



# WINGS OF FREEDOM

The Official Newsletter of the Delaware Valley Historical Aircraft Association

Vol. 20 Number 2

[www.dvhaa.org](http://www.dvhaa.org)

Summer 2005

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## FROM THE COCKPIT of Ron Nelson

### BRAC (Base Relocation and Closure)

My full time job these past months, as a member of Governor Rendell's Base Development Committee and the Greater Willow Grove Chamber's Regional Military Affairs Committee, has been fighting the Department of Defense's placement of Joint Reserve Base Willow Grove on the BRAC closure list.

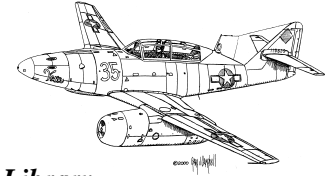
Two committees made up of dedicated men and women in concert with all our state and federal elected officials have stood together in a non-partisan effort to present a very strong case to the BRAC Commission for taking the Base off the list. The operative words for where we stand today are "cautiously optimistic" about our chances for success.

I am proud of all those involved in the process, including our members who have gone above and beyond the call to set up our museum for five separate televised news conferences, most of which came with last minute notification. As an aside, the Wings of Freedom Museum has benefited from the TV exposure and some new high level memberships.

You may ask, "If the Base is closed, what will become of our museum and the DVHAA?" I will address that issue in a future newsletter. Our first mission is to help keep the **BASE OPEN**. Should it remain on the list, the closure process will take two to six years. This will give us time to fight the good fight. DVHAA will survive!

### DVHAA The Office

The office continues to be effectively maintained by **George Kernen** and **John Stayt**; however, we must consider a full or part time secretary for the ongoing fund raising campaign, phone messages, and other daily work. Hopefully we will see both the office and the library move to a new addition to the museum building in the near future.



### The Library

The library under the professional eye of **Sandy Greenberg** continues to forge ahead with the important work of cataloging our many acquisitions. As noted above, our hope is to move the library into the proposed addition for accessibility to our public.

### Restoration Team

**John Rehffuss** has accepted the new title, Director of Operations, which includes oversight of both the restoration program and the museum. **Joe Meyers** will take over the role of Restoration Manager. Restoration of the P-80 is almost ready for its museum quality paint job. The team has done a remarkable job of preparation under adverse conditions. Congratulations all.

### The Harold F. Pitcairn Wings of Freedom Air Museum

What's new? Make sure you visit and meet our docents and have them show you the new and changing displays. Note the new seats in the H-13, thanks to **Bud Galow** and **G.M. Bell's** new display.

The Museum Committee under the direction of **John Rehffuss**, **Fred Place**, **Virginia Brooke** and **Paul Mallon** are busy making the arrangements for moving in the P-80 upon its completion.

Special kudos are in order for **Bryan Painter** and **Virginia Brooke** for their ongoing work on the gift shop and throughout the museum.

Our docents coordinated by **Charlie Reinhardt** continue to perform magnificently. In spite of the fact that we now have 21, the schedule needs additional help on Wednesday nights and weekends. If you can help or know someone else who can volunteer, please contact **Charlie Reinhardt** at the museum as soon as possible. When the number of docents makes it feasible, we will open another day.

### Statement of Policy

Materials submitted and printed in the Wings of Freedom newsletter are presented for the information of members. No responsibility is claimed for accuracy. Opinions expressed are those of the DVHAA. Articles, letters, and photos are welcomed and returned, if requested. No remuneration is made. Articles printed in the Wings of Freedom newsletter may not be reproduced or used in any way without the express permission of the editor. *Kurt Wecker, DVHAA newsletter editor*  
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Visit our website at [www.dvhaa.org](http://www.dvhaa.org)

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## FROM THE COCKPIT of Ron Nelson

### The 2005 Air Show

A total team effort produced outstanding results for DVHAA. Thanks to **Captain Meyers** and his air show staff we had a strategic location. The display was beautifully laid out with three simulators for the kids and a great choice of our magnificent aircraft for a great crowd to enjoy. The museum staff teamed up with Earl Johnson and his Corgi models to raise sales to a new high. Thanks to the leadership of **Joe Meyers, Paul Mallon, Jack Beaver** and **Bryan Painter** supported by the DVHAA team, including a record number of board members, the Air Show was a resounding success. Go to [www.dvhaa.org](http://www.dvhaa.org) for full a full picture spread in the online newsletter.

### Future Events

I. Please help us to find golfers and/or sponsors for our September 12th Golf Outing Fund Raiser. Call or e-mail **Joe Breslin** as soon as possible.

II. Make your reservations early for the gala membership dinner to be held at the Pitcairn Club on September 24th. Call or e-mail **Jim Eidenberg** as soon as possible.

### The Board of Directors

Here is what your board members are doing for you.

**Ed Dudlik** and **Fred Place** are developing a long range business plan.

**Jim Eidenberg** is planning the gala membership dinner.

**Joe Breslin** is planning the golf outing fund raiser.

**John Rehfuss** is managing the restoration of our soft building.

**Kurt Wecker** is keeping our public affairs program in good order.

**Jack Beaver** is working on bids to UV tint the museum windows.

**Fred Place, Paul Mallon** and **John Rehfuss** are providing the leadership for the museum committee.

## FLYING THE PITCAIRN AND KELLETT AUTOGIROS

*John M. Miller, a DVHAA member since 1988, first soloed in a WW-I "Jenny" on his 18th birthday, (12-15-1923). John started flying Pitcairn autogiros at Pitcairn Field in 1931 and later flew for UAL in the then new Boeing 247-D. Later, Kellett persuaded John to leave UAL to test their new wingless KD-1B. Kellett then loaned John to EAL to fly the KD-1B in an experimental one year Air Mail contract to and from the roof of the Philadelphia Post Office, during which time 10 flights were conducted per day, without accident. John stayed with EAL for 25 years until retiring as a Captain. While with EAL John flew a series of aircraft, ending with the DC-8. John is now 99 years old and hopes to visit the Philadelphia area and the DVHAA Museum soon. The following is his account of his flying experiences with the Pitcairn PCA-2 and Kellett KD-1B autogiros.*

I was the first individual person to purchase a Pitcairn autogiro; it was a PCA-2, with a Wright 330 hp R975E engine. It was originally serial number 12 and I had advised Mr. Asplundh, of Pitcairn, that I intended to make the first transcontinental flights in each direction with it. Delivery was to be on May 1, 1931.



**John Miller & the Kellett KD-1B Autogyro**

In April, the factory notified me that my autogyro would not be delivered until May 15, which would cost me two air show appearances at quite a few dollars apiece. However, in the meantime, I read in the NY Times that Amelia Earhart was at the Pitcairn factory awaiting the delivery of an autogyro and intended to make the first transcontinental flights. I flew to the factory to investigate and quickly found that Earhart originally was to receive the next autogyro in the production line after mine but that the nameplates had been switched and I now had serial number 13 and she had serial number 12.

Amelia had made an altitude flight in a prototype PCA-2, flying it airplane style, but she was still undergoing instruction in how to land properly, autogyro style. They

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**WELCOME  
NEW MEMBERS**

Phyllis Scott  
Daniel Golden  
George Kennedy  
Jeffrey Albright  
Anthony Caggiano  
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Brett Herman  
Nick Lucera  
Hank Nowak  
Steven Leopold, Sr.  
Gregory Jones  
Dave McOwen  
Patty Shuler  
Thomas Phillips, Jr.  
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Thornton Hooper  
Gov. Ed Rendell  
Scott Wolfinger  
John Woolley  
George Snyder  
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Daniel Bush  
William Nilsson, Jr.  
Ronald Denny  
Michael Pfaff  
Robert Moyer

**Final Flight**  
MARY ELLEN KOPZCYNKI  
DVHAA Member

**IMPORTANT  
NUMBERS**

**DVHAA office:**  
215-443-6039

**DVHAA office fax:**  
215-675-4005

**Wings of Freedom  
Museum:**  
1155 Easton Rd  
Horsham, PA 19044  
215-672-2277

**Museum Hours**  
Wednesday: 10:30am to 3:00pm  
5:00pm to 8:00pm  
Saturday: 10:30am to 4:00pm  
Sunday: 10:30am to 4:00pm

Visit our website at [www.dvhaa.org](http://www.dvhaa.org)

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## FLYING THE PITCAIRN AND KELLETT AUTOGIROS

were having difficulty instructing her and she said to me (evidently not knowing who I was) that she was not interested in “all this aerodynamics stuff, but just want to fly to California and back”. I kept quiet and let the factory know that I had a lucrative contract to appear at the Omaha Air Races by May 17 and did not wish to miss that race. They let me have my autogiro on the afternoon of May 14 and I promptly took off and flew to Omaha, arriving on the 17th, it was a lot of flying but the weather was perfect. After the show at Omaha, I took off and demonstrated along the way and arrived at the San Diego Naval Air Station on May 28. Later, I returned, thus making the first transcontinental flights in a rotary wing aircraft. Amelia Earhart took off on May 29 for her transcontinental flight and arrived in California about two weeks

after I had arrived and already left. On the way back, Amelia tried to take off over a large crowd but the wheels struck the steel wire fence holding the crowd back and she flew over the heads of the people and crashed into the parked cars behind them. She and her mechanic walked away uninjured but the PCA-2 was totaled. After all that, I did more than 4,000 hours flying my PCA-2 at air shows etc. without ever scratching its paint.

The PCA-2 autogiro I owned and flew so much all over the US was a really wonderful aircraft, easy to fly if done properly, and extremely safe. Many pilots apparently never did learn to really fly the autogiro correctly and considered it a “comedown” from other aircraft they were flying. It never was given a chance to show its real flying qualities by fixed wing pilots. The two women pilots who flew it said that it was too difficult to fly. Well, they were flying it like a fixed wing airplane and as such, it was inferior to other fixed wing airplanes. If flown properly, it had wonderful flying characteristics that I am sure many pilots never discovered.

The Pitcairn and Kellett autogiros that I flew so much had rotors of fixed pitch, without a collective pitch lever. Therefore, the pilot could not get himself in serious trouble by stalling the rotor blades, with resultant crash. There was no way that the rotor could stop rotating,

or stall in the air as a fixed wing does. With the universal joints that joined the blades to the rotor hub, there was likewise no way that the blades could be stressed beyond their bending or tensile strength, unlike the situation in the case of fixed-wing aircraft or the rigid blade type autogiro.

There was a lot of very false information put out about the Pitcairn autogiros which had the small fixed wings, ailerons, elevators and rudders, and the fixed rotor axis and fixed blade pitch. One of the most incorrect was the notion that at low and zero speed, control was insufficient or lost altogether. Contrary to many such reports by inexperienced autogiro pilots, such as fixed wing pilots flying autogiros, control is NOT lost at low or zero speeds. The reason for that is the aileron and elevator areas are much larger than on airplanes AND in even vertical

descent at zero airspeed, there is a large amount of air escaping outward from the descending rotor and that provides airspeed for the large area elevators and for the rudder, so sufficient control is provided at zero airspeed in vertical descent. As for the ailerons, yes they are ineffective

BUT are of no use in vertical descent and simply not needed, since the autogiro is hanging on its rotor in a stable condition.

One of the most common types of accidents by inexperienced autogiro pilots occurred when they were on approach to a landing and undershooting the spot on which they intended to land. They would commonly ease back on the control stick to stretch the glide. Autogiros have a low L/D ratio, especially in a glide, and fixed wing pilots are not accustomed to that characteristic. When the stick is pulled back under that condition, the autogiro settles down steeper and enters a vertical descent. They would try to nose down but by that time the autogiro was sliding backward and with its elevators in the full down position they would cause the tail to go down farther and the autogiro would crash short of the runway, often in a parking lot full of cars. The pilot would walk

away uninjured, since he crashed either going down vertically or actually backward. Of course, they would always blame it on loss of control, but it was due to a complete lack of knowledge of the aerodynamics of the



**John Miller in front of the Pitcairn PCA-2 Autogiro that he flew on the first Transcontinental flight by a Rotary Wing Aircraft**



**Johnny Miller Fly Autogiro \$1 poster copy**

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## FLYING THE PITCAIRN AND KELLETT AUTOGIROS

autogiro, and lack of proper instruction in flying methods. When such an undershoot condition occurs on a landing approach, it is essential to add power. It is best to make high, steep approaches. If such accidents occurred in a fixed wing airplane there would be another funeral. Such false reports of loss of control eventually led to the development of the direct control autogiro, such as developed first by Cierva in England and by Pitcairn and Kellett in this country. They depended on weight being on the rotor and did give excellent control.

In the case of the Kellett KD-1 types I flew, the rotor hub was actually tilted in the direction in which the pilot desired to tilt the aircraft, longitudinally or laterally, so as long as there was weight hanging on the rotor there was control. However, when in a condition when little or no weight was hanging on the rotor, as at the top of a wingover, control would be lost, and such a maneuver must be avoided near the ground or pullout would be likely too late. When that type of autogiro is put into a sudden pushover, with a download on the rotor, a reversal of control could occur when the stick is pulled back, resulting in the further inversion of the aircraft. Such a condition can happen with the newer helicopters too, entirely avoidable also.

I flew the direct control Kellett KD-1B to and from the roof of the 30<sup>th</sup> Street Post Office in Philadelphia in all conditions, including extreme turbulence. In the case of my aerobatic demonstrations, they positively could not have been carried out with a direct control autogiro. The aerodynamic surface controls worked beautifully in weightless maneuvers and even inverted loads on the rotor.

I made all autogiro landings without power and with almost no forward roll and I flew it in winds as high as 73 mph. I also flew a lot of aerobatic demonstrations, some of which would have collapsed the wings of almost any fixed wing airplane. I owe my very life to the PCA-2. When I was towing a huge 9 foot high banner of 37 letters, made of muslin, cotton ropes, and bamboo spreaders and trying to get above 1000 feet, the engine, without the slightest warning, quit cold and the airspeed instantly went to exactly zero! I cut the banner loose. The autogiro went into an automatic vertical descent at about the same vertical speed as a parachute. I looked around and there was nothing but resident

houses under me. I was quickly down to about 500 feet when I saw a slight open space behind the right-hand wing and made a diving right turn toward it. It was at the North edge of a cemetery and I landed in it gently without an inch of roll, in zero wind and no damage whatever. There were gravestones all around me. If I had been towing the banner with a fixed wing airplane, it would have instantly dived straight down into the houses and I would have been dead on January 26, 1934. My gravestone would be thoroughly weather beaten by now.

Of course, several experimental autogiros were built with Jump takeoff systems, but none were ever advanced to Approved Type, for WW-II stopped such development. So, both the Pitcairn and Kellett autogiros made takeoffs with forward speed on the ground, but short ones. As for landings, they could be made airplane style too, but properly flown, the autogiros have the ability to make power-off birdlike flared landings with little or no forward roll at all, by pilots properly trained. All of the landings made on the roof of the Post Office building in the center of



**Post Card - John Miller flying a Kellett Autogiro from roof of Philadelphia Post Office Oct. 30 1939**

Philadelphia were made in this manner, entirely without power or roll, except when the wind was very strong, such as 40 to 55 mph, when landings were most conveniently made with power to prevent being blown backward. I have movies of such roof landings. Those flared, no-roll landings are one of the greatest advantages of an autogiro in the case of a power-off forced landing, and contributing to the extreme safety of autogiros.

The Pitcairn PCA-2 is a wonderful aircraft. I wish there had been a controllable propeller available at that time, for it would have cut the takeoff distance almost in half. It was a sad day in my life when I had to sell my PCA-2 to a crop duster who later left it out in a hurricane without even tying down the blades. It was a noble aircraft.

John M. Miller

For more information on John Miller's amazing career, see: [http://www.vintageaircraft.org/programs/hof/hof\\_miller.pdf](http://www.vintageaircraft.org/programs/hof/hof_miller.pdf)

[http://cityguide.pojonews.com/fe/Heritage/stories/he\\_john\\_miller.asp](http://cityguide.pojonews.com/fe/Heritage/stories/he_john_miller.asp)

# DVHAA AWARDS BANQUET

SEPTEMBER 24, 2005 6:00pm – 11:00 pm

The Board of Directors of the DVHAA is pleased to announce the 2005 Awards Banquet, which will be held on Saturday, September 24<sup>th</sup> from 6:00pm to 11:00pm at the Pitcairn Club, catered by MWR. We are requesting an RSVP no later than August 24, 2005, as seating is limited to 120 people.

- Hors d'oeuvres: 6:00pm to 7:00 pm
- Cash Bar: 6:00 pm to 10:00 pm with coffee & soda until 11:00 pm
- Sit-down dinner: 7:00 pm promptly
- Menu: Choice of Prime Rib or Chicken Florentine; European Spring salad, mashed potatoes w/gravy, glazed baby carrots, rolls, dessert, coffee, iced tea, water
- Banquet commemorative for each attendee
- Many door prizes
- Special center pieces to be raffled off at end of evening
- Basket of Cheer Raffle
- Special Guest speakers – Congressman Curt Weldon & Frank Carson
- Music: during cocktails and dinner
- Dancing: 9:00 pm to 11:00 pm
- Awards: Restoration Dept.; Museum Dept.; Administration/Library; Golden Hands; Member of the Year; President's Award(s)

Any further questions or information, contact Jim Eidenberg at 717-529-0954 or e-mail at [barbjim61542@epix.net](mailto:barbjim61542@epix.net). If anyone would care to acquire door prizes, please notify Jim.

*James A. Eidenberg*  
Special Projects Coordinator

**Clip and mail. or, if you do not want to ruin the newsletter copy and mail in.**

Return reservation form below to: Jim Eidenberg, 73 Lakeview Road, Kirkwood, PA 17536-9568

Name & Guest \_\_\_\_\_

Address \_\_\_\_\_

Phone: \_\_\_\_\_ Social Security No. \_\_\_\_\_

(for Base Security)

Menu Choice: Roast Prime Rib of Beef (quantity) \_\_\_\_\_ Chicken Florentine (quantity) \_\_\_\_\_

Cost: \$30.00 per person    Number Attending \_\_\_\_\_    Total Amount Enclosed \_\_\_\_\_

**Make checks payable to DVHAA**



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**Delaware Valley Historical Aircraft Association**

**&**

**The Wings of Freedom Aviation Museum**

*Present The*

**2nd Annual**

## **GOLF OUTING**

**September 12, 2005**

**At the Horsham Valley Golf Course**

***Fun - Prizes - Food & Drink = Good time!***

**\$125.00 Per Golfer // \$100.00 Hole Sponser**

**Call: Joe Breslin @ (610) 449-2773 or Jim Eidenberg @ (717) 529-0954**

**LOOKING for Foursomes  
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