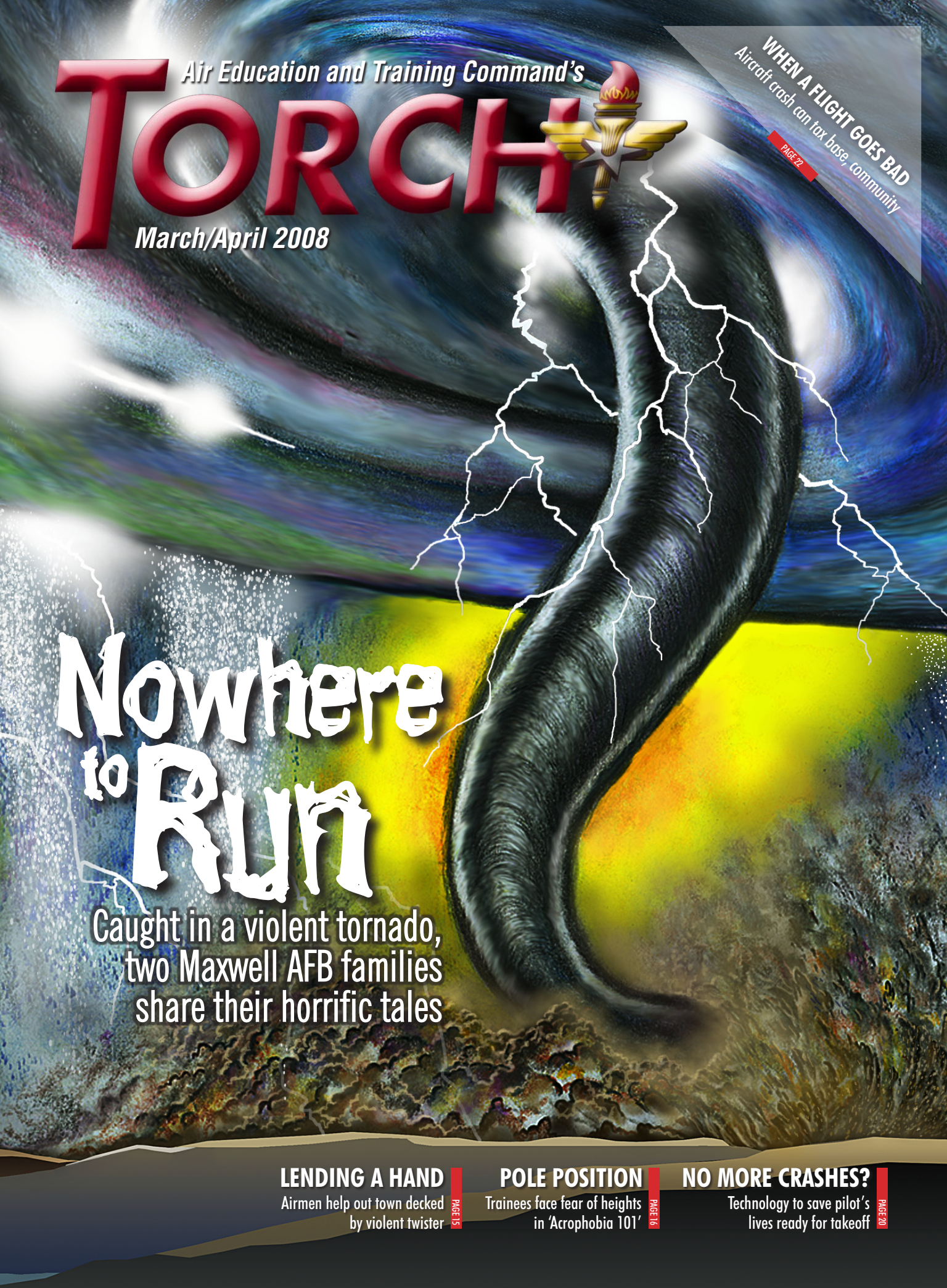
Air Education and Training Command's
TORCH
March/April 2008



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March/April 2008
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Gen. William R. Looney III
Commander

Col. John W. Blumentritt
Director of Safety

Timothy P. Barela
Editor
timothy.barela@randolph.af.mil

Sammie W. King
Senior Designer
sammie.king@randolph.af.mil

David M. Stack
Designer
david.stack@randolph.af.mil

Tech. Sgt. Matthew J. Hannen
Photojournalist
matthew.hannen@randolph.af.mil

Subscriptions and Contributions:
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FROM THE DIRECTOR

By Col. **JOHN W. BLUMENTRITT**
AETC Director of Safety

'FROM CLUBS TO HEARTS!'

Power is an interesting concept. Many Airmen operate power tools at work, and our pilots apply power to their aircraft. More often than not, the item receiving the power responds immediately. There are also leaders who wield merciless power to coerce behavior from employees. I recall a friend who likened his experience with one such leader to a baby seal being clubbed on a beach. ... And he felt like the seal!

Dr. Peter Northouse describes coercion as one of five types of power proposed by French and Raven in 1959. Specifically, it is the use of force to influence behavior by manipulating the penalties and rewards in the work environment via threats and punishment.

So if club-power will guarantee results, why don't leaders just demand their subordinates be safe and then threaten them to get the desired results? Perhaps coercive power would have prevented the loss of 70 Air Force men and women who died in ground mishaps last year.

But, as you might suspect, there are some pitfalls to this approach. Remember my club-suffering friend? He knew the boss wasn't interested in his wants, needs or a common goal. He was only forcing subordinates to comply. And when the club-wielding supervisor left, compliance stopped quicker than an unplugged power tool or a jet engine during shutdown. The bullying boss had zero power when he was absent.

"When the club-wielding supervisor left, compliance stopped quicker than an unplugged power tool or a jet engine during shutdown. The bullying boss had zero power when he was absent."

Of the 70 Airmen lost in ground mishaps last year, 64 died while off duty. Most died in the privacy of their private motor vehicle or alone on a motorcycle. Unfortunately, nonuse of motorcycle helmets, failure to buckle seat belts, high rates of speed, fatigue, and the use of alcohol were involved in some of these mishaps. Bosses and workstations were miles away.

So how does a leader or friend influence, versus coerce, others to desire a positive, mishap-free environment, and then make personal choices to nourish that culture?

That's easy. It doesn't come from the club; it comes from the heart.

Rely less on formal authority based on organizational wiring diagrams and more on personal power. This astonishing power doesn't come from higher authority, but from people who believe what you have to say has value. Via sincerity, caring, compassion and kindness, a sense of intrinsic personal satisfaction occurs when people identify with someone who honestly cares about their safety.

And unlike coercion, the influence may last a lifetime.

Research for this article comes from Northouse, P.G. *Leadership Theory and Practice*: Thousand Oaks: Sage Publications, Inc. (2004).

'ANGELS' STILL AT WORK

We want to sincerely thank you for the cover story titled "Avalanche Angels" in your January/February 2008 issue of Torch. The article provided a great depiction of what we do as independent-duty medical technicians during rescues. IDMTs are the first people tossed out of the helicopter and usually the last ones to get any recognition, so it was very nice for the IDMT career field to get noticed.

The pictures were amazing, as well. We have a great need to display them for in-house training and to show the new guys different aspects of our job.

Staff Sgt. Jason S. Weiss
Fairchild Air Force Base, Wash.

Thanks for the letter. Update: The 36th Rescue Flight got another save March 10. The rescue team had to use night vision goggles and forward looking infrared to find a 15-year-old boy who was lost near the Schweitzer Ski Resort, 11 miles north of Sandpoint, Idaho. Master Sgt. Jason Oldenberg, an IDMT featured in the story "Mountain Rescue" (page 17), picked the teen up. Oldenberg had to be lowered via a 120-foot rescue hoist to assess the survivor's condition and assist with the extraction. The teenager, who had been lost for several hours, was cold but unharmed. He was safely delivered to a civilian emergency medical team and into the arms of his parents.

THE MISSING LINK?

When I visited your Torch E-zine Web site and clicked on the link labeled "Download the Current Issue in PDF Format," I received the November/December 2007 issue. However, I got the January/February 2008 issue when I clicked on the image of the front cover located immediately to the right of that text.

By the way, thanks very much for keeping such a fantastic safety resource readily available for our active-duty and civilian workforce. We appreciate y'all!

Douglas C. McCarty
Air Force Institute for Advanced Distributed Learning

The link has been corrected. Thanks for the heads up and for your feedback.

LETTERS TO TORCH

Have a comment or complaint? Letters to Torch may be sent via e-mail to: torch.magazine@randolph.af.mil. Or mail to Torch Editor, HQ AETC/SEM, 244 F Street East, Suite 1, Randolph AFB TX, 78150-4328, or fax to DSN 487-6982 or commercially to (210) 652-6982. For customer service, call DSN 487-5818, or commercially at (210) 652-5818. Please include your name, address and phone number.

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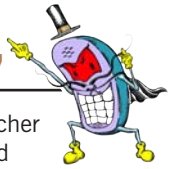


Reference the article "Cell Phones Blamed in Train Deaths, Injuries" in your January/February 2008 issue ("Tales of the Strange," page 6), it turns out that reading Torch is a good thing. It brought to mind an accident that occurred in Greshim, Ore., involving a train and an 18-wheeler.

In the mishap, a semi-truck driver had just taken on a load of crushed plastic bottles for recycling. He was on a cell phone call with his dispatcher telling her that he was loaded and would soon be on the interstate. His dispatcher heard the train sound its horn just as it hit the tractor-trailer and its distracted driver.

I truly enjoy Torch. Keep up the good work.

Retired Master Sgt. Jim Thomas
Via e-mail

SEEING THE LIGHT WITH 'WIDOW-MAKERS'

Regarding your article in the November/December 2007 Torch titled "Glow-in-the-Dark Widow-Makers" (The Alert Consumer, page 7) that claims optical brighteners in laundry detergents could make Airmen Battle Uniforms glow in the dark, the picture you use was taken with ultraviolet lighting. This is not an indication of the performance of ABUs when viewing with night vision.

ABUs are meant to suppress near infrared, typically when viewed with night vision scopes. Whiteners (phosphors) in laundry detergent are meant to work in the blue and ultraviolet light. Typically UV is only out when the sun is out.

Although this concern is not as serious as your article caption would suggest, I will reiterate that it is Air Force policy and just a good idea to adhere to the care instructions. … By the way, I use "Woolite."

Tech. Sgt. Jason D. Scott
Lackland Air Force Base, Texas

I am the chief of safety for 22nd Air Force. In your November/December 2007 issue, you have an excellent article ("Glow-in-the-Dark Widow-Makers") regarding the effects of optical brighteners on the Airmen Battle Uniforms (which I plan to reprint in our newsletter). … I do appreciate your efforts with Torch Magazine. It is an excellent product (loved the "Doggie Boot Camp" cover photo (May/June 2007 issue) … reminded me of how I felt on day one at training camp many years ago!).

Ron Marx
Dobbins Air Reserve Base, Ga.

2008 TORCH CALENDAR

I noticed that Feb. 18 is listed as "Presidents Day" on your 2008 Torch Calendar. Shouldn't it be Washington's Birthday? Presidents Day is a marketing term made common by business. In addition, it has been so successful that people no longer remember that the date is actually Washington's Birthday observance. I believe by perpetuating the Presidents Day misnomer, we contribute to a little erroneous history. Thank you for a great publication.

Lenward Bonafede
Keesler Air Force Base, Miss.

You are correct that the federal holiday is officially designated as Washington's Birthday. However, since the late 80s, Presidents Day has become the common name (though still not the official name adopted by the federal government) for this federal holiday. Many federal agencies, states and local governments use the term Presidents Day. Both variants, along with "Washington and Lincoln Day," are among the official names of a number of coinciding state holidays, as well. The federal holiday is celebrated on the third Monday of February.

Because of its widespread usage, we chose to use the Presidents Day variant to avoid confusion with Washington's actual birthday, which is on Feb. 22 (also listed in our calendar). Thank you for your question and for your interest in Torch.

A friend of my dad's had the Torch Calendar at work, and my dad was just blown away by the photos. So I had to get a copy to surprise him with it! Thanks!

Jennifer Rutkowski
Phoenix

Thank you for your nice magazine and calendar. I work with the Nebraska Department of Education. We work with people with disabilities, many of whom are veterans. Your publication is very well done. I just love the Air Force, and I am sorry I never joined.

David Altman
Lincoln, Neb.

I have been a huge fan of the Torch Calendar for three years now. I am currently serving as a military training officer in the Euro-NATO Joint Jet Pilot Training program and offer copies to my student pilots as incentives. Thanks!

First Lt. David G. Mitchell
Sheppard Air Force Base, Texas

The 2008 Torch Calendars look great. Most people seem to like the new format. Although, two or three people did say they hoped the calendar wouldn't get any smaller because the average age of our workforce is over 50.

Lisa H. Aschbrenner
Hill Air Force Base, Utah

For the past few years I have received your awesome calendar and enjoy the information contained within it. It is quite informative.

Brian Kreie
Enid, Okla.

I obtained the Torch calendars for our Civil Air Patrol unit. We gave them out quick. They are a great part of our motivational efforts for cadets.

Chris Bolen
Crane, Ind.

I am the administrative support person for the 664th Aeronautical Systems Squadron — T-6A and T-6B (Joint Primary Aircraft Training Systems) aircraft, which is featured in the 2008 Torch Calendar. Your calendars were very popular with the T-6A Air Force and Navy team. Many people from the T-38 and T-1A aircraft teams (also aircraft featured in the calendar) saw them and wanted a copy as well. You have made several people very happy.

Carol D. Stollings
Wright-Patterson Air Force Base, Ohio

HUMVEE EGRESS TRAINING INCREASES SURVIVAL IN COMBAT

SOUTHWEST ASIA (AFPN) — Airmen from the 379th Expeditionary Security Forces Squadron are receiving Humvee egress assistance training to increase their survival in combat. More than 260 Airmen were trained recently over a four-day period.

"The purpose of the training is to teach combat Airmen the proper procedures to egress from an inverted Humvee," said Tech. Sgt. Thomas Williamson, 379th ESFS noncommissioned officer in charge of training.

Conducting this training is necessary for combat Airmen to achieve self-control and overcome natural fear and panic following the catastrophic event which led to the vehicle being inverted, he said.

"This is probably one of the most realistic training scenarios that we can go through," Williamson said. "This simulator is the closest thing to a real rollover that we will experience."

According to a study reported by Defense Helicopter magazine in September 2000, "A person who is 'egress trained' stands a 250 percent greater chance of survival than an untrained occupant when faced with an egress emergency."

"The Army has been training their Soldiers in Humvee egress for quite some time," said Kyle Torres, 379th ESFS training manager. "So we coordinated with the local Army support group, and they let us use their equipment to train our personnel."

The training comprises two sessions. First, there's a classroom lecture, which covers Humvee characteristics, as well as rollover drills, rollover egress and water egress in the event that Airmen find themselves submerged under water in the Humvee. Next, there's hands-on rollover training in a Humvee simulator, where trainees practice to quickly and safely egress and recover the vehicle.

For the hands-on training, the trainees don their body armor, safety goggles, gloves and helmet for a ride in the simulator.

"The simulator is a real Humvee that had been sent to the defense reutilization and marketing office," Torres said. "The front and rear of it have been removed, and the body of the Humvee sits on a framework to hold it in place. An electric motor and gear box restraint, motor and transmission were installed, which allows the Humvee to invert 180 or 360 degrees. Everything inside was left the same way."

Overall the training has been a success and a learning experience for all.

"It was different," said Tech. Sgt. Gary Stansberry, deployed from Dover Air Force Base, Del. "It's very easy to get disoriented when you're upside down. Even though it was my first experience, I don't think I would have any problems getting out or directing my people to get out."

Although the training was only a test, it will become a valuable tool in the time of combat.

"With the ever-changing role of security forces in today's Air Force, this training provides survivability of our defenders in Iraq, Afghanistan and other parts of the world," Torres said.

— Tech. Sgt. Sabrina Foster
379th Air Expeditionary Wing Public Affairs

by Staff Sgt. Samuel Bendet

After getting stuck in the mud while patrolling through Kirkuk, Iraq, *soldiers evacuate their Humvee. Some soldiers and Airmen in Southwest Asia are now better prepared for the real world of driving Humvees after going through Humvee egress assistance training, which even covers what to do when submerged.*

NASCAR DRIVER APPEARS IN AIR FORCE DRIVING SAFETY VIDEO

KIRTLAND AIR FORCE BASE, N.M. (AFPN) — The driver of the Air Force-sponsored No. 21 Ford for the NASCAR Nextel Cup Series appears in a public service announcement video promoting driving safety.

In the 90-second segment, driver Jon Wood emphasizes the use of seat belts, observing speed limits and not driving after drinking.

The video is suitable for use on local commercial and public television broadcasts, installation command channels, and Armed Forces Radio and Television Service programs, as well as during commander's calls and safety briefings.

Copies are available free to all Department of Defense units through the Defense Automated Visual Information System/Defense Instructional Technology Information System site: *http://dodimagery.afis.osd.mil/davis/*. Enter "NASCAR" in the search field. The Product ID Number is 614647, and the title is "U.S. Air Force NASCAR Driving Safety."

by Master Sgt. Scott Reed

NASCAR driver Jon Wood *poses for an Air Force Recruiting Service publicity photo. Driving car No. 21 Wood made his professional Nextel Cup Series debut in the Air Force paint scheme Ford Fusion at Las Vegas early in the 2007 season.*

AIR FORCE RELEASES REPORT ON TODDLER'S DEATH

RANDOLPH AIR FORCE BASE, Texas (AETCNS) — The Air Force released a report of investigation into the Sept. 19 death of a 2-year-old dependent son of a senior airman at Tyndall Air Force Base, Fla., citing the cause of the accidental death as a result of workplace complacency.

The investigation board, which released its report Jan. 16, found that the boy accompanied his parents to his father's off-duty workplace at Tyndall's Pelican Point Golf Course. The Airman was employed by the golf course to clean and maintain golf carts.

While moving a cart from one area of the storage facility to another, the Airman put the cart in reverse. He failed to see his son behind the golf cart and ran over him. The toddler died as a result of blunt force trauma injuries sustained in the collision.

AIRMEN AGAINST DRUNK DRIVING
HELP NEARLY 1,000 PEOPLE AT ALTUS IN 2007

ALTUS AIR FORCE BASE, Okla. — A robust Airmen Against Drunk Driving program here saved 994 people from potential alcohol-related incidents in 2007.

Additionally, thanks in part to the efforts of AADD, Altus saw a reduction from 12 driving under the influence arrests in 2006 to seven in 2007.

"The wonderful thing about AADD is that it is here for the base community whether you're military, civilian or a dependent," said Staff Sgt. Pete Rollins, Altus AADD program director. "If you are a [Department of Defense] card holder then you can access AADD and use the service.

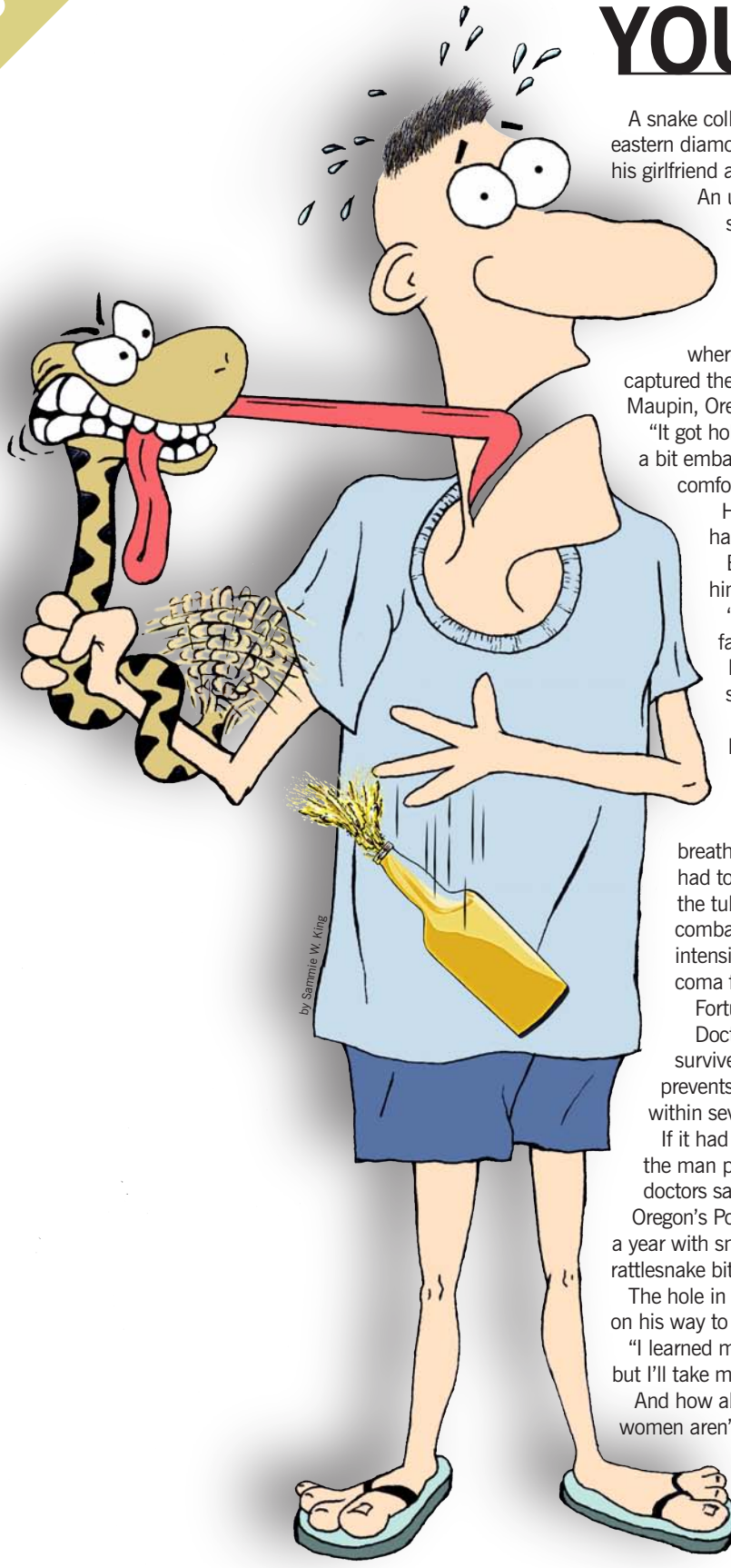
"We will pick you up and drop you off at your place of residence (in the local area) for the night, and it will prevent you from drinking and driving, going home with someone who is drinking and driving, public intoxication and any other form of alcohol-related incidences."

Rollins also said the rides are completely confidential.

To volunteer or for information on the Altus AADD program and alcohol-related topics, call (580) 481- 6458/6698.

— Senior Airman Clinton Atkins
97th Air Mobility Wing Public Affairs

SNAKE GOT YOUR TONGUE?



A snake collector from Portland, Ore., stuffed a 20-inch eastern diamondback rattlesnake into his mouth to impress his girlfriend and barely survived the stunt.

An unwilling participant in the 23-year-old man's showboating, the venomous snake bit back. It sunk its fangs into the man's tongue, and he was soon near death with a swollen tongue that blocked his airway.

The snake collector, who was at a barbecue where he'd already downed a few beers, had captured the rattler three weeks earlier on the highway near Maupin, Ore.

"It got hold of my tongue," the man said, more than a bit embarrassed. "It was my own fault; I felt too comfortable with it and got complacent."

He said at first the bite felt as though someone had given him a shot in the mouth.

But it quickly worsened, as his girlfriend drove him to Oregon Health and Science University.

"You know that painful feeling when your arm falls asleep badly?" he asked. "Well, it was like that with my whole body, only 10 times stronger."

As his tongue and throat swelled and cut off his airway, the pressure forced blood to spray from his nose until his entire face was covered in crimson.

Since trauma doctors couldn't get a breathing tube past the man's swollen tongue, they had to cut a hole in the front of his neck to insert the tube. They then injected him with antivenin to combat the rattler's toxins. Finally, they moved him to intensive care and placed him in a medically-induced coma for three days until the swelling went down.

Fortunately, their efforts saved his life.

Doctors say the snake enthusiast was lucky to survive the incident, as an obstructed airway that prevents breathing will cause most people to perish within seven minutes.

If it had taken any longer to get to the hospital, the man probably would have died of asphyxiation, doctors said.

Oregon's Poison Control Center sees about 50 people a year with snake bites, usually hikers. Deaths from rattlesnake bites in Oregon are extremely rare.

The hole in the victim's throat is healing nicely, and he is on his way to a full recovery, doctors said.

"I learned my lesson," the man said. "I still love snakes, but I'll take more care in handling them."

And how about handling relationships? He discovered that women aren't overly impressed with under-the-influence poisonous serpent stunts — even ones that don't maim or kill. His ex-girlfriend can attest to that.

— Compiled by Tim Barela from wire reports

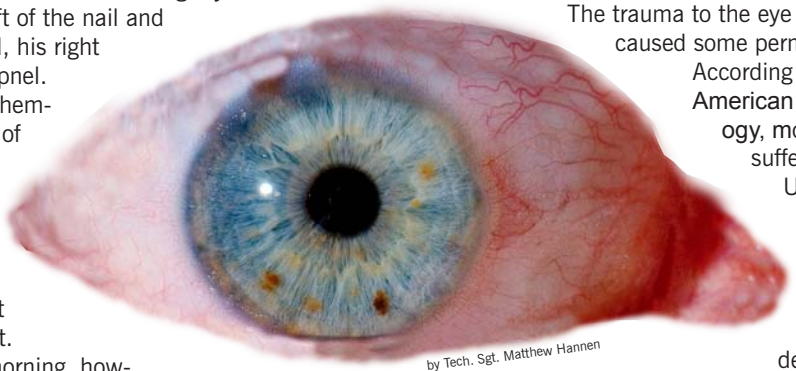
THE 'EYES' HAVE IT

SERGEANT SUFFERS PERMANENT LOSS OF VISION FROM UNTREATED INJURY

While doing a self-help project at work, a technical sergeant hammered a nail into a wall stud. He didn't hit the nail cleanly, and the hammer ricocheted. The sergeant didn't know it at the time, but tiny metal fragments from the nail torpedoed into his cornea.

It never even occurred to the sergeant to wear safety goggles while hammering. How many times had he hammered nails in the past? Thousands at least — all uneventful, except for maybe a smashed digit or two that smarted for several seconds.

In this particular case, the nail he hit was slightly above his head. The hammer glanced off the nail head slightly down and to the left. As he stood left of the nail and hammered with his right hand, his right eye took the microscopic shrapnel. Three metal shavings lodged themselves right below the surface of the cornea, hardly causing so much as a flinch from the unsuspecting worker.



by Tech. Sgt. Matthew Hannen

His eye didn't start hurting right away. As a matter of fact, he suffered no discomfort for the rest of that day or night.

When he woke up in the morning, however, his eye felt as though it had dust or sand in it. It was uncomfortable, but he rinsed it with water and didn't give it much more thought.

By the next day the eye was worse. The white of his eye had turned crimson, and it started to get a bit puffy. The discomfort increased and even burned at times. The sergeant's wife encouraged him to go to the doctor, but the 32-year-old prided himself on a high pain tolerance. Plus he didn't want to bother the doctor because he got some "dust" in his eye.

By the end of the week, the redness and puffiness around his eye had not subsided despite his repeated attempts to flush the eye out. Moreover, his vision had begun to blur slightly.

He decided he would go to the doctor. But since it was the weekend, he would wait until Monday morning.

By Monday morning, the irritation in the eye had become almost intolerable. His vision had become even more impaired.

He went to his family doctor, who immediately referred him to an ophthalmologist.

Using eye drops, light and a special microscope, the eye doctor found the metal particles, which had by this time rusted. The doctor removed the fragments with surgical tweezers.

The trauma to the eye and the untreated infection caused some permanent loss of vision.

According to the Foundation of the American Academy of Ophthalmology, more than one million people suffer eye injuries each year in the United States. Appropriate protective eyewear could prevent 90 percent of these injuries, medical officials with the foundation said.

Dust, sand and other debris can easily enter the eye. Persistent pain and redness indicate that professional treatment is needed. A foreign body may threaten your vision if the object enters the eye itself or damages the cornea or lens. Foreign bodies propelled at high speed by machining, grinding or hammering metal on metal present the highest risk, doctors said.

Corneal infections are serious and can cause permanent vision loss if not appropriately diagnosed or treated, doctors added. So when it comes to deciding whether or not to seek medical treatment for eye trouble, err on the side of caution.

— Tim Barela

SEE THE LIGHT PROTECT YOURSELF FROM EYE TRAUMA

IN THE HOUSE: When using household chemicals, read instructions and labels carefully, work in a well-ventilated area, and ensure spray nozzles are pointed away from you. Many chemicals are extremely hazardous and can permanently destroy the surface of your eyes, resulting in blindness.

IN THE WORKSHOP: Think about the work you will be doing and wear protective eyewear to shield your eyes from flying fragments, fumes, dust particles, sparks and splashing chemicals. Many objects can fly into your eyes unexpectedly and cause injury.

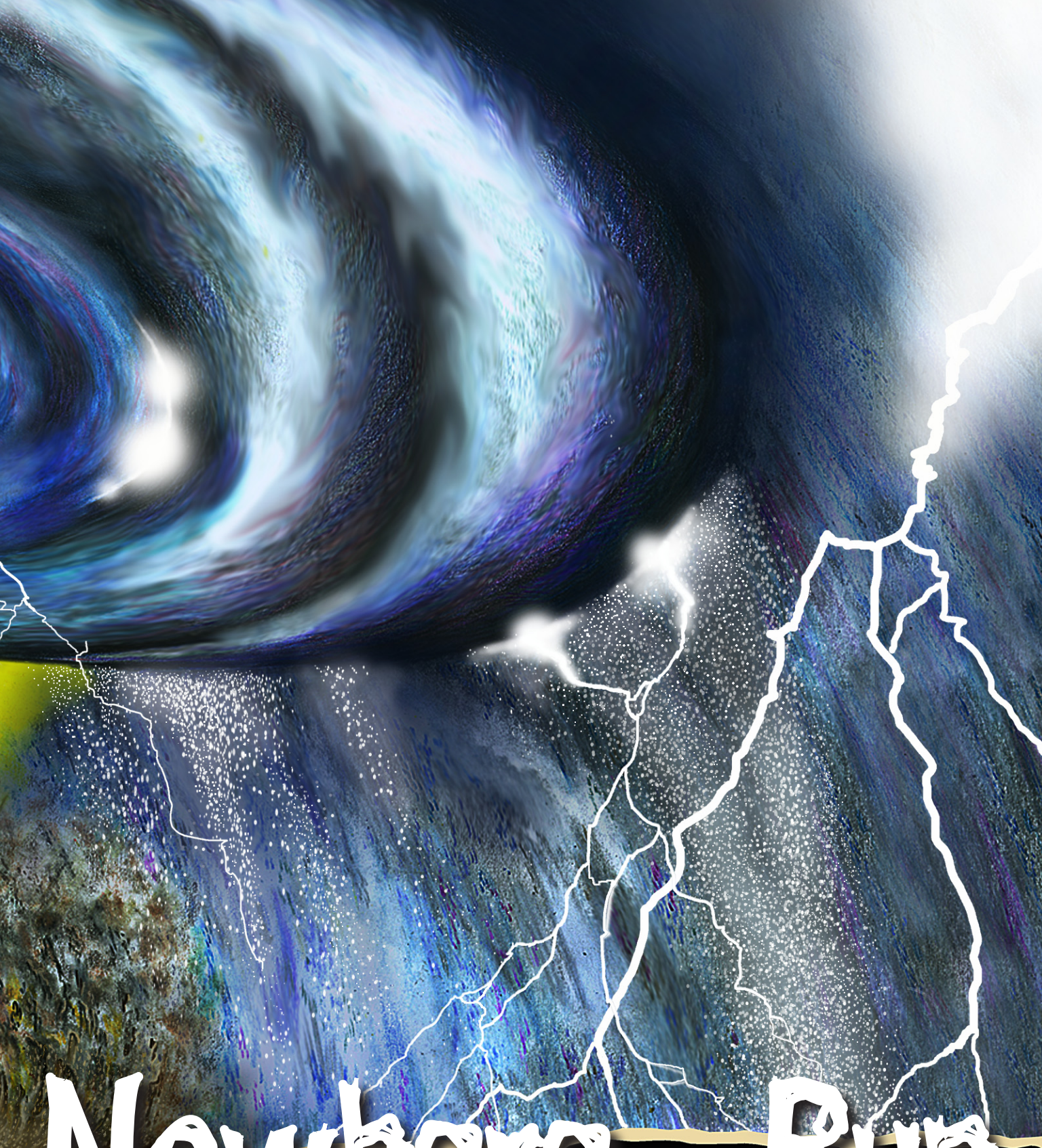
IN THE GARDEN: Put on protective eyewear before you use a lawnmower, power trimmer or edger and be sure to check for rocks and stones because they can become dangerous projectiles as they shoot from these machines.

IN THE WORKPLACE: Wear appropriate safety eyewear for your job. Many of the thousands injured each day didn't think they needed eye protection or were wearing eyewear inappropriate for the job.

AROUND THE CAR: Battery acid, sparks and debris from damaged or improperly jump-started auto batteries can severely damage your eyes. Keep protective goggles in the trunk of your car to use for those emergencies and everyday repairs.

DURING SPORTS AND RECREATION: Boxing and full-contact martial arts pose a high risk of serious and even blinding eye injuries. There is no satisfactory eye protection for boxing, although thumbless gloves may reduce the number of boxing eye injuries. In other sports, such as racquetball, wear safety goggles. Contact lenses offer no protection, and contact lens wearers require additional protection when participating in sports.

— Information courtesy of the Foundation of the American Academy of Ophthalmology



Nowhere to Run

Caught in a violent tornado, two Maxwell AFB families share their horrific tales

By **Tim Barela** *Photos by Tech. Sgt.* **Matthew Hannen** *Illustration by* **Sammie W. King**

A "monster" approached, and nobody could stop it. On Feb. 17, just after 3 p.m., a tornado with winds of more than 150 mph smacked the small town of Prattville, Ala., damaging some 900 homes and businesses, injuring 50 people and leaving a trail of destruction that would make the impact of a runaway freight train look like bumper cars in comparison. Nestled in the heart of the Deep South, Prattville sits 20 minutes from the state capitol in Montgomery and 15 miles northeast of Maxwell Air Force Base.

Maxwell employs many of the residents in this New England-style village of just over 30,000 people. Unfortunately, two of those employees were among those most severely affected by the twister, which rated EF-3 in strength on the Enhanced Fujita Scale. Ilah Glover, a secretary for a two-star general, lost her home. Navy Commander Carl Forkner, an Air War College instructor, nearly lost his life.

It Huffed, and It Puffed

Ilah, who has served the past three years as the secretary to the commander of Air Force Officer Accession and Training Schools (currently Maj. Gen. Alfred K. Flowers), spent that fateful Sunday at home with Wayne, her husband of 29 years.

Wayne and Ilah had built their one-story brick home 12 years earlier, when they decided to make the charming, cozy town of Prattville their permanent residence. Five years ago they added a 200 square-foot sunroom to the dwelling. That seemed to put the finishing touches on their 2,200 square-foot dream home. The couple kept their large yard landscaped immaculately with crape-myrtle, sago palm and banana trees, as well as oleander shrubs. The tropical foliage provided the perfect backdrop for the backyard swimming pool.

They had worked hard all their lives and were enjoying the fruits of their labors, including some expensive "toys," also housed on their property. Wayne, a retired chief master sergeant and former civil service worker at Maxwell, had a Harley Davidson motorcycle and a boat. They also had three vehicles, including a Buick Park Avenue, a four-wheel drive Chevy Silverado Z-71, and a full-size custom van. All were kept in pristine condition.

Just a couple of months earlier in December, they had replaced all of their living room furniture and added a big flat screen TV as an anniversary/Christmas present to each other.

With their three adult daughters moved out, the couple now counted two dogs and a cat as their "kids." Bailey, the tiny male toy poodle, was the oldest at 10 years, while Izzie, a 7-month-old Yorkshire terrier, was the youngest. Their tabby cat, Silly, had been a stray that adopted them.

They had been under tornado warnings all day long with sirens going off constantly. The couple tracked the storm on TV, and Wayne commented that the direction it was traveling seemed unusual.

Living in southern Alabama since 1991, the Glovers had experienced more than a few tornado warnings with zero incidents. They weren't exactly immune to them, but they didn't sit around and fret about them either.

Nevertheless, something about this storm bugged Wayne.

Suddenly, he turned to his wife and said, "If we have to take shelter today, don't go to the closet. Go all the way back to the master bedroom bathroom."

"Why?" Ilah asked.

"I don't know; please just do it," he said.

"OK, fine; just let me know when you want to go," Ilah responded, slightly annoyed. The closet had always been their tornado shelter. She liked the big walk-in closet because it left plenty of room for the couple and their three pets. But it wasn't worth arguing over.

Less than 30 minutes later, it started to rain. But this was no normal downpour. The storm pounded their home like a drum, as if producing giant-sized raindrops.

"Let's go," Wayne said.

Ilah picked up the dogs, while Wayne grabbed the cat.

As Wayne retrieved some pillows and blankets, Ilah started to set up a bed for the dogs in the Jacuzzi.

Wayne said, "No, we have to go further back."

Ilah was irritated. She had never been one of those people who panic over the weather, and the Jacuzzi was a great place to keep her dogs. Nevertheless, she picked up the pooches and followed Wayne to the back of the bathroom.

Meanwhile, the storm's intensity had picked up considerably. Wayne told Ilah it sounded like the jet engine of an SR-71 Blackbird revving up.

With their dream home reduced to a nightmarish rubble, *Wayne and Ilah Glover, with their dogs Bailey and Izzie, say they will rebuild, a process that could take up to nine months.*

Courtesy of the Civil Air Patrol

An aerial view of the tornado's aftermath *shows the Glover's house, far left, demolished, along with those of their neighbors.*

Wayne closed the door at the back of the bathroom, and then …

BOOM!

It sounded as if a bomb had just exploded. The house shook violently for mere seconds, then silence.

Wayne reached for the door and started to open it.

"What are you doing?!!!" Ilah asked with more than a bit of alarm in her voice.

"It's all over with, Babe," Wayne responded with an eerie calmness.

"It can't be all over with; we've only been in here 15 seconds," Ilah said.

But Wayne already had stepped through the doorway. Reluctantly, Ilah followed.

Ilah saw Wayne eyeing the ceiling and followed his gaze. Only there was no ceiling. Dumbfounded, they both stood in their master bedroom and stared at open sky.

Their dream home had been reduced to a pile of rubble. The only room totally intact was the back bathroom where they'd sought shelter. The walk-in closet that had routinely served as their refuge during storms had totally collapsed.

Chills ran up Ilah's spine.

After getting over the initial shock, the couple navigated their way over and through the debris and went to check on neighbors. Everyone was OK, so they returned to survey the ruins where only moments before their home had stood.

As Ilah clutched Wayne's arm, she said solemnly, "We lost everything."

Ilah saw Wayne eyeing the ceiling and followed his gaze. Only there was no ceiling. Dumbfounded, they both stood in their master bedroom and stared at open sky. Their dream home had been reduced to a pile of rubble.

Photos by Lloyd Gallman, Montgomery Advertiser

***Trying to stabilize his neck and spine**, firefighter Jared Maners (inset left) and fire medic Roy Simpson carefully put a neck brace on Navy Commander Carl Forkner, who was critically injured when the EF-3 tornado slammed into his vehicle. At top from left, Sgt. Andrew Ellison, Lt. Josh Brown, and firefighters Cory Russell and Jared Maners attempt to strap Forkner to a backboard while keeping a compress on the commander's 18-inch lacerations to minimize the bleeding.*

Fries, Coke and a Twister to Go

Shortly after taking out the Glover's house, the twister continued its assault on the Prattville business district.

Commander Forkner, who teaches international security studies and is an adjunct instructor in the Department of Warfighting at Air War College, ran errands that afternoon. First, the single dad dropped off his 16-year-old son Brendan at Steak-Out, a local restaurant where the teen works. He then made a quick trip to Lowe's to purchase some Crock-Pot parts.

Forkner had finished up at Lowe's and was heading home when, out of the corner of his eye, he saw the tornado looming from his left.

He stared in awe as the storm tore through the local Kmart as if it were made of straw.

But he had bigger worries.

He sat directly in the tornado's path!

At its base the tornado stretched a quarter of a mile, and as Forkner watched in disbelief, it appeared to span the entire length of the Kmart shopping plaza.

He figured there was no way he was going to outrun it on his current path. So he turned into a nearby Sonic restaurant thinking he might be able to drop his Ford Expedition into four-wheel drive and go out the back of the parking lot and away from the approaching "Armageddon."

But when he reached the back of the parking lot, it was blocked. He turned around and headed back to the exit. By that time, debris was already being blown across the street.

There was no way out.

He decided to park his vehicle under the awning at Sonic. He figured at least that way he wouldn't resemble a tumbleweed being blown down the road.

Like a hulking giant, the storm cast an ominous shadow that blotted out most of the sunlight, and it grew increasingly dark. As the 49-year-old instructor talked to a friend on his cell phone and described the scene, it became harder and harder to hear as the noise from the roaring wind reached a level that he could only describe as a speeding train bearing down on him. His SUV began to shake from the turbulence.

Forkner's next memory is waking up in agony with rescue crews working to save his life.

He has no recollection of the tornado hitting his vehicle and instantly shattering all of the windows. Nor does he remember what sliced through the back of his head, neck and shoulder. At this point, he only knew pain.

Shortly after the twister had pummeled Forkner and his SUV and moved on to new "targets" of destruction, Sonic employees stepped out of the freezer where they had holed up during the storm. The freezer's 4-inch-thick steel walls had kept them safe. When they searched the parking lot and found Forkner, they called 911. A rescue crew showed up only five minutes later.

Among the rescue crew were firefighters Sgt. Andrew Ellison and Cory Russell. They arrived to total devastation. Buildings were battered; power lines and debris lay everywhere.

Ellison and the rest of the crew made their way to Forkner's vehicle and managed to get the door open. They found Forkner sitting upright with glass and debris all about him. He was conscious but in agony.

He also was covered in blood.

Gaping holes on the back of Forkner's head, neck and back bled profusely, and Ellison knew they'd have to get him to a hospital as quickly as possible.

"He's lucky. If whatever hit him struck 1-inch forward, it would have sliced his carotid artery, and he would have bled to death. An inch the other way and it would have severed his spine and paralyzed him for life."

They started an IV, and Russell used bandages to apply direct pressure to the traumatic wounds. Once they had slowed the bleeding, they concentrated on getting Forkner onto a backboard to protect his neck and spine.

Ellison marveled at Forkner's toughness, because even though the commander endured tortuous pain the whole time, he kept his composure.

Forkner, somewhat out of it and going into shock, kept saying, "I trust you guys with my life."

Unaware of his dad's fight for survival, Brendan, who had avoided the tornado's wrath at his workplace, desperately tried to call his father's cell phone to talk about the twister. On the third try, a paramedic answered. He told Brendan that his dad had been injured, and they were taking him to the hospital.

But Brendan didn't know how serious his father's plight really was. Of the 50 incidents the Engine 2 crew would respond to on this chaotic day and into the night, none would be so life threatening as this.

As the crew stabilized Forkner and carefully removed him from the vehicle, Ellison felt that if they didn't get him to the hospital within an hour, the Navy officer would be a goner for sure.

They rushed him to the emergency room at Prattville Baptist Hospital to stabilize him before transferring him to Baptist Medical Center South in Montgomery, where he underwent immediate surgery to repair his wounds.

Brendan, accompanied by his boss, met the ambulance in Prattville during the transfer. While outwardly he tried to remain calm, seeing his dad's injuries rattled the teen. He tried to dismiss the terrifying thought that crept into his mind. …

His dad might not make it.

Rebuilding Their Lives

The Glovers lost a lot. Their home was demolished. Their three vehicles, motorcycle and boat were basically totaled. The trees and bushes that they'd so meticulously manicured? … Plucked from their lawn like dandelions. Their new furniture and big screen TV? … Possibly in Oz. To this day they keep adding to the list of items they lost to the tornado, because it's tough to remember 30-some years of "stuff" they'd accumulated together.

"But we still have each other," Ilah said. "And we have our

Springing into Tornado Season

April showers bring May flowers ... and tornadoes.

In the United States, May has historically had the most tornadoes.

Tornadoes can occur almost anywhere in the world, but the United States is the country with the highest frequency of tornadoes. Each year there are about 1,200 twisters in the United States, causing about 65 fatalities and 1,500 injuries nationwide.

Staying Safe

- Have a family tornado plan in place at home. Know where you can take shelter in a matter of seconds, and practice a family tornado drill at least once a year.
- Flying debris is the greatest danger in tornadoes; so store protective coverings (e.g., mattress, sleeping bags, thick blankets, etc.) in or next to your shelter space, ready to use on a few seconds' notice.
- Turn on local TV or radio stations, and stay alert.
- If a tornado strikes, the safest place to be is in a strong building – preferably in a basement or a small interior room. The important thing is to get away from windows and put as many walls as possible between you and the outside.
- In a house with a basement, know where very heavy objects rest on the floor above (pianos, refrigerators, waterbeds, etc.), and do not go under them. They may fall down through a weakened floor and crush you.
- Mobile homes do not provide adequate protection from a tornado. It's better to evacuate them.
- If there are no secure buildings nearby, lie flat with your hands over your head in a ditch or depressed area.
- Do not try to outrun a tornado in your car, as vehicles are dangerous in a tornado. If you spot a tornado, park the car as quickly and safely as possible – out of the traffic lanes. Get out and seek shelter in a sturdy building. If in the open country, run to low ground away from any cars (which may roll over on you).
- Avoid seeking shelter under bridges, which can create deadly traffic hazards while offering little protection against flying debris.
- After a tornado, keep your family together and wait for emergency personnel to arrive. Carefully render aid to those who are injured. Stay away from power lines and puddles with wires in them; they may still be carrying electricity! Watch your step to avoid broken glass, nails and other sharp objects. Stay out of any heavily damaged houses or buildings; they could collapse at any time. Do not use matches or lighters, in case of leaking natural gas pipes or fuel tanks nearby. Remain calm and alert, and listen for information and instructions from emergency crews or local officials. Your life may depend on it.

– Information courtesy of the National Weather Service

Forkner winces while getting his injuries cleaned and bandaged *by Lucy Mara, a registered nurse at the Wound Care Center at Baptist Medical Center South in Montgomery, Ala. At top right, Mara sticks her finger in a gaping wound on Forkner's back to swab it.*

children, grandchildren, and our dogs and cat. We can replace most material goods, but we can't replace each other."

Ilah credits their survival to Wayne's decision to take shelter in the bathroom instead of the closet. When asked why he suddenly made that choice after years of taking refuge in the closet during tornado threats, Wayne shakes his head and declines to answer. Ilah calls it divine guidance.

While thankful to be alive, the couple admits that there were, in fact, some items that proved tougher to part with than others.

Wayne still gets choked up when he talks about losing most of the mementos from a 30-year Air Force career.

"With all the plaques, coins and other memorabilia, each held fond memories of the places I'd been and the people I'd worked with," he said. "I will never be able to replace them."

Ilah hated losing the things their children had made or bought for them growing up.

"When my girls were young, they purchased this little cup for me at a garage sale," she said. "I used it to hold my rings, which I'd take off each night. I hate that I lost that cup; it was special to me."

A diamond and emerald ring that had been stored in that cup also was especially important to her. Wayne had purchased it for her on Mother's Day more than 25 years ago and now it seemed lost forever.

As they sifted through the debris of their house, Wayne asked his wife if she had any tissue.

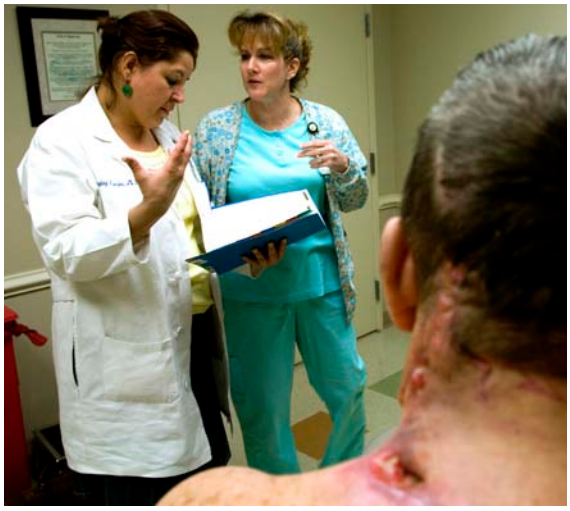
Ilah said, "Tissue? Why do you need tissue?"

He responded, "Well, I don't, but you're going to." Then he pulled out the ring that had been buried under shingles, brick, insulation and other rubble, and "I bawled like a baby," Ilah said.

The Glovers, who are currently living with their daughter and son-in-law, said they will rebuild their home in the same location.

"After all, you never hear about a tornado hitting the same house twice," Wayne said.

While the Glovers rebuild their home, Forkner will be rebuilding his body. Among the 50 people injured in the storm, he was one of only two seriously wounded. Amazingly, nobody was killed. For his part, Forkner only remembered two brief agonizing moments when the rescue crew removed him from the vehicle. His next memory? Waking up in intensive care after surgery.



Discussing the Navy commander's progress, *Dr. MaryLuz Fuentes, left, and Mara said the wounds will heal, but it won't happen overnight. According to the medical team, Forkner will be "part of our family for awhile" — probably for months — and he still may suffer permanent nerve damage.*

He remained in the hospital for 13 days. While his dad recovered, Brendan stayed with his boss, who also happened to be the stepfather of the teen's best friend.

Forkner suffered fractured vertebrae, broken ribs and a broken right shoulder blade. He endured 18 inches of lacerations from just above and behind his left ear all the way down his neck and shoulder area of his back. It took 150 staples to put him back together. The deep cuts left him with nerve damage in his neck and shoulder that affects his mobility and could be permanent.

"He's lucky," said Dr. MaryLuz Fuentes, as she worked on Forkner's injuries at the Wound Care Center in the Institute for Advanced Wound Care, Baptist Medical Center South. "If whatever hit him struck 1-inch forward, it would have sliced his carotid artery, and he would have bled to death. An inch the other way and it would have severed his spine and paralyzed him for life."

The Navy commander has to undergo months of physical and occupational therapy. And a neurosurgeon will hopefully repair and regenerate the nerve tissue that was damaged.

"The big issue is regaining feeling in my neck and shoulder, which lack range of motion right now," he said. "I have to turn my whole body if I want to look left or right. The hardest part is trying to tie my shoes. The doctors can't say if I'll fully recover. When you're talking about nervous system tissue, it's such a crap shoot. It's just one of those mysteries of the human body. It'll do what it's gonna do."

Both the Glovers and Forkner pointed to one piece of advice for those who find themselves in severe weather warnings: No matter what you've seen in the past, weather is always unpredictable. It can move and change very quickly. So heed warnings and think about and prepare for things before they happen. Just because it's never happened to you, doesn't mean it won't.

"And if it's you against nature," Forkner said, "there's a pretty good probability that nature's gonna win."

Lending a Hand

Maxwell Airmen assist city devastated by tornado

MAXWELL AIR FORCE BASE, Ala. (AFPN) — Two days after a devastating tornado severely damaged or completely leveled 150 homes in Prattville, Ala., Feb. 17, more than 20 Maxwell Air Force Base Airmen teamed up with 66 Officer Training School trainees from the base Feb. 19 to help the community recover.

The Enhanced Fujita Scale-3 tornado that swept through the city 15 miles northwest of Maxwell AFB produced winds of 150 mph and damaged more than 900 residences and businesses.

Armed with gloves to protect them from the debris they'd be sifting through, the Maxwell volunteers were quickly put to work Feb. 19, sorting piles of rubble to simplify pick-up by city work crews.

"When we stepped off the bus, we saw pure devastation," said Officer Trainee Joseph Van Valen as he and other volunteers sifted through rubble in a residential area of Prattville. "I have never seen anything like this before."

As Van Valen removed twisted metal panels from a mound of what used to be someone's home, he said he felt compassion for the resident.

"The very first thing I noticed about this house was that the kitchen was sitting in the open," he said pointing to a dwelling that was left without a roof and two exterior walls. "A kitchen is the center of any house. It's where (families) gather to get food. … That was very moving to me."

As the group slowly made its way through the neighborhood, categorizing the refuse, Prattville residents took the opportunity to search for personal items ripped from their homes by the heavy winds.

Capt. James Damato, an OTS instructor who helped coordinate the base's volunteer effort, said he had access to a large number of people who could lend a hand in a time of crisis. He said the trainee's class schedule was rearranged to offer the community support.

"A lot of military — retired and active duty — live out in this community," he said. "These are our neighbors … our families."

by Master Sgt. Scott Moorman

A broken mirror reflects on the tornado damage *and cleanup volunteer Capt. Joseph Timberlake as he collects debris amongst the wreckage of a home Feb. 19 in Prattville, Ala.*

Maj. Gen. Alfred K. Flowers, Air Force Officer Accession and Training Schools commander, and Col. Paul McGillicuddy, the 42nd Air Base Wing commander, toured the site and talked with local officials.

Flowers said the disaster area broke his heart, and he pledged to provide more volunteers if needed.

"This is (a time) when the community needs our help," the general said. "They help us all the time. Now it's our time to help them."

McGillicuddy said the Maxwell community will continue to be good wingmen and assist the city as long as it takes, and knows the city wouldn't hesitate to do the same for the base.

"They are our neighbors, and we are here to help," the wing commander said. "We are just a phone call away for each other."

In addition to help with the cleanup, base officials held an emergency town hall meeting Feb. 19 for victims of the disaster. Some of the representatives that attended the meeting included those from finance, chaplain, medical, legal, Air Force Aid Society, child development center, traffic management office, and the Airman and Family Readiness Center.

Approximately 25 of the homes destroyed in Prattville belonged to base employees, while another 170 base employee residences were damaged. The base's privatized housing developer, Pinnacle-Hunt, offered on-base housing options for military families needing immediate shelter.

When U.S. Secretary of State Dr. Condoleezza Rice visited Maxwell in April, she expressed her appreciation to Lt. Gen. Stephen Lorenz, who heads Air University and will become the new commander of Air Education and Training Command this summer. She commended the general and Air Force members from Maxwell for their involvement in the community — especially in aiding victims of Prattville during the tornado destruction.

"As a daughter of Alabama, I want to thank you," Rice said.

— Master Sgt. Scott Moorman
Air University Public Affairs

by Master Sgt. Scott Moorman

Carrying what was left of a baby crib*, Officer Trainee Michael Hart from Maxwell AFB, Ala., helps with the cleanup Feb. 19, two days after a tornado ravaged Prattville, Ala., a city located 15 miles northwest of the base.*

Leaning back while 40 feet up a pole, *Airman Basic Cody Seymour has to trust his harness to pass this acrophobia test at Lackland AFB, Texas.*

Pole Position

Fear of heights tested in 'Acrophobia 101'

Story and photos by Tech. Sgt. MATTHEW HANNEN

Acrophobia evaluator *Tech. Sgt. Michael Fettis demonstrates how to climb a 50-foot pole, so basic trainees can accomplish the task without losing their balance or losing their cool while battling a fear of heights.*

Sitting atop a 50-foot telephone pole, the black hawk fanned its feathers and spread his 5-foot wings in a menacing display. The bird of prey eyed the intruder who had advanced to within 10 feet of the hawk's perch. Reluctantly, the riled raptor relinquished his pole position and went to find another place to sunbathe.

Its unwitting antagonist didn't want to start a battle for airspace, but for basic trainees trying to pass the acrophobia test at Lackland Air Force Base, Texas, invading "turf" usually reserved for birds is essential.

Acrophobia is an extreme or irrational fear of heights and can be hazardous, as sufferers can experience a panic attack in high places and endanger themselves or others, said Tech. Sgt. Michael Fettis, the acrophobia evaluator for basic trainees trying to get into career fields that require them to work above ground-level.

Acrophobia testing has been around since the late 1970s to help the Air Force take a look at the compatibility of Airmen to do certain jobs. There are six career fields that require testing for acrophobia. They include airfield systems; communications cable and antenna systems; voice network systems; electrical systems; structural; and pest management.

Some Airmen will find working at extreme heights is a perfect fit for them; others will discover this job's for the birds.

"I can't force them to do this test," Fettis said. "Some trainees get up there and do it with no problem, others do it but still feel it's not for them, and others decline to test altogether. That's OK, because it's better to filter out the ones that have an unreasonable fear of heights here than at tech school."

To pass the test, trainees must climb a 40-foot ladder attached to a 50-foot telephone pole. They wear a harness that is fastened to the ladder. When the trainees are at the peak of their ascent, Fettis instructs them to let go of the ladder, lean back against their harness and touch their nose.

The instructor said Airmen must learn to trust the harness to complete this exercise. But having faith in the harness to hold them while leaning backward 40 feet off the ground is not a natural act. Even those who have no fear of height can get skittish when they have to rely on a few safety straps to keep them from plummeting to their death.

"I don't pass or fail the students; they decide for themselves," said Fettis, who tests nearly 100 trainees a month with an average of a 7 percent failure rate.

He said the ones who have no fear of heights typically volunteer to go first and have fun with the test. Of course, there's the other extreme — the ones who refuse to even try.

"Then you have the trainees who get up to the 10- or 20-foot mark, do the white knuckle thing, and say, 'I can't do it! I can't do it!'" the evaluator said. "One young man stayed stuck up there for 20 minutes praying to God. He refused to come down because he thought if he failed the test he'd be kicked out of the Air Force."

Fettis said some Airmen simply psyche themselves out by waiting too long.

"It's like me on a roller coaster," he said. "I don't really like roller coasters. I remember standing in those cattle lines of people waiting to ride, and the closer I would get, I would think to myself, 'Oh crap! Why am I doing this?' The more you think about it, the worse you make it on yourself."

He can coach a lot of these Airmen through the test, but there are still going to be those that rethink their career choice.

"I completed the task, but I didn't feel comfortable enough to work in my job (at those heights)," said Airman Basic Kevin Henson from the 322nd Training Squadron, who was testing to be a structural apprentice.

But failing the extreme exam doesn't mean the Air Force puts these Airmen back on the street in civvies. Trainees who don't pass the acrophobia test are simply placed into other career fields.

"I was nervous at first — I hate heights," said Airman Basic Weston Strong with the 322nd TRS, who will become a structural apprentice because he successfully completed the testing. "But it feels good to know I can do this, and that I can do my job."

Obviously, for Strong, the acrophobia test provided him with a glimpse of the heights he can reach in his future career … a birds-eye view.

> "One young man stayed stuck up there for 20 minutes praying to God. He refused to come down because he thought if he failed the test he'd be kicked out of the Air Force."

Extreme pull-ups, *such as the ones performed by Airman Basic Steven Ayers, can make anyone skittish — especially those with a fear of heights.*

ACROPHOBIA

WHAT IS IT? An extreme or irrational fear of heights.

WHY CAN IT BE DANGEROUS? Sufferers can experience a panic attack in a high place and become too agitated to get themselves down safely, making them a danger to themselves or others. When placed in a situation that triggers a phobia, a person's heart rate, respiration and body temperature increase. They may become dizzy or nauseous, and they may feel faint or tremble. Mentally, they perceive the situation to be far more dangerous than reality, and their bodies react with the fight-or-flight response typical in any threat situation. While an innate cautiousness around heights might be helpful for survival, an extreme fear can interfere with the activities of everyday life, such as climbing up a flight of stairs or a stepladder.

No More
Technology to

By **Kim Sears**
Photo courtesy of **David Drais, Lockheed Martin**

What began as a chance discovery in aviation research has evolved into a complex technology that helps save pilots' lives by preventing airplane crashes.

The Automatic Ground Collision Avoidance System, known as Auto-GCAS, is a software-based technology that has demonstrated a 98 percent effectiveness rate at eliminating aircraft crashes into the ground. The system is ready for operational integration on several types of fighters: F-16 Fighting Falcons, F-22 Raptors and F-35 Lightning Joint Strike Fighters, officials said.

"We are excited about the promise of Auto-GCAS," said Air Force Maj. Gen. Jack Catton, director of requirements for Air Combat Command, at Langley Air Force Base, Va. "This isn't just a safety issue for us, it's a warfighting issue. This technology will allow us to save both lives and combat resources. It is clearly the right thing to do."

An F-35 Lightning Joint Strike Fighter *is one of the aircraft that could benefit from the Automatic Ground Collision Avoidance System, which is designed to prevent aircraft crashes.*

Aircraft Crashes?
save pilots' lives ready for take-off

Auto-GCAS evaluates a variety of factors, including aircraft weight and performance. It also uses aircraft navigation positional information, the Global Positioning System, and digital terrain elevation data to constantly calculate an aircraft's 3-D position relative to the earth, the amount of time available before impact, and the maneuver required to prevent a collision with the ground.

The program differs from current crash-avoidance systems in that it doesn't create nuisance warnings and activates only at the last instant to take control and recover the aircraft when it determines collision is imminent. The determination is made when the aircraft is within 1.5 seconds of the "point of no return" and no action has been taken by the pilot.

"Manual or warning-only systems don't prevent many of our (controlled flight into terrain) mishaps," said Col. "Tex" Wilkins, senior Air Force readiness analyst with the Office of the Undersecretary of Defense for Personnel and Readiness. "That's because situations like pilot spatial disorientation, target fixation, loss of situation awareness, or G-induced loss of consciousness may render a pilot unable to process the warning and/or perform the necessary maneuvers to prevent a collision with the ground. Current programs rely on a pilot's ability to manually respond to its warnings.

Auto-GCAS, however, is specifically designed to prevent a collision in situations where a pilot cannot."

Experts at the Defense Safety Oversight Council, formed in 2003 to help reduce safety mishaps within the Defense Department, believed the technology was worth pursuing, and the organization teamed with the Air Force Safety Center to find a cost-effective and efficient way to integrate the technology across multiple platforms. The collaborative effort became the Fighter Risk Reduction Program led by the Air Force Research Laboratory, at Wright-Patterson AFB, Ohio.

Backed by about $2.5 million in seed money from the Defense Safety Oversight Council, the Fighter Risk Reduction Program is operating on schedule, officials said.

Defense Department experts estimate that more than 130 fighter aircraft could be lost and their crews killed because of ground collisions over the next 25 years. ... The Auto-GCAS program could virtually eliminate "controlled flight into terrain" as a mishap category.

"Getting this program to the point it is at today has been years in the making," Wilkins said. "A lot of time and dedication has gone into this project, and I hope we can keep moving it forward."

A team of specialists from the Air Force Research Laboratory, the National Aeronautics and Space Administration, and defense contractor Lockheed Martin realized the need for Auto-GCAS technology in the early 1980s while conducting research on other automated aviation systems.

"Initially, we put the (GCAS) program on aircraft for flight safety during other tests, but discovered it may have a lot more importance than for just the prime things we were asked to look into," said Mark Skoog, Auto-GCAS test director and chief engineer at NASA. "We realized we might have a technology that's very useful and that nobody even considered was feasible at that point in time."

Initially, the technology only worked over flat terrain. Eventually, digital terrain was incorporated onto aircraft and later integrated into the Auto-GCAS program, giving it all-terrain capability.

After about 2,500 automated recoveries over flat terrain and more than 700 automated recoveries using digital terrain, the program was declared "technologically mature" in 2000, officials said.

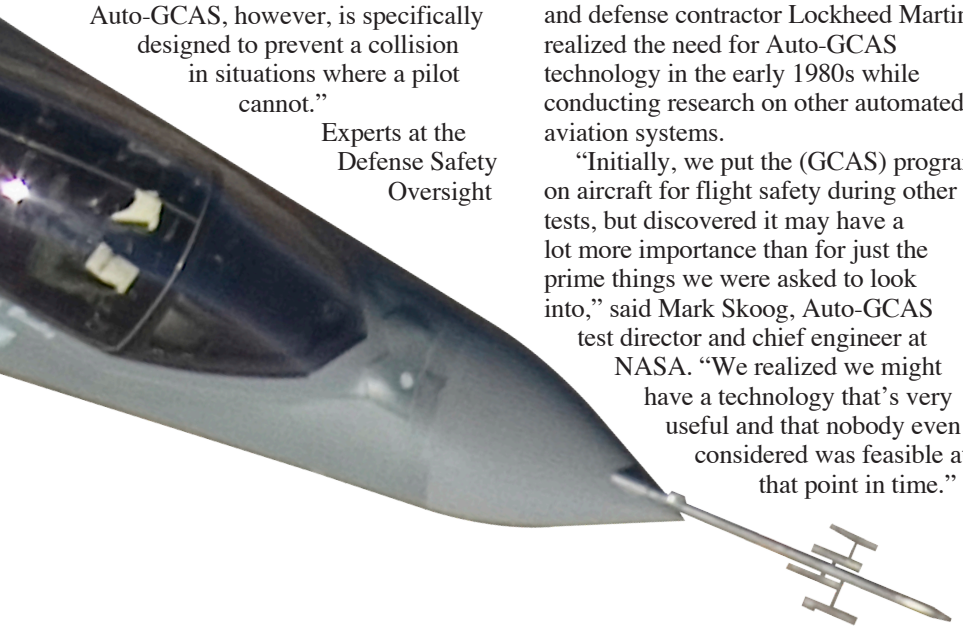
"The main focus of our testing is to make sure we have a nuisance-free system that isn't going to come on when an aggressive pilot doesn't want it to," Skoog said.

He said tests also have helped provide information to pilots who may be skeptical about the system.

"Our primary goal is to make sure people base their opinion (of the system) on good information and data," Skoog said. "I want pilots to realize this isn't someone trying to sell something, it's someone who's honestly trying to give pilots good, solid information to base decisions on."

Defense Department experts estimate that more than 130 fighter aircraft could be lost and their crews killed because of ground collisions over the next 25 years. Wilkins said the Auto-GCAS program could virtually eliminate "controlled flight into terrain" as a mishap category.

"That preserves a lot of combat capability and will obviously make a huge difference in the department," Wilkins said. "We're pleased the technology to curb this trend and save pilot lives is ready to go."



Ms. Sears works for the news media branch of American Forces Information Service in Washington D.C.

WHEN A FLIGHT GOES BAD

AIRCRAFT CRASHES CAN BE TAXING FOR BASE AND COMMUNITY

By Lt. Col. **Ron Whittle**
Photo by Airman **Sara Csurilla**

Aircraft mishaps are emotionally charged events where a base's response is almost always hampered by unforeseen factors that constitute the "fog of war." At the very least, a base's response to a mishap can be chaotic. But without proper preparation, a mishap response scenario could devolve into complete mayhem.

Not that long ago, Laughlin Air Force Base, Texas, and its local community confronted these challenges while responding to an off-base T-38 crash. The crash, which took place in December 2005, resulted from a catastrophic bird strike while flying a low-level approximately 30 miles from the airfield. Crashing into an open field, the aircraft stayed mostly intact but was a total loss. Both of the pilots ejected safely but did receive injuries.

Orchestration of both the initial life-saving response and the follow-on safety investigation proved difficult. This difficulty was magnified with the distances involved. The local county law enforcement, fire department and emergency medical services were the first on scene with Laughlin AFB responders arriving about an hour afterward.

The remote location of the crash challenged the base in terms of timely communication with responders, transportation, security, logistical support, and command and control. In the end, Laughlin performed well, but our experience did punctuate the value of preparation.

The leadership of Laughlin AFB and the town of Del Rio, Texas, understood this value when they decided to stage a major off-base aircraft accident exercise this past fall.

Early in the planning stages, leadership's intent was to involve both on- and off-base emergency response services to include local fire department, law enforcement, and emergency medical services organizations, as well as customs and border protection, special rescue and aviation resources. With Laughlin leading the Air Force in migrating to the new Air Force Incident Management System in 2007 and having just successfully validated the AFIMS concept in its recent Air Education and Training Command Operational Readiness Inspection, base officials knew we were ready to push our emergency response capabilities to the next level. Additionally, leadership determined that we would extend the exercise well beyond where bases typically terminate scenarios to test our safety response processes.

The exercise scenario involved a midair collision between two T-6 aircraft in the Laughlin traffic pattern with an ejection and crash occurring off base near Del Rio and a crippled aircraft returning to base. To add realism to the scenario, we used old aircraft wreckage and created a debris field complete with earth scrapes for the crash scene.

To add realism to the exercise, *the base used an old aircraft wreckage, as well as fire at the scene of the "mishap."*

To simulate the ejection scene, we used actual parachutes, a mannequin to simulate a deceased pilot, and a border patrol volunteer to simulate an injured pilot. We also used two trusted agent T-6 aircrews and aircraft to serve as the simulated crippled aircraft and the search and rescue aircraft.

Lastly, we positioned exercise evaluation team members in key locations to include the T-6 runway supervisory unit, control tower, supervisor of flying, radar approach control and T-6 on-duty supervisor to carefully manage development of the scenario.

We kicked off the scenario through simulated radio call exercise "injects" consisting of "mayday" calls from the crashing aircraft. This set into motion a number of initial response actions, including use of the trusted agent search and rescue aircraft to locate the ejection scene, crash net activation and fire department dispatch. It also triggered notifications to the supervisor of flying and command post, as well as squadron-, group- and wing-level leadership.

We also simulated stop-launch of aircraft and stood up the emergency operations center — formally known as the crisis action team. Subsequent 911-call exercise injects in Del Rio prompted off-base emergency responses to include the fire department to extinguish the crash scene fire and law enforcement to provide initial crash and ejection scene security. Additionally, a customs and border protection rescue unit was launched to locate and rescue the injured pilot, and emergency medical services transported the injured pilot to medical facilities.

After conducting simulated controllability checks, the crippled T-6 aircraft recovered back to base and suffered a simulated gear failure upon taxiing clear of the runway. This twist in the scenario compelled the on-base fire department to conduct an emergency extraction of one of the pilots and maintenance to perform an aircraft lift to clear the T-6 from the runway area.

If this wasn't enough, we extended the scenario into the night and next day to test wing safety's mishap response plan. Per this plan and within two hours of the crash, we formed, briefed and issued equipment to an interim safety board. Subsequently, the board secured aircraft and aircrew records, conducted eyewitness interviews, coordinated toxicological testing for applicable mishap participants, and conducted an initial walk-through of the crash scene.

The next day, the board met to set evidence collection priorities and then accompanied base civil engineering and audio visual to survey and photograph the crash scene. They also coordinated customs and border protection helicopter support to conduct aerial photography of the crash scene.

Of course, the focus of the interim safety board was to collect and preserve evidence (especially perishable evidence) in preparation for the follow-on safety investigation board. The safety response portion of the exercise was terminated with an interim safety board-to-safety investigation board changeover brief late on the second day of the scenario.

This exercise proved extremely complex to plan and execute. Careful attention had to be paid to operational risk management principles in anticipating and mitigating risks with how this complex scenario would develop.

We had to keep in mind that there was always a danger of the exercise taking on a life of its own.

Overall, the exercise did its job and was an incredible learning experience, especially from a safety office perspective with the opportunity to actually practice nearly all aspects of the initial safety response to a major aircraft accident. Even more so, it allowed us to strengthen ties with our downtown emergency responders and establish a more common mindset for how mishap response will be managed in the future.

More specifically, we identified corrective actions to better synchronize our efforts and correct problems experienced in past mishaps and with this exercise. In the end, the benefit was well worth the effort. With proper education, training and periodic exercises, a base and surrounding community's integrated mishap response can be like a well-oiled machine … even in a worst case scenario like a major aircraft mishap.

Colonel Whittle is the former chief of safety for the 47th Flying Training Wing at Laughlin AFB, Texas, and is a T-1A instructor pilot.

by Tech. Sgt. Matthew Hannen

Even with a robust T-6 flying schedule *at Laughlin AFB, Texas, aircraft crashes are rare. But if they do occur, the base and local community will be ready.*

CLEAR THE RUNWAY

POWERED FLIGHT RETURNS TO AIR FORCE ACADEMY

RANDOLPH AIR FORCE BASE, Texas (AETCNS) — Air Education and Training Command officials are testing a program designed to return powered flight to the curriculum at the Air Force Academy in Colorado Springs, Colo.

Called "Jump Start," the program marks the beginning of a plan meant to enhance the academy's focus on airmanship in its curriculum.

"From a safety perspective, I'm very excited about the powered flight program," said Col. John Blumentritt, the AETC director of safety. "A fantastic safety culture is clearly visible throughout the Air Force. The powered flight program allows us to share attitudes and behaviors that strengthen this culture, as it relates to aviation, which will continue to build throughout the careers of our great men and women."

by Staff Sgt. Michael R. Holzworth

Flying in the T-41 Mescalero, *Capt. Steve Priddy and Cadet 2nd Class Brooke Mauss prepare to take off at the Air Force Academy, Colo., Feb. 1. Priddy is an instructor pilot with the 557th Flying Training Squadron and Mauss is a member of Cadet Squadron 5 participating in the "Jump Start" test program, which marks the return to powered flight at the academy.*

There have traditionally been three parts to the airmanship instruction: Soaring, parachuting and powered flight. These elective courses are meant for potential flyers and non-flyers alike. They are intended to round out cadets' knowledge and familiarity with airmanship principles.

The powered flight portion included three parts: academic support, the cadet flying team, and the academy flight screening program.

When the initial flight screening program became operational with the 1st Flying Training Squadron at Pueblo, Colo., in late 2006, the academy flight screening program was cancelled. Though the flight screening aspect was no longer necessary, academy officials sensed a void in airmanship instruction and developed a plan with AETC to return powered flight to the academy.

"The new powered flight course is a pure airmanship course," said Richard Simpson, Air Force Academy airmanship program manager. "It isn't a screening program. Powered flight will give cadets, whether they become flyers or not, a culminating airmanship experience that will help them better grasp the core Air Force missions."

An all-military instructor pilot force, consisting of 65 instructors from AETC and the academy, will train the cadets and mentor them on Air Force missions.

Powered flight will be implemented in three phases. The current test phase began in January and continues through September. It includes a small number of cadets using a combination of Air Force and aero club aircraft, and is under the operational control of the 306th Flying Training Group, a 19th Air Force unit based at the academy.

Starting in October, the program enters an interim service contract for aircraft and maintenance. During this phase, student numbers will increase to 600 annually.

The final phase is planned to begin in the fiscal 2012/13 timeframe, with the acquisition of permanent Air Force-owned aircraft. At that time, the student load will increase to a planned 750 juniors and seniors annually.

"Initial experiences often create strong and nearly unshakable first impressions," Blumentritt said. "That is why we are going to walk before we run. The aviation safety message we send to young men and women, via the powered flight program, must be precise and delivered properly."

— Tech. Sgt. Mike Hammond
Air Education and Training Command Public Affairs

TIRE FAILURE, PILOT ERROR LEAD TO BALAD F-16 MISHAP

HICKAM AIR FORCE BASE, Hawaii (PACAFNS) — An accident investigation board determined there is clear and convincing evidence that failure of an under-inflated nose gear tire on takeoff and the pilot's misinterpretation of the situation caused the July 15 crash of an F-16CJ aircraft at Balad Air Base, Iraq.

Headquarters Pacific Air Forces released the results of its investigation Jan. 30.

The board determined the under-inflated nose gear tire was most likely the result of an improper pressure check following tire replacement, and failure to re-check the tire's pressure during shift change as required. Inadequate inspections by other maintenance personnel and the pilot also contributed to the tire's condition going unnoticed.

The board attributed the oversight to "complacency and overconfidence" because the tire was new. Maintenance personnel installed the tire on the morning of July 15.

According to the investigation report, the pilot misinterpreted the tire failure as an engine malfunction and based on that interpretation, responded according to established procedures by deciding to ground abort the aircraft. The board determined that if the pilot had correctly interpreted the situation, he could have taken off and safely recovered the aircraft.

The board concluded that accurate and truthful tire pressure checks, coupled with more diligent nose tire inspections and the appropriate analysis and actions by the pilot would have prevented this mishap.

The tire failure occurred on the runway 19 seconds into the F-16's takeoff roll at 144 mph. After ensuring the aircraft did not pose a danger to other aircraft or people, the pilot safely ejected and suffered no injuries. The aircraft then skidded off the runway, tumbled and was completely destroyed.

The loss of the aircraft, equipment and ordnance totaled $24,020,700. No other property damage or injuries to military personnel or civilians resulted from the mishap.

The aircraft, assigned to the 35th Fighter Wing, Misawa AB, Japan, was attached to the 13th Expeditionary Fighter Squadron, 332nd Air Expeditionary Wing at Balad AB. It was taking off on a mission to provide coalition ground forces with close-air support, including real-time reconnaissance and armed overwatch.

by Staff Sgt. Michael R. Holzworth

When an under-inflated nose gear tire failed *and the pilot misinterpreted the situation, an F-16CJ Fighting Falcon crashed at Balad AB, Iraq. The mishap cost more than $24 million.*

FIGHTER CRASHES AFTER THROTTLE CABLE MALFUNCTIONS

LANGLEY AIR FORCE BASE, Va. (ACCNS) — Engine fuel starvation resulting from the failure of a throttle cable caused the crash of an F-16CJ Fighting Falcon 1,500 feet short of Tonopah Test Range Airfield, Nev., March 12, according to a recently released Air Force report.

The pilot ejected from the aircraft and received minor injuries. The $29 million aircraft, assigned to the 57th Wing at Nellis Air Force Base, Nev., was destroyed on impact. No fatalities and no damage to personal property were reported. The pilot was the only crewmember aboard the single-seat F-16CJ model.

According to the Air Combat Command accident investigation board report, the pilot experienced a malfunction 46 minutes after takeoff when the engine remained stuck in afterburner (full power). The pilot made several attempts to disengage afterburner before the engine flamed out from fuel starvation.

Investigators determined that a fracture within the throttle cable assembly led to the failure of the component, preventing throttle inputs and loss of the aircraft. Investigators also found that failure of the pilot-controlled lighting system at the Tonopah Test Range Airfield substantially contributed to the mishap sequence.

In their report, investigators note that the pilot and his wingman demonstrated exceptional airmanship and poise in the attempt to recover the aircraft in austere conditions.

F-117A NIGHTHAWK

Retires April 21

"Airplanes do not last forever and develop rapidly. Relative strength in the air depends on what the other fellow has."

— Brig. Gen. William "Billy" Mitchell, 1921

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