

The Combat EDGE

February 2004



The Combat Edge February 2004 Black History Month



Black History Month

GENERAL HAL M. HORNBERG, COMMANDER

COLONEL KEVIN W. SMITH, CHIEF OF SAFETY

THE COMBAT EDGE

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Photo by SrA Greg Davis



Photo by Lars Stout



Photo by PHC Spike Call



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Front Cover: Art by Mark Bailey



LEARN FROM OTHER PEOPLE'S MISTAKES

"There is no way to live long enough to make all the mistakes yourself ... you have to learn from other people's mistakes."

— Mr. Jim Glenn a retired Air Force pilot

Mr. Glenn's sentiment matches the goal of THE COMBAT EDGE. We try to share "there I was" or "there by the grace of God go I" experiences, so others may learn from them and avoid the same mistakes. We are fortunate to have many members of Air Combat Command willing to share their close calls and sometimes embarrassing moments to help others.

However, all too frequently we say it could never happen to me. So we see ACC people repeating those mistakes over and over again. In that regard, I encourage each member of Air Combat Command to share their experiences and for leaders and wingmen to mentor others on mission risks and the risks in our daily lives.

As a wise person said ...
you may never know "if the life
you save might be your own."

Colonel Kevin W. Smith
ACC Chief of Safety



Photo by SSGT Christopher Matthews

Python 1

you're on **Fire!**

By Lt Col Russell Smith, Pope AFB, N.C.

Two and a half years ago, I took off in my A-10 on a Basic Fighter Maneuver (BFM) instructor upgrade sortie with my squadron commander. It was a memorable one, and it still feels like yesterday that this all happened to me.

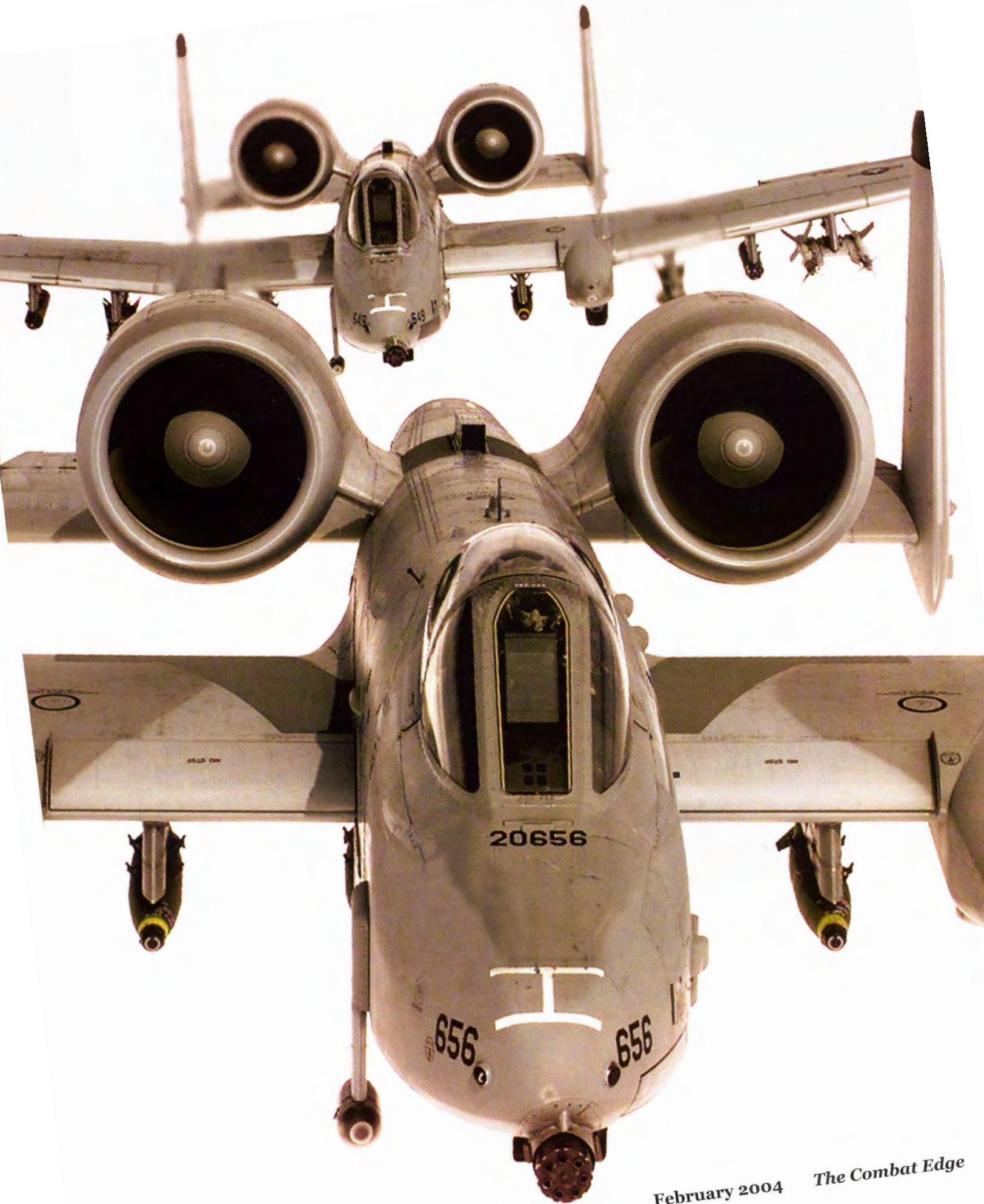
Our plan was to accomplish some heavyweight Visual Flight Rule (VFR) patterns to fill some chased-pattern squares. After the second low approach, I was about 100 feet Above Ground Level (AGL) with my gear just cleaned up. As I raised my flaps my left engine shook violently, the compressor stalled, and the engine immediately caught on fire. My jet yawed viscosly to the left, my ITT pegged to 1200 degrees, and my RPM and fan speed decayed.

My first concern was to control the yaw, so I threw a bootful of rudder toward the good engine, while I established a righthand bank. I called "knock-it-off" while accomplishing the boldface for single-engine failure or fire on takeoff (too late to abort). Because I was still climbing (okay, just barely), I elected not to jettison my training Maverick missiles nor my triple-ejector racks. When I placed the fuel flows to override, I needed to place my right foot all the way down to the floor, even with 5-10 degrees of right bank to alleviate the rudder forces required. The Dash -1 states that, "... additional rudder input and bank will be required to control yaw when selecting Override."

As I raised my flaps my left engine shook violently, the compressor stalled, and the engine immediately caught on fire

From my experience, I can tell you your foot better be all the way to the floor. If I had been smarter, I would have led my rudder inputs and used the rudder trim knob to relieve some of the pressure on my leg.

Meanwhile, Tower started screaming at me, "Python 1, you're on fire!" Then something fell out of my #1 engine onto a grassy area just past the runway and set the ground ablaze. Turns out it was hot stuff falling off my feeble #1 engine. As if that weren't enough, my squadron commander (often regarded as the Air Force's best A-10 pilot in history) chimed in with a much higher voice than I've ever heard from him before or since — "Rudder (my moniker), you've got a pretty good size plume coming out of #1."



I told Tower I was climbing straight ahead into a restricted area and prayed that the Army wouldn't shoot me down with their artillery barrages.

in my T-handle, I did not notice the light. The night vision modifications to our airplane have made this fire light imperceptible

thought I'd have time to review all the checklists on the way back. At any rate, I was intent on get-

My advice is to handle your emergency to a safe conclusion



Photo by SSgt Aaron Allmon

The Dash -1 has a caution which says that fuel flows should remain in Override, "only until a safe altitude and climb rate are established (estimate 1 to 3 minutes)." This estimate in the Dash -1 does not correlate with long established single-engine procedures in the A-10 community. A-10 pilots are advised to achieve 2,000 feet AGL and 200 Knots Indicated Air Speed (KIAS) prior to shutting down an engine. I agree with this sage advice.

in the daylight, a design flaw soon to be corrected.

I finally made it to 2,000 feet AGL, shut the #1 engine down, pulled the fire handle, and then discharged one extinguisher bottle. Although the ITT dropped immediately, the fire light stayed on! After a few more seconds, though, my wingman called and said the fire was out (encouraging), then the fire light went out, although the fire test circuit kept checking bad. Several minutes later, the circuit finally checked good. By the way, my #1 engine had since seized on me and read zero RPM, but the extra drag from the seized engine was not noticeable.

Next, I checked all my stability augmentation switches, cranked my Auxiliary Power Unit (APU), placed my crossfeed on, and placed the APU generator on. I elected to set up a wide right hand pattern back to

ting the sick bird on terra firma as quick as practical.

My squadron commander suggested that I place the fuel flows back to norm to avoid any possible large yaw moment on final. History is replete with A-10s that have departed flight single-engine due to excessive yaw, so I followed his advice. In the event of a go around, I knew that I'd have to jettison my stores and select override again. Unfortunately, raising the gear was not an option (left hydraulics power gear retraction).

I sojourned around the base turn and extended the gear on final with the alternate gear handle. I can tell you one thing — you don't ever want to get slow on a single-engine approach (I didn't) because every time I had the power over 92 percent, the yaw rate increased terrifically. Granted, I had 9,500 pounds of JP-8 jet fuel (very heavy).

I flew my approach mostly at 170 KIAS until close to the overrun. Of course, I had speed brakes (right hydraulic system), so I had no problem stopping. On rollout, Tower was yelling at me again, telling me that there was

On the warm October day, it seemed to take forever to climb to 2000 feet, although it probably was more like 7 minutes, all at UD max (approximately 170 KIAS). I knew I was on fire because my wingman, the Tower, and my engine instruments all told me so. But unless I stared directly at the fire light

final, mainly because it was my right engine, and I

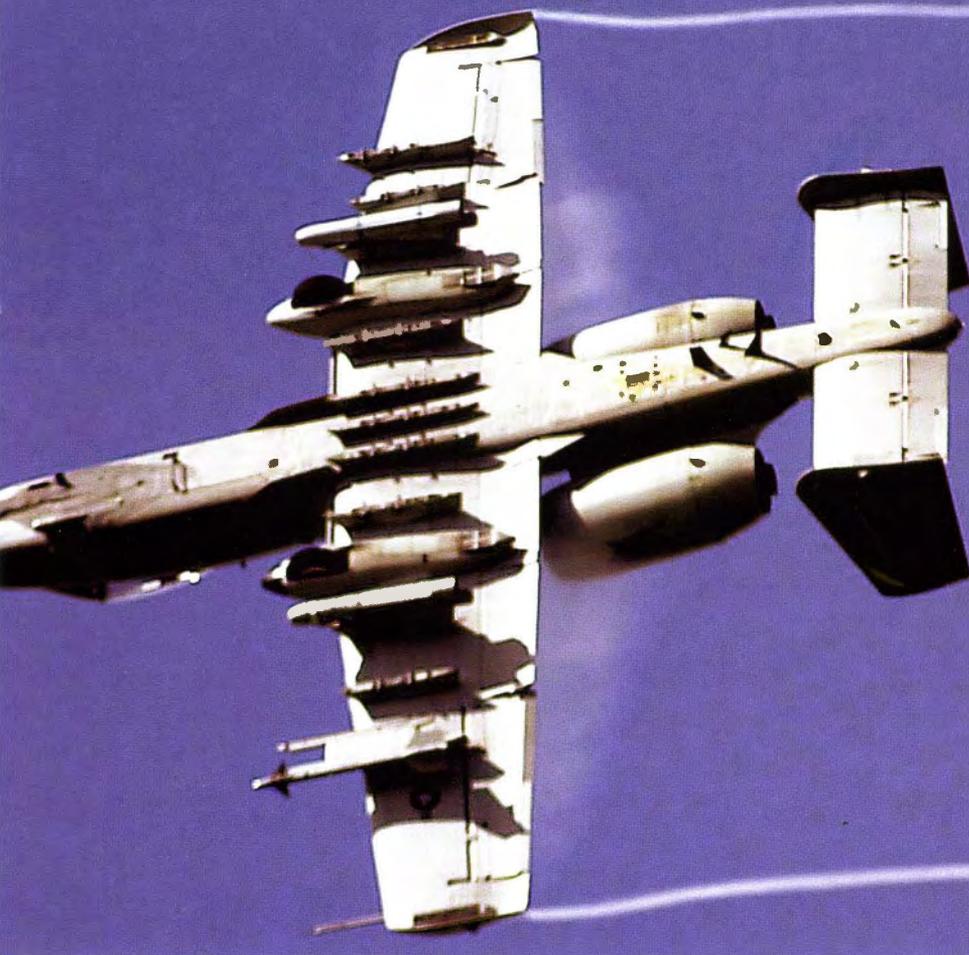


Photo by TSgt Michael Mo

another emergency A-10 coming in right behind me! Instead of stopping straight ahead as I originally had planned, I taxied my sick bird down to the end of the runway, differentially braking off the runway at a 45-degree angle to give one of my bros behind me the entire runway. The most conservative thing to do would have been to stop straight ahead as our local procedures dictate. In retrospect, nosing off the runway at a 45-degree angle was a mistake. My advice is to handle your emergency to a safe conclusion and let the chips fall where they may. As it turned out, the distressed jet behind me was only a precautionary landing due to a cabin pressure anomaly.

Back in the airplane, I started to relax — bad idea! The fire department bubbas met me right away and they started jumping up and down (not a good sign)! Then

Ground Control radioed me, “Python 1, the fire chief says get out, NOW!” Okay, okay, I’m coming. So I shut down my APU and #2 engine and jumped out. Yep, #1 engine was still smoking. After the fire department handled my A-10, they moved over to the grass fire that I had started — it was still raging out of control. Must have made their day, anyway!

The biggest lessons that I can pass on are these:

- Lead with the rudder. Be proactive with your foot because you may not get a second chance. Be prepared when you select override.
- Turn in the direction of your good engine. This will reduce your adverse

yaw and improve your single-engine handling characteristics. Use the rudder trim to help relieve the forces on your leg, but don’t forget to zero out the trim on final.

- Be patient during the climb to 2,000 feet AGL. You’ve got your whole life to think about on the way up.
- Don’t get slow on final. You can find yourself in a world of hurt if you have to select MAX while single-engine.

Step through your emergency to a logical conclusion. Don’t deviate from your planned ending, unless the proverbial school bus shows up. ►



WOW!

I'm Really messed up

By 1Lt Pete Kasarskis, Cannon AFB, N.M.

The next morning I grabbed my gradebook with anticipation to see what impressions my Instructor Pilot (IP) had on my last ride. Much to my surprise, the IP had written a rather benign statement, "big learning curve with poor weather — much experience

gained," on what I considered my scariest flying incident yet. This is the story of how I unknowingly put an F-16 into 90 degrees of bank and couldn't recover the aircraft by myself.

I graduated from UPT the previous September with the op-

portunity to fly the single seat F-16. Immediately, the realization that I would become a single seat pilot caused me to question where my weaknesses were. I began my training at a UPT base that rarely flew during weather, so I'd had little opportunity to experience severe



Spatial Disorientation (Spatial D). By graduation, I could count the number of instrument approaches I had flown in actual weather on one hand. Because of this, I was very leery of my actual instrument experience. Fortunately, I thought, I'm going to Luke AFB in the desert and won't have to worry about Spatial D for a while. I mistakenly thought that, with more experi-

ence (albeit day VFR) and better avionics, Spatial D might never be a problem.

When my F-16 B course began at Luke, we learned that we would be the first F-16 class to train there with Night Vision Goggles (NVG's) as part of the basic course syllabus. The squadron leadership was excited and nervous about this new training. Apparently, some doubted that the Air Force could

send new pilots with only 50 hours of Viper time into the night with NVG's safely. However, because the Air Force operates at night, NVG experience is a critical skill for new wingmen. Using good ORM principles, the squadron leadership trained additional NVG instructors and wisely modified the F-16D models to allow the students to have backseat IP's as safety observers on all flights.



The mission was my second in the NVG training phase and was flown as a 2-ship with one student and one instructor in each jet. We planned to hit a tanker and then practice basic 2-ship tactical maneuvering followed by 1 v 1 intercepts on each other. As luck would have it, we were flying in the middle of the Arizona monsoon season, and the weather forecast called for scattered layers of clouds with thunderstorms in the air-

in route formation while in climbing right hand turns to fly to our airspace. Soon after, it became rapidly apparent that we would re-enter the weather, so lead cleared me to a mile radar trail. I began to weave and

slow the aircraft to get spacing while simultaneously selecting the dogfight mode to get an Air Combat Maneuver (ACM) boresight lock on lead. Unfortunately, we entered the weather when I selected the ACM radar mode, which takes the artificial horizon line out of the Heads Up Display (HUD). I had just lost two sources of

attitude data, horizon and the HUD. While fumbling in the

My IP immediately recovered the jet, informed lead we were Spatial D'ed, and we let the autopilot fly for a good 5 minutes while we recaged our gyros. Once we got to the airspace we quickly decided to terminate and come home because the weather wouldn't allow tactical maneuvering. This was probably a good call because it wasn't until after the recovery, instrument landing, and even touchdown that I felt "normal" again.

Being a human factors major, this incident piqued my curiosity. To find answers, I looked no further than Chapter 22 of AFMAN 11-217. Its opening paragraph states that "the potential for spatial disorientation increases dramatically with the introduction of high performance, single seat fighters in the Air Force inventory." A quick check with the Air Force Safety Center revealed that 30 percent of the 190 Class A mishaps of F-16's (1975-1993) had spatial disorientation and channelized attention listed as primary causal factors. Clearly this is not an uncommon occurrence in the F-16.

According to AFMAN 11-217, as a new pilot I was set up for Spatial D. My general flying inexperience with the F-16 cockpit (50 hours) had not allowed me to become comfortable in the new aircraft. Additionally, since this was my third night ride, my NVG cross-check was not yet routine, causing me to go heads down in the cockpit often. Not surprisingly, pilots with less instrument time are also more susceptible to Spatial D. Therefore, my lack of real instrument time in pilot training aided the onset of Spatial D. Similarly, 11-217 says that Spatial D usually occurs with pilots with limited night proficiency in the past 30 days. Again, this was only my third night ride in 45 days. Clearly, I wasn't proficient.

In addition to the inexperience issues, the formation phase of flight increases the likelihood of Spatial D. It is difficult to suppress the vestibular sensations when in formation because the focal vision is not concentrating on a primary attitude reference. Instead it is focusing on a moving aircraft that may or may not provide reliable information with respect to the aircraft's attitude in relation to the horizon. Because the eyes do not receive reliable attitude information there is no way to counter the vestibular sensations the

My lack of real instrument time aided the onset of Spatial Disorientation

space. It was a low illumination night over the Arizona desert, with no moon or significant cultural lighting, but just the kind of conditions that degrades NVG capabilities.

The ground ops, takeoff, and departure were uneventful. I goggled and was cleared to 1-mile line abreast formation as we climbed into the tanker track. As promised, we ran into several unseen (with NVG's) cloud layers en route to the tanker at FL 260. In fact, I went lost wingman three times with the IP taking the jet to get us rejoined the third time. We finally rejoined on the turning KC-135, degoggled, and stabilized in the observation position. The lengthy tanking (my second night tanking ever) took us through several turns in the Air Refueling (AR) track while flying in and out of the weather. After the extensive time flying formation in turns without a horizon, I didn't feel quite 100 percent as I finished refueling and rejoined onto my flight lead's wing.

I regoggled, and we departed the tanker in Visual Meteorological Conditions

cockpit for an OPS check, I noticed the main Attitude Display Indicator (ADI) telling me I was in about 45 degrees of right bank, significantly different than what I felt. (I probably put this attitude in during the weaving spacing maneuver.) I immediately concentrated on the round dials and placed the HUD back into the normal position. Before I could fight my senses and recover, lead came on the radio announcing that he was in a right hand turn. Despite suspecting that I was Spatial D'ed, I instinctually rolled the aircraft further to the right and placed the aircraft into 90 degrees of right bank. Instead of immediately recognizing/confirming/recovering, I added back stick pressure to maintain my altitude, thus beginning a graveyard spiral which could have ended in collision with the ground 30 seconds later. Luckily, knowing that the increase in G was not right for instrument flight, I finally let go of the controls saying, "I'm really (unprintable) up right now." The whole chain of events took no longer than 10 seconds.

body feels. Hence, 20 minutes of formation flying with the KC-135 in and out of the weather probably degraded my sense of a horizon making me more susceptible to Spatial D.

A final contributing factor to Spatial D is workload in the cockpit. During night or instrument flying, the body cannot rely on the subconscious sensory information because the peripheral visual information is not present. Instead, a person relies on attitude instruments to maintain visual dominance. NVG's do not add any peripheral vision and require an active cross-check to maintain visual. The tasks of finishing post refueling checks, changing frequencies, maneuvering to a new formation, and working the radar at the same time channelized my attention and disrupted my cross-check, causing me to lose the horizon. Unfortunately, with weather and lack of horizon in the HUD, I lost two instruments that provide focal vision to counter my incorrect perception that I was in straight and level flight. The excessive head movement while searching for switches probably exacerbated these sensory misperceptions. If I had stayed on instruments during the weave/spacing maneuver, visual dominance would have been maintained. Instead, a case of the leans gradually developed to the point where I felt straight and level despite being in 45 degrees of right bank.

As fighter pilots, we continually prepare for emergencies with EP's of the day and monthly SEPT's. Ac-

cident reports show that the physiological aspects of flying can kill you just as easily and should be reviewed frequently as well. According to AF Safety, there have been 31 F-16 engine failures from 1998 to March 2003 with no fatalities. During the same period, six F-16 pilots have died after becoming spatially disoriented. Clearly, the regular review of engine emergencies has paid great dividends to safety. Equally, pilots should not become complacent and ignore the dangers of spatial disorientation as



this kills more often than engine emergencies.

Refresher academic training should be more than a simple, "Yes, Spatial D is going to happen, just simply recognize, confirm, recover" briefing. Rather, specific task saturating aspects of flight should be identified and briefed to prevent channelized attention and breakdowns in cross-checks. Experience and proficiency levels for both flight leads and wingmen need to be evaluated on every flight to prevent

two susceptible pilots from flying with each other. A "knock-it-off" and fly the jet first mentality should be stressed at the first hint of Spatial D. Finally, the immediate actions of recovering the aircraft should be chair flown to maintain familiarity with procedures.

As less experienced people are introduced to NVG's, the dangers of Spatial D cannot be over-emphasized. In my case, I was fortunate that I recognized the Spatial D and had 25,000 feet to figure it out with the help of a guy in my backseat. ▶

Trail Blazers

February is Black History month, a time which gives us an opportunity to highlight the significant role African Americans played in U.S. military history. One group the Tuskegee Airmen went on to have the enviable record of not losing a single bomber to enemy fighters despite the significant action they saw. They also went on to have one of the best safety records of the war.



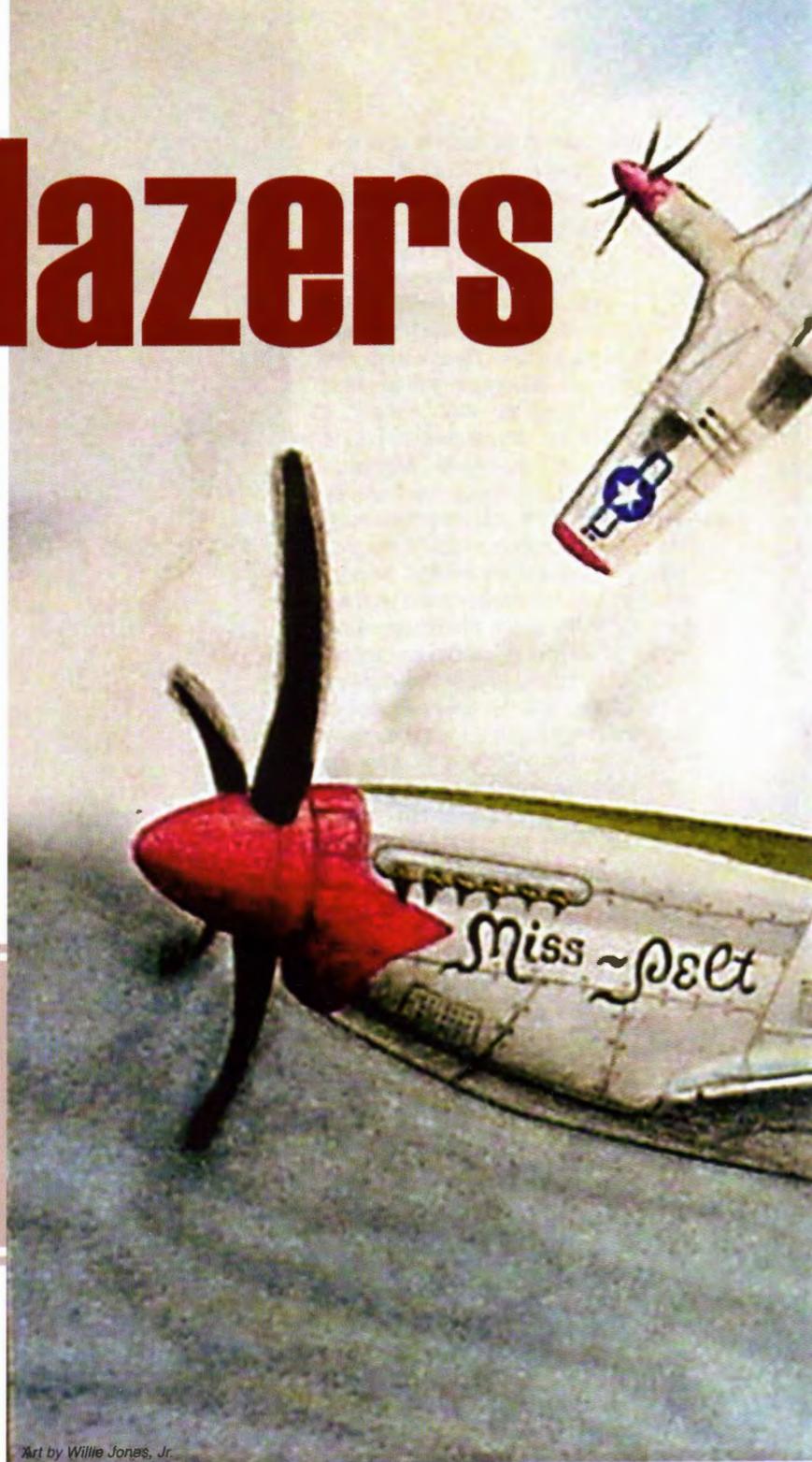
Denied military leadership roles and skilled training because many believed they lacked the abilities to be successful, they were excluded from many career fields and combat. This exclusion included flying and flying support functions.

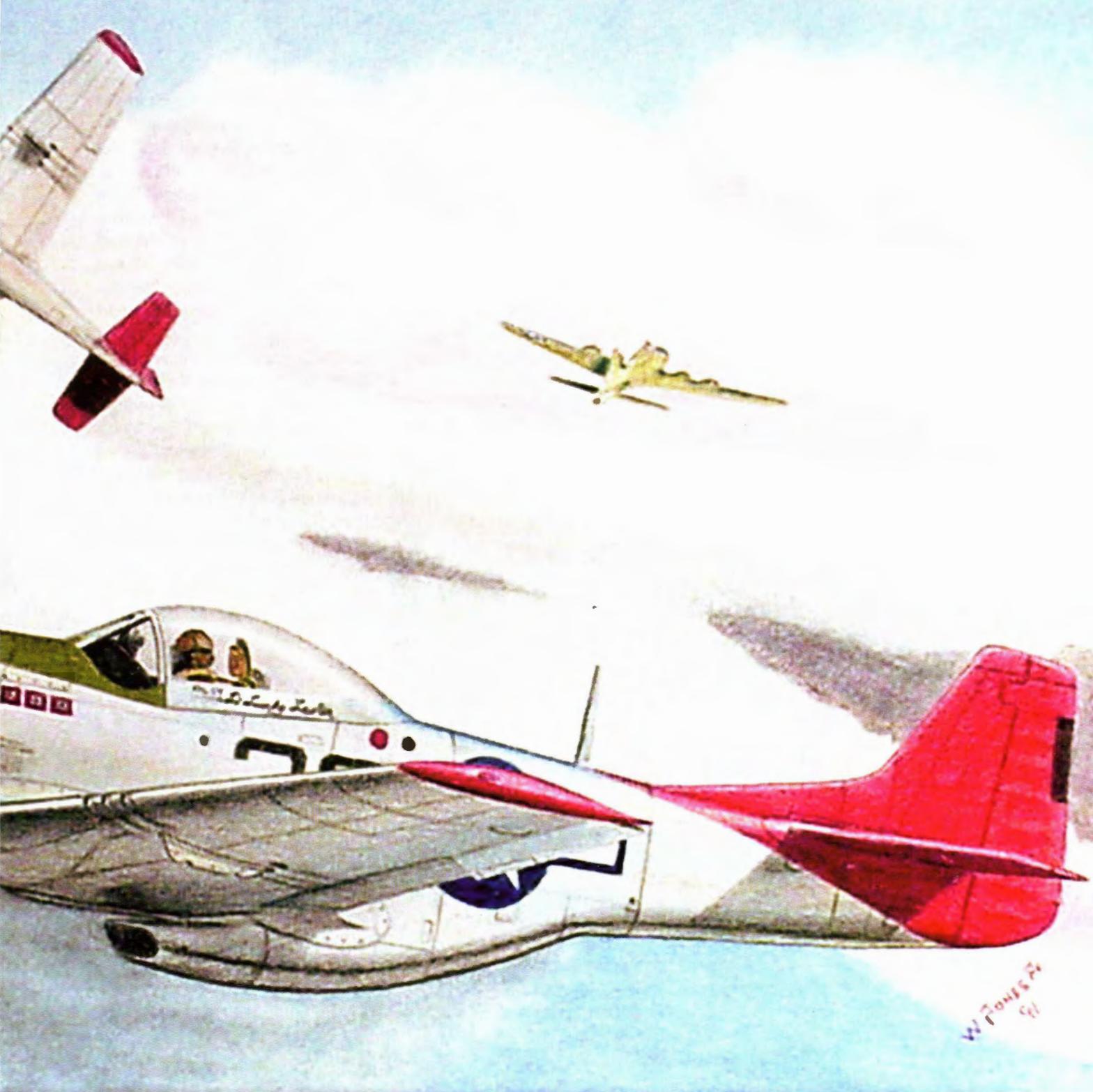
In an effort to open doors to these fields, civil rights organizations and the black press exerted pressure that ultimately resulted in the formation of an

all African American pursuit squadron based in Tuskegee, Alabama, in 1941. They became known as the Tuskegee Airmen. These Airmen went on to form one of the most successful combat units in World War II, and had the enviable record of not losing

a single bomber to enemy fighters despite the significant action they saw. No other combat unit in World War II accomplished this feat.

Prior to the "Tuskegee Experiment," very few African Americans learned to fly. In 1939, U.S.





government-sponsored flight training began with the passage of the Civilian Pilot Training (CPT) Act. Administered by the Civilian Aeronautics Association (CAA), the Act authorized selected schools to offer CPT primary flight training for pilots in

case of a national emergency and included African American colleges. The government paid for ground and flight school instruction, while the colleges provided instructors, physical examinations for potential students, and transportation to ap-

proved flying fields. Prior to this Act, African Americans were self-taught or trained overseas.

The approved schools for African American candidates included Tuskegee Institute, Howard University, Hampton Institute, and the Coffey School of

Aeronautics. Tuskegee Institute originally offered elementary or primary CPT courses, but in July 1940, the CAA authorized Tuskegee Institute to provide advanced CPT courses; the military selected Tuskegee Institute to train its pilots because of the Institute's commitment to aeronautical training.

Tuskegee had the facilities, engineering and technical instruc-

The first class which included student officer Capt Benjamin O. Davis, Jr., who became the commander for the 332nd Fighter Group, began training on July 19, 1941. Students received rigorous training in meteorology, navigation, and instruments in ground school. In addition, the cadets got their primary flight instruction at Moton Field, Tuskegee. Those who completed the course successfully transferred to TAAF to

302nd Fighter Squadrons formed the 332nd Fighter Group and began flying missions over Sicily, the Mediterranean, and North Africa. Under the able command of Col Davis (the same Capt Davis from 2 years earlier), the well-trained and highly motivated 332nd bomber crews overcame the obstacles posed by segregation and established an amazing combat record. Called the "Red-Tail Angels" after the red tail markings on their aircraft, or the "Schwarze Vogelmenschen (Black Bird Men)" as the German Luftwaffe called them, they flew 15,500 missions, destroyed over 260 enemy aircraft, sank 1 enemy destroyer, and demolished numerous enemy installations. Although they never lost a bomber to enemy fighters, several Airmen died in combat.

The Tuskegee Airmen were awarded numerous high honors,



Ammo NCOs during combat operations in World War II, Tuskegee Airmen included maintainers and other support personnel

Airmen of the 618th & 619th Bomb Squadrons at training at Atterbury Army Airfield in Columbus, Indiana



tors, as well as a climate for year round flying. The Institute received a military contract to conduct primary flight training, and the army built a separate, segregated base, Tuskegee Army Air Field (TAAF) for the advanced training. In fact, Tuskegee Institute was one of very few American institutions to own, develop, and control facilities for military flight instruction regardless of race. With these facilities, it became the focal point for training African American military pilots during World War II. (Support personnel were trained at Chanute Field in Illinois.)

complete Army Air Corps pilot training. In March 1942, the first class of five aviation cadets earned their silver wings to become the nation's first black military pilots.

Along with maintainers and support personnel from other African American colleges, the Tuskegee Airmen went to combat in segregated squadrons. In 1943, the 99th, 100th, 301st, and

including Distinguished Flying Crosses (approximately 150 of the 450 overseas-deployed pilots received this honor), Legions of



*1Lt Walter A. Palmer
after he shot down an
ME-109 on July 18, 1944*

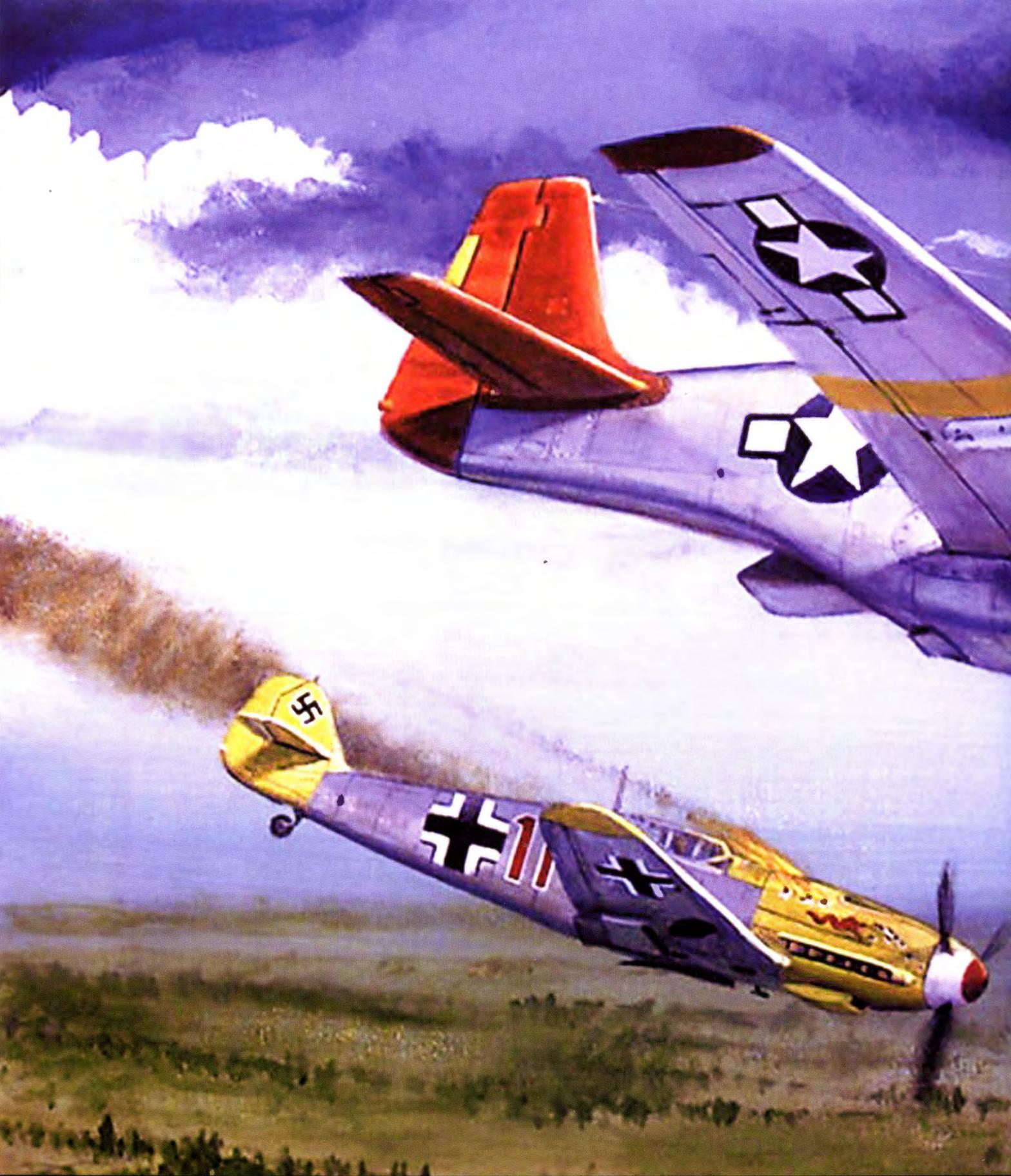
Merit, Silver Stars, Purple Hearts, the Croix de Guerre, and the Red Star of Yugoslavia. A Distinguished Unit Citation was awarded to the 332nd Fighter Group for "outstanding performance and extraordinary heroism" in 1945. Their achievements proved conclusively that the Tuskegee Airmen were highly disciplined and capable fighters. Having proven themselves in combat, they earned the respect of fellow bomber crews and military leaders.

Today, "Tuskegee Airmen" refers to all who were involved in the "Tuskegee Experiment," the Army Air Corps' program to train African Americans to fly and maintain combat aircraft. More than 10,000 African American men and women in military and civilian groups supported the effort serving as flight instructors, officers, bombardiers, navigators, radio technicians, mechanics, air traffic controllers, parachute riggers, and electrical and communications specialists. The experiment proved conclusively that African Americans could fly and maintain sophisticated combat aircraft. The Tuskegee Airmen's achievements, together with the men and women who supported them, paved the way for full integration of the U.S. military. ▶

Editor's Note: *Courtesy of the National Park Service*



*A pilot
prepares
for a combat
mission*



Black Hi



History Month

Air Force Art by Steve Doyle

MONTHLY AWARD WINNERS

Aircrew Safety Award of Distinction

Capt Kent Payne, 2Lt Michael Fessler, Lt Col John O'Connor, and 1Lt Shalin Turner distinguished themselves in their handling of a serious in-flight emergency while flying a B-1B aircraft on a local training sortie. During a low level training mission at approximately 600 ft Above Ground Level (AGL) at .9 mach, the crew of Hawk 82 saw a bird go by on the right side of the jet and felt the impact. The crew aborted the route, returned direct to base, and declared an in-flight emergency. Upon configuring the aircraft for landing, the crew noticed they had

fuel fumes in the cockpit. They immediately went on oxygen and continued their landing. After landing the control tower notified the crew of Hawk 82 that they were trailing a significant amount of smoke. The crew exited the runway and performed an emergency egress from the aircraft. Fuel was leaking from the right forward wing glove area. Crash recovery and a disaster control team responded and contained the fuel leak after the aircraft, lost approximately 10,000 lbs of fuel. The bird had struck the aircraft, dislodging a piece of aircraft sheet metal which penetrated the #1 main fuel tank. The exemplary adherence to emergency procedures by the crew of Hawk 82 resulted in the safe recovery of aircraft and crew.

**Lt Col John O'Connor, Capt Kent Payne, 2 Lt Michael Fessler,
1 Lt Shalin Turner, 28th Bomb Sqdn., 7th Bomb Wing, Dyess AFB, Texas**



Crew Chief Safety Award of Distinction

Sgt Dury displayed uncommon presence of mind during a local Phase II Operational Readiness Exercise SHARP-SHOOTER 03-07. While securing test equipment, he heard a loud crash and saw the aircraft rocking back and forth. He quickly went around the aircraft and saw a JP-8-drenched, smoking MJ-1 bomb lift less than 50 feet from his aircraft. There was also a 4-inch split in the 370-gallon wing tank and fuel was gushing out. After ascertaining there was no fire, he escorted the MJ-1 driver to nearest bunker, treated and assessed the driver for shock, and directed him to remove the JP-8-soaked chemical suit. If untreated, the jammer driver could have

suffered severe reactions from the JP-8 fuel. He then immediately proceeded back to the aircraft to secure the area and shut down two light carts eliminating a possible ignition source for the spilled jet fuel. SSgt Dury then directed six other individuals in the local area to cordon off the spill and establish a fuel stream barrier, halting the spread of approximately 300 gallons of JP-8 that already covered a 75-by-30 foot area. Base Safety, Quality Assurance, and senior base leadership evaluated accident reactions and found post mishap response to be flawless and timely — an overall impeccable operation. After containing the fuel spill, SSgt Dury coordinated the collection of 500 contaminated soak-up pads. Cool and level-headed under extreme pressure, he directed the emergency operation while maintaining strict adherence to Environmental Protection Agency, Air Force, and wing instructions. His incredible composure and immediate response prevented an environmental disaster and a potential fatality.

**SSgt David J. Dury, 336th Aircraft Maintenance Sqdn.,
366th Fighter Wing, Mountain Home AFB, Idaho**

Ground Safety

Award of Distinction

Sgt Sullivan detected a fuel leak on an F-15E while conducting an end of runway (EOR) check on the Advanced Programs centerline pylon and Fiber Optic Towed Decoy pod. Noticing an excessive fuel leak dripping onto the pod, he notified EOR personnel who in turn called in a RED STREAK and returned the aircraft to its parking location. The flight line

production supervisor, weapons personnel, and fuel cell personnel, were called to the location and performed minor maintenance on the pylon. The aircraft taxied back to EOR for takeoff a second time where SSgt Sullivan reaccomplished the EOR check for the Fiber Optic Towed Decoy pod. At this time, SSgt Sullivan witnessed the pylon leak for the second time and determined that it was detrimental to aircrew and aircraft safety. He again notified EOR personnel. The mission aborted and the pylon was reinspected. It was discovered that there were several severed fuel hoses and cracked internal connections that could only be detected when the pylon was pressurized. Attention to detail and his belief that something was incorrect saved human lives and Air Force assets in excess of \$31.1M.

**SSgt Jerome M. Sullivan, 16th Electronic Warfare Sqdn.,
53rd Wing, Eglin AFB, Florida**

Flightline Safety

Award of Distinction

SrA Grunert reported for a local training mission, which was scheduled to fly reconnaissance over the Southeastern United States. After his normal Computer Display Maintenance Technician preflight, SrA Grunert proceeded into the lower compartment of the aircraft for some advanced communications training. While in the lower compartment, he noticed a loose screw on the handle of a Generator Control Unit (GCU). A

GCU regulates high voltage, limits fault currents and power, and provides fault protection. Upon closer inspection of the area, he noticed two more loose screws on a second GCU and several loose screws on an access panel shielding high voltage equipment. SrA Grunert immediately informed his instructor and the flight engineer of the problem. The flight engineer determined the aircraft unsafe to fly unless the problem was corrected. Ground maintenance was contacted and was able to replace both GCU's and secure the access panel prior to the scheduled takeoff time. If these metal parts had fallen off the GCU, they would have made contact with high-power terminal connectors directly beneath. This would have triggered the terminals to short, causing arcing, sparks, smoke, and fumes. SrA Grunert utilized and applied proper crew resource management techniques to break the chain of events to prevent a possible mishap.

**SrA Eric M. Grunert, 963rd Airborne Air Control Sqdn.,
552nd Air Control Wing, Tinker AFB, Oklahoma**

Pilot Safety

Award of Distinction

The sortie was briefed as a 4v5 with one additional dedicated striker Blue Air OCA sortie, with Lt Col O'Mara as Number 3 in the formation. Preflight, start, taxi, and takeoff were all uneventful. Weather was skies clear, with light winds. The plan was for a 10 second interval take off and rejoin to spread container en route formation to the airspace. Shortly after takeoff, Lt Col O'Mara noticed something wrong with his right wing. There was a panel sticking up 2 inches into the airstream. Flight

controls were performing normally, and Lt Col O'Mara elected to slow to 250 knots and get a battle damage check performed on him by his wingman. During the battle damage check, Number 4 found the panel above the right flap to be bent up into the airstream. Lt Col O'Mara proceeded to dump fuel to a weight which allowed for a safe landing and performed a controllability check. He determined that the bent panel may affect the ability of the flaps to lower and retract and elected to perform a no-flap approach and landing. Lt Col O'Mara performed a flawless approach and landing, easily stopping within the available landing distance, even though the no-flap condition required a faster than normal approach and less ability to aerobrake the jet. Lt Col O'Mara's quick reactions and smart decision making quickly defused a potentially serious aircraft malfunction and saved an invaluable combat asset.

**Lt Col Raymond P. O'Mara, 27th Fighter Sqdn.,
1st Fighter Wing, Langley AFB, Virginia**

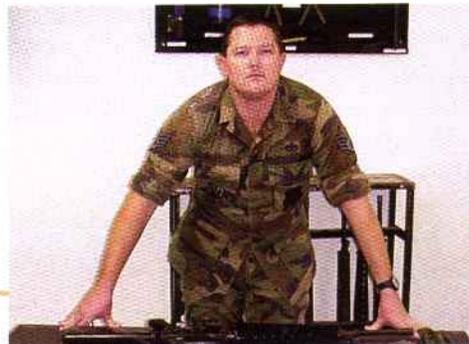
Weapons Safety

Award of Distinction

Sgt Thetford, an Additional Duty Weapons Safety Representative (ADWSR), maintains an outstanding weapons safety program in the 3rd Combat Communications Group (3 CCG) for the 32nd Combat Communications Squadron (32 CCS). When he took control of the ADWSR program responsibilities, he made immediate changes in the program's process. After receiving ADWSR training, he completely rebuilt the unit weapons safety book. He did not stop there. SSgt Thetford quickly realized his program's

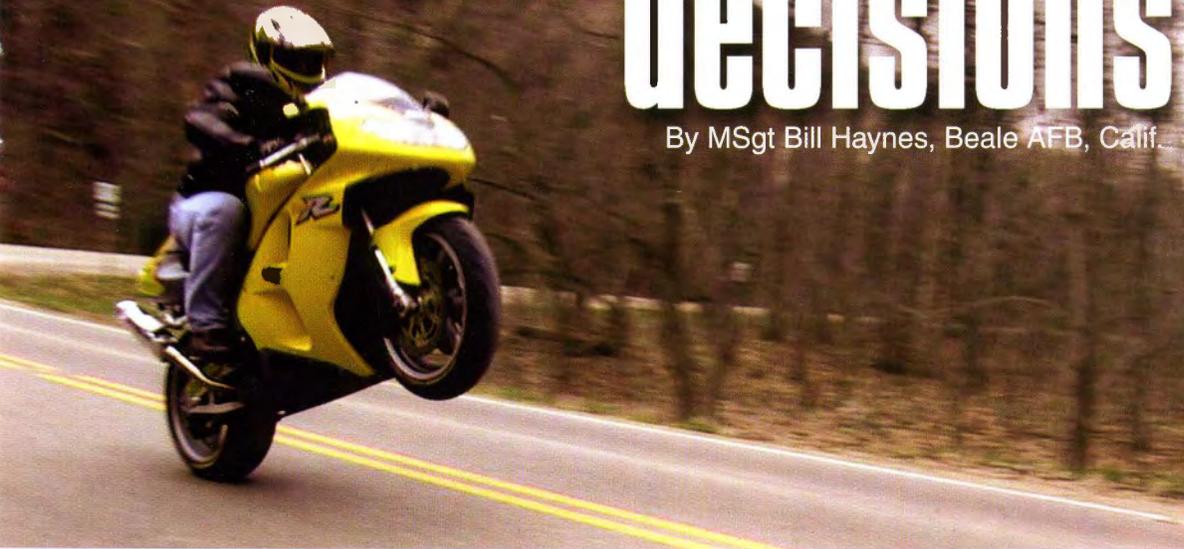
potentially hazardous nature and conducted a mishap risk assessment on the squadron's explosive licensed facility eliminating several hazards. SSgt Thetford's seemingly limitless knowledge of the weapons program has been instrumental in the zero mishap rates for not only the 32 CCS, but also the entire 3 CCG. During the latest safety assistance visit, SSgt Thetford was recognized by 12 AF/SEW as a highly knowledgeable and an outstanding ADWSR. When any of the 5 squadrons in the 3 CCG prepares to deploy with weapons, SSgt Thetford leads the way. SSgt Thetford is instrumental in the Herd's ability to safely deploy, and exemplifies the 32 CCS motto, "We Cover the World."

**SSgt Russell Thetford, 32nd Combat Communications Sqdn.,
3rd Combat Communications Group, Tinker AFB, Oklahoma**



Stupid Driving decisions

By MSgt Bill Haynes, Beale AFB, Calif.



Integrity
means doing the
right thing when
others are not
looking!

I'd like to share with you two incidents involving a few airmen assigned to Beale, and the antics they pulled while driving their personal vehicles.

Situation No. 1: I was riding off base with two other noncommissioned officers. As we departed the gate, two vehicles passed us at an extremely high speed. On top of this, they passed us in a no-passing zone where the road curved with limited vision of oncoming traffic.

The driver of our vehicle, a Beale first sergeant, motioned for them to slow down and pull over. The drivers accelerated and continued to pass each other on this bumpy and poorly maintained road as traffic continued to come at them from the opposite direction. As we entered the next town, we noticed both vehicles passing the school/park area where the speed limit is 25 mph. Children were playing in the park when we witnessed one of the vehicles overtake the other one again.

The traffic on the highway was very heavy as we made our turn to head south. Coming out of town, we noticed the two vehicles were also held up by traffic and had just made their way onto the highway. We wrote

down their license plates, and later they were identified as active duty airmen assigned to Beale.

These airmen will now lose their base driving privileges, face possible Article 15s, and possible discharge from the Air Force.

Situation No 2: While coming home from another town, a young man directly in front of my van executed a wheelie on his motorcycle and accelerated down the road while a number of cars passed him in the westbound lane.

He was going so fast I barely had time to dial the law enforcement desk before he made it to the gate. He either maintained the same wheelie for an extremely long period or performed several wheelies down the road at speeds between 65 and 80 mph. He was detained at the gate, and I had a nice, long talk with him. He admitted his wrongdoing and apologized. He had a history of similar behavior and was forewarned any other violations would result in the loss of his base driving privileges. I told him I would notify his first sergeant the next morning.

During the past 5 months, I have performed four critical-incident stress-management debriefs for people

involved in traumatic or fatal motor vehicle accidents. Every one of them wished he or she could turn the clock back and change at least one small event that may have made the difference in keeping the accident from occurring.

The individuals mentioned in the above situations showed a complete disregard for their safety and the public's safety. In either situation, a blown tire, a mechanical failure, a bird strike, or any other event could have occurred, and we would be dealing with the loss of at least one life.

This is unacceptable! I spoke with two of the three vehicle operators. Both are ashamed and remorseful for what they did, and they are not fans of mine right now. But, talking about professionalism and good decision making is much easier than counseling grief, the loss of a life they were responsible for, or attending their funeral or memorial service.

Remember, driving is a privilege you should not take lightly. Irresponsible driving can affect not only you, but also other drivers traveling the same roads. So, if you decide to risk it all on bad driving practices, remember your next illegal pass or wheelie may be your last. ▶



A Trip

By MSgt Jon Scudder, Elmendorf AFB, Alaska

Sometimes even the best of plans go bad. That was the case for three Elmendorf aircraft maintainers who went on a 4-day hunting trip at a remote lake near Glennallen, Alaska.

MSgt Eric Hoffman, SrAs Dave Strunk and Kevin White, all from the 3rd Equipment Maintenance Squadron, were airlifted back to Kulis Air National Guard Base by the 210th Rescue Squadron after Mother Nature confronted the group with heavy

snow, sub-zero temperatures and thin ice.

However, a combination of the group's preparation, quality equipment, and a thorough trip plan is credited with saving their lives and minimizing rescue efforts.



Highway, approximately 200 miles from Elmendorf.

They unloaded their three snow machines and two sleds for the 13-mile remote trek to an old trapper's cabin where they had planned to hunt "predators," such as coyotes, foxes and wolves.

Their trouble started early on when heavy snow bogged down the snow machines towing their two sleds. "We'd go a mile and get one stuck," said Hoffman, referring to the waist-high, unpacked snow.

"It expends a lot of energy to lift those sleds," added Hoffman. "You just can't move the track over as if you weren't towing a sled. You have to unhook the sled, move the snow machine, and then drag the heavy sled over. We were getting a pretty good workout."

After a few hours, they came upon a small creek normally frozen solid this time of year.

"We went down this creek about 30 yards and got ready to come back up on the bank when two of the snow machines broke through the ice," said Hoffman, who was surprised the ice was thin because of the bone-chilling conditions.

Looking back at the situation,

"It was in a spot where the water was about waist deep. I've never seen a hole in that creek that deep before," said Hoffman, who makes the trip regularly throughout the year.

"Two snow machines sunk up to the engine cowling," said Hoffman, referring to the front cover of the snow machine. "It took us about 2 hours to winch them out. At about 20 below zero, everything froze almost immediately. We had ice in the cylinders and carburetors — the exhaust manifolds and pipes were frozen solid."

The group was now about 2 miles from the cabin, darkness was moving in and the snow was chest level. Instead of trying to negotiate the trail in darkness, the group stayed the night with their snow machines and equipment.

"Our topnotch equipment made a huge difference," said Strunk, referring to their gear bought from a recognized outdoor retailer versus that from a mass marketer. "It made the difference between us being comfortable instead of being miserable."

Realizing their dire situation, the group came to a consensus.

"We made the decision that we all came in together, and we were all going out together," said Hoffman. "We weren't going to risk getting separated and one of us making a run out and breaking down without equipment."

The next day the group tried to get the remaining snow machine to the cabin. However, it bogged down in the snow.

Hoffman said they then decided to go the last part on foot punching through what had become chest-deep snow.

Plan saved our lives!

The veteran hunters, who have hunted with each other before, began their trip after leaving their truck the morning of January 4th at Mile 75 of the Richardson

Hoffman, an 11-year Alaskan resident, believes it was caused by the warm spell followed by a thick layer of insulating snow that kept the ice from freezing solid.

"I don't think I've ever been that exhausted in my life," said Hoffman. "All three of us are in pretty good shape. I don't know if we would have made it if it weren't for our physical conditioning."

The group reached the remote cabin several hours later and managed to light a fire using prepositioned supplies, such as wood, food, and gasoline. "It felt darned good to get a good meal and a warm fire," he added.

The group decided to rest the next day and set out the following morning to try and repair the snow machines. Two feet of snow fell overnight, forcing them to renegotiate the path they previously made.

After hours of drying out the parts with a propane torch, they got a second machine running before they headed back to the cabin. "We would get to the snow machines about 9:30 a.m. and work until 3 p.m.," said Hoffman.

This daily ritual began again Jan. 7, the day they were supposed to be heading home. "Dave's machine was much worse," said Hoffman. "Everything was filled with ice. We thawed out the parts we could

He thought the Alaska State Troopers might fly over, but said he didn't realize at the time that everyone else in the vicinity was socked in with snow as well, preventing any possible flight.

After letting the snow machine parts dry out on the wood stove overnight, the group returned to the broken machine the next day.

"We got it running but couldn't keep it running," said Hoffman. "We kept messing with it and finally realized some silt had gotten into the carburetor. We were getting hammered by the wind-driven snow; so we decided to head back to the cabin."

The trio went to bed early and about midnight heard a helicopter flying over their cabin.

"We went outside to signal the aircrew with a lantern and a pararescueman rappelled down to us," Hoffman said. "The PJ told us our truck was under 3 feet of snow preventing any possibility of driving out. He gave us about 5 minutes to close up the cabin.

"It was probably the greatest ride I've ever had ... and I've ridden in an F-15 Eagle," said

Lt Col John Jacobs, chief of the 11th Air Force Rescue Coordination Center at Fort Richardson, Alaska, credits the group for the swift rescue.

"The individuals rescued are an example of how to survive a mishap in the Alaskan outdoors. They left a trip plan and were well prepared for the unexpected.

"They exercised good operational risk management throughout their ordeal," he added. "This not only contributed to their successful recovery, but allowed the rescuers to minimize some risks involved in the rescue. The rescuers knew exactly where to go, what to look for, and avoided needless hours searching in hazardous terrain on night vision goggles."

Hoffman credits the trip plan for the quick emergency response and it being a necessity for those venturing out in Alaska's unforgiving wilderness.

"They knew exactly where to find us," said Hoffman. "In fact, the PJs said they came right to us. You have to have a great appreciation for the outdoors in Alaska. It's almost mind-blowing

He knew they weren't going to make it out that night, but was confident his wife would start calling the proper agencies

and decided to take the rest to the cabin where we could work on them."

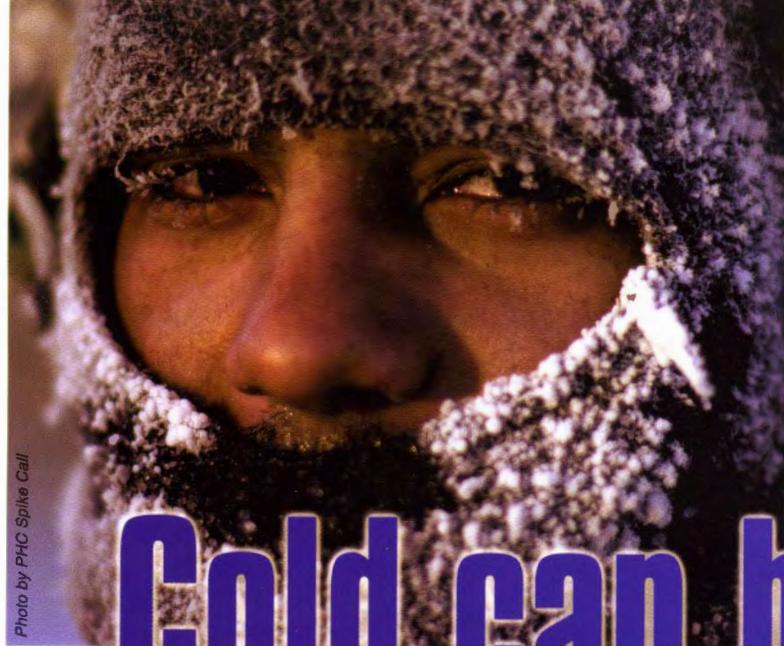
Hoffman knew they weren't going to make it out that night, but was confident his wife would start calling the proper agencies, based on the group's thorough trip plan.

Hoffman. "The PJs were a very professional group. We did a C-130 aerial refueling, got back to Kulis at 2:30 a.m., and were back to work at 7 a.m."



Photo by A1C Joanna Reihle

how vast the wilderness is here. It's unlike the Lower 48 where there's a logging road or a trail around — up here there's not." ▶



Cold can hurt!

By Julie Shelley, Fort Rucker, Ala.

A popular motivational anecdote goes something like this: “That which does not kill you makes you stronger.” How many times have you heard that one? While this oft-quoted line might have some fundamental truth, it forgets to mention that those things that don’t kill you often hurt a lot.

Cold-weather operations present many hazards that, if not approached correctly, can lead to disaster: severe cold injuries, carbon monoxide poisoning, and tent fires, just to name a few. But, the winter environment also introduces other, not-so-serious risks that can increase pain and decrease productivity. These minor aches and pains are not only a nuisance; they are also costly in terms of lost man-hours and dollars.

Fortunately, most cold injuries are completely preventable if appropriate, precautionary measures are taken. Be on the lookout for these symptoms and seek the proper medical treatment if you or one of your people exhibits any of the following.

Frostnip

This type of injury, along with more serious ailments such as

frostbite, can occur anytime the air temperature is below freezing. Frostnip is caused by water freezing on the skin’s surface. In exposed skin, the risk of a freezing injury increases with higher wind speeds.

Frostnipped skin will appear red and possibly swollen. Although painful, frostnip generally is limited to the skin’s surface — the face, ears, and extremities being particularly vulnerable — and causes no further damage after the affected area is re-warmed. However, repeated frostnip in the same spot can dry and crack the skin, making it very sensitive. It also is important to note that distinguishing between frostnip and frostbite can be very difficult. Frostnip must be taken very seriously and all frostnip injuries should be reported immediately.

Sunburn

You don’t have to be in the desert or at the beach to get sunburned — the threat of sunburn depends on the intensity of sunlight, not air temperature. Add in snow, ice, and lightly colored objects, all of which reflect the sun’s rays, and the scene is set for a major sunburn injury if you’re not careful.

Sunburned skin will be painful and hot to the touch, appear red, and possibly swollen and blistered.

To prevent sunburn anytime of the year and in all environments, use sunscreen with a sun protection factor of at least 15 and cover all exposed skin. In cold weather, sunscreen should be alcohol-free. If you should become sunburned, prevent further exposure and apply a moisturizing lotion; aspirin or acetaminophen may be given for pain. People with large areas of injured or blistered skin should be evacuated for medical treatment.

Snow blindness

Snow blindness, like sunburn, is a threat posed by the intensity of the sun’s rays, not the temperature outside. Solar radiation can “sunburn” unprotected eyes, leading to snow blindness. Symptoms of snow blindness include painful, gritty eyes with profuse tearing, blurred vision, and possibly, a headache. People suffering from snow blindness should be removed from direct sunlight and allowed to rest in a dark area with their eyes covered by cool, wet bandages until they can be evacuated. Bacitracin or erythromycin ophthalmic ointment also should be applied.

Protective eyewear or goggles that block at least 90 percent of ultraviolet radiation can help prevent snow blindness, and sunglasses with visible light transmittance in the 5 to 10 percent range are needed to reduce the sun’s reflection off snow. In addition to protective eyewear, sideshields or deeply wrapped lens designs should be used to reduce the chances of eye injury. ►

Editor’s Note: Courtesy of the Army Safety Center

Ice Fishing

winter safety

Story and Photos by TSgt Ben Bloker, Langley AFB, Va.

Picture this: A misty white view of frozen Canandaigua Lake accompanied by the cold chill of a winter morning. The snow-covered ice makes an eerie crunch noise beneath each step. A seasoned ice fisherman leads a novice out on the ice to experience this winter activity firsthand.

For those looking for the peaceful solace of this incredible sport, there are some safety precautions to think about before walking out on the ice. Regardless of the amount of experience

someone has, safety is always a priority on the ice.

The number one concern is the ice's condition. Many factors affect the ice's thickness, and more importantly, its weight bearing capacity.

Some of these factors are

temperature, air bubbles or pockets, and water conditions under the surface. Knowing what the air temperatures were the preceding 2 or 3 days before you fish are just as important as the temperature the day you fish. If the temperature is above freezing for 24 hours prior to your trip out on the ice, it may not be safe. Additionally, large drops in temperature are equally







Observing just a few safety precautions and making some preparations, ice fishing can be a great way for you to get out and enjoy the winter weather

problematic because it makes the ice brittle.

For example, ice that appears blue or clear is stronger than milky looking ice. The milky look is caused by tiny air bubbles which significantly weakens the ice.

Large snowfalls are also a concern because they make the ice bow under the snow's weight and this causes slush to form on top. If you see slush, you should never go out on the ice until it completely refreezes.

Finally, running water under the ice's surface weakens it as well. If you're not sure how thick the ice should be to support your weight, there are several web sites with helpful charts like the one run by the New York

Department of Environmental Conservation. It has a wealth of information about ice fishing including an "Ice Thickness Table."

For example, one person can walk on ice that's 2 inches thick if it's clear, blue, hard, and on a lake versus a stream. In contrast, a 2-ton car can safely drive on 7 inches of ice with the same conditions. So how do you find out how thick the ice is where you want to fish? One of the best sources is your local bait shop. Many post ice thickness conditions. You also can check it yourself using an auger or pick. Make sure you check about every 150 feet or so since conditions can change quickly.

Besides ice thickness and condition, you also must consider the weather's effect on your body. It's paramount that you dress warm and wear waterproof clothing if possible. You must also consider what type of clothing will keep you afloat should the worst happen, and you fall through the ice. Waders and hip boots are a no-no, and you should always wear a personal flotation device. Clothing is not the only thing you can use to protect yourself from the weather. Many use portable "ice shanty" huts that keep you shielded from the elements.

Ice fishing tends to be a place of refuge for most of its faithful participants — a much

needed break from our hectic day-to-day work pace. Observing just a few safety precautions and making some preparations, ice fishing can be a great way for you to get out and enjoy the winter weather. ►

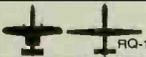
Editor's note: For more information on ice fishing safety, check out one of the following web sites: <http://www.dec.state.ny.us/website/dfwmr/fish/icefish.html#theice> or http://www.crrel.usace.army.mil/ierd/ice_safety/safety.html





FY04 Aircraft

As of December 31, 2003

	Fatal	Aircraft Destroyed
8 AF		
9 AF		
12 AF		
AWFC		
ANG (ACC-gained)		
AFRC (ACC-gained)		

FY04 Ground

As of December 31, 2003

	Fatal	Class A	Class B
8 AF		1	0
9 AF		2	0
12 AF		4	0
DRU's		1	0

FY04 Weapons

As of December 31, 2003

	Class A	Class B
8 AF	0	0
9 AF	0	0
12 AF	0	0
AWFC	0	1

Legend

Class A - Permanent Total Disability; Property Damage \$1,000,000 or more
 Class B - Permanent Partial Disability; Property Damage between \$200,000 and \$1,000,000
 Class C - Lost Workday; Property Damage between \$20,000 and \$200,000
 * Non-rate Producing

Aircraft Notes

Kudos for a safe December. Despite an RQ-1 Class A, this CY 4th quarter (Oct to Dec) had the fewest Class As since 1999. Well done! Continue to be involved safety leaders and use ORM to keep up the good work. ACT: Assess the risk, Consider the benefit, Take appropriate action. Here's an example: You have a tough upgrade certification ride and the weather is not great. It's legal, but not VFR. Now your IP is single radio, your wingman's radar is intermittent, and Number 4 is jumping to a spare. Any one of these issues is workable, but as they add up, it gets tougher to take a step back and make a smart decision. It's the proverbial snowball. Don't let it roll over you before you call, "Number One for takeoff." ACT! Check yourself before you wreck yourself. Fly Safe!

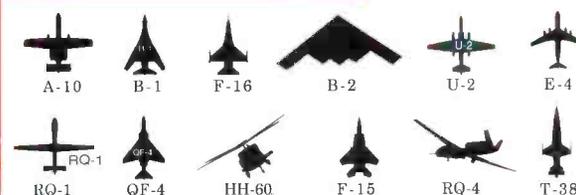
Ground Notes

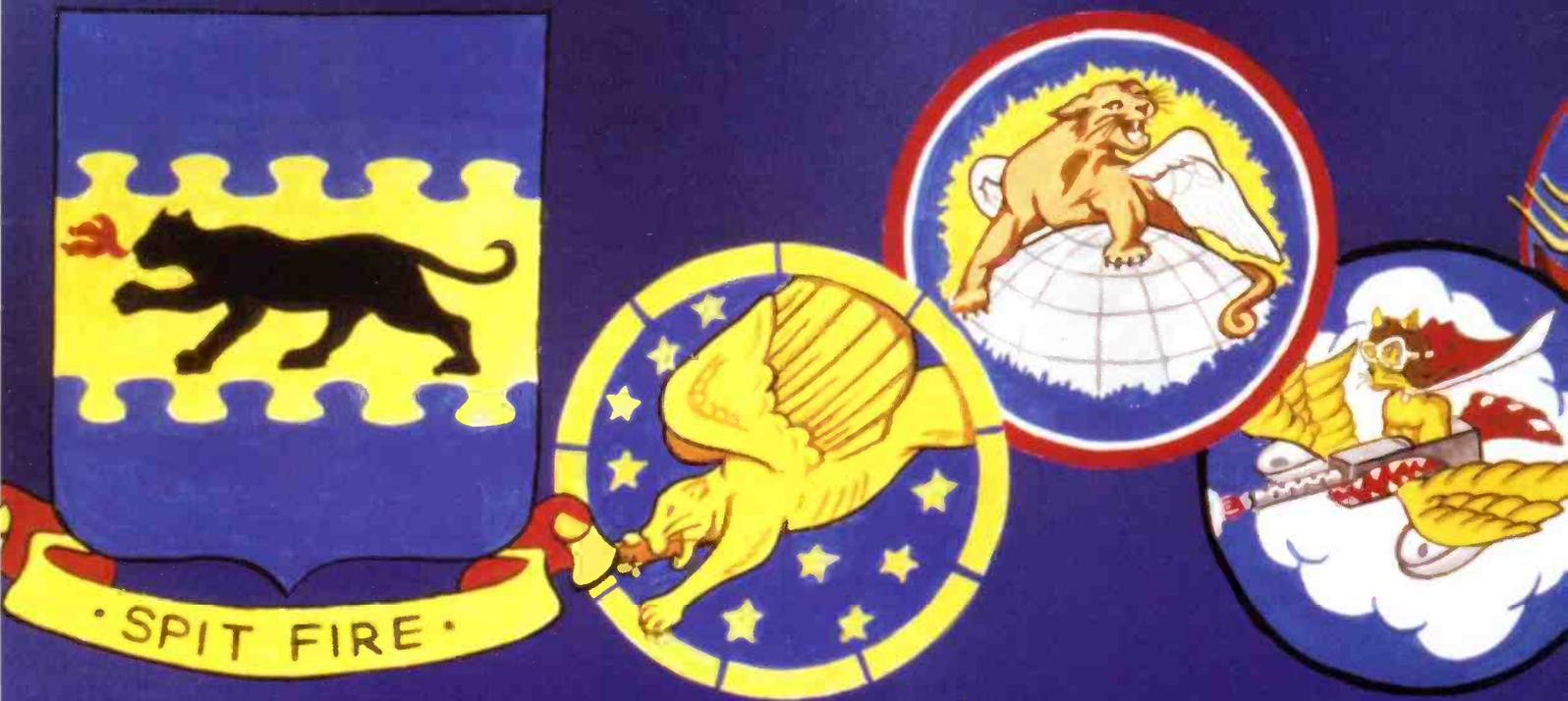
ACC experienced four PMV4 mishaps and one PMV2 mishap during the month of December. Two of the PMV4 mishaps involved head-on collisions and in both mishaps, the individuals crossed the centerline and collided with vehicles traveling in the opposite direction. The other two PMV4 mishaps involved vehicles being broadsided by another vehicle. In the first mishap, the Air Force member ran a red traffic light and was broadsided. In the other case, a civilian ran a red traffic light and broadsided an Air Force member. The PMV2 mishap occurred when the individual lost control of his motorcycle, was ejected, then struck by a pickup traveling in the opposite direction.

Weapons Notes

As another year begins, and we start to look ahead and prepare for new challenges, let us reflect on last year and what we did well and the areas that need improvement.

Symbols for Mishap Aircraft





Under the able command of then Col Benjamin O. Davis, Jr., the well-trained and highly motivated 332nd Fighter Group crews overcame obstacles posed by segregation and established an amazing combat record. They flew 15,500 missions, destroyed over 260 enemy aircraft, sank 1 enemy destroyer, and demolished numerous enemy installations. These Airmen also established an enviable record of not losing a single bomber to enemy fighters despite the significant action they saw. This feat wasn't accomplished by any other combat unit in World War II.

