



BEEES BREEZE



RC BEES of Santa Cruz County, Inc.



Newsletter

November 2016

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Next meeting

**Thursday, November 17th, at the EAA building,
Aviation Way, Watsonville Airport, 7:30 PM.**

October Meeting

Steve Boracca called the meeting to order at 7:37 p.m. with 17 members and two guests in attendance.

Richard Ludt shared the treasurer's report, which was supported unanimously, as were the minutes of the previous meeting, both as reported in the October newsletter.

Old Business:

We now have a replacement generator (see the treasurer's report) A question was raised as to whether it made sense to install a camera inside the shed which would become active when the doors were open.

New Business:

It was noted that voting for the 2017 officers should be done at the November meeting, and accordingly voting papers should be sent out in time, so that members' preferences could be mailed or e-mailed in prior to the meeting. *(You will find such a paper attached with your newsletter).*

Thanks were given to new member, Richard Estes, who did mowing and weeding at the club field the Monday before the meeting.

Dan Morris reported that we need to replace the squeegee in our runway sweeper.

A suggestion was made that we might want to have a multi-rotor fun-fly, but Dan noted that we would need at least ten entries to make the effort worthwhile. At first cut, that did not seem likely.

It was agreed that the December meeting, which will be a pot-luck Holiday dinner, should start at 6:30 p.m. rather than the normal 7:30. This year we will expand the potluck menu to include appetizers, main dishes and sides, as well as desserts. The club will provide non-alcoholic beverages. Laurie Trescott is starting to organize all the food offerings and it's time for you to let her know what you'd like to cook, bake or otherwise contribute to our celebration. So far, we have one appetizer and one side dish promised. Please email her at Sundncr88@comcast.net and tell her how you will help make our holiday potluck even tastier and more fun than last year! Here's a photo from last year's event.



Show and Tell:

Mark Christen brought along his Great Planes Curtiss P26E Hawk, powered by a Rimfire 32 motor. This model has received very good write-ups in the model airplane press, and Mark's model certainly lived up to the reviews.



Richard Tacklind won first prize at our recent foam model fun-fly, and his prize was one of five old kits which had been previously donated at the Watsonville Airport Fly-In in September. He picked out a Guillow Models Kiwi, a 1/2A free flight model from 1954, and converted it nicely to radio control, electric-powered by a 2-cell 350 mA battery, and very pretty it is! The hands in the background are those of brother David holding up the original plan. Note that the free flight model had much more dihedral than Richard's version, for good reason.



By contrast, your editor took fifth place in the same fun-fly and so took the last available kit, a Sig Clipper, designed by Claude McCullough. It included a dilapidated, cut-up plan, a few scraps of balsa, and a foam wing which had a sizeable dog-bite taken out of it. It is currently in our field storage container, available to anyone who can use it!

Keith Wigley has taken a big step forward with an AMA Models short kit of a 63" wingspan Nick Zirolri Fokker DR-1 Triplane. He got the cowl from Fiberglass Specialties, and has worked seemingly night and day to produce the model as he presented it. The engine is an EME 35 c.c. We're looking forward to seeing it complete and at the field



Alan Brown showed his now completed Santos Dumont 14bis, first airplane to fly in Europe in summer of 1905, although the photograph was taken a couple of days later after he had installed the fuel tank, just behind the pilot. And yes, it's a canard, so the pilot is facing the right way. He flew the original airplane standing up!



Benno showed his latest variant on his load-carrying Science Fair entry, so far without wings.



And with that the meeting closed at 9 p.m.

Down by the River

Ben and Sebastian Roeder brought a very nice-looking sailplane to the field, a Hobby King Dragonfly, which had a successful maiden flight.



Alan Brown flew a variant of an old Electric Kaos, planned for fun-fly competition; light weight, low drag, 4S battery power and flap/aileron mixing. First flight showed the need for a bit more aileron expo, but otherwise O.K. The weight seems satisfactory at 24 ounces for 46" wingspan.



George McKeon enjoys helicopters, and now has ventured into a larger size than before. Diligent component search on the internet has saved him some cash, and he now has a compounded Trex 700E with an 800E rotor and an extended tail boom for rotor clearance. It really looks terrific and its maiden flight went well, albeit with some knee-shaking!



Stefan Warnke flew my D.H. Vampire, which is a bit too fast for me, and proclaimed that if it were his he would uprate the electric ducted fan, as it was too slow for him! He then demonstrated how a real EDF-powered airplane should fly with his Phase 3 Squall!hp – very fast!



Marcelo Montoreano, not to be outdone, then launched his F-16 model and the pair flew around at about the same speed for a fine demonstration.

Bill Moore's Memorial

On November 12th a few of us attended the Memorial for Bill Moore, who died on September 1st of this year. He was a fire-fighter for over a quarter of a century, and fittingly the memorial was held at the station in Felton where he worked. We learned a great deal about his background from the various speakers who delivered tributes, and his talents and popularity were much more widespread than, I suppose, most of us realized.

On the RC Bees side, he was a fine modeler, and apparently left a basement full of airplanes in various states of repair! He was president of the RC Bees club from 2003 until 2010. We will miss him!

Aero 101 – Wingtip Fins

I was recently asked by one of our club members why many airplanes don't have wingtip fins to improve wing efficiency, when the extra weight and drag would surely be offset by the improved wing efficiency.

Well, the simple answer is that that isn't a true statement in general. The original question came about, as it often does, from a piece of knowledge being passed on by an experienced full-scale pilot, which wasn't quite accurate in terms of how airflow develops over a wing at higher lift situations.

The first general use of tip fins was on large commercial transport airplanes, when airport limitations of taxi-way width and hangar size limited the allowable wing-span. In general, if that limitation didn't apply, it would have been more efficient to increase the wing-span to give a higher aspect ratio and so higher efficiency.

A classic inverse example of this issue was demonstrated by the British Ministry of Defense when it put out its first requirement for a four-engined bomber in 1939. One of the limitations on the design was that it had to fit into a standard R.A.F. hangar, which therefore limited the wingspan. Short Brothers won the contract and built the Short Stirling. This airplane proved to be O.K. at moderate altitudes, but was unable to fly at the altitude required for satisfactory range/payload requirements. It was relegated to anti-ship and similar operations, and a succeeding contract without this limitation was won by Handley-Page

and Avro with the very successful Halifax and Lancaster bombers.

Going back to tip fins, the early attempts were not very efficient, and NACA (it may have been NASA by then) Langley got involved via the very smart aerodynamicist R. A. Whitcomb, who had first come up with the area-rule approach to reduce transonic drag. His wingtip fin designs are now the commonly accepted norm for this situation, and so are about as efficient as one may imagine.

However, it is interesting to note that with modern carbon fiber manufacturing techniques combined with 3D printing, present-day airliners are now being made without that kind of tip fins, as it is possible to go to higher aspect ratio wings and preserve the stiffness and strength requirements that previously were not so practical. In sequence we have a Boeing 707, before tip fins, a Boeing 737 max 7 with tip fins, and a Boeing 787, which can dispense with the old-type tip fins.



And that's it for this month. Enjoy!