

# CASCADE FLYER



Website: <http://co-opa.com/>

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## *President's Message:*

We had no one speaker for last month's meeting, and yet we somehow ended up with a full program of speakers anyway. Good to have a light program every once in a while so that the membership can take the time to air out all our unused stories and catch up on all the local aviation news and gossip.

I'm working on several possibilities for our May program so be sure to attend and see what pops up.

Plan your approach into the Flight Services Building at 6pm for some hanger flying, stay for the delicious potluck at 6:30pm and participate in the formal program at 7pm. No pilot should miss it.

Also there are two events to note in the next month. The chapter presidents of the OPA will be meeting in Bend at the FBO on 22 May for their quarterly board meeting. This will be an easy way to meet a lot of OPA pilots from out of our area and see how you state organization functions.

And last but not least, be sure to come on down for Bend Airport Day on 19 June. The EAA Bend and Prineville chapters will serve breakfast at 8am and Cafe 3456 will be serving \$5 burgers for lunch. What a great way to start the Father's Day weekend!



**TNT Aviation hosted this month's Bend EAA meeting and have done inspections/repairs on several Epic LTs to date**

## *Calendar:*

- 20 May - Monthly Meeting
- 22 May - Monthly Flyout
  - OPA Quarterly Meeting at KBDN
- 11 June - Hayward Air Rally
- 17 June - Monthly Meeting
- 19 June - Monthly Flyin
  - Bend Airport Day
- 15 July - Monthly Meeting
- 17 July - Monthly Flyout
- 19 August - Monthly Meeting
- 21 August - Monthly Flyout
- 27-28 August - Air Show Of The Cascades at KS33

## *Web doings:*

The ever-popular Airshow of the Cascades is back on for the last weekend in August. From their website:

"Welcome Julie Clark's American Aerobatics in her Beachcraft Mentor for the first time at our airshow. We welcome back aerial wizard Bud Granley. We are thrilled to bring back Rob Harrison, The Tumbling Bear. Renny Price Hammerhead Aerobatics will return to wow the crowd. Expect a fireworks display Friday evening after our twilight show."

As always they are looking for volunteers and corporate sponsorships. All donations are tax deductible. Check out their website for more info:  
<http://www.cascadeairshow.com/>

As always you can check out current and past CO-OPA newsletters, view our membership list and view hot aviation links on our website at  
<http://co-opa.com>

To access the members-only areas the username is "BDN" and the password is "123.0".

### ***My Inbox:***

Last year was the first year for the Hayward Air Rally to come to Bend.

It was such a success that they are coming back this year on Friday 11 June for their 46th event.

Like last year they are looking for volunteers to help marshal the ramp at KBDN. If you would like to help and see a unique face of GA up close and personal then email Steve Verbil at [sverbil@usa.net](mailto:sverbil@usa.net).

They still have open slots for rally participants if anyone wants to test their pilotage skills against some of the best. You can find more details on their web site: <http://www.hwdairrally.org>

### ***Random Thoughts:***

Summer is coming and I have been given a number of interesting tidbits about KBDN and beyond.

In spite of hitting more rock than expected the work is proceeding ahead of schedule on the new east taxiway. Seriously, when has there ever been earthmoving in the Bend area that did not hit more rock than expected? Complaints have been rolling in about the glider parking area that now sits on the compass rose. Have a bit of patience, the new taxiway will have two compass roses before construction ends this fall.

Complaints have also been rolling in about the new PAPI. Gary Judd assures us that it really is set to the FAA standard 3 degree slope.

Looking to the future, expect KBDN infrastructure to remain in flux for at least another year. As always funding is uncertain but it looks like the west (old) taxiway will get replaced in 2011. That will complete most of the items in the current airport master plan so funding is also in process for an update to the master plan, maybe as soon as this summer.

The new runway 16/34 pavement has been down a while now, but figuring how best to use it is still evolving.

Sentiment seems to be favoring changing the calm wind runway to 34, so Gary Judd will be working with

the FAA on that change. This will allow easier glider operations and straight in approaches from the south in calm (<5kt) winds. The calm wind runway is not mandatory, but given the number of local calm wind near misses it should be.

Speaking of winds, Gary Judd seems to have identified dangerous turbulence near taxiway A3 when there is a quartering headwind from the northwest. There have been several aircraft damaged there in those conditions, pilot beware.

There are also the usual traffic pattern gripes. Remember that while most local helicopters are using right-hand patterns that a lot of transient helicopters are using left hand patterns. So be alert, keep you head on a swivel and use your radio.

In a note on radio usage, if you are going to perform a stop- or touch-and-go then be sure to say so in your radio call on final. There have been a lot of go-arounds lately due to aircraft unexpectedly dawdling on the runway. We all need go-around practice but let's keep the unplanned ones to a minimum.

The Epic Aircraft company is gone, hopefully soon to rise from the ashes, but they built some great airplanes that will need maintenance for a long time to come. To serve that need a few ex-Epic employees have opened TNT Aviation at the north end of the field (**see photo on page 1**).

Check out their website: <http://tntaviation.com/>

***Gary Miller***

### ***April Fly-out ---***

.... TO EMMETT, IDAHO !! Sat. 4/17 was our monthly fly-out day. Several people had voiced an interest in going on the fly-out.....but.....it boiled down to just 2 planes. Gary Miller took his Cessna Turbo Centurion. Ed Endsley usually goes, but was unable to go due to eye surgery and Harry McFadden had to cancel due to out of town guests.....so it was just Gary and his dog "Max" in his plane. We (Don & Norma Wilfong) took our Cessna Skylane, Don Bolduc, our intended passenger, had come down with a cold and canceled, so that left just Norma and I in our plane.

## ***Fly-out -----***

We flew out of Pilot Butte International about 0715 and refueled at KBDN. We taxied over to Pro-Air, had some coffee and waited for Gary to show up.....when he had gone out to his plane and appeared to be about to start up and taxi down for fuel we departed (we wanted a head start as his plane is faster than ours) .....well.....he had a couple of delays and didn't get into the air for a while so we were quite a ways ahead by the time he got airborne.

As we were about to enter the pattern at Emmett they came on the radio and said "The Emmett airspace is now closed for the airshow" We told them we were about to land but they repeated that the airspace was closed.....so.. we flew down to Payette, Idaho, landed and spent some time there waiting for the airport at Emmett to open .....When we headed for Emmett again Gary had caught up and was also waiting for the airport to open so we both circumnavigated the valley looking at the sights for a little while longer and then when they reopened the airport we landed.



There were lots of planes and show cars to look at, but the airshow and the breakfast were things of the past.....there is a golf course surrounding the runway and there is a small cafe on the field. It was really warm and comfortable so we sat at an outside table and enjoyed a good lunch.



We picked up a courtesy car and drove by the house I was born in. This was home for my parents from 1930 until 1985. I lived there until after I completed School. We drove by a few other places and then through the town of Emmett.

The place where I went to a country Grade School is now occupied by a nice new home. The building where I went to High School is gone and the Post Office and another building occupy that land. The Boise Cascade Lumber Mill, where I once worked, is also gone. Emmett's business district has a number of empty buildings and the town appears to have become a bedroom community for Boise, which is approx. 30 miles away.

A lot of things have changed but I really enjoyed the time spent and the many memories brought to mind as we visited my old hometown and the airport where I learned to fly. Norma and I plan to go back and spend a few days visiting some of the familiar places of my youth and visiting with some of my classmates from class of '52.



***Don & Norma Wilfong***



*We all hope Ed is recovering from his eye surgery*

## **Bill Weaver & SR-71 BREAKUP**

Among professional aviators, there's a well-worn saying: Flying is simply hours of boredom punctuated by moments of stark terror. And yet, I don't recall too many periods of boredom during my 30-year career with Lockheed, most of which was spent as a test pilot.

By far, the most memorable flight occurred on Jan. 25, 1966. Jim Zwyer, a Lockheed flight-test reconnaissance and navigation systems specialist, and I were evaluating those systems on an SR-71 Blackbird test from Edwards AFB, Calif. We also were investigating procedures designed to reduce trim drag and improve high-Mach cruise performance. The latter involved flying with the center-of-gravity (CG) located further aft than normal, which reduced the Blackbird's longitudinal stability.

We took off from Edwards at 11:20 a.m. and completed the mission's first leg without incident. After refueling from a KC-135 tanker, we turned eastbound, accelerated to a Mach 3.2-cruise speed and climbed to 78,000 ft., our initial cruise-climb altitude. (BY THE WAY, MACH 3.2 IS ROUGHLY 2200 MILES PER HOUR, e.g. Chicago to Dallas in 20 minutes).

Several minutes into cruise, the right engine inlet's automatic control system malfunctioned, requiring a switch to manual control. The SR-71's inlet configuration was automatically adjusted during supersonic flight to decelerate air flow in the duct, slowing it to subsonic speed before reaching the engine's face. This was accomplished by the inlet's center-body spike translating aft, and by modulating the inlet's forward bypass doors. Normally, these actions were scheduled automatically as a function of Mach number, positioning the no normal shock wave (where air flow becomes subsonic) inside the inlet to ensure optimum engine performance.

Without proper scheduling, disturbances inside the inlet could result in the shock wave being expelled forward--a phenomenon known as an "inlet unstart."

That causes an instantaneous loss of engine thrust, explosive banging noises and violent yawing of the aircraft--like being in a train wreck. Unstarts were not uncommon at that time in the SR-71's development, but a properly functioning system would recapture the shock wave and restore normal operation. On the planned test profile, we entered a programmed 35-deg. bank turn to the right. An immediate unstart occurred on the right engine, forcing the aircraft to roll further right and start to pitch up. I jammed the control stick as far left and forward as it would go. No response. I instantly knew we were in for a wild ride.

I attempted to tell Jim what was happening and to stay with the airplane until we reached a lower speed and altitude. I didn't think the chances of surviving an ejection at Mach 3.18 and 78,800 ft. were very good. However, g-forces built up so rapidly that my words came out garbled and unintelligible, as confirmed later by the cockpit voice recorder. The cumulative effects of system malfunctions, reduced longitudinal stability, increased angle-of-attack in the turn, supersonic speed, high altitude and other factors imposed forces on the airframe that exceeded flight control authority and the Stability Augmentation System's ability to restore control.

Everything seemed to unfold in slow motion. I learned later the time from event onset to catastrophic departure from controlled flight was only 2-3 sec. Still trying to communicate with Jim, I blacked out, succumbing to extremely high g-forces. The SR-71 then literally disintegrated around us. From that point, I was just along for the ride.

My next recollection was a hazy thought that I was having a bad dream. Maybe I'll wake up and get out of this mess, I mused. Gradually regaining consciousness, I realized this was no dream; it had really happened. That also was disturbing, because I could not have survived what had just happened. Therefore, I must be dead. Since I didn't feel bad--just a detached sense of euphoria--I decided being dead wasn't so bad after all. AS FULL AWARENESS took hold, I realized I was not dead, but had somehow separated from the airplane. I had no idea how this could have happened; I hadn't initiated an ejection. The sound of rushing air and what sounded like straps flapping in the wind confirmed I was falling, but I couldn't see anything. My pressure suit's face plate had frozen over and I was staring at a layer of ice.

The pressure suit was inflated, so I knew an emergency oxygen cylinder in the seat kit attached to my parachute harness was functioning. It not only supplied breathing oxygen, but also pressurized the suit, preventing my blood from boiling at extremely high altitudes. I didn't appreciate it at the time, but the suit's pressurization had also provided physical protection from intense buffeting and g-forces. That inflated suit had become my own escape capsule.

My next concern was about stability. Air density at high altitude is insufficient to resist a body's tumbling motions, and centrifugal forces high enough to cause physical injury could develop quickly. For that reason, the SR-71's parachute system was designed to automatically deploy a small-diameter stabilizing chute shortly after ejection and seat separation.

## **SR-71 BREAKUP --- continued**

Since I had not intentionally activated the ejection system--and assuming all automatic functions depended on a proper ejection sequence--it occurred to me the stabilizing chute may not have deployed.

However, I quickly determined I was falling vertically and not tumbling. The little chute must have deployed and was doing its job. Next concern: the main parachute, which was designed to open automatically at 15,000 ft. Again I had no assurance the automatic-opening function would work.

I couldn't ascertain my altitude because I still couldn't see through the iced-up face plate. There was no way to know how long I had been blacked-out or how far I had fallen. I felt for the manual-activation D-ring on my chute harness, but with the suit inflated and my hands numbed by cold, I couldn't locate it. I decided I'd better open the face plate, try to estimate my height above the ground, then locate that "D" ring. Just as I reached for the face plate, I felt the reassuring sudden deceleration of main-chute deployment.

I raised the frozen face plate and discovered its uplatch was broken. Using one hand to hold that plate up, I saw I was descending through a clear, winter sky with unlimited visibility. I was greatly relieved to see Jim's parachute coming down about a quarter of a mile away. I didn't think either of us could have survived the aircraft's breakup, so seeing Jim had also escaped lifted my spirits incredibly.

I could also see burning wreckage on the ground a few miles from where we would land. The terrain didn't look at all inviting--a desolate, high plateau dotted with patches of snow and no signs of habitation.

I tried to rotate the parachute and look in other directions. But with one hand devoted to keeping the face plate up and both hands numb from high-altitude, subfreezing temperatures, I couldn't manipulate the risers enough to turn. Before the breakup, we'd started a turn in the New Mexico-Colorado-Oklahoma-Texas border region. The SR-71 had a turning radius of about 100 mi. at that speed and altitude, so I wasn't even sure what state we were going to land in. But, because it was about 3:00 p.m., I was certain we would be spending the night out here.

At about 300 ft. above the ground, I yanked the seat kit's release handle and made sure it was still tied to me by a long lanyard. Releasing the heavy kit ensured I wouldn't land with it attached to my derriere, which could break a leg or cause other injuries. I then tried to recall what survival items were in that kit, as well as techniques I had been taught in survival training.

Looking down, I was startled to see a fairly large animal--perhaps an antelope--directly under me. Evidently, it was just as startled as I was because it literally took off in a cloud of dust.

My first-ever parachute landing was pretty smooth.

I landed on fairly soft ground, managing to avoid rocks, cacti and antelopes. My chute was still billowing in the wind, though. I struggled to collapse it with one hand, holding the still-frozen face plate up with the other.

"Can I help you?" a voice said.

Was I hearing things? I must be hallucinating. Then I looked up and saw a guy walking toward me, wearing a cowboy hat. A helicopter was idling a short distance behind him. If I had been at Edwards and told the search-and-rescue unit that I was going to bail out over the Rogers Dry Lake at a particular time of day, a crew couldn't have gotten to me as fast as that cowboy-pilot had.

The gentleman was Albert Mitchell, Jr., owner of a huge cattle ranch in northeastern New Mexico. I had landed about 1.5 mi. from his ranch house--and from a hangar for his two-place Hughes helicopter. Amazed to see him, I replied I was having a little trouble with my chute e. He walked over and collapsed the canopy, anchoring it with several rocks. He had seen Jim and me floating down and had radioed the New Mexico Highway Patrol, the Air Force and the nearest hospital.

Extracting myself from the parachute harness, I discovered the source of those flapping-strap noises heard on the way down. My seat belt and shoulder harness were still draped around me, attached and latched. The lap belt had been shredded on each side of my hips, where the straps had fed through knurled adjustment rollers. The shoulder harness had shredded in a similar manner across my back. The ejection seat had never left the airplane; I had been ripped out of it by the extreme forces, seat belt and shoulder harness still fastened.

I also noted that one of the two lines that supplied oxygen to my pressure suit had come loose, and the other was barely hanging on. If that second line had become detached at high altitude, the deflated pressure suit wouldn't have provided any protection. I knew an oxygen supply was critical for breathing and suit-pressurization, but didn't appreciate how much physical protection an inflated pressure suit could provide. That the suit could withstand forces sufficient to disintegrate an airplane and shred heavy nylon seat belts, yet leave me with only a few bruises and minor whiplash was impressive. I truly appreciated having my own little escape capsule. After helping me with the chute, Mitchell said he'd check on Jim. He climbed into his helicopter, flew a short distance away and returned about 10 min. later with devastating news: Jim was dead. Apparently, he had suffered a broken neck during the aircraft's disintegration and was killed instantly. Mitchell said his ranch foreman would soon arrive to watch over Jim's body until the authorities arrived.

I asked to see Jim and, after verifying there was nothing more that could be done, agreed to let Mitchell fly me to the Tucumcari hospital, about 60 mi. to the south.

I have vivid memories of that helicopter flight, as well. I didn't know much about rotorcraft, but I knew a lot about "red lines," and Mitchell kept the airspeed at or above red line all the way.

### **SR-71 BREAKUP --- conclusion**

The little helicopter vibrated and shook a lot more than I thought it should have. I tried to reassure the cowboy-pilot I was feeling OK; there was no need to rush. But since he'd notified the hospital staff that we were inbound, he insisted we get there as soon as possible. I couldn't help but think how ironic it would be to have survived one disaster only to be done in by the helicopter that had come to my rescue.

However, we made it to the hospital safely--and quickly. Soon, I was able to contact Lockheed's flight test office at Edwards. The test team there had been notified initially about the loss of radio and radar contact, then told the aircraft had been lost. They also knew what our flight conditions had been at the time, and assumed no one could have survived. I briefly explained what had happened, describing in fairly accurate detail the flight conditions prior to breakup.

The next day, our flight profile was duplicated on the SR-71 flight simulator at Beale AFB, Calif. The outcome was identical. Steps were immediately taken to prevent a recurrence of our accident. Testing at a CG aft of normal limits was discontinued, and trim-drag issues were subsequently resolved via aerodynamic means. The inlet control system was continuously improved and, with subsequent development of the Digital Automatic Flight and Inlet Control System, inlet unstarts became rare. Investigation of our accident revealed that the nose section of the aircraft had broken off aft of the rear cockpit and crashed about 10 mi. from the main wreckage. Parts were scattered over an area approximately 15 mi. long and 10 mi. wide. Extremely high air loads and g-forces, both positive and negative, had literally ripped Jim and me from the airplane. Unbelievably good luck is the only explanation for my escaping relatively unscathed from that disintegrating aircraft.

Two weeks after the accident, I was back in an SR-71, flying the first sortie on a brand-new bird at Lockheed's Palmdale, Calif., assembly and test facility. It was my first flight since the accident, so a flight test engineer in the back seat was probably a little apprehensive about my state of mind and confidence. As we roared down the runway and lifted off, I heard an anxious voice over the intercom. Bill! Bill! Are you there?" "Yeah, George. What's the matter?" "Thank God! I thought you might have left." The rear cockpit of the SR-71 has no forward visibility--only a small window on each side--and George couldn't see me. A big red light on the master-warning panel in the rear cockpit had illuminated just as we rotated, stating, "Pilot Ejected." Fortunately, the cause was a misadjusted micro switch, not my departure. Bill Weaver flight tested all models of the Mach-2 F-104 Starfighter and the entire family of Mach 3+ Blackbirds--the A-12, YF-12 and SR-71. He subsequently was assigned to Lockheed's L-1011 project as an engineering test pilot, became the company's chief pilot and retired as Division Manager of Commercial Flying Operations. He still flies Orbital Sciences Corp.'s L-1011, which has been modified to carry a Pegasus satellite-launch vehicle (AW&ST Aug. 25, 2003, p. 56). An FAA Designated Engineering Representative Flight Test Pilot, he's also involved in various aircraft-modification projects, conducting certification flight tests.

**"For those who fly....or long to."**



*Seen at Sun n' Fun 2010; an O2 mask for your canine co-pilot*

### **ONE STEP CLOSER .... SPACESUIT UNVEILED FOR HI-ALTITUDE FREEFALL RECORD ATTEMPT**

The Red Bull Stratos science team has revealed the pressure helmet, and suit that will serve as Felix Baumgartner's sole life-support system when he steps off his capsule at 120,000 feet to attempt a record-breaking freefall from the edge of space. The suit is custom made by The David Clark company which has been making suits since 1941 including launch entry suits for Space Shuttle astronauts and the iconic suit that United States Air Force Colonel (Ret.) Joe Kittinger wore on his historic Excelsior III jump in 1960.



*On a separate note, Baumgartner's parachute harness is made by Velocity Sports Equipment, based in Sunriver. Here is a local EAA member with the harness*

# 46TH ANNUAL HAYWARD AIR RALLY

June 11-12, 2010

FLY  
NORTH



Bend  
BDN

Redding  
RDD

Hayward  
HWD

- The 46th annual Hayward Air Rally is two days of fun! Visit the San Francisco Bay Area, scenic northern California, and beautiful Central Oregon, all in one weekend!
- The Rally is a 500-mile VFR cross-country challenge, flown in two legs. This event is NOT a speed race. Crews fly from Hayward to Redding for fuel and lunch, and onward to Bend – where the real fun begins! Scoring is based on your fuel management and navigation skills.
- After many outdoor activities at Bend, pilots enjoy a Saturday evening awards party with great food, trophies and awards, and many sponsored door prizes.
- The Rally accepts aircraft with traditional instruments or glass panels. Pilots of all skill levels are welcome. Fly solo or bring the family. This is an excellent opportunity to test your flying skills and have fun!
- Rally proceeds benefit EAA Academy scholarships for Hayward children. EAA members receive a \$25 discount from the basic entry fee.

Please visit the website below for detailed event information.

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

email: [info@hwdairrally.org](mailto:info@hwdairrally.org)



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