

- December 2021 -



With my mandatory 25 hours flown off of the new plane and a new conditional Certificate of Airworthiness for Amateur-built Aircraft in hand, I flew to Damascus and joined Lee on a flight to Conestoga Lake, Stratford Airport, and Wildwood Lake. In this picture Lee had just shown me the new ADSB and weather station equipment installed at CYSA. There are a few tweaks to be made yet, but it is good to see this project has moved along to this stage. There is already a fair bit of data and map information available on this site, which broadcasts on 978 MHz. (UAT) with additional information being added regularly. It should be in full operation in 2022.

President's Message

Where did 2021 go?

Will this be remembered as the year everyone wants to forget?

2020 will likely always be remembered as, "The year we all stayed home".

Regardless of how we remember 2021, with most of us triple vaccinated and Omicron spreading like wild fire, but far less deadly, it likely won't be too long before the worst of Covid-19 is over, which certainly gives us hope for better times in 2022.

Personally, I will remember 2021 as the year I finished building 'Aerial 2' and flew off the mandatory 25 hours to get the conditions removed from the Certificate of Airworthiness. November weather closed in fast, but not before I managed to get one additional flight in C-FDFD for the year without having to limit myself to 25 nautical miles from Ken Chute's airstrip on Puslinch Lake.

In this issue, I have included photos that Lee and I took when I ventured up to Damascus and spent a couple of hours flying alongside Lee Coulman in C-GJIB, something that 'Aerial One' (C-FDEP) did so many times before.

Also, this month's newsletter has a great article from David Wood. David and his father Cam got the thrill of a lifetime flying in the Waterloo Warbird's Vampire.

Please consider jotting down a couple of ideas you can share in the newsletter and take a couple of photos to go along with them. Anything aviation related is appreciated and welcomed by your friends here at KWRAA.

Gary Wolf is still looking for ideas and stories for the Recreational Flyer Magazine too. Whether it stays local or goes national, it's your choice and always appreciated either way.

2022 is going to be a great year for KWRAA!

- Dan

Flying With the Waterloo Warbirds

On November 13, my father and I got the thrill of a lifetime flying in the Waterloo Warbird's Vampire. With the world slowly returning to "normal" we were able to take advantage of a gift certificate my father's business partner had given him a couple of years ago. We headed over to Flightline at CYKF on a brisk November morning and were greeted by the friendly crew.

The first order of business was to watch a 15 minute orientation video that covered ingress and egress from the aircraft, strapping on the parachute and harnesses, emergency procedures (including bailing out!) and the location of the first aid kit and ELT. After that, we were fitted for our flight suits and helmets.

We then headed out to the ramp for my father's flight. The flight plan for his flight was to head to our airstrip 8 miles to the North-West for a couple of passes, then up over the clouds for some aerobatics.



Climbing Aboard the Vampire after the orientation!

They came back in with smiles all around, and it was my turn.

Our flight plan was to head to CYHM to do a pass down the runway and over the museum. After re-fueling the airplane, we strapped in, went through the lengthy pre-start checklist, started the engine and taxied to Runway 26. There was no other traffic at the airport, so we were given clearance to takeoff on our way down the taxiway.



Strapping in for the ride and thrill of a lifetime!

Once on the runway, we started our roll, followed by a quick check of the temperatures. All was good so Peter, the pilot, applied full power. At 85 knots, a bit of backpressure lifted the nose wheel, and we flew off around 120 knots. We raised the gear and climbed very gently until we reached 200 knots. At 200 knots we climbed quickly to 2100 feet and turned towards Hamilton.

Peter let me take control on the way over. The controls were relatively light and responsive. I was having a bit of trouble holding my altitude until I got used to the feel of it and found the VSI and trim. We contacted Hamilton tower and were cleared into the zone for a pass down the runway. When we entered the zone, we were informed that there were no other aircraft in the zone and speed and altitude were at our discretion. As we approached runway 12, I handed control back to Peter and we proceeded to do a pass over the runway, followed by a steep turn over the museum. The museum staff at CYHM had been alerted to our presence in the area, but the roar of the Vampire jet engine confirmed it. Not being used to pulling G's, the turn was a bit uncomfortable, but I maintained consciousness and kept my breakfast down. Peter asked me if I was up for another pass, and I enthusiastically agreed. Tower was happy to oblige, and we went around for another pass. This one was a bit faster, with a more aggressive turn, but I survived again.

With that done, we set a heading back to Waterloo and reached a safe altitude for some rolls. Peter did a roll to the left, checked in with

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me to make sure I was comfortable with another one, then did another to the right. We set a course for Waterloo and Peter let me take the controls again. I was able to maintain altitude a bit better, but still have some work to do before I can solo.

When we got close to Waterloo, we were again informed that there was no other traffic, so we asked for a low pass and the Hamilton Tower was happy to give us clearance. After the low pass we returned to YKF, then did a tight circuit and lined up with 26 for our landing. It was obvious throughout the flight that the

Vampire is fast, but the landing is where the sensation of speed and the contrast with our low and slow airplane was most apparent.

The experience was one I will never forget. The entire crew at Waterloo Warbirds is fantastic. Peter was very good at gauging my comfort level and gave me a real thrill without making me airsick.

If the opportunity ever arises to go for a flight with the Waterloo Warbirds, **take it!**

- by David Wood



All smiles after the flights! Flying our own plane is fun, but this was totally off the excitement and adventure charts!

Thinking Outside the Circle...

Anyone who has built and flown an amateur-built aircraft is familiar with the requirement to fly off 25 trouble-free hours within 25 miles of their designated airport. In the beginning, your focus is on flight testing the new aircraft and expanding on the flight envelope each flight while noting any irregularities or notable flight characteristics of the new aircraft. Even when built from a kit, every amateur-built aircraft is different from all others, regardless of the fact that they may look the same.

For those of us who have built another aircraft of the same model, there is an innate need to improve upon the last one. Whether it entails a need for more speed, the ability to land or take-off shorter, or just to make it look better, the need is there and very hard to ignore.

That insurmountable drive to improve things is what led me to make several changes to the basic "Highlander" design in an effort to improve performance in all phases of flight. I made changes to the engine, the control surfaces, the wings, the covering, the flaps, the ailerons and the panel; not to mention the changes the manufacturer made in the eight years since my last build. I plan to cover a lot of the details of the changes in another story soon, but needless to say all of these changes resulted in an airplane that handles slightly differently than the previous one.

A considerable amount of the initial 10 to 15 hours of the mandatory 25 were spent adjusting to the nuances of a different aircraft. It also was a time of getting used to being back in the saddle after two years of not flying while I was building the new plane.

Beyond the first 15 hours, it seemed like a lot of the time was spent trying to figure out someplace I could fly within the 25 mile circle that I hadn't been to several times before. To make things worse, with CYYZ so close to the east and very few small airports in that direction, it seemed like I was only dealing with a semi-circle, reducing the potential destinations by half. On the up side though, I was able to fly on short notice since the Highlander was located at Ken Chute's strip, a five minute drive from my home.



Guelph, Roseville and Lubitz Field were great places to make short trips to from home and practice take-offs and landings. I did a few from Ken's strip initially, but there are a lot of high-priced homes on Puslinch Lake and I didn't want to generate any complaints about too much traffic on Ken's otherwise quiet airstrip. I have been told by many people that my airplane is very quiet, but I think it was better safe than sorry.

At about the 3 hour mark on the plane, I ran into a major oil leak that I eventually pinned down to a missing bolt in the crankcase. With that resolved, the '25 hour' clock was restarted and eventually, in spite of crappy weather closing in, I had my hours in the logbook, without any abnormal maintenance issues.

I gathered up the requisite paperwork and requested a C of A with the conditions removed. Within two weeks I had it in my hands and planned to finally go flying outside of the 25 mile limit!

I contacted Lee, and as luck would have it, he was already planning to go flying that day. I flew up to join him at Roger Deming's strip in Damascus, Ontario.



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'Aerial 2' is covered in Oratex fabric, which had performed flawlessly until I arrived at Damascus, where I noticed one of the finish tapes was coming loose.



I borrowed Lee's heat gun and did a quick repair by warming and pressing down the tape. The pre-glued tape sealed up well, so I assume that this short section had not been adequately heated when I did the original application. It held up for the remainder of the trip and hasn't separated since, so I also assume it was my fault not the fabric.

As we departed Damascus to the Southwest toward Conestoga Lake, Lee recorded a short video of my 4 second take off... www.youtube.com/watch?v=zmKHxX7JYK8

At Conestoga Lake, Lee did a few water landings while I circled above checking out the late autumn scenery. Hopefully, I will be back on my Zenair amphibious floats next spring to join Lee on some water-based adventures. In any event, it felt great to finally be flying as Lee's wingman again.



We headed over to, and landed, at Stratford to check out the ADSB UAT system there. In spite of all the work Lee had been doing at Stratford, I'm embarrassed to say that it was my first time actually seeing the equipment. After all the work he has put into it, I was glad to see it finally up and running. By the time we left CYSA, the shadows were getting long and my last flying day of 2021 was quickly ending.



To end the day, we flew over to Wildwood Lake near St. Mary's where Lee did a few more splashes with the Searey. I had originally thought about a fly-over at CYTB, but the day was coming to a close and neither Ken's strip nor my airplane had lights, so a direct flight back was in order.

Knowing it was likely the last flight I would make in 2021, I did a couple of quick one-way circuits at Roseville on my way back. There's a house at the east end of the runway there, so taking off and landing to the west is preferred. Roseville is fairly short compared to most aerodromes, and even most private strips. It is mostly used for ultralights, but the Highlander, especially the new one, handles it with ease.

I'm already looking forward to the 2022 flying season and just about have the Zenair floats repaired and ready to go back on the plane. As always though, I will fly for a month or so with the bush wheels in the spring until the water is not quite as hard as it is in the winter. ;)

I will chronicle my experience rebuilding the Zenair floats in the January issue of the Leading Edge newsletter.

- Dan

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Upcoming Events in 2022: (Highlighted lines are KWRAA Events*)

Meetings are now held on the second Thursday night each month due to Monday night scheduling conflicts at the Cadet Youth Development Centre!

Meeting dates and protocols may change as the pandemic progresses.

On-line meetings may resume due to the new Omicron variant of the Covid-19 virus.

Updates will be sent out to members via e-mail, along with a link to the meeting.

January 13	-	January Meeting at 7:30 in the Cadet building at CYKF
February 10	-	February Meeting at 7:30 in the Cadet building at CYKF
March 10	-	March Meeting at 7:30 in the Cadet building at CYKF
April 14	-	April Meeting at 7:30 in the Cadet building at CYKF
May 12	-	May Meeting at 7:30 in the Cadet building at CYKF

Look for summer fly-in details later in the New Year.

September 8	-	September Meeting at 7:30 in the Cadet building at CYKF
October 13	-	October Meeting at 7:30 in the Cadet building at CYKF
November 10	-	November Meeting at 7:30 in the Cadet building at CYKF
November 25 ?	-	KWRAA Christmas Party – Details to follow later in 2022

* KWRAA events are fly-in and/or drive-in.

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FOR SALE:

I have a large quantity of Sika spruce available. Many pieces are cut to a taper from end to end for the spars of a Tern sailplane project; all are either rough sawn to 1" or a little more or planed to 7/8".

It was sold to me as spar grade.

I looked at all the pieces a few weeks ago to verify grain direction and ring count. I did a few density and moisture content measurements and all were well within MIL-S-6073.

I also have 22 full 4' x 4' sheets of 1/16" fir plywood plus some odds and ends.

Present retail price is about \$40 per board ft. for 7/8 sitka and \$60 per sheet for plywood. I am open for offers, but I would especially like someone to buy the whole lot! The sitka is presently in a shipping crate about 28' long by 10" square section and could be moved onto a trailer in this box fairly easily.

A complete listing of material is available. Contact Bruce Clift (519)395-3144 or blairskids@hotmail.com.