



The Bend High Desert Flyer of Chapter 1345

WEBSITE: <http://1345.eaachapter.org/>

KBDN AWOS 134.425

APRIL 2012, VOL11, #4

PREZ SEZ:

Goodbye March, Hello April! What a weird month it's been. Due to the weather and some personal obligations, the "Spitfire" wasn't able to get in for our last meeting. Hopefully this month we will see better weather and the "Spitfire" grace us with a show and tell. As of this writing, the April 11th meeting will be held at the "Ellsberg" hanger, Pizza @ 6 o'clock with the meeting @ 6:30.

Back in February, I sent out a request for Young Eagle candidates to apply for a scholarship, provided by the "Hayward Air Rally". Eric Simpkins who wanted to nominate his son Devan immediately contacted me. I put Eric in touch with Tim Huckabay of the Hayward Air Rally and long story short, Devan Simkins has won an all expenses paid trip to this summer's "EAA's Young Eagles Air Academy"! Devan is one of 4 Young Eagles that the "Hayward Air Rally" has given the opportunity of a lifetime to with these scholarships! Devan almost didn't quite make one of the requirements (has to be 14 - 15 years old) that is until he leaves for "Oshkosh" on his 14th Birthday!

Tim Huckabay asked if our chapter had any "Young Eagle credits" that we could donate or cash contribution that we could offer. I explained that we are a small chapter with limited funds, and in talking with our officers, we came up with 5% (or \$90) that the chapter can offer. EAA Chapter 619 also kicked in \$250 to offset the scholarship expenses. Mike Bond suggested that I ask the members to help send Devan to "Oshkosh". Well I'm VERY PROUD to say that you, our members stepped up to the plate, put your money where your voices come from and dug deep! Rudy Catania wrote a check for \$50! Myself along with almost everyone in attendance (and some not able to be there) raised another \$210! Even Debra Simkins, Devan's mom (who by the way won the 50/50 raffle) tossed the pot back into the funding, so your chapter raised a total of \$300 to help Devan participate in this summer's "EAA Young Eagle Air Academy"

As I said before, it's April, and the flying season is here! Let's go somewhere (Sunday morning coffee and donuts in Madras?) and plan on joining 617 with their many fly-outs. Also put on your calendars that 617 is hosting a "Young Eagles" flying day on May 22nd. They need volunteers on the ground and in the air. Let's give them all the support we can. See you April 11th!

Tom Phy, President

New Chapter Website

Note above that we have a new Chapter website <http://1345.eaachapter.org/>

Our Web Editor Lance Julander will be updating the website and adding a newsletter archive.

April Chapter meeting

The April 11th meeting will be held at the "Ellsberg" hanger, Pizza @ 6 o'clock with the meeting @ 6:30. Hope to see you there! Vern Goodsell's 75% Spitfire "Talon" is scheduled to attend, this time at 5:30pm.

New Madras Muni AWOS

Those who know the weather between Bend and Madras can be quite different, especially in Winter (fog) should tune to 132.425MHz or dial (541) 475-0494.

Treasurer's Report

Financial for period 1/1/12 through 3/31/12

Total Income:	\$658.00
Total Expense:	\$730.00
Net Income (Loss)	\$-72.00
Cash Balance:	\$2,010.55

Jack Watson, Treasurer

March Meeting Minutes

I have not received minutes for the last meeting and propose the detailed comments by Tom in 'PREZ SEZ' be used in lieu of minutes.

Mike Bond, Newsletter Editor

New Records for Electric Flight

Jean Luc Soullier of Belgium claimed three world records for electric aircraft in the FAI RAL1E (microlight electric, single place, landplane with moveable aerodynamic controls) sub-class on February 2, 2012 at Sisteron, France – home of Electravia.

Soullier attained an altitude of 7,877 feet, covered 31.17 miles over a closed circuit course without landing, and averaged 84.54 mph for that distance. All records are claimed in Soullier's Colomban MC-30 Luciole, powered by a 26 HP Lynch-type motor and controller supplied by Electravia.



Electric MC-30 initial test flight

Conclusion of last month's "Beaverton Outlaws" story.

George Bogardus, The "God Father" of experimental Aircraft, Part II

Licenses for experimentals

There was no question that the CAA ruled the airways after the war. That's when Bogardus bought Little Gee Bee -- which was originally built before the war. Bogardus finished assembling and testing the plane in the summer of 1947, then flew to Washington, D.C., with proposals that led to the current experimental category license. The ability to license homebuilt airplanes triggered a surge of interest that continues to this day.

The Experimental Aviation Association has about 170,000 members around the world, and Bogardus was one of the first three people inducted into its Homebuilders Hall of Fame. Fifteen percent of the single-engine, piston-powered airplanes in the U.S. general aviation fleet are registered in the experimental category.

VanGrunsven -- known as Van to his customers and friends -- has designed a series of successful, high-performance homebuilts called RVs: RV-3 through RV-10. His company, Van's Aircraft, operates from the Aurora Airport and sells 600 to 700 kits a year -- more kit airplanes than anyone else in the world.

Almost 5,000 of his RVs are flying, and almost as many kits are under construction.

Those thousands of sleek, Technicolor RVs -- and all home-builts, including Burt Rutan's SpaceShipOne -- owe a debt to the "rusty, dusty" skeleton of Little Gee Bee that Bogardus left to the local chapter of the Experimental Aviation Association. "It's a pretty historic little airplane," said Oregon aviation historian Ken Scott.

But the first job was to get to it: Bogardus' property in rural Sandy was proof that he never threw anything away. Given that some of the detritus consisted of Linotype machines and parts -- the massive old typesetters once used by newspapers -- and that Little Gee Bee had been retired five decades earlier, it was hard work just unearthing it.

Beaverton Outlaws ... continued ...

Putting it back together

"The airplane had been dismantled and stored in different places," said VanGrunsvan, who as an aviation-struck teenager used to fly into the short airstrip on Bogardus' property in Sandy for occasional visits. "The fuselage was at the Sandy airport, and the wings were on his property. We collected parts for a couple of years and took them out to my home shop in North Plains."

Volunteers from EAA Chapter 105 (including Mike Story, the son of the man who originally built Little Gee Bee) started spending Saturdays in Van's shop. "We started about January of zero-five," said brother Jerry VanGrunsvan, a tall, lean former airline and military pilot. "It must've taken us about a year of hard work."

Most restoration projects include a lot of grunt work, and this was no exception: assembling the Continental engine from boxes of greasy bits; sandblasting rust from the steel-tube framework; replacing rotten metal and wood parts in the wings; building new control cables and flying wires; and re-covering the airplane in dull silver fabric, as it was when Bogardus owned it.

They didn't have every part, but they had lots of ingenuity. "We had a lot of pieces and some old photos, but we didn't have plans for the airplane. There were no real records because it was built quickly and on the cheap," said Dick VanGrunsvan, who has meticulous plans for every piece of every airplane kit he sells. "So we had to do some detective work."

Most of the windscreen and canopy were long gone. But they estimated size and shape from old photos and made the new pieces out of Plexiglas. The tracks for the sliding canopy were still there, and half-oval aluminum edging from a marine supply shop served as the canopy framework.

Tires, too, took some fiddling. The hubs are an inch smaller in diameter than the smallest common modern tires (for Piper Cubs) so brother Stan VanGrunsvan bought a chunk of engineering plastic on eBay and machined two adapters to mount modern tires on the old hubs.

The plastic is black, so you can't see the modification unless you know where to look.

It all fits with the rough-and ready aesthetic of Little Gee Bee, said Jerry VanGrunsvan. He pointed out the hand-hammered aluminum nose cowling, which is dull and has a few dents and divots in it. "We could have filled all that and polished it, but it never was bright and shiny."

The tires are also bald and scruffy-looking for a reason -- "Tires back then were treadless," Jerry VanGrunsvan said. "We could've gotten new ones at considerable expense, but my sister-in-law pulled these old Cub tires out of the garbage at Evergreen."

George Bogardus would undoubtedly have approved; "I doubt this airplane ever had a set of new tires," VanGrunsvan said.

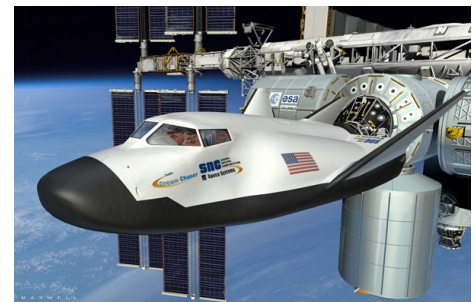
Dream Chaser --- the next a reusable space plane?

Sierra Nevada Corp. (Sparks, Nev.) Space Systems has completed a major Dream Chaser milestone under NASA's **Commercial Crew Development Round 2 (CCDev2)** Program. Successful completion of this milestone required the assembly and delivery of the primary structure of the first Dream Chaser flight test vehicle. SNC has now completed all of its 11 scheduled CCDev milestones on time and on budget.



The Dream Chaser Flight Test Vehicle will be used to execute several remaining milestones, including a captive carry flight and the first free flight.

The flight tests will be conducted with the assistance of NASA Dryden Flight Research Center.



Simulation of docking with ISS.

The Sky Arrow

Magnaghi Group of southern Italy were present at Sun 'n Fun in March to announce the acquisition of Sky Arrow-related assets, including all existing products and certifications.

In bankruptcy since 2008, the aircraft will appear at AirVenture this summer with a lower drag tail and larger (30-gallon) fuel capacity.



Meteor S.p.A., also of Italy, first introduced the Sky Arrow in 1993. It was created as a low-cost, high-visibility aerial work platform to be used for patrol, law enforcement, environmental research, and electronic newsgathering. It has two seats in tandem configuration; a layout that allows the pilots to have up to 300° of visibility. The wing is above the fuselage and a Rotax 912S engine in pusher configuration is placed behind the cabin. As a result, pilots' visibility is increased and sensors and devices used for surveillance and research missions, usually installed in the nose or in the bottom of the fuselage, are not disturbed by the propeller wake. It was the first all carbon-fiber aircraft in the world to be certified for general aviation.



According to a company spokesman, the Sky Arrow can perform most of the rotary wing tasks at a fraction of the cost. Several hundred Sky Arrows are currently operated worldwide as LSA and FAR Part 23 aircraft.

SSRD versus LSA?

In 2007, the UK's Civil Aviation Authority announced a new class of aircraft, known as the Single Seat De-Regulated (SSDR) class, allowing development single-seat, very light aircraft with minimal regulations:

- Empty weight not exceeding 115 kg.
- Maximum gross weight not exceeding 300 kg (330 kg for a seaplane).
- Empty wing loading of no more than 10 kg per square meter.
- Stall speed less than 35 knots
- Single-seat design.

One such design is the e-Go; a canard, with plans to have the prototype completed by the end of May 2012. It is powered by a Rotron Wankel water-cooled engine. The current specifications allow the e-Go to cruise at 120 knots with a range of 300 miles.



The primary structural material is pre-impregnated, tooled carbon with unidirectional carbon for areas that require additional strength. To minimize weight, glass fiber is used for areas of less critical strength.

The fuselage structure is based on a "foam sandwich". Typically, it's one 0.2 mm thick layer of carbon fiber, 3 mm of closed-cell foam, and then another layer of carbon. Because it uses pre-impregnated material and very thin structures, more resin leaches into the foam. As a result, e-Go came up with its own specification with higher resin content.

With the honeycomb materials that e-Go considered, any damage to the structure could allow water to seep into the structure and degrade the honeycomb. With closed-cell foam, water damage won't spread internally and the structure will maintain its integrity.

The wing design uses a lot of polystyrene foam to stabilize the structure. The foam is shaped with a CNC hotwire cutter to hollow out tapered airfoil sections thereby lowering overall weight, yet it creates sufficient stabilization and the ability to handle the aerodynamic loads.

2012 CHAPTER BOARD:

President Tom Phy 541-306-1500
maxfly55@gmail.com

Vice-president Henry Graham 541-383-0096
grahamhenry44@yahoo.com

Secretary Erik Rustand 541-617-1435
topgunav8r@aol.com

Treasurer: Jack Watson 541-408-5614
jswatson30@cs.com

Young Eagles Bud Candland 541-389-1798
Coordinator centorbud@msn.com

Newsletter Ed. Mike Bond 541-317-8443
mvbond@q.com