JANUARY 2006 ♦ VOL 34 ♦ NO 1

FLIGHT fax

Army Aviation Composite Risk-Management Information

"The Absence of an Accident Doesn't Mean the Presence of Safety"

A personal account of an accident from the company commander

U.S.ARMY

FLIGHTfax

Army Aviation Composite Risk Management Information

BG Joseph A. Smith
Commander/Director of Army Safety

COL George Bilafer
Deputy Commander

Paula Allman
Managing Editor

Chris Frazier
Staff Editor

John Hooks
Publishing Supervisor

Leslie Tisdale
Art & Design

CONTENTS & FEATURES

2 **COVER STORY:** The Absence of an Accident Doesn't Mean the Presence of Safety
6 Situational Awareness and Spatial Disorientation in the Fight
8 **INVESTIGATORS' FORUM:** Pilots Pushed Too Far
10 Now You See Me, Now You Don't
12 Ditching Into the Deep
15 A Call to Leaders
16 Seconds to Impact
18 Never Assume
20 **NEWS AND NOTES:**
- Kiowa Pilots Get DFC for Ambush Rescue
- Army Aviator Receives Silver Star

21 **LITEFAX**
22 **ACCIDENT BRIEFS**
24 **POSTER: Mission Safety**

on the web
HTTPS://CRC.ARMY.MIL

U.S. ARMY COMBAT READINESS CENTER

Flightfax is published monthly by the U.S. Army Combat Readiness Center, Bldg. 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Address questions regarding content to the editor at DSN 558-9855 (334-255-9855). To submit an article for publication, e-mail Flightfax@crc.army.mil or fax DSN 558-9044 (334-255-9044). We reserve the right to edit all manuscripts. Address questions concerning distribution to DSN 558-2062 (334-255-2062). Visit our Web site at https://crc.army.mil.

Information in Flightfax is not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or the U.S. Army. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.

JOSEPH A. SMITH
Brigadier General, U.S. Army
Commanding

The Absence

Me

CPT MARK J. RICHARDS
FORT BRAGG, NC

Every day in Army Aviation, aircraft depart their respective airfields or forward operating bases to execute routine or unique missions. Some are simple in planning and execution, while others are more complex and require significant involvement and oversight. Regardless of the mission, it is the mission briefing officer's responsibility to ensure that once the plan is complete and ready to be executed, he verifies the risks have been identified and addressed in the planning to enable the crew to successfully execute the mission while ensuring the right control measures are established.

October 28 marked the 1-year anniversary that my flight company experienced a Class A accident. If you have picked up a copy of *Flightfax* in the last 12 months, you more than likely read about a mishap involving a flight of two UH-60 Black Hawks operating under visual flight rules (VFR) conditions as the weather deteriorated. The end result was the pilot in command (PC) improperly executed inadvertent instrument meteorological condition (IIMC) procedures and became spatially disoriented, which resulted in the aircraft settling into the trees. Thankfully, all seven crewmembers and passengers survived with recoverable injuries. Even though the company and battalion commanders were directly involved as briefing officers for the flight, the accident was still attributed to what happened in the aircraft.

# of an Accident Doesn't

an the Presence of Safety

This is a personal account of an accident from the company commander.

I was, and currently am, the company commander who was the briefing officer for that mission. As I prepare to pass the guidon to my successor, I look back on how that accident affected me as a commander and briefing officer, my subordinates as vigilant aviators, and my unit faced with constant competing requirements over the last 12 months. I feel it is imperative to pass on my lessons learned from this accident to not only my successor, but to all current and future briefing officers so they learn from my experience and help prevent future aircraft incidents.

It was after the investigation board out-briefed my chain of command that I realized I might not know everything about being a briefing officer. I was confident in my abilities and thought I knew enough because I had been a PC in the battalion for the past 2 years and was trained by many outstanding commissioned, warrant, and noncommissioned officers. I was a mission briefing officer as a platoon leader during Operation Enduring Freedom (OEF) and had over 800 flight hours—275 of those in OEF and Operation Iraqi Freedom (OIF).

My intent of writing this article is to review the Army requirements of a briefing officer, discuss the Vice Chief of Staff, Army, (VCSA) Aviation Safety Directive, and pass on my personal lessons learned so as to empower future company commanders and briefing officers alike to avoid future mishaps. For commanders who were not briefing officers as lieutenants, this article, along with their local standing operating procedures (SOPs) and command involvement, might be the only information they have as they become briefing officers.

Army Regulation 95-1, paragraph 2-14, spells out the seven key areas that should be evaluated in the mission planning sequence:

(1) The flight is in support of an operational unit mission or has been authorized by the unit commander. Self-explanatory; is the flight supporting an external support mission or internal training? Just be sure the ground tactical plan makes sense.

(2) Assigned flight crews have been allocated adequate pre-mission planning time. Adequate planning time is subjective, as it depends on a deliberate or hasty mission framework and the experience level of the crew. The key is the less time spent on planning, the more involvement/questions need to be asked by leaders of the PCs and air mission commander (AMC).

(3) Assigned flight crews are qualified and current for

the mission according to this regulation and the commander's flight crew qualification and selection program per paragraph 4-20. Take special considerations when flying personnel still in readiness level (RL) progression, ensuring crews are qualified to conduct tasks that are outside of RL progression (3000 series) and crewmembers are aware of their currency status.

(4) Forecast weather conditions for the mission meet the requirements of this regulation and local directives. As shown, this is the largest contributor to accidents—the aircrew's inability to accurately assess the weather. Everything on a DD Form 175-1 deals with every portion of the flight about to be executed. Therefore, if ANY portion of the brief is in question, it should be clarified before execution. Leaders should key in on "minimum ceiling en route" and "minimum visibility en route." Crews should have a weather brief (local or external) when they are to be briefed to allow the mission briefer to accurately assess the conditions.

(5) Flight crews meet unit crew endurance requirements. Annotate the crew's show time for the mission on the briefing sheet, evaluate what they did the day before, and discuss when their mission will be complete. Keep in mind the mission isn't complete until the after-action report is complete, maintenance/logbooks are closed out, and sensitive items are secure.

(6) Procedures in the commander's risk management program have been completed for the mission and risks are reduced to the lowest level possible. Without being risk averse, the commander can emplace constraints to lower the risk, such as flying an aircraft that is equipped with a heads-up display for zero illumination nights, returning to instrument flight rules if weather deteriorates to a certain point, or even placing a phone call to advise the briefer something has changed and to qualify the decision point.

(7) Required special mission equipment is maintained per published guidance. The briefer must be familiar with the requirements of executing all missions and the additional requirements/equipment that accompany it in order to ask the crew if the proper provisions have been taken into consideration. Approximately 60 days after my unit's incident, GEN Richard A. Cody published a safety directive/guidance message to aviation units with specific guidance. Without restating the three-page document, I want to highlight three items that made me immediately adjust my techniques.

• **"Aviation transformation, aviation reset, and preparation for combat increases the need for commanders at all levels to properly balance the challenges of individual aviator readiness level progression, aviation collective training, combined arms training, and aviation maintenance, safety and standardization."** We would be able to execute more proficient aviation operations if that was our sole focus. However, since we constantly have competing requirements and priorities set from above, it is crucial we ensure our instructor pilots are conducting quality instruction during RL progression, to include table talk before each flight, real-world scenarios during training, and not being afraid to hold someone back from progressing if they are not a proficient aviator. Commanders MUST understand training competent aircrews is the most important task, and they should convey this information to those who have over-tasked the unit.

• **"Recurring factors in recent aviation mishaps include poor weather decisions, inappropriate crew mix, inadequate air mission briefs (AMBs), stressed maintainers, and compressed training and preparation timelines prior to deployment."** It is the mission briefer's responsibility to: identify the hazards and ensure the weather is adequately evaluated, ensure the AMB is completed by the AMC, make certain leaders are more involved as the OPTEMPO increases, and ensure the stress level is appropriate for the mission. Stress is a crucial training consideration, as it will be stressful in combat and crews must be able to quickly and safely execute their mission while under stress.

• **"… select briefing officers based on their aviation experience; ensure personnel are qualified and current in the mission profiles they are to brief; and possess the ability to quickly assess and apply risk mitigation techniques for the mission and aircrew."** Briefing officer experience will differ from the platoon leader to the battalion standardization pilot (SP). The key is applying risk mitigation techniques and providing guidance to the PC/AMC/serial commander while discussing what contingencies have been planned for or what the crew's options are when things don't happen according to the plan.

As a result of GEN Cody's guidance, mentorship from my battalion commander and battalion SP, and discussions with my company's aviators and fellow company commanders, I have incorporated some tactics, techniques, and procedures to mission briefers that may or may not be of assistance to others.

• I now use a green pen on the risk assessment matrix and DA Form 5484-R to differentiate what I wrote and what the PC wrote. I briefed multiple flights a day in the midst of everything else going on in the company, so this enabled me to review my guidance and/or the restrictions I put on each crew, as well as ensure the information was clear and rational to whoever read it.

• Along with their risk assessment, PCs are required to bring a weather briefing; a kneeboard packet for multi-ship or route card for single-ship and maps; brief any notices to airmen (NOTAMs); discuss aircraft configuration/requirements for "additional tasks;" and discuss IIMC and contingencies.

• I will rarely brief a flight the day before execution. The two most fluid elements are the enemy and the weather. I prefer to get a current and accurate picture of the mission and assess the risks at the time of the mission.

• If the mission briefing is within 60 minutes of takeoff, I will often bump their takeoff time to ensure the crew has at least an hour to conduct a crew brief and take care of pre-takeoff checks. Mistakes are more likely to be made when crews are rushing to make a takeoff time and might possibly overlook something or curtail their crew brief.

• If the weather looks to be deteriorating but legal for the duration of their flight, I will have the PC discuss their alternate instrument plan. I have also made it standard for them to have current navigation aids (NAVAIDs) "dialed up" during their VFR portion to increase situational awareness in the event they experience IIMC.

• My unit's risk assessment matrix requires the highest risk be identified and annotated. I ask the PC what he/she thinks/feels the highest risk is and why. This enables a discussion of where their focus should be and if I feel it needs to include another portion of the mission. This allows three things—insight into the PC's risk assessment abilities, the possibility to see something you might not have seen, and mentorship from both the briefer and the PC.

• Ask the basic questions. Oftentimes a briefer can be intimidated by or overconfident in the abilities of the senior aviators being briefed. I didn't put as much scrutiny on their flights. I found myself saying, "They've been doing this job a lot longer than I have, so what makes me qualified to challenge them on what they've planned?" I ensured they understood when I asked basic questions that it wasn't an insult to their maturity or abilities; it was to determine they knew the basics and their plans met my training focus. This was also a way to ensure overt communication and not an assumption or understanding that a portion of the mission would or would not be conducted.

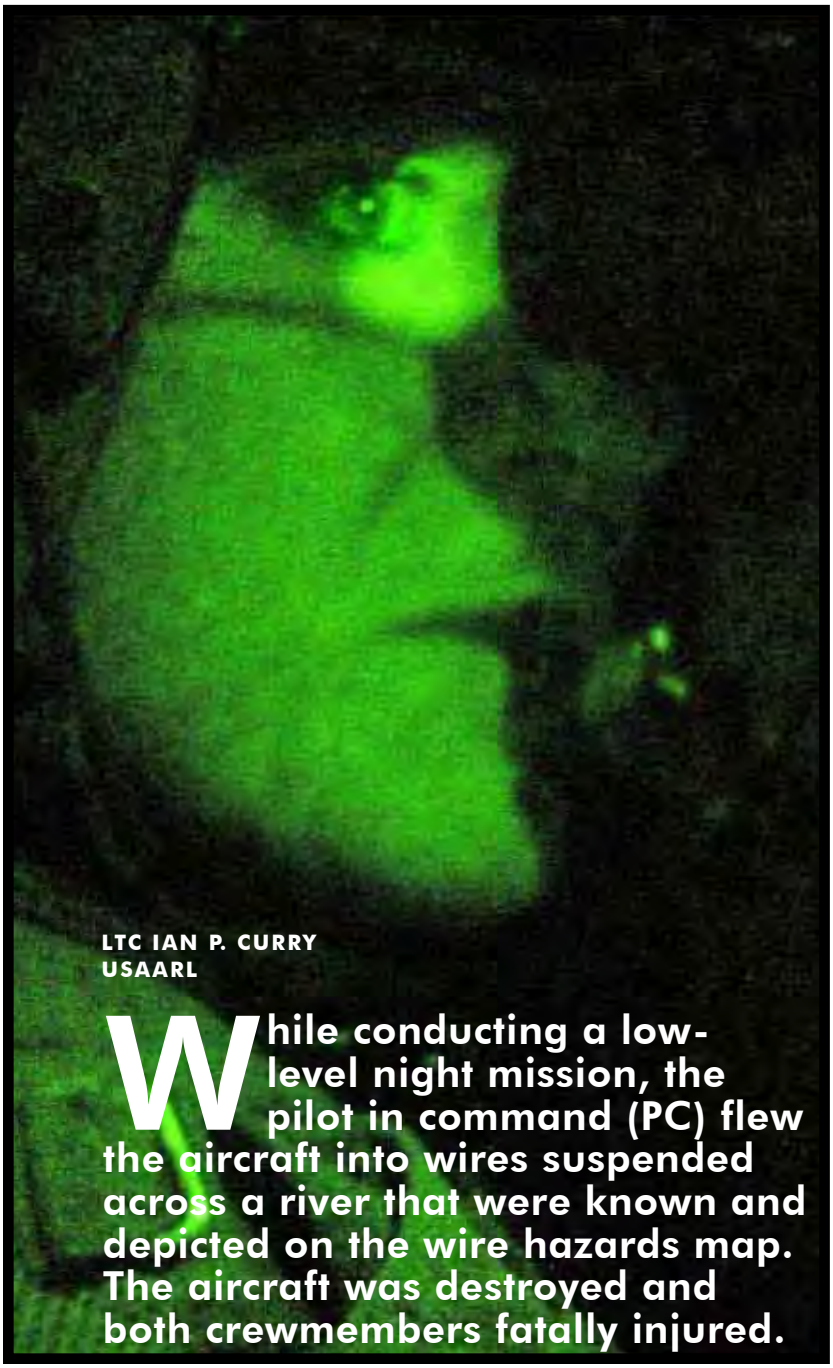
The cliché "the absence of an accident does not mean the presence of safety" may be overused, but I had to learn this lesson the hard way. I hope this article will enable leaders (commissioned, warrant, and noncommissioned officers alike) to ensure the right questions are asked, aircrews are empowered to make sound decisions, and control measures are incorporated at the lowest level to make certain junior leaders continue to hone their skills as aviation decision-makers. ♦

Disclaimer: This article is not meant to be a historical account of a Class A mishap, but a perspective into the responsibilities of a mission briefing officer and some recommendations to more effectively execute those duties.

—At the time of this writing, CPT Richards was the company commander of B Company, 2-82nd, Fort Bragg, NC. He may be contacted at mark.richards@us.army.mil.

Situational Awarenes

Spatial Di



LTC IAN P. CURRY
USAARL

While conducting a low-level night mission, the pilot in command (PC) flew the aircraft into wires suspended across a river that were known and depicted on the wire hazards map. The aircraft was destroyed and both crewmembers fatally injured.

Some would say the cause of this accident was overconfidence, bad planning, or maybe just bad luck. The root of these two deaths, however, was a loss of situational awareness. Many factors led to this crew being unaware of the wires that killed them, but at least some could have been foreseen and dealt with. One small change could have broken that accident chain of events and saved the aircrew.

In another accident, the aircrew failed to maintain the briefed and authorized minimum altitude of 300 feet above ground level (AGL) and went through a four-cable mineshaft ore transport system suspended 156 feet above the ground. The aircraft was destroyed and the two crewmembers suffered fatal injuries.

Two men died because they did not follow their own briefing and the local flying orders. In this case, the hazard was marked on the map but had not been specifically briefed because it was too low to be an issue—or so it was thought. The crew's situational awareness was degraded by a combination of poor planning and poor execution.

The list of accidents involving an aircrew that lost situational awareness and flew their aircraft into wires is depressingly long. Every pilot who has flown in Iraq knows the wires in that country have been designed for the express purpose of snagging unwary aviators. The wires are often a rusted brown color, as are the support poles, and are camouflaged against the desert. At night, the wires are very difficult to detect through night vision devices (NVDs) because of their small circular reflecting surfaces.

s and

sorentation in the Fight

The U.S. Army Aeromedical Research Laboratory (USAARL) is currently conducting a study of situational awareness and spatial disorientation in operations during the War on Terror. There is no way to prevent every accident, but here are some reminders on how to keep your situational awareness and your life intact:

• Don't bust your minimum altitude; it's usually there for a good reason.

• Use hazard maps whenever you brief and keep them up to date.

• Risk assess (Do I need to be flying this low or this fast?) and keep reassessing throughout the flight.

• Don't become the next cautionary tale.

The second area of concern from the survey is spatial disorientation. A very experienced standardization pilot described half of his dust landings in theater as "Hail Marys." Even the sky gods don't have the ability to see through a brownout, and you cannot fly by the seat of your pants.

It is fortunate brownout accidents, by definition, occur close to the ground and are slow. That has limited most of the damage to the machinery rather than the crew. However, there have been deaths, and nearly all of those were preventable. There are three sets of circumstances that have come up time and again:

• **Not enough power to climb out of the dust cloud on takeoff:**

—Poor power available calculations during the planning phase.

—Bad placement of forward arming and refueling points (FARPs) with respect to wind direction and physical obstacles such as sand berms.

—Choosing to take off out of wind and never getting above or ahead of the dust cloud.

• **Hitting an unseen obstacle on the ground:**

—More than $30 million in damage has been caused to aircraft over the last 3 years by impacting obstacles on the rollout, most occurring on reconned and known landing zones. Again, this is a planning and briefing issue—forewarned is forearmed.

• **Lateral drift in the final stages of landing:**

—This has happened more than a dozen times in the last 3 years, almost always ending with the aircraft on its side. Crewmembers have died as a result.

There is no golden bullet for dust landings, but every crew runs the risk of spatial disorientation if they get enveloped in the cloud. Experience is the best savior—stay ahead of the cloud, use symbology if you have it, and use instruments if you can. However, don't be afraid to throw away a bad approach; there are no old, bold aviators.

Based on this survey, we conclude that conducting better flight planning, thinking ahead of the aircraft, following standing operating procedures, and conducting Composite Risk Management saves lives. Fly safe! ♦

—LTC Ian P. Curry is a consultant in Aerospace Medicine and reconnaissance aviator at the U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL. He may be contacted at ian.curry@us.army.mil.

Investigator's Forum

Written by accident investigators to provide major lessons learned from recent centralized accident investigations.

Pilots Pushed

Today's flight profiles being flown in current operations keep aircrew members on a razor's edge from losing situational awareness. This edge is lost when fractured by spatial disorientation (SD) or other human, environmental, or materiel factors.

While conducting a daytime, multi-aircraft, general support mission, the CH-47D crew failed to maintain orientation and aircraft control after inadvertently encountering instrument meteorological conditions (IMC). The crew attempted to continue the mission even though visibility was less than 1 mile due to blowing dust. Chalk 1 slowed their airspeed to 40 knots and began a descent. Earlier that day, the pilot in command (PC) of Chalk 1 had successfully found areas of increased visibility and was able to continue the mission. The previous successes caused the crew to think they could find better visibility as they had done earlier in the mission.

Chalk 1 descended to about 100 feet above ground level (AGL) and suddenly called IIMC (inadvertent instrument meteorological conditions) and stated he was turning right to 050 degrees. Chalk 2 turned to 090 degrees for separation and started a climb after committing to IIMC. Upon reaching 090 degrees, Chalk 2 heard lead say they were turning to 090 degrees. Chalk 2 continued to climb and turned to 120 degrees. Shortly after turning to 120 degrees, Chalk 2 heard the PC of Chalk 1 yell, "Level the wings! Level the wings! Level the wings!" on the external frequency. Chalk 2 continued to climb and increased airspeed to 70 knots. The PC of the lead aircraft yelled, "Nose it over! Nose it over!"—still on the external frequency. Chalk 2 called lead to check on their position, but didn't get a response. Chalk 2 climbed to 13,500 feet, still IIMC, turned north, squawked emergency on the transponder, and continued calling Chalk 1.

After entering IIMC, Chalk 1 lost control of the aircraft and crashed. The aircraft was destroyed on impact with the ground and consumed by a post-crash fire. All crewmembers and passengers suffered fatal injuries.

Situational awareness can be defined many ways, but it comes down to knowing where you are, what you're doing, and why you're doing

Too Far

Information presented in the Investigators' Forum is designed to present non-specific accident information for awareness and accident prevention purposes.

it. This article is intended to raise leader and individual awareness of situations that could lead to loss of situational awareness, as well as the need to "push the weather." Aviators want to accomplish their mission; however, it's never a good idea to push the weather in an attempt to do so.

Flying is a tough business. Operating complex aircraft systems under adverse environmental conditions can be very demanding and requires a great deal of time and concentration from each crewmember.

Today's routine mission profiles demand more than human beings are designed to do. Army Aviators are asked to fly faster, lower, longer, in the dark, in weather, in formation, and under goggles. More often than not, they're asked to do all of this at the same time. And, oh, by the way, somebody may also be shooting at them. This level of complexity is further increased by the frequency and amount of real-time information technology given to them during flight. It comes as no surprise, then, that they're putting themselves into situations which cause them to lose situational awareness. Unfortunately, they're not sensing or realizing it before it's too late to react.

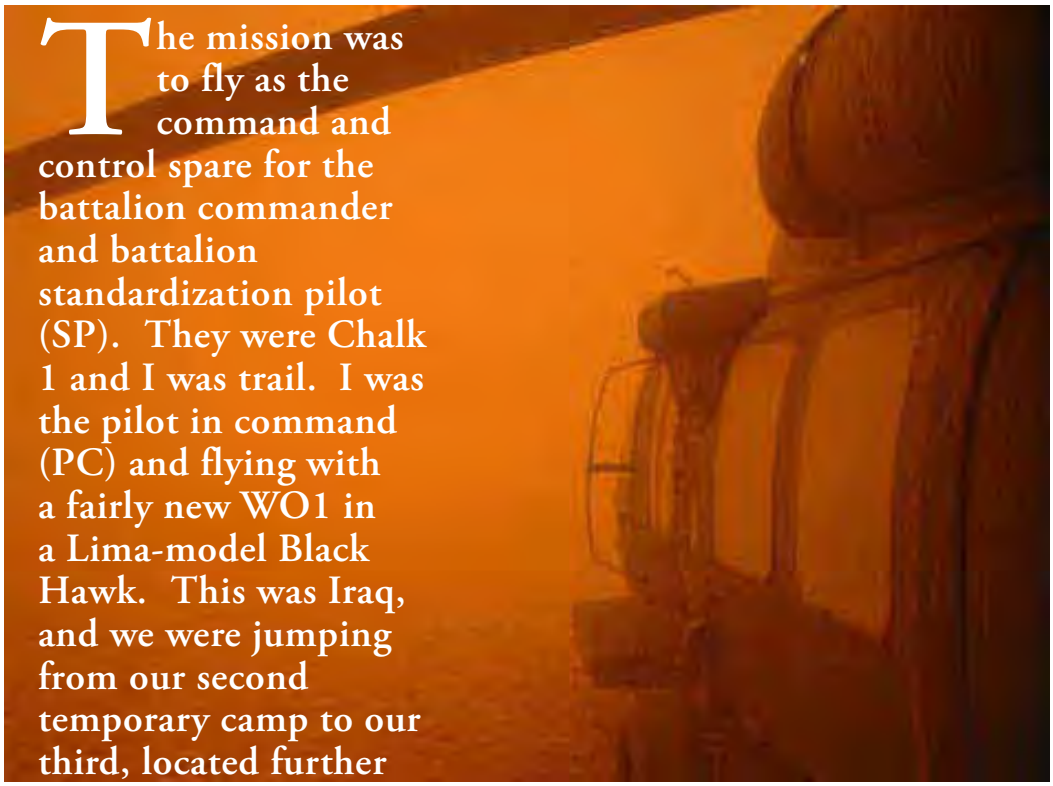
Loss of situational awareness plays an undeniable role in Army rotary-wing operations. It is clearly a hazard that requires more focus if application of our Composite Risk Management process is to drive our accident rate down and preserve our combat readiness. ♦

–Comments may be directed to the U.S. Army Combat Readiness Center Help Desk, DSN 558-1390 (334-255-1390).

Now You See Me,

No

ANONYMOUS ("STORM 35")



The mission was to fly as the command and control spare for the battalion commander and battalion standardization pilot (SP). They were Chalk 1 and I was trail. I was the pilot in command (PC) and flying with a fairly new WO1 in a Lima-model Black Hawk. This was Iraq, and we were jumping from our second temporary camp to our third, located further north near Baghdad. We were in country just a few weeks, and the war had already started. The flight was following a pre-established one-way route that was known theater-wide.

Before departure, we received a sketchy weather brief via cell phone that didn't warn of any real obstruction to visibility, just the normal desert haze. Halfway on the route we spotted two Black Hawks flying the wrong way on our one-way route and asked them why they were flying on the route. Their reply was simple: "Visibility ahead is about one-quarter mile."

They turned around and were headed back to their home base—a concept I tried to implore to Chalk 1. I radioed Chalk 1 and asked if we were also turning around. Immediately the battalion commander radioed back that we were going to press on and see what the weather looked like. I mentioned we already had a pilot report from the other returning flight and thought it would be a good idea to turn around. Again the battalion commander radioed back that he wanted to continue and try to get to the next base camp before the battalion convoy left the former base. He actually sounded annoyed that I was questioning his decision to proceed.

Inside my cockpit I griped about the decision but continued anyway due to the perceived command pressure. The caution lights were going off in my head, but I failed to exert my command authority and demand

w You Don't

we turn around. The fact that the air mission commander (AMC) was the battalion commander and his pilot was the battalion SP led me to believe I was wrong and they must have the situation under control, right?

The next radio call was mine. "Chalk 1, Chalk 2 … I'm having trouble seeing you," I said. "Roger, I'm slowing," the SP replied. His voice inflection alarmed me. He seemed stressed. Visibility was LESS than one-quarter mile, and I was seconds from again requesting we turn around when it hit us.

"Chalk 1, I cannot see you," I exclaimed. The entire windshield was desert colored, and the aircraft was being slammed with close to 50-knot winds from all directions. "I'm landing, I'm putting her down," I said in an intense voice. "Roger, we are also," the SP replied with the same intensity. There were no radar approaches or inadvertent instrument meteorological conditions recovery fields at that time, and we were right at the frontline of a powerful sandstorm.

I looked to my right and saw an equally terrified junior pilot and knew it was up to me to land this bird in a zero-zero visibility condition. The entire crew remained totally silent. I referred to my radar altimeter and artificial horizon and prayed. I didn't know if we were landing on a house, trees, or the other aircraft. Even after landing, I still could not see the ground. I radioed Chalk 1 and was told to shut down immediately and set up perimeter defense positions. I was so glad we made it that I didn't mind a firefight with the enemy at the time.

The storm lasted 2 hours, and we were out there in hasty fighting positions. We were sandblasted and sand burned, but the storm was over. Chalk 1 was seven rotor disks away from our position, and I had landed on a slope on the side of a road. That was the first time we actually saw the ground. Never again am I going to let someone talk me into going beyond my abilities or the aircraft's limits. Sometimes we should listen to that little voice inside our head. Rank and position of the AMC will not dictate actions I deem unsafe. That's my job as an Army warrant officer—to keep my crew safe and bring them back to their families. ♦

—The author's name was withheld by request. If you would like to publish a story anonymously in Flightfax, please call Ms. Paula Allman, Managing Editor, at DSN 558-9855 (334-255-9855) or e-mail paula.allman@crc.army.mil.

Ditc

BY LCDR BILL MELLEN
U.S. NAVY

"OK, guys, this is it; we've gotta do this," was the last thing I said before we lost all power to the aircraft.

Those words could have been my last ones had I not had the proper training. I was straight out of Aviation Safety School and just 3 weeks into my department-head job as the squadron safety officer. I couldn't help but shake my head at the irony of it all.

It was a typically brisk but clear, winter day in Norfolk, VA. The water temperatures were reported to be in the high 30s to low 40s. I begrudgingly donned my dry suit—not thrilled by the prospect of having the suit's rubber seal chafe my neck like a cheap, rented tuxedo for the duration of a 3-hour airborne mine countermeasure (AMCM) sortie. With a seasoned lieutenant for an aircraft commander (HAC) and a complement of six salty aircrew members, I felt the deck was stacked for an easy back-in-the-saddle flight for the old O-4. Good thing I didn't make a wager.

We were scheduled to hunt "mine-like" objects in a training minefield 30 miles off the coast. When we reached the training field, I settled our MH-53E into a 75-foot hover as the crew prepared the AMCM gear. We completed our pre-mission checklist in the cockpit and awaited the "ready to commence" call from the crew. Instead, we heard, "Sir, do you hear that noise?" A high-pitched whining sound could be heard over the intercommunications system (ICS). I quickly scanned the gauges—indications were normal.

I replied, "Everything looks normal up here. Where is the sound coming from?"

One crewman suspected the No. 3 engine. "No biggie," I thought. After all, this is the mighty 53E, with three engines and power to spare; just transition to forward flight and, if the engine fails, land as soon as practical. It was time to show the lieutenant how an "old-school bubba" greases on a dual-engine landing.

I was awakened from my pretentious stupor by another crewman's remark, "Uh, actually, sir, I think the noise is coming from the main gearbox."

Yikes! The machine just upped the ante, and this was a winner-takes-all game.

We immediately headed for the beach. As I mentally reviewed the Naval Air Training and Operating Procedures Standardization (NATOPS)

hing Into the Deep

procedures for an impending main gearbox failure, I flew a "low and slow" profile of 100 feet AGL and 80 knots.

Within 3 minutes, the noises from the back grew deeper and louder; airframe vibrations now accompanied them. I could feel the aircraft laboring to stay in the air. I asked the HAC to check the pressure and temperature gauges and to alert me of any abnormal indications. The gauges checked within limits, but the aircraft was talking and telling a story whose plot was easy to follow. With numerous mishap accounts fresh in my mind from safety school, I knew the all-too-often abrupt ending.

"This is not good," I remarked to the crew.

Reading between the lines, the HAC directed the aircrew members to prepare the cabin for a possible water landing. Still 28 miles from land, I wondered how much farther I could coax the aircraft to fly. I got my answer moments later when the main gearbox chip detector light illuminated, followed, in short order, by a hydraulic pressure caution light.

Completely persuaded that the gearbox was catastrophically failing, I rapidly flared to set up for an immediate, no-hover landing.

"Ditch, ditch, ditch; we're making a water landing, guys!" I announced over the ICS. I asked the HAC to raise the landing gear and to get out a mayday call on guard frequency.

"I can't believe I'm about to do this," I thought as I set the aircraft on the ocean.

The tail end settled and immediately began to take on water. The HAC reached up to secure the engines while I did my best to keep the aircraft upright with the cyclic. Suddenly, the power cut off and all we heard was the whistle of the blades as they coasted down.

Seeing the water level creep up the chin bubble, I realized I needed to prepare for the inevitable egress. I reached down and pulled the window's emergency release handle, gave the window an elbow, and watched it fall into the water.

"What else?" my mind raced to recall. "Air, that's right, I've got air."

AN/PRC-149

The AN/PRC-149 personal locator beacon and voice transceiver (PLBVT) provides global positioning system (GPS) location and communication to search and rescue units. It is carried in the crewman's survival vest and is activated by the crewman.

The integral voice transceiver features multiple channel-selectable VHF/UHF capability. The search and rescue satellite aided tracking (SARSAT) capability provides near instantaneous notification of distress signals to rescue agencies.

With its embedded GPS receiver, the AN/PRC-149 provides automatic position reporting. A detachable radio-control unit enables rescue swimmers to communicate hands-free with the hovering helicopter, allowing full use of their hands for the rescue operation.

The radios are being issued through normal logistics chains as a programmed replacement for the PRC-90 and PRC-125 survival radios. There are more than 10,000 AN/PRC-149 radios currently in the fleet spread across all aviation communities.

—Reprinted with permission from *Approach* May-June 2005.

I reached across my survival vest and grabbed the helicopter aircrew breathing device (HABD) regulator, put it in my mouth, and took a short breath to make sure there would be no surprises (I had been in too much of a hurry on preflight and hadn't bothered to check the bottle pressure). As the rotor blades slapped against the swells and came to a halt, the aircraft began a slow roll. I looked over to the HAC and saw he already was underwater. I held on to my window frame for reference, placed my other hand on the harness release, and braced myself for the big-ticket ride.

I was comforted by how surprisingly close the airframe roll mirrored that of the 9D5 helo dunker. However, my comfort level soon was exceeded by the inrush of water from my window. It felt like a fire hose had been sprayed in my face. Every part of me desperately wanted to get out of that seat, but the phrase, "Wait until all violent motion stops," rang in my mind, and I stayed strapped in until the rush subsided.

Suddenly, it got dark but calm. Breathing on my HABD bottle, I turned the harness release and fell out of the seat—still holding on to my window frame with the proverbial death grip. As I fought through debris that washed forward from the cabin and filled the cockpit, I pulled myself through the window and made a few strokes.

Next thing I saw was the blue Virginia sky as my head popped out of the water. I soon felt the cold bite of the frigid water; I now was glad to be wearing that cheap, rented tuxedo. Regrettably, I had opted to leave my dry suit underliner hanging in the paraloft because I didn't want to get too warm in flight. I pulled the beaded handles to inflate my survival vest and was granted the luxury of an auto-inflate. Other crew members were forced to manually inflate their vests when the beaded handles failed them.

I looked around and spotted an orange raft floating 20 yards away—the crew chief had been able to deploy and inflate the raft during egress. I backstroked my way to the raft, where the rest of the crew met me. We all worked to get each other onboard. I counted eight smiling—no, make that eight giddy faces—and let out a sigh of relief that everyone had safely gotten out. We were cold and wet, but there wasn't a scratch on anyone.

A Coast Guard C-130 crew heard our mayday and within minutes was circling overhead. We established communications with the plane on the PRC-149 survival radio from a crewman's vest. Help was on the way. Morale was high in the raft. I almost felt guilty about quenching the festivities by putting on my safety officer's hat and reminding the crew we were still in the ocean and needed to stay focused on our procedures for rescue. As advertised, the cavalry soon arrived in the form of two Navy H-60 helicopters that quickly hoisted us to safety.

Back at the hospital, a crewman asked me if that was the back-in-the-saddle flight I was looking for. "Not so much," I replied. But if experience is the best teacher, I earned a Ph.D. on that flight. Foremost, I learned the aircraft doesn't lie when it's talking to you, so you better be all ears. Abnormal noises may be the first and possibly the only indication of malfunction before failure. What's more, it has been said the NATOPS was written in blood. Unless you want to write a postscript with yours, know its contents cold; there's no time to cross reference when things get ugly.

Don't allow the donning of your survival gear to become a mere formality—dress for survival, not comfort. Preflight and thoroughly familiarize yourself with all personal—and aircraft—survival items; today might be the day you call on them to save your life.

Finally, believe in the emergency egress training you've been taught. Does it really work? I bet my life on it—literally. ♦

—Reprinted with permission from *Approach* May-June 2005.

A Call to Leaders

RIA MARTINEZ
U.S. ARMY COMBAT
READINESS CENTER

There's an old saying that goes, "We're only as strong as our weakest link." I believe you, as a first-line supervisor, are the critical link in the Army's leadership chain. You're the Army's expert when it comes to knowing and protecting your Soldiers.

I ask you to read Preliminary Loss Report 0566 below. As you will see, two Soldiers died in an AH-64A accident in North Carolina. Whether Soldiers die on the battlefield or from accidents stateside, their loss affects the Army's mission, morale, resources, and overall readiness. A loss is a loss, regardless the cause.

PRELIMINARY LOSS REPORT 0566

AH-64 CRASH CLAIMS 2 SOLDIERS' LIVES -- ACCIDENT

Two Soldiers (1LT and CW3) were killed when their AH-64A helicopter crashed during nap-of-the-earth (NOE) training. The aircraft was flying west into a setting sun when it struck multiple 1¼-inch wires that extended across a river. The aircraft crashed into the water. The wires were marked on the local hazards map.

As a retired Army NCO, I know Soldiers are only as good as the training their leaders provide. If leaders don't train Soldiers to be safe, who will? As a first-line supervisor, you're the first leader your Soldiers see in the morning and the last one they see before heading out at night. They depend on you to show them what "right" looks like.

You can teach your Soldiers what right looks like by training them to use Composite Risk Management (CRM). By doing so, you empower them to reduce losses, which benefits you, your organization, and the entire Army. Using CRM is not a great mystery; it's the same five-step risk management process outlined in Field Manual 100-14, *Risk Management*. What makes CRM different is it addresses not only accidental losses, but also those caused by combat, suicide, medical, and other issues. To quickly review the five steps:

Step 1—Identify Hazards: Identify what will hurt you, your Soldiers, and the mission.

Step 2—Assess Hazards: Is the risk(s) low, moderate, high, or extremely high? What's the severity or probability of the risk?

Step 3—Develop Controls and Make Decisions: Develop options to reduce the risk(s) and decide the best controls.

Step 4—Implement Controls: Follow through with your plan.

Step 5—Supervise and Evaluate: Make changes as needed to modify or adjust.

CRM was designed to be ongoing and flexible to meet the changing missions and environments Soldiers encounter in garrison and on the battlefield. As you teach your Soldiers to use CRM, they can gain experience completing risk assessments for normal and long-range planning. Even better, they'll learn how to quickly perform risk assessments under any circumstances.

Once Soldiers accept and understand CRM, they'll automatically have their "risk mode" activated. As using CRM becomes automatic, Soldiers will better protect each other—whether in combat or in garrison, day or night. And CRM isn't just limited to on post. Soldiers who've taught their families to identify and avoid hazards can deploy with greater peace of mind, knowing their families will be safer.

On the battlefield, Soldiers using CRM can tell their buddies, "I've got your back," confident they've thought through the dangers and planned for them. Because they've asked themselves, "What's going to kill me and my buddies," they're better prepared to defeat the enemy and come home alive.

That's why you're so important as a first-line supervisor. The training you give your Soldiers is their best defense against the twin hazards of enemy action and accidents. You're training your Soldiers to win and survive! ♦

—Ms. Martinez is a Safety and Occupational Health Specialist for the Mobile Training Team at USACRC. She may be contacted at DSN 558-0208 (334-255-0208) or by e-mail at orillia.martinez@crc.army.mil.

Seconds to Impact

MARIAN GARAIACU
ROMANIAN AIR FORCE

During an exercise in September 2000, my squadron detachment was called to Campia Turzii Air Base to perform night flight training missions. Once we arrived at their facility, we met our hosts and they briefed us on flight rules and procedures relative to the local area, as well as discussed mission objectives and training rules to follow.

Well after sunset, a flight of two took off as planned from Campia Turzii. It was a very dark night, and during initial climb, only the stars accompanied us. I was the trail aircraft, so behind my jet I saw nothing but blackness. There was only one island of light at my 6 o'clock—a local town and the base nearby.

The MiG 21 Lancer fleet constitutes the backbone of the Romanian Air Force, performing air defense, close air support, and training roles. It is an incredible aircraft, offering an impressive number of resources to the pilot, including the program altitude passage warning system. A verbal warning of "Altitude, Altitude" is heard from a voice message unit (VMU) when the aircraft descends past the programmed altitude.

On this night, I had programmed altitude warnings at 600 meters above ground level (AGL). However, I was not expecting to hear the altitude warning before the final approach into Campia Turzii. My rationale behind programming at 600 meters from ground warning was it would allow me to have enough time to initiate a recovery and miss the ground if something were to go wrong.

The return to base was in formation under visual flight rules (VFR). From about 60 kilometers, we descended 1,000 meters. Shortly after, we received instructions from the Campia Turzii Air Base tower to proceed to point WP-15, 25 kilometers southeast of the air base.

Up to that point everything was normal. I had no doubt about the procedures we were following; everything was according to VFR and routine. Still in descent, my leader called a formation change to "left echelon." As a winger, I did not know what altitude my leader was planning to level off around point WP-15.

As we continued our descent, I read 800 meters on my altitude heads-up display. We were now in the lower level (below 1,000 meters AGL). I was convinced we would not descend below the instrument flight rules (IFR) minimum sector-safe altitude. That altitude assured us a 500-meter clearance from the highest obstacle within 35 kilometers of the airport. This meant I would not hear the altitude warning, especially when Campia Turzii Air Base sits at 100 meters above sea level (ASL) and is surrounded by obstacles 350 meters ASL within that 35 kilometers—point WP-15 being one of them.

So our descent continued and my confidence level was reinforced by that island of light in my peripheral vision at my 11 o'clock position and slightly below horizon. We were getting closer to the air base. But short of 30 kilometers, suddenly something was wrong. The VMU manifested itself, this time to warn me we had passed through 600 meters AGL!

The following events happened in less than 3 seconds. Never in my more than 1,000 flight hours had I been confronted

Photo credit: Alex Trandafir, www.airliners.net

with such an awful reality. In a fraction of a second, the safety of my flight was threatened. I could not believe it. Since I was in close formation, I had to first make power and position adjustments before I could stop looking at the lead aircraft. Once I had a safe distance from the lead aircraft, I was able to quickly glance at the radar altimeter.

Before I could even satisfy my curiosity, the VMU was heard again. We were still below 600 meters AGL and descending. I saw the radar altimeter needle rapidly descend from 600 to 400 meters AGL and had no doubt what just happened. I transmitted to my lead the code words associated with this rare event, "***PULL UP! PULL UP!***" At the same time, I initiated an aggressive recovery.

Fortunately, my lead made his recovery, as well. Even though my radio transmission had to sound like thunder in his helmet, his recovery was tinted with disbelief. He took the time to ask me if we were supposed to report ourselves at point WP-15 at 600 meters ASL. After this radio transmission, trying to overcome my surprise, I quickly began to convince him of the danger that had just occurred. I told him I saw 400 meters on the radar altimeter when I had given him the "pull up" call. Now back at 800 meters ASL, we proceeded back to the base route formation until we were in a position to land without further problems.

I was on the ground when I realized my lead had used day visual flight rules. The 500-meter altitude was designed for aircraft on a low-level mission during daytime only. According to the procedure, those low-level aircraft have to climb to 800 meters ASL before entering the Campia Turzii Air Base control zone. The aim here is for the fast aircraft to rejoin the circuit in a safe manner, allowing all helicopters around Campia Turzii to fly below all military traffic, in this case below 800 meters ASL.

After the video tape recorder review, we discovered we avoided impact with the earth by only 150 meters. Also, we found the recovery altitude was actually 50 meters below the highest obstacle. From that altitude and rate of descent (nearly 25 meters per second), there were only 8 seconds before we would have impacted the ground. That profile is based on a descent over a flat terrain with no trees or obstacles, which was not the case around point WP-15!

Lessons learned

There are two lessons to take away from that night mission. First, night VFR does not always represent perfect visual meteorological conditions. In this case, the ground visibility was nonexistent; we may have been VFR, but we needed to be flying under instrument meteorological conditions. Under these conditions, it is imperative to follow approved approach rules and nothing else. Secondly, it is crucial to instinctively react to the "PULL UP" call without one second of hesitation. ♦

—Marian Garaiacu is a member of the Romanian Air Force. He wrote this article while attending the Aviation Safety Officer Course at Fort Rucker, AL. He may be contacted at garaiacu@roaf.ro.

Never Assume

KENNETH KLEIN
DOTHAN, AL

In January 1968, the North Koreans captured the Navy spy ship "Pueblo." I was an Air Force firefighter attached to Det. 8, 38 Air Rescue Recovery Center, stationed at Myrtle Beach Air Force Base, SC. Our unit was alerted to deploy two Kaman HH-43B Huskie helicopters, better known during the Vietnam War as "Pedro," to Kunsan Air Base, Korea. Our detachment—consisting of pilots, maintenance personnel, firefighters, and medics—packed up our two aircraft with equipment, loaded them on two C-141 aircraft, and was in Korea within 3 days from the time of notification. We were there for 6 months, living in field conditions from February through July. Our alert operations tents and two aircraft maintenance tents were to be placed between two inactive taxiways because there were no quarters on the installation for our personnel to stay.

MSG Kenneth Klein pre-flighting the fire suppression kit (FSK) in the morning while on alert at Kunsan Air Base, Korea, 1968.

During our stay, we made rescues for three downed aircraft: an F-4D, an F105, and a Korean F-86. We were also required to maintain minimum flying hours and proficiency training, including emergency procedures. During daylight hours, the alert crew consisted of one pilot, one medic or pararescueman, and two firefighters. On the Huskie, the pilot flew the aircraft from the right seat. For these flights, a crewmember occupied the front seat to help monitor the gauges and to watch for other aircraft from the 9 to 12 o'clock position. During nighttime operations,
we added a copilot.

Early one morning, our alert pilot decided to launch a training flight to keep our currency up to date. After about an hour, our pilot decided to perform some emergency procedures—one of which was an autorotation from 500 feet. We had previously been using a specific spot on one of the inactive taxiways for this procedure. He alerted the crew that he was about to begin. He told me he was going to perform the autorotation using a left traffic pattern. We leveled out at 500 feet, downwind, when he reduced power to ground idle, lowered the collective, and banked left,

turning base. Because he was in the right seat, his visibility was impaired by me and the left side of the aircraft. He continued the bank until he was on final approach, descending at a 45-degree angle at 60 knots. The Huskie has four landing gears with four wheels, so on touchdown, the aircraft would normally rollout and stop when the pilot applied the brakes.

On this particular day, we were confronted with something unexpected. The Korean Army had been having trouble with Korean nationals infiltrating the installation, so the night before they had lain rusty concertina wire and trip flares across this taxiway to prevent their access. They forgot to tell us! Yep, you can guess what happened next. After we touched down and began rollout, the pilot noticed this wire across the entire taxiway. We were rapidly approaching it without any power for lifting off. He immediately cranked up the throttle, pulled up on the collective, pulled the cycling stick to the full back position, and applied the brakes. The aircraft shook and jumped to a full stop just a few feet from the wire. We all sat there for awhile to compose ourselves.

HH-43B used to fight fire in training exercise.

Lessons learned

The lessons learned from this near-disaster is no matter how often you perform an autorotation or landing to the exact same location, ALWAYS doublecheck the area to ensure it is in the same condition as it was the last time you conducted training. This is particularly true when a unit is deployed to locations such as Iraq, Kosovo, and other forward locations. NEVER ASSUME your landing areas are going to be in the same condition they were the last time you used them. Perform a low-altitude recon before performing any training or emergency procedure. Your life will depend on it. ♦

—Mr. Kenneth G. Klein is a retired master sergeant from the Air Force, a retired GS-14 Fire Chief from Fort Rucker, AL, and currently works as an EH&S Coordinator at Cairns Army Airfield, Daleville, AL. He may be contacted at 334-598-0578 or by e-mail at kleink@frmaint.com. Mr. Klein wrote this article while attending the Aviation Safety Officer Course 04-003.

News and Notes

KIOWA PILOTS GET DFC FOR AMBUSH RESCUE

SGT MICHAEL J. CARDEN
FORT BRAGG, NC

From left to right: CWO Charles Folk, 1LT Michael Hultquist, CWO James Cornell, and CWO James Williamson, all aviators from 1st Squadron, 17th Cavalry Regiment, 82nd Airborne Division, received the Distinguished Flying Cross during a ceremony on 8 November 2005 at the 82nd Aviation Brigade Headquarters. The aviators were awarded the medal for valorous actions during Operation Iraqi Freedom.

The Distinguished Flying Cross (DFC) was awarded to four paratroopers from the 1st Squadron, 17th Cavalry Regiment of the 82nd Airborne Division on 8 November 2005 for valorous conduct in Operation Iraqi Freedom (OIF). 1LT Michael Hultquist and CWOs James Cornell, James Williamson, and Charles Folk, all pilots from Troop D, were recognized in a ceremony at the 82nd Aviation Brigade headquarters.

On 22 March 2005, Hultquist, Cornell, Williamson, and Folk were almost finished with a routine aerial reconnaissance mission near Lake Tar Tar in northwestern Iraq when they heard a scratchy mayday call over their radio traffic.

The call came from a group of U.S. and Iraqi troops who were ambushed during their patrol. Though the pilots only had about 10 minutes of fuel left in their Kiowas and were too far out of range to maintain radio contact with their headquarters, they decided to fly to the aid of the ambushed troops.

"These four Soldiers are an amazing breed of Army Aviator," said COL Kelly Thomas, commander, 82nd Aviation Brigade. "They turned their aircraft toward the sounds of the enemy's guns, and without hesitation, they engaged the enemy with a close-contact attack, saving the lives of their brothers in arms.

"More than 1.5-million Army Aviation flight hours have been flown in OIF, and only 22 Distinguished Flying Crosses have been awarded," Thomas said. "You witnessed it today; 23, 24, 25, and number 26."

Hultquist said it was a tremendous honor to just be put in for the DFC.

"But the biggest thing for us that day," he added, "was the Soldiers we were fighting for made it home alive." ♦

(Editor's note: SGT Michael J. Carden serves with the 82nd Airborne Division Public Affairs.)

LITEfax

CHRIS FRAZIER
STAFF WRITER/EDITOR

YOU MIGHT NEED THOSE LATER

After taking to the air to conduct a night vision goggle (NVG) training flight, a UH-60L crew lost a very important component to their mission. A specialist had stored a set of NVGs in the back of one of the aircraft's empty troop seats just before takeoff. As the aircraft departed, the NVG case was reported to have fallen out of one of the open cabin doors.

It's believed the specialist did not apply pressure to the entire edge of the Velcro™ fastening around the troop seat. As the wind rushed through the open doors into the cabin area, it apparently blew open the troop seat and sent the NVGs tumbling out of the aircraft to the ground. The crew returned to the runway and recovered the NVGs, which suffered repairable Class D damage.

THIS WAY FORWARD

Poor scanning for any potential hazards and a lack of crew coordination allowed some easily avoidable damage to occur to a CH-47D that was on a combat mission. After hooking up an external load, the crew was informed by the tower that they had hooked it up backward. The crew was in the process of unhooking and repositioning the load when the pilot in command (PC) noticed the aircraft's hook release lights had illuminated. The PC asked if it was all right to come forward, and the flight engineer told him it was clear.

When the pilot brought the aircraft forward, the cue tip was still connected to the forward hook, and the aircraft

ARMY AVIATOR RECEIVES SILVER STAR

SSG KEN DENNY
ALASKA ARMY NATIONAL GUARD

An Army Aviator was awarded the Silver Star for gallantry in a ceremony 1 October 2005 in Bagram, Afghanistan. CW3 Christopher Palumbo from A Co., 3rd Battalion, 158th Aviation Regiment, was awarded the medal for his actions 11 April. Palumbo was the pilot in command of "Skillful 31," the call sign for a UH-60L Black Hawk helicopter conducting aviation operations in Southeast Afghanistan that came under fire while supporting Special Operations Soldiers.

"I was going to do whatever it took to ensure those Special Forces Soldiers were protected and spared from any further injuries," Palumbo said. While inserting a quick-reaction force and extracting two wounded Soldiers, Palumbo and his crew were credited with killing more than six enemy and were constantly under fire from small arms and rocket-propelled grenades.

"None of the crew aboard Skillful 31 had any reservations," Palumbo said. "Over 50 bullet holes, shot-up engine, shot-up cabin and cockpit, one crew chief wounded, four blades tore up … we were lucky." Though luck may have had something to do with it, Palumbo said, "I think while the fight played out, instinct took over and training just kicked in."

Palumbo worried for the safety of his crew but said none of his crew had any reservations about the importance of the mission or, more importantly, the troops on the ground.

Army CW3 Christopher Palumbo, 3rd Battalion, 158th Aviation Regiment, is awarded the Silver Star by CJTF-76 commanding general MG Jason Kamiya.

"I think this incident just reinforced the bond that aviators have with their infantry brethren and reminds us that the war in Afghanistan is not over," said Palumbo. "There are many Soldiers all over this country taking the fight to the enemy and persevering."

The news of the award shocked Palumbo. "I never realized the magnitude of the actions we took that day," he said. ♦

(Editor's note: SSG Ken Denny serves with the 117th Mobile Public Affairs Detachment.)

was pulled down and contacted the load. The flight engineer told the pilot to come back, but the load had already punctured the bottom of the aircraft ramp, causing Class E damage. Following repairs, the aircraft was returned to service.

DOES THAT BELONG THERE?

During refuel operations, a clipboard that had been placed on an OH-58D(R) glare shield by an instructor pilot (IP) slid off, causing a 5-inch by 6-inch hole in the left chin bubble. The aircraft was returned to parking and shutdown without further incident. The clipboard caused Class C damage to the aircraft, which was returned to service after the chin bubble was replaced. The clipboard was reluctantly returned to the IP.

NICE SHOT, MAN

Following the hot refuel of a UH-60L on a maintenance test flight, a refuel team member tossed the grounding cable while standing under the rotor disk. The cable entered the rotor disk, and the clip on the end of the cable contacted the red main rotor tip cap, resulting in a 3-inch gash in the top of the tip cap.

An inspection was conducted on the main rotor blade weight attachment point to determine if the blade structure was damaged. The incident was reviewed with all aircrew and forward arming and refueling point (FARP) team members, and it was recommended all FARP personnel participate in proper refueling procedures refresher training. The tip cap was replaced and the aircraft released for flight.

—Contact the author at (334) 255-2287, DSN 558-2287, or by e-mail at christopher.frazier@crc.army.mil. For more information on how to submit a story to Litefax, send an e-mail to flightfax@crc.army.mil.

AccidentBriefs

Information based on preliminary reports of aircraft accidents

Class A

OH-58

A Model

The aircraft descended into a pecan grove during a reconnaissance and interdiction detachment mission and was reported as destroyed. The crew and the law enforcement officer passenger all sustained survivable injuries.

RQ-5A

The aircraft experienced a failure of the forward engine during flight. Recovery chute deployment was initiated, but the aircraft contacted trees. Significant damage to the aircraft, which was suspected to be destroyed, and payload was reported.

AH-6J

• **Class D:** During cruise flight, the crew experienced a one-to-one main rotor vibration. The crew landed the aircraft in the vicinity of a tactical forward arming and refueling point and shut down the engine. Upon postflight inspection, the crew discovered an improperly installed trailing edge main rotor blade pin. This resulted in damage to the main rotor blade, main rotor dampener, main rotor lead lag link, main rotor dampener retention pin, and both (leading edge/trailing edge) main rotor blade retention pins. Maintenance was notified, the affected parts were replaced, and the aircraft was returned to service.

AH-64

A Model

• **Class D:** During a right turn, the right engine nacelle opened.

• **Class E:** The instructor pilot (IP) was conducting environmental training/maneuvering flight training. After demonstrating a target "bump-up" from maneuvering flight engagement, the backseat cockpit began to fill with smoke. The environmental control unit (ECU) was turned off, and the backseat cockpit continued to fill with a blue-white smoke. An emergency was declared and a rolling landing was conducted. The aircraft landed safely and the cockpit was opened for ventilation. The crew got out and checked for a possible fire. The ECU was replaced.

• **Class E:** During aircraft runup procedures while on auxiliary power unit (APU) power, a flight control check was conducted. The APU failed and fuel was observed running out the tailboom. Inspection revealed the APU fuel control valve was leaking at the solenoid connection into the fuel valve assembly. The fuel control valve assembly was replaced, and the aircraft was released for flight. No damage to the aircraft was reported.

D Model

• **Class E:** The aircraft was flying at 100 knots and 470 feet above ground level (AGL) when a strong, hot, solvent odor was noticed by both crewmembers. Within seconds, front cockpit visibility was greatly reduced and a moist, oily film coated all surfaces. An emergency was announced and a precautionary landing was immediately made to an open field. The maintenance test pilot got out and inspected the aircraft. No warnings, cautions, or advisories were noted, and except for vapors/odor, the aircraft systems appeared to function normally. The crew requested one-time flight back to base and returned with no additional difficulty.

• **Class C:** The aircraft contacted wires during a recon mission. Damage was found to four main rotor blades and minor damage was found to the airframe interface assembly. The aircraft was flown back to home station without further incident.

CH-47

D Model

• **Class C:** Postflight inspection revealed the right-side combining transmission butterfly cowling had separated from the aircraft during flight and associated damage occurred.

• **Class D:** The crew was performing its fourth dust landing in the same landing zone (LZ), which was made up mostly of loose sand and small rocks. When the crew landed, the aircraft slid forward and stopped 5 to 7 degrees nose-low due to terrain. There was no indication damage had occurred, so the crew continued the mission. On the postflight inspection, the crew discovered damage to the bottom of the aircraft and reported it immediately. Later, two passengers on the aircraft claimed they had suffered minor injuries. There was no lost work time from the injuries. Following repairs, the aircraft was returned to service.

MH-60

L Model

• **Class D:** After hooking up a rotor analysis and diagnostic system kit camera to the vent screen on the aircraft nose to perform an in-flight main rotor blade check, the aircraft performed two maintenance test flights. The first flight went without incident. A half hour into the second flight, while performing the required main rotor blade autorotational check, the pilot on the controls lowered the collective and began a right turn. Just as the aircraft entered the right turn, the nose door opened, smashing the center windshield. The pilot on the controls terminated the autorotation and landed the aircraft. The crew secured the nose door and returned to the airfield without further incident. Maintenance was

notified, and no structural damage was noted. The weather radar antenna, nose door strut, and center windshield were replaced.

OH-58

D(R) Model

• **Class C:** The crew experienced low-rotor audio during a simulated engine failure training procedure with power recovery. The aircraft experienced mast and engine overtorque.

• **Class C:** The aircraft experienced blade, blade up-stop, and hub damage during a low-level training autorotation.

• **Class C:** During refuel operations, a clipboard that had been placed on the glare shield by the IP slid forward and down, causing a 5-inch by 6-inch hole in the left chin bubble. The aircraft was returned to parking and shut down without further incident. The chin bubble was replaced, and the aircraft was returned to service.

• **Class E:** While the IP was flying the aircraft (conducting evasive maneuvers) from the left seat, the aircraft displayed a mast torque time limit message. The IP leveled the aircraft and checked the full authority digital engine control (FADEC) monitor page. The IP read 107 percent mast torque and 108 percent engine torque, thinking no limits were exceeded and continued flight. During shutdown, the IP reviewed the FADEC monitor and engine history pages and discovered a mast overtorque of 117 percent for 2 seconds. The aircraft was inspected and revealed no damage. The aircraft was released for flight.

UH-60

A Model

• **Class B:** The aircraft passed under a Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) system during approach and severed the JLENS tether. The JLENS subsequently rose unfettered to an altitude of 5,000 feet AGL before it burst.

• **Class D:** As crewmembers were unloading supplies into a local civilian vehicle while conducting hurricane emergency re-supply, another vehicle backed up to pick up supplies but did not stop. The crew attempted to warn the individual, but the vehicle did not stop in time. One of the crewmembers noticed part of an antenna hit the ground outside the rotor system. The aircraft was shutdown and each rotor blade was inspected, but no damage was found. During the preventive maintenance check, a small cut was found on top of the main rotor tip.

• **Class E:** The tail rotor driveshaft cover on the third driveshaft was opened to verify wrench size. The crew chief closed the cover but did not latch it and then proceeded to complete the torque check on the first driveshaft. The torque check was completed and the area where the work was performed (i.e. the first driveshaft area) was secured. The pilot in command was not aware the third driveshaft cover was open and took off, but the crew had to return due to weather. Upon landing, the crew chief was notified by a Soldier on the ground that the third driveshaft cover was open. The aircraft was shut down and the driveshaft cover secured. The copilot completed a visual inspection and found a small crack in the cover. The aircraft was flown back to the airfield with no further incidents.

L Model

• **Class C:** During a night vision goggle landing, the aircraft slid forward into a rut, causing damage to the fuselage near the search lights.

• **Class E:** While ground taxiing to the ramp, the crew chief noticed fluid flowing down the left cargo door of the aircraft. The crew completed taxi to the ramp and initiated a normal shutdown. Maintenance inspection revealed an oil transfer tube disconnected from the No. 1 generator. The tube had been disconnected as part of the replacement of the No. 1 generator and was never reconnected by the maintenance personnel. Maintenance personnel reconnected the tube and flew the aircraft back to home base without further incident.

UC-35

• **Class C:** The aircraft sustained damage to two tires and associated wheel and brake assemblies during an operational brake test in accordance with the manufacturer's specification.

UNMANNED AERIAL Vehicles

RQ-5A

• **Class C:** The aerial vehicle operator (AVO) experienced generator and ignition failure readings during flight, followed by engine failure. The parachute did deploy.

RQ-7B

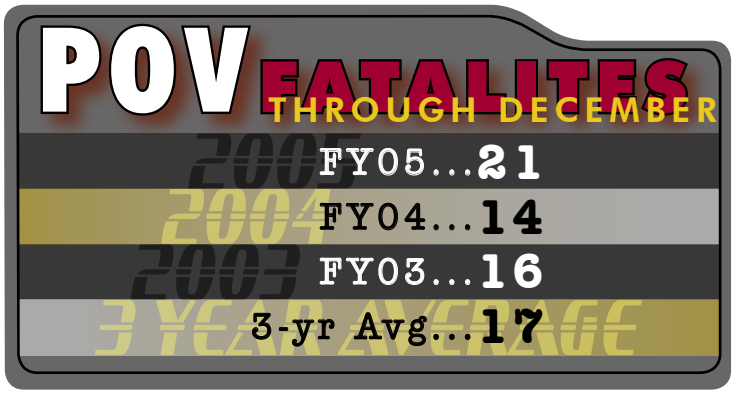
• **Class B:** The aircraft engine failed less than 1 minute into flight from climb-out. Altitude was too low for chute recovery, and the aircraft impacted the ground. The right wing, landing gear, payload, and other components separated.

• **Class B:** The aircraft crashed after the launch hook reportedly released prematurely and the aircraft failed to clear the launcher.

• **Class B:** The aircraft experienced generator, ignition, and subsequent engine failure during flight. The parachute was deployed at approximately 1,000 feet AGL. The aircraft landed in high-wind conditions and was dragged approximately 300 meters before coming to a stop.

• **Class C:** The aircraft experienced an RPM drop to zero and was maneuvered to a safe location, where the recovery chute was deployed. Video feed was lost and a search was initiated.

Editor's note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change. For more information on selected accident briefs, call DSN 558-9552 (334-255-9552) or DSN 558-3410 (334-255-3410)



Mission Safety

This is not just for the pilot either—this is for **ALL** aircrew members in the mission.

1 Plan every mission.

- Don't be lulled into a false sense of security because the flight is just another routine mission. You don't have to micro-plan every mission, but you must plan.

2 Brief prior to every mission.

- Briefing forces you to focus on the mission at hand. Always brief a contingency plan (what if?).

3 Fly the plan.

- Execute the plan you briefed. Ad hoc maneuvers are not acceptable.

4 Debrief the mission.

- Every mission must be debriefed to find lessons learned. It requires personal honesty about one's capability to be able to come away with anything meaningful.

5 Support each other.

- If things "just don't look right," bring them up and discuss them.

U.S. ARMY COMBAT READINESS CENTER
https://crc.army.mil

own the EDGE
Composite Risk Management