The visibility looking out the front window of the airplane had gone from bad to worse in just a couple of minutes. The pilot had waited too long to turn around and was now straining to see through the blinding snow.

In a flash, the pilot saw trees in the windscreen the second before the airplane plowed into them. Everyone aboard the airplane survived, but not without injuries. It would be a long, cold night and the survival of the pilot and passengers was in question.

Would you be prepared to survive if you found yourself in this situation?

The Montana Department of Transportation (MDT) Aeronautics Division sponsored a winter survival clinic in Marion, Montana in January. The program began with a lecture on no-engine emergency landings, and covered many different aspects of surviving a winter crash, from food procurement to building survival shelters.

Flathead County Sheriff Chuck Curry and Flathead Undersheriff Jordan White trained participants on emergency medical techniques, including immobilization of broken bones, burn and shock treatment, and wound care. Participants also spent time out in the elements learning medical techniques.

Frank Bowen, a Special Forces survival trainer, Perry Brown, and Doug Dryden provided instruction on surviving in cold weather, and participants had the option to spend the night in survival huts of their own making.

By all accounts, the participants found that staying alive in a cold weather environment would be a lot more difficult than they had imagined, and that being prepared is the key to survival.
Administrator’s Column

Five years and 23 continuing resolutions later. Congress has finally passed an FAA reauthorization bill. The compromise bill has been sent to President Obama for signing. Highlights of the four-year bill include: no user fees or tax increase for avgas or jet fuel; reduction in the Essential Air Service Program to $190 million and the elimination of service to communities within 175 miles to a large or medium hub AND flights that enplane fewer than 10 passengers/day, (this will not affect any of Montana’s nine EAS communities); new communities will not be allowed into the EAS program; Airport Improvement Program funding for airports currently stands at $3.35 billion per year; the federal/local matching ratio for airports that are not identified as economically distressed are defined at: http://hepgis.fhwa.dot.gov/hepgis_v2/GeneralInfo/Map.aspx is returned to a 90/10 split; there will be no increase for passenger facility charges; through-the fence operations are now allowed and funding for NextGen the agency’s transition to GPS technology will be provided. The 304-page bill is still being studied.

METs hazardous per NTSB:
Following an accident involving a California Aerial Applicator, the National Transportation Safety Board (NTSB) has officially declared the fatality as a collision with an unmarked MET due to the pilot’s inability to see and thus to avoid the obstacle. The NTSB further stated, “Contributing to the accident was the lack of visual conspicuity of the MET and the lack of information available to the pilot about the MET before the flight.” The accident report reads: “METs are used to measure wind data throughout the United States. They can be assembled quickly and can be constructed of galvanized tubing with guy wires used as support. Because many METs are just below the 200-foot threshold at which FAA regulations would require the applicant to notify the FAA of the MET and to provide a lighting and marking plan for FAA assessment, many METs are unmarked, unlighted, and not referenced in any FAA notices or publications for pilots. Although the FAA in 2011 approved an update to Advisory Circular (AC) 70/7460-1K, Obstruction Marking and Lighting, that will provide recommended guidance on marking METs, ACs are only advisory in nature. Because of this, MET constructions will likely continue to meet only the minimum requirements and, thus, will remain a hazard to pilots operating at low altitudes. The National Association of Aerial Applicators continues work with the FAA and Congress in hopes of establishing a national database of low-level obstructions. A reminder to be heads up and fly safely.

Instrument currency: Contrary to recent rumors, the FAA recently clarified portions of FAR 61.57. If the pilot’s currency lapsed, but did so less than six calendar months ago, the pilot may reestablish currency, without taking an instrument proficiency check. If currency expired more than six months ago, it’s time to set up an instrument proficiency check. The requirement has always been confusing but remains the same, no changes have been implemented.

Paper applications being eliminated:
As of October 1, 2012, aviation medical examiners will no longer accept paper applications. The good news is that applications submitted online will be processed quicker, errors should be reduced, and taxpayers should get a break on federal spending. But, the transition away from paper applications for medical certificates presents concerns for pilots who don’t regularly use a computer. AOPA will launch an education effort inform pilots of the online application and will continue to work closely with the FAA to address concerns.
The 2012 conference is quickly approaching; remember there is an early bird registration fee offered to those registering before February 24, 2012. A conference registration form is included on page 7 of this month’s newsletter. With an amazing caliber of speakers this year’s conference is something you won’t want to miss.

Rooms are blocked at the Best Western GranTree Inn at a conference rate of $92 plus tax. Please phone (406) 587-5261 or (800) 624-5865; reference Montana Aviation Conference when making reservations.

Rooms are also been blocked at the Holiday Inn where the rate is $92 plus tax. Please phone (406) 587-4561 and reference Montana Aviation Conference when making reservations. You may also book your room on line at www.hibozeman.com; use on line booking code MAC.

Reserve your room today, as reservations must be made prior to February 14, 2012 in order to guarantee the group discount.

Friday’s luncheon speaker is Larry Chambers. Larry’s presentation, “A Lifetime in the Air – Doug Parrott,” touches on the life and times of pilot Doug Parrot of Roundup. Doug became a navy Cadet in 1945, where he flew Stearman, Grumman TBM’s, and Hellicat fighter airplanes. After his military career, Doug became an airline pilot with Northwest airlines, where he flew Boeing 737 and 747 airplanes. Not a person to sit back and take it easy, Doug purchased a ranch in the Roundup area where he now spends his time.

Larry’s presentation is right in line with this year’s theme, “Wings from the Past into the Future”.

A conference program is featured on our website at http://www.mdt.mt.gov/aviation/. Please contact Patty Kautz (406) 444-9580 or pkautz@mt.gov for further information. We look forward to seeing you there!

March 1-3, 2012: Montana Aviation Conference - Gran Tree and Holiday Inn Hotels, Bozeman. For further information contact Patty Kautz pkautz@mt.gov or (406) 444-9580.

The MDT Aeronautics Division is pleased to announce the 2012 Mechanics Seminar & IA renewal will once again be held in conjunction with this year’s Montana Aviation Conference in Bozeman.

The dates for the conference are March 1-3, 2012. The Mechanics Seminar will be held on Friday, March 2 from 8:00 a.m. to 5:30 p.m., and continue through Saturday, March 3 from 7:00 a.m. to 5:30 p.m. Please plan to be there early to register as an IA if you intend to use the training for next year’s renewal.

We will be offering six hours of training on Friday and eight full hours of training on Saturday. This has worked out well in the past for those mechanics who only want to attend on Saturday but still need the training to update their IA.. If you are planning to attend only the Saturday seminar, registration begins at 6:00 a.m. Please get there early to get the full eight-hour credit.

TENTATIVE SPEAKERS: Joe Westby, Northwest Propeller; Kristi Dunks, NTSB; Carol Leyner, Colorado Classic Aircraft; Vince Bechtel, Tempest; Steve Davidson, Alaskan Bushwheel; Allan Jesmer, Precision Airmotive; Loren Lemen, LY-Con Rebuilding; Greg Cross, Cross Petroleum; Mark Gaulke, RAPCO; Bryan Hart, KANNAD; Steve Vold Helena FSDO, Aertronics – FAASTeam.

Make plans now to attend, discuss, and learn the latest in aircraft maintenance. A registration form is included on page 7 of this newsletter. A conference program is featured on our website at http://www.mdt.mt.gov/aviation/.

Please contact Michael Rogan, MDT Aeronautics Division, with any questions at (406) 444-9590 or email mrogan@mt.gov.
Looking for Toads

By David J. Hoerner

With over twenty thousand flight hours of animal search flights I’ve had the privilege to see grizzly bears fight wolves and wolf packs fighting other packs. 

Telemetry flying has gone from a handheld antennae sticking out the aircraft window to GPS transmitters that transmit an animal’s location and body temperature every few minutes.

Just when I thought I’d searched for every animal that could carry a transmitter, I received a call from a Plum Creek biologist. He said, “Tim Manley said that you were the guy to fly with.”

He continued, “I’ve started a new study in the Gold Creek country south of Seeley Lake and I’ve lost one of my animals. Can you fly down to Seeley and pick me up?”

I thought it was a little strange to not tell me what species of animal he was studying so I asked, “What kind of animal and what frequency are you using?”

I was expecting to hear elk, deer, maybe lynx even eagles. “I’m studying toads,” he replied.

My first thought was how in the heck would you keep a transmitter on a toad? He continued, “I have a transmitter on one of the big male toads and he’s missing.”

I replied, “This has got to be a joke.”

It was no joke. Most of the area around Gold Creek had been logged and authorities said the logging was wiping out the habitat for the toads. If it could be proved that the toads were disappearing, the logging would take the blame and be shut down.

“How in the heck do you get a transmitter to stay on a toad?” I asked.

He replied, “At first we had no clue but I came up with the idea to make a girdle out of stretch Velcro.”

The Velcro was pulled tight around the toad and a small transmitter and antennae was glued onto the Velcro. The problem was that the battery was so small that the power ran out in a few days.

So every two days he honed in on the signal, changed the battery and cleaned the grass and twigs out. It was easy for the toads to get stuck in thick brush or grass.

“I’ll be there in an hour, are you sure you want to pay three hundred and fifty dollars an hour for me to find your toads? I was still leary.”

We departed Seeley Airport headed south. “How far can a toad go overnight?” I asked. Let’s face it: a toad’s world is his immediate vicinity.

We circled the last known location, but there was nothing. I expanded the circle to a half of a mile out; still no signal.

“There was absolutely no way a Toad could go this far one hop at a time,” I thought to myself.

Then a faint beep, beep, beep, sounded in our headsets. As we crossed a thousand foot high ridge, the sound increased. “No way,” I said, “I’ll bet an eagle carried him up here.”

The toad biologist said, “The Toads dig into the mud left from a log loading yard. The machines turn all day long and grind the soil into soft silk like mud. Toads come to the yard, dig down into the mud a foot or so, and hibernate for the winter.

“Don’t they freeze solid?” I asked.

“Their extremities get pretty cold, but the body core stays warm. In the spring they warm up and start another season,” he replied.

We zeroed in on the big toads location. The signal was weak and by the sound the batteries were about done. We turned toward the airport. If the battery went dead, he’d lose the toad and the transmitter.

The biologist continued, “The male hops around looking for a female. There croaking gives away their presence.”

He continued, “The male toad hops to the other toad and gets nose to nose. From the outside appearance, one toad can’t tell whether another toad is male or female.”

The big male stiffens his legs so he can show off his muscles and physique and lifts his body off the ground. (I made the muscles and physique part up for better visualization.)

The biologist continued. “He vibrates his whole body and if the other toad is a male, he doesn’t respond. But if it’s a female, she’ll lift her body and vibrate in return, and they mate.”

He told me the story without a smile; I had all kinds of remarks in my mind but kept them to myself.

I replied, “There a moral to this story.” He looked at me blankly.

I continued, “If you’re lying out in the middle of a meadow, hear a croaking noise and open your eyes to a big stud toad vibrating in your face, you have two choices.”

The biologist looked at me and nodded his head in agreement. He listening intently.

“One choice would be to get up and run. Another would be to not move, cough, sneeze, or scratch your nose. Don’t do anything that resembles vibration; just lie completely still, and maybe he’ll hop away.”

He sat for a second thinking about my statement and then we laughed.

In the end, his study showed that the logging was actually generating better habitat and was helping the toad population increase.

Sometimes we overlook the role airplanes and helicopters have had in the advancement of wildlife studies. Aviation makes it possible to see animals in their natural environment without disturbing them, and information gained from airborne platforms gives wildlife officials the ability to set hunting limits or remove species that have over populated or creating problems.
Harold Keilman passed away peacefully at his home on Jan. 30, 2012. He had a wonderful last few days surrounded by family and many visitors whose lives he touched. He was 76.

Harold was born in Pocatello, Idaho, (because he wanted to be with his mother) on Sept. 22, 1935. He was raised in Miles City, where he graduated from Sacred Heart Catholic High School. After graduation, he attended University of St. Thomas in Minnesota for a time before attending aircraft mechanic school, where he received his A&P license. He worked as an aircraft mechanic in California and Nebraska for several years before returning to Montana State University to complete his teaching degree. He then worked from 1967 to 1997 teaching aircraft mechanics at the Helena College of Technology. He was an incredibly hard worker who also supported his family running a dental lab business for many years. After retirement, he continued teaching for a time at Colorado Northwestern Community College and then at St. Andrews Catholic School in Helena. During the years, he also tutored various students in math.

After moving to Helena he met Marjorie Kelly of Butte and they married on June 11, 1971. Together they have three children and were blessed to celebrate their 40th wedding anniversary in 2011.

Harold had a passion for lifelong learning as well as for teaching. He had an incredible amount of patience and found so much meaning when a student excelled and grasped a new concept.

His faith was always a place where he found solace. He attended Cursillo, which enhanced and deepened his spirituality further. He was very involved in Fourth Day prayer groups and enjoyed learning from and sharing with these men. However, his faith was most importantly shared through his actions — in the way he treated his family, friends and those who might be in need of a helping hand.

His family was his most important gift in life, as he was to them. He loved his children and grandchildren so deeply. He made sure each of them knew how loved they were and how proud he was of the people they had become.

Hal tried to keep his sense of humor in life and always left people with a joke, often to the chagrin of Marge, who had to bear many of the same jokes over and over. He put a smile on the faces of many medical staff with his positive attitude through years of medical procedures.

Harold was preceded in death by his parents, Ruby and Leroy. He is survived by his beloved wife, Marge; daughter, Kelly and husband Thom Trunkle; sons, Nick and wife Patty Hertweck Keilman and Daniel and wife Brittnie Burke Keilman. He leaves behind his four young grandchildren, with whom he has enjoyed the last few summers in the backyard and one grandchild on the way. He is also survived by his three brothers, Leo, Gail, Paul and many beloved relatives.

Air Service Updates

Allegiant Travel Company has announced that it is adding nonstop flights to Oakland/San Francisco twice-weekly to and from four Montana cities; Missoula, Kalispell, Bozeman, and Billings beginning April 27. Allegiant flies MD-80 jets that seat 150 passengers.

Alaska Airlines will begin daily seasonal service between Portland and Bozeman and is resuming daily seasonal service from Portland to Missoula and Billings. All service will begin June 4 or 5 and operate through August 25, 2012.

Bozeman announced new, non-stop seasonal summer flights to New York/Newark Liberty International Airport to be operated by United Airlines. Flights will operate between Bozeman and New York/Newark Liberty International Airport once weekly on Saturdays from June 9, 2012 through September 1, 2012, and discussions about potential winter service for the next ski season are in progress.

Frontier Airlines announced new seasonal service from its Denver hub to Great Falls. Service will be provided on 99-seat Embraer 190 aircraft four days a week and will begin on May 14 and run through September 30, 2012.
The Maule left the Polson airport enroute to Lethbridge. The pilot had an appointment for a job interview and told his wife that he had to be there. The flight plan had been filed Polson direct Lethbridge.

The winds were blowing from the west and grew in strength with altitude. A pilot on the ground at Lake McDonald saw the aircraft fly overhead and enter the steep rugged mountains of Glacier National Park. The mountain peaks at the time had rolling cloud formations on the downwind side that indicated high winds and turbulence, but the pilot had to get there, so he continued on. The ground observer wondered why anyone would be flying in such horrid weather conditions and then fly into the heart of nine thousand foot peaks.

The airplane flew around Heavens Peak and out sight. From the ground it looked like the airplane was almost out of control. “There was no way the airplane would handle the turbulence that it would encounter after crossing the divide,” thought the observer.

The sound of the engine and the sighting of the airplane headed south told the story; the pilot had seen enough and was headed home.

At the south end of Lake McDonald the airplane turned around and headed back into the mountains and again out of sight.

The next day the scattered remains of the airplane were found in the upper end of the Belly River Drainage. The pilot had not survived.

This is an actual aircraft accident that ended with devastating results. Instead of scrutinizing, pointing fingers, or saying, “What was he thinking,” let’s learn from what others have done and make smart decisions in the future.

The event described above is the result of poor planning, bad decision-making and the pressure of having to get to a job interview.

1. The pilot didn’t have a lot of flight time and little mountain experience. It would have been wise to ask local pilots about flying in the mountains under these conditions. The answer he would have received is, “Don’t even think of flying in the mountains in those conditions.”
2. The winds at the mountain tops were about 40 knots. If the winds at the mountain tops were that strong, in the canyons and around the peaks the speed and turbulence would be strong enough to lose control of the airplane. When the winds are strong or above your experience level, stay home.
3. The aircraft hit the top of a ridge. The downdraft and turbulence encounter on the east side of the continental divide was more than the airplane or pilot could handle. An aircraft is a machine and will only handle so much before coming apart.
4. The route of flight was the most dangerous that could have been flown. The pilot had the option to turn right at Lake McDonald and follow Highway 2. This route would have kept the pilot south of the high rugged peaks, but still questionable if the airplane and pilot would have handled the winds of Marias pass. But in case of an emergency a highway would have been available.

While flying around the state of Montana we encounter a wide variety of terrain. As in this case, the weather encountered in Glacier Park, with the turbulence just east of the divide exceeded the pilots experience level. It ended with a lost life and a family to pick up the pieces.

A pilot must pick the right conditions to fly in these areas. If the conditions are beyond your ability, don’t go. Some of the most uncomfortable turbulence can be encountered in the Libby, Thompson Falls, Superior and Bitterroot Valley areas. To the west are continuous rolling seven thousand foot mountains that cause the wind to roll with up and down drafts. When the wind is blowing in this region the ride can be quite uncomfortable.

A big danger on the westside of the mountains is IFR conditions. Weather systems push in from the west and hang up against the mountains or fog forms in the mountain valleys making flight conditions impossible.

The high valleys around Butte, Dillon, and Bozeman can create uncomfortable flying conditions with turbulence downwind of the mountain ranges. A good rule to follow is 30 knots or less at mountain-tops or less. High mountain passes can plug up with clouds when weather systems flow into the region. Density altitudes must be checked on hot summer days.

From the east front of the Rocky Mountains and out twenty miles to the east, high wind speeds can make flying impossible. Usually weather systems entering the area create the downslope winds. If these high winds exist, pick a different day to fly. Flying downwind from the Bear Paws, Highwoods, Little Belts, Big Snowy, and the Crazy Mountains can be beyond comfortable on windy days.

The winds at Livingston can gust up sixty knots making flying impossible and should tell a pilot to wait for better conditions. The high winds that descend off the Beartooth Mountains and east of Red Lodge can create turbulence, with up and down drafts. It would be wise to wait for a better day.

Eastern Montana has its own issues with turbulence, when flying low and usually creates a slow ride when headed into strong headwinds. I remember a Volkswagen on the ground passing me as I flew a Super-Cub from Minot to Kalispell. In that case fuel management was a big issue.

As pilots we must always remember that there is no such thing as, “I have to get there.” If you must be there, go by automobile. Weather reports can give the wind speed aloft, but winds change and can change to dangerous when being compressed in canyons, around peaks and behind mountain ridges.

Always leave room to make a 180, set your own personal limits, and live by your rules. If you will think it will never happen to you and it’s always the other guy, you’re wrong. You might be that other guy or gal. Never fly beyond your limits and never be in a hurry to get anywhere.
**28th Annual Montana Aviation Conference**  
March 1-3, 2012 – Best Western Grantree & Holiday Inn Hotels, Bozeman

Mail Registration Form & Payment to: MDT Aeronautics Division - Attn: Patty Kautz, PO Box 200507 - Helena, MT  59620-0507  
Phone (406) 444-9580 – Fax (406) 444-2519 - Email: pkautz@mt.gov

Names of Participant(s) (for badges):

Aviation Organization Affiliation:

Address: __________________________ City: __________________________ State/Zip __________________________

Phone __________________________ E-mail address __________________________

Register Early and SAVE! Pre-registration will be open until February 24, 2012.  
After that date conference fees increase and participants must register at the conference site.

**PRE-REGISTRATION: BY FEBRUARY 24, 2012**

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**PLEASE INDICATE IF YOU WILL ATTEND THE FREE FRIDAY DINNER AND FREE SATURDAY LUNCH WITH NUMBER OF TICKETS REQUIRED. PERSON/SPouse AND FAMILY RATE INCLUDES 2 FRIDAY DINNER AND 2 SATURDAY LUNCH TICKETS – ADDITIONAL TICKETS MAY BE PURCHASED - $30.00 FRIDAY DINNER AND $15.00 SATURDAY LUNCHEON. TO ASSURE ADEQUATE MEAL COUNT IF NO INDICATION IS MADE AS TO NUMBER OF TICKETS REQUIRED NO TICKETS WILL BE RESERVED.**

Payment Method:
Enclosed is my check payable to Montana Aeronautics Division - Total Amount Enclosed $______________

Upon receipt of this form, please charge my: American Express MasterCard Visa Discover

Cardholder Name __________________________

Account Number __________________________ Exp. Date __________________________

Balance Due $______________ Signature __________________________
Roger Meggers of Baker purchased N5410H, Piper’s first civilian Super Cub, S/N 18-1 in February 2010 from Kelly Coffelt of Bend, OR. They have been gathering parts since then and have now disassembled the aircraft for complete restoration to original condition as the airplane left the factory in Lock Haven, PA. It was test flown 11/23/1949, then on to Johnson Flying Service in Missoula, MT. It started its life as a crop duster. In 1952, it was modified with wing flaps and 125 HP Lycoming engine. After a few mishaps, repairs, and years of crop dusting, it continued its life in Coldwell, ID, and was owned by Eugene Franks for over 40 years. They are hoping to have the restoration complete and fly it to Sentimental Journey in Lock Haven, PA in June and then back to Oshkosh, WI for the 75th year of the Piper Cub. Clyde Smith, Jr. has been out assisting with the restoration for a couple of weeks. Darin Meggers and Roger have been working hard to get this project completed. Parts are difficult to find with some having to be fabricated as they are no longer available. There is a lot of research involved to make this aircraft as original as possible, including the Continental C-90-8F engine and wood propeller. Pictured, above left, Roger welding and, right, Clyde Smith Jr.