

JANUARY – FEBRUARY 2023

AROUND THE WORLD – IN SEVERAL WAYS

Those who were unable to attend the January VFC Meeting missed out on an excellent talk by our guest speaker; VFC member, Dave Crerar.



Dave spoke about his vast experience with ferrying aircraft around the world.

He has been flying since 1964 and has more than 50,000 hours in the air as an airline pilot and bush pilot. Now a contract pilot through his company Sterling Pacific Air, he ferries aircraft all over the world to places such as the Maldives and Philippines, or from places like Japan to Canada.

As president and owner, Dave has amassed over 50000 hours of flight time since starting his career on BC's West Coast. C-185s, DHC-2 Beavers and DHC-3 Single Otters on floats and wheels led the way up through B727, L-100 Hercules and B737-200. From the early 1980s, he owned

his own Beaver and, along with several other small aircraft from time to time, operated a charter service on his days off. Before his early retirement from the Canadian airline industry, he added B767 and B747-400 to his repertoire.

Choosing early "retirement" allowed him to focus on his real passion of hands-on flying in multiple types and providing a valued service delivering aircraft. In the past decade, contract piloting has taken Dave across the big oceans again, multiple times, mostly in Twin Otters.

Across and through Greenland to Iceland, the EU, Islands of the Mediterranean, across deserts of Egypt, Saudi Arabia and the UAE and on to the Maldives on different trips, Dave has been in the air more days every year than days just on the ground.

He has ferried aircraft clear across America from Washington state to Florida, the Caribbean and South into Central America; from the West coast of America to Hawaii, Fiji, Majuro, Truk, Philippines, Malaysia and Indonesia. From Alaska, down the Eastern side of Russia, Japan and South Korea, Dave has vastly broadened his list of international airports from his 767 and 747-400 days.



On subsequent pages, you can read the substance of Dave's dissertation on but one facet of his long career...

AIRCRAFT FERRYING

Dave's talk was over 1.5 hours and included slides of various aircraft and destinations. This was the basis, but each point was expanded upon with more detail.

Delivery of aircraft to new or existing owners around the world is done by a handful of people. Some specialize in jets and big turboprops, ie Dash 8's. What I concentrate on is Twin Otters, King Air's, Beech 190's – any light twin turbine or single turbine aircraft overseas, but anything twin or single in North America.

Aircraft may be brand new, may be used ones being purchased, or may be owned by companies needing them to be flown to or from a maintenance facility in another country. Deliveries across the Pacific sometimes go from Oregon to California to Hawaii to Marshall Islands where you go left to Fiji or Australia or right to Chruk, Midway or Guam, and then to the Philippines, New Guinea or other east Asian countries. The trip will be up to 60 hour flight time with each leg 10 – 14.5 hours. Sometimes a westbound flight will go northwest through Alaska and down through Russia and Japan, or vice versa to bring planes to North America.

Flights through Russia require an English speaking navigator because some airfields are military and don't have English speaking controllers. Stops include Sakhalin, Kabarovsk, Magadan, Petropavlovsk, Tilichiki and Anadyr to Nome. I've had some great experiences with these people, who are extremely friendly and helpful, and I especially enjoy Petropavlovsk, a beautiful resort area for skiing and sightseeing. It's a regular stop for cruise lines – or at least it was! Northern Russia seems to be more autonomous and the people are more resilient, needing to live in a harsh environment without much help.

Across the Atlantic, flights might go northeast to Churchill and Iqualuit , Greenland, Iceland, Scotland and then through European countries such as Sweden, Serbia and Bosnia. Alternately they sometimes go southeast from Newfoundland to the Azores and then over Spain and around North Africa to Tunis, Cairo Egypt, and Muscat in the UAE to the Maldives.

Flight planning and expediting.

I've done this for many years for other companies but am now doing it through Sterling Pacific Air, sterlingpacificairltd.ca along with Rob Graham, a good friend and partner who does the ground work and planning.

Planning and organizing is an extremely important and time-consuming job and, while each trip often takes at least 10 days, the planning often takes more.

What Rob does:

On overseas trips the planes need to be fitted with our special fuel bladders.
Wiring is off the hot battery bus in case of other electrical issues.

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On the Twin Otter, they are plumbed into front and rear tanks through the vent lines. Life rafts are secured near back door and also a knife to cut bladders, open back door and drain off fuel rapidly in case of engine failure. Weight would have to be down to 14,500 or less in a very short time. Take off (normally at 12,500) is at 17,500 to 18,000 lbs - single engine needs to be down to 14,500.

Routes must be planned.

The timing for fuel and rest stops in countries along the way needs to be carefully coordinated and planned so that when we arrive the fuel will be available, transportation arranged and hotels booked. In foreign countries we arrange for a 'handler' to meet and greet us and transport us to our hotel. They give us our weather packages and our flight plan, which are prepared by an expediter based in Sweden. The expediter is extremely efficient and can be reached 24 hours a day. The handlers are very important in countries where English is not the main language. One (a university student) spent several days with me in Japan. Most days are 14-hour days, so any delays will of course disrupt the schedule considerably. HF radios are required across the North Pacific but not on the northern route through Iceland and Greenland IF we get up to 17,000 ft.

We rise early and fly during the day and usually land at dark, so there's not much to see from 17,000 ft. and not much chance of sightseeing, unless there happens to be a delay.

Delays can play havoc with the schedule, which happens often at the outset of the trip. It's common to have the proper paperwork not arrive on time, flight permits, or the C of A hasn't been transferred yet. One brand new Twin Otter was rejected a day or so before delivery because the owner wasn't happy with the paint. It was rejected a second time and we were delayed again for the third paint job.

On our last delivery of a Twin Otter to the Maldives we had radio problems in Winnipeg, and then again in the Azores. This gave us a day to hire a taxi driver to give us a tour of the island, Santa Maria. I once had a chance to do a bit of exploring in the Maldives, but this time was typical of most trips. Once we land and have a night's sleep we spend at least a day to remove all the fuel bladders from the plane, see that they're purged and cleaned and then packed up for shipment back home. We need to oversee that to make sure they're properly prepared and not damaged.

Interesting trips

Occasionally we run into problems enroute. A woman I call the "Queen of Chruk" made me pay an \$800.00 fee that was already paid – her personal rip-off - basically a bribe to allow me to leave Chruk. Bribes used to be common but aren't any more because of international laws.

On a single engine turbine Otter on wheels delivery to Malta, the fuel transfer pump blew a seal and fuel was leaking down and along the floor of the aircraft. We spent two days in Iceland where fortunately someone was able to supply me with the proper parts repair it. That gave us a chance to enjoy the hot pools at the Blue Lagoon and tour the town.

On this trip I planned ahead to make a stop in Duxford, a famous former WWII fighter base, to wait for our clearance through France. We arrived in the middle of an airshow with WWII planes and had time to visit the aviation museum as well.

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Two Kingair 90's to Mexico were probably destined for the drug trade.

We were invited to a special symbolic welcoming ceremony for a Twin Otter to Fiji. My female First Officer was not allowed to attend as it's for men only. I had to decline because there was alcohol involved.

A Twin Otter went to Abu Dhabi for a sheik to transport men and young ladies of the night to his 5 yachts in the Mediterranean. We weren't supposed to take pictures of it and, once we arrived, it went immediately into a locked hangar and I wasn't able to retrieve my headset left behind.

Another clandestine delivery was a Twin Otter that was specially kitted out with secret surveillance equipment for police use in Thailand.

Border problems – I was banned from US for 5 years by a US Customs Officer who insisted I was contravening the rules. After one year I applied for a waiver that was granted recently.

Upcoming trips

In the near future we have bid on two Twin Otter trips to Manila and one to the Maldives, plus a Diamond DA42 twin diesel to Thailand. There will be other regular deliveries around North America.

COMMENT

Thanks, Dave. We appreciate the time and effort required to put this together.

Passing through New York's airspace this summer, we heard the following:

New York Approach: "Airliner 123 descend maintain 5000."

Airliner 123: "Descend 5000."

New York Approach two minutes later: "Airliner 123 descend maintain 5000, you appear to be climbing."

Airliner 123: "We are descending."

New York Approach: "Well you appear to be descending up, I need you to descend down. You were at 5200 now you are at 5600. Check your instruments and descend the other way."

Airliner 123 (meekly): "Descending 5000."

CONFESSION IS GOOD FOR THE SOUL...

As a couple approaches the altar, the groom tells his wife-to-be, "Honey, I've got something to confess: I'm a golf nut, and every chance I get, I'll be playing golf!"

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"Since we're being honest," replies the bride, "I have to tell you that I'm a hooker."

The groom replies, "That's okay, honey. You just need to learn to keep your head down and your left arm straight."

HOW THE SEARCH FOR UNLEADED AVGAS IS LIKE TWO ELEPHANTS MATING

By Ben Visser



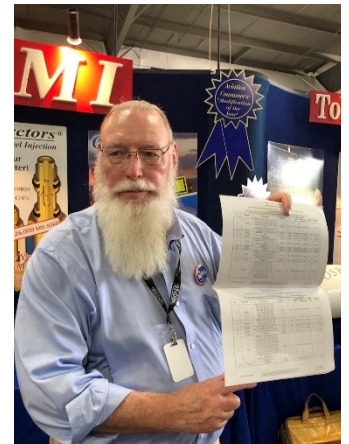
Whenever a new problem or crisis arises in general aviation, it reminds me of two elephants mating. The first step is total panic, followed by complete chaos with trees uprooted, huge dust storms, and everything flying everywhere. And when the dust finally settles, nothing happens for 22 months. In the case of an unleaded 100LL replacement, it is more like 22 years, but you get the picture.

The industry has been working on this problem in earnest for more than 25 years and should have been aware of the potential for the problem for about 50 years. But now that there is a potential solution with the approval of General Aviation Modification Inc.'s G100UL, the FAA is still going to study the problem some more.

GAMI's George Braly shows off the STC paperwork that covers all engines in the FAA's database.

But think about that for a few minutes. If it is approved for all piston engines, why the need for a STC? Why can't most pilots just start using it once it becomes available?

The only reason that I have heard is that the FAA wants to leave the door open for further evaluation of the unleaded fuels from Shell and Swift Fuels. This may lead to a more competitive avgas marketplace, I would guess. The GAMI fuel is just a two-component blend, but for now one of those components has to be shipped from overseas, which could be a problem with the current shipping situation. And the other component is a highly refined alkylate product.



One potential problem is that the people who run oil refineries do not like boutique blends or products. In the mid-1990s when I was with Shell, I was called into the head office for a meeting on the upgrades needed to the leading system at our refinery that was producing 100LL. I thought I was prepared with the cost for the system and the profit derived from the marketing of 100LL. But the refinery people were very well prepared.

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In an oil company, it is not just one big happy family. It is more like numerous different companies under one roof. The E&P or exploration and production group punch holes in the earth and produce the crude oil. This is transferred to the manufacturing or refining group to make into saleable products. And then the marketing group sells the product.

This means that the refinery group has to “buy” the crude from E&P, refine it, and sell it as a finished product to the marketing division. This system works well for most high-volume products like automotive fuel, diesel, Jet A, and so on. But small batch blends like avgas do not fit into the normal operating procedure. In addition, if a mistake is made in the blending process, mogas and diesel fuel may cause a stalled vehicle, which is no big deal.

Even Jet A is tolerant of mistakes because the product is co-blended with products from other refineries, and a jet engine will burn anything as long as it can be pumped. But with avgas, an off spec fuel can bring down a plane quickly — and that will make the national news even if no one is hurt.



The Marathon Refinery in Anacortes, Washington. (Photo by Walter Siegmund)

When I got into the meeting, the refinery people had a lot of data, such as the cost to maintain and run the distilling operation to produce aviation alkylate. They also talked about the cost of the dedicated blend, storage, and shipping. Now I know that the production of an unleaded avgas will be a little less costly than that for 100LL, but the separate handling system will be much the same. And then there is the liability cost associated with the production of avgas. And that is

very large.

Do you remember the huge problem Chevron had with the contamination of its avgas on the west coast in 1994? More than 1,000 general aviation pilots in Northern California bought the fuel, which was improperly mixed at the company’s plant in Richmond, California. The Shell refinery personnel were very aware of the cost. The charge back for all of those aircraft engines and service went to the refinery operation. This liability exposure was something the refinery people were not willing to bear. As a result of the meeting, Shell discontinued the production of any avgas fuel or component.

I doubt that many refineries will be willing to jump into this business just because of the absence of lead, unless they can be a sole supplier for a large area with little or no competition.

Ben Visser is an aviation fuels and lubricants expert who spent 33 years with Shell Oil. He has been a private pilot since 1985.

Jetoptera targets Mach 0.8 with bladeless-propulsion VTOL aircraft

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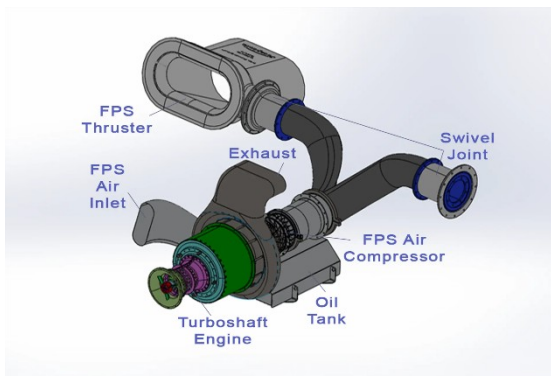
Like bladeless Dyson fans on steroids, Jetoptera's unique aircraft propulsion systems look like pure sci-fi. But they're beginning to demonstrate some fascinating capabilities in testing, and the next step will be a super-fast VTOL aircraft design.

How Jetoptera's Fluidic Propulsion Systems work

We've explained these fluidic propulsion systems before in detail. Indeed, Sir James Dyson did a pretty decent job of explaining the basic concept to *The Telegraph* back in 2010. But in a nutshell, they're not magic, they don't use ionic propulsion, and while there are no blades or moving parts visible, they require a flow of compressed air to function. You can use whatever you like as a compressed air source, but Jetoptera doesn't see a ton of utility at this point in an electric compressor; battery density simply isn't high enough to deliver range figures the company would consider useful. Instead, the company is starting out with efficient gas turbine generators, routing the exhaust gas through the fluidic propulsion systems.



This compressed air is forced through tiny, directional slits all around the inner surface of Jetoptera's hollow propulsion units. These inner surfaces are shaped like wings, and they do the same job, creating a low-pressure vortex right in the middle of the loop as the compressed air rushes over them.



The Fluidic Propulsion System thrusters need to be fed by compressed air. Jetoptera is currently assuming this will be from combustion turbine engines driving compressor pumps

The low-pressure vortex – plus the fluid entrainment vortices that form where the accelerated air rushes out the back and interacts with ambient air – sucks up to 15 times as much air through the loop as was fed through by the compressor, and this multiplies the thrust accordingly.

JET SERVICE TO NUNAVUT COMMUNITY

A Boeing 737-200 jet lands in Iqaluit in March of 2021. The jet, which was made in the 1980s, will be phased out next year, which means the hamlet of Cambridge Bay will be served by smaller turbo-prop planes. (David Gunn/CBC)



This spring, Canadian North airline will retire the last jet in their fleet that can land safely on Cambridge Bay's gravel runway.

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For years, the community of about 1,800 has been served by a Boeing 737-200 series jet. On April 1, 2023, the company is planning to phase out the jet and replace it with smaller turbo-prop airplanes. Canadian North's CEO Michael Rodyniuk told CBC it is simply becoming too hard and expensive to maintain the decades-old aircraft.

"That aircraft was manufactured in the 1980s and ... useful life for an aircraft typically is 15-20 years. We've stretched this one out to 40 years," he said. "Understandably, the community would prefer that we keep the jet on the market, and we would love to be able to do that, it's just that the world has moved on from gravel runways, and with Cambridge Bay using a gravel runway we have to use equipment that will fly in to that type of environment."

A street hockey game in Cambridge Bay, Nunavut. The community of close to 1,800 people will lose regular jet service next year. (Kate Kyle/CBC)



The company said it will replace the old jet with two ATR 72-500 series aircraft. Cambridge Bay MLA Pamela Gross says it will be a big change for the small Arctic community.

"Going into using the ATR will affect how many people are able to come in and out of the community and how much cargo as well can be brought back and forth," she said.

Cambridge Bay, a regional hub in western Nunavut, isn't the only community in the territory that has problems with airport infrastructure. Glenn Priestley is the executive director of the Northern Air Transport Association, an organization that represents air carriers in Canada's North. He says that only 11 airports in Canada's territories are paved, with only two of them in Nunavut.

"Gravel runway damage is a constant maintenance issue," Priestley said. "It's not just the runway, though. It's also the approach lighting, it's also the infrastructure, the airport and the terminals ... is a challenge across the North."

However, modernizing runways will require major investments. Priestley said he didn't know how much a project like paving the runway in Cambridge Bay would cost, but that similar projects tended to be "in the millions."

For Gross, finding the money to improve the runway is a priority. She told CBC she spoke to Prime Minister Justin Trudeau about modernizing the runway when he visited Cambridge Bay last August and is organizing meetings now to talk with federal ministers about possible sources of funding for the project.

"It's going to be very hard for our community to not have jet service but I'm hopeful that we will be able to find funds from the federal government in the near future to support the need."

Sarah Krymalowski is a reporter with CBC North in Iqaluit.

No one believes seniors

...everyone thinks they are senile.

An elderly couple was celebrating their sixtieth anniversary. The couple had married as childhood sweethearts and had moved back to their old neighborhood after they retired. Holding hands, they walked back to their old

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school. It was not locked, so they entered, and found the old desk they'd shared, where Jerry had carved "I love you, Sally".

On their way back home, a bag of money fell out of an armoured car, practically landing at their feet. Sally quickly picked it up and, not sure what to do with it, they took it home. There, she counted the money - fifty thousand dollars! Jerry said, We've got to give it back. Sally said, Finders keepers. She put the money back in the bag and hid it in their attic.

The next day, two police officers were canvassing the neighbourhood looking for the money, and knocked on their door. Pardon me, did either of you find a bag that fell out of an armoured car yesterday?

Sally said, "No".

Jerry said, "She's lying. She hid it up in the attic".

Sally said, "Don't believe him, he's getting senile."

The agents turned to Jerry and began to question him. One said: "Tell us the story from the beginning." Jerry said, "Well, when Sally and I were walking home from school yesterday"

The first police officer turned to his partner and said, "We're outta here!"

Describes the US system but has parallels to our own...

FIVE THINGS YOU DON'T KNOW ABOUT CROP DUSTERS

By William E. Dubois · General Aviation News



I bet most of you have never even heard of the NAAA before, but the organization represents members of a vibrant segment of the aviation industry that's literally off the radar: The low-flying pilots who are a more critical part of the food on your table than you probably realize.

But beyond the existence of their version of the Aircraft Owners and Pilots Association (AOPA), Experimental Aircraft Association (EAA) or National Business Aviation Association (NBAA) — and their role in your dinner roll — there's a whole

lot most of us in aviation don't know about the folks we share the sky with.

Here's a quick list of five big things (and a bunch of related little things) that most pilots don't know about crop dusting and crop dusters.

1. What's in a Name?

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They don't really like to be called crop dusters, although being well-mannered country folks, they are too polite to correct you. Instead the bigwigs prefer "aerial applicators," while the rank-and-file are happy with the less formal "ag pilots."

Why? Well, first off, "crop duster" is inaccurate. No one has dropped powder on crops from an aircraft in decades. The herbicides, insecticides, fungicides, and fertilizers are all liquids. And then there's the image thing. Over the last few decades the industry has focused on increased training, professionalism, safety, and the mentoring of younger pilots by veterans, and the old tag of "crop duster" in some minds conjures images of wild men or drunks like Randy Quaid's iconic character from the movie "Independence Day." As Jon Smith of [AG Aviation School](#), told me, "there's no room for wild men in this business. We're flying million-dollar airplanes."

2. Million Dollar Flyers

Ag planes cost a \$1 million? Yes, even \$2 million — or more — depending on the model. The Cessna and Piper of ag planes are [Air Tractor](#) and [Thrush Aircraft](#). Models from either one will set you back considerably more than a fully tricked out turbo Cirrus SR22. And they are BIG airplanes, especially given that most are single seaters.

Air Tractor brought one of its 502s to showcase at the trade show. It towers over you, has a wingspan of 52 feet, and is 33 feet spinner to tail. The company had to have the wings and tail removed to get it in the door of the trade show floor at the Knoxville Convention Center.



The cockpit of the Air Tractor 502 on display at the 2022 show. (Photo by William E. Dubois)

It's not the biggest model the company makes, but it still weighs 4,500 pounds empty, and has a useful load of over 5,400 pounds. Inside the cowl is a Pratt & Whitney PT6 turboprop, this one belting out 750 horsepower.

Interestingly, I chatted with some folks from Dream First Bank, a 100-year-old financial institution in Kansas, and it has started financing ag planes. They told me that they like the fact that unlike, say, a crop combine, there are federal rules that mandate aircraft maintenance, which keeps their collateral in good repair.

3. Continuing Education

Wait a minute, did you say that there are schools for crop dust... err... aerial applying?

Yes, ag pilots can learn on the job under 14 CFR § 137 or there are a number of schools that teach the skills. Not only that, but ag pilots are pretty much the only pilots required to have honest-to-God continuing education — not just flight reviews or line checks.

In all, 27 states require continuing education credits to renew state commercial applicator licenses.

To that end, the expo packed in two dozen educational sessions over four days ranging from nozzle flow and pressure control, to next-gen precision GPS, to a seminar on dealing with relationship issues and their possible impact on pilot decision making and safety.

4. Earning Your Wings

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You airline-bound guys and gals (that's ag talk) complain about having to work a couple of years as CFIs before flying for the regionals. To get your first "seat," as an ag flying job is called, many operators require new pilots to work one or two seasons as part of the ground crew, learning all phases of the operation before moving into the airplane. But then the logbooks get fat quickly. One new ag pilot I talked to logged 700 flight hours in his first season, while industry vets have hour-counts that would make even the most senior airline captain blush.

5. Better Living Through Science

Want to ban chemicals? How does starvation sound? The ag folks are sensitive to the bad rap the industry gets from some quarters and are quick to point out that crop plants "compete" with 30,000 species of weeds, 3,000 species of nematodes (worms), and a whopping 10,000 species of plant-eating insects — and that's not even counting plant diseases and fungi.

Without ag fliers putting their butts on the line in what's probably not the safest job on the planet, the globe's food supply would be pretty grim.

How grim? Going outside of the ag folks just to avoid any possible bias, I did some research and found that the [United Nations Food and Agriculture Organization](#) estimates that, even with current crop "protectants," that fully 40% of the world's crops are lost each year to this onslaught of weeds, worms, and weevils. Meanwhile, University of Bonn scientist E.-C. Oerke and his team of researchers at the prestigious Institute for Plant Diseases have estimated that without pesticide use, that number would increase to 70%.

William E. Dubois is a NAFI Master Ground Instructor, commercial pilot, two-time National Champion air racer, a World Speed Record Holder, and a FAAsteam Representative.

Electric Plane Adoption Faces an Uphill Battle Thanks to Physics

Jet fuel? Batteries? A small nuclear reactor? Wired breaks down the best way to get these birds in the air.

By **Erin Marquis**



Eviation's "Alice", the world's first all-electric commuter airplane, takes off for its first flight at 7:10 am on September 27, 2022 in Moses Lake, Washington. Piloted by Eviation's Chief Test Pilot Steve Crane, the flight lasted 8 minutes taking the aircraft to an altitude of 3500 ft. Photo: Mathieu Lewis-Rolland (Getty Images)

An all-electric passenger plane took its first flight this fall, potentially heralding the entry of air travel into the electric age. Or does it?

The Eviation Aircraft Alice you see above only cruised at 3,500 feet, traveling at 260 knots (or 300 miles per hour) for eight minutes. Those stats are no where near what the big, money-making and pollution-producing commercial jet aircraft can do. The planes most of us ride in can travel at over 500 miles per hour and heights above 30,000 feet in the air.

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Consumers understand the limitations of EVs and have adapted to the challenges. When it comes to range in electric planes, however, manufacturers will have a much harder time taking to the skies. *Wired* has a rundown of the basic physics which is so accessible, even I understand it. The entire piece is worth your time, but here's a good run down of the essential problem of electric planes:

Let's go back to the example of the 747. Most variants of this plane have a fuel capacity somewhere around 200,000 liters, which is really a lot of fuel. With a density of about 0.8 kilogram per liter, this gives it a fuel mass of 160,000 kilograms. The specific energy of jet fuel is around 12,600 watt-hours per kilogram. This means that with 1 kilogram of fuel, you could get a power of 1 watt for 1 hour—assuming you can use all of the energy, which you can't.

Let's say that the overall efficiency of the plane is 35 percent (which is the same as saying each jet engine is 35 percent efficient). That means that 1 kilogram of fuel will actually only give you 0.35 watts for one hour. But you see where this is going, right? I know the amount of fuel in the 747 and the required power. With that, I can calculate the flight time (and also the flight distance). Cranking the numbers gives me a flight time of 13.5 hours and a distance of around 10,000 kilometers, or 6,200 miles. That's just a rough calculation, but it seems legit.

Now suppose I take all that jet fuel and replace it with batteries. Assume that I can replace the jet engines with equivalent electric-powered turbofan engines or something. So, that's a 160,000-kilogram battery. Electric cars use a lithium-ion battery, and the best specific energy you can get is about 250 watt-hours per kilogram. Now you can already see the problem. If I assume an electric motor is 50 percent efficient, our electric-powered 747 could fly for 22.7 minutes with a range of 304 kilometers. Forget about that trip to Hawaii.

The numbers don't lie: Jet fuel is simply better at propelling jets through the air than big battery packs, but the fuel is also incredibly bad in terms of emissions. Planes not only emit massive amounts of CO₂, but nitrogen oxides as well due to how high jet planes travel. Not to mention some airplanes still use leaded fuel for their flights, the health affects of which are currently unknown. The pollution from plane traveling is getting worse; emissions increased 30 percent in six years, from 707 million tons in 2013 to 920 million tons in 2019, according to the Environmental and Energy Study Institute.

MOSQUITO!



This plane helped map Canada. Now a group of Calgarians are restoring it

The WW II airplane will function as a static display but with working engines

Richard de Boer, president of the Calgary Mosquito Society, says restoring the de Havilland DH.98 Mosquito honours those who gave their lives, those who designed the aircraft and those

who served on it. In a workshop at the Bomber Command Museum of Canada in Nanton, Alta.,

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volunteers scrape paint and assemble parts around the wooden wings and fuselage of a historic de Havilland Mosquito.

For 10 years, a range of people — from aviation industry experts to people with very little experience — have been gathering to restore the aircraft owned by the City of Calgary.

They're at the halfway mark of the project, but a love for aviation history, along with the dedication of the volunteers, is what's driving the long-term plan. "It's a passion for doing it, and it's a passion to see it through to the end — and it's such a unique airplane," said Gary Toffelmire, who has been volunteering with the project for more than eight years.

*Gary Toffelmire works on resorting parts of the Mosquito.
"There's just nothing like a Mosquito."*

The Mosquito served in the Second World War and in peacetime. It performed high-altitude photo mapping work across Canada with Spartan Air Services.

In 2010, the Calgary Mosquito Society, the non-profit organization responsible for restoring the aircraft, entered into an arrangement with the Bomber Command Museum of Canada, a community museum that has developed an expertise in restoring vintage warbirds.



Part of the agreement says the society can use the museum's shop space, along with its specialized tooling and the members' expertise, to restore the plane in exchange for allowing visitors into the facility and giving them the opportunity to see the plane up-close. The historic de Havilland DH.98 Mosquito is being restored at the Bomber Command Museum of Canada in Nanton, Alta.

"It's a joy to come in here and take something that's so historic and so old and bring it back to life again," said Chris Durnall, who's been serving as a volunteer on the project for more than five years. "This is a huge part of our history, my history, coming from Britain, and I just think it's a worthwhile cause."

In its proposal to the city, the society offered to pay the full cost to restore the Mosquito. But in December 2011, the city agreed to fund half the cost of the restorations and said it would match all donations the society received. The society is paying for the remainder of the restoration costs through donations.

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Richard de Boer, president of the Calgary Mosquito Society, emphasized the importance of the project, saying it honours those who gave their lives, and those who designed the aircraft and served with it. "And to educate people about the incredible work done by these airplanes, both in wartime and in peacetime," he said. "That's the legacy. It's the touchstone to tell the important stories about the people who were involved with this airplane."

The goal is to restore the Mosquito to function as a static display but with working engines — and to create materials that the society says will educate the public on the aircraft and the role aviation has played on the exploration of Canada.

Omar Sherif is a journalist with CBC Calgary

Church Bulletins

The Fasting & Prayer conference includes meals.

The sermon this morning, "Jesus Walks on the Water". Tonight 's sermon "Searching for Jesus"

Ladies, don't forget the jumble sale. It's a chance to get rid of things you no longer need. Bring your husbands.

Irving Benson & Jessie Carter were married on Oct 24 in the church, So ends a friendship that began in their schooldays.

More 'Bird-Like' Wing Now Under Development At Airbus

By Mark Phelps



Photo: Airbus

UpNext, the innovation division of Airbus, announced last week it plans to be flight testing a Cessna Citation VII testbed with "morphing wing" technology in 2024. The developmental concept takes an aircraft's complement of control surfaces to a whole new level, well beyond flaps, ailerons, slats and vortex generators.

Similarly to how a bird can use its thousands of feathers to almost infinitely refine the aerodynamic shape of its wings for various phases of flight, the morphing

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wing concept adds gust sensors, pop-up spoilers, multi-functional trailing edge configurations and a semi-aeroelastic hinge to all the conventional control surfaces to more completely leverage aerodynamics for efficiency. Airbus claims the morphing wing can exact improvements of up to 10 percent in specific fuel consumption.

Airbus's "Wings of Tomorrow" program, launched in September 2021, gave rise to work on the so-called "extra performance wing." The testbed, reportedly a 1999 Citation VII, will undergo the structural transformation at Cazaux air base in southwest France. Test flights of the extra-performance-wing-equipped business jet will start in 2024, with an eye toward adapting the technology to multiple applications, including larger aircraft.

Mark Phelps is a senior editor at AVweb.

CAREFUL WHAT YOU WISH FOR...

A married couple in their early 60s were out celebrating their 35th wedding anniversary . in a quiet, romantic little restaurant. Suddenly, a tiny yet beautiful fairy appeared on their table and said, "For being such an exemplary married couple and for being faithful to each other for all this time, I will grant you each a wish."

"Ooh, I want to travel around the world with my darling husband" said the wife.

The fairy moved her magic stick and... abracadabra!.... two tickets for the new Queen Mary2 luxury liner appeared in her hands.

Now it was the husband's turn. He thought for a moment and said: "Well this is all very romantic, but an opportunity like this only occurs once in a lifetime, so I'm sorry my love, but my wish is to have a wife 30 years younger than me".

The wife and the fairy were deeply disappointed, but a wish is a wish...

So the fairy made a circle with her magic stick and abracadabra!the husband became 92 years old.

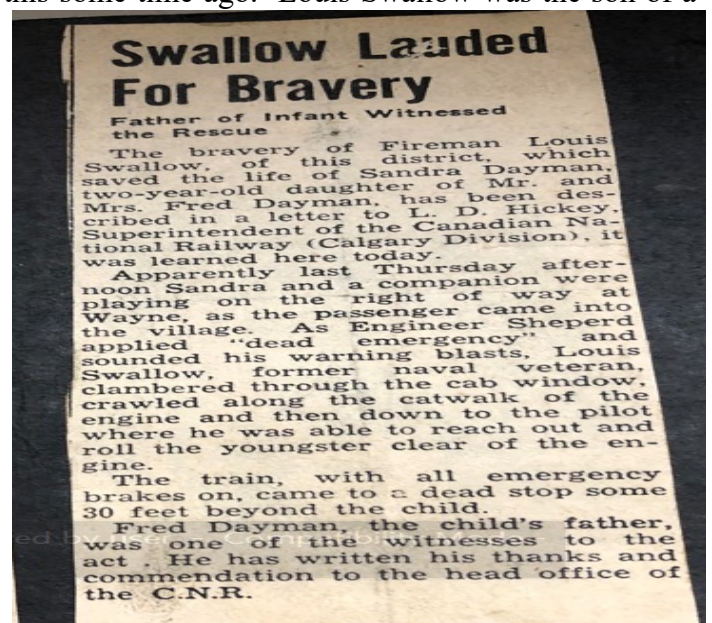
The moral of this story: Men might be ungrateful idiots... But fairies are....female!

OF SUCH STUFF ARE HEROS MADE...

While having nothing to do with aviation, I came across this some time ago. Louis Swallow was the son of a great uncle and grew up in the same town as did I...



FIREMAN LOUIS SWALLOW, 115 12th Ave. E. here shows how he pushed a two-year-old Wayne, Alberta girl to safety when she was playing on the railway tracks in front of an oncoming train. Mr. Swallow who was fireman on the engine climbed through the cab window, down on to the pilot at the front of the engine and pushed the girl off to the side of the tracks with his foot. The incident occurred a week ago as the C.N.R. northbound train was pulling into the station.



Swallow Lauded For Bravery

Father of Infant Witnessed the Rescue

The bravery of Fireman Louis Swallow, of this district, which saved the life of Sandra Dayman, two-year-old daughter of Mr. and Mrs. Fred Dayman, has been described in a letter to L. D. Hickey, Superintendent of the Canadian National Railway (Calgary Division), it was learned here today.

Apparently last Thursday afternoon Sandra and a companion were playing on the right of way at Wayne, as the passenger came into the village. As Engineer Sheperd applied "dead emergency" and sounded his warning blasts, Louis Swallow, former naval veteran, clambered through the cab window, crawled along the catwalk of the engine and then down to the pilot where he was able to reach out and roll the youngster clear of the engine.

The train, with all emergency brakes on, came to a dead stop some 30 feet beyond the child.

Fred Dayman, the child's father, was one of the witnesses to the act. He has written his thanks and commendation to the head office of the C.N.R.

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WHO WAS THE FIRST?

While the Wright Brothers are commonly thought to have been the first to fly an airplane at Kitty Hawk, North Carolina on December 17, 1903, some believe the honor belongs to two other pioneering aviators: Alberto Santos-Dumont of Brazil and Gustave Whitehead of Connecticut. Read about the case for each and decide for yourself.

The Case for Alberto Santos-Dumont

Tens of millions of people around the world received their first introduction to Alberto Santos-Dumont when they tuned into the Opening Ceremony of the 2016 Summer Olympics in Rio de Janeiro and watched as a nattily attired, mustachioed man impersonating the pioneering aviator took to the skies in a vintage biplane. The assertion by Olympic organizers that the Brazilian Santos-Dumont was the true inventor of the powered airplane may have surprised most viewers, but not those in the host country.

While living in Paris in the 1890s, Santos-Dumont poured money from his family's coffee-planting fortune into experimenting with lighter-than-air crafts such as hot air balloons and motor-powered dirigibles. According to "Wings of Madness: Alberto Santos-Dumont and the Invention of Flight" by Paul Hoffman, the high-flying bon vivant even had a personal airship that he would fly from his apartment near the Arc de Triomphe to his favorite restaurant and keep tethered to a lamp-post as he dined inside.

After claiming an aviation prize in 1901 by piloting a dirigible around the Eiffel Tower, Santos-Dumont shifted his focus to heavier-than-air flight. While some remained skeptical of the reported achievements of the Wright Brothers, which were conducted in secrecy away from the public eye, the success of the flamboyant Santos-Dumont was plain for all to see on October 23, 1906, when his 14-bis biplane flew about 200 feet at a height of around 15 feet before a large Parisian crowd in the world's first public powered flight. Less than three weeks later, the Brazilian set the first world record to be recognized by the Federation Aeronautique Internationale by flying 726 feet in his winged aircraft.

Backers of Santos-Dumont claim the 1906 public demonstrations were the first powered flights because his wheeled craft took off unassisted unlike the Wright Flyer, which was launched off a rail and aided by the strong winds at Kitty Hawk to lift it off the ground. Henrique Lins de Barros, a Brazilian physicist who has written two books on Santos-Dumont, told Reuters in 2003 that the Wright Brothers' flight did not fulfill all the standards in place at the time, which included taking off unassisted, publicly flying a predetermined length in front of experts and landing safely. "If we understand what the criteria were at the end of the 19th century, the Wright Brothers simply do not fill any of the prerequisites," he said.

The Case for Gustave Whitehead

More than two years before the Wright Brothers glided over the dunes of Kitty Hawk, a night watchman at a local manufacturing plant reportedly soared over the industrial city of Bridgeport, Connecticut, in his handcrafted flying machine. A full-page article on page five of the August 18, 1901, edition of the Bridgeport Sunday Herald reported that four days earlier a German immigrant named Gustave Whitehead had flown a distance of one-and-a-half miles at a height of 150 feet over Bridgeport and the neighboring town of Fairfield. An accompanying hand-drawn illustration depicted Whitehead in his bat-like contraption, known as No. 21 or "Condor." Whitehead later reported that he returned to the skies on January 17, 1902, and flew for seven miles over Long Island Sound.

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Whitehead's claim, however, was plagued by a lack of documentation. Scientific American had noted that a single blurred photograph of the immigrant's plane in flight had been seen at a 1906 aeronautical show in New York City, but that snapshot, if it existed, became lost to history after the report. When an attempt was made in the 1930s to interview the two eyewitnesses named in the Bridgeport Sunday Herald piece, one could not be found and the other, James Dickie, said he believed "the entire story of the Herald was imaginary." Still, the persistent claims stuck in the craw of Orville Wright, who in 1945 wrote a rebuttal entitled "The Mythical Whitehead Flight" in U.S. Air Services magazine in which he stated that Whitehead "lacked the sufficient mechanical skill and equipment to build a successful motor" and "was given to gross exaggeration."

The case for Whitehead's primacy received new life in 1987 when the CBS news program "60 Minutes" aired a segment entitled "Wright Is Wrong?" after aviation buffs successfully flew a replica of his craft. The controversy reached new heights in 2013 after Australian aviation historian John Brown announced that he had found a photograph of the exhibit mentioned in Scientific American in 1906 that showed the missing snapshot of Whitehead in flight. Brown's research led Paul Jackson, editor of the esteemed aviation publication Jane's All the World's Aircraft, to endorse Whitehead as being first in flight in the foreword to its 100th anniversary issue that March. (Two years later the publication's corporate owners issued a public statement that Jackson's assessment was solely his personal opinion.) Connecticut legislators subsequently passed a bill signed into law that declared their state "first in flight."

The Case for the Wright Brothers

December 17th, 1903, Kitty Hawk, North Carolina: The Wright Brothers lift off with Orville Wright at the controls. His brother Wilbur is running at the side of the machine.

On the morning of December 17, 1903, Orville Wright took the controls of his heavier-than-air craft and signaled to his brother, Wilbur. With Wilbur running alongside to balance the fragile machine, the Wright Flyer that Orville had built with his brother slid down the guiding rail and soared into the air over a distance of 120 feet. The two brothers from Dayton, Ohio, followed up the 12-second flight that day with three others over the dunes of North Carolina's remote Outer Banks. A handful of witnesses were present for the first flight, and a photograph taken by an employee of the U.S. Life-Saving Service proved the Wright Flyer had taken to the air.

The Wright Brothers meticulously documented their experiments, although they maintained great secrecy while they pursued patents and contracts for their flying machine. Unlike Santos-Dumont, the brothers kept a low profile and did not make a public flight until 1908, two years after the Brazilian aviator dazzled Paris.

Most aviation historians believe the Wright Brothers met the criteria to be considered the inventors of the first successful airplane before Santos-Dumont because the Wright Flyer was heavier-than-air, manned and powered, able to take off and land under its own power and controllable along three axes in order to avoid crashes. Backers of the brothers also note that by 1905, a year before Santos-Dumont's first powered flight in Europe, the Wright Brothers had been able to take flights that lasted as long as 40 minutes.

Historian David McCullough, author of "The Wright Brothers," swatted down the claim that Whitehead was first in flight in a 2015 interview with radio station WNPR. "There's no evidence for it whatsoever," he said. "Mr. Whitehead is never known to have flown anything and when he tried to demonstrate later on, it didn't work at all in front of people. There's something like 35 noted historians of aviation specialists who have signed statements that say it's an interesting story but there's nothing to support it." Other Whitehead skeptics add that the original Bridgeport Sunday Herald story was likely an exaggeration and that the recently discovered photograph is too blurry to offer any conclusive proof that the German immigrant had ever been airborne.

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Although unified in their belief that the Wright Brothers were first to fly an airplane, some of their boosters have their own ongoing historical feud, one that can be seen everyday on American highways. Ohio and North Carolina have each staked a claim to the legacy of the brothers. Both states featured the Wright Flyer on their commemorative state quarters, and while Ohio's state license plates include the tagline "Birthplace of Aviation," North Carolina's boast "First in Flight."

John Olsen, Honorary Lifetime Member

John
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club
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for
his
club
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John Olsen has been a valued member of the Vernon Flying Club since 2012. He has a varied history and many colourful flying stories which we've enjoyed over the years. Some of these were printed in the Member Profile on John presented in the newsletter a few years ago.

In the past few years, John has been particularly generous with both ideas, support and meaningful gifts to the flying club and its members. He has sponsored and provided an annual scholarship to the Aviation Maintenance program at Okanagan University College on the airfield. The washroom upgrades were instigated by John, and the beautiful picnic tables we use are another of his donations....and three more are on order to be delivered this spring. The Bunn coffee maker we all enjoy was one of his contributions, as were bench cushions and various tools that have been of use in maintenance. We've also appreciated John's help at various club events such as COPA for Kids.

It was decided some time ago to pay it back by giving John an Honorary Lifetime Membership to the club. Although he was advised by the club executive last November, it was not until recently that an official presentation was made. During coffee time on Saturday morning, January 7th, President Betty Lee Moore gave a short speech and presented John with an official certificate proclaiming him Honorary Lifetime Member.

We enjoy seeing John daily for morning coffee and hope he'll be able to join us for a long time yet – he has many more stories we have yet to hear!

Thank you, John, from all of us

IMPONDERABLES...

A man placed some flowers on the grave of his dearly departed mother and started back toward his car when his attention was diverted to another man kneeling at a grave. The man seemed to be praying with profound intensity and kept repeating, "Why did you have to die? Why did you have to die?"

The first man approached him and said, "Sir, I don't wish to interfere with your private grief, but this demonstration of pain is more than I've ever seen before. For whom do you mourn so deeply? A child? A parent?"

The mourner took a moment to collect himself, then replied, "My wife's first husband."

KIS, KIS, DINC

We're sitting around the table in the Vernon Flying Club taking care of business when the club radio receiver crackles to life: "Vernon Traffic, this is RagBag C-FUBU, fifteen miles north at 6500 feet, I'll be passing over the airport in ten minutes enroute Kelowna."

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There was a collective gasp from the assembled throng; then, in an awe-struck voice, someone exclaimed: “He didn’t mention conflicting traffic or the frequency on which he’s transmitting.” The others muttered their agreement and the original speaker continued; “He must be a new pilot; someone who’s actually read and understands the radio telephony procedures as they apply to aviation”.

I made up the foregoing, but what is this fascination with including the phrase “conflicting traffic please advise...” and appending the frequency on which you’re transmitting to a position report that is supposed to be composed of “Who you’re calling, your identification, your position, and your intentions” as per regulations? The other day, I heard someone on the ground broadcast “C-XXXX is on the ground at Sumspot, I’ll be backtracking runway XX, conflicting traffic please advise C-XXXX on 122.8”. Now, assuming that you’ve had your radio on since start-up, that you’ve taxied to the run-up position, have waited until the T’s and P’s have attained the necessary spot on the dial, and that you’ve completed the necessary engine checks, surely enough time has elapsed for you to hear any conflicting traffic that might be in the area. And if there is conflicting traffic in the area, your call that “C-XXXX is in/on taxi Alpha and will be backtracking runway XX for take-off” is an invitation to anyone who IS in conflict to step up to the plate and so indicate.

While we’re at it, if you are airborne and hear the call mentioned in para 1, it does not require a response indicating you’re ten miles east of their position at 3500 feet inbound to Vernon; ETA 15 minutes. THERE IS NO CONFLICT! Similarly, if you’re inbound to the airport and have been listening out for the last hundred miles or so, you will be aware of anyone who may be a threat; however, if circumstances deny you that opportunity, your position report is, again, an invitation for someone else to step up to the plate and de-conflict.

Today, I heard someone append “conflicting traffic please advise C-XXXX on 122.8 or 126.7”. I didn’t catch the type, but no aircraft I flew could transmit on two frequencies at once. I know; I know; the defence will be that someone might be listening on both frequencies. Bollox! If they’re capable of listening on 122.8, they’re capable of replying on 122.8.

I know I’m preaching to the choir, but if you’re one of those miscreants who routinely transits the Vernon area, please remember to KIS, KIS, DINC;

Keep It Short

Keep Is Simple

Don’t Include 'No Conflict'

Here endeth the rant. I’m starting to sound more and more like Andy Rooney every day...

COMMENT

This bit of fulmination was run nearly ten years ago. I’m happy to say that – mercifully – similar occurrences have become rare around the Okanagan. However, I understand that it still has a life in other parts of Canada.

AN RV FLIES THE COOP

On Sunday, 4 February 2023, the number of local RVs – those designed by Richard Van Grunsven – was reduced by one when Alan Daniel lifted off the Vernon’s runway 23 and pointed the nose of C-FBJV toward its new home in Penticton.



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The aircraft, an RV-7A, was built by local pilot, John Swallow, over a period of nine years. Started in 2005 and under the mentorship of Rick Thorburn, C-FBJV took to the air on its maiden flight on 24 April, 2015. Four months later, on 24 August, John headed east and four days later was sitting in front of the hangar of his former employer in Saint John NB.



Alan prepares to mount up

The maiden flight of C-FBJV in April 2015

Most aircraft builders try to incorporate their initials into the call letters of their aircraft; however, in my case, nothing similar was available. However, in scanning the available 'marks', I noticed that 'C-FBJV' was

available. Those marks were assigned to an Irving Bell JetRanger helicopter 'back in the day' and I had accumulated over a thousand hours on that machine. Which meant that on 24 April, when I announced my intentions to the world on the first trip, I sounded like I knew what I was doing. (When moving to a new machine, it takes a while for its call sign to fall smoothly off your lips...)

Alan Daniel displaying the "RV grin" shortly before start-up.

Alan lifted off Vernon's runway 23 shortly before noon and I received a text message an hour or so later that C-FBJV was safely at its new home...



SUNDAY SERVICE AT THE LOCAL CHURCH

Mary Clancy goes up to Father O' Grady after his Sunday morning service, and she's in tears.

He says, " So what's bothering you, Mary my dear?"

She says, "Oh, Father, I've got terrible news. My husband passed away last night."

The priest says, "Oh, Mary, that's terrible. Tell me, Mary, did he have any last requests?"

She says, "That he did, Father."

The priest says, "What did he ask, Mary? "

She says, He said, "Please Mary, put down that damn gun!"

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THE SUPER PETREL



Photo by Alison Crerar

VERNON FLYING CLUB / COPA Flight 65 2022 / 2023

PRESIDENT: Betty Lee Longstaff
VICE PRESIDENT: John Swallow
TREASURER: Bill More
SECRETARY: Marion Ross
DIRECTOR: Alison Crerar
DIRECTOR: Tom Glover
DIRECTOR: Derek Riphagen

COPA CAPTAIN: Stuart McLean
COPA Co-CAPTAIN: Stan Owen
COPA Navigator: Michael Crutchley

Newsletter Editor: John Swallow



Meetings are held the third Tuesday of each month at 7:00 p.m.