

- November 2016 -



With the change back to Eastern Standard Time in November, sunset comes early now. Although I call this photo “Five O’ Clock Shadow”, it was actually taken about 16:30 on Sunday, November 6, 2016.

President’s Message

With our last meeting of the year behind us now, it really signals the end of another year for KWRAA. Our annual Christmas Party on November 25th was the last time some of us will see each other until the January meeting in the New Year. Remember that our website and newsletter provide a way for us to stay in contact and informed during the busy holiday season and hiatus from the regular meeting schedule. If you have something you would like to share using either medium, please forward it to me for inclusion.

Well, my Highlander is back on wheels. It really has been a great summer and fall for flying! Sure there were a few nasty and windy days mixed in, but overall it was great. I put almost 140 hours on the plane since I put the floats on in April, with trips all over this part of the province and even one to Yarmouth Nova Scotia to the COPA convention with Lee

Coulman and the seaplane museum in Sault Ste. Marie.

The abnormally warm weather this fall allowed me to do a little extra flying than might have otherwise been possible, so I am certainly thankful for that opportunity. I’m sure many of you have enjoyed this reprieve from winter weather, which is undoubtedly just around the corner. Who knows what this winter will bring, but for now, I have enjoyed some of the best flying I have had all year.

Whether we pre-heat and winterize our aircraft or park them for the winter while we await spring, we can all still dream of the great adventures that await all of us in the next flying season.

2017 is going to be a great year for KWRAA!

- Dan

Fall Flying 2016



This autumn, I had the pleasure of flying to a number of great locations to experience the gorgeous fall colours in Ontario. Having the ability to land on water, meant I had the added bonus of being able to explore more of the Muskoka area up close and personal in the fall. Even travelling to the higher land elevations near Grand Valley and northward to Georgian Bay gave me a great opportunity to experience the fall colours in woodlots on my way north.

Adding a bit of water to the mix only enhances the great scenery. Whether it's the step banks of a glacially-carved river valley covered with maple trees or a northern lake sporting a shoreline dotted with tall pines and oak trees, water just seems to hold a vital place in the beautiful fall landscapes in Ontario.



The Leading Edge



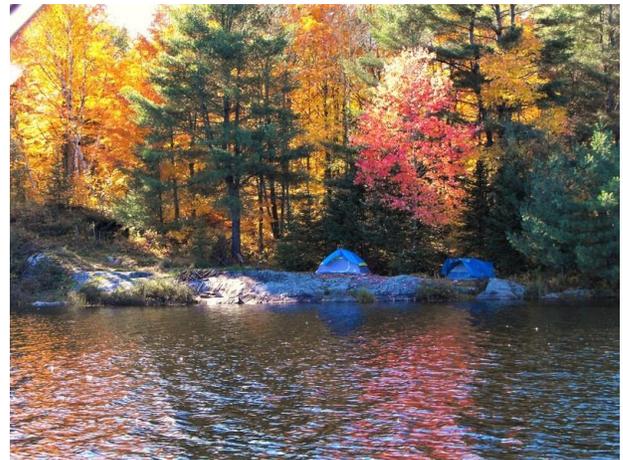
Overflying colourful autumn landscapes can be breathtaking but flying to, and landing on, a remote northern lake to capture a little bit of paradise first hand is a breathtaking visceral experience that somehow feels sacred.



In my humble opinion, the beauty of Muskoka reaches its pinnacle in the fall as the leaves of the maple, oak, ash, elm, birch and other deciduous trees reach the end of their life cycle before falling to the forest floor.

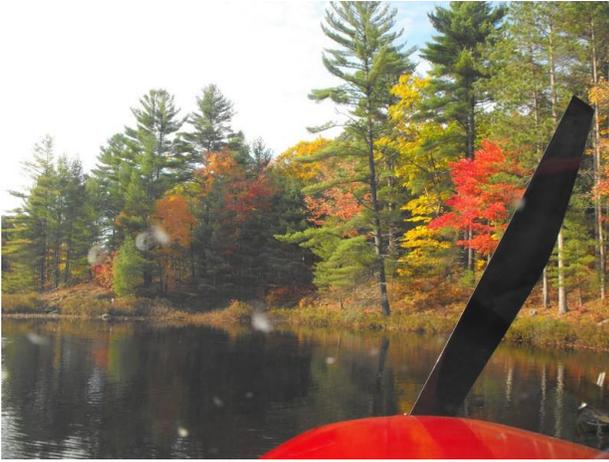


The late Red Fisher called it *God's Great Earth* and considered being in the wilderness to be as much of a religious experience as any church he had ever been in. Whether we agree with this view or not, we certainly have to agree that there is a great degree of spirituality connected with being alone in such beautiful natural surroundings experiencing the awe and wonder of nature. I certainly feel blessed to be able to fly into it, almost at will. Perhaps this is one of the many reasons I put so many hours on the floatplane this year.



Although the nights begin to get a little too cool for many of us to consider camping, there are always a few hardy souls willing to tough it out for one last chance to experience the beauty that is abundant in the semi-wilderness areas of Muskoka. This time of year, campers are a rare sight, but the bright blue canopies on these tents only seem to add to the rainbow of colours as the low angle sunlight streams through the trees trying its best to slow the inevitable cooling of the earth and water of Muskoka in the fall.

The Leading Edge



In the photo above, a small oak tree on the shoreline competes with the cowling on my Highlander to see which one is a brighter red. Below, the bright yellow leaves of a solitary maple tree stand out among the tall pines and spruces along the rocky shoreline, framed by the mirror image of still waters and cotton ball-like clouds of a fair-weather autumn sky.



I have been told many times that October can yield some of the best float flying of the year. Knowing how often the weather reports show rain, wind and morning fog in the fall, I was somewhat skeptical of this idea, but I have since changed my opinion on fall flying. I once had a flight instructor who said the fall is when you will see the most *TEMPO*'s on METARS and that you might as well replace everything after *TEMPO* with the word "crap". I certainly understand that impression, but it's far from the whole picture for the fall season in Ontario.

It is true that the number of fair-weather flying days can be reduced as the days grow shorter and the changing weather patterns cause the air to be less stable as weather fronts move through. However, on those days when the conditions are right, the flying and scenery are nothing short of spectacular!

In Southern Ontario, we are incredibly fortunate to have so many magnificent places to explore and especially to have a jewel like the Muskoka lakes to enjoy. Being able to fly into a remote lake after the end of tourist season to enjoy the semi-wilderness is priceless. The fact that it is scarcely over an hour's flying time away in a small float plane is a delightful bonus. I am pleased that I have an opportunity to share it with you even if it is only through a few photos and description of some of my fall flying adventures in 2016.

- Dan



Micro-Controllers and Automation in Amateur-built Aircraft

At the November meeting, we had the pleasure of meeting Terry Fisher and got an introduction to some readily available and reasonably priced micro-controllers and learned a little bit about what they can do for us in our amateur-built aircraft.

Lee Coulman explained to us the dilemma he was facing in implementing a good wheel position detection system in his Searey. There are basic detection/alarm systems on the market for about \$250, but they are very limited in what they can do. There are systems on the market that have more features and are more robust, but they are much more expensive; in the order of one to three thousand dollars.

Lee approached Terry at a lunch meeting this summer and the two of them began discussing how easy it would be to design the ideal system using a micro-controller. They decided that the open architecture of the Arduino processors was best for the task at hand and a project was born. Recently, Lee asked Terry about presenting a primer on Micro-controllers to our RAA chapter and luckily for us, Terry agreed.



Terry described the advantages of using a micro-controller rather than a simple logic system, which requires a complete redesign if the parameters being measured need to be changed. The programmability of the Arduino boards and the configurable inputs and outputs make them compatible with many small

homebuilder projects. He stressed the need to make sure the micro-controller acts as a monitoring system, not a process automater.

Ideally you will use them to determine that a switch has operated, an action has taken place, a process has been completed, etc.; not to actually complete the action wherever possible. His suggestion is based on safety concerns for pilot interaction with the aircraft so as not to become too reliant on automation to the point of complacency.



Terry showed us three different processor boards in the Arduino family; the Nano, the Leonardo and the Max. There are more versions of the Arduino, but this gave us a good idea of the packages available.

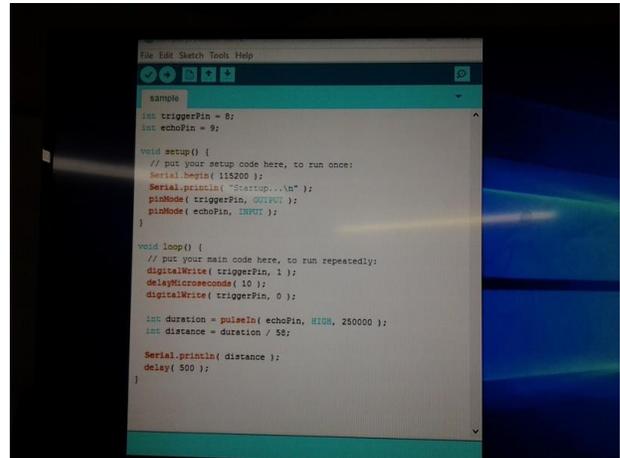


The presentation was a big hit and many of the guys stuck around to ask Terry questions afterward. A suggestion was made to form a small technical working group to explore the

Arduino micro-controllers in more detail and develop some ideas on how to benefit the members of KWRAA by using them in their aircraft. We will definitely explore this suggestion in more detail, so if you are interested in learning more, let me know.



There are “kits” available to learn about the Arduino processors and numerous different sensors that can be purchased that work well with the Arduino family. There are also a number of “programs” that have been developed to operate the sensors that can be modified as required to perform different functions, and I/O devices like keypads and displays for human interaction with the devices or programming them. Check the website later for more information from Terry including a copy of his presentation and sample program.



Thanks Terry for an informative presentation this month! Everyone seemed to really enjoy the talk and considered the possibility of using microcontrollers in their aircraft.



See you at the January 2016 meeting at 7:30 on the 9th!

I am arranging for our annual re-current training with Fred Grootarz and Terry Fisher has agreed to do a presentation on 3D printing this winter. I will notify you as soon as I have confirmation on when each of those will be held.

Remember ... there is no December meeting!

Be sure to check out the December issue of the Leading Edge or the KWRAA website for a copy of the events scheduled in 2017!

Be sure to check out the KWRAA website frequently for the latest information regarding KWRAA events, our meeting minutes and additional information from our regular KWRAA monthly meetings.