

the
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Canadian Aviation Historical Society



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CHAIRMAN'S MESSAGE

As we wrap up the 2014-15 season, I want to thank everyone, especially the hard working executive, for making this a great year. I would also like to thank our members who filled out our survey in April; your feedback will help us build a stronger organization for the future. It was great hearing from everyone, especially from our members further out, who don't often make it to the meetings.

Based on the survey results, we have some new ideas for next year. The question of cancelling our January meeting yielded evenly split results, while the question of cancelling both January and February meetings showed the majority against cancelling. With that in mind, we have decided on two courses of actions. The first, will be to keep both the January and February meetings; however, we will be changing the format of the January meeting. Instead of a speaker in January, we will make it a mixed night of member's stories, and short Canadian aviation related films. The second course of action will be to implement a weather cancellation policy. This policy will meet specific criteria so we may provide our members with at least 24-hours notice of a cancellation.

Despite the survey results, we will be going forward with getting CAHS Ottawa onto social media for next year. This will be done so we may promote not only the chapter to a wider audience, but also to continue to share Canada's rich aviation heritage with the public.

In regards to renting a bus to the National convention this June, the survey results show there is little interest in it.

Pending approval at this month's AGM (in conjunction with the 28 May 2015 scheduled meeting at CASM), we will explore setting up a June meeting in order to either continue having 8 speakers a year OR using June as a rain (snow) date in case of a weather cancellation.

Have a wonderful summer.

*Kyle Huth,
Chairman*

The Observair is the newsletter of the Ottawa Chapter, Canadian Aviation Historical Society and is available with membership. Membership fees are payable in September. Any material for *The Observair* Newsletter should be directed to the Editor, Colin Hine. All matters relating to membership should be directed to the Secretary/Treasurer: Mat Joost.

Kyle Huth
Mathias Joost
Colin Hine
Don MacNeil
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Program convener
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PAST MEETING

Alan White – *BRINGING STOL SERVICE FROM THE BACKWOODS TO DOWNTOWN*

Seventy people attended the 30 April 2015 meeting in CASM's Bush Theatre to hear an interesting presentation on the de Havilland Canada DHC-7 (*Dash 7*) development program by Alan White. Alan was a Flight Test Engineer during the development of the de Havilland Canada *Dash 7* aircraft and Project Engineer after the *Dash 7* entered service. Later, Alan was Manager of Technical Support with responsibilities for all DHC aircraft, including both the *Dash 7* and the *Dash 8*.

Introducing his talk Alan highlighted the amazing pace of aircraft development during the 1960s (higher, faster, bigger) with such high altitude, fast flying aircraft as the Lockheed SR-71 and the introduction of jumbo jets as the beginning of mass air travel, and supersonic travel coming for the elite.

Many believed that the long runways required by jets would not be practical everywhere, so development of vertical takeoff aircraft for both civil and military purposes was also a hot topic. At the same time it was recognized that STOL aircraft could use smaller airports with much less power, technical complexity and lower noise levels. DHC had developed a range of STOL propeller aircraft using low wing loadings, powerful flaps and low speed control systems. Steep approach and high wings gave improved short landing performance. Slipstream lift could be credited for max military performance, but was not used in civil applications.



Alan White © Rod Digney

In the 1960s the US FAA was becoming concerned about congestion and saw STOL services to small airports as a possible answer. A demonstration was set up to see how aircraft could support emergency situations and possibly downtown passenger services. Multiple aircraft flew in and out of three temporary strips of 900ft to 1900ft. The DHC-5 *Buffalo* was by far the largest aircraft and delivered a 6,000 lb field hospital into a baseball park.

Several small airlines purchased DHC-6 *Twin Otters* and established "commuter" services in the US. SFAR 23 and appropriate operating regulations were introduced to support this new category of service. Affiliations between the feeder airlines and the major carriers developed – the beginnings of "hub and spoke" services. Airlines such as Air Wisconsin, Ransome and Henson would later become *Dash 7* operators.

Transport Canada/Air Canada ran an experimental service between a STOL strip on the runway at Ottawa Rockliffe airport and a 2000ft "STOLport" on the Expo 67 site in Montréal. The (6) DHC 6-300S had ground spoilers and anti-lock brakes plus a comfortable interior. A special avionics installation allowed coupled pre-programmed flight along a three dimensional corridor with minimal ATC clearances and MLS approaches. Shuttle buses carried passengers to and from downtown for a total journey time of 1 hour 25 minutes. Scheduled flights started with 16 per day, increasing to 30 with a first year load factor of approaching 60%.

The following text from an early press release shows the primary objective of the DHC *Dash 7* program. "The de Havilland Canada *Dash 7* quiet STOL Airliner will be used to inaugurate a new short-haul transportation system. Designed to operate from STOLports with a total length of 2,000 feet the *Dash 7* carries 50 passengers. It will have the lowest noise level of any transport aircraft and will be able to operate unobtrusively from airports close to urban areas. The *Dash 7* is powered by four United Aircraft of Canada PT6A-50 gas turbines, rated at 1,120 shp."

Boeing and DHC had a marketing agreement and Boeing had much influence in presenting the aircraft as a first step, with jet equipment to follow as a next generation. Boeing pressed for the aircraft to be known simply as "*Dash 7*" (as an alternative to DHC-7 MOOSE?). Utility and remote locations roles were expected to supplement primary sales into a sophisticated market.

DHC designed, built and supported all products with total employment at Downsview between 2,500 and 5,000. The engineering department staff peaked at approximately 250. The company was acquired by Montréal-based Bombardier Aerospace in 1992 and was eventually incorporated into the Bombardier group of companies and the *Dash 8* remains in production with a particular emphasis being placed on its quiet operation in comparison to other aircraft of a similar size. This product line has been expanded to four models, the largest being labelled the Q-400.

Dash 7 Design Overview:

- 50-56 passengers
- Pressurised for 20,000ft cruise
- Four PT6A-50 engines
- Hamilton Standard composite props
- Mix of powered and unpowered controls
- Wide stance landing gear for crosswind handling
- FAR 25 and FAR 36 certification (amendment 31)
- Special Condition for steep approaches to 7.5 degrees.

Unique flap system



- Small ailerons + roll spoilers allowed wide span flaps
- Takeoff settings 15° and 25° used single slotted Fowler with large chord increase
- Landing flap of 45° deployed low hinged trailing segments creating a second slot.
- Trailing segments fully deployed or retracted in approx. 2 seconds



- Lift Dumping after touchdown by trailing flap retraction and deployment of all 8 spoilers

Dash 7 Flap system © Alan White

The PT6A-50 engine variant incorporates some unique features to ensure quiet and safe operations in all environments. Engine air enters plenum then reverses through engine (the intake masks engine compressor noise). Wing shields exhaust noise from the ground and a plenum contains selectable defectors for snow and ice. This unique PT6 variant incorporates a slow turning gearbox and over-wing exhausts. Hamilton Standard HS 24PF large diameter single-acting propellers with an aluminum spar and a fiberglass sheath are designed to go to feather in the event of an engine failure.

Flight Testing

The *Dash 7* prototype was rolled out in February 1975 by which time the Government of Canada had taken ownership of DHC from Hawker Siddeley. The Government was also attempting to find buyers for both DHC and Canadair. The first flight was on 27 March 1975. There were two prototypes; C-GNBX-X for handling and performance and C-GNCA-X for systems, power-plant, etc. Most test flights were from Downsview with some offsite testing in Yuma Arizona and Leadville Colorado. Bob Fowler was HQ pilot and DAR. Mike Saunders did most systems proving flights. Jake Wormworth was the resident Transport Canada pilot.

The digital data system was very crude with no real time processing, no telemetry – voice transmission of “counts.” Tapes were processed post flight, oscillographs for high rate parameters, movable water ballast was used for load distribution and a nose camera was installed for runway performance measurement.

The stall handling required fences, a drooped o/b leading edge, and vortex generators. Testing was done with tufts and photography from a tail camera.

The *Dash 7* is the only Part 25 aircraft certified to FAA STOL Special Condition for 7.5° on approach and 35 ft screen height. Aircraft reliability is based on MSG 2 maintenance program.

Some of the airline operators around the world who use the *Dash 7* include:

Widerøe's Flyveselskap AS, trading as *Widerøe*, is a regional airline operating in Norway. The *Dash 7* operates from 800m STOL strips serving remote coastal communities. Average flight times are 22 minutes with 5,000 landings per year per aircraft in mountainous, coastal environments experiencing weather with severe turbulence.

Wardair cargo/pax aircraft operated from Yellowknife. Supplied research project near North Pole, flying 1 hour north from Alert to an 800m ice strip. Wardair also flew tourist charters into the Arctic communities.

Brymon, UK Intercity and Oil Patch Development. Based at Plymouth with single runway length of 758m and houses alongside the runway. Special procedures were incorporated at Heathrow that enabled time and fuel savings. Aircraft were rotated through Aberdeen with minimal maintenance support for two week periods on North Sea oil support. The *Dash 7* was the only large aircraft able to operate into Unst, an island in the Shetlands. This airport has a 2,000ft strip, and severe crosswinds are commonly experienced there. This operation helped reduce high cost helicopter transfers to rigs.

Brymon LCY. The London City Airport was conceived as an integral part of the Docklands development project, along with Canary Wharf. Brymon with the *Dash 7* were instrumental in getting approval, facing stiff environmental opposition. The initial operating approval stated that no aircraft louder than the *Dash 7* would be allowed to operate there. The airport has since extended the runway from 1000m to 1500m and some jets have now been certified to 5.5° gradients to gain access.

Tyrolean – Courchevel “Ski Jump”. Courchevel Altiport in French Alps; Altitude 6,586 ft. 385m paved runway, average gradient 14% maximum gradient 22%. Takeoff V_1 is at brake release. For landing there is no need for a steep approach, but a tight turn radius is essential!

Newman's Coach Lines in New Zealand ran tours of NZ, transferring passengers between luxury coaches and *Dash 7* at GA airfields and at a gravel strip at Mount Cook. The strip had no buildings and no paved surfaces.

US feeder airlines – hub and spoke. President Reagan's firing of the air traffic controllers, combined with the 1987 economy crash combined to create a brutal market. DASH 7 achieved US (50 seat) market share of 100% against two competitors in 1982. *Dash 7* US market share was maintained at approximately 70%, paving the way for the *Dash 8*.

The *Dash 7* Today

On 24 February 2006, Viking Air of Victoria purchased the type certificates from Bombardier Aerospace for all the original de Havilland designs including:

- DHC-1 *Chipmunk*
- DHC-2 *Beaver*
- DHC-3 *Otter*
- DHC-4 *Caribou*
- DHC-5 *Buffalo*
- DHC-6 *Twin Otter*
- DHC-7 *Dash 7*

Viking now provide all product support and approximately 50 *Dash 7* aircraft remain in service. The US Army now operates 10 on drug and other surveillance tasks. BUY ONE! Several aircraft are for sale in France, Malaysia and Egypt.

Some videos to watch:

Tyrolean operating into Courchevel www.youtube.com/watch?v=fFVb62BGLFo

Greenlandair operating into Nuuk: www.youtube.com/watch?v=DiXuRn82kMk, and www.youtube.com/watch?v=GXqzT1RvIZ0

Other *Dash 7* videos: <http://www.bush-planes.com/DeHavilland-DHC-7-Dash-7.html>
https://www.youtube.com/watch?feature=player_embedded&v=eziU4KtZtc
https://www.youtube.com/watch?feature=player_embedded&v=0zbaolAGkBA

Colin Hine
Editor



RAMBLING THROUGH RECORDS – AIR FORCE

Sometimes research can be systematic - indices and archival finding aids lead one fairly directly to the documents, books and articles that are needed to write about a person or topic. In other cases however one must patiently troll through material, hoping that serendipity will disclose new facts or confirm information already found. A case in point is *Airforce*, the quarterly magazine that has been published by the Air Force Association (now the RCAF Association) since 1977. Complete sets are held at the Canada Air and Space Museum, Canadian War Museum, Directorate of History and Heritage, RCAF Association Headquarters, and the head offices of the Royal Canadian Legion. There may be others in municipal libraries. With no cumulative index, one must look carefully, issue by issue, for relevant material (as Larry Milberry and I did when we were researching the *Norseman* book). Sometimes one searches for material on one topic, and stumbles onto another that is equally fascinating.

My own collection of *Airforce* begins with the 1979 issues. One section routinely visited has been the obituaries, keeping track of veterans (wartime and postwar) who have passed on. Countless articles, long and short, have dealt with RCAF history, especially as a flood of wartime veterans jotted down their experiences and opinions. Roughly speaking I have found that specific categories demand my attention; even if the articles are not immediately useful they usually contain something to be considered in the future.

General History - An example of this is contained in the March 1979 issue, much of which was devoted to the Avro *Arrow*. The late Fred Shortt described it as "Canada's fastest growing religion", and the *Airforce* articles were a fine, blinkered compendium by worshippers; even if the *Arrow* was the aeronautical equivalent of a space-age whalebone corset (advanced but who needed it?).

A different take on general history is found in articles about the legendary Frederick J. Mawdesley, one of the most colourful characters of the interwar RCAF. *Recollections of "Mawdie"* appeared in the March 1979, June 1980, June 1982 and September 1985. *The story of KB700, "The Ruhr Express" (the first Canadian-built Lancaster)* was recounted in the September and December 1982 issue.

Contemporary News - *Airforce* of June 1980 welcomed the CP-140 *Aurora* into air force service and 35 years later it is still going strong (although the RCAF operated *Dakotas* in one role or another for 46 years). That was about the time that the CF-18 was being selected and then introduced into the Canadian Forces; the magazine carried numerous articles celebrating the event. The September 1986 issue published Dave Bashow's overview of the CF-18s first three years with the service. Meanwhile, the September 1988 issue celebrated the opening of a new museum - the very building in which we meet today. The issue of December 1988 included an article, *Jet Jockey at TAM*, with Captain Duff Sullivan's description of a NATO Tactical Air Meet (a live firing exercise). In March 1991 Major R.M. Prystai described a recent operation - in-flight refuelling of CF-18s during the First Gulf War.

Personal Recollections - These are too numerous to list exhaustively, but among the more unusual Lieutenant-General David Adamson provided his story of 41 years military service in the December 1979 and March 1980 issues (also see <http://www.meridianbooster.com/2011/10/04/local-rcaf-veteran-remembered>). Another unusual story (June and September 1981) was that of Robert McNee describing D-Day airborne operations from the viewpoint of an *Albemarle* pilot. Artist Don Connolly provides his take on the Korean Airlift (issue of December 1983). John E. Goldsmith writes of being rescued from the North Sea in August 1944 (issue of March 1983) and his recollections of the 1947 to 1949 searches for the North Magnetic Pole (issue of March 1984). Much of the literature about Malta concentrates on the fighter war; Eric Cameron's recollection (September 1985, April 1986) dealt with day-to-day life on the George Cross island, as seen by a *Wellington* air gunner.

Unhappily, the magazine as historical source is sometimes flawed. Precise dates are often left out. A case in point (among others) is a story by Lieutenant Paul Fleet, *Dramatic Rescue* (issue of April 1989). It tells of a CH-113 *Labrador* helicopter mission by No.413 Squadron that plucked 27 seamen from a sinking freighter. The operation was at the limit of the CH-113's range. All the crew members are named - but the date and exact location of the operation is left out. It required a "google search" to locate these important details - vicinity of Sable Island, 24 November 1988.

If writing history was easy, everybody would do it!

Hugh Halliday



Images of recent sightings at the Ottawa Macdonald-Cartier International Airport (YOW).



A visit to Canada by Indian Prime Minister Narendra Modi brought this Air India Boeing 747-437, VT-ESO (c/n 27165) to Ottawa Macdonald-Cartier International Airport (YOW) on 14 April 2015. A large number of local plane spotters were on hand to witness and photograph "Air India One", or flight number AIC1, as it arrived from Berlin. It is seen here passing over Leitrim Road for a late afternoon landing on runway 32. (© Rod Digney)



"Air India One", a Boeing 747-437, VT-ESO (c/n 27165) departs runway 32 at Ottawa Macdonald-Cartier International Airport (YOW) taking Indian Prime Minister Narendra Modi to Toronto on 15 April 2015 for the second stop of his visit to Canada. Although the aircraft is owned by national airline Air India, it is operated by the Indian Air Force for international state visits of the Indian Prime Minister, President or Vice President. (© Rod Digney)



WestJet regional airline Encore began service from Ottawa Macdonald-Cartier International Airport (YOW) in late March with a daily return flight to/from Toronto's Pearson airport. In this photo, Bombardier DHC-8-402, C-FWEZ (c/n 4483) departs runway 32 as flight WJA3463 on 15 April 2015. Encore is a wholly owned subsidiary of WestJet designed to serve smaller Canadian communities and add lower capacity service to larger ones. Its fleet is comprised exclusively of Bombardier Dash 8 Q400 next-gen turboprops and currently numbers 19 aircraft with planned rapid expansion to a total of up to 45. Ottawa service will be expanded in July with flights once daily to Moncton and twice daily to Halifax. (© Rod Digney)



Lockheed L-100-30 (Model 382G) Hercules C-GUSI (c/n 4600) was seen at First Air's main base at YOW on 27 April 2015 as it underwent final maintenance prior to its sale to Lynden Air Cargo of Anchorage Alaska. The aircraft was the last of First Air/Bradley Air Service's two Hercs to be sold, as the northern carrier purged its fleet of the type. First Air began operating Hercules transports in 1997 and in recent years they were the only civil registered Hercs in Canada (the type was previously operated by Pacific Western and Northwest Territorial). In a special arrangement with Lynden, First Air will now reportedly charter Hercules aircraft when demand for heavy lift cargo transport warrants. (© Rod Digney)

Solar Impulse 2 – The Story So-Far

Several people have asked about the status of the *Solar Impulse 2* (Si2) around the world flight. Swiss explorers Bertrand Piccard and André Borschberg are the founders, pilots and driving force behind *Solar Impulse*, the first aeroplane of perpetual endurance, able to fly day and night without a drop of fuel. By attempting the first Round the World Solar Flight, they want to demonstrate that clean technologies and renewable energies can achieve the impossible. For the *Solar Impulse* team, pioneering spirit and innovation can change the world.

The Round-The-World flight started from Abu Dhabi, on 9 March 2015. The route includes stop-overs in Oman, India, Myanmar and China. After trying to cross the Pacific Ocean via Hawaii, Si2 should fly across the U.S.A. and over the Atlantic Ocean, heading back to Abu Dhabi.

The following mission summary includes edited extracts from the *Solar Impulse 2* web site <http://www.solarimpulse.com/>. The mission can also be followed on Facebook: https://www.facebook.com/solarimpulse?_rdr.

9 March, 2015. *Solar Impulse* took off at 7.12am local time for its first flight from Abu Dhabi to Muscat (Sultanate of Oman).

André Borschberg landed at 8.13pm (16:13UTC) after 13 hours and 1 minute of solar flight, reaching a maximum altitude of 6,383m (20,941ft), over a distance of 441km, at an average speed of 33.88km/h.

10 March, 2015. *Solar Impulse* took off at 6.35am local time on the second flight from Muscat (Sultanate of Oman), to Ahmedabad, India.

Bertrand Piccard landed at 11.25pm local time after 15 hours and 20 minutes of flight only powered by solar energy. The solar aircraft flew 1,485km, reaching a maximum altitude of 8,874m (29,114ft), and with an average ground speed of 96.85km/h.



Solar Impulse 2 – Leg 1 Abu Dhabi © Solarimpulse.com

18 March, 2015, 8 days after its arrival in India, *Solar Impulse* took off at 07:18AM local time, for its third flight from Ahmedabad to Varanasi.

André Borschberg landed at 8:33pm local time, after a 13 hour 15 minute flight, travelling a distance of 1,215km at the average speed of 91.70 km/h. Max altitude reached: 5,182m (17,000ft).

19 March, 2015. *Solar Impulse* took off after an overnight "pit stop", for its fourth flight from Varanasi (India), to Mandalay (Myanmar) at 5:22am local time.

Bertrand Piccard flew the solar aircraft for 13 hours and 29 minutes, travelling a distance of 1,398 km at the average speed of 103.68 km/h. Max altitude reached: 8,230 m (27,000ft). Before taking off for its fifth flight from Mandalay (Myanmar), to Chongqing (China), the Solar Impulse team stays a few days on the ground, waiting for the weather to improve over China.



Solar Impulse 2 in China

29 March, 2015. Bertrand Piccard took off for its fifth flight from Mandalay (Myanmar) at 21:06 UTC, to Chongqing (China). Si2 landed in China at 17:35 UTC. The landing was challenging and delayed because of strong winds and intense traffic at Chongqing International Airport.

Bertrand Piccard flew the zero-fuel airplane on 1,459 km (742nm) for 20 hours and 29 minutes. Upon landing, Bertrand Piccard declared that managing to land in such difficult conditions was extremely reassuring in view of the numerous more challenges that the pilots will face in the next flights of the Round-the-World tour.

Solar Impulse took off for its sixth flight from Chongqing to Nanjing, China, on Monday April 20th at 22:06 UTC and landed on 21 April, 2015 at 15:28 UTC.

Bertrand Piccard flew the zero-fuel airplane on 1,344km (725.7nm) for 17 hours and 22 minutes.

Solar Impulse will take off for its seventh flight from Nanjing (Nanjing Lukou International Airport, NKG/ZSNJ) in the People's Republic of China, to Hawaii (Kalaeloa Airport, JRF/PHJR) in the United States.

The pilot will fly the zero-fuel airplane on about 8,172km (4,412nm) for an estimated time of 120 hours. This flight across the Pacific is a feat of endurance for the pilot, and for the support teams that constantly monitor and plan for Si2's route. Over 5 days, the pilot will head for the small target of the Hawaiian Islands. The team has stated that the earliest date for take-off on this long leg across the Pacific is 11 May 2011. By the time this issue of Observair reaches you, this leg of the flight could be completed.

Solar Impulse will take off for its eighth flight from Hawaii (Kalaeloa Airport, JRF/PHJR) in the United States, to Phoenix (Phoenix Sky Harbor International Airport, PHX/KPHX) in the United States.

The pilot will fly the zero-fuel airplane on about 4,707km (2,541nm) for an estimated time of 100 hours. This flight will be the first time that Si2 stops in mainland USA, last visited in 2013 by the prototype Solar Impulse 1 as it flew Across America.

Solar Impulse will take off for its ninth flight from Phoenix (Phoenix Sky Harbor International Airport, PHX/KPHX) in the United States, to a city to be determined in the United States.

The pilot will fly the zero-fuel airplane on about 2,030km (1,096nm) for an estimated time of 30 hours. Phoenix Sky Harbor gave Solar Impulse an incredibly warm welcome back in 2013 as Si1 flew Across America. This time, Si2 will decide the destination just before take-off!

Solar Impulse will take off for its tenth flight to New York (John F Kennedy International Airport, JFK/KJFK) in the United States.

The pilot will fly the zero-fuel airplane on about 1,436km (775nm) for an estimated time of 20 hours.

Solar Impulse will take off for its eleventh flight from New York (KJFK) in the United States, to Europe or Northern Africa.

The pilot will fly the zero-fuel airplane on about 5,739km (3,098nm) for an estimated time of 120 hours.

Solar Impulse will take off for its twelfth (final) flight from Europe or Northern Africa, to Abu Dhabi (OMAD) in the United Arab Emirates.

The pilot will fly the zero-fuel airplane on about 5,845km (3,156nm) for an estimated time of 120 hours.

William (Bill) Hough 1930 – 2015

Members of the CAHS Ottawa Chapter, Vintage Wings of Canada and Project North Star, as well as volunteers at the Canada Aviation and Space Museum will remember the support and many contributions that Bill Hough has made to aviation history research over many years. Sadly, Bill passed away on 13 April, 2015 following an accident.

<http://www.legacy.com/obituaries/ottawacitizen/obituary.aspx?n=william-hough&pid=174716652&fhid=31106>

Bill had supported many of the CAHS Ottawa Chapter's book sale events and Conventions. He made a significant contribution to Vintage Wings' Yellow Wings project, and was a dedicated supporter of Project North Star.

Bill is survived by his wife Sigrid, who has kindly asked that donations in Bill's memory be made to Project North Star, PO Box 44005, 541 Montreal Road, Ottawa, ON, K1K 4P8. A dedicated Bill Hough Memorial Fund has been established in his memory. Contributions will be used for a suitable and lasting part of the North Star restoration.

OUR VETERANS - WALLY KASPER PART TWO

This is the second of a three part series written by Second World War RCAF veteran Wally Kasper. Last month's episode covered Wally's introduction to the RCAF and his initial training followed by his posting to England and bomber training.

Colin Hine, Editor

The *Wellington* was a joy to fly so the mandatory circuits and bumps passed quickly and the crew sort of got to know each other and learned to work together, a bit. Two quite interesting things happened here. Our first exercise as a crew was to do a cross country flight at night. The plan was to fly from our base in the Midlands to just outside of Dublin, Ireland and then turn north and east to go to the top of the Orkney Islands at the upper end of Scotland and then back to our base in the Midlands. Ireland was neutral and, of course, all the lights were on so you could see the place some distance off and we had been warned NOT to over fly Irish territory.



Wellington bombers in flight (© RAF photo)

In the ordinary sequence of events on a trip like this a pilot would expect that the navigator would do a good deal of navigational magic like wind-speed and direction calculation with position fixes and that a new course would automatically be given to the pilot some few minutes before the time came to turn north from Dublin. When we were about ten minutes away I asked the navigator for an ETA and a new course and got an indecipherable reply in return. So I made a rough calculation of my own, turned onto it before we hit Dublin, plugged in the automatic pilot and went back to the navigator's place.

There he was, sitting reading a novel. There was not a single notation of any kind on his chart. It took me a long moment to recognize what had happened here but then I rather unceremoniously ushered him out of the seat and dug into the recesses of my memory for all my once learned navigation skills. I back plotted as best I could and made up a new ETA for the Orkneys and an approximate course for the homeward leg of our trip. Then back to the pilot's seat, check fuel flow, make course corrections and after about a half an hour I got a position fix, checked in with the crew, and then back to the chart again to make my notations and then back to the pilot's seat again and so on.

About a half an hour out from our last turning point the gunner tells me that there is an aircraft about three thousand feet up, port side. He can't identify it. Two minutes later he shouts "Port Go". I'm half ready for the command so a quick climbing turn to the left and just behind where the aircraft used to be is a long squirt of tracer from the guns of the Junkers 88 which had been tracking us. Needless to say I spent no more time at the navigator's table and with a nice bearing courtesy the Wireless Operator we made it back to base and once we were on the ground and with our feet firmly planted on the asphalt in the dispersal, waiting for the bus to pick us up, we had time for an unkind comment or two about the performance of the navigator.

In any case he and I, next morning, after breakfast, took a walk down to the Wing Commander's office. He listened to me without interruption, then impaled the navigator on a glance which must have been more piercing than a cavalryman's sabre and ordered him out of the room. He looked at me for a long moment and then said "Well done. I'd like you to describe this trip to your fellow aircrew in the theatre this afternoon, say 2:00 p.m." "Yes, sir", and with a salute I was off. As I made my way back to the mess I wondered what it was going to be like on the squadron flying over Germany if the Germans were over here trying to shoot us out of the sky on our first training exercise at OTU.

We were given a new navigator and all went well until about ten days later, or rather evenings later, when a dozen or so of us who had been out on our bicycles a few miles down the road to a pub having a couple of beers, were on our way back

to the base and our new navigator managed to get the front wheel of his bicycle into some crevice on the road, fell off and broke his arm. Subsequently I was summoned to the Flight Commander's office to meet my new navigator. Frank was a home grown Brit, six foot four inches tall, had been trained here on the blessed isle without any contamination in the colonies and was an unvarnished genius. No sense of humour, had never had a drink or smoked, never had a date with a girl but absorbed all the information ever presented to him and then knew how to use it. As a navigator he was without parallel on the course or later the squadron. He had been an actuarial statistician before turning his attention to the RAF and navigation and it was always pure pleasure to watch his mind at work in a discussion or in a bridge game.

One final comment on the OTU. My Canadian file finally caught up with me a few days before we finished the course and landed on the Wing Commander's desk - yes, he of the moustache. I was summoned to his office and he told me that he observed that I had been trained on the Special Navigation Course at the General Recce School and that I must have been aware that Coastal Command was my destination and yet I had volunteered for a Bomber Command posting. The cost to my government, etc., etc., etc., the rhetoric flowed freely but I suspected that he knew that I knew that he could not pull me off of this program and send me to Coastal Command at this juncture. When he ran out of steam I saluted and left, and just for a fleeting moment I thought he had the tiniest crease of a smile around his eyes, but it was unlikely. I'm sure I imagined it because I rather liked him. To my great surprise and that of the crew, Daily Routine Orders next day announced that I, and a few other Canadians had been promoted to Flight Sergeants.

The Heavy Conversion Unit at Wombledon in Yorkshire was beckoning us and brought us a flight engineer and a mid-upper gunner and we were given our formal introduction to the mighty Mark II *Lancaster*. With its four 1650 HP *Hercules* air-cooled engines, instead of four 1200 HP *Merlins* on *Marques I* and *III Lancasters*, she was the queen of the skies. In two weeks we completed the requisite circuits and bumps, cross-country and practice bombing exercises and then taken some eight miles to Linton-on-Ouse and 408 Squadron.

Four days later I was on schedule to do my first second-dickey trip with one of the more experienced crews and that night we were off to see the sights of Berlin. Perhaps I might describe this as sight-seeing at its most exciting for it surely was. Not in my wildest imaginings could I have envisioned anything like the ring of defenses around the city or the action which flowed as the main force approached the city to do its work for the night. The crew I was sight-seeing with were on their 27nd trip and were like a superb well-oiled machine. The adrenalin was flowing, of course, but there was something else here, it seemed almost like an extra measure of a polished performance that newcomers like me could only dream of.



Avro Lancaster B Mark II, LL725 'EQ-C', of No. 408 Squadron RCAF, on the ground at Linton-on-Ouse, Yorkshire. Armourers are backing a tractor and trolley loaded with a 4,000 lb HE bomb ('Cookie') and incendiaries under the open bomb-bay. LL725 was lost over Hamburg on 28/29 July 1944. (© RCAF)

I went with them the next night again, to Augsburg and then, four nights later, I took my crew to Berlin on our first trip and they were on the mission as well. It was their twenty-ninth trip and they failed to return. You can hardly imagine what went through my mind as I looked at the status board which showed no landing time for them. If that crew couldn't make it what were the odds for the rest of us?

(To be continued next issue, September 2015.)



**PUBS
&
MAGS**

Warbirds International (June 15)

- 4 pp on the acquisition and crash of Spartan Air Services first Lockheed F-5G Lightning, CF-GSP;
- photos of Quebec Government Canso A, C-FPQM, ex-RCAF CT-133, C-GPEG in dragon scheme, and Kenting Aviation B-17G, CF-HBP.

Canadian Coast Guard and Canadian Forces Helicopters

Fifteen Bell 429s have been ordered as part of the Canadian Coast Guard Fleet Renewal (CCGFR) Project; the light twin will replace the mid-80s vintage Airbus (formerly Messerschmitt) BO-105 helicopters. The Bell 429 can seat up to seven persons and will be used for logistical support, maritime patrol, environmental research, scientific personnel transport and lighthouse replenishment duties, as well as assisting the RCAF in a secondary search and rescue role. In another phase of the CCGFR Project, Bell will supply eight medium-lift 412EPI.



The first of the Canadian Coast Guard's new Bell 429 helicopters, C-GCQG (c/n 57238, fleet no. 441) was seen operating from the Transport Canada hangar on 5 May 2015.

(© Rod Digney)



CCG Bell 429 Helicopter C-GCQG at CASM 6 May 2015 (© Guy Charron)



Canadian Forces Cormorant at CASM 6 May 2015 (© Guy Charron)

NEXT MEETING OF THE OTTAWA CHAPTER, CANADIAN AVIATION HISTORICAL SOCIETY



THE BATTLE OF BRITAIN

seen through the eyes of "One" of "The Few"

Timothy Dubé

**former Military Archivist with Library and Archives Canada
and long-time Chairman of the CAHS Ottawa Chapter**

Seventy-five years ago this year, one of the most storied battles in military history took place in the skies of England – the Battle of Britain. More than 100 Canadians are known to have participated in the four month long air battle. Using the flying log book and personal letters of one of those Canadian airman, William Lidstone "Willie" McKnight – perhaps the outstanding Canadian fighter pilot of the Battle of Britain and the first eighteen months of the war – along with other resources, Tim will put the personal story of "One" of "The Few" within the context of the larger Battle of Britain.

Location: Bush Theatre, Canada Aviation and Space Museum, Rockcliffe

Date/Time: Thursday, 28 May, 2015, 1930 Hours

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

Visitors and guests are always welcome.

Landing Fees: \$1.00