



EAA 297 – KITTYHAWKERS NEWSLETTER

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CHILLY FLY-IN & CHILI COOKOFF SATURDAY MARCH 9TH

PRESIDENT SENDS

Greetings fellow aviators,

Our clubhouse project has progressed amazingly well since our last meeting. I think you will be pleasantly surprised when you see it Saturday. We will conduct a wall naming ceremony on Saturday whereupon Mr. Mark Thoman will unveil the official name of the wall color.

Well, it's way too warm for February, but, nevertheless, it is that time of the year when the finest chili in Eastern North Carolina can be found at the No Whining Saloon at Stag Air Park. Our annual Chili Cook-Off and Fly-In is next weekend, March 9. So, refine your recipe and practice your culinary skills. Your reputation is on the line next Saturday! Of course, I have discovered a tasty secret that will make my Cuban Chili even harder than last year for Chris and Kristen to beat.

Sun N Fun at Lakeland, FL is coming up in about a month, April 2 - April 7. I promise, if you go once, you will want to be there every year thereafter. It is less commercialized, and more fun than that show in July "up North".

I am pleased to announce that Tim Haley from the Greensboro FAA Safety Office will be at our meeting this month to socialize and answer any questions that you might want to ask.

See ya Saturday,
Aubrey

LADIES DAY LUNCHEON

The Ladies Day Luncheon was a hit. Thirteen of our courageous ladies participated in this special occasion. The ambience in the clubhouse was "aviation decorous" and judging by the animated camaraderie around the table

the ladies enjoyed themselves thoroughly. The master of ceremonies, our own Master Chef, Ken McGee delighted the ladies with a five-course meal that was expertly prepared in our "under construction" kitchen. Ken was enthused to report that our "newly donated" stove worked perfectly. Thank you, Kristen and Chris Montefusco. Ken was aided in the kitchen by our new "sous chef" Mike Barri. Mike Corn lent an invaluable hand as the duty pot scrubber. The meal was ably served by Drew Holbrook and Mark Thoman who were appropriately attired in their classy, black, embroidered EAA aprons.



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A hearty thanks to all our ladies who work so hard for the chapter, and to those who attended luncheon. And thank you to all who lent a hand in its production and success. Judging by the smiles around the table all the ladies had a good time.



FEBRUARY MEETING MINUTES

10:17 am – Aubrey Thompson called the meeting to order. He noted that Tom Goodwin was unable to make it today. He was hoping that Tom would be around to discuss electric planes some more. Aubrey showed off some heavy-duty steel shelving brackets that he picked up from the Habitat Re-Store in Porters Neck for \$.50/piece.

10:20 am - Treasurer report from Bob McGowan. December's statement totaled \$3,507.10. Sam McGowan Young Eagles Fund has over \$1,100 from 19 different donations. We are gratefully accepting donations to this fund. So far fifteen (15) chapter members have paid their dues for 2019.

10:23 am - Aubrey would like to update the chapters name tags prior to the chili cook-off/fly in. Ken McGee and McGee Graphics manufactured the current set of

nametags. Aubrey mentioned that he has had conversations with people around town, and when he brings up the EAA they mention that they have been out to the field for a cook-off/fly in before. Aubrey asked us to keep spreading the word about our chapter around town.

10:26 am - Electric plane comments.

Aubrey Thompson watched a video about the Chevy Volt electric motor system. It is rated at 200 HP and the core unit weighs about 130 lbs. (Not including batteries.) Pieces could be removed for aircraft installation. The motor has a servo control unit, that is quite heavy, but would not be required in an aircraft installation. It has a high voltage battery pack. There are a series of Youtube videos where you can watch someone disassemble the battery pack.

Larry Goff - NASA is doing research on wing tip electric motors and trying to recover vortex energy that is shed by wing tips. By using wing tips you are dividing by a factor of 2 or 3.

Martin Hamm – The US Navy is contemplating building electric submarines again - Germany and France are and they are performing well and are very silent.

Mark Thoman – Noted that often when we are discussing an electric power system we factor in the weight of the battery. But when we are comparing the weight of a reciprocating engines, we rarely include the weight of the fuel in our consideration.

Martin Hamm – Noted that with a reciprocating engine the aircraft weight is heaviest at take-off and as fuel burns the gross weight gets lighter. A battery powered aircraft will not get lighter during a flight.

Larry Goff – Mentioned that the FAA does not currently recognize electric power and barely recognizes fuel injection and digital ignition. The bureaucracy is very slow to adopt new technology in power plant systems.

Aubrey Thompson - Boeing appears to be getting into electric powered aircraft. Maybe they carry enough political weight to be able to convince the FAA to change their position

10:40am - Message from Tom Goodwin - He is engaged in conversations with the Board of Directors at ILM airport. He has filed a complaint with the FAA that is greater than 130 pages in length. Aubrey has not heard

anything officially, but rumor has it that the FAA has requested a response from the airport authority.

Mark Thoman – In a conversation and email Tom Goodwin told him that FAA has sent ILM the complaint and a letter demanding a response to the complaint within thirty (30) days. Language in the letter includes that the FAA will investigate the complaint.

Martin Hamm – The current FBO at ILM has a monopoly on the field.

Ken McGee – Announced the Tom Goodwin will be attending a Board of Directors meeting at ILM this Wednesday and would like anyone who can be there to come in support. The meeting will be held at 5pm in the conference room. Tom will not be participating in the meeting but thinks that aviators should be there to advocate for local interest. The topics to be discussed were listed in last month's newsletter.

Mike Barri – Stated that he felt that the airport was probably not in violation of funding requirements. The gent that runs the airport is an attorney and pretty sharp concerning legal considerations and following regulations. Tom's complaint will have to show how they used the government funds inappropriately.

10:52 – Discussion of fuel cost at ILM.

Aubrey Thompson stated that there has been a price increase across the board. Fuel is almost \$6/gallon at ILM, whereas wholesale is only around \$3/gallon. Columbus County Airport is only charging \$3.89/gallon. It was noted that if you "top off" at ILM, you do not have to pay a ramp fee. You only have to pay \$10 to tie down for the night if you purchase \$10 of fuel.

10:55 Back to electric motor discussion.

Larry Goff – Watched a video on youtube where a company designed a motor using a free piston. This is a hybrid concept where the piston in a cylinder is driven by combustion from both ends of the sealed tube. The piston is a magnet that passes through a coil and generates current to turn an electric motor to turn the propeller. This axial piston system has a much greater combustion efficiency. The engine uses standard gasoline but the higher frequency nets a higher efficiency.

Aubrey Thompson – Demonstrated the brushless motor in new Ryobi battery powered drill that has an 18 volts motor driven by 5 lithium cells in the battery pack. The drill has a planetary gear system attached to the motor and is very strong at its lowest speeds. The drill motor, without the battery, is available Ebay for about \$40. Aubrey bought his for \$18 on an ebay sale. It already had a battery pack. He passed around the drill for everyone to see

11:05 Projects

Mark Thoman - has been using his "rotisserie" to rotate the steel frame for easy access to the bottom of his

fuselage. During the last month he has removed every moving component mounted to the steel frame. All of the components have been cleaned, labeled, and stored in zip locks bags. His three-deck toolbox is filled with airplane parts. Yesterday he wheeled the fuselage frame into the driveway to spray wash the frame. 49 years of dirt, oil, dried hydraulic fluid, and grunge was cleaned off. Next, he will be sandblasting the surface rust and priming the frame.

Billy Johnson – He had new magnetos for his engine. Originally a 4-week delivery was anticipated. Six weeks later he found out that there were some problems with the wires, and that it would be about 8 more weeks for delivery. He asked them to break the kit down and send the mags without the wires, which they did. He will be bringing the engine to the hangar soon for installation on the airframe. His engine is mounted on top of a pylon well above the fuselage. He wants to complete as much of the engine installation as possible, before mounting the assembly on top of the airframe, because he cannot quite crawl up on the airplane to work on the engine like he used to. He discussed that he will take advantage of a two-pilot test flight program and he has several volunteers to go with him.

Aubrey Thompson – Reported that he has made no progress since the last meeting. His workshop is not heated and it has been too cold to work comfortably.

Chris and Kristen Montefusco - Kristen reported that they are next in line for a new kit. Billy Johnson is going to let him ship the kit to his home so they do not repeat the same poor handling as the last kit that was damaged in delivery.

Jim Flippin – It was announced that Jim's Mosquito is up for sale.

11:15am – Aubrey Thompson ceremoniously presented a "new" grill to our Master Chef Ken McGee. The grill, in almost new condition, was purchased at the Habitat Re-Store by Aubrey Thompson. It was customized with stainless steel burner guards shaped and welded in place by Billy Johnson. Bob McGowan bought the steel for the project.

Ken McGee – Our Master Chef described in delicious detail the menu for the Ladies Day Luncheon. It was going to include five courses including: lime sorbet; tuna melt on crackers and shrimp cocktail; a salad of spinach, carrots, onions and olives on a bed of lettuce; stuffed clam shell pasta with feretta cheese cooked in olive oil, with red garlic mashed potatoes and asparagus; and for dessert; a fresh fruit parfait. Fine wine would be served in real wine glasses. The men of the chapter would be offered beans and corn bread.

11:25am – Aubrey Thompson discussed the completion of the clubhouse construction project. He

hoped that the walls could be finished in February before the March Chilli Cook-Off. He noted that the paint selected for the walls would not be named anything with the title "lavender". Larry Goff thought that the walls should be painted "orphanage white".

11:30am – An on that note the meeting was adjourned.

Respectfully submitted,
Kristen Montefusco
Secretary

ALBUQUERQUE INTERNATIONAL BALOON FIESTA

Jim Kessler and I first met in 1979 as members of HMT-204. I was an instructor pilot and I flew Jim on his very first flight in the CH-46 helicopter. Jim flew the "Phrog" for his entire twenty-year career. I soon transitioned into the KC-130 program and he and I never served in a squadron together. Following my retirement, we crossed paths at a soccer game and got reacquainted. I learned that he was building an RV-6 and volunteered to join his building effort. There were many memorable Sunday afternoons as I helped drill holes and buck rivets. One afternoon, discussing flying, I pointed out that Jim was building a taildragger but he had no taildragger experience. I also mentioned that, ever since I was a very young lad I had wanted a Citabria. We formed a partnership and purchased PATROL which we happily flew for several years. Jim and I both joined Chapter 297. In 1999 we were hired by Bell Helicopter and created the initial, MV-22 pilot simulator training program. Jim later moved to Amarillo, Texas where he was the Lead Production Test Pilot for Bell Helicopter flying the V-22. Jim is currently a simulator instructor in the USAF CV-22 Pilot and Flight Engineer Training program in Albuquerque NM. He and his wife Pam have a lovely home in the "high desert". Jim completed his RV-6 and he enjoys the clear weather and spectacular scenery of the New Mexico area.

This past October Jim and Pam invited Nancy and I out for a visit. During several days we toured the museums and tourist attractions of Santa Fe and Albuquerque. We hiked the natural and historic wonders of the desert southwest. And we thoroughly enjoyed the local cuisine. But the highlight of the trip was attending the Albuquerque International Balloon Fiesta.

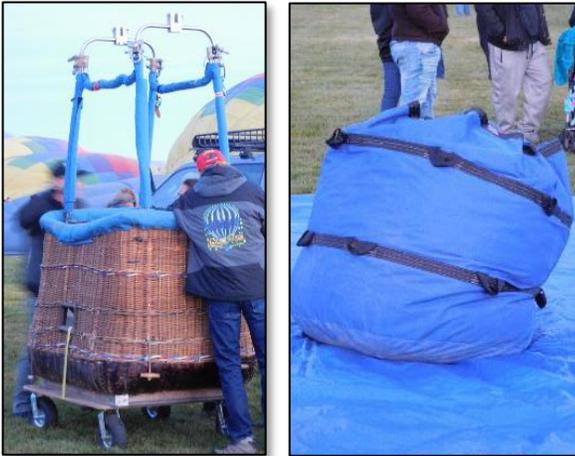


The balloon fiesta is held in October because the weather during that time of the year is generally CAVU, and the winds are very light. Perfect for ballooning. On the day that we attended we were up well before dawn and merrily joined one hundred thousand of our closest friends at the fiesta grounds. With large cups of coffee, we trekked into the middle of the launching area. It is a large, level grass field that covers more than a square mile. (Green, lush grass is not "natural" in Albuquerque. Someone works very hard to keep that expanse of lawn in shape.) The area is marked off in squares which are individual launch sites individually assigned to the hundreds of participating balloonists. Even in the dark there were many balloons fully inflated and ready for their takeoff clearance. Watching the fiery glow of the gas burners as the balloons maintained their inflated state was a unique visual display and quite exciting. With the start of "nautical twilight" (just enough to see for the launch to be safe) the first balloon, sporting the Stars and Stripes, rose over the crowd to signal the start of the days ballooning. In the next several hours, hundreds of balloons, of many different shapes and designs, inflated and launched into the calm, blue skies.



In the middle of the grass, we found a balloonist who had just arrived and we were able to observe the entire launch process. The whole apparatus was unloaded from

the bed of his big pick-up truck. He and his crew unloaded the gondola and set it on the upwind side of his designated area. Then they hauled out a large canvas sack that



contained the balloon itself. They rolled the gondola onto its side and fitted the gas bottles, and connected the burners, to the frame of the gondola. Then they connected the balloon to the frame of the gondola using a classic system of turnbuckles with pins that were held in place with a simple lock pin. The balloon was stretched out over the ground and then initially inflated with cold air from a garage sized fan powered by a lawnmower engine.



The balloon was now about half inflated while it still lay on the ground. As the scheduled time for launch approached the burners were lit with a roar. The tongue of flame extended at least eight feet from the burner and forced the hot air into the balloon. As the temperature of the air increased the balloon began to lift from the ground. A single crewmember, generally the largest person, manned a rope that stretched from the apex of the balloon away from the gondola. His job was to cause the balloon to rise from the horizontal to the vertical in a gentle and controlled manner. He anchors and controls the top of the balloon to keep it from swinging.

With the balloon in the vertical, the pilot uses the burner to continue to warm the air and prepare for launch. In the crowded airspace of the fiesta a balloon can only launch with a signal from a “zebra stripe” controller. As was explained to me by the pilot, while the visibility from

the gondola is spectacular, he does have one, rather large, blind spot. And that is directly above him. His own balloon blocks his vertical visibility. To avoid lifting into another balloon, that might be floating in his blind spot, the striped controller stands several hundred feet from the gondola and communicates to the pilot with hand and arm signals and a whistle. When the controller has confirmed that the airspace above and upwind of the balloon is clear he gives him the thumbs up and a long whistle. With a roar of gas and a long, hot tongue of flame the balloon lifts into the air. Destination unknown.

Well that’s what I thought. Until I got to watch the next event of the day which was “target ballooning.” You’re kidding, right? No, I’m not. And was I surprised. After all the local balloons had launched and floated down wind, I started to notice a large group of balloons, at least thirty in number, that were approaching the field from upwind. At the same time mounted New Mexico State Police cleared the spectators from a large part of the field. We were moved



behind a designated line and watched as the “targets” were set up. There were three types of targets set up in rows across the width of the field. Each row was oriented across the general direction of the wind, and each similar row if targets was upwind of the next row. This allowed the balloon to pass through each row as it floated with the gentle wind. The first row of targets was a pole that stood on a weighted base that extended vertically about thirty feet. It looked just like a flag pole. Each balloonist was armed with a Frisbee like disc that is simply a ring about one foot in diameter. The balloonist’s goal was to toss the ring onto the pole. The next row of targets was a line of cloth white “X’s” staked to the ground. The balloonists were armed with colored sandbags and their goal was to toss the sandbag from the gondola and come as close to the center of an “X” as possible. The last row of targets was a line of larger “X’s”. These were landing targets and the balloonist’s goal was to land his gondola on the “X”.



It was explained to me that the balloons were required to launch from a site at least one mile from the fiesta grounds. I imagined the difficulty of trying to measure the direction of the wind and then find an open area that would allow me to drift toward a target as small as a flag pole. From our vantage point, it was fun to watch the balloons slowly approach. You could clearly observe the pilots using the different wind directions found at different altitudes. Initially the balloons were approaching at an altitude of least 2,000 feet above the ground. At that altitude it appeared that they would miss the field entirely. But as they approached a desired point, they began a descent that put them into the surface flow of wind that was directly upwind of the target area. About then I realized that you did not want to be the first balloonist to make the attempt. He unfortunately would end up being



the “wind dummy” who showed all those who followed exactly the direction of the winds.

As we watched I could observe the next problem faced by the pilots, and that was the difficulty of vertical control. There is a significant time lag between the application of flame and then a change in altitude, or a change in the rate of descent. I counted as much a thirty to forty-five seconds between the application of heat and a visible change in the vertical movement of the balloon. And then the next problem is one of nature’s temperature change. When you want to descend you simply stop applying heat. But it takes a considerable time for the air in the balloon to cool enough for the descent to actually start. And unless you want to fall out of the sky, the pilot must apply a periodic burst of heat to maintain a controlled rate of descent. This was an exciting evolution to watch, as the contestants attempted to descend to find the wind that is blowing in the proper direction and then arrest the descent at an effective altitude to “hit” the target. Several had difficulty. Approaching the target area, they began an initial, and rather rapid, descent. As they neared the ground, they recognized the requirement to either slow the rate of descent or to level off, so they added “power”. When they

recognized that the initial burst did not achieve the desired effect they added more “power” and really put on the flame. The second burst arrested the rate of descent, but in a few seconds the air in the balloon was too hot, and it began climb away from the target altitude. Now the pilot could only wait for the air to cool naturally so that the balloon would start descending again. What a challenge.

Having observed all of this I would have concluded that no one would get near a target. Again, I was very wrong. We watched several balloonists toss their rings onto the flag pole. And one, to the cheers of the crowd, was so close that he simply reached out his hand and placed the ring on the top of the flag pole. In several other cases, with an altitude of less than ten feet, the pilots simply dropped their sandbags directly onto the center of the “X”, without even the requirement to throw the bag toward the target. To make that perfect an approach to the target was “a spectacular feat of stratospheric skill.”

The International Balloon Fiesta was both exciting and educational. Nancy and I were introduced to a facet of aviation that we were completely unfamiliar. And we experienced it with great friends, and surrounded by an enthusiastic crowd. Jim and I made plans to take his RV-6 for a flight early the next morning. He had some aerial sights that he wanted to share with me. Surprisingly we woke to low ceilings and rain. In New Mexico? But I thought it never rained in New Mexico. We were both disappointed, but we simply added the flight to the list of events that we would enjoy during our next visit. Nancy and I are looking forward to another visit with Jim and Pam. Maybe it will be in PATROL.... Now there is an adventure to look forward to! If you are interested, the 2019 Albuquerque International Balloon Fiesta will be held the 5th through the 13th of October.

ANNUAL DUES ARE DUE

Ladies and gentlemen your annual dues are due. During the February meeting it was noted that less than twenty members had paid their dues. Please seek out our esteemed Treasurer, Bob McGowan, and offer your annual \$35 dollars. Collectively these dues barely meet the chapter’s annual expenses, which include our EAA fees, insurance, and monthly clubhouse rent. This year, reconstruction of the clubhouse, created an unexpected expense. If you are so inclined, any additional contributions would be sincerely appreciated. Thank you.

FUTURE EVENTS

March 2019

- Saturday 2nd **EAA 297 - Chapter Meeting**, 10:00 AM in the clubhouse. Lunch in the No Whining Saloon 12:00 PM
- Sunday 3rd South Carolina Breakfast Club, Mt Pleasant Regional (KLRO)

- Saturday 9th **EAA 297 – Chilly Fly-In and Chili Cook-Off**, 11:00 AM to 1:00 PM, Stag Air Park (7NC1)
- Sunday 17th South Carolina Breakfast Club, Lexington County Airport (6J0)
- Sunday 31st South Carolina Breakfast Club, Lee County Airport (52J)

April 2019

- Tuesday 2nd- Sun ‘n Fun, Lakeland FL
- Sunday 7th **EAA 297 - Chapter Meeting**, 10:00 AM in the clubhouse. Lunch in the No Whining Saloon 12:00 PM
- Saturday 6th
- Friday 12th- Festival d’Avion, Moore County Airport, NC (KSOP)
- Saturday 13th
- Sunday 14th South Carolina Breakfast Club, Cheraw Municipal Airport (KCQW)
- Saturday 27th EAA 939 Wings & Wheels, Cape Fear Regional Jetport (KSUT)
- Sunday 28th South Carolina Breakfast Club, Broxton Bridge Plantation (SC55)
- Saturday 27th- Wings Over Wayne Air Show, Seymour Johnson AFB, Goldsboro NC
- Sunday 28th

May 2019

- Saturday 4th **EAA 297 - Chapter Meeting**, 10:00 AM in the clubhouse. Lunch in the No Whining Saloon 12:00 PM
- Sunday 5th South Carolina Breakfast Club, Rock Hill/York Co/Bryant Field Airport (KUZA)
- Saturday 11th **EAA 297 – Spring Fly-In and Car Show**, Stag Air Park (7NC1)
- Sunday 19th South Carolina Breakfast Club, Whiteplains Airport (SC99)

HUMOR

The first testicular guard, the “Cup,” was used while playing hockey in 1874. The first helmet was used in 1974. That would indicate that it *only* took one hundred years for men to realize that their brain is also important.

