ACADEMY OF MODEL AERONAUTICS CHARTERED CLUB #1255

S E R V O C H A T T E R

A PUBLICATION OF:

ANOKA COUNTY RADIO CONTROL CLUB, INC.

FEBRUARY 2015

THE MEETING WILL BE THURSDAY, FEBRUARY 19, AT RIVERWIND!!

PRESIDENT'S CHATTER

The 2015 flying season will be just around the corner. These are the dates for the 2015 flying season events:

April 18	Fun Fly
May 2	MARCEE Electric Fly
May 23	Fun Fly
May 30	Spring Fly In
June 20	Fun Fly
June 27	Warbird Fly In
July 11	Fun Scale (ACRC members only)
July 18	Fun Fly
Aug 22	Fun Fly
Sept 12	Electric Fly (only electric)
Sept 19	Fun Fly
Sep 26	Fall Fly Out
Oct 17	Fun Fly

Stay tuned for further updates.

Break out your flight simulators, tune up your skills and let's have some fun.

Have you ever heard of "Swingee hinges"? They are commercially available and are used to operate ailerons from a horizontal control motion. They can be used to conceal control horn and linkage. Now you know.

Virgil Okeson

ACRC EVENTS

After the board meeting on Sunday February 8, it looks like it's going to be another busy summer at the ACRC flying field. The event schedule has been finalized and some new events have been added.

We will be hosting an additional electric fly-in event with the MARCEE club at our field this spring and we have a commitment from MARCEE to provide some additional help with the event.

We have also decided to have a Fun Scale event for ACRC club members only this year. This will be the usual Fun Scale type event, however it will not be sanctioned. We will have contestant judging and Amy and I are planning a special menu for all registered pilots. There will be a small entry fee for this event to cover the cost of the food and we will be asking all those pilots planning to attend to pre-register so we know how much food to plan for.

I want to emphasize how important it is for club members to get involved in these events. We seem to have the same small group of volunteers helping out at the events all season and with the number of events and the number of club members we have, if everybody volunteered to help at just one event during the summer we'd have everything covered, no problem.

To those that have volunteered in the past, a huge **Thank You** and to those thinking about getting more involved in club activities, now is the time. I'll be looking for our first batch of volunteers for the first event of the summer very shortly, so

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please take look at the Event Schedule shown elsewhere in this newsletter and start thinking about how and when you can be of service to the club.

Feel free to call or e-mail me if you'd like to volunteer. We need help with field prep and set-up, food service and potluck items, flight line duties and numerous other tasks that are required to pull off a smooth, well organized event.

I'll be at the February meeting so don't hesitate to come and introduce yourself and let me know you'd like to get involved.

See you then.

Bob Proulx

MEMBERSHIP NEWS

IT'S GETTING CLOSER TO SUMMER. LET'S GET THOSE NEW PLANES BUILT !!!!!!!!!!

About 60% of last year's members have rejoined for 2015. This is a little more than last year at this time when it was about 58%. If any of your friends have not rejoined, please encourage them to do so ASAP. The 2015 budget is based on a projected membership of 100 fully paid members. If we drop much below that number we will have to cut services somewhere.

If you have any pictures that could be used in the newsletter send them to me. If they are digital, email them to szdon@yahoo.com. If they are prints mail them to me and I will scan them and return them to you. If you come across any articles on the Internet that could be use in the newsletter send me the link and I will download them and use them.

The Board met on February 8 and set up the schedule of events for the 2015 flying season. Along with the monthly meetings and the Fun Flies from April to October there will be six events during the summer. They are:

May 2	MARCEE Electric Fly In
May 30	ACRC Spring Fly In
June 27	ACRC Warbird Fly In
July 11	ACRC In House Fun Scale Contest
Sept 12	ACRC Electric Fly In
Sept 26	ACRC Fall Fly Out

The next meeting will be at Riverwind on February 19 at 7:00 PM.

Stan Zdon

ACRC MINUTES

January 15,2015

Meeting called to order at 7:05 PM.

Attendance: 18

Veep: Phil Vaughn showed all the raffle prizes for this month.

Training: Dick Huber, a new member, has soloed

Safety: Brett Ohnstad is looking for articles on safety. If you have something send it via email.

The first aid kit needs restocking and it will be taken care of before the flying season starts. If you are flying with LiPo batteries be sure to familiarize yourself with proper procedure in case there is a fire.

Membership: There are 65 members so far for 2015.

Events: There was a good turnout for the freeze-fly. The board will be meeting soon to set up the calendar of events for 2015.

Old and New Business: None

Raffle Winners:

Screwdriver set	Virgil Okeson
Wrench set	Phil Vaughn
Socket set	Paul Castrodale
Mug	Tom Janos
Tool box	Tom Janos
Air horn	Tom Janos
Mini pliers set	Marc Tellevik
Hex wrench set	Jeff Voelz
Multi-tool set	John Sager
Hobby knife	John Sager
Caliper	Bruce Martin
Flashlight	Bruce Martin
Telescoping tool	Jeff Voelz
Calculator	Bob Barton

Stan Zdon

ACRC TRAINING

If anyone is interested in training this year or helping as an instructor please contact me.

Also, if any of the instructors could be responsible for bringing the club training planes to Wednesday's training sessions that would be a great help. Because of work I can't get there until 6:30 or 7:00.

Tom Janos

ACRC SAFETY

It is the start to a new flying year. I hope that everyone made the resolution to be safer this year. If you didn't, I can only imagine that it is because you are already so safety conscience that you really don't need to think about it any more. Well I hope that this is not the case.

Safety for yourself and for others should always be at the forefront of your thoughts when building, transporting, and flying. Oh yah, bet you never thought about safety for transporting your airplanes.

Do you throw your tools, fuels, and batteries in the back seat and call it good? Or maybe you set your airplanes in the back half of your minivan. In a collision, your vehicle airbag will provide protection to your head and body when deployed. However, momentum will easily carry that fuselage through to the front. Although a wing or nosecone to the back of the head might not be fatal, I can't imagine that it would feel too good to either you or the airplane.

But let's be realistic. If you get into an accident that would cause the airbag to deploy, the least of your concerns would be for a few airplanes and tools. And I would hope that you have stowed the batteries well enough that they are not going to ignite. The bigger problem will more likely be "hanger rash" caused by loose items moving around in the back of a vehicle caused by everyday normal driving.

To prevent damage to your airplanes there are a few things you can do. Strap down and secure any and all toolboxes, battery cases, field boxes, and radio cases. If it can slide, it will. A few bungee cords can hold everything in place. Even tying items together will help to keep things in place. I keep a big piece of carpet in the back of my truck to hold the loose items in place. It's real good for those items that can't be bungeed, like the remnants of a favorite plane that I want to bring home for repair.

Wheel chocks are great for keeping and airplane from moving around if it can't be secured. There are some fancy wheel chocks out there that range from simple bowls that keep the plane from moving to devices that clip on to the axle and hold the wheel completely of the ground. A simple solution is to use a couple wide base dog dishes that have a rubber rim. They are cheap and can keep the airplane from rolling or sliding.

If you have a several airplanes to transport, you might want to make a transport dolly out of PVC pipe. Half-inch pipe can be easily cut and assembled in to a case that can hold each airplane with its wings. The pipe, when covered with foam water line insulation, will protect the airplane very well and can be used for long-term storage for each airplane. I have even used PVC pipe to make storage hooks that hang from the ceiling of my garage to help me store more airplanes than I know what to do with.

Of course the ultimate way to transport your airplanes safely is to buy a dedicated transportation trailer. Everything can be stowed away securely and the best trailers are can be set up as mini workshops in their own right.

So for the sake of safety for the transporting my airplanes I think I just talked myself into commandeering my wife's enclosed trailer that she was using for her embroidery business. I think she would want my airplanes to be safe too, I hope! If not, you will probably see me sleeping in the trailer down at the field this summer.

Brett Ohnstad

FACTS ABOUT BALSA

Model airplanes are no different from any other type of flying machine, large or small. The lighter it is built, the better it will fly! With that in mind, it is easy to understand why balsa wood has been the standard material for model airplane construction since it first became readily available in the US in the late 1920s. Its outstanding strength-to-weight ratio enables hobbyists to construct durable models that fly in totally realistic manner. Balsa also absorbs shock and vibration well and can be easily cut, shaped, and glued with simple hand tools.

Where Does Balsa Wood Come From? Balsa trees grow naturally in the humid rain forests of Central and South America. Its natural range extends south from Guatemala, through Central America, to the north and west coast of South America as far as Bolivia, however, the small country of Ecuador on the western coast of South America is the primary source of model aircraft grade balsa in the world. Balsa needs a warm climate with plenty of rainfall and good drainage. For that reason, the best stands of balsa usually appear on the high ground between tropical rivers. Ecuador has the ideal geography and climate for growing balsa trees. The scientific name for balsa wood is *Ochroma lagopus*. The word balsa itself is Spanish meaning raft, in reference to its excellent flotation qualities. In Ecuador it is known as Boya, meaning buoy.

How Does Balsa Wood Grow? There is no such thing as entire forests of balsa trees. They grow singularly or in very small, widely scattered groups in the jungle. For hundreds of years, balsa was actually considered a weed tree. They reproduce by growing hundreds of long seedpods that eventually open up and, with the help of the wind, scatter thousands of new seeds over a large area of the jungle. Each seed is airborne on its own small wisp of down, similar to the way dandelion seeds spread. The seeds eventually fall to the ground and are covered by the litter of the jungle. There they lay and accumulate until one day there is an opening in the jungle canopy large enough for the sun's rays to strike the jungle floor and start the seeds growing. Wherever there is an opening, made either by a farmer or by another tree dying, balsa will spring up as thick as grass. A farmer is often hard put to keep his food plot clear of balsa. As the new balsa trees grow, the strongest will dominate and the weaker trees will die. By the time they mature, there may be only one or two balsa trees to an acre of jungle.

How Long Does It Take A Balsa Tree To Grow? Balsa trees grow very rapidly (like all pesky trees). Six months after germination, the tree is about 1 1/2 inches in diameter and 10 to 12 feet tall! In 6 to 10 years, the tree is ready for cutting, having reached a height of 60 to 90 feet tall and a diameter of 12 to 45 inches. If left to continue growing, the new wood grown on the outside layer becomes very hard and the tree begins to rot in the center. Unharvested, a balsa tree may grow to a diameter of six feet or more, but very little usable lumber can be obtained from a tree of this size. The balsa leaf is similar in shape to a grape leaf, only a lot bigger. When the tree is young, these leaves measure as much as four feet across. They become progressively smaller as the tree grows older, until they are about 8 to 10 inches across. Balsa is one of the few trees in the jungle that has a simple leaf shape. This fact alone makes the balsa tree stand out in the jungle.

How Are Balsa Trees Harvested? While nature intended the balsa tree to be a short-lived nursemaid, humans eventually discovered that it was an extremely useful resource. The real start of the balsa business was during WW I, when the allies were in need of a plentiful substitute for cork. The only drawback to using balsa was, and still is, the backbreaking work that is necessary to get it out of the jungle. Because of the way the individual balsa trees are scattered throughout the jungles, it has never been possible to use mass production logging procedures and equipment. The best way to log balsa trees is to go back to the methods of Paul Bunyan - chop them down with an ax, haul them to the nearest river by ox team, tie them together into rafts, and then float the raft

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of balsa logs down the river to the saw mill. The logging team usually consists of two native Ecuadorians, each armed with a broad Spanish ax, a machete, and a long pole sharpened like a chisel on one end for removing the bark from the downed trees. Because of the hilly terrain, an ox team may only be able to drag two logs to the river per day. At the saw mill, the balsa is first rough cut into large boards, carefully kiln dried, and finally packed into bales for shipment to the US via ocean freighter.

Why Is Balsa Wood So Light? The secret to balsa wood's lightness can only be seen with a microscope. The cells are big and very thinned walled, so that the ratio of solid matter to open space is as small as possible. Most woods have gobs of heavy, plastic-like cement, called lignin, holding the cells together. In balsa, lignin is at a minimum. Only about 40% of the volume of a piece of balsa is solid substance. To give a balsa tree the strength it needs to stand in the jungle, nature pumps each balsa cell full of water until they become rigid - like a car tire full of air. Green balsa wood typically contains five times as much water by weight as it has actual wood substance, compared to most hardwoods that contain very little water in relation to wood substance. Green balsa wood must therefore be carefully kiln dried to remove most of the water before it can be sold. Kiln drying is a tedious two-week process that carefully removes the excess water until the moisture content is only 6%.

How Light Is Kiln-Dried Balsa Wood? Finished balsa wood, often found in model airplane kits, varies widely in weight. Balsa is occasionally found weighing as little as four pounds per cubic foot. On the other hand, you can also find balsa that can weigh 24 pounds or more per cubic foot. However, the general run of commercial balsa for model airplanes will weigh between 6 to 18 pounds per cubic foot. 8 to 12-pound balsa is considered medium or average weight, and is the most plentiful. Six pounds or less is considered "contest grade," which is very rare and sometimes even impossible to obtain.

Is Balsa The Lightest Wood In The World? No! Most people are surprised to hear that botanically, balsa wood is only about the third or fourth lightest wood in the world. However, all the woods that are lighter than balsa are terribly weak and unsuitable for any practical use. The very lightest varieties don't really resemble wood at all, as we commonly think of it, but are more like a tree-like vegetable that grows in rings, similar in texture to an onion. It is not until balsa that there is any sign of real strength combined with lightness. In fact, balsa wood is often considered the strongest wood for its weight in the world. Pound for pound it is stronger in some respects than pine, hickory, or even oak.

from RC Propwash
Ocala Flying Model Club
Dick Smith, editor
Ocala FL

R/C AIRPLANE DEFINITIONS

Submitted by Stan Zdon

PROP NUT: What a glider pilot calls power pilots.

PUCKER FACTOR: A factor that exponentially gets higher, as your out of control plane gets lower. At the high end of the scale, changing your shorts is necessary.

RADIO: An expensive electronic device to randomly alleviate overcharged batteries. A device that enables an airplane to crash in different places than it normally would.

RADIO GLITCH: A documented electronic occurrence, causing immediate and irreparable loss of control. The source of a crash when there is a possibility of someone else's radio in the close proximity to the plane.

RECEIVER: The part of your airplane that picks up interference.

SKID PROTECTOR: Another word for a spinner.

SNAP ROLL: After a nice high G roll, something snaps, usually the wing.

SPINNER: A critical part of the landing gear.

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Deadline for the next newsletter is: March 1, 2015

CALENDAR OF UPCOMING EVENTS

Thursday – February 19
- ACRC Meeting

Thursday – March 19
- ACRC Meeting

Thursday – April 16
- ACRC Meeting

Saturday – April 18
- ACRC Fun Fly #1