

Winter is on its way to Mojave! Plane Crazy Saturday was quite cool, with wind from the west, but no rain! Thank you to the brave souls who came out to set up booths! Antelope Valley Sea Cadets from Lancaster; Doug Castleman Aviation Artist; the Edwards AFB Civil Air Patrol, Squadron #84; Marlena Balvin space and aviation books and the Mojave Transportation Museum crew, Chris and Riitta Martin; Bill Deaver and Midge Wright!

I had to leave early with an earache, which was no fun, however our friend Ann Jones said it was the best Plane Crazy Saturday ever!

I'm sure everyone saw the beautiful red, white and blue Berkut making passes down runway 08/26, owned and flown by Dick Rutan!

The passenger inside was our good friend Ann Jones! Her husband Doug told her that they just had to attend Plane Crazy Saturday this month. Although she always has a nice time at Plane Crazy, she had no idea that he had set up a ride in the Berkut for her!

Look at the happy expression on her face!



She said that the flight was perfect! Complete with a barrel roll!

Congratulations Ann! We are so happy for you!

Thank you to Dick Rutan for being so gracious and number one to our friends at Mojave Air & Space Port.



After the flight, Ann poses with round the world Voyager pilot, Dick Rutan.

# California is 'the place for space' says speaker

BY JOYCE GRANT

MOJAVE - Glenn Stearns hopes to one day see his concept for a UAV (unmanned aerial vehicle) Flight School come to life in the town of Mojave.

Stearns, an entrepreneur and venture capitalist at Stearns & More Capital in Monterey Bay, was the guest speaker at Saturday's Plane Crazy event, held at the Mojave Air and Space Port.

Educational outreach, he told the audience, is a first "galvanizing" step toward making the idea a reality. To that end, Stearns is collaborating with Mojave residents, Steve Rushford and Ethan Chew.

Rushford, a board member of the Mojave Transportation Museum and master airplane modeler, and Chew, an engineer at XCOR Aerospace and charter member of the Mojave Makers, are currently partnering to create a business that they hope will bring additional jobs to Mojave through providing educational services to the school system.



Ethan Chew, aerospace engineer, describes the playful concept of the UAV Combat League competitions at Plane Crazy Saturday on November 16. (Left to right): Doug Messier, Chew, Bill Deaver, and Steve Rushford.

JOYCE GRANT/MOJAVE DESERT NEWS

SEE SPACE, A3

Joyce Grant wrote a super front page article in the *Mojave Desert News* about UAV speaker Glenn Stearns from the Bay Area. Thank you Joyce! Sorry to have missed the talk!

# SPACE

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Stearns advocated for the advancement of STEM (science, technology, engineering, and math) programs in the local schools, as well as establishing astronomy, robot, and rocket clubs that will involve students in exciting, educational activities.

"Let's imagine that kids who are learning to fly rockets can also learn to fly UAV's," he said.

The creation of maker-shop/hackerspaces also provides an additional avenue for students' creativity and experimentation. The Mojave Makers was organized in 2012 and provides a shared workspace for people to pool their resources, talents, and tools for projects in art, elec-

tronics, robotics, and rocketry.

Stearns further elaborated that "public, fun flights" of UAV's can help counter the downside of "technology hype," in which public support can wane, following peak excitement generated by technological advancements.

"We want to keep the community engaged and enthusiastic," he stated. Such enthusiasm helps move fledgling projects into commercial environments, he said, leading to business development and the formation of such entities as flight schools.

Bill Deaver, President of the Mojave Transportation Museum, suggested that Stearns integrate his ideas into the community's annual

Intermediate Space Challenge, organized by Marie Walker, a board member at the airport.

The very popular event, which features the launch of rockets created by area 4th, 5th, and 6th graders, is held each May at the Mojave Air and Space Port. "We're trying to create some engineers in our elementary grades," Deaver said, also suggesting that Stearns become involved with the East Kern Educational Resource Network, which meets monthly and actively promotes STEM coursework throughout a student's education.

Ethan Chew reported that the Mojave Makers have set up a new location at the Mojave High School. "We are there with makerspace infrastructure available for our high school students," he said.

Stearns, who is the

Founder of California Spaceports Network, additionally described ideas for linking the geographic areas of California's spaceport centers into a supportive network. Citing Silicon Valley, Monterey Bay, Mojave, Vandenburg, and San Diego, he said, "These evolving centers make up an ecosystem. We are a thriving ecospaceport system in California, which is the exciting place for Space in the United States."

Each center maintains its own focus, he continued. As an example, he said, Monterey Bay handles "green" tasks, such as fuel testing, while the very challenging jobs that are "dangerous and dirty" go to the Mojave Air and Space Port.

"We need to focus on the strengths of each spaceport and foster a spirit of cooperation," he said.

Glenn Stearns is an entrepreneur and venture capitalist at Stearns & More Capital in Monterey Bay and plans to create a UAV (unmanned aerial vehicle) Flight School in the near future.

We had visitors from Switzerland at our November Plane Crazy too. Swiss Air pilots and crewmembers enjoyed their conversations with Bill Deaver and Al Hansen. They were most interested to know if any Swiss Air aircraft were still parked at Mojave Air and Space Port. Unfortunately, we didn't have any to show them.



Dressed for the weather, representatives from the Antelope Valley Sea Cadets stopped for a pose next to Al Hansen's Grumman S2F Tracker.

The Second World War demonstrated to the U.S. Navy that one of the key weapons needed to combat the deadly menace of unrestricted submarine warfare was a carrier based hunter-killer anti-submarine aircraft. The Navy took delivery of its first Grumman S2F-1 Tracker in October of 1953.

Hansen's Tracker was

manufactured in 1958. Affectionately known as the "Stoof," (S-TWO-F) the success of the type was such that the Navy and Grumman planned a second generation aircraft in 1957 and the new aircraft would originally be designated S2F-3 before standardizing on S-2D in 1962. Capable of carrying more sonobouys, nuclear depth charges and more advanced detection gear, the first example flew on May

21, 1959. Further upgrades resulted in the S-2E which had a new computerized tactical navigation system and other improvements.

A unique Liberty Aerospace XL-2, manufactured in 2007, dropped by Plane Crazy. Here are quotes from an article in *Plane&Pilot* magazine in 2009 that describe the aircraft:

*“America seems to be just discovering the XL2. The Vanguard is the latest development from Liberty Aerospace in Melbourne, Fla., and is the only FAA-certified single-engine piston production aircraft equipped with a full authority digital engine control system (FADEC).”*

*“Its hybrid carbon-fiber construction and its unique design features have endeared it to pilots in the know.”*

*“The XL2’s fuselage is constructed entirely of Toray carbon-fiber composites—same as the Boeing 787. The construction is uniquely modular: The entire airplane consists of a steel rolling chassis, removable aluminum wings and a single-piece fuselage that weighs a mere 100 pounds. This component approach makes maintenance easier than with traditional aircraft.”*

*“The Teledyne Continental IOF-240-B provides 125 hp, and the FADEC optimizes performance so the Vanguard only burns 5 gallons per hour and offers up 120 knots at 75% power. Low-energy fabrication processes make it one of the “greenest” aircraft out there.”*

For more information about this aircraft, go to: <http://www.libertyaircraft.com/airplane-liberty-xl2/1-overview.php>

Special thanks to Ron Langford and Mojave Air and Spaceport staff for their assistance with Plane Crazy Saturday. Ron is always so kind and helpful – thank you Ron – we appreciate you so much!

Hope to see everyone on December 21<sup>st</sup> for Plane Crazy Saturday! Rain or shine, we hold this event, even if you are unable to fly in, be sure to attend to hear the aerospace lecture!

Aviation enthusiasts everywhere know there are very important dates to remember this month – December 7, 1941; December 14-23, 1986 and December 17, 1903.

Speech by President Franklin D. Roosevelt – “Yesterday, December 7th, 1941 -- a date which will live in infamy -- the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan.”

December 14-23, 1986, Voyager made the extraordinary first-ever, non-stop, unrefueled flight, around the world with pilots Dick Rutan and Jeana Yeager (no relation to Chuck Yeager). This year marks the 27<sup>th</sup> anniversary of that historic and daring flight!

At 10:35 a.m., on December 17, 1903, Orville Wright made history by flying a powered machine into full flight at Kitty Hawk, North Carolina.

One hundred years later, on December 17, 2003, Brian Binnie achieved the first supersonic flight with SpaceShipOne at Mojave Air and SpacePort, soaring to 67,800.8 feet and reaching 1.2 Mach!

Blessed Holidays, Merry Christmas to you from Mojave Transportation Museum Foundation!

