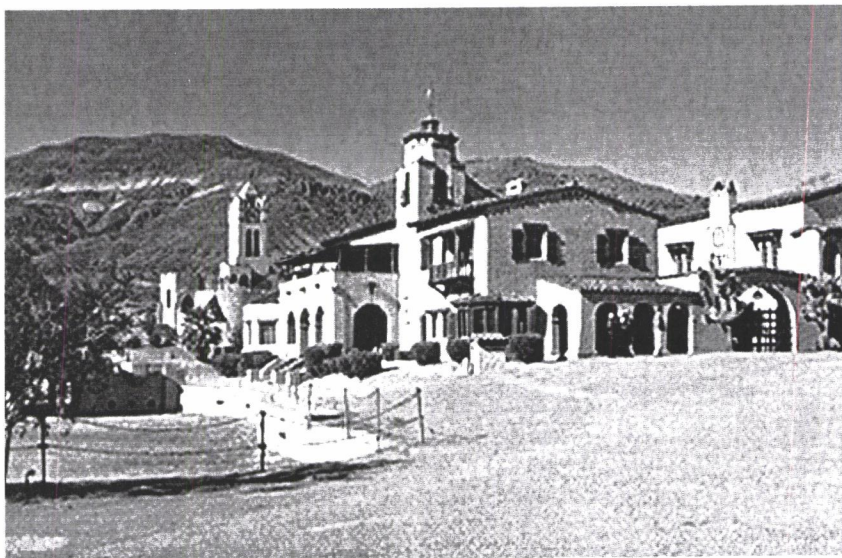


# CPA FLIGHT LINES

Volume 22, No. 1

January 2005



## CPA Fly-in to Furnance Creek *A fly-in that fought to the bitter end*

CPA WEB SITE  
[www://coloradopilots.org](http://www://coloradopilots.org)



# President's Message

## *Avoiding a last minute rush to obtain recurrent training*

*By Bart Jones, 2005 CPA President*



Winter is upon us and although we are blessed with something like 350 days of sunshine they are not all flyable. If not snow then strong winds or deep cold will keep me grounded, I must be getting old. While there is no lack of obligations clamoring for my attention on those bitter days, I have, nevertheless, resolved to use some of that time for a little recurrent training. I know we all accept that this is an obligation we owe ourselves, but in my case at least, it never seems to happen until I'm up against some dead line like a BFR.

This year is different. I have been introduced to the world of interactive DVD training materials. I appreciate the fact that these have been around for some time and that I am late to the game, but better late than never. Perhaps I am not the only one out there who is late to the game. My introduction to these new training materials came by way of using the Cessna Flight Program and

I'm learning things I thought I knew before. With the video and the graphics this is so much better than just studying from a book. This is actually fun.

Having now been introduced to these products I took a look at the Sporty's Catalog with more focused interest. I see all kinds of interesting training programs there, and at prices I can afford. I have my eye on some of Richard Collins' Air Facts Series, in particular, IFR Risk Management and Instrument Flying Tips. Now the idea of recurrent training is no longer a chore but something I am looking forward to on those days when the weather is ugly.

If you are feeling guilty about how long it has been since you have been flying or have refreshed your knowledge base I encourage you to check out these products. Not only that, but this is a great reason to preempt some other dreaded chore.

*Bart*

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## CPA Fly-in Planning Party! Save The Date! Jan. 30, 2005

*Hosted by Connie Hopkins and Cathie Martyny*

It's hard to believe, but it is time to begin planning for another year of fun and fascinating destinations for our fly-in calendar! Please start thinking about where you would like to visit.

**When:** Sunday, January 30th at 1 pm.

**Where:** The home of Connie and Mark Hopkins, 1598 Wildwood Lane, Boulder (directions to follow with RSVP.)

**What to Bring: YOUR IDEAS!!** Have you been to a place you'd like to share with the group? Have you always wanted to host a fly-in? It is important to remember not everyone can attend three day fly-ins, therefore we would like to see a mix of one and two day fly-ins as well as the three day trips. Please

come prepared to tell us, or bring to the meeting, information about the destination, suggest a date, and let us know if you would like to host the event.

**Food and drink:** No CPA party would complete without food and beverages! After the meeting we are planning a casual, sandwich supper. Please let one of us know if you'd like to bring a salad or dessert.

**RSVP:** Please either email or call Cathie or Connie by January 29th if you plan to attend. You won't want to miss this gathering, but if you must, you may e-mail Connie Hopkins (constance\_hopkins@hotmail.com) or Cathie Martyny (johnmartyny@comcast.net) with the details. We'll present your idea for you.

## Concerning Learning

*"Keeping Your Options" By Bob Dawson as told to Dean Jaros*

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We always wanted to tour Central America down to the Panama Canal. But lacking flying experience in that part of the world, we hesitated to make the trip alone. When we heard about a guided, multi-plane excursion to five countries, we were delighted. Jon, the trip leader, who would be flying a Seneca, was an old south-of-the-border hand. The company of several other planes would be comforting. The combined wisdom of many pilots was likely to be better than the judgment of one, and in the event of an emergency, there would be someone to help — or at least to communicate with.

Our initial meeting place was to be Flores, in central Guatemala, site of the spectacular Maya site of Tikal. The four planes from the western US assembled at Brownsville. Pausing at Vera Cruz, we continued toward Flores, overflying Villahermosa. Although we had been briefed about a large tropical depression, this was a well-planned route — the countryside was generally well populated and there were a reasonable number of alternate airports. But as we traveled east of Villahermosa, we began to wonder if the weather was not a bit more than we had bargained for. Following standard procedure, we maintained five mile horizontal separation between planes and 500 ft. vertical.

Only the lead plane had full approach plates to Flores and the soup was thick. We were within 45 minutes of our destination, and we felt that our options were narrowing a little too fast. We backtracked to Villahermosa, which was clear, for the night.

The tropical depression was still with us the next day, but with a 1500 ft. ceiling,

we were able to make Flores without too much trouble. Communications with the tower, however, were a little unsettling. There was confusion over whether to use a VOR-DME approach (which would have meant climbing up into the clouds) or just a visual. Tower wanted us to do the approach, but as we had the field in sight, we kept insisting on the visual. Eventually tower agreed and we were cleared to land. While English is the formal language of international air travel, controllers' vocabularies do not necessarily extend beyond normal flight operations. We were also having difficulty understanding the accent of someone who was working in a language not his own. Something more to be aware of when flying south of the border! Possibly language contributed to a mishap at Flores the previous day.

Our six eastern US counterparts, plus Jon in his Seneca, had met at Key West. Their plan was to refuel at Cozumel and then proceed to Flores. One of the planes, however, was a long-range Mooney, equipped with tip-tanks. The pilot filed direct to Flores. As we well knew, the weather was bad that day. The Mooney pilot missed two approaches. A shouting match with the tower controller had developed at this point, possibly in part because the pilot's English was also accented — he was an Egyptian whose native language was probably Arabic. On base leg of the third approach, with a passenger distractingly hysterical, the engine quit. Thanks to a very brief restart, the pilot was able to prang the plane onto the runway, wheels-up. The tanks were bone dry. Fortunately, no one was hurt. For the couple in the Mooney, the trip was over after the first day!

Our first thought was that the Mooney pilot had let his options slip away. Obviously, the pilot did not plan his fuel reserves. Key West to Flores is a long way, and since there are no alternate fuel stops any where near Flores, this was a huge blunder. Also, the pilot clearly overestimated his instrument abilities or underestimated the severity of the weather. “Cockpit resource management” was a failure. The passenger had not been briefed — or had not learned — about instrument flying and thus became a liability rather than a possible helper when the going got tough. Finally, possible language problems, what with Spanish, English, and Arabic all entailed, should have been a real red flag, but were ignored.

The same day, by contrast, we had returned to Villahermosa while we still had plenty of fuel. Clearly wiser, but as events were to prove, perhaps not much wiser.

Departing Flores, the big tropical depression with its lousy weather stayed with us. At one point we had flown into a grass strip in a valley near the famous Maya ruins of Copan. On the day of our planned departure, clouds covered the surrounding mountain peaks and ridges in all directions. At breakfast, the nine remaining clients all agreed that the weather was too ominous. But when Jon, the trip leader, walked-in, he downplayed the weather. We all looked at each other with doubtful expressions, but away we all went. Nothing bad happened to us, but we had let a single person, by virtue of presumed expertise, influence us into what was, in retrospect, a really questionable decision. Were we truly that much smarter than the unfortunate Mooney pilot?

Over the next days, we flew south. Bad weather continued to plague us — our

aerial tour of Guatemala, Honduras, Costa Rica, Nicaragua, and Panama was in or above clouds some 80% of the time. At last we turned north to begin our return trip. But overcast skies followed us and threatened to persist along our planned route to Roatan, off the Honduran coast.

At this point, six of the clients decided they had had enough of the persistent tropical depression. There was much better weather on the Pacific side of Central America, and so they decided to take a more westerly course for home. They bid us adieu and flew off into sunny skies.

The rest of us decided that as we had paid for it, we would stay with the tour. As things developed, this was not necessarily the best motivation for a decision. We had planned a fuel stop at La Cieba en route to Roatan, but a severe downpour had closed the airport. This was problematic but not dangerous. We all had sufficient fuel to make Roatan, but, as we knew in advance, there was a shortage of avgas on the island.

Landing at Roatan was in the rain but not really too difficult. The ceiling was at about 700 ft. and we were able to descend and break-out over water. We did encounter a problem as the tower refused to acknowledge our calls — even though we could hear the controller talking to another plane on approach. It turned out that the tower used a “one at a time” procedure. In-bound aircraft did not rate communications until the previous plane in the queue was on the ground. We solved this simply by following the previous plane (*fortunately completely visible*) on approach until the tower could spare us attention.

Again, this was a little more than we had anticipated. Once on the ground, I did some serious thinking. It seemed for

several days, our options had been slipping away at an unacceptable rate. Although there was no overt danger and no true “close calls,” I began to ask myself some questions. Should I have attempted Roatan without knowing about tower procedures? Should we have gone west into better weather from Costa Rica? Given the persistent and very pervasive tropical depression, should we have cancelled the tour at the outset? I

don’t think there were clear “yes-no” answers to these questions, so second-guessing at this level was pointless.

But in any event, no one will dispute that the probability of trouble grows as available options decline. If we keep this principle in mind, we can assess what we are getting in to. The Mooney pilot did it wrong, we did it right, but, perhaps just barely!

Vern

## “Concerning Learning”

### FREE LUNCH and possible FREE 1 YEAR MEMBERSHIP

Do you have a flying story with a lesson? Tell it to interviewer Dean Jaros over lunch or a late afternoon drink. (*Dean picks up the tab*) If the story is accepted for publication in *CPA FLIGHT LINES*, your membership in CPA will be extended and free for one year.

*E-mail Dean at [jarosd@digis.net](mailto:jarosd@digis.net) or call him (970) 686-1233*

## Factoid, December, 2004

*(Here is the question to the answer that was printed in our December newsletter)*

### ***Forgotten Genius?***

**Question:** The history of science and technology is full of stories of brilliant but unrecognized innovators. Supposedly the contributions of these geniuses were suppressed by an entrenched establishment or were appropriated by crafty rivals. A good example is Immanuel Velikovsky whose radical views on the formation and history of the solar system supposedly fell afoul of a conspiracy of mainstream scientists. Nikola Tesla, among other accomplishments, was thought to have designed a “death ray” in the late 1930s. But his papers, reportedly confiscated by the FBI, have never seen the light of day. Emil Berliner, it is claimed, first worked out many of the problems of telephones, microphones, speakers, and electronic sound transmission. But his defenders say that his ideas were taken over by Edison and Bell.

There are similar personalities and similar claims in the field of aviation. What are some of the more interesting examples? Which Colorado native fits this pattern?

## Factoid, January 2005

**Jet Trainers Question:** Which aerospace company has produced the largest number of jet trainers?

*(See page 13 for the answer to this question.)*

# AOPA's Fabulous 2004 Expo & An Eventful Journey

By Kathleen Bennett, Retired Commercial Pilot

AOPA's fabulous 3-day Expo was held October 21-23, 2004, at the Long Beach Convention Center. The days were packed with

aviation seminars presented by such well-knowns as Rod Machado, Phil Boyer (President AOPA), Jack McCormick (President Baja Bush Pilots), John and Martha King, and Marion Blakey (via satellite.)

The Exhibition Hall occupying the entire lower floor featured booths sponsored by engine, prop, and aircraft manufacturers, book, clothing, and jewelry stores, the latest avionics technology, aviation publications and schools, and even flying safaris to South Africa and New Zealand.

Shuttle buses left continuously from the Convention Center to the Long Beach Airport where aircraft manufacturers displayed their latest models. Cessna's new 182 turbo with glass panel caught my eye, and for a mere \$320,000 I could have flown it home! (no offense intended, 9073X, my beloved old 182D)

Some of the seminars I elected to attend were: "Machado's Defensive Flying," "Flying the Glass: the New Cockpits are Here," "When the Horizon Fades to Black," "Pilot Demons: Strategies for Coping in the Skies," "How to Save Your Life in an Aircraft Accident, and "The Kings on Risk Management." John King's description of the aircraft accident both he and Martha were involved in 20+ years ago was riveting. He carefully related each step of the flight, their



*Kathleen Bennett in the AOPA Exhibition Hall*

mistakes in decision-making, and the numerous opportunities they had to land the plane safely. Ultimately, they learned that the repair needed would have taken only 20 minutes and delayed their arrival time by less than an hour! Most of you know that Martha King holds more ratings in various aircraft than any U.S. woman pilot. I'm 5 feet 4 inches tall, yet felt like I towered over her when we met. John King had opened their presentation by quipping: "Hi, we're John and Martha King...and yes, we are standing up!"

The journey is often as exciting as the destination . . . especially for pilots flying their own aircraft. I departed GXY October 19, 2004, early morning, in my C182. My plan was to spend the night in Palm Springs, CA and continue onto Long Beach the next day. Flight Service had informed me that there would be mountain obscuration, so I was encouraged to fly a more southerly route; winds aloft at 12,000 feet were forecast at 40 kts from the West. The flight to Las Vegas, New Mexico, where I stopped to refuel, was uneventful. While on the ground, I checked with FSS again. Winds were now forecast 40-50 knots from the West.

Leaving LVS, I decided to fly south and skirt around the highest mountains directly west. However, each time I attempted to turn westward, the ground speed quickly dropped below 90 knots. Trying lower altitudes, I still was making slow progress towards the west. When I transitioned through Albuquerque airspace, the controller asked if I could climb several thousand feet higher. Sadly, I had to report "Unable." The west winds intensified and, by the time I reached Grants, NM, I decided to put down for the night. Grants is one of those genuinely friendly small airports whose manager quickly

helped tie down my plane and loaned me a courtesy car.

Unfortunately, the weather didn't improve the next day. On October 20th California and western Arizona experienced their worst thunderstorms and floods in years. I flew west as far as Glendale, AZ (6 miles west of Phoenix). GEU is another airport I'd recommend when flying into the Phoenix area; there are several FBO's, a restaurant, and car rentals. My next call to FSS verified that southern California's thunderstorms weren't budging until the following afternoon. That ended Plan A.

It was time for Plan B. I didn't want to miss any of the AOPA Expo events, and a rental car was immediately available. So I bid farewell to 9073X and drove the final leg into Long Beach, experiencing the agony and little ecstasy of southern California's

freeways during rush-hour. (This makes a pilot appreciate flying all the more!)

When the AOPA Expo ended October 24, I drove back to Glendale, and flew through clear blue skies with moderate winds to Yuma, AZ. YUM has the cheapest fuel I've found anywhere (about \$2.10/gallon.) After filing an International Flight Plan, I was soon cruising over the ADIZ towards San Felipe, Baja Mexico (an AOE, Airport of Entry.) Since I'd never visited San Felipe, I spent the night (the airport is 10 miles from town, and taxis cost @ \$12 to \$15 each way.) The taxi driver recommended the \$40/night El Capitan Motel, near the town center and beach. The next morning, I flew south along the Sea of Cortez coast to my home in Bahia de los Angeles. Plan C: a margarita on the beach. Another wonderful air adventure with a happy ending.

*Kathleen*

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## AOPA EXPO 2004 Highlights

*By Penny Hamilton of Granby*

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Long Beach-Another successful AOPA EXPO. Over 11,000 people attended the three-day AOPA event, including Colorado pilots from Greeley, Granby, Conifer, Evergreen and Erie. What a great opportunity to meet with 535 companies, organizations and government agencies in the Exhibit Hall or participate in more than 75 seminars, or take one of the many free shuttle buses to Long Beach / Daugherty Field to see the 73 aircraft on display.

So much to do, so little time! GA safety & technology, hangar flying, Association meetings, even aviation tax planning were topics. An entire afternoon was devoted to the AOPA Airport Support Network (ASN). Colorado was represented by Karl Morgan, ASN for Greeley / Weld County (GXY) and

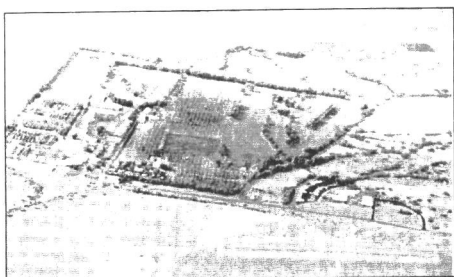
Penny Hamilton of Granby / Grand County (GNB). CPA Board member and AOPA Regional Representative, Bill Hamilton, also participated in this important session. A nationwide network of more than 1700 ASN volunteers exists to help protect and promote GA airports. Almost 100 were at the AOPA EXPO ASN meeting. Stacy Platone, the new AOPA Director for the ASN program, was introduced to the corps of AOPA volunteers.

At every EXPO, the prestigious Hartman Award is given to an outstanding elected official. (Colorado's own CO Senator & COPA member Lew Entz is a past winner of this very important award.) Alaska Congressmam Don Young was the 2004 winner.

*Penny*

## Behind the Scenes of the Furnace Creek fly-in

*A fly-in that fought to the bitter end. By Shawn Kinney*



*Aerial view of Scotty's Castle*

Our story starts back in early 2003. Scott & Kathleen Morse volunteered to host a CPA fly-in to Furnace Creek in Death Valley, California. After exhaustive pre-fly-in preparations and things being perfectly organized the 50 plus registrants were grandly disappointed when the Morses were forced to cancel. At the last minute, Mother Nature conspired against them. Within a day or two of the scheduled fly-in, some of the worst wildfires in California's history sprang to life and shrouded the region in dense, acrid smoke which lay in the valleys creating marginal to hard IFR conditions.

Surprisingly, the day of the fly-in a major storm moved from the west coast throughout the Colorado Plateau. That, in itself, would have ensured cancellation.

Fast forward to early 2004. In light of the tremendous popularity of the 2003 event, which never came to be, Bob and I volunteered to resurrect the Furnace Creek fly-in.

Following considerable planning and preparation in January and February, the event was on. Everything was set for a great time in November, but the jinx continued. The dates of the fly-in had to be changed to steer clear of a major annual motorcycle event. Even though

the dates were changed, they never got changed on the CPA web site location or newsletter. Some people never did understand the final schedule . . . November 19-21.

Late summer 2004, Bob received a call from his Furnace Creek contact that they'd had tremendous rains and that most of the roads were washed out in the valley, including those leading up to the famed Scotty's Castle, site of our planned Saturday tour. Road repairs were predicted to take up to 6 months. The fly-in was in jeopardy for 2004. Less than two weeks before the fly-in, the "all clear" was received, the roads we needed were open again, all was well.



*Scotty's Castle*

One week before departure Bob received yet another disconcerting call. This time he was told that the US Park Service had just notified the Furnace Creek Resort that the airport was going to close four days before our arrival for re-paving of the airstrip. The cold reality that the fly-in was not going to happen slapped us in the face again. To say that major pressure was applied to the Park Service from several directions is an understatement. The Park Service finally agreed to have the airport open by Wednesday prior to our Friday arrival.

We departed on Tuesday, November 16 for a pre-fly-in visit in southern California with family. On Wednesday morning, a frantic call was received from the Furnace Creek Ranch folks. The airport was still closed and would remain closed! The paving was not finished. Bob's cell phone and the phone at Bob's brother's house were white hot for 24 hours. Talk about scrambling! An alternative airport almost 20 miles distant, Stovepipe Wells, was chosen as the alternate airport. Transportation from Stovepipe Wells to Furnace Creek was arranged for and pickup times coordinated. This wasn't easy considering the wide range of arrival times anticipated because of the varying capabilities of arriving airplanes over a lengthy distance. Oh well, all was finally set and the weather from Colorado to California was looking to be less and less of a factor. Shoot, the morning marine layer that haunts the California coastline much of the year hadn't even been present for over a month. Bob and I wouldn't need to deal with it for our VFR departure, planned for early Friday morning. Things were finally under control, at least for the moment.

Friday morning dawned in southern California and Bob and I reaffirmed a painful truth of life . . . Murphy's Law. Fullerton Airport, although VFR for the past month, was showing less than one mile visibility with an 800 foot ceiling. Oh well, this was the actual start of the Furnace Creek fly-in. Why would we have expected anything else? After an hour and a half delay and a "special VFR" clearance we made the short flight to Stovepipe Wells, arriving after, two or three of the first arriving airplanes. So much for greeting our guests.

As the reader can tell, things didn't improved much for the 27 participants of the now infamous, Furnace Creek fly-in.

Rather than bore you with the details of the missing airport shuttle, the high wind and associated dust storm. The cold blasted through the area on Saturday, buffing the Plexiglas on some airplanes. The bus that broke down just prior to our departure for the Scotty's Castle tour. The cramped hallway where we tried to salvage Saturday's happy hour. The subsequent circuitous flight home through Wyoming, bucking eastbound headwinds, or the MVFR to IFR conditions greeting us upon our return to the Front Range.



*Pilot Power - When your 20 mule team has the day off.*

We'll end this story here.

***Did we forget to mention we had a great time?*** Friday night's happy hour under the desert sky and Saturday's trip to Scotty's Castle with our wonderful CPA family made the whole thing worthwhile. So, if this story dampens your enthusiasm for attending a fly-in, don't let it. If we could salvage a good time from this "train wreck" you can only imagine the fun we have when things go right, which they almost always do. Till next year.

*Shawn*

**Colorado Pilots Association  
Advertisement rates for CPA Flight Lines  
Approved by board as of 1/13/04**

|                              |       |
|------------------------------|-------|
| ¼ page or business card size | \$30  |
| ½ page                       | \$60  |
| Full Page                    | \$120 |

Beverly and Carl Boecher  
Editors, CPA Flight Lines

## Flying in the Real World #15

*WWII Air Transport Command, Slow & Simple* By Vern Foster

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At the end of my previous column, I left off with our crew checking in at the Ala Moana hotel in Honolulu after the over night flight from Hamilton Field, near San Rafael located a few miles north of the Golden Gate Bridge at San Francisco.

A recent travel article stated that the “Moana” had recently completed a multi-million dollar restoration and modernization and was renamed the Sheraton Moana Surfside. If you are ever in HNL look in on or stay at this wonderful historic hotel.

Continuing to Kwajalein – We had an early wake up call and breakfast at the hotel. Arrival at Hickam Field dispatch was around 07:00 a.m. As we strolled into dispatch, Capt. Ross Kinkle casually told me “you have the left seat today.” I was elated and looked forward to the flight with excited anticipation. Around 08:00 a.m. and after all the preparatory activities had been done, we launched southwest for Johnston Island some 800 NM distant. The air was fresh and smooth as the 4 big radials clawed thru the morning atmosphere. Our gross weight was at maximum but with some 6,000 lbs., less fuel, replaced by more cargo, because our longest leg today would require 3:00 less fuel — -9 hours - Johnston Island to Kwajalein - versus the near 12 hours Hamilton Field to HNL.

Crazy Jack had given us the heading for the first hour. The airplane felt good and in due time we were at our assigned altitude of 8,000 ft. After level off, Vic made coffee and we engaged the auto pilot and droned along over the trackless Pacific. Our Johnston Island stop was to add a bit of fuel, off load some crates of food, and have lunch. This island is a Marine base located in the center of the Atoll and is approx 1.5 miles long by a half a mile wide. The runway is on the extreme SE edge of the property. The center of the area was some

15 ft. above the runway and was the location for the mess hall, barracks for the base personnel, and the administrative offices. The control tower and ADF transmitter were located at the extreme NE end of the island. Warehouses were located on the west side of the island. After landing, the drill was to turn left and taxi around the mess hall to the parking area where freight would be unloaded. After shut down, we walked the short distance to the mess hall and had lunch.

After lunch, we returned to the parking area, picked up the load manifest and taxied out to do the runup . . . As I swung left to a NE heading for the takeoff roll, I was again reminded of the limited space on each side of the runway. Some 50 ft. right of the right edge of the runway was the water. Approx. 50-60 ft. left of the left edge of the runway was the mound of lava rock on which the base buildings had been built. As I brought up the power for takeoff, I remember thinking that, without a prompt rudder input, an abrupt power loss on a right side engine during the takeoff roll might get us dunked in the lagoon and even worse a left engine failure at a critical moment on takeoff roll might have the C-54 doing a tango with the steam tables in the mess hall. All not good. We accelerated smartly, rotated just prior to abeam the mess hall, then gear up and away we went doubtless rattling every dish, pot and pan in the eatery. We continued with the cruise altitude of 8,000 ft. toward Kwajalein Island. Along the way, sun shots were plentiful and Crazy Jack could use his drift bombs to check our drift correction angle. These bombs were about the size and shape of bowling pins with small fins to stabilize them as they fell from plane to water. Upon hitting the water, an orange packet of color would burst and leave a color trail in the sea. The drift bombs were dropped through the cabin floor via a 4 inch tube. An

adjacent tube had a rotatable grid. By viewing the floating drift bomb and adjusting the grid, a navigator could determine what drift angle was desired in order to make good the desired enroute track. Soon a small deserted island slid under the left wing. This speck of real-estate had been a Zero base early on. It consisted of bomb pocked dirt runways, a few hangars, and smaller buildings, which had been reduced to rubble by our naval bombardments. We wondered if the place was still occupied by one or two wild eyed Jap soldiers with some firepower and what a hoot it would be to drop down to 300 ft. and buzz the island - - - but common sense and outright fear always prevailed. It had been a very austere facility. The tracking gods were kind to us and eventually Crazy Jack announced, "About 45 minutes-out." We tuned the ADF to the Kwajalein frequency. Soon the pointer came to life and settled down. Next came the call "50 miles-out" which was the cue to reduce the manifold pressure to 26 inches, trim for 500 fpm down and get stabilized in the descent after the airspeed had gained about 15 - 20 kts. I reviewed the IFR chart, even though it is CAVU, because I want to look professional in the upcoming approach and landing. All goes well as I turn onto final and at the old 3 miles-out and 1000 ft. AGL I call for "Gear Down, flaps 15 and Landing Checklist." The landing goes well. We rollout and taxi to the parking and fueling area which is partly covered with Jungle Mat put down over bomb craters, etc. (our bombs made 'em.) This is a busy place with 4 or 5, C-54's at a time being serviced, changing crews etc. These C-54's were being operated by MATS-Military Air Transport Command flown by Army Air Corp pilots (It would be much later before they would be "Air Force.") Others were NATS or Naval Air Transport Command flown by Navy pilots plus the C-54's flown by United Airlines crews.

"Jungle Mat" is a U.S. invention. It comes in grid like metal sections which I estimate

were 2 ft. wide by 12 ft. long with clips which held the sections firmly together. The Seabees used shiploads of these sections to quickly build useable but noisy runways and parking ramps in the war zones. Shortly after an island had been rid of the enemy, the Seabees could, in a day, fill and pack the bomb holes, scrape the surface as level as practical and lay down a jungle mat runway suitable for planes as our troops moved in. The parking ramp at Kwajalein was about twice the size of a football field and partially covered with Jungle Mat. With planes parked wing tip to wing tip, it was extremely noisy as ground power units, fuel trucks, engine starts and ground crew shouts permeated the 100 degree temperatures at this site near the equator. Crew accommodations were stark. The "dorm" building was a two-story structure remindful of a hay barn in Kansas. The frame work had only external siding of wide boards, flooring of large planks, a conventional roof and no doors or windows. Here the word "shelter" seems most appropriate.

Shaving/showering was outdoors and consisted of a large deck like structure about 80 ft. long and 12 ft. wide raised about a foot off the ground to provide drainage. At one end there were a few cheap mirrors nailed to a panel above wash basins for shaving. The remainder of the facility was the shower area. This consisted of a row of hanging "Blister Bags" each holding about 40 gallons of sea water warmed by the equatorial sun. The attached shower-head had a pull rope. Showering involved pulling down on the rope with one hand while soaping with the other. This all outdoor operation worked since there were only a few female Red Cross nurses and clerical on the island. They had a separate compound well removed from the male lodging area.

After shut down, we checked in and received our bunk assignments, fresh sheets, a pillow, a towel, and a chit for one beer. Dinner was "C-Ration Stew" coffee and a

slab of sheet cake.. “C-Ration Stew” was a chili like concoction of dried vegetables, maybe some hint of meat and heated in giant G.I. bowls, each holding some 20 gallons of the stuff. It was nutritious but tasteful - no. The next morning breakfast was a spoonful of dried eggs with a slice of Spam, a slice of bread and coffee.

After breakfast, we were off to Guam. The trip was routine. Our approach into Harmon Field Agana, Guam was unique since sneak attacks by Jap planes were considered a possibility by the military officials. The preventative procedure was to descend to a point 20 miles off shore, south of the island at 1,000 ft. then turn inbound with the gear down and a minimum flap setting. Crazy Jack put us right over the magic spot and we proceeded toward the island. It took a lot of power to drag the loaded transport in

level flight at 120 IAS. We contacted the tower using our code of the day. To our relief, the shore batteries remained silent as we rumbled overhead. As we swung around the end of the island, we were over the beautiful small bay where the water was 2 to 6 ft. deep and so clear one could see the bottom. We later snorkeled there. The approach and landing were routine. The time was mid afternoon so there was time for a shower and a beer before mess call. We are scheduled for a 9:00 a.m. departure tomorrow. We will be transporting a load of wounded soldiers, on stretchers, who will be flown to either the Triplet Army hospital in Honolulu or on to a San Francisco military hospital. Prior to departure, our U.S. bound C-54, one of several each day, will be converted to a giant flying ambulance. More on that in the next article.

*Fly Safely - Vern*

Dear Jim,

On behalf of the CPA, we thank you for the donation of the three incredible books that you gave us for door prizes for our annual Holiday dinner. The newly published: *America Flying High*; *Urban Sprawl*; and *Discovering Lewis and Clark from the Air*.

We did not use them for door prizes; instead we auctioned them off to the highest bidders with the promise that the dollars will be put into our CPA aviation scholarship fund. We earned \$160 for the fund, thanks to you. The books were aggressively bid for by several members, and this was a highlight of the evening. Thank you from all of us for your generous donation.

Sincerely,

*Barton F. Jones*

### ***CPA Members!***

If you weren't there, or lost your chance to bid, you can contact Jim at 719/545-1051 or send an email to [airphotona@comcast.net](mailto:airphotona@comcast.net) for your very own copies. These are some of the most beautiful aerial photos you will ever see. Jim is a master photographer, and gifted artist.

## January 2005 Factoid Answer

The Czech firm Aero Vodochody (AV) has produced, including light attack aircraft variants, 6,729 jet trainers.

In the early 1960s, the Warsaw Pact (including the USSR and most eastern European countries) wanted a standard trainer for alliance-wide use. Major design considerations were ruggedness and ease of maintenance. Many airbases east of the "iron curtain" were unpaved and generally rough. AV entered the L-29 in the design competition against the Russian Yak-32. The L-29, with its wide-set, robust landing gear, won. Its performance was acceptable but not spectacular. In a way, the L-29 was a perfect example of the harsh functionalism of the Soviet-era. But it did its job. Some 3,365 copies were built through 1974.

A greatly improved aircraft, the L-39, appeared in 1972. Faster, more powerful, and much more graceful of appearance, this plane was better suited to advancing jet technology. But again, simplicity and ability to operate in rough conditions were important design imperatives. A large number of well-placed access panels made servicing easy. Engine air inlets were placed high to avoid ingestion of debris during taxi and takeoff. The L-39 had low operating costs and a minimal purchase price. Unlike the L-29, this plane attracted attention outside the Soviet bloc. Significant numbers were sold to countries like Thailand, Libya, and Nigeria. In addition, many of these aircraft were built using western European or American systems technology. The L-39, unlike its predecessor, was not Soviet-type machine.

Among its other features, the L-39 has a very modern appearance and it has excellent aerobatic qualities. Ex-military L-39s have proved very popular with private parties in the US. There are no fewer than 249 copies are on the US registry and many others are in the hands of dealers. L-39s are often seen at airshows and several regularly appear at Oshkosh.

A total of 2,925 L-39s were built.

Among the several variants of the L-39 was a light attack aircraft. Weapons systems and long range fuel tanks could be mounted on wing pylons. But limited carrying capacity and range restricted its appeal. This led to the development of the L-59, a similar airframe, but one considerably stronger and more flexible. It was also a good advanced trainer. Some 67 copies were built, with most sold to Egypt and Tunisia.

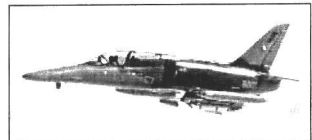
Finally, AV developed the current production L-159. Though a trainer version can be supplied with an instructor's seat, it was explicitly designed as an "Advanced Light Combat Aircraft" (ALCA). Capable of carrying a large variety of weapons, the L-159 shows no signs of Soviet-era roots. It is powered by an Allied Signal/ITEC turbofan and all of its other systems are either American or western European. Electronically, the L-159 is completely compatible with NATO operations requirements. Though the L-159 is a fine airplane, the current world economy has limited international sales. To date, 72 copies have been produced.

Aero Vodochody continues a formidable Czech aviation industry tradition. The Walter line of excellent in-line engines, begun in the 1930s, has been continually improved and continues in production to this day. The 720 hp Walter turboprop is used world-wide and increasingly in the US. Zlin aircraft are well known in aerobatic circles. Zlin also markets many other aircraft including a successful crop duster. AVIA currently produces a great line of high-tech propellers; the company has been in continuous production since 1919.

*Dean Jaros*



*"Aero vodochody L-39.  
Photo in the public domain"*



*Aero vodochody L-159.  
Photo in the public domain."*

## FAA To Discontinue Printed Safety Information

*By Don and Kathie Dolce*

Brian Richardson, the FAA Aviation Safety Program Manager, asked that we contact pilots in the area by way of our newsletter and request they sign up, on the website listed below to more economically and effectively receive FAA information. The CPA reaches between 500 and 1000 pilots each month with the newsletter.

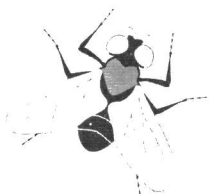
Budget concerns have prompted the FAA's Aviation Safety Program to phase out the practice of sending printed safety meeting announcements to pilots via the U.S. Postal Service. Instead of the paper notices, all information eventually will

be delivered via e-mail and posted on their web site (<http://www.faa.gov>.)

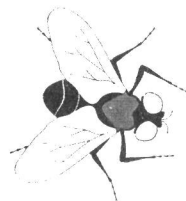
The cost of paper printing has jumped 100 percent between July and August 2004. Pilots are urged to register their e-mail address at the Web site, where they can pick and choose notification services for safety seminars and other events. You do not need to register to search the events database.

The FAA states that it will not share its database of e-mail addresses with anyone.

*Kathie*



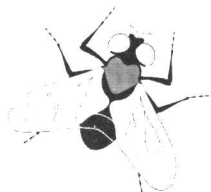
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Wanted to hang on wall of my office. Vern Foster, phone (580) 237-3903.

**For Sale:** Tobago cloth cockpit cover in great condition. \$50  
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**Fly Mart** is a free service provided for CPA members only. If you have a personal AVIATION related item to list, please submit the ad to the Flight Lines editors: Bev & Carl to [n34552@wispertel.net](mailto:n34552@wispertel.net). Deadline is the 15th of each month, to appear in the following month. These ads run once unless you contact me prior to the 15th of the next month to be run again.

# A Report from a General Aviation Pilot

*By a friend of Mary Jones*

---

I just had the extreme pleasure of speaking with Mike Melvill yesterday, the pilot of Space Ship One's first two flights above the Karman line of 100 km.MSL, and with his wife. He gave a 45 minute presentation to the Association conference in Long Beach on Thursday, and got a several-minute standing ovation. I was fortunate to speak with him for a short while after his talk.

Since he was speaking to pilots, he didn't have to translate for the "general public" or pull many punches. He spent almost half of his time going over the flight controls and the entire cockpit layout inside of Space Ship One, explaining how it is flown. I think this is the first time this has been explained publicly in such detail, and it was amazing. There are actually four separate flight regimes, and each is flown differently. Just after launch, it flies like a piper cub, using a joystick and rudder pedals with mechanical linkages to the controls (no hydraulic assists). When it goes supersonic, the aerodynamic forces are too high to be able to move the stick, and the controls are subject to flutter. So they use an electrically powered trim system, flown using the "top hat" switch on the joystick and a couple of grips on the arm rest of the pilot's seat. (There are backup switches to the left of the instrument panel, which had to be used on one flight.) This moves the entire horizontal stabilizers, not just the elevons on the trailing edges. Eventually, they get high enough and the air gets thin enough that they can again use manual controls, although the response is totally different than lower down. But that goes away as they exit the atmosphere; the Reaction Control System nozzles are then used for maneuvering in space. Coming back down, the pilot has to reverse the sequence. There is no automated

switchover of control systems; the pilot has to remember to move from one system to the next at the right times.

The rudder pedals are not linked. Each controls one of the two vertical stabilizer rudders separately. You can push both rudder pedals at the same time, and get a fairly effective speed brake, with both rudders canted outward. Push both fully forward and they engage the wheel brakes. But these are not very effective and are only really useful for steering input during rollout. The real brake is on the nose skid: a piece of maple wood, with the grain aligned down the centerline of the airplane. He said it was the most effective braking material they could find.

Stephen, we talked about G forces on Tuesday, and I got some of it wrong. He says that he gets hit with about 3Gs kicking him backwards as soon as he lights the rocket motor. He's supersonic within about 9 seconds later. But he immediately starts to pull up into an almost vertical climb. So he also gets over 4.3Gs pushing him down into his seat just from that maneuver. The combined force is "very stressful" and Mike says it's "important not to black out" at that point. He's going 1880 knots straight up within 70 seconds. On re-entry, the aircraft goes from being absolutely silent while in space to generating a deafening roar as it hits the atmosphere again. He's going about Mach 3.2 by that time, and has to survive about 5.5Gs for over 30 seconds, and lesser G forces for longer than that, as it slows back down. It sounds really intense, both as he explains it and on the radio.

A couple of interesting side notes: Space Ship One has a standard "N" registration number; but it is licensed as an experimental "glider".

Apparently there was a huge bureaucratic hassle trying to license it as a rocket powered spacecraft, which they just sidestepped by calling it a glider. I asked him if it had a yaw string; he laughed and said that would have burned off. By the way, the registration number is N328KF, where 328K is the number of Feet in 100km. (White Knight is N318SL - Burt Rutan's 318th design.)

Mike says that the flight director system (called a TINU) was developed completely in-house by a couple of 28-year-old programmers, and is absolutely fantastic to fly. That's why they don't need a yaw string. But I had heard over the radio that Brian Binnie had re-booted the TINU just before the landing approach during the X2 flight, and it took quite a while for it to come back up. So I asked Mike what that was about. He says that during re-entry, the TINU loses its GPS lock. So it keeps trying to go back to catch up, re-interpolate and compensate for the missing data, and this keeps it a little behind in its actual position calculations. The pilot has no straight-ahead vision at all, so they have a real issue landing: they can't see the runway! The way they do it is to fly directly down the runway at 9000 feet; then they do a (military style) break and fly a full 360 degree pattern right to the landing. The TINU gives the pilot a "blue line" to follow and a target airspeed (which produces a given rate of descent). If the pilot follows the blue line, right to the break point and through the two 180 degree turns, it will put him right onto the runway at what ever touchdown point he selects.

But the TINU has to be absolutely current when this is going on. So at something above 15,000 feet they reboot the TINU and get it re-synched with the GPS satellites again before setting up for the landing!

He also talked in detail about the rocket motor, and had photos of its insides after firing. The nozzle throat actually ablates as the motor burns, enlarging the interior throat diameter as the burn progresses. He described the problem they had on the June 21 flight: The rocket motor nozzle was skewed by about  $\frac{1}{2}$  degree to one side. This generated a surprisingly high lateral torque trying to turn the aircraft. If it had been up or down pitch rather than lateral, the controls could have handled it; but the lateral yawing forces were too great for Mike to compensate as the atmosphere thinned. The result was that he was pretty far off course. Mike says he reached apogee, rolled the spacecraft over, and was surprised to see the Palmdale VOR directly beneath him. That was 30 miles away from Mojave and a long glide home. He says its amazing how fast a relatively small deviation can produce large distances when you're going Mach 3!

For one of the static burn tests, they had fire and safety crews all standing a mile away, ready to duck if anything went wrong. In the middle of the test, Mike and Burt Rutan walked up to the front of the motor assembly and felt the pressure vessel that contains the N2O. Mike knew he was going to have this same thing strapped onto his back soon, anyway, and he wanted to know how much it vibrated, how hot it got, and how loud it was. It was deafening, literally. It turns out that, with the nozzles they use at high altitudes, it's actually not that noisy inside the spacecraft. But he still wears hearing protection.

Scaled Composites seem to have fabricated quite a bit of the rocket motor themselves, including the N2O tank (which is also the structural core of the spacecraft) and the nozzle casings. It would be interesting to hear from Michael's friend exactly what parts SpaceDev designed and what they manufactured.

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