

MAY, 2004

TOPCAP

The Newsletter of the ORCC

This Month's Meeting: Tuesday, May 4th
Entertainment for the April meeting will be:
Some Expert Advice about:
!!! Batteries and Chargers !!!

Your President's Message

West End Field

The West-end field is open for business (is if it really ever closes!). The field has been prepped and the pilots' stations installed. Thanks to Karel for coordinating and to Shahram, Corey Groves and Frank Cloake for helping out.

Concours D'élégance 2004

This year's Concours D'élégance was well attended. There were a total of 17 planes entered in one of three categories: Scale, sport, and glider. I would estimate that there were between 40-50 modellers ready and willing to lend their expertise judging the models.

Here are this year's results:

Grand Champion: Fokker DR1 (Giant scale) by Mark Leighton

1st Scale: CESSNA 180 (on floats)

Louis Rocque

2nd Scale: Demoiselle

Louis Rocque

1st Sport: Somethin' Extra

John Weekes

2nd Sport: Acro-Sport

Robert Pugh

1st Glider: Delerium Tremens

Gudmund Thompson

2nd Glider: Ruby

Brian Buchanan

Mark Leighton built an awesome giant scale DR1 tripe, and very deservingly, won Grand Champion. I think the Baron would have approved.

Again this year, Louis thrilled us all with his expert craftsmanship. Personally, I look forward with excitement each year to seeing the products of the winter's building. 1st place winners were awarded a \$20 gift certificate while 2nd place winners received a \$10 certificate to either Multi-Hobby, Dynamic Hobbies, or Discount Hobbies. Thanks to everyone who entered a model in this year's event.

I'd like to thank Hector Nunez, Raphael Ready (visiting from Stetson Flyers), and Jack Snapper for their help coordinating the event.

Richard Robichaud from Discount Hobbies generously donated the grand prize...a GEM 2000 battery monitor. It'll help Mark make sure the batteries on his gorgeous DR1 don't go dead...and so he won't have to utter the Baron Von Richtofen's last words before he died: "Kaput"!

2004 EVENTS

Please check the club's website and www.calmdays.com for all of the exciting ORCC events for 2004 as well as various other local events being put on by our friends in other clubs in the region. I hope that you have a great flying season.

Questions...Concerns...

If you have a question or concern about anything relating to the ORCC I invite you to contact me directly at [<weekesj@rogers.com>](mailto:weekesj@rogers.com) or call me at home 727-0066 or on my cell 889-2025. I want to ensure that your experience as a member of the ORCC is as enjoyable as possible.

John

Indoor RC Flying ... by Paul Penna

This is a "wrap-up" report on indoor electric RC flying for the 2003-2004 season. As you may remember, this is organized by Bill Nickel of the Rideau RC Flyers, but many members of ORCC and other nearby clubs often attend these indoor sessions (mainly at the RA gym).

Well, there is so much to report! The big news this year was the appearance of Lithium-Ion and Lithium-Polymer cells for powering our electric motors. These cells are *extremely* lightweight and have storage capacities that we could only dream about just a year ago. Previously, we tended to fly with Nickel-Metal Hydride cells with capacities of, say, 300 mah. Now, with Li-Poly cells, 700 to 1200 mah is the norm. Also, some people are not even bringing their battery chargers to the gym any more. With two or three Li-Poly packs in their flight box, they are good for the whole session. Two Li-Poly cells in series provide about 8.4 volts when fully charged, so this is just perfect perfect for our small electric motors. Some of the more daring pilots have powered their motors with 3 cells in series (about 12.6 volts when fully charged, whew!). When so powered, their models, such as the famous "Pogo", can be pulled up in a ver-

tical climb and with skillful use of the throttle, the model can be made to hover. (“Watch out for the ceiling rafters, Bill! Oops! Oh well, get the ladder and the long-reach pole, guys. Bill’s plane is caught in the ceiling trusses again!”)

The next big development was the “re-winding” of motors from CD-ROM’s. Pierre Audette of the Rideau RC Flyers and Graham Collins of ORCC got us going on this. What am I talking about? Well the motor that drives the CD in a PC can be yanked off of its printed circuit board and used to drive the propellers of our indoor planes. Of course, you yank the motor out of an old, out-of-date CD drive that you get for \$2.50 from a computer recycling store. Graham must have bought and examined every CD drive available in the recycling store. He produced a “catalogue” of motors based on their manufacturer (Toshiba, Sony, Creative, etc.) giving their sizes (usually about 23 to 28 mm O.D.), number of poles (usually nine poles), shaft diameters (3 mm is best) and type of bearings (bushing or ball bearing). He has categorized about 40 different units as to their suitability for use in indoor models. And Bill has picked up so many units, the guy at “Computer Recyclers” knows him on a first-name-basis.

Essentially, the motors are “out-runners”, that is, the nine stator poles are stationary and are attached to the airframe (just as they are affixed to the printed circuit board in the original drive) and an outer ring of magnets on a central shaft is rotated by the pulsating magnetic field created by the stators. So, we attach our indoor propellers to the rotating outer ring and now we have a brushless motor for indoor models. Oh yes, one more requirement: you must re-wind the stator with heavier gauge wire to take increased current flow. At first, you think this re-winding business will be too much work, but after you have re-wound a motor, you realize it’s no big deal. The resulting re-wound motors are really impressive. They will turn an 11 inch diameter prop and power an indoor model more efficiently than a conventional motor with brushes. Of course, you require a brushless motor controller for these motors. Everyone is using the Castle Creations “Phoenix” 10 Amp controller: very tiny and very versatile. And being never satisfied, Pierre Audette found a source of even more powerful individual magnets to replace the originals in the motor. He organized a bulk purchase of these, so now everyone has replaced the magnets in their motors to get more power. Yes!!

Gerry Pronovost and Louis Rocque continue to impress every one with their ultra-ultra-light Tiger Moth and Taylor Craft, respectively. Both of these planes can be looped. Not bad for RC models that weigh less than an ounce! They both exhibited examples of their ultra-light models at the Concours d’Elegance on April 6th.

Pierre Audette and Louis Dionne have again designed their own foam-based models with CD ROM motors that will knock your socks off. Louis constructed his model using a numerically-controlled, hot-wire foam-cutter and so there may be a few more pilots flying his design next year (or even this summer on a calm evening in the local park).

Speaking of foam, Brian Wattie attended a session with his flying “Flap-Jack” made from fan-fold blue foam. It was similar to a *big* “Mini IFO” and it flew well. (Notice the emphasis on “big”. What else would you expect from Brian?)

Oh, and one final note: Louis Dionne and I flew our indoor models on the big lawn of

the RA Centre one Saturday. We had missed Bill's message telling us that flying was cancelled that Saturday because of a mix-up with the RA scheduling the gym for another group (say, ORCC Executive, does this sound familiar?). So we arrived to find the gym unavailable and no other pilots in sight. "So what?", you say. Well, the weather outside was calm, but it was the Saturday just after Christmas and there was a very, very low ceiling (like maybe 60 feet!) and the temperature was just at zero Celsius. The snow on the lawn was coated with a layer of ice. So we flew our indoor models of course! Well, about a minute or two into our flight (we were flying together, just below the fog) we both started losing power and had to land. Bad batteries? Nope. We had picked up glaze ice on our propellers and wing leading-edges. The accumulation of ice was only about a millimeter in thickness but it was enough foul up the aerodynamics, especially on the propellers. So after melting off the ice with our hands, we were off into the fog again until we picked up too much ice and had to land again. Will we need in-flight de-icing systems next?

There's lots more to tell, like the variety of indoor micro helicopters that people are trying out or the competition to do the Best Carrier Landing or.....well, you'll just have to come out to one of the sessions next season to see for yourself. See you next October.

THERMAL EVENTS ... 2004

Date	Event
May 30	Fun Fly
June 5 & 6	ORCC Annual 2 Day Thermal Duration Contest
June 19	ORCC MATS C2VM Hand Launch Challenge Round 3
June 27	Fun Fly
July 25	Fun Fly
August 21	11 th Annual ORCC MATS Challenge
August 29 Fun Fly	FUN fly
September 11 & 12	Ottawa Area Aerotow Annprior RC Field
September 19	ORCC MATS C2VM hand Launch Challenge Round 5
September 26	Fun Fly
October 31	Fun Fly

ORCC 2004 Events

Event Name	Date(s)
Concours d'Elegance	April 6 (Tuesday)
Two-Day Annual Thermal Glider Event	June 5 and 6 (Saturday and Sunday)
Doug Pinhey Float Fly	June 26 (Saturday)
SMALL Event and Pig Roast	July 24 (Saturday)
ORCC - MATS Challenge	August 21 (Saturday)
Greater Ottawa Aero Tow	September 11 and 12 (Saturday and Sunday)
Casual Float Fly	September 23 (Saturday)
Fall Fun Fly	October 15 (Saturday)

ORCC 2004 Memberships

Junior .. 9
 Open .. 67
 Senior .. 29
 Life .. 9
 Non Flying .. 2
 Total .. 116

Dates to Rember

Club Meeting Dates	TopCap Submission Dates
Tues. Apr. 6th	Fri. Mar. 19th (for Apr. TopCap)
Tues, May 4th	Fri. Apr. 16th (for May TopCap)
Tues. June 1st	Fri. May 14th (for June TopCap)

Discount Hobbies

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Treasurer	Dick Mills	822-7529
Memberships	Aurele Alain	738-8797
Past President	Jean Populus	591-9738
TopCap Editor	Tom Ross	733-9470
Gliders	Brian Buchanan	824-3723
Scale Sailplane	Gudmund Thompson	837-0648
Helicopter	Len Gaultois	746-8526
Sailplane	Brian Buchanan	824-3723
SMALL / Air Combat	Ken Park	823-1933
Float	Aurele Alain	738-8797
Electric	Paul Penna	731-5627
Yachting & Indoor	Jim Zufelt	733-1210
Chief Flying Instructor, Power	Shahram Ghorashi	726-8709
3D Flying	John Weekes	727-0066
Winter Flying	Shahram Ghorashi	726-8709
West End Field Manager	Karel Tettelaar	226-5023
Pattern Flying	Dave Penchuk	592-6706
Postmaster	Andrew E. Mileski	565-1827
MAAC Zone Director	Richard Lyle Barlow	613/348-1696

ORCC Website : <http://www.ottawarcclub.ca>

June Meeting: Tuesday June 1st, 2004

ORCC Club Meetings The first Tuesday of each month
Date & Time: from September to June at 8:00 PM.
Location: McNabb Community Centre
180 Percy (at Gladstone), Ottawa

Submissions for the TopCap Newsletter can be sent to:
Tom Ross, TopCap Editor
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Email: teejay@mondenet.com , Tel: 613/733-9470

Closing Date for the June TopCap: Friday May 14th, 2004