



## CHAPTER 613

February 2004

[www.eaa-chapter613.org](http://www.eaa-chapter613.org)

# The Boredom Fighter Flys !



Harry Yawney's "Boredom Fighter" on it's maiden flight at Shelburne Airport piloted by Frank Gibney. Flight was on November 16, 2003

Photo taken by Bruce Uvanni.

## Upcoming Events

**February 15<sup>th</sup> (Sun) – 09:00** – Chapter 613 Pancake Breakfast – Franklin County Airport.

**February 29<sup>th</sup> (Sun) – 13:00 to 17:00**  
Open house / Retirement Party for Hobie Tomlinson at the FBO Avcenter, Burlington Airport. For details see flyer on page 8

**March 6<sup>th</sup> (Sat) – 18:00**  
It's Cabin Fever Frolic time again. This year it's at The Waterworks in Winooski. For details see page 11

## Views and News By Bill Morelli

**On The Cover** – The “Boredom Fighter”. For more details on Harry Yawney's aircraft, see page 5.

**Hobie Tomlinson** continues his series in the “Flight Advisor Corner” starting on page 4. This month it's Aircraft Upset Recovery” part 3 continued from last month. See page 3

**AWOS** – Just a reminder that Franklin County Airport has an AWOS on 119.025

There is also an AWOS at Caledonia Airport on 119.275

**Pratt and Whitney Tour** - Bob Sterling was able to set up a tour of the Pratt and Whitney engine facility at the Plattsburg Air Base. A few of us Chapter 613 members attended. They have two aircraft for flight testing engines. A Boeing 720 and a Boeing 747. We got to see the 720 take off on a test flight and we toured the inside of the 747. It was very informative and interesting. See photos on pages 9 & 10.

## January Pancake Breakfast

By Marge Butterfield

The January 18<sup>th</sup> pancake breakfast was held at the Franklin County Airport because the furnace at the Shelburne Airport decided to go “south”. Due to the weather, the turnout for the breakfast was small. The Chapter stove was brought up to the airport by **Donald Taylor**, with the help of Bill Cheney. Both Donald and Bill set up for the breakfast on Saturday so that everything would be ready for the Sunday breakfast. **Chuck Robitaille** and **Donald Taylor** were the cooks and did a fine job.



President, **Terry Griffin**, announced that our Chapter renewal is past-due because the necessary paperwork regarding chapter status and insurance had not been sent in with the annual fees. Terry had never received the paperwork because a snowplow took the liberty of removing his mailbox from its stand, never to be seen again. Nevertheless, all the paperwork has been prepared and fees forwarded to EAA headquarters. Because of our “inactive” Chapter status, an official meeting was not held; however the following matters were discussed:

- Thanks were extended to **Donald Taylor** and **Bill Cheney** for setting up for the pancake breakfast.
- Thanks were also extended to **Chuck Robitaille** and **Donald Taylor** for the fine breakfast they cooked.
- **Don Nowakowski** and **Donald Taylor** volunteered to cook for the next pancake

breakfast to be held on February 15<sup>th</sup> at the Franklin County Airport from 9:00 – 11:00.

- **Cabin Fever Frolic** will be held at “The Waterworks Restaurant” at the Champlain Mill in Winooski on Saturday, March 6<sup>th</sup>. For more details see the separate announcement and sign up sheet attached to the newsletter. Hope to see you there!
- **Donald Taylor** thanked **John Butterfield** for designing the thank you cards for him. Donald brought the thank you cards to the meeting so everyone could see them. Donald is going to use them to thank the lady who helped with the paperwork at last summer’s Young Eagle rally at Saranac Lake and also to thank the individuals and/or companies who donated towards the Chapter trailer.
- Young Eagles Coordinator, **Donald Taylor**, announced that the Young Eagles Program is going continue on as it has in the past. Donald is planning a Young Eagle Rally at the Franklin County Airport in June and he also reminded everyone that **Mike Pecue** is planning a Young Eagle Rally at the Montpelier Airport for some time in the spring.

#### 50/50 Raffle

**Tyler Hart** was the winner of the 50/50 raffle, (breaking **Marge Butterfield’s** winning streak) bringing home a grand total of \$8.00. Congratulations Tyler!!

### Chapter Calendars for Sale!

We still have a few calendars for sale for \$8.00 apiece. This is the price that the Chapter bought them for. Call **Steve Couzelis**, our new Treasurer at 893-0029 to reserve one. All calendars must go!

## Flight Advisor Corner



### AIRCRAFT UPSET RECOVERY III

This month we will continue our discussion of aircraft upset recoveries by looking at some of the possible upset scenarios and their recovery strategies. We will look at:

- Evaluating the Aircraft situation
- Recovery Process
- Uncommanded nose up
- Uncommanded nose down
- Wake Turbulence
- Asymmetric flap/aileron jam (deflected)
- Rudder Jam (deflected)
- Control Jam/Failure (surface failed)
- Recovery Blockers (Gotcha’s)
- Summary

The importance of **evaluating the aircraft’s situation** cannot be overstressed. It is where we decide which recovery strategy to use and if we are wrong here, well - *the rest is futile!*

The first step in evaluating the aircraft’s situation is to locate the horizon. If we are in VMC (visual meteorological conditions) this is simply a matter of looking out the window. The degree of bank is determined by looking out the front window, while the degree of pitch is determined by looking out the side window. The most common error is not looking out the side window to determine the pitch attitude, which is continually seen when teaching departure stalls. This gets trickier in IMC (instrument meteorological conditions), as we need to use the attitude indicator for this information. The more expensive attitude indicators have a “Sky Pointer” which points to “up”, the less expensive ones have a “bank indicator” which points to the angle of bank. Always be aware of which type you are flying with, as this has caused more than one failed recovery! Look at the angle of the horizon line, or pitch ladder bars, to the miniature airplane. Next look at the sky or ground colors displayed, the orientation of the pitch bar labels and the amount of pitch displayed. Be sure to crosscheck other instruments, as more than one aircraft has been rolled inverted while following a failed attitude indicator!

Next look at the airspeed both for amount and direction of change. This is going to tell us what to do with the power. Low and/or rapidly decreasing airspeed means full throttle, while high and/or rapidly increasing airspeed means idle power. Piston aircraft have an advantage here, as the drag of a windmilling prop is very high and greatly retards speed buildup. Constant airspeed in the normal range would mean the power setting is ok.

Lastly, evaluate AOA (angle of attack) and Sideslip. Make sure the aircraft is not stalled or operating at a high AOA. Although light aircraft do not typically have AOA indicators, AOA is directly proportional to elevator position. The more “aft” the stick/yoke, the higher the AOA and the closer to stall the aircraft is! Sideslip can be determined by the ball in the turn coordinator and/or by the sideforce we feel. It is important to eliminate Sideslip because of the rolling moment it produces.

We introduced the **Recovery Process** last month, but I would like to review & expand upon it. The first step is to announce the problem, (verbalize the event). This “snaps us out” of the denial stage, normalizes the cockpit and starts us on the recovery process. Next reduce the aircraft automation level, i.e. all autopilot/autoflight systems OFF! They may have caused the problem & will most certainly interfere with the recovery. Then evaluate the aircraft situation, especially **noting aircraft attitude, airspeed and altitude!** Now initiate recovery by unloading the wing (to approximately ½ G), roll the shortest way to upright, wings level (using full aileron deflection) and then pitch to level flight.

The first UAR (Unusual Attitude Recovery) we will look at is **Uncommanded Nose Up**. This could be induced by several factors. Some of these are, aircraft out of aft C.G., cargo shift in flight, autopilot fault, miss set trim, stuck electric trim, even an “out of trim” go-around. The “out of trim” go-around is the basis for the FAA’s instructor test maneuver called an “elevator trim stall”

The first recovery steps are announce the problem, reduce automation, and evaluate the aircraft situation. Then unload the wings using up to full forward elevator if necessary. Next use any & all nose down trim available. Reduce power (thrust) as necessary to use thrust vector effect in lowering the pitch attitude. Lastly roll the aircraft into a very steep bank, this will cause the excess lift to turn the aircraft rather than continuing to pitch the nose up. The bank recommended is 90 degrees (knife-edge) to initially start the nose coming down. The

bank has to be very steep to reduce the vertical component of lift, because even at 60 degrees bank, 50 % of the wing lift is still vertical! Once the nose has started down and is approaching the horizon, reduce the bank to find a bank angle that will maintain pitch attitude. This will create time in which to sort out what is causing the problem and devise a solution. It is important in all UARs that we act correctly and quickly. The time window of “solvability” for these events is very short (5 to 10 seconds) and they rapidly become unsolvable. In the Uncommanded Nose Up event, it is necessary to act before the airspeed depletes substantially! A tragic BE1900 accident in Charlotte, N.C. a while back was the result of allowing an uncommanded pitch up to deplete the aircraft’s speed.

Next we will consider the **Uncommanded Nose Down** UAR. Factors inducing this could be bank in excess of 90 degrees due to wake turbulence or mountain wave rotor; aircraft stall, autopilot malfunction, or stuck electric trim. Again, announcing the problem, reducing automation and evaluating the aircraft situation are the first steps. Unloading the wing is the next recovery step. This insures the wing is not stalled by moving the elevator forward of the neutral point, while improving aileron effectiveness/roll rate. Roll the shortest way wings level, using full aileron deflection. Adjust thrust to obtain/maintain cornering speed (approximately 1.6 times stalling speed, clean configuration). As the wings level, pull towards the horizon, considering proximity to the terrain. **Remember to avoid rolling Gs!** **Approaching the horizon, restore normal thrust.** If the nose maintains a tendency to “pitch down” use whatever force is necessary on the yoke/stick to maintain/restore normal pitch attitude. Use stabilizer trim and consider the pitch up tendency of power in most aircraft. Consider configuration changes such as gear or spoilers to contain the speed build up.

Lastly, for this month, we will look a **roll upset** caused by **wake turbulence** or a mountain wave rotor. As we all know, wake turbulence is caused by the wing tip vortices produced by high-pressure air spilling around the wingtips of the generating aircraft. These are at maximum strength when the generating aircraft is slow (high AOA) and in a relatively clean configuration. These vortices tend to sink and move outward from the generating aircraft, hence the admonition to remain above & upwind of the generating aircraft. Rotor turbulence is produced just below the ridgeline on the lee side of mountain ridges when high winds aloft and stable air produce a strong mountain wave effect. Again staying well above the ridgeline, or well downwind

when paralleling the ridges, should avoid the phenomena.

The severity of a wake turbulence encounter primarily has to do with the difference in wingspan of the two aircraft. A short wingspan aircraft is at higher risk, because the entire wing, including the ailerons, is in the rotating air mass. An aircraft of equal or greater wingspan to the generating aircraft would have its ailerons in undisturbed air, thus giving it a much greater anti-vortex rolling capability.

Again the initial recovery steps are announce, reduce automation and evaluate. Then unload the wings to 1/2G and roll the shortest way to "up" using full aileron deflection. Unloading the wings will dramatically reduce the rate the nose is "falling through" the horizon and buy more time to roll the aircraft upright. As the wings return toward level consider an exit strategy from the wake turbulence by climbing or turning. In "straight wing" airplanes, if full aileron deflection will not stop the rolling moment, consider enhancing roll rate buy use of the rudder. Because of the dramatic yaw-roll coupling of swept wing aircraft, rudder use is not as good an idea. If you have already been rolled inverted, forget the rudder unless you are an experience aerobatic pilot! This is because rudder control inputs reverse in inverted flight due to the fact the rudder is upside down. Be ready for the sudden roll reversal that happens when the aircraft exits the wake turbulence into still air with full aileron deflection! Lastly pitch the aircraft back to the horizon and restore normal power if it was reduced during the upset.

This looks like a good place to break for this month. Next month we will conclude this series with upset recoveries for asymmetric flap/aileron jam, rudder jam, and control freeze/failure, recovery blockers and a summary. The thought for this month is "What you don't know can hurt you!" Talk with you next month, and as always, **Think Right to FliRite!**

**John McNerney** received this from the Air Care Alliance (the "Angel Flight" folks are part of this). There is the aviation equivalent of a "Good Samaritan Law" in its early stages in Congress designated H.R. 1084. It would provide some liability protection for volunteer pilots and groups engaged in public benefit flying ("life flight", or other such volunteer efforts including, he believe's Young Eagles flights).

## "Boredom Fighter" by Harry Yawney

The aircraft is a wood-rag aeroplane and is scratch built. I started work on this project too far back to remember. I have the excuse, however, that I took time off to build our house – another scratch-built project.

Description: Wingspan - 20 feet  
Cord - 30 inch  
Airfoil - NACA 4412.  
Empty weight - 475 pounds  
Max gross - 770 pounds.  
Engine – Continental A-65

The prototype performance figures are:

Cruises at 110 mph at 2150 rpm  
Takeoff distance is 150 ft  
Landing distance is 350 ft  
Climbs at 1400 ft per/min

The plane is about 10% heavier than the prototype. It weighs 860 lbs whereas the prototype weighs 770 lbs. Any difference we will see in performance figures is because the plane is heavier.

Two months prior to the actual test flight, Frank Gibney taxied the plane and then he and I made any necessary changes or adjustments. This happened 3 or 4 times. There were issues with CG as well as rudder and brake pedal rigging.

I would like to thank Ray and Steve for providing space in the hangar and for their moral support during assembly.

### Tomlinson joins Heritage Flight

SOUTH BURLINGTON — Hobart C. Tomlinson has joined the flight department of Heritage Flight. "Hobie" has been a local FAA designated flight examiner for the last 27 years and has over 31,000 hours of flight experience with TWA and American Airlines.

Tomlinson's background also includes his participation as a Boeing 747 program manager, FAA safety counselor, EAA flight advisor, HAFI master flight instructor and has completed more than 1,000 north Atlantic crossings.

"We are pleased and excited to have Mr. Tomlinson join our team as a charter captain," said Heritage Flight President Christopher Hill. "He will continue his role as a FAA designated flight examiner and will also assist the Heritage Flight School."



## YOUNG EAGLES

by  
Donald Taylor

We had a great year for Young Eagles in 2003.  
Let's see what 2004 will bring.  
To date we have no Young Eagle flights reported.

So far we have 2 Young Eagle rallies scheduled for this year.

Franklin County Airport – FSO – Highgate Vt,  
Some time in June

Edward F. Knapp airport – MPV – Barre-  
Montpelier Vt.  
In late April or May

If we have any other Young Eagles rallies planned,  
let me know.

## 10 for 2003

A supplement in Sport Aviation recognized all Flight Leaders who flew 10 or more in 2003. Chapter 613 had ten.

John Butterfield,	Williston
Steve Couzelis,	Milton
George Godin,	Franklin
Edward LaFramboise,	New Haven
John McNerney,	New Haven
Michael Pecue,	Barre
Loren Shaw,	Derby
Donald Taylor,	Swanton
William Yendrzski,	Essex Jct.
Ron York,	Barre

Your efforts last year enabled the program to reach our initial goal of flying 1 million Young Eagles well in advance of the 100<sup>th</sup> anniversary celebration on December 17. At the end of the year, we registered an incredible 151,032 Young Eagles. That brought the overall total to 1,027,242 as of December 31, 2003.

The Young Eagles program is made possible by men and women who participate and support the program in whatever manner they could. We extend sincere thanks to each of you and with your help and dedication the Young Eagles program will continue as before.

## Safety Tip

As part of our winter preparations, a little extra practice on crosswind landings will come in handy on those gusty days. Most especially on snow covered runways when remaining dead center provides a little margin of safety and is so important.

Because of the combination of a cross wind and slick surface, you may experience a weather vane effect resulting in a sudden change in heading and lateral movement, making the little extra distance from the runway edge much appreciated.

Although nose wheel steering may lose it's effectiveness in such a condition, as long as your flight controls are aerodynamically effective, use them. On a single engine airplane a burst of power judiciously applied will provide rudder and elevator effectiveness.

Brakes must be used with caution when a slick surface is interspersed with dry spots. Do not lock up the wheels as a skid could develop and loss of braking effectiveness and directional control may occur.

## From the Young Eagles Office

### Looking to the Future



**W**hile EAA fine-tunes the program's future, one thing is certain: EAA Young Eagles will continue to expose children between 8 and 17 to the wonders of personal flight through an introductory aircraft ride.

"We've proven that we're pretty good at flying kids, so we'll continue to do that," said Young Eagles Director Steve Buss. "Except we want to make a child's flight an even more valued experience by following up more effectively and facilitating those who wish to continue in aviation, whether that's someone pursuing a private pilot certificate, an aeronautical degree, an aviation career, or whatever."

Thousands of children have used their Young Eagles flight as a springboard to a lifetime of aviation, Buss said, but the program has had an equally profound effect on the volunteer pilots and ground crews. "This has been a tremendously exciting year for the Young Eagles program, but I'm even more excited about the potential the program holds for the future."

### Did You Know by Don Taylor



#### Russians Revive The Triwing

A giant freight or passenger-carrying twin-body airliner is on the drawing board at the Russian research and industrial company NPO Molniya.

Displayed in model form at the 2003 Paris Air Show, the Molniya-1000 Heracles sports an unconventional "triwing" layout.

Molniya envisions the Heracles being powered by six large bypass turbojets. With a wingspan of over 295 ft. and a fuselage length of over 240 ft., the Heracles would carry freight or passengers in a separate pod located between the two fuselages below the wings'

"inverted V" center section. Approximately 992,000 pounds of cargo or up to 1200 passengers could be carried in this way. Heracles's maximum range with a full payload would be approximately 1925 miles. Whether

Heracles will ever be built depends on many factors, including funding considerations within Russia's cash-strapped aircraft industry.



## FLI-RITE SCHOOL OF AVIATION

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**His roots.....**



COME TO A  
RETIREMENT PARTY  
FOR

**"HOBIE" TOMLINSON**

**OLD STUFF: 35 YEARS @TWA  
2 YEARS @AA**

**NEW STUFF: DEC. 2, 2004 @ HERITAGE FLIGHT  
SPRING OF 2004 AERIAL PHOTOGRAPHY**

**SAME OL STUFF: 27 YEARS @ FAA FLIGHT EXAMINER**

**WHAT: OPEN HOUSE ~ RETIREMENT PARTY  
WHEN: FEBRUARY 29, 2004 Hours 1PM TO 5 PM  
WHERE: FBO AVCENTER ~ 1130 AIRPORT DRIVE  
SO. BURLINGTON, VT**

Walt Houghton will be here w/an early aviation slide show.  
For more info, call Shirley Chevalier at 802-878-4432.

# Pratt and Whitney Tour - 1/24/2004



# Pratt and Whitney Tour - 1/24/2004



EAA CHAPTER 613 PRESENTS.....

# CABIN FEVER FROLIC

## 2004

WHEN: Saturday, March 6, 2004

WHERE: **The Waterworks** at the Champlain Mill, Winooski

WHAT: 6:00 PM - Cash Bar. Complimentary chips & salsa, fruit & cheeseboard.

7:00 PM - Buffet Dinner: You can choose from one of the following entrees:

**Citrus Salmon Fillet** marinated with citrus fruits,  
& olive oil, garlic & cilantro; baked and served with a citrus glaze & rice.

**Raspberry Chicken** marinated with olive oil, garlic  
& herbs; chargrilled & served with a rich raspberry sauce and served with  
Roasted Red Potatoes.

**Sirloin Steak** a boneless N.Y. sirloin strip steak,  
Presented with sautéed mushrooms and baked potato.

Desserts: **Chocolate Mousse** topped w/ grated bittersweet chocolate  
& fresh whipped cream.

**Key Lime Pudding Cake** garnished with whipped cream and  
& toasted coconut.

**Price: \$26.00 per person (which includes tax and gratuity)**

8:30 PM - Annual Awards Ceremony

Got an “award” for that special person who really deserves to be recognized for something that they did/didn’t do? Bring it along to the Awards Ceremony!

### CABIN FEVER FROLIC RESERVATION

To: Marge Butterfield (For more information, call Marge or John at  
721 No. Williston Rd. 802-878-6337)  
Williston, VT 05495

YES!! I will be attending the 2004 Cabin Fever Frolic. Enclosed is my payment of \$26.00 per person. Check made payable to Marge. (must have your reservation by Thurs, March 4<sup>th</sup>.)

NAMES: \_\_\_\_\_

## EAA CHAPTER 613

Bill & Carol Morelli, NLE's  
105 Brick Church Rd.  
Fairfax, VT 05454



FIRST CLASS MAIL



**FLY SAFE**

February 2004

## OFFICERS/COMMITTEE MEMBERS

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