



September 2023 Newsletter

New Mexico Pilots Association

NMPA operates exclusively for charitable, educational, and scientific purposes for promoting general aviation, aviation safety and education, and pilot camaraderie; preserving airfields and airspace; and to engage in any activities permissible for nonprofit corporations, organized under the laws of the state of New Mexico.

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Virga...Virga...Virga
At least the monsoons are trying...
Cloud Avoidance Recommended

The Editor's Log

by Lanny Tanning



Living the dream in N 60 BF....

Lanny's fascination with flying began in childhood. Lack of uncorrected perfect vision kept him out of a USAF flying suit. So, he served as a Tactical Controller. At least he got to talk to pilots every day. After a year overseas helping with airstrikes, refueling and so on, he was assigned to Cannon AFB – Clovis, NM. He joined the Flying Club, got his ticket in 1970 and has been flying when circumstances permitted ever since.

Places to Go...Things to Do...In Airplanes!

This year has not been the best for punching holes in the sky. Weather systems have brought strong winds, high temperatures and general atmospheric shenanigans all summer. But, as we transition into Fall, things are looking up.

The Mystic Bluffs fly in was a great beginning for a series of New Mexico pilot getaways and get togethers. The valley, with its layer cake cliffs, green meadows and the top end of the Ramah reservoir is almost beyond description.

Labor Day weekend will see pilots dropping in at the Reserve airport for the Gila Fly In. Coming into Reserve from any direction is a visual feast. From the north one can see the White Mountains in Arizona, the vast ranchland west of the Malpais, Zuni pueblo...from the east, the VLA, the Plains of San Augustin and the sprawling Gila Mountains...from the south, the Gila Wilderness, the Sitgreaves/Apache National Forest areas in Arizona, the southern end of the Mogollon Rim...the view from above in every direction is breathtaking.

In mid-September, the kind residents of Magdalena welcome pilots to the area that hosted mines and the railhead for cattle shipments from vast ranches in the area. Magdalena is cowboy New Mexico history and rockhound heaven.

Landing at Mystic Bluffs...no dust because it rained the previous two evenings. Breakfast on the ramp provided by the locals was great! The valley is beyond stunning.



Upcoming Events

NMPA Members can login and post any aviation events on the [Events calendar](#).
Or send announcements to nmpa@nmpilots.org and we'll post for you!



September 1-3 - [Gila Regional Fly-in at Reserve, September 1-3, 2023](#)

Register Now! Save the date for the annual Gila Regional Fly-in at Reserve Airport (T16). If you want a motel room, BOOK NOW! Join your fellow pilots from multiple states for this hallmark event.

September 16-17 - [Light Sport Repairman in Albuquerque / EAA179 sponsored](#)

This is the 16-hour class for all light sport airplanes and allows someone who completes the course to be able to sign off on condition inspections for their LSA. Go here for details -> <https://eaa1306.org/2023/04/03/light-sport-repairman-workshop-coming-to-albuquerque-eaa179-sponsor/>

September 16 - [Magdalena Breakfast & Lunch Fly-in 2023](#)

Join is at the Magdalena Fly-in! Free shuttles to town for your shopping enjoyment! Drive ins welcome also!

September 22 - [Mountain Flying Clinic \(Sept 22-24\)](#)

NMPA's annual 3-day clinic with 1/2 day of ground school Friday and Saturday afternoon and optional mountain flying with an experienced mountain CFI Saturday and Sunday morning. 2-3 hours of pre-work will be required. Available seats may be limited depending on ground school location. Details, registration, and fees available by early August.

September 23 - [Land of Enchantment Fly In \(KAEG\)](#)

Join NMPA at the Albuquerque EAA Chapter 179's annual fly-in at Double Eagle II Airport (KAEG).

Be sure to check the NMPA Website (www.nmpilots.org) for updates to any and all events.

Click on links for more information.

Here is your NMPA

John Lorenz, President



John Lorenz is a 6000 hour CFII, MEII, glider, and sand-lot acrobatic pilot. He has given over 2000 hours of tailwheel instruction. During the day he is a consulting geologist.

Grants Board Meeting, Rebecca Pearl Hendricks

Wishful Thinking: So much of today's politics consists of what you merely believe, or merely *want* to believe. Just don't apply that philosophy to aviation; fuel burns at a proven rate no matter what you want to believe, the sucker hole through that thunderstorm can't be wished into staying open, and hope is not a viable flight plan.

September Flying Opportunities: This Newsletter comes out on Sept 1st or thereabouts (thank you Lanny Tanning!), which is also the first day of the three-day Gila Fly-In at Reserve NM. Reserve has a paved runway with nearby back country dirt strips to visit. If you aren't already here, come on down and say "Hi."

Sept 16th gives you two choices, to Magdalena NM, and Salida, CO.

The Magdalena fly-in offers camping as well as both breakfast and lunch at the airport, and numerous touristic venues in this historic cattle-drive and mining town. Please tell Hizzoner Mayor Rumpf you're coming so he can plan: see

https://www.nmpilots.org/content.aspx?page_id=4002&club_id=264824&item_id=1943505 .

If you prefer a paved runway and something more formal, the new EAA chapter in Salida, CO is hosting a fly-in with warbirds, an airshow, and a pancake breakfast: see

<https://www.socialflight.com/events/2023-09-16-salida-airshow-September-16-2023.html> .

Then there is the ever-popular Land of Enchantment Fly-In takes at Double Eagle on Sept 23rd, with the NMPA Mountain Flying Clinic wrapped around it Sept 22nd-24th.

Plenty of excuses to fly in September, not that you needed them.



The water level of the lake off the west end of the runway at Mystic Bluffs is way up this year. It was worth a flyover after the August 19th fly-in breakfast organized by the good folks of Ramah. Photo by Larry Shapnek

Connections and History: I met Billy Brainerd at Oshkosh this year. He showed me a photo of his grandmother, Rebecca Pearl Hendricks, who owned an Ercoup and flew it out of the dirt airstrip at the Flying H ranch near Roswell. Billy told me she was quite proud that the Ercoup was *her* airplane, and that only *she* flew it. I grew up in the era when women were relegated to a secondary status in so many things (my uncle did not believe his wife could handle the responsibility of a credit card), so it's good to be reminded that those women had gumption. NMPA held a breakfast fly-in at the Flying H ranch several years ago: the ranch is on the National Register of Historic Places and has connections to Billy the Kid.

NMPA Board meeting: Your NMPA board met at the Grants FBO August 12th. We confirmed Jim Covington and Will Fitzpatrick as chairs of the Advocacy and Safety and Education committees and discussed how to improve our programs. Ideas welcome, just be prepared to back up ideas with action. Will and I are talking about how to resurrect our Back Country clinic to complement our Mountain Flying clinic, and we're batting around the question of insurance for our various events. The next board meeting will be held 10 AM at the War Eagles Museum in Santa Teresa on November 18th: come for the museum, stay for the meeting.

Grants has a small but very worthwhile museum, dedicated to the early trans-continental aviation routes, just behind the FBO. The web address is 9 lines long but just google "[Western New Mexico Aviation Heritage Museum, Grants NM](#)". It's only open on Saturdays, but apparently the FBO will loan you the key on other days. Gotta love small towns.

"I went shopping on an empty stomach, and I am now the proud owner of Aisle 5."



History at several levels: Rebecca Pearl Hendricks and her Ercoup at the Flying H Ranch in southeastern New Mexico, courtesy of her grandson Billy Brainerd.



Oshkosh just frustrates the hell out of me: there are too many things to see, experience, and do, and too little time to see, experience, and do them. However, I did not feel compelled to experience *all* of them.

City of Albuquerque Announces Major Hangar Development Project at Double Eagle Airport

The new General Aviation aircraft hangar development at Double Eagle will provide high quality storage for an additional 50 business and personal aircraft. Hangars will provide expanded business opportunities throughout New Mexico and the surrounding tri-state area. General Aviation aircraft are an important part of growing the Albuquerque economy and business community.

Together, the City of Albuquerque and High Flying Hangars, LLC are leading the way nationally with this very innovative approach to solving the critical shortage of aircraft hangars. In addition, many New Mexico pilots support a variety of charitable missions such as free introductory flights to kids through the ***Experimental Aircraft Association's Young Eagles*** program or humanitarian missions including flying patients in need of medical care to specialized hospitals. Several New Mexico flyers are volunteer pilots for **LightHawk** an international non-profit conservation group based in Colorado. **LightHawk** provides conservation groups, local officials and media with bird's eye views of various conservation projects under consideration.

These hangars represent the first new hangar development of this type at the Double Eagle II airport in decades.

Backcountry Beat

by Ron Keller



Ron Keller flies a C-182 and has been involved in aviation for the better part of his life. Ron retired from FAA Technical Operations in 2011 and has stayed busy ever since, including working for the New Mexico Aviation Division, and currently serves on the NMPA Board of Directors and as Co-Chair of the NMPA Backcountry Committee. Ron is a Recreational Aviation Foundation Liaison and serves on the New Mexico Airstrip Network Steering Committee.

Monsooner or Later...

This year, the monsoon rains kept us in suspense, but finally kicked in just in time to extinguish some stubborn wildfires in the Gila. I wanted to get to Beaverhead and Me-Own to mow, and I was able to sneak in a trip right at the end of July. I managed to keep my tradition alive of either losing or breaking something. When I arrived at Beaverhead, I noticed my ratchet boomer was missing. This piece of equipment keeps my chain tight around the front end of my tractor as it rides on the trailer. Fortunately, I use a secondary method to keep my tractor on the trailer, so it was alright.

I got lucky on this trip because it stayed dry the whole time. I was able to mow Beaverhead full length and width, and then loaded up and headed for Me-Own. I was able to mow almost until dark, with just a little to finish the next day. Up early in the morning, I finished mowing the full length and width at Me-Own as well.

Earlier in July, I traveled to Sacaton and Jewett Mesa, with a stop at Glenwood Airstrip. I wanted to pick up our drag at Sacaton, and when I got there I found 1-5 foot sunflowers on the runway. No good for airplanes!



Looking good Me-Own



The old Beaverhead windsock

Backcountry Beat, continued

I towed the drag behind my truck and took care of the sunflowers on the runway. Then I had to toss some rocks, of course. Next, it was off to Jewett Mesa, but I stopped at Glenwood Airstrip on the way. That runway has been graded and rolled, and is in the best shape I have ever seen. Score one for Catron County.

I went to Jewett Mesa to fix some erosion and repair some vehicle ruts in the runway. Some displaced thresholds were also placed at each end. These were items noted during the last airport inspection this spring, and the USFS District Ranger welcomed some help. More work is planned for later this fall. I left Jewett Mesa in the best shape I have seen it in.

Now to those monsoon rains; I hope they didn't cause erosion on the runways at Sacaton and Jewett Mesa. The grass needs to flourish and stabilize the surface. Time will tell.

Until next month,
Fly Safe and Often!
Ron



Where is this place? Hint: Some of you have been here.

Safety Briefings are available on the NMPA website for all the [Gila USFS Airstrips](#). Note that some require prior permission – just a phone call.

Another great resource, is [www.Airfield.Guide](#), thanks to the Recreational Aviation Foundation (RAF)

Mountain Flying

by Cliff Chetwin



Cliff is a retired National Park Service pilot and a Master/Gold Seal CFI with over 40 years experience flying in the Rockies, Sierras, and Alaska. He currently lives in Kremmling, Colorado and owns a Superhawk.

Déjà Vu...All Over Again

With apologies to that famous philosopher, Yogi Berra (and I'm old enough to have seen him play and hear his witticisms), our government has announced yet another order to reform the largely broken Notam system. I'm not referring to yet another name change designed to satisfy the gods of political correctness but a completely restructured system designed to actually meet the needs of us pilots, dispatchers, airport managers, and others needing accurate system information regarding the NAS.

All of us know the system was intended to provide users with real time operational information about airports, communications, and airspace issues necessary to operate safely but which was not included in standard information publishing cycles. We also know that for a variety of reasons the system simply does not achieve this goal. This is a problem everywhere, including internationally. However, here in our western mountains where reporting stations are widely scattered, most airfields are unattended or have limited hours, TFRs pop up like mushrooms during wildfire season, radio communications are often poor even when everything is working, airfields must condense runway and taxiway work into a few short months causing frequent closures, airfields are still often out of fuel due to delivery issues, there are few ATIS recordings for current airfield information, and GPS outages can leave the unwary with only pilotage for navigation the Notams are critical. Without timely, accurate, and applicable Notams we can easily find ourselves lacking key information and in serious trouble with few remaining options.

So as Yogi so aptly observed we've been down the Notam reform road enough times before to have worn out the pavement. What happened to incite this latest directive to the FAA? Was it someone finally listening to the chronic complaints of pilots and airport managers that the system is virtually impossible to use even by the most diligent? Was it that the system is so overloaded with non safety-of-flight information that many users simply ignore checking Notams? Was it that the system is often cluttered with expired information, thereby devaluing the still current information? Perhaps it was a senior U.S. Senator landing on a runway closed by Notam? No, it was something far simpler.

Some of you may recall the NAS was completely shut down for about two hours on January 10th of this year. What you may not recall is that the reason was a failure of the Notam system resulting from corrupted software on a 30 year old computer framework. Keep in mind that we have two independent systems operating right now. These are the legacy "U.S. Notam System" and the newer "Federal Notam System", which in my opinion is not a significant improvement over the legacy system. The January crash was the result of failed efforts to synchronize these two systems, causing the FAA to shut the NAS down.

We're probably lucky that the bad guys haven't figured out how easy it is to essentially shut the country down by creating a Notam outage but at least this event finally got the bipartisan attention of Congress. A bit shocking in today's political climate but a clean, standalone bill, the Notam Improvement Act, actually whisked its way through Congress in just days and ordered the FAA to again take action. The FAA was ordered to establish a task force to recommend improvements in the system.

The more skeptical of you are now noting that Yogi's perspective was correct and that this is the usual government response to a problem...study it to death, yet again. The government's track record of turning studies into actual problem resolution leaves much to be desired. Given some of the things the government studies this may be a good thing but it certainly is not when we're talking about key safety programs such as the Notam system.

What is the directed outcome of this study? The FAA has until September 30, 2024 to complete the design and implementation of a modernized federal Notam system and to implement a backup system so as to avoid the January debacle. Just in case the FAA still has time on its hands after accomplishing the study the new system must also be machine readable, user filterable, capable of information prioritization, and presented in a common and understandable language. If even the last point is the only thing achieved I think getting rid of the 110 year old Q-codes and the 99 year old ITA-2 abbreviations along with ceasing the use of all capital letters would be a major step forward and a good victory for the human factors folks. Oh, a minor additional requirement, the new system must also meet all ICAO standards for international usage.

Has any progress been made so far? An industry group called the Notam Alliance, comprised of about 300 end users, met in February and began work. In March the group, using random Notams, began testing various AI language models such as Chat GPT 4 to determine machine reading capability. Success is claimed in trials filtering the operational information to a specific flight route, prioritizing Notam information, correct translation into plain English, and removal of non-operational information to an appendix that a user could access if further non-operational information was desired. The group claims to have reached a point of 98% accuracy with this AI. This is certainly commendable although when its my butt on the line up in the big rocks I want 100% before declaring any victory.

A word of caution is in order. The FAA is not to be found in these efforts so far. Billy Nolen, then Acting Administrator, testified before Congress in February about the poor state of the Notam system and committed the FAA to making the changes directed by the Act. Will his replacement, whether confirmed or another acting, follow through? Only time will tell but given past performance I don't believe any of us would take the bet in favor of the FAA meeting the Congressional deadline. However, we should not pass on any opportunity to help fix what is clearly broken, even if additional time is required. I'm going to take the optimistic view and expect to see the FAA engaging on these tasks, albeit slowly. When the agency does engage there will be specific proposals and opportunity for public input. I urge each of you to review the proposal(s) and comment.

In the meantime there is still opportunity for each of us to influence where this work in progress heads. Reference the Act and submit your thoughts to the FAA regarding necessary Notam system improvements now. Also contact your elected representatives and encourage them to track and support the FAA's progress towards an improved Notam system and a safer NAS for all of us.

Until next month, enjoy the mountains and fly safely.

Obscure and Scenic New Mexico

by Jeff Gilkey



Jeff Gilkey has been flying his Aerotrike Cobra (ELSA, weight shift control) since 2004. He has logged over 2200 hours on cross country adventures into nearly every corner of New Mexico, with many extending into Colorado, Arizona, Utah and Texas. For more information, visit his YouTube Channel at <https://www.youtube.com/user/jeffttrike>

Ramah Natural Bridge

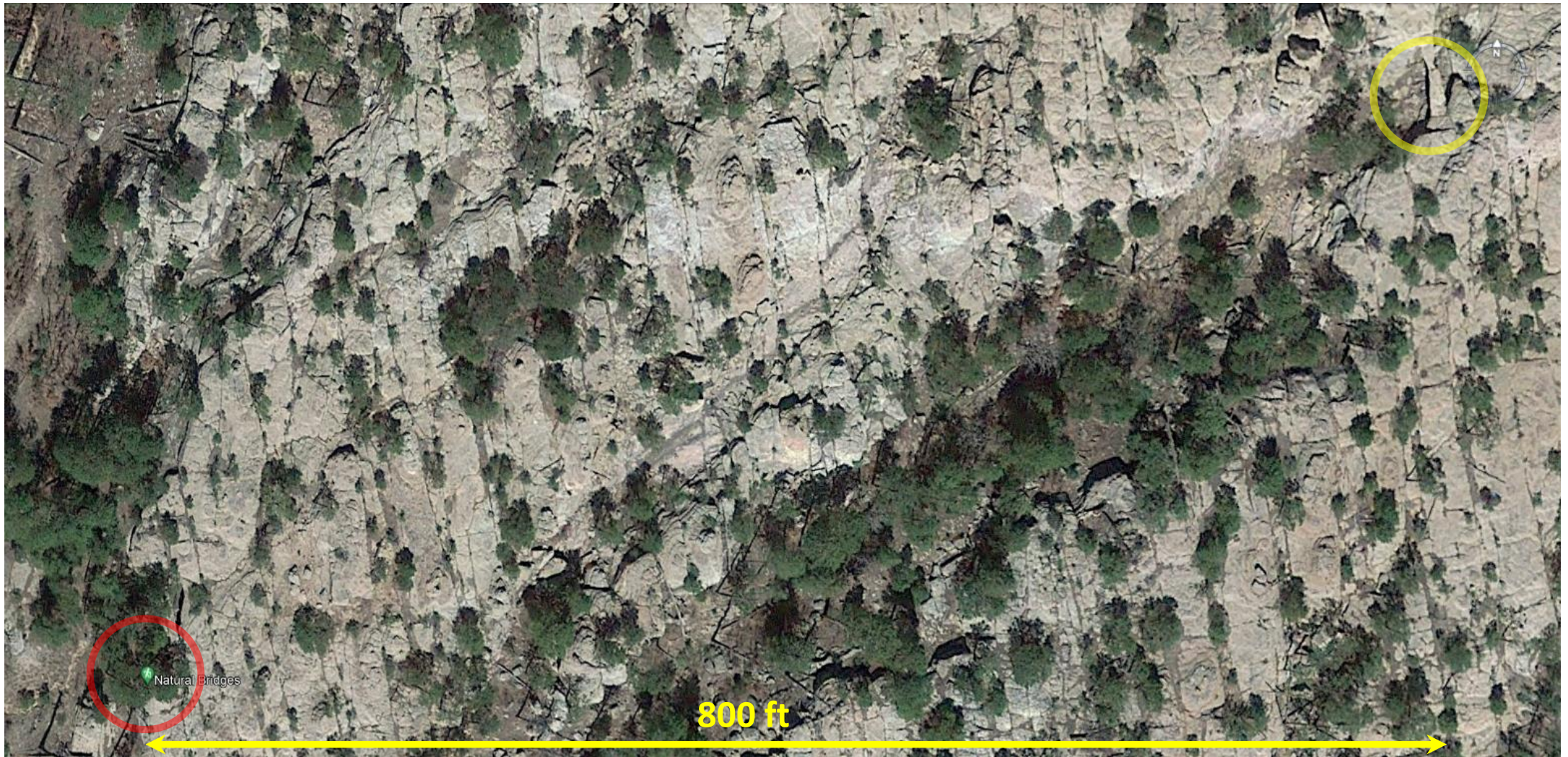
I have always found natural arches and bridges fascinating, and many of my “Obscure and Scenic New Mexico” columns have featured these geological oddities in and around New Mexico: [Royal Arch](#), [Malpais Arches](#), [Snake Bridge](#), [Acoma Arch](#). Years ago, poking around on the internet, I came across the “Ramah Natural Bridge”, precise location unknown, but with a photo stored in [Wikipedia Commons](#). This photo, dated to the year 1906, has dozens, perhaps as many as 100 people posing around a natural bridge somewhere in the vicinity of Ramah, New Mexico.



The search begins

As the date of 2023 Mystic Bluffs Fly-in approached, I prepared for an aerial search of the Ramah Natural Bridge. I developed a few more clues from the internet. [Doug Scott's page](#) on the Ramah Natural Bridge had a set of coordinates, though they were not too promising. Google Earth put them on a dirt road about 6 miles northwest of the Mystic Bluffs Airport with nothing of interest nearby.

As a last resort, I turned on every possible icon in Google Earth: *borders, places, photos, roads, gallery, and "more"*. I panned around Ramah Lake with a 2 mile wide window. So much clutter. But on the slopes of a sandstone mesa called "The Hogback", was the hiking icon "Natural Bridges" (circled in red in the lower left corner of the image). I did not notice the feature in the upper right corner until after the flight.



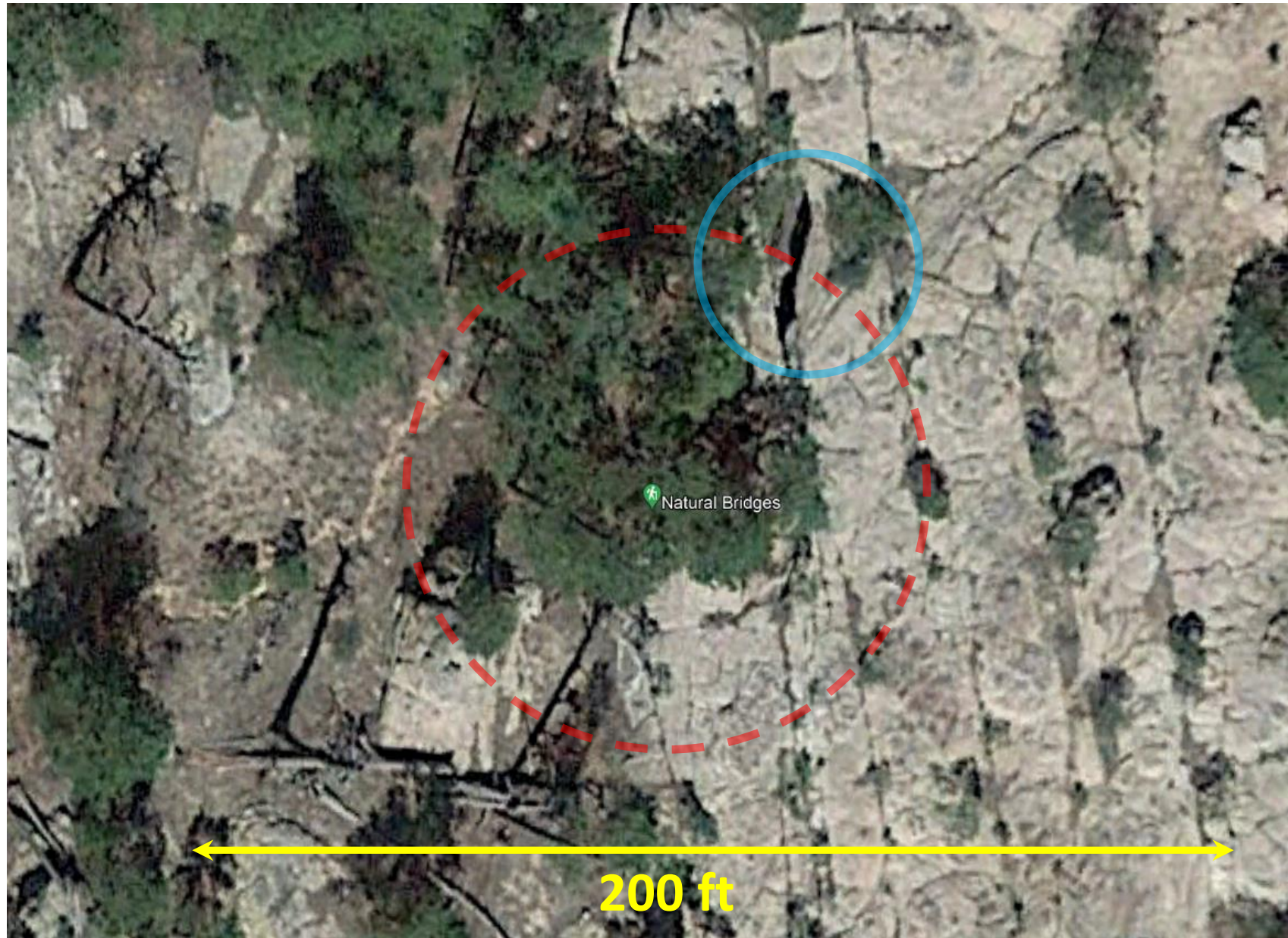
Zooming in

“Natural Bridges” was a clue that no one could miss. But there was no obvious bridge here, unless it was under the trees or perhaps it was the rocky feature oriented North/South circled in blue on the right. I was curious about the plural form, bridges as opposed to bridge. How many were up there?

I loaded the coordinates of this point, and the coordinates from Doug Scott’s webpage into my GPS moving map navigation app (FlyisFun).

My trike cruises at about 60 mph, and with any significant headwind it could be a 2+ hours flight from my hangar at Belen to Mystic Bluffs. I would also need at least a half hour to search for the bridge once I arrived. I did not want to fly out, only to land, scarf down a breakfast burrito, then get back in the air for a thermally mid-day flight back to Belen. I have done this before and it is not recommended.

So I departed for Mystic Bluffs the day before the fly-in, on Friday morning. I would have plenty of time to explore the area today, camp out, and eat a leisurely breakfast the next morning. My flight to the west was scenic and pleasant in light winds, bringing me to the Mystic Bluffs Airport vicinity around 10am. I diverted to the south so I could make a pass over Ramah Lake.



Ramah Lake

Ramah Lake never looked so beautiful. I flew past the lake to the Mystic Bluffs airstrip and saw one plane parked on the ramp. I waved at the pilot (Zeke) near the shade structure and began my search for the Ramah Natural Bridge.



Over the Hogback



I found no sign of a bridge at the first set of coordinates I pulled from Doug Scott's webpage. I flew to the coordinates of the "Natural Bridges" marker on Google Earth (blue circle) and found nothing there either. The terrain below my trike was consisted of sandstone with long linear cracks, the sort country where an arch or natural bridge could form. The "natural bridges" designator told me I should focus on my search on any drains or arroyos in the area.

Ramah Natural Bridge

I found it!

The bridge spanned a small rocky defile about 800 ft northeast of the Google Earth marker. Since it was monsoon season with nearly daily rain showers, a small flow of water was trickling under the span, transforming the “arch” into a “bridge.” This would definitely be worth a hike to explore on foot. Maybe next year?



Back at home, I took another look on Google Earth and spotted the bridge (circled in yellow a few pages back). Here are the coordinates of the bridge. Latitude = 35.193768, Longitude = -108.509490. Check it out the next time you are out there. And yes, the breakfast the next morning was fantastic.

FLY SAFE

Remember as “Pilot in Command”, you are ultimately responsible for the safety of your passengers and aircraft. Proper planning with respect to the weather, terrain clearance and traffic hazards is critical to having a safe and enjoyable flight.

SLOW FLIGHT INTO OSHKOSH



As the CFI sees it

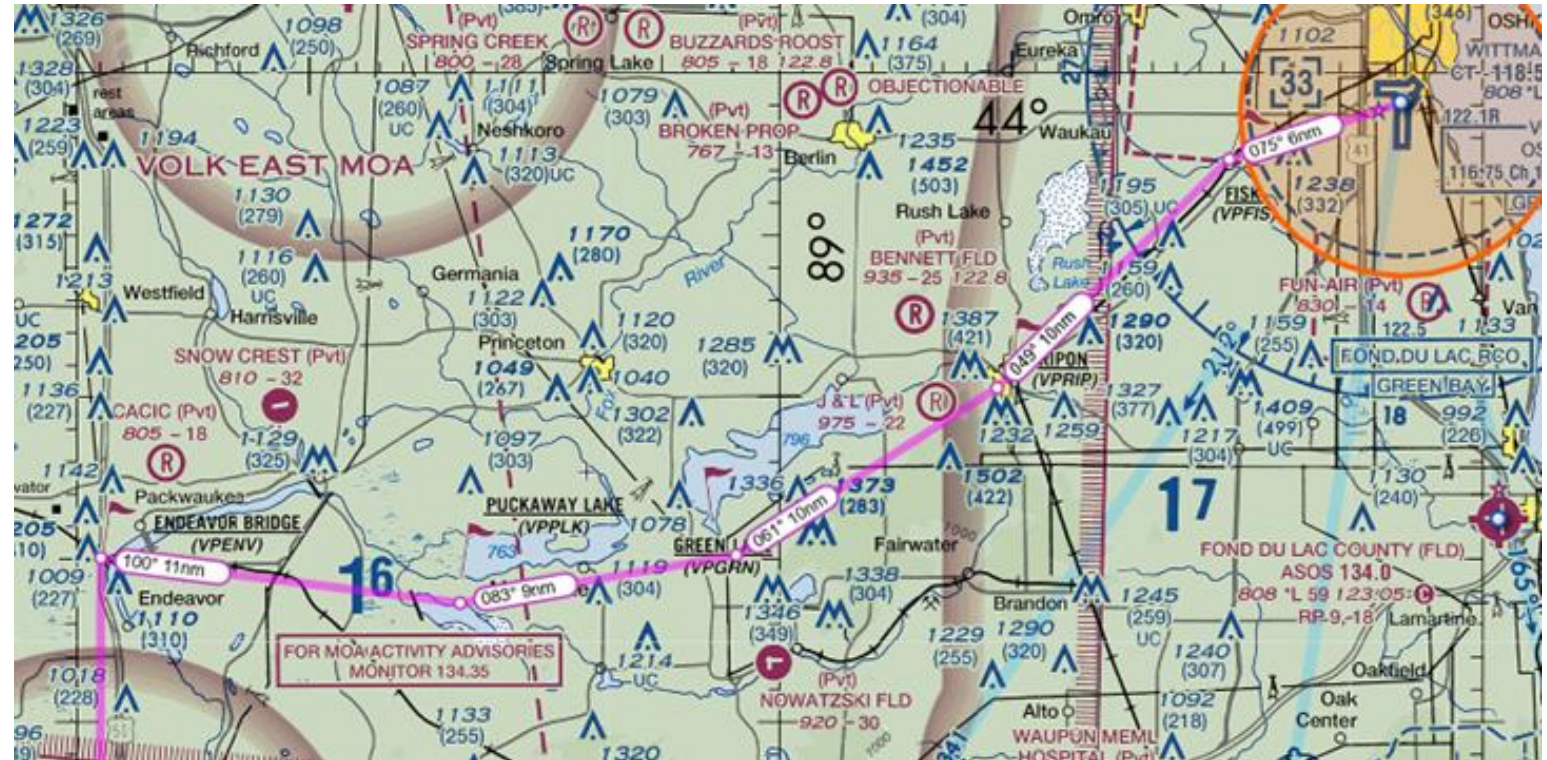
by John Lorenz



John Lorenz is a 6000 hour CFII, MEII, glider, and sand-lot acrobatic pilot. He has given over 2000 hours of tailwheel instruction. During the day he is a consulting geologist.

The Fisk Arrival into Oshkosh at peak hours during AirVenture is aviation's equivalent of the blivit: "ten pounds of (mud) in an eight-pound sack." EAA has pushed the entry point for the arrival westward several times to where it's now a 40-mile-long arrival route, but it can still be a goat rope navigating the conga line.

Sunday morning this year was particularly bad because the N-S runway at KOSH was closed due to an incident and all traffic had to land on Runway 27. Traffic Control was pleading for aircraft to maintain two miles of in-trail separation, but there were probably a hundred planes in that 40-mile-long corridor and the math just wasn't working. Trying to stay behind someone who is trying to stay behind someone else who is..... and people kept getting bunched up despite hanging out the flaps and slowing down 'til the stall warning squawked.



The Fisk Arrival into Oshkosh

Some folks tried to fix the problem by going around the plane in front that was “obviously going too slow”, but they quickly found out that the plane they passed was going slowly because the plane in front of it was going just as slow or slower. Over Ripon, where control begins, Control tried to fix bunched-airplane problems by sending planes that were too close in trail back to the starting point at Endeavor Bridge, but that just deferred the problem, it didn’t fix it. Control tried to be nice by recognizing someone they had sent back when they re-appeared over Ripon and giving them priority; sometimes it worked. Some pilots took “cuts” and earned the animosity of other pilots on the radio. Control couldn’t and didn’t try to rectify such incidents, though with ADS-B pilots aren’t anonymous and Control may have been taking notes. But Control couldn’t see too far down the conga line west of Ripon where everyone was jockeying for position.

Ken Summers noted that the plane in front of him slowed to 90 knots *ground* speed, not the 90 knots airspeed specified by the NOTAM, creating problems. And some pilots seem to have no notion of 1800 ft MSL, the designated arrival altitude: I was spot on (of course) and had a Bonanza zip by below me, and had to pass under a doubly-slow Cub that was several hundred feet above me.

The math of 100 airplanes trying to follow a 40-mile approach route cannot be changed, and there’s no foolproof strategy for avoiding the idiots and not getting bunched along the Fisk Arrival. Trying to be first in line just as they open the field for the morning is a popular strategy, but it doesn’t seem to work because it’s popular. Some folks use the warbird arrival if they’re flying a fast, non-warbird aircraft and get away with it. There’s also a non-advertised, undescribed “Prison” arrival from the north that only insiders seem to know about. Arrival at off-peak hours is about the only real solution. One year we arrived several minutes before the field closed and that worked because pilots don’t like to cut it that close. It might work again, who knows. Mid-week and late-week arrivals are typically less hectic than arrivals the weekend before the show starts, but you miss part of the show. Next year: *NORDO!*

Jet Blast! I was reminded recently, by a slap upside the head, that ground control at a towered airport regulates aircraft movement but does *not*, in fact, regulate other ground operations such as engine starts. When cleared by ground control to taxi behind a parked jet airplane a pilot needs to determine whether the jet’s engines are turning because it’s a fair bet that ground control does not know. Evidence for running engines include an operating beacon, the absence of wheel chocks, the presence of ground crew ready to guide the jet out of parking, and sometimes blowing dust and debris. Blast from even small jets will turn a taxiing Stinson 90° to the intended direction of travel in the blink of a startled eye. Jet blast has rolled up more than one taxiing light airplane into a crumpled ball.



ADS-B plot from FlightAware.com shows aircraft inbound on the Fisk Arrival as well as aircraft that were sent back to the Endeavor Bridge to re-join the inbound conga line, having been penalized for being too close in trail to the aircraft ahead when they arrived at Ripon.



Looks like maybe it’s only a Deux Chevaux, but still...

Tech Corner

by Will Fox



Weight and Balance vs Spin Behavior

It was a good day to spin a new aircraft. The air was cool and calm. No cloud decks to worry about and visibility was excellent. Even so, the test pilot was a bit nervous. She always was, when it came to spin testing a new aircraft. As good as the engineers were, they still had trouble predicting spin behavior in new designs. Today, the spin testing would explore the recovery characteristics of the aircraft at rear CG locations. The goal was to find the rear CG limit with acceptable spin recovery characteristics. The FAA certification requirement for a single engine, normal category airplane was that after a one turn or three second spin, whichever takes longer, the aircraft must be recoverable in less than one additional turn. The engineers had rigged a gizmo behind the pilot seat that allowed the test pilot to adjust the CG of the aircraft while she was flying it. Basically it was a motorized trolley on rails with a weight on it. The trolley could be motored fore and aft on the rails to change the CG location. The pilot had a switch on the yoke, similar to a trim switch, that she could use to run the trolley back and forth.

The plane had climbed to 12,000 AGL, and the pilot was cleared to begin the first spin test. She flipped the diagnostics switch that would turn on the data recorder and moved the trolley aft, to the first test position. She could feel a change in the pitch stability of the aircraft, but it still had good positive pitch stability. She cleared the area around her and below her, checked her altitude and heading, reduced power, and then executed a spin entry. After one turn she executed the recommended recovery technique with full rudder against the spin and centered the yoke. The rotation began to slow and then stopped in about half a turn with the nose pitched down. After the aircraft gained speed, the pilot pulled the nose up into level flight. She had lost about a thousand feet in the spin. She climbed back up to try another spin. The testing continued with the pilot gradually moving the trolley farther and farther back after each spin and recovery. The pitch stability of the aircraft remained positive, even though it was becoming less so, and the spin recovery was taking a bit longer each time. She finally moved the trolley to the rear limit that the engineers wanted to test. This would be the rear CG limit for the aircraft if it had acceptable stability and spin recovery characteristics. The pilot executed another spin entry and noticed that the nose did not drop as much as in the other spin entries. After one turn, the pilot executed the normal recovery technique. The rotation began to slow but did not stop in the required



Picture of a Cessna 150 entering a spin.

one turn, in fact it did not stop at all. The nose began to rise as the aircraft continued past two turns. The test pilot neutralized the controls and tried the recommended recovery technique again. Once again the spin rate slowed, but did not stop. As the spin went through 3 turns the test pilot then tried an alternate recovery technique that involved pushing the stick full forward with full opposite rudder. Once again, the aircraft slowed, but did not stop spinning. The pilot glanced at the altimeter and noted that she had now lost 3000 feet. It was time to recover the aircraft before it entered a fully developed spin. The pilot activated the trolley and ran it forward to its stop. As she did so the nose of the aircraft began to drop and the spin rate began to accelerate. She then executed the recommended spin recovery technique and the aircraft rotation slowed to a stop. The pilot pulled out of the dive and leveled off. She noticed that her pulse rate had increased and beads of sweat had formed on her forehead. She reminded herself that had the change in CG not worked, she could have deployed the spin chute, and if that had not worked she could have bailed out. Never the less, being a test pilot could certainly be exciting at times. As she returned for landing, she thought to herself that the engineers would not be happy about having to move the rear CG limit farther forward then they had planned, but it was either that, or make some aerodynamic changes to the wing or empennage to improve spin recovery.

This story illustrates the possible effect of a rearward CG on spin recovery. An aircraft may have positive pitch stability behind the specified rear CG limit, but it may not have acceptable spin recovery characteristics. This story is based on an actual test pilot experience. I hope it is helpful in letting you understand the implications of flying your aircraft outside of the recommended CG limits and encourage you to develop a better understanding of why it is important to know where the center of gravity is for your aircraft and to remain within the CG limits.

Below are a few websites that you may find interesting on spins and spin testing.

The Four Steps of Spin Recovery

<https://www.boldmethod.com/learn-to-fly/maneuvers/the-four-steps-of-spin-recovery-explained-pare-recovery/>

Spin Testing Piper Tomahawk

https://www.youtube.com/watch?v=3b9etPV_yVQ&t=4s

Spin Testing a Beechcraft Twin

<https://www.youtube.com/watch?v=wzM1VoAnwvc>



This shows pictures of a B777 during testing where water stored in barrels replaces normal seats and is pumped fore and aft to simulate center of gravity shifts.

CFI Resource List: A Member Benefit for Students and CFI's

NMPA Certificated Flight Instructor Resource List updated 3-28-2020
NMPA members who are CFI's and who would like to be listed here, or who need to modify their information, please contact John Lorenz at johnlorenz@geoflight.net



Instructor: Suzanne Azar

Contact: email suzanneschmeckazar@gmail.com

Primary areas of instruction: *Private, Commercial, Instrument, Multi-engine Instrument*

Airports you instruct at or will travel to: *El Paso, TX, Santa Teresa, NM, and Las Cruces, NM*

Do you have access to an airplane for instruction and if so what kind: *Cessna 172 and Cessna 182*

General summary of experience: *I have been a pilot since 1980 and a flight instructor since 1984. Among my many students I taught both of my daughters to fly. I have flown numerous air races through the US, Bahamas, Hawaii, and Canada. I hold a commercial pilot's license and am rated in single engine, multi-engine, glider, and seaplane, with an instrument rating. I fly a Lancair IVP a pressurized, retractable, high-performance composite experimental as my personal aircraft, and instruct in Piper and Cessna singles. As a Multi-engine Instructor, I have flown many aircraft from the 1956 Apache to a 690B Rockwell Commander turboprop. I also hold licenses as basic and advanced Ground Instructor and have earned the FAA's "Gold Seal" flight instructor license.*

Instructor: Mike Dellas

Contacts: (505) 699-7297, captrellas@aol.com

Located at Santa Fe (KSAF)

General summary of experience: *Currently flying for AAL, experience in Aeronca Champ to a Twin Beech D18/Douglas DC-3 and aerobatic planes such as Citabria and Decathlon, owned and operated a Luscombe, C-180, and C-310 including instruction over 45 year flying career.*

Instructor: Scott Burnett.

Contact: email ssburnettnm@gmail.com

Single and multi-engine CFI teaching in the student's aircraft. Specializes in tailwheel and Maule check-outs, private instruction, and ferry flights. Located at Mid Valley (E98)

Instructor: Peter D Murphy, contacts peterdenismurphy@gmail.com, 505-946-7777. CFII MEII LSP. Flight Design CT

Instructor: Diane de Souza - Taos - contact info is dyeingtoweave@gmail.com

"Information about these CFI resources is provided for the benefit of our CFI and student members. The NMPA and its officers do not endorse any of these resources. We urge all members, CFIs and students, to use good communication skills and show respect in all of our engagements with other members."