



Experimental Aircraft Association

Chapter 135

News



Number Two

February 2016

EAA Chapter 135 members

Our next meeting is Feb. 13th, Saturday, 6:00 PM in the meeting room at Exec 1 Aviation

We will have a video from EAA national to show, and plan a discussion on inexpensive ways to have weather display in the cockpit.

Our last meeting was on ADS-B (automatic dependant surveillance broadcast).

11 members and guests attended. Dave showed a slide show explaining the ADS-B system. Greg Long brought a unit that he built to receive the signals. The "In" part of ADS-B is not required by the FAA, however the "Out" sending units will be required by year 2020 for anyone flying into airspace D,C, or B.

There was lots of very in-depth discussion on both receiving and sending units, along with a couple articles from the October Ercoupe newsletter.

Your president, Marc Broer



How is your day going?

NEXT CHAPTER MEETING

will be held

Saturday - February 13, 2016

6:00 P.M.

Meeting Room at Exec 1 Aviation

Video and Discussion

Adventurer Tracey Curtis-Taylor's England-to-Australia solo flight a homage to aviation pioneer Amy Johnson

By James Dunlevie and Joanna Crothers

From ABC News Website



Adventurer Tracey Curtis-Taylor speaks to media in Darwin after her 20 day solo flight from England. (ABC News: Joanna Crothers) Story on page 2



English aviation pioneer Amy Johnson, pictured two years before her death in 1941. (Supplied: Rex/Shutterstock)

Flying long distances solo in a biplane is daunting enough in modern times; to have done it in the 1930s is bordering on superhuman.

Canada-based British adventurer Tracey Curtis-Taylor has some idea what aviation pioneer Amy Johnson went through to become the first female pilot to fly solo from England to Australia in 1930.

Landing in Darwin after 20 days of flying in an open cockpit 1942 Boeing Stearman, Curtis-Taylor described seeing the Australian coastline as a feeling of “euphoria, relief”.

Beginning on October 1 in England, Curtis-Taylor piloted her “Spirit of Artemis” over 23 countries; Europe, across the Mediterranean Sea to Jordan, over the Arabian Desert, across the Gulf of Oman to Pakistan, through India and on to Burma, Thailand, Malaysia, and Indonesia before crossing the Timor Sea and landing in Darwin on Friday — a journey of over 20,000 kilometres “following in the slipstream” of Johnson’s epic feat.

“I’m feeling just a bit windblown, sunburnt and a bit punch drunk,” a jubilant but weary Curtis-Taylor told assembled media as she stood in front of her aircraft in Darwin.

in England.

Despite a ship crew seeing her parachute come down and Johnson alive in the water, neither her body nor her plane have been recovered.

‘You’re only as good as your last landing’

Fully exposed to the elements in the open cockpit, Curtis-Taylor had to contend with rain, cold, heat and everything that comes with flying a plane that was designed in the 1920s as a trainer for US Army and Navy pilots.

“It’s fairly devastating on the skin and the hair and so forth. It’s tiring, it’s really tiring. It’s the noise, the vibration, the exposure,” she said.

The perils of solo flying in vintage aircraft were not lost on Curtis-Taylor. Despite the aid of a modern satellite navigation system, the cockpit of her Boeing Stearman is largely as it was in the 1940s.

And while staying in the air is tricky, it is coming down safely that is upmost in the mind of any pilot of vintage aircraft.

“You’re only as good as your last landing and I just wanted to do a good one,” Curtis-Taylor she said of her

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Cockpit of 1940s era biplane, with modern addition of satellite navigation.

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touchdown in Darwin.

From her first flying lesson at age 16, Curtis-Taylor — whose list of previous vocations includes “diamond valuer” and a stint with the Diplomatic Service at the Foreign Office in Whitehall — has taken on several endurance feats of air and land travel,

with the England to Australia homage to Johnson being the pinnacle so far.

Curtis-Taylor said the highlights of this trip included “flying over Myanmar [Burma], the Dead Sea, the Arabian desert and seeing sights such as the Taj Mahal from the air”.

Much of the journey has been dedicated to visiting schools along

the way, with Curtis-Taylor hoping to inspire girls to follow their dreams.

Despite touching down after her epic journey, Curtis-Taylor already has her sights set on the next adventure.

Her trusty Stearman is to be shipped to America and flown across the United States to complete the world flight in 2016.



Tracey Curtis-Taylor flies her Boeing Stearman over temples in Bagan, Burma en route to Australia.

Membership Dues

Name _____

EAA No. _____

Address _____

Phone _____

e-mail _____

Dues are \$20.00 per year

Dues are due July 1 and run through June 30.

(After January 1st you may pay \$30.00 for 1½ years)

LIFETIME MEMBERSHIP DUES ARE \$200.00

You must be a member of the National EAA.

You may mail your dues to our treasurer:

Dave Kalwishky
4224 Grandview Ave.
Des Moines, IA 50317

Taking Time to Find Aviation Serendipity



By Scott Spangler on January 4th, 2016

From *JetWhine Website*

On your way someplace else, how many times have you passed a sign pointing to a small town airport? The more important question is how many times have you followed that sign?

With the potential for unknown delays between the sign and your intended destination, and the unlikely reward of aviation serendipity, of finding something interesting at a small airport in these aviation depressed times, you probably drive on by. Yeah, me, too.

But not this year, or in all the years to follow. Finding something special is worth the minutes it takes to follow the airport sign and make a drive-by inspection. If there is nothing that captures my curiosity, I'll be on my way. But if it is taken prisoner, what else can I do but surrender to it?

A visit to the municipal airport, with a single 4,400-foot runway, that serves the 11,639 residents of Urbana, Ohio, planted the seed for this change. Had I been traveling and not touring the National Aviation Heritage Area, I would have missed something truly unique, the *Champaign Aviation Museum*, which calls this small town airport, also known as Grimes Field, home.

What makes the Champaign Aviation Museum unique is not the B-17, named Champaign Lady, it is restoring to flight status by connecting the parts of five different Flying Fortress airframes



with new construction. Nor is it the company of volunteers who are doing this good work. What's unique is that museum visitors can watch them work, up close and personal.

At most aviation museums, if the restoration shop is open to the public, admission is usually an added fee and visitors are kept at a distance. At the small museum at the Urbana Municipal Airport, the restoration

shop is the primary exhibit. Open Tuesday through Saturday, there is no admission, period.

Naturally, there's much more to the museum, but what captured my curiosity was talking to the volunteers doing the work. From one I learned that one of the B-17's sections was a set for the 12 O'clock High TV series, with big holes cut into it so cameras

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could film the waist gunners. The tail came from a B-17 drone the military flew through radioactive clouds after nuclear weapons tests. And the nose section came from the B-17 Allison used as an engine test bed.

And if I had driven by this small town airport, I wouldn't have met Irv Bence (I hope I got your name right), a volunteer since 2008, who was building wooden ammo boxes for the tail guns. An engineer, he started work at Rockwell International in Columbus, and during his career he worked on naval aircraft, including the A-3 and A-5 Vigilante. Our far ranging conversation about this aviation era was priceless.

So from now on, when I see a sign for a small town airport when I'm driving somewhere else, I'll will follow it for a quick look-see. This decision has enriched my anticipation for two trips planned for 2016, one to the East Coast and another, on two wheels, to the West. And I'll be looking for more than alluring attractions and interesting people. What I'm most curious about is the state of small town flight training. Does it still exist, and what are flight schools or independent instructors

doing to maintain its viability? Rest assured that I'll share what I find. – Scott Spangler, Editor



Innovator makes maiden flight

From AOPA Website

January 21, 2016 By Jim Moore



Commuter Craft test pilot Ethen Chaffin sits in the wide cockpit of the Innovator designed by Richard Hogan. The roadable two-seater design features a pusher prop, a canard, and four lifting surfaces. Photos by Jim Moore.

Commuter Craft test pilot Ethen Chaffin sits in the wide cockpit of the Innovator designed by Richard Hogan. The roadable two-seater design features a pusher prop, a canard, and four lifting surfaces. Photos by Jim Moore.

Test pilot Ethen Chaffin was prepared to fly on Sept. 24, 2015, the chosen day for the maiden flight of a brand-new, home-brewed design. He just wasn't expecting it to happen quite so soon.

Models and math had told the small team behind Commuter Craft, a startup founded by homebuilder Richard Hogan, to expect the two-seat Innovator to lift off on its own (in the absence of aft stick) at 105 knots. Chaffin advanced the throttle, spinning the 180-horsepower Titan engine up to speed and accelerating down the nearly 6,000-foot runway at Cartersville Airport in Cartersville, Georgia, with his left hand steady on the sidestick, watching the airspeed wind up.

"It took me just a moment to realize I was off the ground," Chaffin recalled, standing beside the distinctive white airplane on display at the U.S. Sport Aviation Expo in Sebring, Florida, nearly four months (and 28.3 flight test hours) after that first flight. "It came off the ground at 87 (knots)... it didn't pitch up."

Hogan was so excited he forgot to keep the camera pointed at his creation as
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Scales Rental Info

All scale rentals require check for \$200.deposit (Will be returned, uncashed, upon timely scale return).

Three day rentals. May be extended for thee additional days at no charge, if there are no other conflicting requests for their use, with notification by phone. Otherwise late fee of \$100 per day applies.

Chapter 135 members (must be member 3 months prior to rental date.) ..\$25.00 for 3 days

National EAA member but not Chapter 135 member\$75.00 for 3 days

A&P or FBO rate\$125.00 for 3 days

Copy of rental agreement available by fax or email by calling Craig Martin at 515250-3124 or emal to cmartindsm@gmail.com

Scales are kept at Wisecup Willow Aviation (Craig Martin) Nash Field, Indianola.

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it broke ground. About five years before that auspicious day, Hogan had retired early from his day job as the general manager and chief financial officer of a (nonaeronautical) engineering firm to complete a mission he had been working on in his spare time.

Designer Richard Hogan is a longtime homebuilder who retired early to devote his full attention to making his vision a reality with the Commuter Craft Innovator.



Designer Richard Hogan is a longtime homebuilder who retired early to devote his full attention to making his vision a reality with the Commuter Craft Innovator.

That first flight was more than a decade in the making, and in one respect the culmination of a dream dating to his boyhood, though it was also just the beginning. A longtime homebuilder actively involved in the Experimental Aircraft Association community, Hogan said he set out to make an airplane that is capable of covering distance at speed, an airplane that is exciting, unmistakably “new,” comfortable, and “very, very safe.” The Innovator, as he dubbed the design, has so far shown no signs of falling short of those goals.

On that first flight, Chaffin, the 26-year-old test pilot, realized he was already off the ground soon enough, and decided to let it fly. The short first flight of the first prototype produced a remarkably short list of tweaks and improvements to be made: minor adjustments to the suspension of the long, leggy landing gear, ailerons, and engine cooling.

It was the humans who overheated, so to speak.

“It was such a euphoric moment, we didn’t fly again that day,” Chaffin recalled. “We needed a couple of days to cool down.”

This unique two-seater is difficult to describe, with lines and features that invite comparison to some Rutan designs (it has a canard and a pusher prop) as well as manta rays. The wide body accommodates a wide cockpit (60 inches), with widely spaced seats and a huge center console between

that is large enough to accommodate batteries that can drive the wheels for travel by road, with an expected road range of about 50 miles when that version is developed.



The Innovator prototype is powered by a Titan 340 (180 horsepower), though other powerplants will also be tested.

The Innovator prototype is powered by a Titan 340 (180 horsepower), though other powerplants will also be tested.

The design produces lift from tip to tail, with three primary airfoils: the canard, the wing, and the horizontal stabilizer. Technically, Hogan noted, it has four lifting bodies, including the fuselage.

He plans to give it folding wings, a design point in common with Terrafugia’s Transition, though Hogan emphasized that this craft is an airplane first, and a road vehicle second; it is designed to be a great airplane above all.

While he plans to build a light sport version (1,320 pounds maximum gross), this first prototype has so far been flown at 2,250 pounds gross; fiberglass wings account for some of that weight. The all-composite, folding-wing version will be able to adapt quickly to road travel, and another option will be to tow it home on a trailer.

While there are some similarities between the Innovator and the Transition, Hogan noted many differences, and said he has a different market in mind: The Innovator will be produced first as a kit, and will likely require two or three years to develop into a light sport version. It will have at least this much in common with the Terrafugia Transition.

“Nobody’s going to confuse either one of them with a 172,” Hogan said.

A flip of a switch in the spacious center console can move the rudder pedals forward or aft to accommodate pilots ranging in height from 5 feet 2 inches to 6 feet 4 inches tall; Hogan said the design will ultimately offer a comfortable ride (and consistent sight picture forward) for pilots up to 6 feet 8 inches tall.

It is scalable in other ways. Hogan anticipates his small

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startup company will eventually build versions with up to six seats, and the basic design can scale larger still.

“I’ve got a lot of ambitions for my little baby,” Hogan said.

Chaffin, so far the only pilot with firsthand knowledge of the results of the years-long effort, said the Innovator is an “absolute joy” to fly: responsive, steady, and as docile in a stall as can be. Power off and stick full aft produces a sink rate of 1,100 feet per minute, with no pitching, yawing, or rolling tendencies, he said. He has added turns to that profile, up to about 17 degrees of bank, and the aircraft has yet to spin. These characteristics, he said, will help make the dreaded base-to-final stall-spin scenario nearly impossible, part of the Innovator’s safety package. (An optional ballistic parachute will also be available, along with other safety features.)

The Commuter Craft Innovator, a roadable two-seater with a pusher prop, a canard, and four lifting surfaces, draws curious looks at the U.S. Sport Aviation Expo in Sebring, Florida.

Chaffin has logged speeds of 181 knots at 7,000 feet, and projected a range of 620 nautical miles at 55 percent power with an 8-gallon reserve. Those figures, along with the climb rate of 1,750 feet per minute at sea level, will be reconfirmed as the design is refined and new features (such as folding wings) and alternative powerplants are added.

Hogan expects to produce kits that can be completed for about \$100,000 to \$120,000, depending on avionics and other choices; the roadable version will be a bit more expensive, between \$150,000 and \$180,000.

He hopes to be able to fly it in front of the crowd at the Sun



The Commuter Craft Innovator, a roadable two-seater with a pusher prop, a canard, and four lifting surfaces, draws curious looks at the U.S. Sport Aviation Expo in Sebring, Florida.

Fun International Fly-In and Expo, where he will also announce details of an “alpha” and “beta” build program, with 10 experienced builders to be recruited in each of these categories. Largely self-funded to date, he also will be recruiting investors.

The Innovator has already demonstrated a remarkable ability to draw crowds, pilots and nonpilots alike. There was such great interest among patrons at the local Waffle House that they posted one of the design drawings on the wall, and Hogan noted that the aircraft has earned the admiration of men and women alike, including people who had never expressed much interest in airplanes before.

“We wanted an airplane that would inspire, and bring new people into aviation,” Hogan said.

Iowa Department of Transportation Office of Aviation Calendar

February 2016

Friday and Saturday,
February 5-6

2016 Midwest Aircraft Maintenance Symposium and Trade Show

Airport Holiday Inn, Des Moines
Phone: 319-389-8943 (Phil Conn)
Email: philip.conn@rockwellcollins.com
Website: www.iaaviation.com

Friday, July 29 - Saturday,
August 6

National Balloon Classic

Indianola National Balloon Classic Field
Phone: 515-961-8415
Email: info@nationalballoonclassic.com
Website: www.nationalballoonclassic.com

June 2016

Saturday and Sunday, June
25-26

Quad City Air Show (30th Anniversary)

Davenport Municipal Airport
Phone: 563-285-7469
Email: info@quadcityairshow.com
Website: www.quadcityairshow.com

September 2016

Sunday, September 11

Carroll Municipal Airport (KCIN)

Airshow and flight breakfast
Breakfast: 6:30 a.m. - noon
Airshow time: TBD
Phone: 712-792-4980 (Don Mensen)
Email: don@carrollaviation.com

July 2016

Monday, July 25 - Sunday,
July 31

EAA AirVenture

Oshkosh, WI
Phone: 920-426-4800
Email: communications@eaa.org
Website: www.airventure.org

Saturday, September 24

FLY IOWA 2016

Clinton Municipal Airport (CIW)
(Rain date: September 25)
Phone: 515-964-1398 (Chuck McDonald)
Website: www.flyiowa.org
www.cityofclintoniowa.us/departments/Airport



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