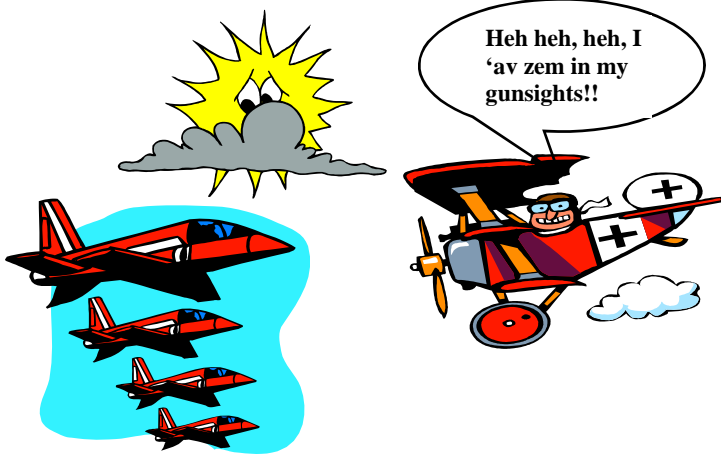


OMFC Fliteline

The Newsletter of the
Oakville Milton Flying Club
February 2010



February Meeting

The February meeting was all about “Jets”; yours truly was on vacationskiing at Sun Peaks, B.C..... fantastic! Andy Sulkowski agreed to step in and make up the meeting notes, and he did a great job. Many thanks Andy!!! Here are his notes on the meeting.

The February meeting was convened by President Percy Ford-Smith at 7:30 pm with 40 members and 1 guest present.

The first order of business was a report by Brian Anderson on the MAAC Divisional Seminar that he and Mike McDermott attended recently. There, Zone Director Clair Murray invited Mike to talk about insurance aspects and Brian to give a run-down of how OMFC approaches flight training and safety issues at the club fields. There was great interest in Brian’s presentation; what was scheduled for 30 minutes turned into an hour’s talk. It turns out that most clubs are not as regimented in their approach to both safety and flight training as is Oakville, and in fact can be quite lax as to the safety issues at their fields. Also most clubs follow a procedure whereby an instructor has the same group of students for the season, rather than having the first free instructor in line take the first free student waiting. Clubs could also not understand how OMFC could operate their wings program without offering weekend classes, or accommodating students who could not attend the flight school on the designated evenings.

It seems that Brian and Mike may be repeating their talk in the future as only about half the zone clubs were represented at this last meeting.

Percy then read an email from a sixteen-year old junior member, James Macdonald, who indicated he was willing to do volunteer field work at our two locations on his days off. James’ enthusiasm and willingness to help out was applauded by all.

VP John Pretty next introduced the evening’s guest speaker: Peter Ayache, and his topic, Jet model aircraft.

Peter is a former MAAC Jet Committee chairman, and has been in the hobby almost 25 years. He is an electronic engineer who also has his own business supplying jet model related products: turbines, kits, retracts, machined struts, wheels, brakes and other accessories (Altecare Products, website at www.altecarerc.com). Altecare also deals in EDF (electric ducted fan) models and support systems. These can be almost as complex as the turbine models, with many challenges of their own – massive LiPo packs can be quite a handful to say the least!

Peter had two of his models on display, a scale BAE Hawk (still under construction) and a sport model called the Scorpion. The Scorpion comes in at about \$8,500, money well spent on quality components, claims Peter, as it is important that everything in a jet be perfect, otherwise it is just a crash waiting to happen. When he started out with jets, there was very little available commercially, and he basically had to teach himself to fly and maintain the models. His first plane was a high wing trainer (!) called the Avi8tor; nowadays the entry jet is usually something along the lines of the Boomerang. Peter now tours clubs and gives talks on jet flight and jet maintenance to help people ease their way into the hobby. Learning can be very expensive especially if not done right!

Modern jets are all fiberglass and composite materials, and everything must be maintained perfectly. Peter claims flying a jet is not that difficult, the difficulty is in landing, since jets have no prop to slow them down. Even with air brakes on the model, you need to pick your landing spot from a long way off, and then if you overshoot, you can’t forget that it takes the turbine about a second or two to spool up to speed again. A jet can fly a long way in a second or two!!

For a machine that loafs around at over 300 km/hr, there are three main mechanical challenges to deal with. Servos must be heavy duty (ball bearings with metal gears), and there is usually at least one servo per control surface. Peter has an F-18 he is building which will have four servos for the elevator alone (one pair on each side of the flying elevator). This means a 12 channel radio at least, with multiple channels per servo in most cases. All wiring and connectors must be heavy gauge, and the landing gear must be of very good quality since these are heavy models (around 30 lb dry). Not only are there the usual landing forces, but all these planes have brakes to stop them once they land. The landing gear takes a pounding.

A jet model must be well organized inside. There are three systems that have to be planned for in the plane – an air system for the landing gear retracts, brakes and any other hydraulics, a fuel system for the turbine (and smoke, if used), and an electrical system for the controls of both the flying surfaces and the turbine or EDF. That's a lot of wires and tubes that have to be routed through the fuselage and wings – good organization and good labeling is a must!

The fuel system consists of a Kevlar tank (plastic is illegal) which is usually split 70/30 between fuel for the turbine and smoke fuel. In addition there are air traps in the fuel system since turbines don't like air bubbles. Smoke is produced by simply spraying the smoke fuel into the 700 degree exhaust.

By law, these models must have brakes; they are usually expansion drums actuated by air; the wheels that they are attached to should have ball bearings, as bushings will wear out too quickly.

The engines themselves are marvels of precision engineering. Fuel consumption is electronically regulated, and comes out to about ½ lb of kerosene per minute. Peter usually aims for six minute flights! The medium sized turbines spin at 35,000 rpm idling, and peak at about 120,000 rpm, giving about 40 lbs thrust. A thrust

to weight ratio of 1:1 or greater is ideal for these models. Winter flying is no problem for these engines, in fact they get about 2 lbs more thrust because of the denser cold air! The most common cause of engine problems is dirt – Peter describes the turbines as big vacuum cleaners. Anything ingested can cause damage to the fans by introducing vibration. Then, if there are problems, the whole unit has to be taken apart, checked and rebalanced. More big bucks!

Peter then showed us samples of each of the major components of a turbine, some samples of landing gear, brakes and wheels, and a complete carbon fiber EDF unit. These EDFs can generate around 19 lb thrust and cost “only” \$1600 (plus a fortune in Lipo's of course).

Peter also mentioned two upcoming jet shows, one in Leamington at the end of May, and one in Wingham June 19th & 20th. Wingham is a full scale airfield so there is lots of room for the big jets.

Peter then took questions from the floor, and the members had a chance to mingle and look over the planes and components. John Pretty thanked Peter for a fascinating session, and the meeting broke to give people a chance to get refreshments and raffle tickets.

As a finale, Peter took the Scorpion outside to the back of the building and started it up. I think we were all expecting to see a blowtorch on the dark parking lot – at least feel a



bit of heat maybe (it was cold out there!). However, it was all very simple – Peter just primed the turbine (from his transmitter), advanced the throttle (he flies mode 1, by the way) and the turbine spooled up. No flames out the exhaust, no glow in the dark – just this 30 lb jet taxiing around the parking



Peter in the alley.

lot, sounding very much like it was on approach to Pearson. Must have freaked out the people in the next units!! That concluded the meeting – Percy reminded everyone that there will be a March regular meeting on March 1st as well as the Swap Meet on Sunday March 7th.

Well, thanks again Andy for the above!

It looks like everyone had a great time as the pictures graciously sent to me by Louis Csefko and recently sent to all members, readily show. Many thanks to Peter Ayache for his great presentation. [Ed: How do I get the wife to let me spend \$8,000????]

Executive Meeting

- It is not widely known that OMFC has been having on and off meetings with Dufferin Aggregates for use of escarpment lands since last Spring. In the late Fall, we made a formal presentation to the company executives on behalf on OMFC for the use of lands under the control of Dufferin Aggregates. We are sorry to report that, despite our best efforts, we were not successful in this endeavor. We do have another potential avenue we are exploring and we will let you know if anything develops.
- OMFC Aerotow at South Field scheduled for August 7/8th. The event Director will be Frank Pilih.
- The MAAC South East Zone Precision Aerobatic contest will be held on July 24/25th. The event Director will be Jim Eichenberg.

Closing Comments

Our guest Speaker for our March 1st meeting will be none other than our very own Keith Houston. He has tales to tell about how he got to become the pilot to fly the WW11 Fairey Firefly at Hamilton's Mount Hope airfield. He also intends to bore us with some other stuff but we should be able to sit through all of that!

DONT FORGET "SWAP MEET" SUNDAY March 7th!!

That's all for now!!

Here are a couple of great pictures of the Mount Hope WW11 Fairey Firefly.



.....and, in closing, a beautiful full scale "Stampe".



OMFC 2010 Executive

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Vice President:	John Pretty	South Field Manager:	Frank Pilih
Past President:	Don Wilding	Social Director:	Terry Sears
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OMFC Meeting Dates for 2010

<u>Date</u>	<u>Event</u>	<u>Contact Person</u>
Monday, March 1st	Speaker Keith Houston	Percy Ford—Smith
Monday, April 5th	Regular Meeting	Percy Ford—Smith
Monday, May 3rd	Regular Meeting	Percy Ford—Smith

OMFC Event Dates for 2010

<u>Date</u>	<u>Event</u>	<u>Event Director</u>
Sunday, March 7th	Swap Meet	Erik Genzer/Terry Sears
Saturday, June 5th	Mall Show	Don Wilding
Sunday, June 6th	Electric Fun Fly	Jack Linghorn
Saturday, June 12th	Mall Show	
Sunday, June 20th	Air Show / North Field	Don Wilding/John Pretty
Saturday/Sunday, July 24/25th	S.E. Zone MAAC Pattern Contest	Jim Eichenberg
Saturday/Sunday, August 7/8th	Glider Air Tow	Frank Pilih/Jim Eichenberg