



# The Flyer



Volume 45, Issue 10

Experimental Aircraft Association Chapter 44

September 2013

## AUGUST YOUNG EAGLE RALLY

by Elise Isler

On August 18, 2013 we had a very successful turn out at the SAC for our Young Eagles Rally! 9 pilots flew 27 Young Eagles and we had more than 125 visitors to our event. What a wonderful way to share our enthusiasm and knowledge of general aviation. Our first young flyer had waited 2 years until she reached age 8 so she could fly - after watching her sisters fly in 2011. This year we had several other youngsters that were not old enough but are looking forward to the future. One was counting the months! Of course many parents were just as excited as the kids!



The beautiful weather and so many wonderful volunteers led to the success of the day. As well as our own numerous, dedicated members (too many to mention by name – I would be afraid to leave someone out) Paul Quenzler, Young Eagles Coordinator from EAA Chapter 46 Buffalo, came with several volunteers, and Todd Cameron and Members from the Civil Air Patrol came to help supervise a Gippsland GA 8 Airvan (Austalian made). Dave Amsler had his Sonex (Amsler made) for static display as well.

Continued on next page.

## A FEW QUICK THOUGHTS

by Rob Williams

Where the heck did the summer go? Seems to be the question on everybody's mind lately. Labor Day arrives and suddenly there is fall in the air. It went so fast, yet we did have some great flying weather despite its fast passing.

Speaking of passing, by now all of you are aware of EAA founder Paul Poberezny's death in August. His contribution to aviation and lasting impact on the homebuilding world was enormous. All around the country chapters are contemplating ways to honor him, including our own board of directors. What a legacy he has left!



Paul Poberezny 1921-2013  
(image from the Internet)

At this writing I am about to head out to Reno for the air races. Its another one of those many events where Paul made his mark. He helped to breath life back into air racing in the mid-sixties with the start up of the Reno races. I am appreciative we still get to do it after the accident a few years ago. It's the only venue left for this, a sport that was second in popularity only to baseball in the 30's in the US.

I have said it before, and I will say it again. I am continually impressed by the monumental efforts members of this chapter make on an individual level to support what we do and our facilities. There are so many of you, in so many ways, that make it all work. It is really incredible. It bodes well for our future and the plans we have made going forward. CAVU

**(Young Eagle Rally con't)**

There was a nice mix of planes flying: Jeff's Zenith, Paul's Glostar, Art's Comanche, Larry's RV-6A, Steve's Piper Cherokee, Todd's Cessna 172, Rollie's Navion, Whit's Cessna 210A, and Mike's Cessna 172F.



Jeff Paris demonstrates a fuel check to his Young Eagle.

The activity of the day was exciting! "Phil's Porch" was a main center of activity (even before the food was brought out!) The picnic table built by Ron Logory was in constant use. Not only were we successful in flying Young Eagles, but as Norm said, "This is what we built (the SAC) for: watching airplanes, flying kids, and sharing food with family and friends." Since 2009 we have been physically working to build an establishment to facilitate such events. We are now successfully holding Young Eagle Rallies, AOPA Safety Seminars, AeroCamps, hosting numerous guest speakers both at our monthly meetings and special events and more. Uniting with groups from other organizations and other EAA Chapters is a continuation of the dream! Thank you all for your support.

Please watch for future Young Eagle events and contact YE Coordinator Elise Isler at [FlyYoungEagles44@gmail.com](mailto:FlyYoungEagles44@gmail.com) for information.

## AOPA ASI ANNOUNCES NEXT SAFETY SEMINAR AT THE SAC

EAA Chapter 44 again welcomes the Aircraft Owners and Pilot's Association Air Safety Institute with the presentation of their seminar "Weather Challenge." The event will be held on Thursday Oct. 24 from 7-9 PM at the Sport Aviation Center of Western New York, 44 Eisenhower Dr. Brockport NY 14420, aka Ledgesdale Airpark (7G0). The presentation is free and open to the public.

Here is the info blurb from the AOPA ASI website:

You don't need a meteorologist-level understanding of weather to be a good pilot—though to judge from some of the educational materials out there, you might think so. Skew-T diagrams and moist adiabatic lapse rates are all well and good, but for most of us it's the practical stuff that matters.

With that in mind, our new seminar is aimed at bolstering your real-world weather wisdom—and having a little fun, too. As with our recent "Chart Challenge" seminar, we'll put your knowledge to the test, quizzing you on everything from METAR/TAF decoding to real-world weather scenarios. Along the way we'll cover:

- 1 The most important weather resources for pilots
- 2 Critical tie-ins with risk management and decision making
- 3 Weather-related accidents that didn't need to happen
- 4 The promise (and pitfalls) of cockpit weather

## LAST MONTH'S GUEST SPEAKERS

Several of our members went to AirVenture Oshkosh and reported back on their experiences.

Ron Logory hasn't been since his first time in 1987, and for his friend Joe, this was his first AirVenture. The two of them made a road trip thru Canada to Oshkosh. Ron was at the show every morning at 0700 hrs, even though the show didn't start till 0900 hrs. They had a wonderful time, and even had an opportunity to meet Burt Rutan talking about the Voyager flight. Ironically, on Ron's first trip in 1987, he saw Voyager being introduced to the public and even held one of the wing tips as it was being guided into its place. His goal is to fly in next time.

Carl Bouwens has been going since 1971, only missing 4 or 5 fly-ins. He attended the roadable aircraft forums and found that there were 3 such aircraft at OSH and 6-7 in the pipeline for future introduction. Carl was also very impressed with the night time airshows.

Rob Williams offered to advise any first time flyers to Wittman Field guidance on the various approaches, VFR/IFR/Warbird/etc/ He's flown them all over the years. Ron L, this is for you.

Elise and Norm Isler had a fantastic time and flew out to support our Airlift. They attended several of the Chapter and Young Eagle activities. They noted that EAA is now focusing more on Chapter roots. They missed seeing Jetman, though the night airshow was great. Throughout the daily airshow, they did not really miss the military flight teams (See Dave Hurd's rant in last months [Flyer](#).) Volunteers were recognized significantly throughout the week.

Continued on next page.

## OLD GOAT RAMBLINGS

by Art Thieme

Back-to-college time. The TV and newspapers show parents lugging refrigerators, microwaves, computers, stereos, and chairs, up to the room. I went to college with one suitcase that would now fit into an overhead bin, plus a slide rule. Times change.

Old Goat reminder: Got a call from a classmate asking if I remembered that it is the 70th year of our high school graduation. Also celebrated our 60th wedding anniversary. *(Congratulations on both, Art! Ed.)*

This material is androgynous. Look it up.

When we talked about the Honor Flight I remarked that I was never asked to prove that I was in WWII. Someone said, "That is why it is called Honor Flight."

It was nice to see that Earl Luce was recognized for reverse-engineering and building the Buttercup. Long-time chapter members can remember going to Earl's shop and looking at the development of the fuselage and leading edge slats. A great piece of work. Article in the August 2013 issue of [Sport Aviation](#).

Anyone experience anything with the no-fly zone when the President was here? It had to go from BUF to ROC to SYR to Binghamton to PA.

At my yearly visit to the cardiologist I asked the doctor if my heart was healthy enough for sexual activity. He said "Yes!" I asked, "May I have a prescription?" He answered, "Yes, but I don't know who would fill it."

Old Goat, out. Really OUT!

**(Young Eagle Rally con't)**

Highlights of the week for them included: 17 years ago Norm asked then girlfriend to go to this little airshow in WI with him. Elise has been going ever since; installing Hugh Jones's name on the Memorial Wall alongside departed members Cy Noon, Mark Donovan, Everett "Squeek" Hepler, and Al Garlick. Other names on the same Wall are Steve Wittman, John Denver, Tony Bingelis, and the crew of STS 107 Columbia. Good company all.

Best memories for them: the people, both old and new friends, members, and the names on the Memorial Wall.

Dwight Meyers flew one of thirty-five Navions on the field. His plane was parked right next to Brian "Waldo" Moore and his restored 1947 Cub (see photo in last months newsletter.) Turns out Brian's mother was Helen Moore, former EAA 44 member, CFI, wing-walker, owner of Hopewell airport, and Gulfstream pilot. Small world.

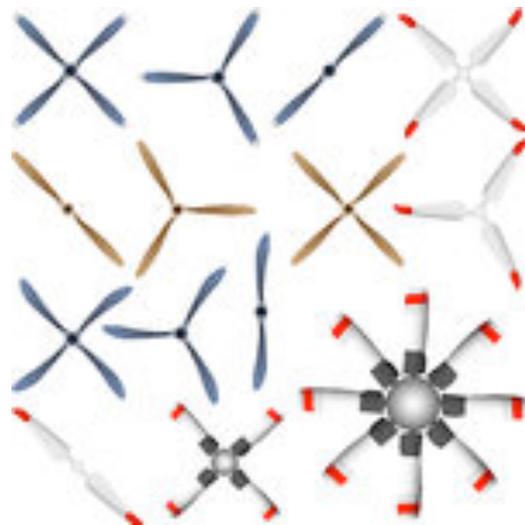


The folks from ITT rolled out their Caravan and brought it over to the SAC for the last months Young Eagle event. Mike Clayton is talking about some of the uses of the electronic measuring equipment on the aircraft. This was one of the bigger general aviation aircraft the kids had ever seen. It gave them some idea of the variety of planes and their purposes in GA.

**PROPELLERS, PART V**

by Mike Clayton

In the previous installments (Feb-May 2013), we looked at some general ideas about how propellers work, as well as engine characteristics that have to do with how power is provided to the propeller. The basis of this was the idea that, as a propeller rotates, it converts the power produced by the engine into thrust, which then causes forward motion of the aircraft.



We looked at the difference between typical two and four cycle engines, in terms of how they produce torque as a function of RPM. We looked at how that characteristic is important to the ability of the propeller to produce thrust.

Now, let's take a deeper, more thoughtful look at torque and RPM. First of all, we know that practically speaking, a flatter propeller pitch allows an engine to develop maximum rated horsepower, as it lets the engine achieve maximum RPM statically and during the takeoff run. However, as the aircraft becomes airborne, the engine speed is reduced by the pilot for several reasons: wear and tear

Continued on next page.

on the engine and fuel economy. In order to extract the maximum performance from the engine-propeller combination at lower engine speeds, we would like to increase the pitch on the propeller (this is like shifting the transmission on your car to a higher gear). Bear in mind however, that the increase in pitch also increases the required torque to turn the propeller. Thus, the maximum pitch and the maximum efficiency of the propeller-engine combination depend upon the torque the engine is capable of producing at any engine speed. In other words, the propeller is analogous to the automatic transmission in a car if it can match the engine speed and the torque characteristics so that the best efficiency overall is achieved. This is what a constant speed or in-flight adjustable pitch propeller allows us to do. If things are handled correctly, we can have the best of both worlds: maximum power at takeoff, and maximum efficiency during cruise at a lower power with the in-flight adjustable pitch propeller. Mixture control also enters into this issue, in terms of maximizing the efficiency of the engine/propeller combination, but I am not going to address that at this point.

Many small aircraft do not have constant speed or in-flight adjustable pitch propellers. What about them? Well, here is where the difference between the torque and speed characteristics of different engines becomes important.

What about the difference in two cycle and four cycle engines? Well, recall that the two cycle engine has a torque curve that increases with engine speed, while the four cycle engine usually has a relatively flat torque curve. This is at least part of the reason that four cycle engines tend to have much better fuel economy than two cycle engines, provided the engine propeller combinations are selected properly. With a higher pitch propeller, the

aircraft can cruise more efficiently with the four cycle engine, operating at a more economical speed than the two cycle engine. At lower speeds, the four cycle engine can handle a propeller with higher pitch than a typical two cycle engine. The flat torque curve also means that a small reduction in maximum RPM will not lead to as dramatic a reduction in horsepower output from the four cycle engine as for the two cycle engine. Therefore, we may be able to use a higher propeller pitch, for fixed pitch propellers, and still achieve very good takeoff and climb performance, while coming closer to optimum cruise performance.

A good example of this is a comparison between the Rotax 582 and HKS 700E. Fuel consumption for the 582 is around 5 gallons per hour, plus or minus a bit on the Kitfox II and III at about 75% power. The HKS will cruise at the same aircraft speed for about 2.5 gallons per hour. With the proper selection of propeller diameter and pitch, the two engines will produce essentially the same aircraft performance at takeoff and cruise. Thus, the four cycle engine with slightly lower rated horsepower will provide essentially the same aircraft performance at about twice the fuel efficiency as the typical two cycle powerplant, as long as the engine weights are comparable. This underscores the importance of understanding the balance of all these factors in designing an aircraft, and in selecting the engine/propeller combination.

We also want to look at propeller shape, and understand what this means in terms of maximum efficiency for a given propeller. This will be our next installment, and will allow us to have some understanding of propeller design, and coupled with our discussion of various engine characteristics, to appreciate how to select the engine for our aircraft, and to come up with the best propeller for it.

**EAA Chapter 44  
Board of Directors' Meeting  
13 August 2013**

**Board Members Present:** Clayton, Byers, Nelligan-Barrett, North, Peters, Williams and Isler

**Other Members Present:** Greeno, Northrop

**Reports:**

- President (Rob Williams):
  - No specific items
- Vice President (Norm Isler):
  - No specific items
- Treasurer (Dave Hurd):
  - Report read and approved

**Business:**

- Building Committee (Darryl Byers / Mike Clayton)
  - Additional concrete work still planned.
  - Bathrooms are nearing completion, most partitions are in, and vanities are installed. Need final partitions and stall enclosures.
  - Trench filling completed last Saturday. Norm moved that the Chapter purchase a gift card to reimburse Jim Weinkauff for his bucket loader fuel. North seconded, passed unanimously.
  - Norm shared sample SAC sign artwork. Norm noted that he has a quote for two signs, one for the south side of the building and one over the east entrance. Both

signs will cost 10% over the previously allocated amount. Mike Clayton moved to approve the additional expenditure, Hurd seconded, passed unanimously.

- Capital Campaign (Larry Greeno)
  - Rob Williams presented a summary of the progress that he and Larry Greeno had made in development of a comprehensive fundraising plan.
- Old Business:
  - Induction loop sound system – Bob Nelligan-Barrett still looking into this.
  - AOPA Giving Back Program – Bob Nelligan-Barrett watching and waiting.
- New Business:
  - The “make-up” Young Eagles rally is Saturday, 17 August. Pilots and ground crew are needed.
  - Ron Logory donated a pair of pop up exhibition tents, BOD agreed to accept.
  - Norm suggested that we appropriate funds for purchase of materials for two more picnic tables that Ron Logory has volunteered to build. Steve North moved to approve, Norm seconded, passed unanimously.
  - Next AOPA Air Safety Foundation program at the SAC is 24 Oct (Thur).
  - Jeff Peters- reviewed database on local pilots and EAA members.

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The Flyer is published monthly. For an electronic copy, go to <eaa44.org> and enter your email address where requested. For a mailed hard copy (\$10), contact Treasurer Dave Hurd. For membership info, contact Treasurer Dave Hurd.

Stories and photos by the editor unless otherwise noted. Article deadline is 1<sup>st</sup> Tuesday of the month. Send submissions to Editor Bob Nelligan-Barrett.

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### EAA 44 is a 501(c)3 organization.

Gifts of cash, securities or other property to the Chapter for the benefit of the Sport Aviation Center are welcome and fully tax deductible.

Contact Treasurer Dave Hurd for details.



**Sport Aviation Center of Western New York**

## REGIONAL CALENDAR

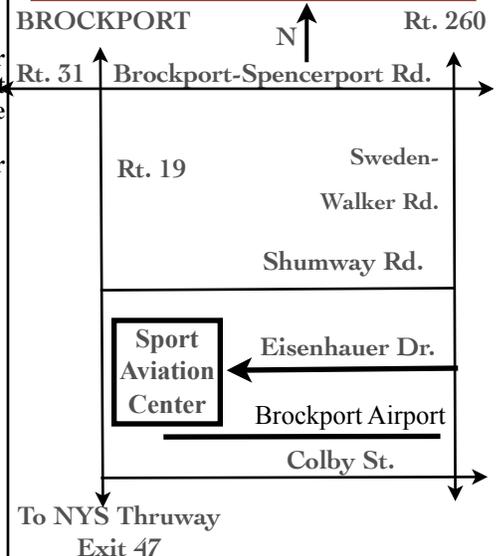
See the Upstate NY Aviation Calendar for fly-in breakfasts and other events.

<UPSTATELIST.ORG>

### AOPA AIR SAFETY INSTITUTE SEMINAR

#### “WEATHER CHALLENGE”

Thursday Oct. 24, 7-9 PM  
EAA 44 Sport Aviation Center  
44 Eisenhower Dr. 14420  
Brockport Airport/  
Ledgesdale Airpark (7G0)  
See article in this issue.



## EAA 44 Calendar



### NEXT GENERAL MEETING

**Tues Sept 17, 6:30 PM**

**Speaker: John Foy** will talk to us about attending the 69th Anniversary of the D-Day invasion in Normandy, France.

Please bring a side dish or dessert to complement Mike Clayton's dinner of smoked brisket and ribs or southwestern chili with beef & beans.

Sep. 14 SAC Sat. Work Day  
Sep. 17 General Meeting  
Sep. 28 SAC Sat. Work Day

Oct. 8 Board Meeting  
Oct. 12 SAC Sat. Work Day  
**Oct. 15 General Meeting**  
**13WHAM Meteorologist Glenn Johnson (Weather permitting)**  
**Oct. 24 AOPA ASI Seminar**  
Oct. 26 SAC Sat. Work Day

Nov 9 SAC Sat. Work Day  
Nov. 12 Board Meeting  
**Nov. 19 General Meeting**  
**Craig Curren, Space Travel Agent, Galactic Enterprises**  
Nov. 23 SAC Sat. Work Day

**All activities take place at the Sport Aviation Center unless otherwise noted.**

### **Sport Aviation Center**

44 Eisenhower Dr. 14420  
Brockport Airport/  
Ledgedale Airpark (7G0)  
43° 10' 56" N 77° 55' 1" W

### **Board Meetings-**

2<sup>nd</sup> Tuesday of the month, 7 PM

### **General Meetings-**

3<sup>rd</sup> Tuesday of the month

Dinner 6:30, Meeting 7:30

### **SAC Saturday Work Days-**

2<sup>nd</sup> & 4<sup>th</sup> Saturdays, 10 AM

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