

CHAPTER 690 NAVCOM

FEBRUARY 1994

.....

Southeastern Young Eagles Rally

The second Southeastern Young Eagle Rally is set for March 19, 1994!

Chapter 690 is sponsoring this event at Briscoe Field. The Eagle Flight Committee has met twice for advanced planning. Duane Huff and Bill Coleman are co-chairs, and Sue Kulick and Chuck Nyren are lending aid from the regional office. The plan is fairly ambitious. The first Rally at McCollum flew 436 young people. Our goal is to fly 600! We are asking every Chapter 690 member to contribute to the effort. All volunteers will get free pancake breakfasts and Eagles get free hotdog lunches. Areas that we need help with are:

Pilots: Frank Wilcox is recruiting pilots. So far the response has been good. All pilot volunteers will receive an information packet and will be asked to complete questionnaires before the event. Pilots will get free breakfasts and lunches. If you are interested in flying for the biggest Young Eagle Rally in the South, Frank can be reached at 978-2403.

Loadmasters and Ground Operations: Bob Zahner and Ben Jeffrey are recruiting people to escort Eagles from the staging area out into the planes. This is a vital position because you provide safety during the most dangerous part of the exercise—getting to the plane! Ben will also need help with aircraft ground movement. If you would like to have a job where you get to yell at both pilots and groundlings indiscriminantly and get away with it, call Ben at 925-2852 or Bob at 822-0776.

Registration: Bobbi Estes, the long-suffering wife of our crazy-running president, heads this. She needs six to eight people to help the Eagles and their guardians fill forms. Please call her at 938-3515. God dwells in the details.

Young Eagle Briefing: Steve Ashby will be doing his patented schtick with the Eagles. Steve needs a tent and some chairs to conduct his rolling briefings. If you have 'em call 'im at 469-0786.

Publicity: Alan and Sheri Langford are producing posters and flyers for distribution at schools, clubs, etc. They will need help getting the word out. Recruiting Eagles is something almost every one of us can do. If you have any contact with groups of young people through schools, churches, athletics, etc., please make them aware of the Rally. At least tell your neighbors, family, and friends. Alan and Sheri can be reached at 339-3674.

Static displays: Greg Jannakos is gathering people who are either building or flying interesting airplanes. Greg has lined up some vendors and exhibitors already, including The Greenland Expedition and The 99s. If you would like to show off your pride and joy to a group of people slightly anxious about having junior 3,000 feet overhead, call Greg at 296-0937. Alexander's DC-3 doesn't count as a static display—it's going to be hauling Eagles!

Concessions: Mike North (925-2552) heads the pancake breakfast. He will need help early in the morning, but not later, because Williamson Brothers BBQ will be barring Q later in the day! They will provide free food for Eagles and pilots.

Unfilled Positions: Duane and Bill need someone to register volunteers and to help sign up new EAA members. Duane's number is 921-4423. Bill can be reached at 498-3741 or bcoleman@hayes.com. ...

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Kittyhawk Commemorative Eagle Flight

by Steven R. Ashby

It was a cold and windy day on December 17, 1903, when Wilbur lost the toss and Orville prostrated himself on the bottom wing of the Wright Flyer to make history on that Kittyhawk, North Carolina sand dune. Exactly ninety years later I, along with five other Eagle Flight pilots, commemorated that historic event by attempting to introduce ninety local children to the wonder of powered flight.

Georgia's Eagle Flight program, headed by Delta captain Chuck Nyren, has flourished with the help of local EAA chapters and the guidance of the national Eagle Flight office in Oshkosh. Coming off the successes of several chapter 690 Eagle Flight rallies and a huge regional rally at McCollum airport in November, Nyren opened a permanent Eagle Flight office at Peachtree DeKalb airport in Atlanta, Georgia. The office space was donated by Pat Epps (owner of Epps Air Service and nationally famous P-38 defroster).

As the ninetieth anniversary of the Wright brothers' famous flight approached, Chuck Nyren and Pat Epps felt that an Eagle Flight rally would be the best way to commemorate the event. What better way to remember ninety years of flight than to give ninety children their first experience in an aircraft. The Wright Brothers' Commemorative Eagle Flight rally was originally planned for Dare County airport, near Kittyhawk, but unforeseen events dictated a move to Peachtree DeKalb airport in Atlanta.

The event got underway when the eager participants, children from the local Boy's clubs and Girl's clubs, arrived on the ramp. First, the children were given a preflight briefing, including the basics of flight, by a ground instructor. Next, loadmasters escorted the groups to their waiting aircraft, where they were securely buckled in.

Eagle Flight pilots coordinated with Peachtree tower, who designated all participants as "Eagle Flight ____" (using the last three digits or letters of each aircraft's N number). Although I never had the opportunity to fly in the military, I could not help but feel like Top Gun material when I announced over the ground frequency that "Eagle Flight seven one lima is ready for taxi."

For my first flight, my crew consisted of three excited boys from the local Boys Club. In the copilot's position was ten

year old Pavel Chesnokov. As was my practice, I trimmed my trusty Cessna Skyhawk upon reaching cruise altitude and then let my Eagle Flight copilot handle the controls. As I nervously scanned the pattern for a Citation with my name on it, Pavel calmly kept seven one lima straight and level. As we approached Lenox Square Mall, I talked Pavel through a standard right hand turn and he executed it beautifully. Several turns later, we were back in the pattern when Pavel gave me this look like, "Well, Captain, how am I doing so far?" To that point, Pavel had flown better than your average Bonanza driver, so I decided against switching horses in mid approach. I worked the throttle and the radios and told Pavel that we were going to see if he could land the Skyhawk. As it turned out, Pavel slid down the final approach like he was on rails, pulling a firm but gentle flair to the point where the mains barked on the

numbers. To be fair, I had the difficult part, telling Pavel that he was doing fine and when to flare. Also, I had to work the toe brakes since he could not reach. It is only logical to conclude, therefore, that despite Pavel's performance, I am the better pilot (at least for now :-).

On my next flight, my copilot was a little eight year old girl named Tiffany. She was quite excited to be taking her first flight and insisted on sitting in the copilot's seat. As we leveled off at pattern altitude, I told Tiffany that she could

fly for a while. Before I could explain the joys of straight and level flight, however, Tiffany seized the yoke and immediately pulled us up into a 2-g climb. As calmly as I could, I told Tiffany to push the wheel in so that we would not climb. Without even glancing in my direction, Tiffany immediately slammed the wheel into the panel, executing a nearly perfect zero g maneuver. The kids in the back, floating to the limits of their seat belts, chortled "wheel!" At that point, I hurriedly relieved Tiffany of command and told her that she was surely destined to be a fighter pilot. Whoever her first instructor is at Pensacola or Miramar will surely have his hands full.

As we Eagle Flight pilots taxied on the bustling ramp, waiting our turn for takeoff behind singles, twins and business jets, I could not help but marvel at the progress



Three more for the Big Log Book in the Sky

of aviation in ninety short years. As sophisticated as the machinery has become, however, the wonder of parting with the earth and flying through the sky was still the same. Orville Wright's heart could not have beat any faster than did Pavel Chesnokov's that day. The excitement of the witnesses of that first powered flight could not have been greater than those children who squealed after their Eagle Flights, begging for a second ride. The excitement and pride of this Commemorative Eagle Flight Rally was felt everywhere, from the controllers in the tower, to the ground volunteers, to the pilots, and finally to the children themselves. In the final analysis, the rally was a complete success, commemorating man's first flight by passing on the experience to the next generation.♦♦♦

Steve not only knows how to write a column, he knows how to get other journalists to write about him! The following is from the December 12, 1993 issue of "The Decatur-Decalb News/Era Legal Review". Reprinted with permission.



DeKalb's Steve Ashby straps in Pavel Chesnokov, 11.

Phillip Hermann/staff

'Up, up and away...'

'Young Eagles' fly high

By PHILLIP HERMANN
Editor, The Review

Their eyes were as wide as the sky they were ready to fly into.

That's the only apt description to capture the feelings of some 90 members of the Brookhaven Boys/Girls Club who last Friday received free airplane rides courtesy of the EAA Aviation Foundation and DeKalb-Peachtree Airport.

The children, ranging from ages 8-12, were given the adventure as part of the Foundation's commemoration of the 90th anniversary of Wilbur and Orville Wright's first flight on Dec. 17, 1903, in Dare County, N.C.

DeKalb resident Steve Ashby was one of numerous pilots who donated their time to provide the rides.

Ashby flies a Cessna Sky-Hawk which seats up to three passengers. In this case, those passengers were small and very excited.

"I love doing this. This is the third or fourth time I've participated in this type of program," Ashby notes. "I took

my first plane ride when I was 9-years-old, and I've never forgotten that experience. That's what I like about this. I'm giving kids an experience they'll remember for a lifetime," he says.

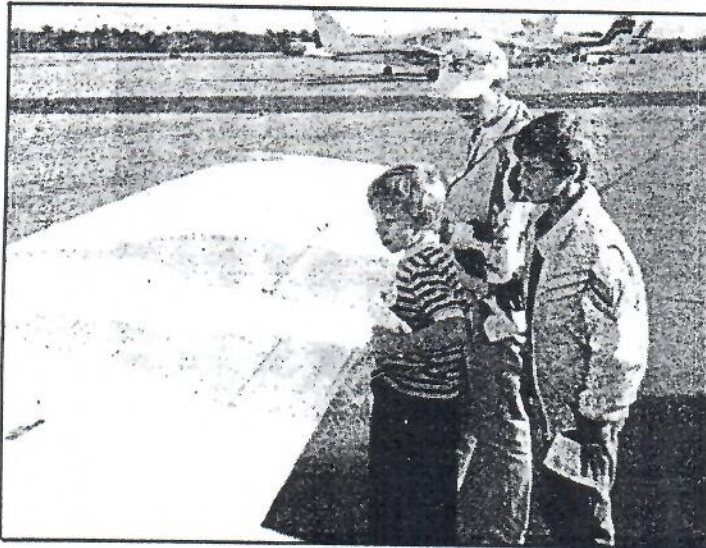
Angelica Tellis, 11, took her first flight Friday, and being the first one out of the plane, she was asked for her response

to the adventure.

"It was fun," she said.

Jeff Castleberry, a member of the EAA Young Eagles club, says that providing a new experience, and education about flying is what the program is all about.

"This opens up the door to the realm of flight," he adds.



Pilot Karen Carroll tells Ilya and Anton Chesnokov all they need to know about the workings of an airplane.

Chapter Building Topic of Feb. Meeting

Although by press time we did not have a meeting program, the business portion of the meeting will concern the Chapter 690 Building. A presentation will be made by the Building Committee that will cover costs, site, and the airport contract. There probably will follow a discussion and possibly a vote on where we go

from here. Essentially, the airport administration cannot forever hold open the offer they made when we first moved to Briscoe Field. Also, with the site preparation by the county almost complete, and with several chapter members planning to build at Briscoe in a complex with the Chapter Hangar, it is finally time to plan our building strategy.

Chapter 690 Chili Cook-Off!

Saturday, April 2nd Rain or Shine!

It's that time again—time to experience the culinary delights of the Chapter 690 Chili Cook-Off. Prizes will be awarded for the best Antique (old-family recipe), Warbird (hottest), Homebuilt (unusual), Classic (overall best-tasting), and for the first time—Contemporary. We haven't decided just what constitutes this category. So dust off your chili-making skills and come on out! Those not wanting to enter the competition can bring salad or desert to share. Drinks, crackers, condiments, and table service will be provided. Members, friends, relations, and any interested persons who enjoy airplanes, good food, and fellowship are invited. **Saturday, April 2, 2-6 pm (eat about 4:30) at the Wilcox Air and Road Service Inn, Lenore Field, 2995 Centerville-Rosebud Road, Snellville, GA. Phone: 978-2403.**

New Tool Keeper

Frank Wilcox is now keeper of the tools! Frank takes over from John Henderson, who has done a great job for 690 over the past few years. We've steadily gained tools and materials and John got us a secure steel cabinet for them. Frank will be keeping the tools out at his hangar at Lenore (2995 Lenore Church Road; 978-2403). Tool use is free to Chapter 690 members. Materials are cheap but not free. The current list includes:

Rivet squeezer	Compression tester
Nicopress tool	Spark plug lead tester
Spark plug cleaner and capping tool	Magneto timing light & lock, Bendix
Piston ring compressor pliers and bands	Coaxial cable (antenna)
Set cylinder base wrenches	Wire--20 & 22 g. (light and radio)
Timing indicator	Tube flaring set
Torque wrench	Rivet removal tool kit
Instrument hole cutter, (2-1/2" & 3-1/8")	Cleco kit (pliers, clamps, clips)
Tube bending tool, set plier type	Right-angle drill kit - screw-type bits
Cable tension tester	360° rivet puller
Tachometer checker	Starter wire
	Rivnut puller kit

For Sale

•1968 Cessna 150. 200 SMOH. Trspdr, Mode C (ACK), intercom, ELT, MK 12 radio, King 145, ADF, Audio panel/MKR BKN REC, wheel Pants. \$14,500. Based at Lenore, N50132. Ken Sharp 404/979-4233 (H), 404/750-6025 (W).

•1990 Sonerai II. 75 TTSN. Greg Jannakos 296-0937

•Placard Labels made to order. Greg Jannakos, 296-0937

Calendar of Events

Feb. 11- Briscoe Field - Chapter 690 Monthly Meeting. Program: UNKNOWN!! Business section: Semi-finalize building plans.

Feb. 19 - Nashville, TN - Air Fair '94 Sport Aircraft Builder's Conference sponsored by EAA Chapter 162. Steve Wright, 615/373-9707.

March 12-13 - Ft. Pierce, FL - Delight of Flight Airshow and Fly-In sponsored by EAA Chapter 908. Tom Shedd, 407/461-0346.

March 19 - Southeastern Regional Yong Eagles Rally SPONSORED BY EAA CHAPTER 690.

April 10-16 - Lakeland, FL - EAA Sun 'n Fun Fly-In, 813/644-2431.

April ? - Sun 'n Fun Chapter 690 Exchange.

April 30 - Griffin, GA - Alexander Hangar, Griffin Municipal Airport; 1994 Builders Workshop. 800/831-2949.

July 28-August 3 - OSHKOSH

August ? Chapter 690 post Oshkosh Exchange

August 20-22 - Gadsen, AL - Aerodrome '94 - WW I Aircraft Fly-In and Airshow sponsored by Lake Guntersville Aero, 205/582-4309.

Steve Ashby Under the Knife

Chapter 690 member Steve Ashby underwent wrist surgery Wednesday, 2 Feb. 1994. The recuperation is supposed to take weeks, during which Steve will not be allowed to do much. Aviation-oriented diversions will be welcomed.

Ultralight Club Forming

A group of about 50-60 local Atlanta ultralight flyers are banding together to form a club. They are looking into USUA or EAA Affiliation. For more info, call Pierce Day at 591-7284 or Chuck Goodrun at 426-7294.

And now, the best for last:

FAA FLIGHT PLAN			
1. Type	2. Aircraft Identifier	3. Aircraft Type	4. Departure Point
<input type="checkbox"/> Boy	N1BABY	Newborn	Gwinnett Women's Pavillion
<input checked="" type="checkbox"/> Girl			
5. Departure Date	6. Name of Flight		
9 January 1994	Katharine Elizabeth Coleman		
7. Destination	8. Time of Arrival	9. Remarks	
Life	00:13	Gross Weight 7 lbs 10 oz Length 19.5 inches	
10. Fuel on Board	11. Parents Name & Aircraft Home Base		12. Number on Board
Enough for one wet diaper	Bill & Theresa Coleman Stone Mountain, GA		1
13. Color of Hair & Eyes		14. Delivered By	
Brown Hair Blue Eyes		Dr. Lynn Zahner	
CLOSE FLIGHT PLAN WITH STORK ON ARRIVAL			

North to Adventure!

by Jeff Boatright

Last weekend, Wayne Whitaker decided that I led a sheltered life and that to expand my horizons, we needed to fly up to the Smoky Mountains. Looking in my log book, I realized the the closest I'd ever gotten to mountain flying was one of my student solo cross-countries up to Toccoa. If memory serves, I got lost within site of the airport! Wayne had even less experience than I in highlander flying. Thus, we two flatlanders decided to remedy this situation by flying up to Andrews-Murphy, a small airport in the Smokies about 84 nm north of Stone Mountain and surrounded by four- to five-thousand-foot tall ridges.

Being the adventurous types (read: dumb/lazy), neither of us bothered to acquaint ourselves with the peculiarities associated with flight over bumpy terrain. The *very* first sentence of the Mountain Flying section of the Airman's Information Manual reads: "Your first experience of flying over mountainous terrain...could be a never-to-be-forgotten nightmare if proper planning is not done and if you are not aware of the potential hazards awaiting." Other than the vague feeling that some amount of turbulence may occur, neither of us were "aware of the potential hazards awaiting."

The day was absolutely gorgeous. A fast-moving cold front had passed in the night, so we had severe clear and only about a 10 knot breeze out of the north. Not much more was reported on AWOS. Mounting our trusty steed (Steve Ashby's fine Cessna 172), we took off to the north.

Having some intelligence, we knew that we'd have to fly at least a little higher than the surrounding terrain. The highest point near our little yellow line on the sectional was 5260 AGL, and since Andrews-Murphy is on a slightly eastern course, this meant (obviously to us) that we'd need to cruise at 5500 ft AGL, right? After all, the airport was nestled in a valley at only 4500' AGL, and we didn't plan to get that close to the surrounding ridges...

So, we're on our way. We get up to 5500' and start ticking off check points. Although Steve has a brand-new GPS, we like to know what we're skimming over. Actually, we weren't really skimming but more like plodding. A quick check of our ground speed courtesy of the ol' FlyBuddy showed us slogging along at 70 mph, even though the ASI showed 120! What a headwind! (Reading along further in the AIM, we find that part C of Mountain Flying states: "Don't fly a light aircraft when the winds aloft, at your proposed altitude, exceed 35 miles per hour.")

Now from my sail racing days, I knew on a lee reach winds are gusty and unpredictable while stronger but steady breezes are found on windward sides of islands. With a probable wind of 50 mph off our nose and extrapolating from two dimensions to

three, I told Wayne that 5500' wasn't nearly enough for me! He agreed and we headed on up to 7500'. (Again from the AIM: "Approach mountain passes with as much altitude as possible...From the leeward side it is always a good idea to add an extra thousand feet or so of altitude because downdrafts can exceed the climb capability of the aircraft.")

By this time we were approaching real mountains. Both Wayne and I were awed by their majesty. It is difficult to convey how striking the scene was. The cold front had dropped a few inches of snow the previous evening and the top thirds of the peaks were still white with it. Though the haze was building around the metro area, this far north we could see from horizon to horizon. As the foothills grew in size, populated areas dribbled down to the point that individual homesteads became worth noting. The winding mountain roads hugged the valleys with only a few venturing into the ridge lines. From the air it was easy to see how the surveyors had mapped them out to follow the land's contour. A long way to walk if something went thump in the engine compartment... But, the air was glass-smooth and the Continental O-320 just purred along. Sport flying at its best. Capping all of this was that subtle thrill that accompanies new experiences, particularly those that hold a slight risk.

It became difficult maintaining altitude. One moment we ascended at a 500 feet per minute, the next we dropped at the same rate. By the time we had figured out the rise/fall pattern, the ridge lines were too closely spaced to predict lifts or sinks. It wasn't too bad; the drafts had gradual onsets so the ride was not bumpy, and we always had enough power to climb in the sinks. We just had to watch it. ("Downdrafts of from 1,500 to 2,000 feet per minute are not uncommon on the leeward side."—AIM) By the way, at this point the GPS showed ground speed at 50 mph! AWOS hadn't said anything about this! And I was having a water containment crisis. It was *cold* up in them thar hills!

Speaking of GPS, I LIKE IT! We never strayed unintentionally more than a mile from course, and because we weren't absolutely dependent upon our contact navigational skills, we were more relaxed and enjoyed the scenery. However, GPS is no substitute for the sectional. A direct route from Stone Mountain to Andrews-Murphy goes right over one of the highest ridge lines in the airport's sectional quadrangle. One of those valley-hugging roads runs right past Andrews-Murphy, so we descended into the valley a few miles west of course and thus avoided getting too close to a set of 5,000 foot ridges. It was a good thing, too, because as we descended through 7,000 feet, turbulence really picked up. We had a couple of full-deflection corrections to maintain attitude. We called in for an airport advisory and they claimed no-wind conditions!

Continued at the bottom of the next page ➡

Technical Article: SKYLITE CONSTRUCTION

Prepared by the FRICK & FRACK AIRCRAFT CONSORTIUM

The construction of a home built aircraft seems to create a sort of chaos, pieces and parts everywhere, wives angry because they are no longer centers of attention, and uncertainty as to how to proceed to the next step.

After about a year of work FRICK & FRACK have begun to see a pattern that emerges from the chaos! It appears that you go through "phases" as you construct what you hope will be your PRIDE AND JOY! They have found that some phases are fun and easily done, others not so much fun and harder to do. Other things become more important and you have to really push yourself to work on "the project".

What follows are comments and descriptions of the phases that FRICK AND FRACK have gone through, in the attempt to build two Skylites.

PHASE 1 Procurement of plans and materials

OH BOY! The plans are here, lets get started!!

To be successful and build an airplane, you need clear, detailed, and complete plans, along with a good understandable manual. The SKYLITE plans are well detailed and few problems were encountered in following them. The accompanying manual however, was written with the assumption that the builder was experienced, and had built an airplane.

The FRICK & FRACK Consortium muddled through somehow, (phone calls to the designer and help from EAA 690 members) and began construction in the NUMBER 1 PLANT. (NUMBER 2 PLANT is for overflow).

Materials procurement is made easy if you have a detailed list with the plans. SKYLITE plans do not have a list so FRICK & FRACK very carefully went through the plans to make a list. After 7 or 8 trips to Alexander in Griffin Ga. they realized that they had done a lousy job of making the list! They will probably make a few more before the SKYLITES are finished.

PHASE 2 Building Pieces

The fuselage, tail, and wings are built in a fashion similar to model airplane building. The fuselage sides are cut to dimension, placed in a flat table jig, and tack-welded. The sides are then joined at the tail and the cross pieces are tacked into it. At this stage, cross wires and turnbuckles are put in place so "squareness" can be maintained while the final welding is done.

Welding is like any skill, you have to dedicate time to learn how to do it. It also seems to be easier if you have a young body! Welding requires sharp eyes, good hand coordination and well-toned muscles. Frack's old body felt pretty strained after a weekend welding session!

Heating and cooling cause uneven expansion of the steel tubing so you must constantly monitor the squareness of your work, and adjust with the turnbuckles as necessary. If you don't, the fuselage won't be square. (Frick used the sledge hammer only twice)

The rudder constructs like the fuselage, laid out on table, tacked, then welded taking care to keep from distorting it. Frick and Frack were pretty successful here, didn't use the sledge more than three times.

Elevator construction is similar to the fuselage and rudder except aluminum is used in place of steel, and pop rivets instead of welded joints. NOTE: edges of the aluminum parts need to be filed and sanded smooth. Any nicked or scratched place on the edge of a piece of aluminum is a potential crack due to engine and flight vibration. It is also wise to zinc chromate mating pieces of aluminum to prevent corrosion where moisture can't easily evaporate. The sledge didn't work to well here so FRICK & FRACK left them a little crooked and plan to use some washers when mounting to the fuselage.

Next Month: Wing construction and PHASE 3, Covering•••.

Adventure continued from previous page

Once we reached the highway, we turned back east and the valley opened up in another hard-to-describe sight. We rounded the end of the ridge line and spread before us was a scene right out of Lost Horizons, only in living color! Webster's describes the word picturesque as "the airport and its immediate surroundings found between the Blue Ridge towns of Murhpy and Andrews, North Carolina. See idyllic." Old Noah knew whereof he spoke.

By this time, we were flying below much of the "immediate surroundings," a curious but not unpleasant sensation for a first-timer. Turbulence was terrific and Wayne was twisting the heck out of the yoke to correct. We followed the valley right to the airport. A local pilot (as evidenced by the radio chatter) was in the pattern,

which was lucky for us. Andrews-Murphy sits between two ridge lines that are not quite parallel. They pinch the pattern off the end of runway 6, the active that day. Rather than fly a downwind parallel and south of the runway (and dangerously close to the southern ridge), the local flew a very tight downwind that extended past the end of the southern ridge, then he turned slightly *right* for proper spacing, then back around left onto base. We followed like an obedient gosling.

Wayne made a great landing and we took the first turn-off. As we taxied in, we noted that the windsock was dead limp. Another fact to file away about mountain flying: Calm on the ground means nothing up in the ridges.

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From My Point of View...

...THANK YOU

Last month, I wrote about my concern for continued member involvement and whether or not we could sustain this momentum. I have received encouragement already on this subject.

First: I needed to fill two important vacancies in our chapter (a person in charge of tools and materials and a person to handle project visits/workshops/tours). These vacancies were announced Friday night at our January meeting. Between that night and the next two days, I heard from FIVE people volunteering to help. That was great!

Second: The Young Eagles Rally. Duane Huff (who is also a recent vacancy-filler, having stood in for Theresa Coleman for this event) is filling posts for his sub-committees with good success. To me, this is a great indication of your involvement with EAA and Chapter 690, and I THANK YOU very much. Please say yes if Duane or any of his captains ask for help. Better yet, choose a post that sounds good to you and jump right in. Any job but assistant cook. Ken has promised that to me.

—Jim Estes, President

We're Just Road-Kill on the Information Super-Highway

Why a Reliever

With the Braves luck with relievers, it's amazing that the DOT is considering one in Gwinnett County. OK, but why a reliever airport for the metro area... Most larger cities with BIG airports (Class B ...) have relievers. Chicago's O'Hare has Midway, DFW has Love, National has Dulles (or is it the other way around?), and JFK has LaGuardia. BUT, Boston Logan and LAX do not have them, nor do Denver or Seattle. However, the main consideration is traffic. Is Hartsfield saturated in terms of aircraft arrivals and departures? The answer is no. Industry officials and Georgia DOT claim it will be saturated by 2000 if the fifth runway is not built and ASSUMING the growth in air travel through Atlanta continues to grow.

Will air travel through Atlanta continue to grow?

It is interesting to note that these projections are based on figures that predate the demise of Eastern. Additionally, the head of American Airlines recently said in the New York Times that American has bought its last airplane. He predicted that by 2010 American would no longer be in the business of actually moving people, but would instead be a giant support company. Now, American doesn't make up the lion's share of Hartsfield traffic, though it does produce business second or third to Delta. But what's really important about that statement in the Times is American's appraisal of the failure of the hub system of airline traffic. For over five

years hub systems have been losing money for airlines, such as American, who bought into them in the late 70s/early 80s. Most of the majors are moving back to the destination-to-destination form of travel.

What does this mean for Atlanta?

Well, less than half of the travelers at Hartsfield are stopping. That means Hartsfield is a just a hub for more than half of its business. If hub travel declines, so will arrivals and departures into Atlanta. If American quits flying altogether and traffic from other airlines decreases due to lack of hub traffic in general, then Hartsfield may end up actually being under-utilized.

I don't think air travel through Hartsfield will decline, though. Overall, airline travel continues to increase. Additionally, Atlanta's economy continues to grow, and this will support continued business air travel.

Assuming increased traffic, is a reliever necessary?

In my mind, the only time you need a reliever is when 1) the current airport cannot expand due to physical constraints; 2) actual ground destinations are inconvenient to travelers using the airport as a destination (e.g., JFK vs LaGuardia or Dulles vs National); or 3) air traffic is too dense over the major airport.

By the DOT's own admission, the third criterion is not the concern. The DOT

says that a fifth runway at Hartsfield would obviate the need for a reliever in the Atlanta region. Adding another runway does not alleviate airspace congestion, thus the DOT's perceived need for a reliever must be in actual runway use. The second criterion probably is not the principle concern either, even though over 80% of metro area air travelers live north of I-20. It's just not that hard to get to the airport, especially for business travelers. If you don't believe that, try getting into DC from Dulles or NYC from JFK at their rush hours. So, we're left with the first criterion—Hartsfield cannot expand physically. Of course, this cannot be true since the DOT already owns the land for the additional runway. Possibly what it boils down to is which neighborhood group screams the loudest opposition.

Why a reliever will be built.

Up to this point, I have avoided the real reason that a reliever airport will be built somewhere in the state of Georgia. The state DOT has the largest (by far) budget of any state entity in Georgia. How do they ensure that this budget remains the largest or even grows? Why, spend all of last year's money, of course. And how do they ensure job security? Start long-term projects that commit the state to years of funding and employment resources. The added benefit is that they eventually get so big that it becomes disastrous for the state's economy if any DOT project is curtailed. This is called empire-building, and for years it kept the military-industrial complex going on a national level.

Now one reliever airport does not an empire build. The Briscoe expansion is just one cog in a wheel of the juggernaut that is the Georgia DOT. The big plan, according to the Atlanta Journal-Constitution, is to run a commuter rail from Athens (home to almost none of the Atlanta work-force) through the grounds of Briscoe Field, and on into Atlanta. I guess this is so all the Rabid Dawg fans can return safely but drunk from their weekly Drubbing Between the Hedges. The much needed (?) outer perimeter to nowhere will also run right by Briscoe Field. This is so all of the arriving out-of-towners can more easily get to the aquatic paradise that Lake Lanier will

become. Or is it so DOT and Gwinnett County officials can get to their lakeside villas faster upon returning from an all-important junket to New York City? By the way, the buzz phrase for this behemoth is "Intermodal Transportation Network."

Actually, the DOT knows that potential Briscoe passengers from East Cobb and North Fulton will never use Briscoe unless they can get home fast. Hence, the Outer Perimeter. But wait, isn't this the State creating a need for another State project? If you build it, they will come... Of course, the commuter rail will be needed for all those non-Atlanta business travelers to get into Atlanta rapidly. I thought that is the purpose of the MARTA station at Hartsfield. It's all hooey as soon as you look at a map (I'm ignoring the added benefit to those Rabid Dawgs). Even with all the inter-perimeter traffic, there is *no way* surface travel from Briscoe to downtown or the northern 'burbs can be made faster than the straight shot up I-75/85 that now exists from Hartsfield.

Impact on Chapter 690

Probably not much for now. The Airport Development Authority has not been named by the governor, and even then, construction isn't to begin until after 2000. However, the first segment of the Intermodal Transportation Empire, the Mighty Outer Perimeter, will start soon now that the environmental impact study is complete. The first segment to be built? Why, the connector at Briscoe Field, of course. See how that works? Sink money into one folly until it only makes sense to sink another fortune into a connected folly.

On the positive side, if we build the chapter hangar soon, we could make a fortune renting it out to hungry commuter airlines—maybe even enough for rental space for chapter meetings at the new and improved Briscoe Field. Of course, after twenty years, we'd have to cough up serious dough to re-up on the lease.

FYI: Lawrenceville is the county seat of DOT commissioner Wayne P. (Never saw concrete I didn't like) Shackelford's home county.

P.S. Didn't they try something like this at Winder Airport...?♦♦♦

Adventure continued from page 7

The ramp strangely had plenty of wing tie-downs but none for the tail. We went into the operations shack and were applauded by the "bums" for having the foresight to park our plane facing south into the sun. "Best way to warm one those suckers up on a cold day like this!" It was only then that I noticed that all the other planes in our row were facing north with their tails hanging over the grass off the tarmac. Aha! The tail tie-downs must be in the weeds! I'll take dumb luck over smarts everytime.

Our luck kept holding. Five minutes after we landed, another airport bum (driving an new Jaguar) brought in a steaming crock of beef stew. There's nothing like flying on a crisp morning to bring on an appetite. They were not satisfied until we had had two helpings. Really, a great bunch of guys.

As we broke ground on the take-off, we were almost immediately slammed by turbulence. The windsock was still limp! We decided Andrews-Murphy had a strange and magical blanket of calm air that extended to exactly 4550' MSL, or fifty feet above the runway. Climbing out of the airport, we flew west over the highway until past the ridge line, then turned south. As we leveled off at 8500 feet, we figured out that we had already missed *two* of our check points. A quick twist of the GPS knob showed why—our ground speed was 156 mph! Unfortunately the wind had shifted more from the west, so we had to maintain a heck of a crab angle. It was a little disorienting to have to look out of the door window to see where we were going.

Continued bottom of page 11 ➡

Birth of a Fighter

or

Not All Nieuports Were Created Equal

Wayne Whitaker

In 1915 designer Gustave Delage submitted a new aircraft, the Nieuport 10, to French authorities for their approval. Mssr. Delage, a former naval engineer, was new to the firm of Nieuport; he had been hired when both the previous owner-directors, the brothers Nieport (without the "u"), were killed in separate aviation accidents. Gustave came on board and was perhaps trying to show his worth by coming up with a new aeroplane. Before the war the Nieport firm had designed and manufactured swift little monoplane racers. Now, with a "u" added to the company name, Delage introduced the first of the "sesquiplane" Nieuports, the two-seat model 10.

The term "sesquiplane" was coined to describe the biplane layout of so many of the Nieuport designs of WWI: a lower wing with a chord half as wide as the top wing.

Although the reason Delage chose that narrow lower wing is lost to history, we can speculate. For one thing, it allowed him to utilize a biplane-type wing cell with less drag than a true biplane. The biplane format was considered easier to brace than a monoplane. In those days lifting and landing loads were usually passed through cables (instead of struts), which made for quite a spider web on a monoplane. Just look at the rigging plan on Ben Jeffrey's Flybaby, compared, for example, to the elegant logic of the wires on a Nieuport. Well, there are a few less wires on the Nieuport. Trust me.

Improved visibility was another factor in favor of a narrow lower wing. "Outlook from the cockpit" was taken very seriously by pilots in the first World War.

But a patent from 1915 shows that Delage may have had something altogether different in mind for the tiny lower wing he designed. That patent, illustrated with a Nieuport 10, showed that the lower wing was originally designed to pivot about its single spar, allowing the incidence angle to be adjusted in flight. This variable-incidence wing was an innovative idea for altering lift and/or drag characteristics, sort of an ancestor to the modern flap. Some historians speculate that Delage may have been concerned about the N 10's ability to meet the maximum landing speed criteria of the French Aviation Militaire. Like the new light plane certification rules recently adopted by the FAA (thanks to Paul Poberezny and the EAA), the French had slow speed standards way back then, only they called it landing speed instead of stall speed.

However you label the slow side of the spectrum, Delage had reason to be concerned about his

new baby. Because of that slender lower wing, the N 10 had less lifting area than many contemporary aircraft; less even than some monoplanes. Delage was possibly worried that with a higher wing loading the 10 would land too hot to be accepted by military authorities. Thus his pivoting lower wing, which doubtless would really slow things down.

As it turns out the landing speed must've been slow enough to meet the standards without aerodynamic chicanery, since the pivoting lower wing idea was abandoned. As events proved, even solidly mounted that fragile lower wing was susceptible to flutter; one can only wonder how the pivoting design held up at the high end of the performance envelope. It was probably scary enough that the test pilot convinced Delage to forget about it.

So the pivoting idea was out, but the narrow wing design was retained, and so unfortunately was the single spar. Every production Nieuport up through the model 27 used the single-spar lower wing, and they all suffered from the same problem: flutter developing at high speeds or high G when the wing flexed around that lonely spar.

Interesting to note that despite that handicap the Nieuports were among the most successful fighters of their day. They just had to be flown thoughtfully, and with respect for their limitations. A good idea with any airplane, even today.

Back to 1915: the N 10 was accepted for military use, though it suffered from a poor rate of climb and a rather low useful load. In fact the two-place 10 struggled so with a war load that often squadrons dispensed with the observer altogether and flew the 10 as a big single-seater, with the front cockpit permanently cowed over.

The reason for the N 10's rather mediocre lifting ability was the low aspect ratio of the main (top) wing. As all us airplane-builder types know now, higher aspect ratio wings are more efficient. Designer Delage learned that lesson himself when he created a smaller, single-seat version of the 10, the fabled and much-loved 11. The 11 had the narrow lower wing, plus a top wing of higher aspect ratio than the unfortunate 10. The climb and maneuverability of the 11 was much improved over the 10.

The British in particular had a rather poor opinion of the 10. In his memoirs of flying Nieuports for the Royal Naval Air Service, C.P.O. Bartlett gives us some indication of the less-than-sterling flight qualities of that first sesquiplane: "Oct. 17th, 1916: These two-seater Nieuports have next to no glide; one just points the nose at the aerodrome and comes straight down."

Bartlett points out that the Nieuport 11 was held in much higher esteem: "Nov 1st, 1916: I took up Nieuport 8711, one of the two single-seaters [N11] recently delivered from the Depot... A great improvement on the two-

seaters... I climbed to 13,500 feet, the first 10,000 in 27 minutes." Later he lamented the squadron's loss of the little 11s: "Nov 28th: All our single-seater Nieuports are being replaced by two-seaters -- worse luck."

Delage improved on the 10 by replacing the top wing with one of higher aspect ratio. This new and better-performing two-seater was the Nieuport 12. And the 11's replacement, the 17, had an even higher aspect ratio.

Delage stuck with his sesquiplane planform until the Nieuport 28, when he finally changed to a two-spar lower wing. Though this stronger wing was still quite narrow, it was not as extreme as the earlier models. The 28 had excellent performance, but was without honor in its homeland, since the French decided to standardize their equipment by adopting the SPAD 13. America entered the war in 1917 and desperately needed fighter planes. SPADs were in short supply, but France was glad to loan us some 28's. American aces like Eddie Rickenbacker and Douglas Campbell flew them quite successfully.

Although the 28 finally solved the flutter problem of its earlier brothers, ironically it suffered an undeserved bad reputation because of repeated failures of the upper wing covering. A seam was placed right on a high pressure point near the leading edge, and in a dive the fabric tended to suddenly depart. This was not a design fault, but merely a covering oversight (they knew better even back in 1917). Rickenbacker almost cashed in his chips when fabric failure happened to him in combat; exhibiting superb piloting skills, he managed to stagger back to his aerodrome sans most of the covering on the upper wing. Once it was recognized, this problem was solved by simply relocating the seam, but by then the USA had also adopted the rugged SPAD.

But the last Nieuport of the war, the 29, restored the good name of the firm. Though it appeared too late to see combat, the Nieuport-Delage 29 was such an outstanding aircraft that the French adopted it as their standard post-war fighter, and kept it in active service until 1930.♦♦♦



The final Nieuport mark—Graham Lee's 7/8 scale aerial terror

Adventure continued from page 9.

Just for the heck of it, I turned us with the wind, and ground speed jumped to 170 mph! Too bad we weren't going to Savannah that day.

Back on the ground at Stone Mountain, we realized a few things. We had opened our flying horizons a great deal that day. Only 30 minutes north of here (without that danged headwind) is an entirely different type of aviating. Thrilling but less forgiving than the flatlands. Everyone should try it. We had had a great time, but we really only avoided a "never-to-be-forgotten nightmare" due to our innate caution. I don't know what this says about either of our piloting skills. We should have been better prepared.

But, all's well that ends well.

Last quote from the AIM: "Mountain flying need not be hazardous...However, inexperienced pilots, as well as experienced pilots, may run into trouble when they encounter an altogether different set of conditions...Pilots from flatland areas should understand a few things about mountain waves in order to stay out of trouble."

So, read section 7-75 of the AIM, light up your Belch-Fire Special, and head north to adventure!♦♦♦

About the EAA...

The Experimental Aircraft Association was founded in 1953, with early meetings of a few stalwarts in the home of the founder, past President, and present Chairman, Paul Poberezny. From modest beginnings the movement has expanded to hundreds of thousands of members. The annual EAA convention in Oshkosh, WI hosts more than 800,000 people per year and is the premier aviation event in the world. Today, the EAA is headed by Tom Poberezny and exists to promote the world of amateur-built aircraft and sport aviation in general. EAA provides many services to its membership, from technical know-how to representation of membership concerns to federal entities. Membership is open to anyone who shares the interests of the association. Annual dues are \$35.00 per year of which \$20.00 is for a subscription to Sport Aviation. To join, see our Treasurer, Lnor Levine (394-5466) or call the EAA Aviation Center, 1-800-843-3612

About the NAV-COM...

The NAV-COM is the monthly newsletter of EAA Chapter 690. It comes free with the dues, and you get what you pay for. (Like sentences ending in prepositions). NAV-COM is for EAA members only. It is a compilation of ideas, opinions, and data from several sources. In presenting it, the Chapter and EAA HQ by no means recommend or sanction the stuff. In other words and for example, we are not responsible if you bust your keester at an event we list in the calendar. Contributions are always welcomed, whether they are facts, opinions, or exaggerations. I will gently edit for grammar and curse words, but what you send in is generally what I send out. Magnetic media is appreciated. Send your pearls of wisdom to: Jeff Boatright, 2293 Sanford Road, Decatur, GA 30033. jboatr@emoryu1.cc.emory.edu.
Thanks to Alan Langford for production.

About Chapter 690...

The EAA is made up of hundreds of chapters world-wide. The local chapter for Dekalb and Gwinnett counties and vicinity (i.e., anyone else who wants IN) is Chapter 690. We're a raucous group with several projects, both restoration and amateur-built, in progress. Annual dues are \$48.00. See Lnor Levine (394-5466) to sign up. You'll also need to join EAA National (see above). Write for the NavCom... Write for the NavCom... Write for the NavCom... You are getting sleepy... sleepy... Dave, open the pod bay doors... Dave... Our meetings are every second Friday of the month, 8:00 pm, at Gwinnett Co. Airport Administration Building. In addition to the meetings, which often consist of excellent guest speakers from across the aviation world, the Chapter holds many functions, including workshops, fly-ins and -outs, and social gatherings.

Our officers and other luckless people are:

President: Jim Estes—938-3515
Vice-President: Bob Zahner—822-0776
Secretary: Alan Langford—339-3674
Treasurer: Lnor Levine - 394-5466

Videos and Books: Barney Barnes - 923-7896
Tools and Materials: John Henderson - 449-1946
Chapter Historian: LeRoy Stoutenburg - 981-6041

Technical Counselors:
Frank Wilcox - 978-2403
Jim Clarkson - 934-8971

Building Committee:
Chairman: Frank Wilcox - 978-2403

Resident Crazy Runner - Jim Estes

The NavCom

Newsletter of EAA Chapter 690

Editor: Jeff Boatright

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Decatur, GA 30033

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Next Meeting: 11 Feb., 8 pm
Gwinnett Co. Airport Admin. Bldg.

No program speaker yet, but we will discuss the building and possibly vote.

March 19 - Chapter 690 hosts the Southeastern Regional Young Eagle Rally



Larry Bishop
6527 Rosecommon Drive
Norcross Ga 30092