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Journal of the Air Force Association

# AIR FORCE

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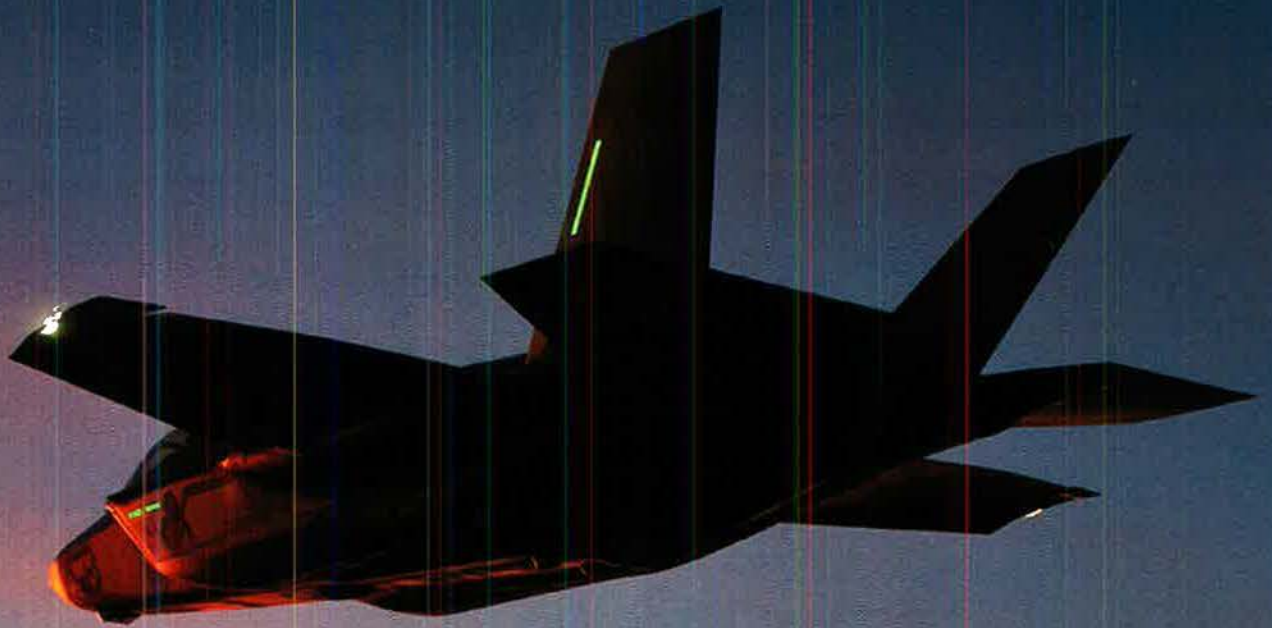
## MAGAZINE



The F-35:  
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Seeking the Sex-Assault Solution





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**About the cover:** An F-35 executes a barrel roll over the California desert. See "The F-35 Readies for Takeoff," p. 22. Lockheed Martin photo by Darin Russell.

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## MAGAZINE



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**Advocate for aerospace power and STEM education.**

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## Where the Cold War Lives

**T**HE Korean War was halted by a 1953 armistice. Sixty years later, some 28,000 US troops—8,000 of them airmen—are still stationed in South Korea. They are there to defend the democratic, free-market, and allied South from its neighbor to the North. Recent events show why this is both good and necessary.

The Korean Peninsula is famously split along the 38th Parallel between South Korea (the ROK) and North Korea (the DPRK), a belligerent and confrontational dynastic communist state.

DPRK has a failed economy and can barely feed its people. It maintains a million men under arms, however, and exploded nuclear devices in 2006 and 2009. The regime is predictably unpredictable—ratcheting up tensions when it seeks to extract concessions such as food aid from the international community, or to rally its people around its leadership.

Some of the crises it manufactures are deadly. Without provocation, DPRK sank a ROK Navy ship in 2010, killing 46 sailors. Later that year, it shelled a South Korean island, killing two troops and two civilians.

When Kim Jong Un took control of DPRK at the end of 2011, he put the North under its third generation of family leadership. There was initially hope the 30-year-old Kim would ease his father's repressive policies and accept international norms. These hopes have largely been dashed.

Threats and provocations are par for the course. DPRK exploits the international community for its own benefit, an extension of the way North Korea exploits its own people for its rulers' benefit. The DPRK has a stated goal of reunifying the peninsula, by force if necessary.

This past December, DPRK successfully tested a long-range rocket. This year, it successfully detonated a third nuclear device. In March, the North announced it "scrapped completely" the armistice.

DPRK is a brutal regime where dissent is not tolerated. No matter how bad you think life is in North Korea, the reality is worse. Citizens exist to support the elites and ruling family, making

the country a prison to its people. The citizens are systematically oppressed and lied to, to prop up the leadership.

South Korea stands in stark contrast to all of this. There is probably no place on earth where the failings of communism and the successes of freedom are in such clear contrast. The South has risen from Korean War destruction to become a valuable US ally with one of the world's most advanced and vibrant economies.

### North Korea has dashed hopes that it might change.

The US has backstopped South Korea's defense from the beginning, and the North, almost without doubt, would again attempt to seize the South if not for the deterrent power of the US presence. The ROK military is highly capable, but the US (and the Air Force in particular) makes it vastly more credible. Keeping this combined deterrent sharp requires constant effort.

Airmen on the peninsula pride themselves on being ready to fight tonight—because there is no alternative. USAF's airmen and their A-10s, F-16s, U-2s, and other systems in the South, all supported by an air and space operations center, stay at a high state of readiness.

The vast majority of the US troops on the peninsula are on unaccompanied, one-year tours that allow them to focus single-mindedly on their mission. Staffing rates are high, and exercises are realistic and constant.

Military officers frequently mention the "tyranny of distance" in the Pacific, as the region encompasses roughly half the Earth's surface and great distances must be accounted for and overcome. In Korea, planners have to worry about the opposite problem: the tyranny of proximity. Downtown Seoul is less than an hour's drive from the demilitarized zone that separates it from the North. Greater Seoul is the world's second largest urban area. It is also within DPRK artillery range.

Major war would create military and humanitarian chaos, as millions of civilians would try to escape the fighting by moving through a shifting battlefield that included Seoul's urban area.

The Air Force prepares for war by studying the enemy and its likely invasion routes, working closely with ground forces and air controllers to master the scenarios.

In the event of a North Korean invasion, US aircraft out of Japan, Guam, Alaska, and elsewhere would quickly augment the American forces. The RO-KAF has hundreds of advanced fighters of its own. This combined air force would devastate advancing DPRK troops and would immediately take the fight north. From Osan Air Base, south of Seoul, it is just a 15-minute flight to Pyongyang, North Korea.

If the North chose to invade, it would lose the war. The DPRK has numerical advantages, but its conventional capabilities are slowly fading while ROK and US capabilities grow ever greater. And while the North Koreans can study US tactics, "they don't understand how flexible we can be," said USAF Maj. Gen. Brian T. Bishop, deputy chief of staff for US Forces Korea.


Public exercises show strength and resolve. Annual events such as Key Resolve and Ulchi Freedom Guardian keep the US and ROK ready and send a clear message: If necessary, the defenders will defeat the North. A DPRK invasion would end North Korea's Kim dynasty—and for all of its bluster and skirmishing, survival is what matters most to the regime.

Between 1950 and 1953, some 1.8 million Americans served in the Korean War, and more than 33,000 of them were killed in action. They did not die in vain. The Korean armistice turns 60 this year, and in the years since, the US and South Korea won the war. The North is contained, the South is free and prosperous, and American airmen help keep this status quo through their readiness and vigilance.

The Kim regime is unlikely to embrace meaningful reforms, as that ultimately led to the downfall of many dictators. A revolution would be messy, violent, and create a massive humanitarian problem. A new war would create the worst situation of all.

It is hard to envision a "good" way for this standoff to end, but thanks to the deterrent power of airpower, the South can remain at peace. ■





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**THE VALUE OF PERFORMANCE.**

**NORTHROP GRUMMAN**



## It's Protection, Not PR

As the [former] commander of the Continental US North American Aerospace Defense Command Region, 1st Air Force (Air Forces Northern) I would like to respond to the letter from retired Maj. Dudley H. Johnston "Giant and Fly" [February, p.8]. Using the example of a mid-sized turboprop flying over the National Capital Region (NCR) at 18,000 feet, Major Johnston erroneously concludes that the air defense system in place in the NCR has a "chink in the armor."

In the example painted by Major Johnston, the many parts of the Integrated Air Defense System (IADS) would respond in a timely manner to mitigate the threat. Working closely with our partners such as the Federal Aviation Administration (FAA), our robust command and control system would very quickly identify the deviating aircraft and activate the Ground-Based Air Defense (GBAD) systems to ensure that there was a very high confidence prior to a decision to address the threat. If needed, prior to fighters being in a position to respond, the multiple elements of the GBAD would be sure to protect critical NCR assets.

I also take exception to his observation that "intercepting Cessnas with an F-16 is questionable PR." Defending the homeland 24/7 is and always has been the No. 1 priority mission—an absolute no-fail mission. There are other capitol defenders to be considered. Interceptor aircraft like the F-16 are only one tool in a multilayered defense system that consists of radars, command and control, Coast Guard helicopters, and various GBAD systems that include laser warning elements, surveillance cameras, and Army surface-to-air missiles. These elements, together with a dedicated group of professionals who manage them, provide a world-class multilayered Integrated Air Defense System. Additionally, we work very closely with the FAA and other partners with a significant role in this mission, such as the Aircraft Owners and Pilots Association (AOPA), to educate pilots and minimize the need to conduct intercepts.

But vigilance can never relax, for history has shown that we cannot predict the nature of the next threat. There should be no doubt that in spite of all the preventive measures taken, if needed we will use

F-16s or other aircraft to ensure that our mission succeeds. As a commander, I am often reminded of how critical this mission is and I am, without question, 110 percent confident in the ability of our dedicated team of joint professional men and women to perform it. America's airmen on the watch.

Lt. Gen. Stanley E. Clarke III  
Tyndall AFB, Fla.

## Play Misty—and Tiger and Stormy

In your February issue, Rebecca Grant writes brilliantly, as usual [*"The Crucible of Vietnam," p. 74*]. But perhaps my book *Hangar Flying* gave the wrong impression that the Misty Fast-FACs lost 14 aircraft in the first half of 1969. Though the first and maybe the most famous, Misty was not the only fast-FAC outfit. Others gradually took on the role—Stormy out of Da Nang, Wolf, Tiger, Laredo/Falcon, and Night Owl, all operating out of Thai bases. By 1969, even the Marine Corps had a fast-FAC outfit, Playboy, flying from Chu Lai. All of these contributed to the 14 fast-FAC aircraft lost in my calculation.

Of the 157 pilots who flew as Mistys, 35 were shot down during their short stay with the squadron, two of them twice. But as luck would have it, we lost only one airplane while I was there, and we recovered both pilots—Ron Standerfer and Lacy Veach.

I'm inordinately proud of this low loss rate, though it was mostly due to the strength and skill of the other pilots, men like Ron Fogleman, Jack Dickey, and Arnie Clarke.

Gen. Merrill A. McPeak,  
USAF (Ret.)  
Lake Oswego, Ore.

## Saving the Patient—and Money, Too

I would like to commend Ms. Malenick for her article "Emergency Care by Air" [February, p. 58]. It clearly showed the many parts of a system dedicated to saving lives and how the people in that system interconnect. However, one of the improvements in the patient movement system was not mentioned: using in-system select aircraft for patient movement. Prior to that, an airframe would be "dedicated" to an AE mission, regardless of how many or how few patients needed to be moved. The exact year escapes me, but around 2003 AMC held an AE

Tiger Team with subject matter experts from the Total Force community—medics, operators, flight nurses, AE medical technicians, administrators, even financial experts, etc. Anyone who was somehow involved in the patient movement mission was in attendance. One of the team's products was the recommendation for an in-system select process. The result was maximum use of an aircraft. For example, a C-17 moving cargo from an East Coast port to Ramstein, then downrange, could then be selected and reconfigured for the AE mission to move patients westbound. Dollars saved and without compromising patient safety.

Col. John M. Starzyk,  
USAF (Ret.)  
Riverside, Calif.

## La Revolución

"The Condor Legion" by John T. Correll [February, p. 84] contains one of the most concise and balanced explanations of the forces on both sides of the Spanish Civil War. Not only was the aviation side of the article highly enlightening, the historical content verifies all the stories my father told us about his youth during the Spanish Civil War, which his generation often referred to as the "Revolution."

As a teenage Catalan, my father along with his brother fled through the mountains of the Pyrenees to escape the violence and the recruiting coming from both sides of the conflict. Although the Catalonian region saw little air warfare, the various components of both political factions—especially on the Popular Front—were very active in Catalonia. Many "expat" Catalans like my father, although not at all fond or supportive of a fascist dictator ruling Spain, found the alternative anarchistic collection of communists

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and socialists much less appealing and quite destabilizing.

No excuses can be made for the atrocities committed by all parties, but as John Correll indicates, the Republicans had a much larger role than popular history recalls. Army Lt. Col. Frank Monaghan, Ph.D., writing in his 1943 *World War II, An Illustrated History*, called the Spanish Civil War a "rehearsal for disaster."

Rodolfo Llobet  
Phoenix, Md.

I think the penultimate statement in Mr. Correll's excellent article "The Condor Legion," i.e., "He was sympathetic to the Axis powers that supported him in the civil war, but Spanish forces did not engage in combat," requires some further elucidation.

Spanish personnel fought alongside the German Army during the siege of Leningrad. The unit was named the Blue Division. I don't know if this was an actual Spanish Army unit or more possibly a group of Spanish volunteers whose intention to defeat communism motivated them to ally with the Germans, similar to the communist sympathizers from the United States who joined the Abraham Lincoln Brigade to serve with the Republicans.

In any event, there is a street in Madrid, the "Calle Caidos de la División Azul," which commemorates those who died in this endeavor.

I was stationed in Spain from 1976 to 1979 during which time Franco's death was finally acknowledged.

Lt. Col. W. J. Seaman  
Las Vegas

### "Challenging" Is Putting It Mildly

I was interested in Walter Boyne's B-47 article in the February issue, as I flew the airplane as an aircraft commander from '58 to '61 with the 509th BW at Pease. It was the most challenging aircraft I ever flew, and I flew a long list of fighters, bombers, tankers, and trainers. I encountered all of the shortcomings Boyne cited plus a few more ["*The B-47's Deadly Dominance*," p. 79].

It was the most difficult of all birds I knew to refuel in the air. The J47 engines didn't spool up together which produced roll due to yaw as the shoulder-high downwind wing was blanked by the fuselage. Further, the incompatibility with the KC-97 caused some interesting stalls off the boom! On one occasion I had given the tanker a forming speed of 218 and last read 193 as I slid into the Arctic murk!

Also, in 1959, I lost an outboard engine on takeoff and barely staggered into the air fighting the yaw which threatened to make the ship uncontrollable. I learned later that not many survived that combination of circumstances.

All in all, though, it made me a better airman and made the B-52 a piece of cake!

Maj. Gen. Earl G. Peck,  
USAF (Ret.)  
Clearwater, Fla.

Walter Boyne's article on the deadly, dominant B-47 was very well done. However, one misstatement needs correcting. Strategic Air Command never used the Boeing KB-50 tanker. SAC began its air refueling fleet with the KB-29, supplanting it with the KC-97 and then, of course, the KC-135. The KB-50 was used by the tactical air forces (TAC, FEAF then PACAF, and USAF). They began in 1953 receiving SAC's surplus KB-29s, then switched to the triple

drogue-equipped KB-50 as they became available in 1956-57. With its emerging probe-equipped fighter force (F-100s, etc.), TAC used the KB-50 to enable its Composite Air Strike Force (CASF) concept, the predecessor to today's Air and Space Expeditionary Force.

Lt. Col. John F. Bessette,  
USAF (Ret.)  
Springfield, Va.

### Under Pressure

I am sure that *Air Force Magazine* editors know the difference between normal flying helmets and pressure suit helmets, but you did not make that fact clear in the February 2013 issue ["*Flashback: Brain Buckets, Hanoi Style*," p. 56]. The suits and helmets shown are for high-altitude



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flight only and are not and were not worn on normal missions. The helmet shown in the inset is and was the type of helmet worn for normal altitude missions (those below 45,000 to 50,000 feet) as the pressure suit is confining and uncomfortable to wear unless it is required for life support at high altitude. The communist pilots did not wear these suits and helmets as a normal rule during the last two years of the war.

I have some experience in both the partial pressure suit and the full pressure suit, having flown the U-2 from 1965 to 1986.

Lt. Col. George Worley,  
USAF (Ret.)  
Elberton, Ga.

### Knock Off the Spy Lingo

Like retired Lt. Col. Allan Johnson, I am a former RC-135 instructor navigator. I, too, take exception with your use, and explanation for said use, of the word "spy" in connection with the RC-135 [*Letters: Please, Avoid Page 32 of This Issue, March, p. 10*] and again in the March issue article on the U-2, "Spy Eyes in the Sky" [p. 32].

One of the first things I learned in SV-83 (Special Survival School) was that the RC-135 was a reconnaissance mission, not a spy mission. Reconnaissance is legal. Spying—otherwise known as espionage—is not. In fact, the overall strategic reconnaissance mission is referred to as PARPRO—Peacetime Aerial Reconnaissance Program.

Nowhere does the Air Force or DOD refer to ISR as "spying."

As to your definition, Webster's defines a spy as a person employed by one nation to SECRETLY convey classified information ... to another nation. Spying is clandestine; reconnaissance isn't. You might also look up "espionage"—the use of spies or illegal monitoring devices which is distinguished from intelligence gathering by its "aggressive nature and illegality."

You are right. ISR assets collect information without the opposing interest's permission. The difference is, reconnaissance is overt and legal; spying is covert and illegal.

I'd rethink my explanation and use of the word "spy" in relation to ISR.

Lt. Col. Charles A. Grimes,  
USAF (Ret.)  
Williamsburg, Va.

As usual I enjoyed reading your February issue of *Air Force Magazine* and particularly the fine article by Richard P. Hallion [*Air Dominance From Normandy to the Bulge, p. 94*].

He did fail to emphasize one item of the greatest significance—particularly to those of us who were on the historic missions of Dec. 24, 1944.

This was when the weather fully cleared over the Ardennes, and Eighth Air Force launched the largest number of four-engine bombers that will ever be launched—2,046 plus 853 fighters. In total, 5,555 sorties were flown by the Allied air forces that day. While mentioning the limited air missions of Dec. 23, he failed to emphasize the tremendous airpower commitment of Christmas Eve.

Lt. Col. Wallace A. Storey,  
USAF (Ret.)  
Spartanburg, S.C.

While I thought this was a very good article about a very overlooked aspect of WWII, I did find a problem with your photographs. The B-17s depicted in the photo on p. 72-73 are flying over Antwerp, not Bonn.

SMSgt. Dan Delaney,  
MDANG  
Laurel, Md.

### Gooney Fans

What a pleasant surprise to turn to p. 104 in the February issue and see the C-47 Skytrain pictured in "Airpower Classics." There is no doubt that its predecessor, the DC-3, shouldn't be considered eponymously for early air travel.

I'm sure there are a host of *Air Force Magazine* readers with "stick time" in the "Gooney Bird." I would like to relate my experience in two missions that may be of interest to the readers.

In early 1945, it became necessary to airlift supplies and equipment to Burma to support General Stilwell's drive with the Chinese army to fully retake Burma. One operation was coded "Cotton Tail" and could be considered as "reverse Humo activity" in that the material was being moved from China to Burma.

Some of the "material" were mules. I flew two C-47 trips from China to Myitkyina, Burma, carrying six mules each trip. A British Army sergeant was the project escort. His orders were to shoot any of the mules that started to act up. We thought if there was going to be any trouble, it would happen on takeoff; however, takeoffs were uneventful. The mules were hoisted about eight-to-10 inches from the cabin floor by two three-to-four-inch wide industrial type belts from under their bellies to the cabin top.

As we leveled off, I went to the cabin on both trips to check on our "passengers." They were quite docile, some sleeping, others just looking around enjoying the ride. The cabin floors had been completely covered with straw. As one might expect, by the end of the flights, the cabins had the appearance and aura of a flying stable.

But alas, that was war!

Lt. Col. Marcus B. Crisman,  
USAF (Ret.)  
Belleville, Ill.

During my Air Force career I accumulated over 4,500 flying hours, a good portion of them in the "Gooney Bird." Although your crew of three (pilot, copilot, and flight mechanic) is technically correct, I believe there are thousands of navigators and radio operators who may feel slighted. Their flight positions and equipment are/were an integral part of the flight deck.

TSgt. William Yeager,  
USAF (Ret.)  
Jackson, Ohio

The February issue on the C-47 Skytrain brought back memories of medical air evacuation missions I flew as a Medical Technician during 1955 and 1956. Missing in the Interesting Facts section was the role that the "Gooney Bird" played in evacuating patients from Korea to Japan and the Philippines during the Korean War. While I was assigned to the 1st Aeromedical Evacuation Flight at Rhein-Main AB, Germany, in 1955, we were bringing patients from bases in Morocco, Libya, France, and Egypt back to Germany for treatment. With the exception of one mission in a C-54, all of the flights that I crewed were in the C-47, a real "work horse" in aeromedical evacuation.

CMSgt. Richard L. Knowdell,  
USAF (Ret.)  
San Jose, Calif.

### Gunnery School

In the [January] issue, someone did not do their homework (i.e., research) [*From Gunnery School to Fighter School, January, p. 42*]. The Fighter School started out at Williams AFB, Ariz, first of all. The four-ship of F-80As on p. 44 shows the markings used when the school was at Willy. The F-51D on p. 45 is in the markings of the school's commander, Col. Robert L. Scott Jr., of *God Is My Co-Pilot* fame (see his book *Boring a Hole in the Sky* for an image of him standing next to her), and the F-84E 424 is not from the FWS, but was a 27th FEW aircraft taking off from a base in Korea in late 1950.

David Menard  
Huber Heights, Ohio

The photo spread on the Weapons School was motivating. On p. 45, photo two was of a "Fighter Weapons School 'Heritage Flight.'"

The F-100 is listed as an F-100D when in fact it is the sixth F-100A. The P-51, which is a lightweight H model, seems to have its tail wheel stuck down.

Brig. Gen. Art Cornelius,  
ANG (Ret.)  
Tigard, Ore.

■ The historical photos and information for the captions came from the USAF Weapons School.—THE EDITORS



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# Washington Watch

By John A. Tirpak, Executive Editor

Good news and bad news; Setting straight a major myth; Working on lifetime No. 2; Competition matters ....

## THE NON-ADVOCATE'S GOOD F-35 NEWS

The F-35 program can be made to work with the time and funds available, but everyone's going to have to be patient with the inevitable and normal setbacks, given the scope of the project, said Air Force Lt. Gen. Christopher C. Bogdan, F-35 program executive officer.

There's "more good news than bad news" on the program, said Bogdan at an *Aviation Week* conference on defense requirements and affordability in early March. The program received a "gift" from his predecessor, Vice Adm. David J. Venlet, in the form of an additional 30 months and \$6 billion, which Venlet persuaded Congress to provide to get the program back on track. As such, Bogdan said he won't ask for any more time or money.

If problems arise that exceed the cash reserves already set aside to absorb further problems, he said he'll let the users decide whether to give up capability or add time or funds.

"Generally, we are on track. ... We're not missing any major milestones," Bogdan said. "I see no reason we can't finish on time with the money we have planned." He said Venlet also left him a schedule which is "realistic" and "executable." However, he acknowledged "things are not perfect, ... there's still risk."

Software is a key risk, Bogdan said, and while it's a "true statement" that software is behind schedule to the tune of five months, he's "reasonably ... confident" the program will catch up.

"Only one-third of flight test is complete," Bogdan said. "You gotta figure we'll find things" as testing continues. Any development program will have problems, which is "why you do flight test," he noted.

Since taking over the project last December, Bogdan has captured media attention with unusually frank comments about the poor relationship between the government and its prime contractors on the F-35, Lockheed Martin and Pratt & Whitney. Nary a public appearance by Bogdan has failed to produce a headline focusing on a problem with the program.

During the Arlington, Va., symposium, Bogdan joked that he had "used up his quota" of controversial remarks for the month, having taken the two primes to task during a speech at the Australian International Air Show. Bogdan also fre-

quently notes that he is a manager and not an "advocate" for the F-35.

However, he said his previous remarks have been exaggerated and taken out of context. He's determined to provide "transparency" so that all the F-35 partners and "stakeholders" have a clear idea of what's happening on the project, but he said progress is good and re-emphasized the realism of the schedule.

In Australia, he said, he was merely making it publicly clear that he expects the vendors to "attack" threats to affordability every day. Based on numerous meetings with company executives since, he said he's confident they've gotten the message.

## NO TRILLIONS

Bogdan took pains to address what he thinks is a major myth about the F-35: that its cost is far beyond reason. He acknowledged it's the largest procurement program in the Defense Department's history, but the numbers bandied about by critics are way out of line, he said.

The figure of \$1.1 trillion as the operating and support cost of the F-35 program—a Pentagon assessment—is "not a good number," Bogdan insisted.

That's "what it will cost in 2056," he pointed out, and he challenged anyone to predict accurately what fuel will cost next year, let alone 43 years from now. Moreover, the price "is in 2056 dollars," and if adjusted back to today's dollars, would be around \$580 million. At a half-trillion dollars, that's "still a lot of money" and is the reason he's so dogged about making sure everyone on the program is thinking constantly about how to keep the fighter as inexpensive as possible. The life cycle operating and support number includes buying the aircraft, fueling and fixing the fleet, spare parts, training, simulators, runways, hangars, and practically every other aspect of having and using the aircraft for the decades it will be in service.

The O&S numbers are large, but "if you don't start thinking about operation and support ... now, it could be unaffordable" later, said Bogdan. He noted there are some costs "I can't control," such as crew ratios and how much training time is spent in the simulator vs. in a real flying airplane.

Some technical problems that have emerged on the F-35 program—a jittery helmet display, a fuel dump issue, and a redesigned arrestor hook, among others—"do not keep me up at night," Bogdan reported. "I have confidence" the problems will be resolved, he said; it's just that the solutions are not coming quickly.

Fixes are in the pipeline, but they require time for design, test, production, and installation, Bogdan pointed out. "It's just not happening fast." Such issues are what flight test is intended to reveal, and after 12 years, he understands that people are impatient, and he asked that the program be given time to address them.

## THE GREAT SIN

The F-35 has been pilloried for "the great sin of concurrency," Bogdan noted, readily agreeing that finishing development,

USAF photo by A1C Jason Couillard



Production is the "shining star" of the F-35 program.



ramping up production, and conducting flight test, standing up training, and weapon evaluation all at once is a monumental effort with “many moving parts.”

However, the program has learned a lot about concurrency, he said, and the primary cost of it comes in the form of reworking already-produced or in-production aircraft when there is a “discovery” in flight test mandating a design change. Those costs are pretty well understood now, he said.

It's most expensive to rework an aircraft already delivered, but it's significantly less costly to correct one still on the line, Bogdan noted. Most design changes have flowed from things found during fatigue testing, in which a representative aircraft is subjected to the stresses of a normal 8,000-hour “lifetime” at an accelerated rate, to find out if the parts will hold up as long as expected.

“The good news” on this front is that the Air Force and Marine Corps versions—the F-35A and B—have already finished one “lifetime” and are well into a second lifetime. The Navy carrier version will finish its first life by the end of the year. With those data in hand, the number of changes can be expected to start coming down rapidly, Bogdan reported.

Furthermore, a feature of the Lot 5 contract with Lockheed Martin puts half the burden of any rework costs on the company. With “more skin in the game,” he's sure the company will work hard to ensure that rework is done quickly and cost-effectively.

The development and installation of retrofit kits used to be 18 months, Bogdan said; now it's just under 13 months and he's aiming for less than 12.

A bigger schedule risk than rework or even software is in weapons certification, he said.

“We lost seven months” of certification flight-test time because of the discovery of a loads issue with the weapons bay doors, he noted. It will take a while to catch up; only three weapons are likely to be certified when the Marine Corps is expected to be first to declare initial operational capability.

Production is the “shining star” of the program, Bogdan reported, noting that production costs are declining with experience and increasing volume. Lot 5 was cheaper than Lot 4 and, he said, “I'm confident Lot 6 will be cheaper than 5, and Lot 7 will be cheaper than 6.” He fully expects production costs “will come down” even further. That this is happening so early in production is an excellent sign, he said. “We still have 90 percent of production to go—about 3,000 airplanes.”

## WHEN IS IOC?

Bogdan confessed he has “very little say” in when one of the F-35's users will declare initial operational capability. Each user has unique criteria of what will constitute “required assets available,” which is the precursor to declaring the system war-ready.

“The service tells me what they need to declare IOC,” Bogdan said. “And it's not only just the airplane, ... it's the tech orders, it's training pilots, training maintainers, ... support equipment, ... infrastructure. Those are all the things I have to provide the service. And it all has to come together—and work—before a service Chief is going to declare IOC,” he said.

He expects to deliver to the Marine Corps version 2B of the F-35 software “somewhere near the end of 2015.” He has received the required assets available list from the Marine Corps and believes he can meet that timetable. It's the “basic warfighting capability” suite.

“Radar, electronic attack, electronic warfare, sensor fusion, ... all of those things are going to be working at a pretty high level” on version 2B. The key limiter will be probably the minimal number of certified weapons. “They may be comfortable declaring IOC with that “limited ... capability,” he said.

Version 3I will be the same as 2B, with the difference that “it's hosted on a different set of computers on the airplane,



*Bogdan has used up his quota of controversy.*

and those new computers have more growth potential, but that's the exportable version of 2B, fundamentally.”

To international partners, he said, the question of IOC depends on whether they consider that first, limited fighting potential sufficient to declare themselves operational: “Do they have the whole package ready to go?”

Shortly on the heels of delivering sufficient aircraft to the Marine Corps, “I have to deliver [to] the Italians, with 3I capability, in 2016, and ... at the end of 2016/early 2017, I have to go with that 3I capability to the Israelis,” Bogdan said. That country “may have” sufficient assets to declare the F-35 operational at that point.

“The Air Force has yet to determine what level of capability will constitute their IOC,” Bogdan said. “That's understandable; up until this point in time, we could never give them any kind of assurance that we were going to deliver anything on time. And so you can understand why they're a little hesitant early on.”

The Air Force has said it would leave the combat readiness determination up to whoever is the head of Air Combat Command when USAF has enough assets on hand to make an IOC declaration. With the F-22, IOC was declared in 2005 with six aircraft capable of deploying and fighting for two months.

## MORE COMPETITION

In his drive to hold down F-35 costs, Bogdan said he will introduce competition on the program wherever he can, and Lockheed Martin will not enjoy sole-source status on sustainment. So far, he has determined four major areas of competition that were not previously expected to be competed.

One will be sustaining support equipment. “A lot of that will be common, some will be unique,” but none of it needs to be sole source, he said.

Another will be training. The government owns “the software, the courseware, the syllabus, the simulators, and the buildings,” and there's no reason that other contractors couldn't run that aspect of the program, Bogdan said.

The Autonomous Logistics Information System, or ALIS, which will manage the flow of parts and repairs at the user level, is another potentially huge competition, Bogdan said.

“It will be in every squadron, and there will be hundreds ... of squadrons,” he noted, adding that he'd like to “squeeze it down so it's deployable.”

Last will be the global supply chain of parts to the various countries using the F-35.

The goal of all this competition is not to take work away from Lockheed Martin and Pratt & Whitney; indeed, they may win all or most of it. But “if nothing else, competition will drive down costs” and get everyone to make the most efficient proposals possible, Bogdan said. ■



## Hagel Becomes Defense Secretary

Former Sen. Chuck Hagel (R-Neb.) was sworn in as the 24th Defense Secretary on Feb. 27, ending a nearly two-month, contentious approval process during which most Senate Republicans opposed him as President Obama's pick to succeed Leon E. Panetta.

"I will be counting on Chuck's judgment and counsel as we end the war in Afghanistan, bring our troops home, stay ready to meet the threats of our time, and keep our military the finest fighting force in the world," said Obama.

The Senate approved Hagel's nomination by a vote of 58 to 41. Joining the chamber's Democrats and Independents in favor of the nomination were just four Republicans: Sen. W. Thad Cochran (Miss.), Sen. Mike Johanns (Neb.), Sen. Rand Paul (Ky.), and Sen. Richard C. Shelby (Ala.). Sen. Frank R. Lautenberg (D-N.J.) did not vote.

The confirmation vote came several hours after a cloture motion passed by a margin of 71 to 27, ending debate on

the nomination and clearing the way for the final vote.

## Dunford Takes Command

Marine Corps Gen. Joseph F. Dunford Jr. assumed command of US and NATO forces in Afghanistan during a ceremony in Kabul on Feb. 10.

Dunford is expected to oversee the phased completion of NATO's combat mission in Afghanistan by the end of 2014. He succeeded Marine Corps Gen. John R. Allen, who had led the International Security Assistance Force and US Forces-Afghanistan since July 2011.

"Today is not about change, it's about continuity," said Dunford in addressing the audience during the change-of-command ceremony. He added, "I'll endeavor to continue the momentum of the campaign and support the people of Afghanistan."

Dunford previously served as the Marine Corps' assistant commandant. President Obama tapped Dunford for

## F-35 in Post-Sequester Era

Gen. G. Michael Hostage III, commander of Air Combat Command, said the Air Force will have a "serious breach of capability" if the powers that be decide to cancel the F-35 strike fighter program in an effort to fix the nation's budget crisis. It's an option Hostage clearly doesn't want, but that doesn't mean Air Force officials haven't started thinking about how they would defend the country if the F-35 does fall victim to the budget ax.

"I would have to refurbish the [F-15] and [F-16 fleets] and the legacy hardware I have today. I also have a very small fleet of tremendously capable airplanes in the F-22s. I would push to buy more of those," said Hostage in a Feb. 21 interview with *Air Force Magazine* in Orlando, Fla.

Specifically, Hostage said, the Air Force would need an additional 225 F-22s to ensure that it could execute a successful war plan and still remain ready to deal with a second contingency, if necessary. That would bring the Raptor fleet back in line with the numbers that the Air Force anticipated purchasing before then-Defense Secretary Robert M. Gates in 2009 capped F-22 production at 187 airframes.

Hostage acknowledged that restarting the F-22 production line would not be cheap and could eat up any potential savings gained by canceling the F-35 program. However, this step would be necessary in order to maintain the fifth generation capability needed to ensure the US military's legacy aircraft fleets survive future threats, he said.

Hostage maintained that the Air Force must have the 1,763 F-35As in its program of record to remain viable in the future.

"Numbers count. It's not just the high capability of our force. You need a quantity of that force in order to be capable," he said.

USAF photo by Samuel King Jr.





the leadership post last October; the Senate confirmed him in December.

Allen was the longest-serving ISAF commander in NATO's 11-year-plus campaign in Afghanistan, stated the ISAF news release.

#### **Breedlove Eyed for SACEUR**

Gen. Philip M. Breedlove, US Air Forces in Europe-Air Forces Africa (USAFE-AFAFRICA) commander, is emerging as the leading candidate to

be President Obama's new nominee to lead NATO and US forces in Europe, according to officials speaking on background.

A senior Air Force official confirmed to *Air Force Magazine* on Feb. 21 that Breedlove is definitely in the running. "I think he's going to be it," said this official, when asked whether Breedlove would be the nominee.

Breedlove, who received his commission in 1977, has been USAFE-

AFAFRICA's commander since July 2012. Before that, he was the Air Force's vice chief of staff for a year-and-a-half. If the President does indeed nominate him, Breedlove would be the first Air Force general chosen to lead US and NATO forces in Europe since Gen. Joseph W. Ralston held that position from May 2000 to January 2003. The Senate would have to approve the nomination.

Breedlove would succeed Adm. James G. Stavridis, who has been



**03.06.2013**

*Lt. Col. Benjamin Bishop completes preflight checks before his first sortie in an F-35 at Eglin AFB, Fla. Bishop and other 422nd Test and Evaluation Squadron pilots will begin operational testing of the Lightning II later this year at Nellis AFB, Nev. For more on the F-35, see "The F-35 Readies For Takeoff," p. 38.*



## DOD IG Finds Fault in F-22 Accident Probe

The Air Force's investigation of the crash of an F-22 in Alaska two years ago failed to prove that pilot error and disorientation caused the fatal accident, according to the Pentagon's inspector general.

Pacific Air Forces' accident investigation board originally determined that pilot Capt. Jeffrey A. Haney's failure to recognize vertigo symptoms, on top of his mental fixation and visual inattention, primarily caused the Nov. 16, 2010, crash.

After reviewing the investigation, the Defense Department's IG found that the accident investigation board's conclusions were "not supported by the facts" in the AIB report, according to the summary of the IG's findings, dated Feb. 6.

Furthermore, the conclusions were not consistent with the "clear and convincing standard of proof" set forth in Air Force regulations, stated the summary.

Air Force officials rejected the IG's assertion that its conclusions were flawed, but admitted there were flaws in the report, according to the service's comments included in the IG summary. Air Force officials said they planned to address some of the IG's concerns, but drew additional fire from the IG for failing to detail what measures they would take.

The IG asked the Air Force to provide by the end of February a detailed description of the remedial action to be taken. As of March, the IG had received an initial response from the Air Force. According to DOD IG spokeswoman Bridget Ann Serchak, the F-22 AIB has reconvened, and the Air Force has requested more time to provide details on the remedial actions to be completed.

In January 2012, at the time when the IG announced its "self-initiated evaluation" of the F-22 accident probe, then-Air Force Chief of Staff Gen. Norton A. Schwartz called the IG's inquest "routine" oversight.

NATO Supreme Allied Commander, Europe, and commander of US European Command since summer 2009.

### New Medal Under Review

Defense Secretary Chuck Hagel has tasked Army Gen. Martin E. Dempsey, Chairman of the Joint Chiefs of Staff, to review the military's newly established Distinguished Warfare Medal to re-examine its order of precedence relative to other US military awards and commendations, Pentagon press secretary George Little told reporters on March 12.

The decision came about two weeks after Rep. Duncan D. Hunter (R-Calif.), a former marine; Rep. Thomas J. Rooney (R-Fla.), an Army veteran; and Rep. Tim Murphy (R-Pa.), a Navy Reservist, introduced a bill in the House of Representatives that would prohibit the Defense Department from rating the new Distinguished Warfare Medal as equal to, or higher than, the Purple Heart. HR 833 had more than 100 cosponsors as of March 22, according to the Library of Congress' bill-tracking website.

The DWM recognizes a service member's extraordinary achievements directly impacting combat operations, even when the individual is physically separated from the battlefield. It is meant to honor service members such

as remotely piloted aircraft operators whose actions have a significant impact on combat operations even though they may physically be located thousands of miles away.

"Combat valor awards have a deep and significant meaning to those who serve in America's military," said Hunter

in a Feb. 26 news release issued the same day the legislation was introduced in the House. He said while there's nothing wrong with a medal "that recognizes commendable actions" off the battlefield, "it's absolutely necessary to ensure that combat valor awards are not diminished in any way."

Dempsey was given 30 days to report back to Hagel with his assessment. In the mean time, "production of the medal has stopped," said Little during the March 12 briefing. No service member had yet been nominated for it, he added.

### F-35 Updates

The F-35 joint program office lifted the cautionary flight suspension of the F-35 fleet on Feb. 28 after engineers completed analysis of a cracked F135 turbine blade.

"Prolonged exposure to high levels of heat and other operational stressors on this specific engine were determined to be the cause of the crack," stated the office's March 1 news release. Inspections found "no additional cracks" in the remaining F135 inventory.

The JPO instituted the fleetwide standdown on Feb. 21 after finding the 0.6-inch crack on a third stage turbine blade during a routine inspection of an F-35A test aircraft at Edwards AFB, Calif.

Less than two weeks prior, F-35 spokesman Joe DellaVedova had announced that the JPO restored flight clearance for the F-35B strike fighter variant on Feb. 12. That return-to-flight order rescinded a cautionary suspen-



**Winter Thaw:** A-10 Thunderbolt II aircraft cool off in the shade at Monte Real AB, Portugal, Feb. 14, after flying a mission during the exercise Real Thaw. See "Spang's A-10s Last Exercise," p. 17. Real Thaw, hosted by the Portuguese military, is an annual training event between some NATO partners.



sion instituted on Jan. 18 after the failure of a fuel hydraulic hose on an F-35B jet during a training sortie on Jan. 16 at Eglin AFB, Fla.

### Commando Training and Beyond

Air Force officials stood up the Air Force Special Operations Air Warfare Center in a mid-February ceremony at Duke Field, Fla.

The center consolidates Air Force Special Operations Command's training and doctrine development under one flag, with Active Duty and Air Force Reserve Command airmen working side by side.

"The center is here to train and educate air commandos," said Col. Jonathan Duncan, AFSAOWC deputy commander, who will serve alongside Brig. Gen. Jon A. Weeks, who took command of the center during the ceremony. Duncan noted, however, that the center will not be a "training-only organization" but rather "a training and operations organization," with the units assigned to it playing operational roles as well.

AFSAOWC is headquartered at Hurlburt Field, Fla., with satellite locations at Duke and Robins AFB, Ga. It is modeled after the Special Air Warfare Center, which the Air Force activated in 1962 and stood down after the Vietnam War, according to a press release.

With the new center in place, AFSOC on Feb. 11 inactivated the Air Force Special Operations Training Center.

### Iran Boasts of "Stealth"

Iran unveiled the single-seat Qaher F-313 combat aircraft, claiming that the domestically built platform is sophisticated and stealthy.

Iranian Defense Minister Brig. Gen. Ahmad Vahidi said the aircraft has a "very low radar cross section" and is capable of flying at low altitudes, reported the *International Business Times* (via *The Diplomat*), citing Iranian state-run television.

Vahidi also said the aircraft is capable of carrying advanced weapons and can take off and land on short runways.



USAF photo by Capt. Erika Yepsen

**Meet, Greet, If Necessary, Defeat:** Members of Reaper Team 5 walk a foot patrol north of Bagram Airfield, Afghanistan, in March. Reaper teams respond to indirect fire attacks and look for improvised explosive devices that may hinder the Air Force mission. They also leave their armored vehicles to walk through villages and over hillsides, meeting and interacting with residents as unofficial ambassadors of a sort.

The F-313 is designed and built by Iran's Aviation Industries Organization—part of its Defense Ministry, reported *Flight Global*. "All its parts, from A to Z, have been manufactured domestically," Hassan Parvaneh, Qaher project manager, told Iranian state television. Parvaneh also said that the F-313 is "the first Iranian jet using a front control wing."

### Land and Sea Exchange

The US and Russia have agreed to exchange telemetric information this year on the launch of an ICBM or submarine-launched ballistic missile that each nation conducted in 2012, announced the State Department on Feb. 19.

This exchange falls under the verification and confidence-building measures called for in the New START agreement that entered into force in February 2011.

Under New START, the US and Russia are reducing their respective strategic nuclear arsenals to no more than 1,550 deployed warheads, 700 deployed launchers, and 800 deployed/nondeployed launchers by February 2018.

US and Russian delegations decided on the telemetric exchange during a meeting of the Bilateral Consultative Commission in Geneva, according to a State Department news release. The BCC is the forum where the two parties discuss treaty implementation issues.

### Hawaii Raptors Complete Red Flag

A contingent of eight F-22s and some 150 airmen and contractors returned home to JB Pearl Harbor-Hickam, Hawaii, from a two-week deployment to Nellis AFB, Nev., for Exercise Red Flag 13-2 in February.

This was the first overwater deployment for the Hawaiian Raptors and their first participation in a Red Flag aerial combat training exercise, according to a Feb. 6 JB Pearl Harbor-Hickam news release.

"The Hawaiian Raptors made a strong showing at Red Flag," said Maj. Andrew Fessenden, director for weapons for the Hawaii Air National Guard's 199th Fighter Squadron. The unit operates and maintains 20 F-22s at Hickam together with the Active Duty 19th FS under an association.

The 101 Air Guardsmen, 40 Active Duty airmen, and 11 contractors returned to Hawaii on Feb. 2.

With the Red Flag under their belt, the two squadrons are now preparing

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### North Korea Conducts Nuclear Test

North Korea confirmed through its official news agency Korean Central News Agency that it conducted an underground nuclear test on Feb. 12. The test employed "a miniaturized and lighter nuclear device with greater explosive force" than previously tested and "did not pose any negative impact on the surrounding ecological environment," reported Reuters, citing KCNA.

White House Press Secretary Jay Carney called the test "a highly provocative act" that "undermines regional stability," among the detrimental effects. This is North Korea's third nuclear test, following underground events in 2006 and 2009. Deputy Defense Secretary Ashton B. Carter condemned the nuclear test and said the US is working to "get the rest of the international community to condemn" it.

Appearing before the Senate Armed Services Committee on Feb. 12 to discuss budget matters, Carter called the situation after the test "extremely dangerous."

The Director of National Intelligence's office issued a statement saying the North Koreans "probably conducted an underground nuclear explosion in the vicinity of P'unggye" on Feb. 12. The explosion yield was "approximately several kilotons."

Phantom Eye remotely piloted aircraft demonstrator completed its second flight, announced company officials.

The Phantom Eye climbed above an altitude of 8,000 feet during the Feb. 25 mission at Edwards AFB, Calif., and remained aloft for 66 minutes at a cruising speed of 62 knots (71 mph) before landing, according to the company's Feb. 26 news release.

The airplane "exceeded what it achieved" last June during its maiden flight when it flew at an altitude of 4,080 feet and remained aloft for 28 minutes, stated the release. And unlike last year's flight when the Phantom Eye's landing gear was damaged during landing, the aircraft made "a picture-perfect landing" this time around, said Boeing officials.

"This flight, in a more demanding high-altitude flight envelope, successfully demonstrated Phantom Eye's

**Roll Out:** SrA. Mai Anderson, a crew chief with the 455th Expeditionary Aircraft Maintenance Squadron, replaces a tire on a C-130 at Bagram AB, Afghanistan, in March.

to deploy "in the not-so-distant future" to an area of responsibility as part of a normal rotation of US combat forces, stated the release. Hawaii's F-22s are the Air Force's newest Raptor force, reaching combat readiness after units in Virginia, Alaska, and New Mexico.

### KC-46A Usage Rates Revised

The Air Force informed Congress in February that it has increased the planned life cycle flying hours for its future fleet of 179 KC-46A tankers and added about 60 additional aircrews in order to utilize the aircraft more closely to their full potential, according to a service press release.

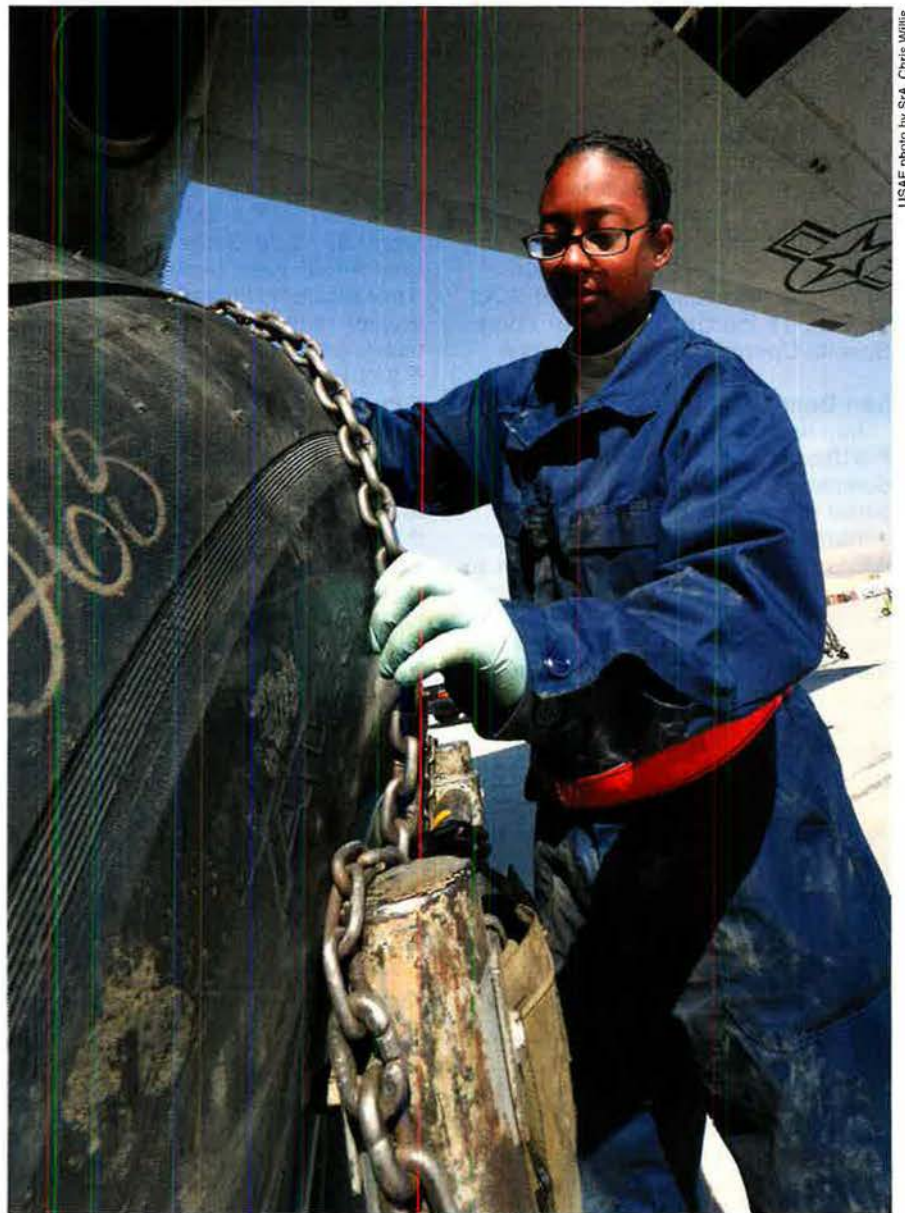
As a result of the projected increased usage of the new tankers over their 40-year lifetime, the service has revised its estimate of the money needed to operate and support these jets, now predicting \$103 billion in total costs, an increase of 11.2 percent, stated the Feb. 5 release. The original estimate was \$92.7 billion.

The projected cost increase is because the Air Force will use the KC-46 "more often and more effectively" than today's KC-135 and does not reflect increased costs to operate the KC-46, said service officials.

"We're just flying it more," said Maj. Gen. John F. Thompson, the Air Force's tanker program executive officer and KC-46 program director.

### Phantom Eye Flies Again

Boeing's liquid hydrogen-powered



USAF photo by SJA, Chris Willis



### Operation Enduring Freedom

#### Casualties

As of March 20, 2013, a total of 2,181 Americans had died in Operation Enduring Freedom. The total includes 2,178 troops and three Department of Defense civilians. Of these deaths, 1,722 were killed in action with the enemy, while 458 died in noncombat incidents.

There have been 18,348 troops wounded in action during OEF.

#### Obama: More Troops Coming Home

Over the next year, another 34,000 American troops will return home as part of the phased drawdown of US combat forces from Afghanistan, announced President Obama in his State of the Union address on Feb. 12.

"Already, we have brought home 33,000 of our brave servicemen and women," he said, noting that the US troop drawdown will continue through the end of 2014 when "our war in Afghanistan will be over," and the US will shift to training and equipping Afghan forces.

#### AAF Conducts First C-208 Casevac

An Afghan Air Force Cessna 208 in mid-February successfully transported a seriously injured soldier and three minor casualties from Kandahar, Afghanistan, to Kabul Airport, marking the first time an AAF C-208 transported a litter patient, according to US air advisors.

"This is adding a capability that will increase the morale, not only in the Afghan Air Force, but in the entire Afghan National Security Forces," said Col. Michael Paston, 438th Air Expeditionary Advisory Wing surgeon general, in a Feb. 17 wing news release. "It provides Afghans with a sense of security to know that if hurt on the battlefield, they will be taken care of quickly."

Maj. Gen. Abdul Wahab Wardak, AAF commander, said the move validated the casualty evacuation concept of operations plan that the Afghans concluded with the NATO Air Training Command-Afghanistan. That plan calls for the AAF to independently conduct Casevac operations by 2017, stated the release.

maneuverability, endurance, and landing capabilities," said Drew Mallow, Phantom Eye program manager.

Boeing is self-funding development of the high-flying Phantom Eye, envisioned for intelligence, surveillance, and reconnaissance roles.

#### Reaper Gets Decoy

Raytheon is working with General Atomics Aeronautical Systems to adapt the MQ-9 Reaper remotely piloted aircraft to carry its Miniature Air Launched Decoy, announced Raytheon on Feb. 13.

"This new offering provides unprecedented electronic warfare capability, enabling remote, unmanned suppression of enemy air defenses," explained Harry Schulte, Raytheon's air warfare systems vice president.

The two companies finished ground tests with a MALD-equipped Reaper at General Atomics Aeronautical Systems' flight facility in Palmdale, Calif., in November; they expect to complete the integration later this year, stated the Raytheon press release.

"Integrating MALD weaponry on remotely piloted aircraft systems is integral to maintaining air superiority in today's and tomorrow's conflicts," said Schulte.

MALD is designed to confuse enemy air defenses by mimicking the profiles of strike aircraft in flight. The Air Force has already cleared the decoy for combat use on the B-52 and F-16.

#### RPA Base Now in Niger

A team of 100 US military personnel, mostly airmen, is operating unarmed remotely piloted aircraft out of Niamey, Niger, in support of intelligence-gathering efforts in the region, announced Defense Department officials.

President Obama on Feb. 22 notified Congress that the last of these personnel had deployed to Niger, stated the Pentagon's news release on that same day.

"This deployment will provide support for intelligence collection and will also facilitate intelligence sharing with French forces conducting operations in Mali, and with their partners in the region," stated the President in his letter to lawmakers.

US Africa Command recommended placing RPAs in Niger, and the host nation consented, signing an agreement in January with the US on the status of American forces in Niger, stated the DOD release.

#### Mali Support Milestones

As of mid-February, Air Force transports had airlifted more than two million pounds of cargo from Istres, France, to Bamako, Mali, and other places since Jan. 21 in support of French military operations in northern Mali, announced service officials.

Meanwhile, Air Force KC-135 tankers, staging from southern Europe since Jan. 27, have offloaded more than one million pounds of fuel to French fighters conducting operations over Mali, they said.

The airlift milestone came on Feb. 12 during the 43rd mission from Istres, while the tankers hit their mark four days later, according to news releases on Feb. 15 and Feb. 16.

"This operation has been extremely rewarding, supporting our French partner's efforts to promote stability in Mali," said Lt. Col. Shawn Underwood, 621st Contingency Response Element commander, who's been supporting the C-17s operating at Istres.

"This is a massive refueling effort from a small group of dedicated airmen," said Lt. Col. Heather Baldwin, commander of the 351st Expeditionary Air Refueling Squadron, the forward-deployed tanker unit from RAF Mildenhall, UK, supporting the French.

#### Hercs of the Negev

Airmen from the 86th Airlift Wing at Ramstein AB, Germany, and members of the Israeli Air Force's 103rd Squadron practiced combat airlift together Jan. 27 to Feb. 8.

Their C-130s operated in the Negev Desert on a recent training deployment to Nevatim AB, Israel. The two-week gathering was the first time in five years that Ramstein's airmen have trained with the Israeli unit, according to a Feb. 8 Ramstein news release.

"The purpose of this training was to hone our tactical expertise while building partnerships and maximizing bilateral training," said Capt. Raymond Bevivino, a 37th Airlift Squadron pilot from Ramstein who served as deployment mission commander.

This training deployment also was the first time that the two units practiced together since Ramstein transitioned from legacy C-130s to new C-130Js, something for which the Israelis are preparing as well, stated the release.

#### Spang's A-10s Last Exercise

Airmen and A-10s of the 81st Fighter Squadron at Spangdahlem AB, Germany, departed the base for Monte Real, Portugal, on their final deployed exercise ahead of the unit's planned disbandment later this year, announced unit officials.

These Warthogs were making their training debut in Exercise Real Thaw,



the Portuguese military's cooperative training gathering, according to a Feb. 8 base news release.

The A-10s, which left for Portugal on that same day, were expected to fly close air support, forward air control, and search and rescue missions, augmenting allied forces during the scenarios. Aircrews also were to execute additional roles, including anti-shipping and air-to-air missions, as well as special operations support.

The 81st FS is standing down as part of the Air Force's Fiscal 2013 force structure adjustments.

### Engine Anomaly Downed F-16

An F-16C flying from Misawa AB, Japan, on July 22, 2012, crashed into the Pacific Ocean after its engine's main fuel shutoff valve closed with no command to do so, announced Pacific Air Forces officials on Feb. 19.

PACAF was citing the findings of a recent accident investigation board.

The aircraft, assigned to Misawa's 14th Fighter Squadron, was part of a four-ship formation of F-16s en route from Misawa to Eielson AFB, Alaska, to participate in a Red Flag training exercise, according to the AIB report's executive summary. The F-16 experienced a loss of engine thrust from which the pilot was unable to recover. The pilot safely ejected from the aircraft and was recovered without injury.

The F-16, tail No. 92-003886, crashed in waters about 750 miles northeast of Misawa and was destroyed, an estimated loss of \$32.6 million, according to the document.

The board could not determine why the valve closure occurred because certain pieces of aircraft equipment were lost in the ocean.

### F-16 Accident Addendum

Air Combat Command investigators released an addendum to the May 2012 report on the crash of an F-16C from Hill AFB, Utah, at the Utah Test and Training Range.

In its report issued last September, ACC's accident investigation board determined that a manufacturing flaw in a blade in the first stage fan of the aircraft's engine caused the crash and loss of the fighter during ground support training.

The AIB president reopened the investigation to re-examine whether maintenance crews should have identified the manufacturing inconsistency at the base of the blade, according to ACC's Feb. 7 news release.

The report addendum indicates that the blade's surface inconsistency could have been detected during installation at Tinker AFB, Okla., in April 2004, stated the release. However, the abil-

## Senior Staff Changes

**RETIREMENT:** Brig. Gen. Dwight D. **Creasy**. **AFRC RETIREMENTS:** Brig. Gen. Daniel P. **Gillen**, Brig. Gen. Robert R. **Redwine**.

**PROMOTION:** To **ANG Lieutenant General:** William H. **Etter**.

**NOMINATIONS:** To be **Lieutenant General:** James M. **Holmes**. To be **Major General:** Dorothy A. **Hogg**.

**CHANGES:** Maj. Gen. David W. **Allvin**, from Cmdr., 618th Air & Space Ops. Center (Tanker Airlift Control Center), AMC, Scott AFB, Ill., to Dir., Strat. Planning, DCS, Strat. Plans & Prgms., USAF, Pentagon ... Maj. Gen. William M. **Bender**, from Cmdr., USAF Expeditionary Center, AMC, JB McGuire-Dix-Lakehurst, N.J., to Dep. Dir., Ops., Office of Security Cooperation-Iraq, CENTCOM, Baghdad ... Maj. Gen. (sel.) Thomas W. **Bergeson**, from Dir., Operational Capability Rqmts., DCS, Ops., Plans, & Rqmts., USAF, Pentagon, to Dir., LL, OSAF, Pentagon ... Maj. Gen. Norman J. **Brozenick Jr.**, from Cmdr., SOCOM Pacific, PACOM, Camp H. M. Smith, Hawaii, to Vice Cmdr., AFSOC, Hurlburt Field, Fla. ... Brig. Gen. David J. **Buck**, from Vice Cmdr., USAF Warfare Center, ACC, Nellis AFB, Nev., to Dir., Air, Space, & Cyberspace Ops., AFSPC, Peterson AFB, Colo. ... Maj. Gen. (sel.) Theresa C. **Carter**, from Cmdr., 502nd Air Base Wg., AETC, JBSA-Fort Sam Houston, Tex., to AF Civil Engineer, DCS, Log., Instl., & Mission Spt., USAF, Pentagon ... Brig. Gen. Anthony J. **Cotton**, from Cmdr., 45th Space Wg., AFSPC, Patrick AFB, Fla., to Dep. Dir., Natl. Recon Office, Chantilly, Va. ... Maj. Gen. (sel.) Mark C. **Dillon**, from Dir., Regional Affairs, Office of the Dep. Undersecretary of the AF, Intl. Affairs, USAF, Pentagon, to C/S, United Nations Command, US Forces Korea, Yongsan Army Garrison, South Korea ... Brig. Gen. Michael E. **Fortney**, from Dir., Nuclear Spt., Defense Threat Reduction Agency, Fort Belvoir, Va. to Dir., Ops., AFGSC, Barksdale AFB, La. ... Brig. Gen. Timothy S. **Green**, from Dir., Instl. & Mission Spt., AMC, Scott AFB, Ill., to Dir., Instl. & Mission Spt., ACC, JB Langley-Eustis, Va. ... Brig. Gen. Joseph T. **Guastella Jr.**, from Cmdr., 455th AEW, ACC, Bagram Airfield, Afghanistan, to Dep. Dir., Rqmts., Jt. Staff, Pentagon ... Brig. Gen. John M. **Hicks**, from Dir., Command, Control, Comm., & Cyber, PACOM, Camp H. M. Smith, Hawaii, to Cmdr., 23rd AF & Dir., Ops., AFSOC, Hurlburt Field, Fla. ... Maj. Gen. (sel.) Dorothy A. **Hogg**, from Dep. Command Surgeon, AFMC, Wright-Patterson AFB, Ohio, to Chief, AF Nurse Corps, Office of the Surgeon General, USAF, Falls Church, Va. ... Lt. Gen. (sel.) James M. **Holmes**, from Asst. DCS, Ops., Plans, & Rqmts., USAF, Pentagon, to Vice Cmdr., AETC, JBSA-Randolph, Tex. ... Brig. Gen. Scott A. **Howell**, from Dep. Dir., Ops., SOCOM, MacDill AFB, Fla., to Dep. Dir., Special Ops., Jt. Staff, Pentagon ... Brig. Gen. Charles K. **Hyde**, from Cmdr., 86th Airlift Wg., USAFE, Ramstein AB, Germany, to Dep. Cmdr., Canadian NORAD, NORAD, Winnipeg, Manitoba, Canada ... Maj. Gen. Paul T. **Johnson**, from Dep. US Mil. Representative to the NATO Mil. Committee, NATO, Brussels, to Dir., Operational Capability Rqmts., DCS, Ops., Plans, & Rqmts., USAF, Pentagon ... Maj. Gen. James J. **Jones**, from Dir., Ops., DCS, Ops., Plans, & Rqmts., USAF, Pentagon, to Asst. DCS, Ops., Plans, & Rqmts., USAF, Pentagon ... Maj. Gen. Michael A. **Keltz**, from Dir., Strat. Planning & Policy, PACOM, Camp H. M. Smith, Hawaii, to Dir., Intel., Ops., & Nuclear Integration, AETC, JBSA-Randolph, Tex. ... Maj. Gen. (sel.) Timothy J. **Leahy**, from Cmdr., 23rd AF, AFSOC, Hurlburt Field, Fla., to Dir., Ops., SOCOM, MacDill AFB, Fla. ... Brig. Gen. Patrick C. **Malackowski**, from Dir., Prgms. & Analyses, PACAF, JB Pearl Harbor-Hickam, Hawaii, to Cmdr., 455th AEW, ACC, Bagram Airfield, Afghanistan ... Maj. Gen. Frederick H. **Martin**, from Dep. Dir., Ops., Office of Security Cooperation-Iraq, CENTCOM, Baghdad, to Cmdr., USAF Expeditionary Center, AMC, JB McGuire-Dix-Lakehurst, N.J. ... Maj. Gen. (sel.) James F. **Martin Jr.**, from Dir., Budget Ops. & Personnel, Office of the Asst. SECAF, Financial Mgmt. & Comptroller, Pentagon, to Dep. Asst. Secy., Budget, Office of the Asst. SECAF, Financial Mgmt. & Comptroller, Pentagon ... Brig. Gen. Bruce H. **McClintock**, from Spec. Asst. for Russia & Div. Chief, Central Europe & Eurasia, Jt. Staff, Pentagon, to Sr. Defense Official/Defense Attaché, DIA, Moscow ... Brig. Gen. Jeffrey R. **McDaniels**, from Dep. Dir., Ops., Natl. Jt. Ops. & Intel. Center, Ops Team One, Jt. Staff, Pentagon, to Dir., Prgms. & Analyses, PACAF, JB Pearl Harbor-Hickam, Hawaii ... Maj. Gen. James K. **McLaughlin**, from Dir., Space Ops., DCS, Ops., Plans, & Rqmts., USAF, Pentagon, to Cmdr., 24th AF, AFSPC, JBSA-Lackland, Tex. ... Brig. Gen. John E. **Michel**, from Dep. Dir., Strategy, Policy, & Prgms., & Log., TRANSCOM, Scott AFB, Ill., to Commanding General, NATO Air Training Command-Afghanistan, NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan, & Cmdr., 438th AEW, ACC, Kabul ... Maj. Gen. John F. **Newell III**, from Sr. Mil. Advisor to the US Spec. Representative for Afghanistan/Pakistan, Jt. Staff, Pentagon, to Dir., Policy & Planning, NORTHCOM, Peterson AFB, Colo. ... Maj. Gen. Harry D. **Polumbo Jr.**, from Cmdr., 9th Air & Space Expeditionary Task Force-Afghanistan, ACC, Kabul, to Cmdr., 9th AF, ACC, Shaw AFB, S.C. ... Maj. Gen. (sel.) James N. **Post III**, from Dep. Dir., Ops., Plans, & Policy, PACAF, JB Pearl Harbor-Hickam, Hawaii, to Dir., Ops., ACC, JB Langley-Eustis, Va. ... Lt. Gen. Robin **Rand**, from Cmdr., 12th AF (Air Forces Southern), ACC, Davis-Monthan AFB, Ariz., to Dep. Cmdr., SOUTHCOM, Miami ... Maj. Gen. John N. T. **Shanahan**, from Dep. Dir., Global Ops., Jt. Staff, Pentagon, to Cmdr., AF ISR Agency, JBSA-Lackland, Tex. ... Maj. Gen. (sel.) Steven M. **Shepro**, from Commanding General, NATO Air Training Command-Afghanistan, NATO Tng. Mission-Afghanistan/Combined Security Transition Command-Afghanistan, & Cmdr., 438th AEW, ACC, Kabul, to Dir., Ops., DCS, Ops., Plans, & Rqmts., USAF, Pentagon ... Brig. Gen. David R. **Stilwell**, from US Defense Attaché, China, PACOM, DIA, Beijing, to Dir., Regional Affairs, Office of the Dep. Undersecretary of the AF, Intl. Affairs, USAF, Pentagon ... Maj. Gen. (sel.) Marshall B. **Webb**, from Dir., Plans, Prgms., Rqmts., & Assessments, AFSOC, Hurlburt Field, Fla., to Cmdr., SOCOM Europe/Dir., Special Ops., EUCOM, Stuttgart-Vaihingen, Germany ... Maj. Gen. Jack **Weinstein**, from Dir., Air, Space, &



## Senior Staff Changes (cont.)

Cyberspace Ops., AFSPC, Peterson AFB, Colo., to Vice Cmdr., AFGSC, Barksdale AFB, La. ... Maj. Gen. (sel.) Burke E. **Wilson**, from Dep. Cmdr., Air Forces Cyber, AFSPC, Fort Meade, Md., to Dir., Space Ops., DCS, Ops., Plans, & Rqmts., USAF, Pentagon ... Maj. Gen. Timothy M. **Zadalis**, from Dir., Intel., Ops., & Nuclear Integration, AETC, JBSA-Randolph, Tex., to Cmdr., 618th Air & Space Ops. Center (Tanker Airlift Control Center), AMC, Scott AFB, Ill.

**SENIOR EXECUTIVE SERVICE CHANGES:** Douglas L. **Loverro**, to Dep. Asst. SECDEF, Space Policy, Office of the USD, Policy, Pentagon ... David W. **Madden**, to Exec. Dir., SMC, AFSPC, Los Angeles AFB, Calif. ... Michael R. **Shoultz**, to Dep. Asst. C/S, Strat. Deterrence & Nuclear Integration, USAF, Pentagon ... Kathy L. **Watern**, to Dep. Asst. Secy., Cost & Economics, Office of the Asst. SECAF, Financial Mgmt. & Comptroller, Pentagon.

**COMMAND CHIEF MASTER SERGEANT CHANGE:** CMSgt. Douglas L. **McIntyre**, to Command Chief Master Sergeant, AFSPC, Peterson AFB, Colo.

ity to detect the defect was limited due to the lubrication applied during machining work and the transfer of the part, it said.

Procedures also did not require an inspection and were not typically completed at Tinker for new blades arriving from the manufacturer, noted ACC.

### U-2 Tweaks Avert Bends

Technicians at Beale AFB, Calif., are modifying U-2 reconnaissance aircraft to nearly double the airplanes' cockpit pressure, thereby lessening Dragon Lady pilots' risk of decompression sickness when descending from extreme altitude, according to base officials.

"What we're doing is beefing up the structure and pressure equipment," including cockpit bulkheads, explained Lockheed Martin field representative James Barnes in Beale's Feb. 15 news release.

The Cockpit Altitude Reduction Effort, or CARE, retrofits will boost ambient pressure from 3.88 pounds

per square inch to 7.65 psi, stated the release.

Even wearing a pressure suit at 70,000 feet altitude, U-2 pilots experience the physiological effects of nearly 29,000 feet altitude—equivalent to standing on Mount Everest, according to the release. The modifications will halve the perceived altitude to a more manageable 15,000 feet, said base officials.

Members of the 9th Maintenance Squadron undertake the CARE tear-down, and Lockheed Martin technicians complete the mods during phase maintenance at Beale, they said. The mods take roughly 23 days per airframe.

### Schwartz Receives Enlisted Honor

Air Force Special Operations Command's enlisted force inducted retired Gen. Norton A. Schwartz, former Chief of Staff of the Air Force, into the command's Order of the Sword—the highest honor enlisted airmen can bestow on a senior officer or civilian.

"Sir, this is the very least we could do for you, after all you've done for us," said AFSOC Command CMSgt. William W. Turner during the Feb. 1 induction ceremony in Fort Walton Beach, Fla., east of Hurlburt Field, AFSOC's headquarters. "You are a leader among leaders, an airman's airman, and most surely worthy of the greatest honor the enlisted force can bestow," added Turner.

Recalling the failed 1980 Tehran hostage rescue, Schwartz accepted the honor on behalf of the airmen who ensured AFSOC never experienced the "crushing disappointment" of failing at a "mission of singular national importance" again, according to Hurlburt's Feb. 4 account of the ceremony. He saluted the "generation of leadership that propelled special operations from the searing experience in Desert One to the exhilaration of Abbottabad" in taking down Osama bin Laden.

### Veteran Awarded Bronze Star Medal

Retired TSgt. Placido Salazar received the Bronze Star Medal with Valor device in February for his heroic actions when his air base came under attack in South Vietnam in 1965.

Retired Col. Colin Chauret, a former commander of Salazar, pinned the Bronze Star on him during the Feb.

**We Got This: A C-130H takes off from Yokota AB, Japan, during "readiness week," a nine-day exercise testing the 374th Airlift Wing's ability to respond to unexpected contingencies in the Pacific region. The C-130 joined five others in a large formation flight practicing airlift tactics and procedures.**



USAF photo by 2nd Lt. Jake Bailey





**We Shall Overcome:** SrA. Annette Bieniek inspects the primary heat exchanger of an F-15E Strike Eagle at RAF Lakenheath, UK. Bieniek—an inspection section journeyman whose family immigrated to the US—is one of several female airmen whose stories of overcoming adversity and becoming top-notch airmen were featured by USAF during March, which was Women’s History Month.

15 ceremony at JBSA-Randolph, Tex., according to a Randolph press release. Salazar also received a Purple Heart at the ceremony.

On Aug. 21, 1965, Salazar, who decrypted classified messages as a member of the 4080th Strategic Reconnaissance Wing at Davis-Monthan AFB, Ariz., was deployed to Bien Hoa AB, South Vietnam. The base came under attack. Salazar secured an encrypted message he was holding and then brought his previously injured commander from a nearby building to the underground command post bunker. Salazar then helped two other senior officers to safety in the face of enemy fire.

At one point during the firefight, Salazar was knocked unconscious after

slipping. Upon waking, he secured more officers and then guarded the command post until relieved. Salazar retired from the Air Force in 1976 after 20 years of service, according to the release.

#### Ten Million and Turning

Pratt & Whitney F117 engines recently surpassed their 10 millionth flight hour on the C-17 transport, announced the company.

“This milestone is a testament to the reliability of the F117 engine,” said Beverly Deachin, the company’s vice president for military programs and customer support. “The exceptional performance of our engines—in some of the harshest conditions—has helped the C-17 Globemaster III save count-

less lives in military, humanitarian, and disaster relief missions,” she said in the company’s Feb. 21 statement.

Each C-17 carries four F117 turbofans. Constant upgrades increased the F117’s average “on-wing” time between overhauls to eight years, stated the release.

The F117 first entered service in 1993. So far, there are some 250 C-17s in worldwide service, including 218 in the Air Force’s fleet.

P&W said it has delivered more than 1,100 F117 engines thus far.

#### First KC-135R Retired

The Air Force retired its first operational KC-135R tanker from service after more than 50 years of flying it, announced officials at Altus AFB, Okla. This KC-135, tail No. 61-0312, first flew on Aug. 14, 1962, received new engines in 1985, and accumulated some 22,500 flying hours over the years, stated the Feb. 22 news release from Altus’ 97th Air Mobility Wing, which trains KC-135 aircrews.

The aircraft departed Altus for good on Feb. 21, en route to the Air Force’s aircraft “Boneyard” at Davis-Monthan AFB, Ariz. It is one of the KC-135s that the Fiscal 2013 defense authorization act allows the Air Force to retire.

#### Doolittle Raider Thomas Griffin Dies

Retired Maj. Thomas C. Griffin, one of the Doolittle Raiders who, along with 79 other airmen, carried out a daring bombing attack on Tokyo on April 18, 1942, died in his sleep in a veterans’ hospital in Cincinnati on Feb. 26, reported Cincinnati.com. He was 96.

Griffin, a native of Green Bay, Wis., served as navigator on aircraft No. 9, one of the 16 B-25 bombers under the command of then-Lt. Col. Jimmy Doolittle that took off from the deck of the carrier USS *Hornet* in the Pacific Ocean to bomb Tokyo on that spring day in 1942, just four months after Japan’s strike on Pearl Harbor.

Griffin, then a lieutenant, bailed out with his crewmates over China after the raid and made his way back to allied lines.

Eventually returning to combat, he later spent 22 months as a prisoner of war in Germany after his airplane was shot down in July 1943.

Griffin’s death leaves four surviving Doolittle Raiders: retired Lt. Col. Richard E. Cole, copilot on aircraft No. 1; retired Lt. Col. Robert L. Hite, copilot on aircraft No. 16; retired Lt. Col. Edward J. Saylor, engineer on aircraft No. 15; and then-Cpl. David J. Thatcher, engineer-gunner on aircraft No. 7.

Those four are scheduled to gather in mid-April in Fort Walton Beach, Fla., for the Doolittle Raiders’ 71st reunion. ■

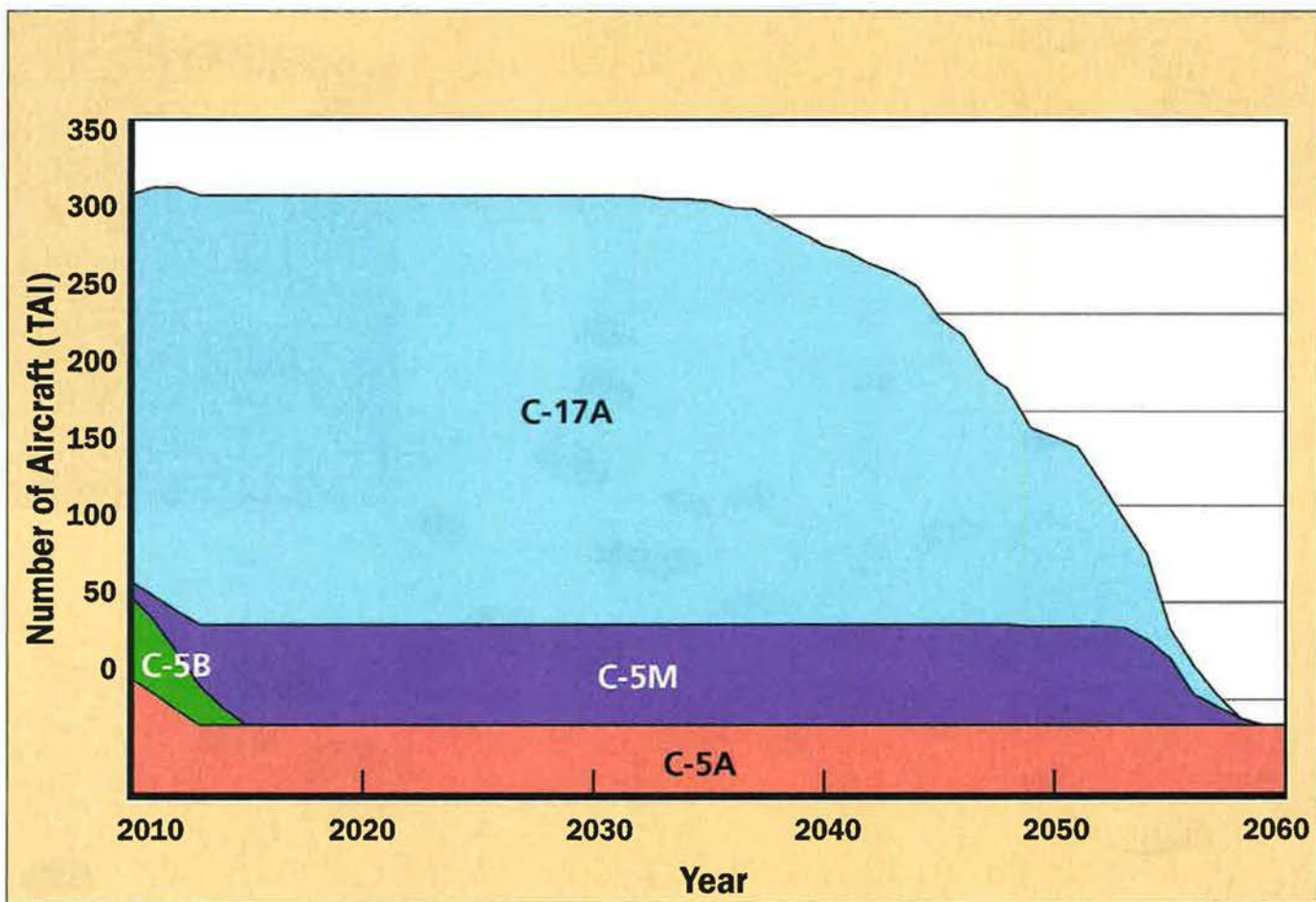


## The Airlift Cliff

USAF's strategic airlift fleet consists of C-5 and C-17 types. USAF ceased producing new C-5s years ago. The C-17 line is open, but USAF does not plan to buy more than the 224 it already has ordered. RAND recently projected annual strategic airlifter retirements, based on structural fatigue. The projection, seen here, shows that numbers fall off a cliff after 2030. C-17As

are the first to go. Though newer than the C-5, the C-17 has been ridden hard. In the mid-2050s, C-5Ms will start to retire. (C-5As, because they are little used, will be around longer.) RAND reports that, given the drawdown realities, USAF must recapitalize. The question is: Where will the money come from?

### Projected Retirement Schedule



Source: "Reducing Long-Term Costs While Preserving a Robust Strategic Airlift Fleet: Options for the Current Fleet and Next Generation Aircraft," Christopher A. Mouton, David T. Orletsky, Michael Kennedy, and Fred Timson. Project Air Force. RAND Corp., Santa Monica, Calif. Jan. 31, 2013. Reprinted with permission.



**A**IR FORCE readiness levels have been declining since 2003. For a decade, “full-spectrum training” was set aside to support the wars in Iraq and Afghanistan, said Chief of Staff Gen. Mark A. Welsh III at the Air Force Association’s Air Warfare Symposium in Orlando, Fla., Feb. 21.

The high operational tempo required to fight two simultaneous wars ensured that a small portion of the force remained “supremely” ready, he noted. However, that capability came at the expense of other mission areas.

Welsh had told the House Armed Services Committee Feb. 13 that nearly 50 percent of Air Force fighting units “are below what I would consider an acceptable combat readiness level.” That means the Air Force’s ability to fight a “determined enemy, in a contested environment, with degraded communications, degraded navigation, degraded weapons systems capability is not where it should be,” Welsh testified.

Air Force senior leaders are “fully aware” of the problem and had planned to address what Welsh referred to as a “readiness bomb” in the Fiscal 2013 budget, but faced instead a double whammy. In addition to the across-the-board spending cuts known as sequestration taking effect

March 1, meanwhile Congress refused to approve a Fiscal 2013 spending bill, forcing the service to operate under a continuing resolution that extends 2012 funding levels.

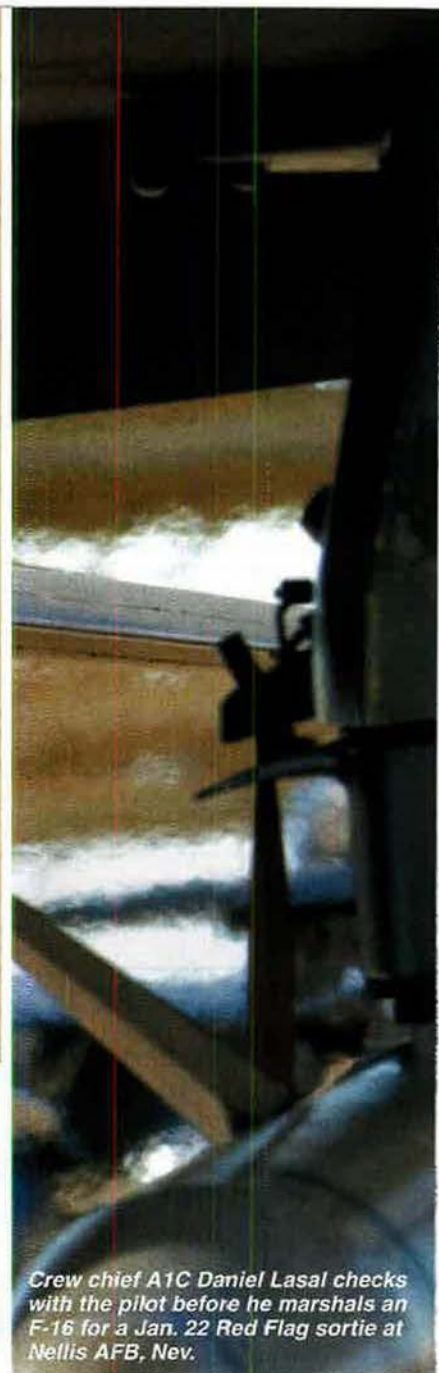
“These impacts to readiness occur at a time when the Chief and I have been striving to reverse a 10-year declining trend in this critical area,” said Air Force Secretary Michael B. Donley.

### Random Slashing

The Budget Control Act of 2011 required the Defense Department to cut \$487 billion from its budget over 10 years—a move defense leaders agreed was not only possible but also the right thing to do for taxpayers. However, the act also included an additional deficit reduction of about one trillion federal dollars—more than half coming from national security accounts—over the same time period.

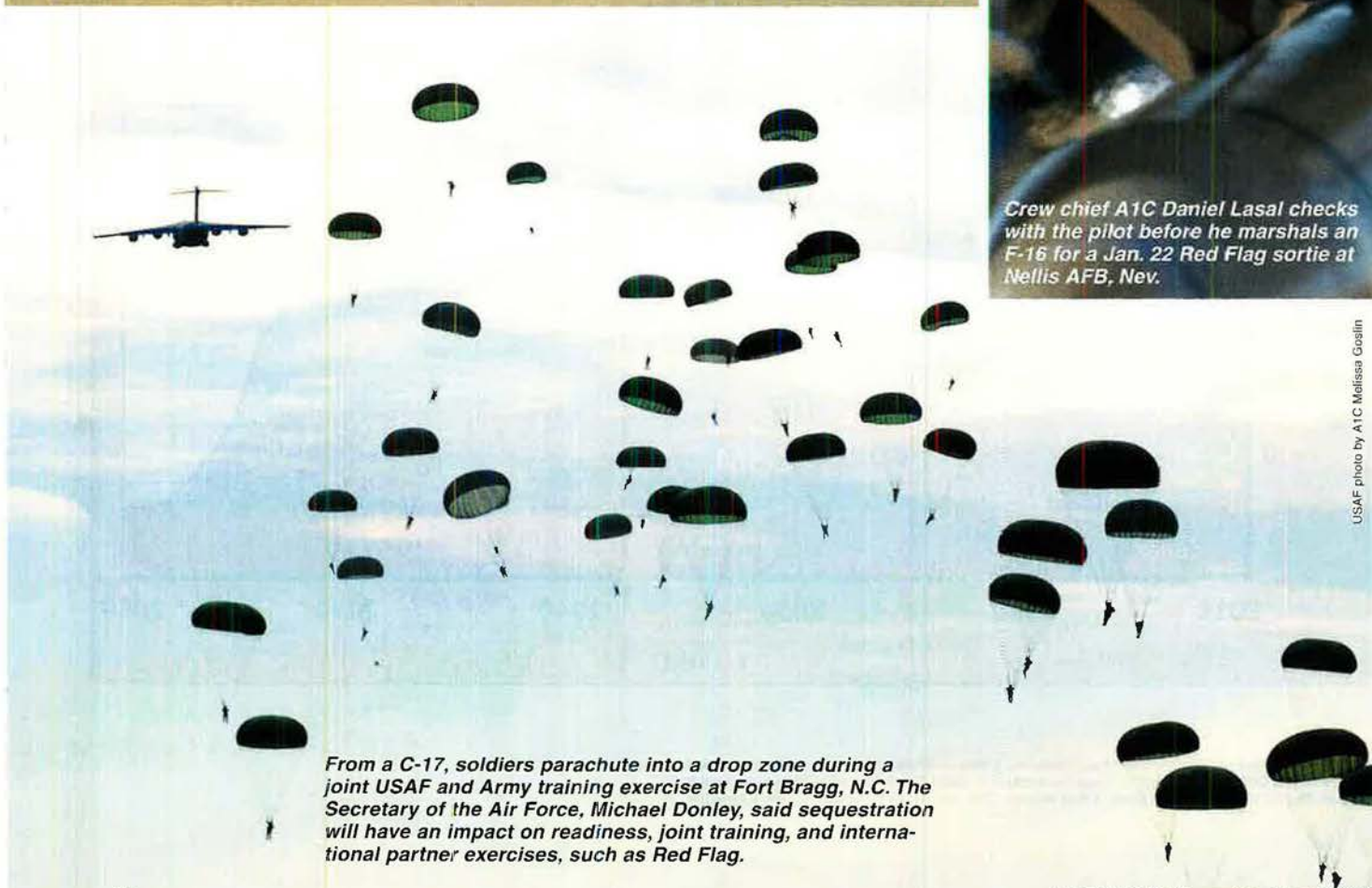
Just about no one in the defense community found these additional cuts a good idea.

The sequester does not give budgeters the authority to pick and choose which accounts will be slashed, in effect crippling readiness and critical modernization efforts. Sequestration was designed to be so devastating that Republicans and Democrats in Congress would be forced



Crew chief A1C Daniel Lasal checks with the pilot before he marshals an F-16 for a Jan. 22 Red Flag sortie at Nellis AFB, Nev.

USAF photo by A1C Melissa Goslin



From a C-17, soldiers parachute into a drop zone during a joint USAF and Army training exercise at Fort Bragg, N.C. The Secretary of the Air Force, Michael Donley, said sequestration will have an impact on readiness, joint training, and international partner exercises, such as Red Flag.



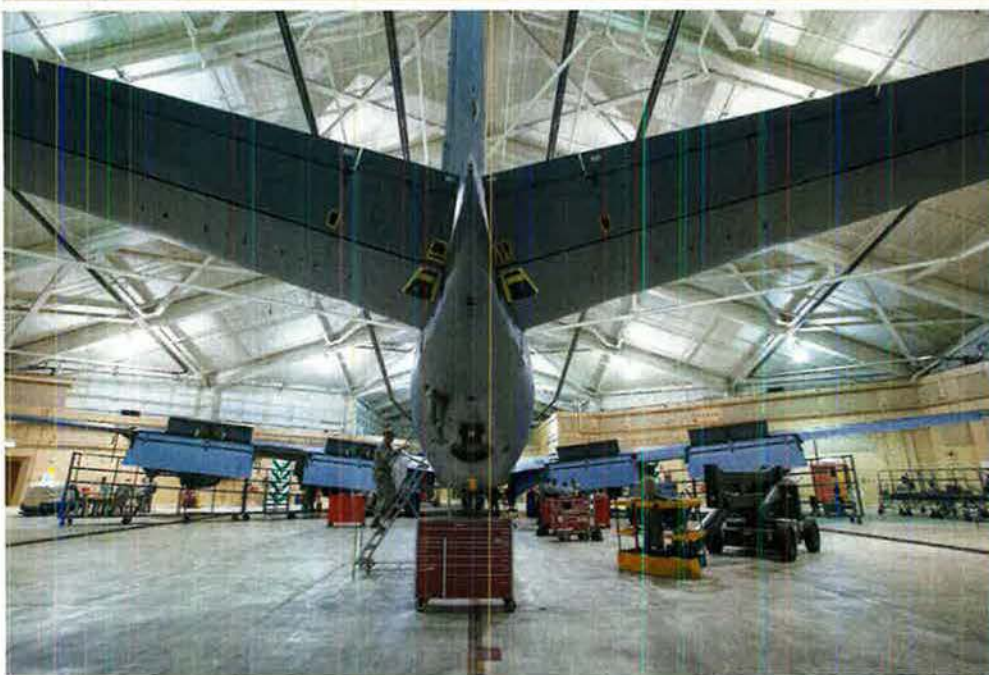


# CUTTING READINESS

By Amy McCullough, News Editor

**USAF was forced into immediate action when sequestration kicked in.**





AP Photo/Mark D. Olson



Lance Johnson/Scott W. Aitch

**Top: A KC-135 is in for maintenance at a phase dock at JB McGuire-Dix-Lakehurst, N.J. Under sequestration, maintenance funds could run out in July. Here: Donley speaks at the Air Force Association's Air Warfare Symposium in February. He painted a bleak picture of the effects of draconian, untargeted budget cuts on readiness—effects that could take years to counteract.**

to work together to reach a compromise that would protect national security while reducing the deficit.

By early March, no compromise had been reached, and both sides continued to play the blame game.

In addition, Congress has failed to pass a Fiscal 2013 appropriations budget even though the fiscal year is nearly half-way complete. Repeated continuing resolutions keep the government operating at Fiscal 2012 funding levels, but they also introduce another level of fiscal uncertainty

that will have a lasting effect on readiness, said Donley at the Orlando symposium.

"Although we've protected people and readiness to date, the impact of sequestration will ultimately force us to consider actions that will impact readiness and our civilian work force as well," said Donley.

As a result of the steep cuts, the Air Force will reduce flying hours by about 200,000 hours through the remainder of the fiscal year—a move Donley said "would impact our theater security packages, our continuous bomber presence missions, as well as

many Air Force joint and international partner exercises, including Red Flags."

Gen. Edward A. Rice Jr., commander of Air Education and Training Command, said it's too early to say how the absence of a Red Flag-type exercise will affect training.

"If the absolute worst-case scenario were to happen, where we were in this for a very extended period of time, I think we would look at restructuring how we train in a less optimal fashion," said Rice. That could mean more virtual exercises, though Rice said it's premature to consider that now.

Officials hope to protect prioritized missions, such as operations in Afghanistan, nuclear deterrence, and initial pilot qualification. But "the majority of our fighter and bomber units will only continue to fly until depletion of their flying hour funds, which could occur as early as mid-May," said Donley. Initial flight qualification training may have to stand down as early as September if a solution is not reached, he added.

### Here Comes Tiered Readiness

Gen. G. Michael Hostage III, commander of Air Combat Command, said the only way he can continue to provide effective operational combat power is to transition to a state of "tiered readiness," meaning a significant portion of combat air forces will no longer be combat capable.

"Tiered readiness is not something we as an Air Force would do normally because we are the ready force," said Hostage during an interview with *Air Force Magazine* in Orlando. "When conflict kicks off, it's expected by all our sister services, our allies, and [even] our adversaries, ... that hours after something initiates, airpower will be flowing en masse. The only way to do that is with an Air Force that is constantly combat ready to move."

Under tiered readiness, however, units returning from a combat theater will stand down. Those units, as well as other State-side units, will then remain in a dormant status until they are tapped for a combat deployment or a named operation, said Hostage.

"In order to get to the end of the year and still be able to produce fully combat ready forces, I have to husband those resources," he said. "If I spread [the flying hours] out to everybody, all my units would fly but they would be at some minimally low level of capability and not combat ready. My only choice is to husband the resources of those that I need immediately and then take risks with those that I don't need immediately."

Though a significant departure for Air Force units, tiered readiness is a normal



operating concept for the Army and Navy, said Hostage. For example, when a carrier returns from deployment, the ship goes in for refurbishment, the company disperses, and the air wing flies off to train elsewhere. Over a period of time, the ship becomes noncombat capable as it undergoes refit, but it is then brought back up before deploying again. An Air Force squadron, on the other hand, is typically combat capable just a few weeks after returning from theater.

"The period of time when they are not combat ready is because their parts and pieces and their people are in transit," said Hostage. "Once back at home station, they are back on combat status."

As a result of sequestration, Hostage said, "more than half my force" will go in to dormant status, during which pilots will rely solely on simulators for training.

Welsh said most of the combat air forces will be "below acceptable combat levels" by mid-May and "about 70 percent of our CAF will be completely nonmission capable by July." In addition, the Air Force will be forced to close about 10 training ranges in the United States, including places such as the Utah Test and Training Range and the Nevada Test and Training Range.

In a move designed to free up some flying hours, the Air Force announced March 1 that it was canceling the Thunderbirds aerial demonstration team's entire season beginning April 1 and ending support such as flyovers for public events. These activities are funded through standard Air Force training accounts.

USAF also will need to cut weapon systems sustainment by as much as 18 percent, essentially pushing aircraft availability rates and mission capable rates significantly below established standards, said Donley.

"These depot delays would affect over 30 aircraft types and weapon systems across our Total Force and could require the grounding of some affecting aircraft," he said. "The deferments result in disruption to production lines, the degradation of work force productivity and proficiency, and they'll drive up future sustainment costs for our Air Force."

Repeated continuing resolutions have decremented the force to the point where officials had no other option but to begin implementing cuts on March 1, regardless of whether a budget is passed or a solution to the sequester is reached, said Hostage.

"The problem doesn't go away once you fix the budget and get it back on the budgeting process," said Hostage. "We'll have to take irrevocable actions starting

1 March; otherwise, we start getting into ... all kinds of catastrophic situations at the end of the year when we can't meet the numbers."

Air mobility forces also will "experience training degradations in airdrop and air refueling" as operations and maintenance funds could run out by July, said Donley. The Army could lose as many as 21,000 training jumps, and the Air Force will

"lose the ability to do air refueling training for both our own forces and for coalition partners because we simply won't have the flying hours to fly," added Welsh.

Gen. Paul J. Selva, commander of Air Mobility Command, said he is obligated to "make sure we're capable of moving the President, vice president, and members of the Cabinet; to exercise American influence at home and abroad; ... to make

**Here: Air Force Chief of Staff Gen. Mark Welsh delivers his keynote address at the symposium. Sequestration will shape the way the Air Force looks and operates in the future. Bottom: Members of the Thunderbirds, USAF's aerial demonstration squadron, perform at a Nellis open house. The Thunderbirds had their 2013 season canceled in an attempt to free up desperately needed flying hours.**







**SrA. Mindy High prepares to launch a B-2 from Andersen AFB, Guam. The continuous bomber presence in the Pacific is also threatened by sequestration's budget slashing.**

sure that parts of our military force can be moved to places in the world where they are absolutely essential; and ... to have a portion of my crews ready to move the nation's nuclear stockpile if it needs to be moved." Everything else is subject to the budget ax.

That means KC-135 air refueling operations inside the continental United States, C-17 continuation training, and aircraft commander and instructor pilot upgrade training may take a heavy hit under the sequester.

"It's conceivable that up to a third of the C-17 fleet and almost the entire KC-135 fleet will be reduced to basic missions, which means the pilot and the copilot will get to takeoff and land every 30-to-45 days," Selva told reporters in Orlando.

Selva said he has the ability to maintain some training, such as takeoff certifications, through simulators. However, that's not a lot of help considering pilots cannot certify landings in a simulator.

"By the way, the takeoff is beneficial to the landing," he joked halfheartedly.

Instead, Selva said he would focus solely on training "that is required to keep

the crews minimally proficient and then accept the risk if I have to send them on a mission."

That would require recommendations from squadron, group, and wing commanders to determine which crews are the most qualified to conduct missions, he said.

#### Minimum Mission Assurance

Niche missions, such as aerial firefighting, could be cut completely because they require a significant amount of training to ensure the mission can be conducted safely—and Selva said he simply won't have the flying hours to do that.

Although officials have said they plan to protect operations in Afghanistan, Selva said the sequester would constrain his flexibility in executing missions in and out of theater. For example, a reduction in flying hours would reduce the number of crews available to fly such missions, limiting options available to withdraw supplies and equipment from Afghanistan.

"Today, essentially any crew available can be tasked. I can manage their deployment ratios, their time away from home,

their time in training, and I can keep the pipeline open ... to grow new crews," said Selva.

Though he does not anticipate longer deployments as a result of the cuts, the smaller pool of mission capable crews will mean more time away from home, just for shorter stretches of time.

"This is a place our Air Force has not been in several decades, so the rebuilding time, ... the bill to pay for taking ourselves down to that level of minimal efficiency, minimal mission assuredness, is substantial in terms of training and the investment of dollars and time to do that training," said Selva.

The Air National Guard also anticipated grounding or significantly reducing flying hours on a large portion of its fleet as of early March. "Critical wartime missions" would be exempt for the time being, said National Guard Bureau spokeswoman Rose Richeson. However, NGB funding is set to expire on March 27 and Air Guard funding in the continuing resolution is "greatly underfunded," she said.

As a cost-saving measure, the Air Guard will operate a reduced number of fully mission capable and partially mission capable aircraft as of early March, said Richeson. The most critical missions, such as aerospace control alert, search and rescue, and predeployment activities, will continue to operate. Unlike AMC, the



Air Guard considers airborne firefighting systems a must-fund mission.

Donley said it could take "six months or more to reverse" the effects of grounding units. And "curtailing pilot training could result in pilot shortfalls that could take over a decade to remedy."

Air Education and Training Command won't be hit nearly as hard as ACC or AMC by the flying hour reductions, but there will still be plenty of pain under a sequester, said Rice.

Because Air Force leaders want to protect initial pilot training, Rice said he will have to cut advanced pilot training first. That will create a backlog in training requirements that Rice said will "be very difficult for me to catch up on" because there is not enough excess capacity to easily restore the proper levels.

"We are training to our limits in most cases, though there are a couple of exceptions to that," Rice told reporters in Orlando. "When I miss training slots it's hard for me to make those up later. When I catch up depends on how long we go in to this [sequester]."

Rice said if sequestration lasted just a few days, the complications could be dealt with, but anything longer than that would start to have a serious impact on training.

"We will have to make decisions that I can't make today on an individual basis," he said.

For example, a commander of a flying squadron must be certified in the aircraft variant he oversees. However, the cancellation of advanced pilot training means Rice may have to "sacrifice an initial training slot in order to catch up with one of these other training slots." That could

mean pushing pilots who are not currently in a flying billet to the back of the line so a commander can be requalified, he said.

The Air Force does, however, plan to protect F-35 pilot training at Eglin AFB, Fla., even though that is considered "advanced" training, said Rice.

"We just don't have that many F-35s or that many flights at Eglin," he said. "Because we are dealing with fairly large numbers here in terms of flight hours across my command, I can afford to continue to train at Eglin." He said, "It's really not an either-or question at Eglin, and it's important to continue maturing the training of the fleet."

### This Is Personal

Sequestration often is characterized as an inside-the-beltway issue, but it could be deeply personal for airmen.

The Air Force already has cut back on "nonmission critical" temporary duty assignments as part of its sequestration mitigation efforts. Donley said the further cuts that began March 1 could mean delays to professional military education courses, such as the Noncommissioned Officer Academy and mission readiness training.

That could lead to delayed promotions for airmen and possible loss of certification for airmen in technical specialties such as firefighting and explosive ordnance disposal, said Donley.

Rice said officials are "trying to manage prudently near-term decisions so we don't cost ourselves more in the long run."

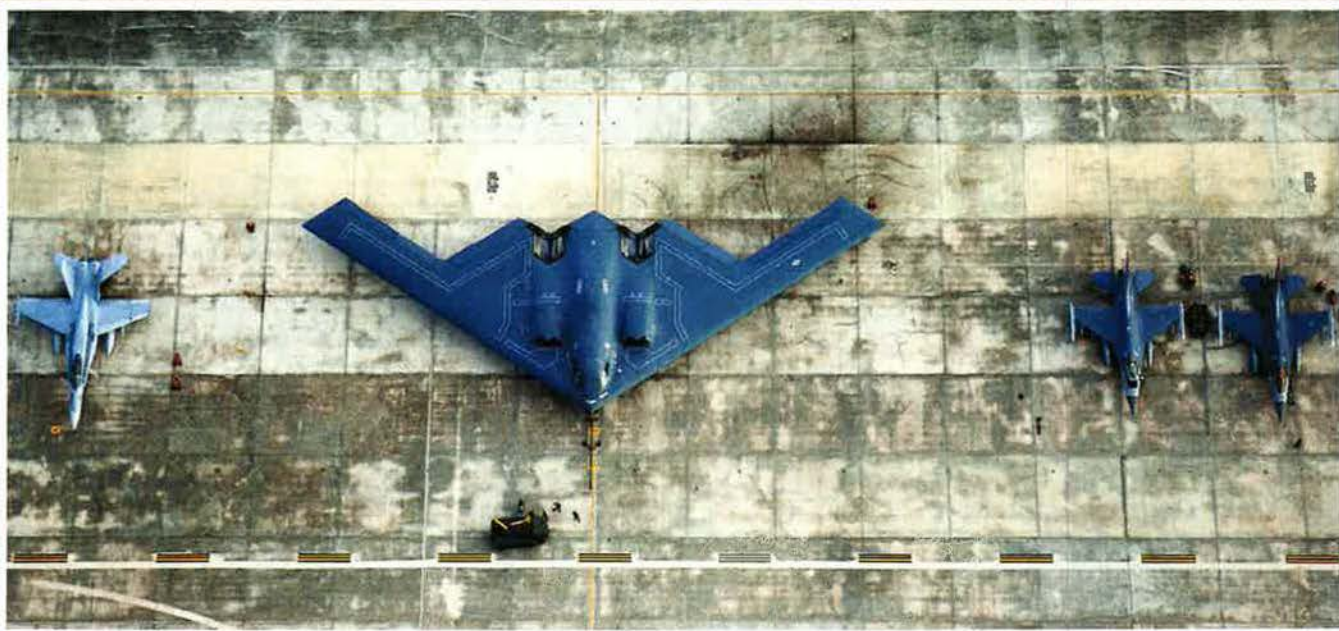
However, delays in initial qualification training or upgrade training will follow airmen throughout their careers, creating a backlog that is difficult to recover from. That's why the Air Force has made a strategic decision to preserve those elements of training in the short term, said Rice.

Regardless of how the cuts play out, Welsh said they will be significant and they will hurt. They also will shape the way the Air Force looks and operates in the future.

The last two decades of war have already taken a toll on the force, straining airmen and their families and reducing training opportunities. Donley said the Air Force has "a critical responsibility to rebuild and restore full spectrum readiness and training" so the force will be prepared for the future and any unexpected contingencies that might arise.

"Sequestration is a threat to our national security which will undermine readiness in the short term, likely drive us to be smaller than we should be, and endanger modernization in the long term," said Donley. "The ongoing uncertainty plays havoc with our planning processes. It makes it difficult to invest and finalize contracts, to maintain infrastructure and essential military equipment, and to take care of our people." ■

L-r: A Navy F/A-18 Hornet, a B-2 Spirit, and two F-16 Fighting Falcons await their next mission on the flight line at Andersen during last year's joint Air Force-Navy exercise Valiant Shield.







USN photo by Mass Comm. Spec. 3rd Class Ryan J. May

**T**he AirSea Battle concept is becoming more of an operational reality with every passing day, senior USAF and Navy leaders now say. AirSea Battle ideas are being put to the test in a range of anti-access, area-denial (A2/AD) scenarios ranging from exercises to joint experiments and simple USAF-Navy coordination activities around the world.

But the fiscal climate for the Pentagon is worsening, and the military services are attempting to reset from more than a decade supporting irregular warfare operations. ASB advocates are now pushing back against criticism—from

inside and outside the Pentagon—suggesting the Air Force and Navy are too enamored with the concept.

“The US and our allies and our partners have interests and shared interests,” said Lt. Gen. Burton M. Field, the deputy chief of staff for operations, plans, and requirements on the Air Staff, in a joint talk with his Navy counterpart at the Air Force Association’s February Air Warfare Symposium in Orlando, Fla. Underpinning all of these, and the theme that pervades the January 2012 Defense Strategic Guidance, is what Field called “unimpeded access to the global commons”—that being air, space, the world’s waterways, and the

freedom to use space and cyberspace anywhere.

After the 2009 directive from then-Secretary of Defense Robert M. Gates to work solutions for the concept, the Air Force and Navy “locked at each other and said we have a lot of capability between the two of us,” Field said—and thus ASB came to fruition. Much has occurred since the idea was drafted in a classified memo between the services and articulated in the 2010 Quadrennial Defense Review which said the Air Force and Navy would develop a “joint air-sea battle concept for defeating adversaries across the range of military operations.” A great deal of time and effort



# AirSea Battle's Battle

The air and maritime concept is maturing, but must fight off interservice rivalries and Pentagon politics.

*A USAF HH-60 Pave Hawk helicopter lifts off from USS Nimitz during the Joint Task Force Exercise in November 2012. During JTFEX, Air Force assets trained in a threat environment unlike recent operations in Iraq and Afghanistan. Below, a formation of Navy F/A-18s approaches a USAF KC-135 for refueling over Wake Island in the Pacific.*



By Marc V. Schanz, Senior Editor

has been spent working on ASB—both in and out of the Pentagon—and on what it aims to do, senior officials say. Now it must become operational if it will be credible.

Rear Adm. Bruce E. Grooms, the Navy's assistant deputy chief of naval operations for operations, plans, and strategy, spoke alongside Field in Orlando, where they gave some of the most wide-ranging comments on the progress of ASB to date by senior uniformed officials. The ASB concept, the pair argued, is far larger than discussions often centering on platforms such as bombers or ships. It is about connectivity and networks and being able to understand each other when it comes time to fight. This is why experimentation has focused a great deal on networks, understanding them and linking them with existing capabilities within each service culture.



USAF photo by SSgt. Ben Fulton





**USAF Capt. Justin Pavoni checks maintenance books before a mission during Razor Talon at Seymour Johnson AFB, N.C. The exercise tested cutting-edge operational concepts from AirSea Battle.**

"It would be great if a submarine captain ... could poke his head above water ... and say, 'Hey, I need to use a [remotely piloted aircraft] to make this happen,'" said Field. Cross-service communication and coordination, whether a sub captain using USAF remote assets, or Aegis ships providing "third-party targeting" information to fighters or bombers, are concepts which will only work if they are exercised and practiced, he added. Until you have the links and the tactics, techniques, and procedures, "it's not going to happen," Field said.

Grooms commented that ASB is forcing a great deal of new thinking about how air and maritime forces interact with each other. "We're in a different world now," he said. Fiscal limitations and the need to be interoperable are part of the testing and experimentation phase of ASB. Since 2010, working with Gates, then his successor Leon E. Panetta and Deputy Secretary of Defense Ashton B. Carter, both services have refined the concept, making it more detailed, Grooms said. "But you reach the point where the words on paper are important, but what are the tangible things you are doing to bring warfighting forward in ways that resonate?" he asked rhetorically.

USAF and the Navy are addressing this, the pair noted—working out concepts and initiatives from ASB across the force,

down to the wing level and not letting it get bottled up in the Pentagon.

Several exercises and events have taken place in just the last six months. In November last year, the Air Force's 563rd Rescue Group deployed more than 150 personnel to NAS North Island, Calif., to participate in the US Third Fleet commander's Joint Task Force Exercise, a final pre-deployment certification for the *Nimitz* carrier strike group. During the exercise, USAF assets were put through new maritime scenarios in threat environments vastly different from operations in Iraq and Afghanistan. HC-130Js dropped pararescue jumpers to rescue isolated personnel. Air Force HH-60 Pave Hawks then picked them up. Another scenario included a simulated attack on a carrier group and recovery of personnel from the aftermath. The Air Force's 55th and 66th Rescue Squadrons also conducted their first-ever maritime gunnery exercise to validate new tactics, techniques, and procedures for opposed, overwater recovery operations.

### The Task Ahead

In early February, off the coast of North Carolina, Air Force, Navy, Marine Corps, and Royal Air Force aircraft held a multinational exercise and planning effort—Razor Talon—employing new operational concepts from AirSea Battle. Six RAF Typhoon aircraft participated in

the exercise, which addressed gaining entry into contested airspace while destroying or disabling air-to-air and surface-to-air threats. The RAF's inclusion was a noticeable event, and Field confirmed close allies now share in the ASB discussion as well. "We are going to operate in coalitions, ... so we want to bring them into meetings with us," Field said. But exercising is where the dividends will pay off. "When we are able to go out and train in reality, we can work some of these [issues out]," he said.

Grooms noted the Navy would be part of the Feb. 25 to March 15 Red Flag air combat exercise at the Nellis Range in Nevada, and it would involve a "scenario we will test to see if [an AirSea Battle] concept will work, to carry it forward to the next level." Combatant commands are also working on cooperation between air and maritime components and on integrating cyber and space control into these operations. Field pointed to examples of partnerships between Pacific Air Forces and the US Pacific Fleet recently.

Turning the concept into operational reality is only part of the task ahead, those close to AirSea Battle deliberations point out. AirSea Battle's main developers—who occupy a small office of less than 20 personnel in the bowels of the Pentagon—are also partially engaged in a multifront struggle, both inside and outside the building. USAF and Navy staff officers and officials are now trying to push back against what they see as a good deal of obfuscation and confusion about the office and its activities—what is



perceived as an often intentional attempt to mischaracterize the concept for parochial service-driven agendas. “There are a lot of misperceptions about AirSea Battle in general,” Grooms told the audience in Florida. “This is not a strategy in and of itself developed in the confines of the Pentagon that ... excludes what is happening in the real world.” ASB is not an operational plan, not “just about China,” and not an opportunity for resource-hungry program offices to have a “Christmas tree to hang their particular items on,” he said bluntly during his talk. “It is not a resource grab and it is not something just to keep us busy in the Pentagon.”

The tension behind Grooms’ sentiments comes from the concept’s objectives coinciding with an extended drawdown period, as the US pulls back from Afghanistan and the services take stock of their roles and missions in a strategy zeroing in on access and operating in denied areas. While ASB is technically a concept office with no budget authority of its own, the fact that it was built outside of the Joint Staff’s requirements process is telling—and not accidental, several officials asserted. A “unique aspect of AirSea Battle office is the absence of a designated ‘joint’ boss,” former Air Force Chief of Staff Gen. Norton A. Schwartz wrote in *The Journal of International Security Affairs* in late 2012. “The services are committing their own equities to this organization’s efforts and calling for their respective staffs to work with the office.”

Since the office’s emergence from the last QDR, criticism and skepticism has surfaced surrounding its purposes and intent. “For all of you who have spent any quality time in Washington, it’s hard to hide anything,” Grooms said. “In our view, misperceptions are not [necessarily] a bad thing. ... It’s not necessarily an incentive ... for us to disabuse all those misperceptions.” While there are many in the services who do “get it and do understand it,” there are lots of others who are watching who should be kept guessing, he observed. “Do we want to clarify every single detail? Probably not,” he said.

For those working inside the Pentagon on the problems posed by AirSea Battle, the perspective is a bit more unique. According to several sources, Gates and his team assembled the concept and the joint USAF-Navy memo codifying it, in order to avoid getting bogged down in the Joint Capabilities Integration and Development System (known as JCIDS) of the JCS—turning the idea into a “purple” mess.

“We’ve tried to keep it small,” Grooms said. “As you could imagine, we could

get mired in the bureaucracy of process. Here’s a great concept; let’s talk about it for hours and hours. ... But we understand what we need to do.” The ASB office, as currently constructed, reflects Grooms’ approach. It is led, alternately, by an Air Force colonel and a Navy captain and staffed with experienced officers across a multitude of fields—from intelligence to programming and other areas.

### Skeptics Abound

As opposed to a sprawling war plan, the actual ASB classified document is a little under 50 pages, according to staff officers who work with the concept.

Gates, then Panetta, wanted to work some really hard problems to inform decisions about resourcing and program priorities, said several staff officers involved. AirSea Battle was the vehicle for examining these issues, at least as they pertain to anti-access and area-denial challenges. To avoid having the office slowed down in the

DOD joint bureaucracy, Gates made sure ASB was segregated from it. Until now, it has largely succeeded in this aim. One staff officer wryly observed that if your average person looked at a diagram of the JCIDS process, they’d be hard pressed to find a more anti-access environment laid out in any war plan.

Peel back just a few layers of the criticism of ASB, however, and it is impossible to separate its discussion from interservice rivalries. The ground services, several staff officers remarked, are not eager for a frank discussion about comparative capabilities in the A2/AD environment because this forum is not one they are well-positioned for in a strategy seen as favoring the air and sea domains.

The Army and Marine Corps have made no secret of their skepticism and frustration with AirSea Battle and have voiced opinions publicly and in private increasingly in recent months. Now that the Pentagon is drawing back from manpower-intensive

**A B-52 is flanked by USAF, US Navy, Australian, and Japan Air Self-Defense Force fighters during Cope North, a multilateral and joint service exercise.**

Photo by Jim Haseltine







USN photo by Mass Comm. Spec. 1st Class James Kimber

**An Air Force CV-22 Osprey hovers over a US Navy ballistic missile submarine, USS Wyoming, just before performing a proof-of-concept personnel evacuation mission.**

counterinsurgency wars, the manpower bill is hitting the ground services first. The Army is drawing down from 570,000 soldiers to an estimated 490,000 by Fiscal 2017, while the Marines are going from just over 202,000 to 182,100 by the end of Fiscal 2016.

Many Army and Marine Corps officials appear nervous about conversations in the Pentagon dominated by A2/AD issues. They are making sure they are part of the discussion—and now have representatives in the ASB office.

The Army also revealed last fall it would soon stand up an Office of Strategic Land Power, incorporating US Special Operations Command, the Army, and the Marine Corps, in a move several Navy and Air Force officers see as a check on ASB.

“Those who want to assume away a need for ground force capability—I don’t agree with that,” Army Chief of Staff Gen. Raymond T. Odierno said in a November 2012 discussion at the Center for Strategic and International Studies. “I think it’s a very dangerous, dangerous road for us to go down.”

Odierno said the new OSLP will look at what future conflicts mean to the ground forces: “What are the characteristics and capabilities that we want?” he asked.

The OSLP is only the most recent manifestation of the ground services attempting to grapple with A2/AD ideas. In March 2012, the Army and Marine Corps released “Gaining and Maintaining Access” (GAMA), a doctrinal concept to explain how the two services “project and sustain power, anywhere in the world.” The 20-page document highlights a raft of operations they argue will be necessary in the future, such as seizing or occupying terrain in maritime chokepoints, providing strategic “stay-

ing power,” and neutralizing “landward threats to access.”

The Marine Corps in particular has treaded a careful line in public.

“I wouldn’t characterize it [as] we are skeptical of the concept, but it is not a strategy,” USMCLt. Gen. John E. Wissler, deputy commandant for programs and resources, said in October 2012 to a Capitol Hill audience of reporters. ASB is a piece of capability the military has to pay attention to, he said, but it should not be made into something it is not designed for.

### The Fight We Are In

“It is not ... a nose-on-nose fight between air and sea forces. The joint force has a piece to play in this,” he said. “Our concern is that people will try to take what is a concept and assume it is a strategy and decide that that’s a focus as to what needs to take place, for what needs to take place in the future.”

In private, several Marine Corps officials admit they are not enamored of the idea. Focusing on China is unhelpful, poses nuclear escalation dangers, and ignores the “fight we are in”—irregular warfare and pop-up crises such as Mali and Libya.

One senior defense official repeated a frequent charge leveled by Army and Marine Corps officers, calling the concept a thinly veiled “TOA grab”—a bid for the Air Force and Navy to seize larger shares of the Pentagon’s total obligational authority. Under this theory, AirSea Battle will inordinately consume funds intended for the rest of the military force in the out-years. The Marines Corps and Army, the official argued, would fight hard to make their case in budget battles they see as inevitable in the “Tank,” the nickname for the service Chiefs’ meeting room in the Pentagon.

The jockeying of the land services somewhat misses the point, several charge, as AirSea Battle and GAMA are both concepts nested under the JCS’s “Joint Operational Access Concept.” JOAC is Chairman of the Joint Chiefs of Staff Army Gen. Martin E. Dempsey’s attempt to get a “joint” way ahead for A2/AD problems. But some see this as the JCS reasserting its influence and putting limits on what ASB can accomplish.

“I don’t think there’s an intention to minimize the scope of AirSea Battle,” said Marine Lt. Gen. George J. Flynn, the director of the JCS force development activities office, during the rollout of JOAC in early 2012.

“We’re talking about the need for other concepts beyond [AirSea Battle], whether it be entry operations, whether it be littoral operations, whether it be sustained land operations,” Flynn stated. “It’s being integrated into what the Chairman’s priorities are. ... His responsibility is joint force capability, not service capabilities.”

Defenders of the ASB office’s work respond to all of this with a simple rejoinder: Air, space, and sea superiority are essential to any military success in the future.

“If air and naval forces cannot establish control of the air, space, cyberspace, and maritime environments, or if they cannot sustain deployed forces, no operational concept is tenable. If ground forces cannot get to the fight or be sustained, ... they will fail to serve the vital interests of America, our allies, and the international system,” wrote Navy Capt. Philip Dupree and USAF Col. Jordan Thomas. Dupree and Thomas are their respective service leads for the ASB office and were writing in a June 2012 *Armed Forces Journal* article.

Still, in the operational realm, the Navy and USAF have a “long list” of items the services need to implement in order to see ASB to fruition, Field said. Some are contentious issues on how to actually link the forces of the two services together, he said at AFA’s symposium. “What’s the appropriate way to do that, the appropriate medium for that?” he asked.

But practice will perfect ASB’s ideas in the real world, he said—and not exercising these concepts will have serious consequences for its viability. “If you can’t fly and you can’t steam and you can’t turn on your radar, then it’s kind of hard to execute anything,” Field said—before adding a blunt warning.

“If we’re not flying and not steaming and not turning on radars, what this will be is an intellectual exercise.” ■



By Robert S. Dudley

## Thinking the Unthinkable

"The service Chiefs ... have had to ... take cuts that eventually are going to impact us. Flying hours, for example. In the near term, what the Air Force is going to try to do is take their [cut in] flying hours in the bomber force ... in such a way as to make sure that our crews that are nuclear-certified will remain so for as long as possible. ... As time passes, we will see greater impacts to the nuclear deterrent, global strike, missile warning and missile defense, situational awareness in both space and cyberspace, and to our support for warfighters around the globe. ... Ultimately, reduced readiness and curtailed modernization [will] damage the perceived credibility of our capabilities, increasing the risk to achieving our primary deterrence and assurance objectives."—*Gen. C. Robert Kehler, head of US Strategic Command, remarks before the House Armed Services Committee, March 5.*

## In Other Words, Screwed

"We find ourselves stuck in the unenviable trade-space between modernization and readiness, with infrastructure improvement delays and deferrals amplifying the impacts to each, and we need your help to get out."—*Gen. Mark A. Welsh III, USAF Chief of Staff, appealing to Congress for relief from budget cuts, testimony before a House appropriations subcommittee, March 5.*

## And You Know What "It" Means

"It is Iran's pursuit of a nuclear capability which is the greatest challenge facing Israel, the region, and the world today. ... Frankly, while exhausting all diplomatic means is understandable, I do not believe it will lead to a moment of truth when the ayatollahs will give up their nuclear aspirations. Therefore, all options must remain on the table. ... We expect all those who say it to mean it. Ladies and gentlemen, we mean it. And let me repeat it. We mean it."—*Israeli Defense Minister Ehud Barak, remarks at the annual conference in Washington, D.C., of the American Israel Public Affairs Committee, March 3.*

## All Fall Down

"The benefits to an attacker using cyber exploits are potentially spectacular. ... US guns, missiles, and bombs may

not fire, or may be directed against our own troops. Resupply—including food, water, ammunition, and fuel—may not arrive when or where needed. Military commanders may rapidly lose trust in the information and ability to control US systems and forces."—*From an unclassified version of a new Defense Science Board study, noted in the Washington Post, March 6.*

## Carter Burlesque

"We met Hugo Chavez when he was campaigning for president in 1998. ... We came to know a man who expressed a vision to bring profound changes to his country to benefit especially those people who had felt neglected and marginalized. Although we have not agreed with all of the methods followed by his government, we have never doubted Hugo Chavez's commitment to improving the lives of millions of his fellow countrymen."—*Former President Jimmy Carter, statement on the death of Venezuelan dictator Hugo Chavez, March 5.*

## Dead Men Tell No Tales

"Drone strikes are easy. With a single key stroke, a suspected enemy is eliminated once and for all, with no fuss, no judicial second-guessing, and no legions of lawyers poised to challenge detention. ... Potential intelligence assets are bombed out of existence. ... What could we have learnt from even a handful of the high-value operatives killed in drone strikes? We do not dispute that use of drones against al Qaeda is a legitimate part of the President's powers as Commander-in-Chief, and we have doubts about some proposals that purport to circumscribe that authority. But it is clear this Administration is using them as a substitute for capture, detention, and intelligence-gathering."—*Jay Lefkowitz and John O'Quinn, former officials in the George W. Bush Administration, op-ed in the Financial Times, March 4.*

## Where Is the Love?

"What I see Lockheed Martin and Pratt & Whitney doing today is behaving as if they are getting ready to sell me the very last F-35 and the very last engine and are trying to squeeze every nickel out of that last F-35 and that last engine. I want them both to start behaving like they want to be around for 40 years. I

want them to take on some of the risk of this program. I want them to invest in cost reductions. I want them to do the things that will build a better relationship. I'm not getting all that love yet."—*USAF Lt. Gen. Christopher C. Bogdan, chief of the F-35 fighter program, remarks to reporters at an air show in Avalon, Australia, Feb. 27.*

## A Suicide Note

"The United States should be acutely aware that the US mainland is now well within the range of our strategic rockets and nuclear weapons."—*Official North Korean statement, posted on North Korea's propaganda website, Feb. 27.*

## Next: Thumb Sucking

"Any paramount leader needs the support of the PLA [the People's Liberation Army] and makes gestures in that direction. I think that's what Xi's doing. It's kind of like how a kid holds on to a security blanket. The [Chinese Communist] Party is more secure than it thinks, but it needs that security blanket of the PLA."—*RAND China expert Andrew Scobell, on overtures of Chinese President Xi Jinping to the military, New York Times, March 4.*

## Well, Did He?

"A study to learn whether or not a fish called the golden shiner can teach us about 'collective action': \$5 million. A project to design beef jerky that rolls up: \$1.5 million. A seminar in which a topic was, 'Did Jesus die for Klingons, too?' (This is a question that, I can assure you, will not be answered by any sane person): \$100,000. These examples of absurd government spending become even more absurd when you realize these items were all part of the budget for the Department of Defense."—*Sen. Rand Paul (R-Ky.), op-ed in the Washington Times, March 1.*

## Tired and Untired

"The conflict formerly known as the Global War on Terror is spreading and intensifying. Many in Washington would like to talk about other things, but, while the West might be tired of the war on terror, the war on terror isn't tired of the West. ... This war isn't over, and the danger isn't past."—*Walter R. Mead, editor-at-large of the American Interest, op-ed in the Wall Street Journal, March 5.*





# AIRMEN ABSENT

**T**HE Air Force doesn't adequately prepare its officers for top Joint Staff or joint command jobs—and doesn't seem to care. This presents a grave risk to USAF's long-term influence—and US national security—because it means the service's message is not being heard in the nation's war councils.

Such were the observations from two distinguished panels at the Air Force Association's Air Warfare Symposium in Orlando, Fla., held in mid-February. Panelists warned that if the Air Force doesn't learn to speak up for itself, it may never shake its current image as merely a supporting service, instead of a primary agent of the nation's power.

USAF, said a collection of former Air Force Secretaries and retired top generals, must also take seriously the need to groom credible candidates for joint command jobs because the service is being locked out of top-level war and strategy planning.

What the Air Force brings to the fight and why its contribution is critical are important facts that will probably only increase in relevance in the coming years. However, the Air Force's aversion to telling its story broadly means Congress

and the American people are getting the USAF story elsewhere. The information is incomplete, confusing, or false.

"The Air Force is not good at telling its own story," former Air Force Secretary F. Whitten Peters told the Orlando audience. "It's tended to shy away from the press; it's tended to shy away from Congress, which I think is a mistake."

Peters, on a panel with two other recent Secretaries of the Air Force—James G. Roche and Michael W. Wynne—said USAF is indispensable because it's the only service whose full-time job is to concentrate on integrating and innovating in air, space, and cyber.

Airmen, Peters said, excel at their "ability to think about a problem and use existing systems to come up with something new, which provides different alternatives for the President." He said he's pleased that Air Force Chief of Staff Gen. Mark A. Welsh III "has gone back to talking about global reach, power, and vigilance, because I think that those three concepts give you a template for talking about this."

Global power may be delivering humanitarian relief one day, or it may be about a new long-range bomber, Peters said.

But "what I think is important is unity of explanation. And I think it's important that everyone in the Air Force senior leadership be able to describe how the Air Force hangs together—why the budget is as it is, why in one year we favor one thing over another, simply because of phasing of requirements."

## Terribly, Terribly Important

Because of the different "tribes" within the service, however, the service often undercuts itself by allowing internal disputes to become public, former Secretary Roche said. The Air Force doesn't speak with a unified voice, he said.

"Washington is a nasty place, and 'divide and conquer' is something that's always been done. We just make it easier for the enemies of the Air Force to do it because we divide by ourselves," Roche said.

He found it hard to believe that as the top USAF leadership was working hard to save the F-22 in the middle of the last decade, there were "former general officers from [Air Mobility Command] that were bad-mouthing the F-22 to the press."

Roche had a long Navy career and noted that in that service, "up to the decision





## USAF tells its story poorly and lands few key joint jobs. These problems are self-inflicted—and serious.

By John A. Tirpak, Executive Editor

point, [there was] lots of fighting. But once the [Chief of Naval Operations] made a decision, it was one Navy. And no matter what you did or with whom you spoke, the audience always got the position of one Navy.”

He asserted that “this notion of having ‘one Air Force’ is terribly, terribly important, and we don’t do it.”

Roche also urged the Air Force to use simpler language in describing what it does. In the Navy, he said, it’s “power projection, sea control.” The Air Force needs a similar slogan, he said. “My candidate is: ‘long-range strike and support of forces on the ground.’”

Wynne said his advice to Maj. Gen. Steven L. Kwast, head of USAF’s Quadrennial Defense Review, is “in the face of reduced resources, to really frame the future of the Air Force. And do it in a straightforward manner that you can explain in one page. Return to the strategic Air Force.” He also said that it should resonate with lawmakers that “if our Air Force is never used, it has achieved its finest goal.”

Lani Kass, a former Joint Staff and Air Force policy advisor speaking during a panel about the “Absence of Blue Suits” in

top combatant command jobs, took issue with a current buzzword, “air-mindedness.”

“I don’t know what it means,” Kass said. A much better shorthand, she said, would be something like “the three-dimensional perspective—an airman’s perspective. Be proud of that.” But “‘air-mindedness’ means nothing.” You don’t hear the Navy speaking about sea-mindedness or the Army extolling the virtues of land-mindedness, she noted.

Kass, who has taught at the National War College, said she was always impressed that every one of her Marine Corps students “could, in his sleep, tell me everything there was to know about Iwo Jima and Belleau Wood and why we need the [V-22] Osprey. And I got the same from every sailor and every soldier. I did not get that from every airman.”

She said that on her first day on the job with the Joint Staff, she thought she had made a wrong turn because she saw nearly all Army uniforms there. Later, “after the Air Force was decapitated and Secretary Wynne and General [T. Michael] Moseley departed, I came downstairs to the Joint Staff, [and] I thought I was among the Navy Staff.”

The point, Kass said, is “if you’re not in the room, if you’re not in the meetings, it just doesn’t matter how great is the story you’re going to tell.”

She argued that “this is probably the most important issue facing our Air Force. It is an existential issue in this joint world. ... We are not well-represented where ... decisions are made.” She added that only people in “blue suits” are aware of the fact that the Air Force has been in continuous combat for more than 20 years. “We don’t tell that story. We don’t have our rightful place at the table, even when we are in the room.”

Kass said if she could work her will, she would “kill” the phrase “all in,” which the Air Force trumpeted to show that it was a full partner in Iraq and Afghanistan. The phrase “makes us subservient and makes the other services the warfighters. We are warfighters as well. And that distinction—which we have done to ourselves—has placed us outside the ‘Band of Brothers.’ We are considered a support service and we are taken for granted.” She said the Air Force has become like a utility to the other services, much like electricity or toilets, and isn’t noticed unless it isn’t there.



The Air Force also fails to send out “spies” when there are “Tank” meetings of the Joint Chiefs, “to see what the other services are thinking, what’s going to be discussed, where is the Chairman standing on the issues.” Every service does this “except one—and that’s ours,” said Kass.

Speaking on the COCOM panel with Kass were retired Gen. Charles F. Wald, former US European Command deputy commander; retired Maj. Gen. Lawrence A. Stutzriem, former director of plans, policy, and strategy for NORAD and US Northern Command; and retired Lt. Gen David A. Deptula, former head of Air Force intelligence, surveillance, and reconnaissance.

Deptula said USAF’s capabilities in exploiting air, space, and cyber have to be well-understood in the planning, development, and execution phases of war.

“The military can’t do any of those activities if Air Force leadership is absent from the key military organizations involved,” he asserted.

Deptula noted that since the Air Force was created in 1947, only five regional combatant commanders have been Air Force officers, and two of those were put in place in the last six years: one NORTHCOM commander and one US Southern Command commander.

Mastery of global reach, power, and vigilance have made the Air Force “indispensable,” Deptula said, but it has created a problem for USAF.

“We’ve made it look easy—when it’s not—and as a result, too many [take] what we do for granted and don’t understand the reason for a separate Air Force.”

Too many—especially on Capitol Hill, where staffers with military experience are extremely rare—“still mistakenly believe that all the Air Force does is support the Army,” Deptula said. “In fact, today, there are some who are questioning why we even need a separate Air Force.” Given the severe budget constraints and an upcoming Quadrennial Defense Review, “those questions are going to continue and they’re only going to grow in intensity.”

He continued, “Part of the reason those questions and misunderstandings are out there today is the ... absence of Air Force leadership on the Joint Staff and at the combatant commands over the last decade. That needs to be corrected.”

Though USAF is “doing better” in joint and COCOM assignments, he said, “without a presence at key leadership levels,” alternatives offered by the Air Force “won’t be considered. And our nation will suffer as a result.”

Wald noted that the Air Force needs to have “the right people ready” when a CO-

COM position comes up for competition. Then, “the collaboration and collegiality among the four stars is hugely critical. ... In the past, there’s been a little competition at times. And it hasn’t been healthy, and we’ve eaten our own.”

Stutzriem reported on a survey he has done, talking to Air Force general officers who have served in joint commands or senior Joint Staff positions to see how the Air Force could improve its representation in these key fighting posts.

To begin with, Stutzriem said, no one had previously asked these officers to “download” their observations and experiences, “and that ... may be one of the most salient observations.”

### Street Cred

Air Force officers headed for joint jobs get very little preparation, and once in them, are highly disconnected from their own service. After their return to blue suit jobs, their experience is neither tapped nor valued, Stutzriem said.

A Pentagon inspector general report from about 15 years ago, Stutzriem said, “was very critical of the Air Force” and found the service was holding back its top talent from joint positions.

The “other services are aiming to develop their officers for [joint task force] and [combatant command] command; Air Force aims its best talent for CSAF—to become Chief—and top jobs within the service,” he observed.

Those surveyed said they got no preparation for joint jobs, especially in the war zone. “There’s frustration that they were ignorant about command structures, processes, battle rhythm, cultures that were in command, and it took a lot of time to assimilate [that], and that impacted their ‘street credibility’ from the start.”

Once in joint posts, “it was unanimous: a feeling of being cut off,” Stutzriem reported. One surveyed officer noted that Army and Navy flag officers convened frequent telecons with leaders of their own service staff, while the airmen felt “abandoned” by their fellow blue-suiters.

If joint officers came across an opportunity that could be met by an Air Force solution, they were told to “stay in their lane” by the corporate Air Force—that “it wasn’t their job to deal with certain aspects that they were advocating,” Stutzriem said.

Once back from their joint position, the officers said their experience in the combat zone “was not respected” and there was little interest in their perspectives.

There’s been a “significant change of attitude” in the last few years, Stutzriem said, and the Air Force is now actively

building its warrior credentials. Gen. G. Michael Hostage III, head of Air Combat Command, has taken steps to bring the [combined force air component commander] forward and give greater authority to his people in-theater. Stutzriem claimed that Hostage told Army Chief of Staff Gen. Raymond T. Odierno, “whatever check [you write], I will cash,” and that has started to ease Army disdain toward blue-suiters.

Stutzriem said the implications for his survey are that “we need to develop airmen at the O-6 level [for joint jobs]. ... The Chief needs to connect better with his general officers in joint jobs. And finally, there is a continuing need to evaluate, as General Hostage did, that there’s better street credibility to make those generals more ... marketable for key joint jobs.”

He added that officers need to be exposed to joint positions earlier in their careers to gain the experience that will make them competitive later, to switch back and forth between blue suit and joint positions while growing in each.

“But the fact is, we need to take a look at our personnel system, to be able to design these kinds of experiences into a career—to do it intentionally, as opposed to just happening by accident.”

Wynne said the Air Force’s tendency to groom officers for its own needs comes back to bite the service in many ways.

“It was so frustrating for me to nominate COCOMs and to nominate people for [the] Intelligence Community because they did not have the education—because we squandered their career making them great, great pilots.”

Air Force leaders need to understand “the technology underpinning the domain and the national policy implications of those domains,” Wynne said. When they go to interdepartmental meetings, “they need to understand it from their customer’s perspective. And when they go to talk to Congress, they need to understand it from the congressional perspective. Frankly, pushing education is the key even in the face of reduced resources, and we’ve got to promote it.”

Kass said the Air Force has nothing to be embarrassed about, but seems to be. Other service officers, she said, walk into a Pentagon meeting room “like they own it. An airman slinks in, sits to the side, and rarely articulates an airman’s view.”

The Air Force is “not a second-rate service,” she admonished. “We are America’s asymmetric advantage. But you don’t hear airmen saying that. The airmen who are in the joint arena would say, ‘We are here to support the warfighter.’” ■



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In January, Eglin welcomed the first F-35 student pilots.

# The F-35 Readies For Takeoff

By Gabe Starosta







Here: An F-16 leads a formation of two F-35s from the 58th Fighter Squadron, Eglin AFB, Fla., during a training flight over the Gulf of Mexico. Above: Maj. Jay Spohn, an F-35 instructor pilot with the Florida Air National Guard, runs through a preflight check prior to a training sortie. Brand-new F-35 pilots fly six checkout flights of increasing complexity.



Photos by Jim Haseltine

**O**n Jan. 7, 2013, the first class of six F-35 student pilots started its academic training at Eglin AFB, Fla., and the future Lightning II pilots were to take to the air shortly thereafter. The Air Force as a whole has navigated a complicated series of hurdles to prove the safety of putting dozens of new students in the most advanced fighter jet in development today.

The F-35A is far from a finished product, and the Air Force's training enterprise is similarly just getting started. But more than a decade after the Joint Strike Fighter program began, and some time later than originally hoped, the Air Force's F-35A pilot and maintainer training pipelines are up and running. Some pilots were designated future F-35A students as far back as 2009 but are still waiting for their first ride.

The Air Force always has maintained that the decision on when to begin flight training would be "event-driven," rather than calendar-driven. Nonetheless, the service had planned to launch training operations in the fall of 2011.

The basic F-35 pilot syllabus lasts about three months, split roughly evenly between an academic classroom and simulator portion, and then a flight training portion. Lockheed Martin provides most of the academic training at Eglin, and Greg Wilder, the company's lead instructor for F-35 pilot training, said it provides about 47 classroom lectures and 14 simulator missions that cover normal and emergency operating procedures.

### Checking Out

Once students hit the flight line, they take a single F-35A taxi ride—a training maneuver borrowed from the F-22 Raptor program—followed by six full flights. As of early March, eight Air Force officers have completed that series and have been certified as instructor pilots.

Maj. Jay Spohn, an Air National Guard pilot who completed his F-35 instructor certification process in August, said the six flights used to check out pilots gradually increase in complexity. The first three are fairly simple and are important for pilots to get used to how the airplane handles, accelerates, slows down, and approaches runways for landing. Those flights are not limited to Eglin airspace; Col. Andrew J. Toth, commander of the 33rd Fighter Wing, said that on his first flight, he practiced approaches at both Eglin and nearby Duke Field.

The fourth and fifth are formation flights, in which students fly their aircraft alongside either another F-35 or an F-16. They are asked to be the lead aircraft on the fifth sortie. The final flight "is pretty well a standard United States Air Force instrument qualification check ride" that also requires students to instruct some or all of the mission brief for that flight, Spohn said.

Student pilots are accompanied in flight by a chase aircraft, which can be an F-35 or an F-16 fighter on loan from the 56th



## The Question and Promise of Simulators

An important trend for the future of F-35A training, and for flight training across the Department of Defense, is the move toward depending more heavily on simulators because of their increasing quality and low cost relative to flying. Rear Adm. Randolph L. Mahr, the F-35 deputy program executive officer, said the program office coordinates between Lockheed Martin and the military services to incorporate training updates into their flight procedures and simulator interfaces. It is up to each service, though, to decide how many actual flights student pilots should receive.

"Obviously, it's less costly to the services to fly a simulated event than to fly in an airplane, so the more we can put into the simulators, the less expensive it's going to be to operate the global fleet," Mahr said. "What we're trying to do is determine, what fidelity can we get in the simulators, and what are the core things that have to be done in an airplane? The fidelity of the simulators, the trainers, the visuals, is much, much higher now than it was even three or four years ago, so we're able to accomplish more. But ... in the end, the services have to make a decision over how long does a pilot have to actually be sitting in a seat and feel the aircraft move, and what value does that add?"

Mahr did note that the F-35 program is making sure simulators are updated to newer configurations as those capabilities are delivered to the field, rather than much later on. In that situation, pilots could be taught outdated flight procedures until the simulator is updated.

In the past, "you used to say the simulator is trailing the aircraft down the runway because you'd always get [modifications and upgrades] down to the airplane first, so we're trying to keep those tied together if we can. So far so good, but we're relatively early," Mahr said.

Photos by Jim Haseltine



**Right: SSgt. Roger Sutter (r) and SrA. Herbert Tucker check maintenance procedures using a Portable Maintenance Aid after running a postflight inspection on an F-35A. Below: Three F-35s in a hangar at Eglin. Pilots from USAF, the Navy, Marine Corps, and F-35 partner nations will all go through initial training on the aircraft at Eglin before moving on to more advanced, service-specific training sites.**







Fighter Wing at Luke AFB, Ariz. The checkout flights are being performed under restrictions that originally demanded the F-35A not exceed Mach 0.9 in speed, 30,000 feet in altitude, five Gs, or an 18-degree angle of attack. Those restrictions figure to be eased as the JSF program becomes more mature, Toth said. In two respects, they already have—by January, the jet's altitude ceiling had been raised to 39,000 feet and its G limit to 5.5.

Some 36 Air Force pilots and about 14 from the Marine Corps will go through F-35 pilot training at Eglin in 2013. Col. Dawn M. Dunlop, special assistant to the Air Force Secretary and Chief of Staff for F-35 integration, said the Air Force number alone should reach 50 per year, with the total number of pilot graduates per year rising to about 100 once the Marine Corps and Navy fully ramp up their training programs.

On the maintenance side, Dunlop said the academic training center eventually will be able to support around 2,000 maintenance students per year. Standing up a robust and sufficiently trained maintenance workforce was one of the key drivers of F-35A flight progress in Florida, and Air Force officials have widely praised Lockheed Martin's training program as well as the skills displayed by many Lightning II maintainers.

Maj. Mike Byrd, the F-35 academic training center's maintenance lead, said the center offers courses that range from four to 13 weeks depending on their focus. Those classes are mostly led by Lockheed personnel, putting Byrd and his team in a "quality assurance" type of role.

To get to this point, the program moved through three recent phases: the path toward airworthiness, local area operations, and an operational utility evaluation (OUE) performed in the fall.

The Air Force's airworthiness authority was the Aeronautical Systems Center (before the Air Force Materiel Command reorganization subsumed most ASC functions under the Air Force Life Cycle Management Center in 2012). ASC granted verification in late February 2012.

### 800 Graduates in 2013

Throughout last spring and summer, pilots and maintainers at Eglin performed local area flying in an effort to become more familiar with the F-35, the airspace around Eglin and its neighboring military facilities, and with basic maintenance procedures. That period also helped the 33rd Fighter Wing build up to some of the requirements it would need to meet to begin the operational utility evaluation. Those requirements included certifying four instructor pilots and being able to support at least eight F-35 flights per week, weather permitting.

By late May, Toth said, the wing had achieved the eight-flights-per-week sortie rate, and it hit its pilot requirement later in the summer. Air Force Secretary Michael B. Donley gave the green light to start the operational utility evaluation in late August.

The F-35A OUE at Eglin went smoothly and finished ahead of its expected 65-day duration, according to Toth and Lt. Col. Lee Kloos, the commander of the 58th Fighter Squadron. Both are certified F-35 instructor pilots. During the OUE, four more pilots were taught how to fly the F-35A using the exact syllabus intended for use on future students, and the process finished up in mid-November.

Toth attributed the pace of progress through the OUE to good weather in the storm-prone Florida Panhandle, as well as to high-quality support from Air Force and Lockheed Martin maintenance personnel.

Air Education and Training Command took about one month to study the results of the unit evaluation before its commanding officer, Gen. Edward A. Rice Jr., declared the F-35A ready for training on Dec. 17.

The Air Force has largely been pleased with the level of training, although that will continue to mature as the aircraft gains more capability, and Lockheed Martin's Autonomic Logistics Information System (ALIS) remains a question mark in the JSF program's development.

Lockheed Martin's Matthew Moore, F-35 maintenance training lead, said students specialize in the model of F-35 they work on based on their service. The company plans to graduate about 800 Air Force and Marine Corps students in 2013.

Moore emphasized that the maintenance instructional program attempts to minimize the amount of training that requires students to actually touch operational airplanes, allowing those jets to remain available for flights. Part-task trainers, weapons load trainers, other simulators, and classroom lessons are of a high enough fidelity to make that teaching method effective, he said.

"What we have right now in this building is way advanced, more than anything I ever had when I was in the Air Force training, and it keeps the pilots able to focus on their mission so that they're better prepared when they have to go out into





the field and to war," Moore said. "And the maintainers are able to do their thing without them interacting and taking assets away from each other."

F-35 pilots do receive a small amount of training from maintenance instructors, with a focus on flight equipment and how to exit the aircraft in case of emergency, said a Lockheed Martin spokeswoman. They also are taught how to check the status of a jet.

The Air Force also needs to prepare to teach its current crop of students, who are flying an early, noncombat-capable version of the F-35A, how to operate some of the jet's more advanced capabilities, which will come online in stages over the next five years.

### Devil in the Details

As Lockheed Martin delivers superior capability blocks for the F-35, culminating in Block 3F, Eglin personnel will identify the differences between blocks in conversations with Air Education and Training Command and determine the most efficient way to provide that "upgrade" training.

"What we'll do for that type of thing is we'll develop a differences course, potentially a simulator that goes with it, and then a flight, so that will be our basic transition from Block 1B to 2A," Toth said. "This is really not a whole lot different than when you get a software upgrade or you get a new system capability on a fourth generation platform."

According to Dunlop, the strike fighter's eventual ability to employ weapons will require a major addition to the training syllabus.

"One of the big transitions in training is going to have to occur when we get weapons, when we start to develop tactics for how we employ the F-35," said Dunlop, a former F-22 test pilot. "The actual specifics of whether or not we're going to have operational test teams go out to the field and teach tactics, ... do it in the simulator, or ... send people somewhere, can't really be decided until we know what's in each block of capability. It's kind of a two-step process. We want to lay the groundwork right now and bound it so that we have a good, actionable plan going forward, but we can't actually get to

*An F-35A powers off the flight line in full afterburner at Eglin. The Lightning IIs flying now are non-combat capable. Training will change as each new block comes online with new capabilities.*

the details of planning until we know what the capability is going to be."

In the meantime, the Air Force is doing its best to build basic F-35 tactics by considering how the service employs fourth generation platforms and how to transition those methods to a fifth generation aircraft. The standup of operational testing will give the process of designing those tactics a big boost, Toth and Dunlop agreed.

Pilots and maintainers from the Air Force, Navy, Marine Corps, and the F-35 program's international partners all will go through initial training at Eglin before moving on to more advanced, service-specific training at other locations. For the Air Force, that site is Luke AFB, Ariz.

"There's about a two-year process to stand up a training base, and within that two years, the large majority of it is all of the construction that has to be done," Dunlop said. According to the current Air Combat Command beddown plans, the first F-35s will arrive at Luke in January 2014. "It's not terribly far away," Dunlop noted.

Luke initially will receive 72 F-35A jets broken into three training squadrons of 24 aircraft. The Air Force conducted an environmental impact statement that verified the base can support as many as 144 strike fighters—enough for six squadrons.

In the near future, the Air Force also will set up its first two operational F-35 units where pilots trained at Eglin and Luke can transition.

Those units are likely to be located at Hill AFB, Utah, and Burlington Arpt., Vt. ■

*Gabe Starosta is the managing editor of the defense newsletter "Inside the Air Force." His most recent article for Air Force Magazine, "The Air Force's Fuel Problem," appeared in the July 2012 issue.*





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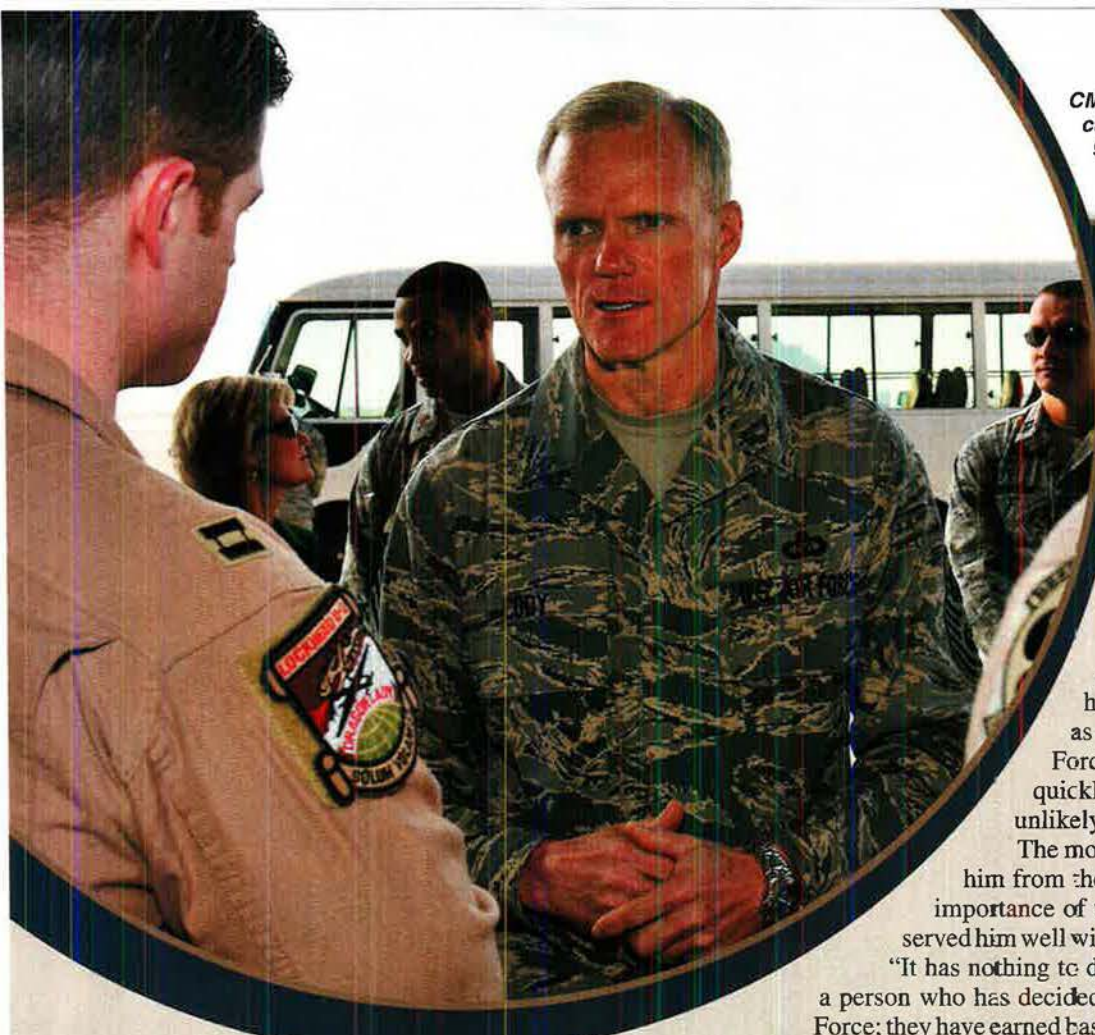
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**CMSAF James Cody discusses ISR capabilities with a pilot from the 99th Expeditionary Reconnaissance Squadron in Southwest Asia.**

# CH

USAF photos by TSgt. Christira M. Styer

Asked if he ever imagined himself as the highest ranking enlisted airman, Cody confessed he'd had a fleeting image of himself as Chief Master Sergeant of the Air Force when he was in basic training, but quickly dismissed the notion as "probably unlikely just for sheer numbers'" sake.

The most important lesson he's taken with him from the earliest years of his career is the importance of treating airmen properly. This has served him well with superiors and subordinates alike.

"It has nothing to do with rank or position. ... This is a person who has decided to serve their nation and our Air Force; they have earned basic respect to be treated with dignity and that's how I treat everybody—regardless," said Cody. As a young airman he was most inspired by leaders who spoke respectfully, even to their subordinates. As the highest ranking enlisted person in the Air Force, Cody said the most "fundamental thing to leadership is dignity and respect."

The force seems to embrace this concept. Asked how airmen had adapted to the end of the "Don't Ask, Don't Tell" rules prohibiting homosexuals from openly serving in the US military, Cody said it has not been an issue. Airmen treat their peers with dignity and respect, he said at the Air Force Association's Air Warfare Symposium in Orlando, Fla., in February.

Barely a week into the job, Cody flew with the Chief of Staff to visit airmen at several bases in Southwest Asia. From his vantage point, what inspired him the most was seeing the "commitment, dedication, and focus" of the airmen deployed and serving abroad. "We had a glimpse of that" speaking with airmen at each base along the way from Afghanistan to the Middle East, he said afterward.

## Hands-on Leadership

The Air Force is at a pivotal juncture—facing the end of combat operations in Afghanistan and bringing changes for airmen, necessitating decisive leadership, Welsh emphasized in explaining his choice of Cody. He said that selecting the Chief Master Sergeant of the Air Force was quite possibly the most important decision he will make as Chief of Staff.

Welsh said he picked Cody for his "hands-on leadership" style, among other qualities. "People describe him as smart, talented, articulate, poised, and it won't take you long to figure out why they feel that way," said Welsh.

"I bring a very holistic approach to what we're going to do. We're going to make some decisions," Cody said, underscoring

**L**EADING the Air Force's enlisted ranks as the 17th Chief Master Sergeant of the Air Force is "family business" for CMSAF James A. Cody, who assumed the weighty responsibility at a ceremony at JB Andrews, Md., in January. These are no idle words coming from Cody. He met his wife at Keesler AFB, Miss., in tech school. They were training to become air traffic controllers, and the two of them spent their entire careers together in uniform. He and Athena, who is now a retired chief master sergeant, were both sent to Ramstein AB, Germany, on their first assignment where they got married and had their first child, now an airman at JB Charleston, S.C.

"Our story is different, because we grew up together in our Air Force; we did the same career field together for 20 years," Cody said of himself and his wife, in an interview in February, three weeks into his new job at the Pentagon. "My family is knee-deep in this and has been our whole lives, so what we do and how we think about things is very much influenced and shaped by that life experience."

Cody began his uniformed career in 1984 and has served most of his 28 years as an air traffic controller, filling every slot from tower boss to ATC functional manager at Air Combat Command. Before replacing CMSAF James A. Roy in his current post, Cody was command chief master sergeant for Air Education and Training Command at JBSA-Randolph, Tex.

At every step along the way, "Cody's love of airmen is what leaps off the pages of his record," said Chief of Staff Gen. Mark A. Welsh III, in introducing Cody during his appointment ceremony at Andrews on Jan. 24.



The new Chief Master Sergeant of the Air Force has his eye on preserving airmen's long-term strength.

# CHIEF CODY

By Aaron M. U. Church, Associate Editor

his antipathy for endless study with no action. "Sometimes it's OK to make a decision and then realize later that it wasn't the best decision and you adjust, versus waiting forever," he said. He later elaborated that many issues need to be resolved within six months. If a subject takes longer than that to study, the Air Force may be going about it the wrong way.

The first big decisions—preparing for a drawdown in Afghanistan—are already at the doorstep. After 12 years of combat operations in Iraq and Afghanistan, many younger airmen have spent their entire career in the Air Force at war. "The challenge for our airmen is going to be [that] for the majority of them, they know nothing but this," Cody acknowledged.

Over the past decade-plus, the demands of deployments, Stateside training, professional development, and other requirements on airmen's time have grown continuously. The cumulative pressure on some within the force has gotten to the point where "it's just not feasible to maintain a family or have a healthy life," said Cody. In time of need, airmen have always risen to the challenge, but Cody is worried that the strain of such a high level of commitment "over an extended period of time" is proving "just too great."

He later said at the symposium that the force has been at war for so long, for some airmen there is no "normal" but wartime operations. The Air Force will have to stay on top of its airmen to ensure they keep their "work/life balance" in sync. Many airmen are so motivated they can drive themselves to the breaking point mentally or with their families.

The focus of his tenure will come down to one key question, said Cody. That is: "How do we create this community within our Air Force where our airmen will step up and continue to step up and serve ... but not do it in a way that is destructive to their ability to have a family and a life?"

More-senior airmen "have been around a little bit longer; we know what the Cold War was like," he continued. "We know a military posture that was primarily just training," he said. As the US redefines its strategic goals and force posture post Afghanistan, "it's going to be different and it's going to be shifting of missions, shifting of focus," Cody said.

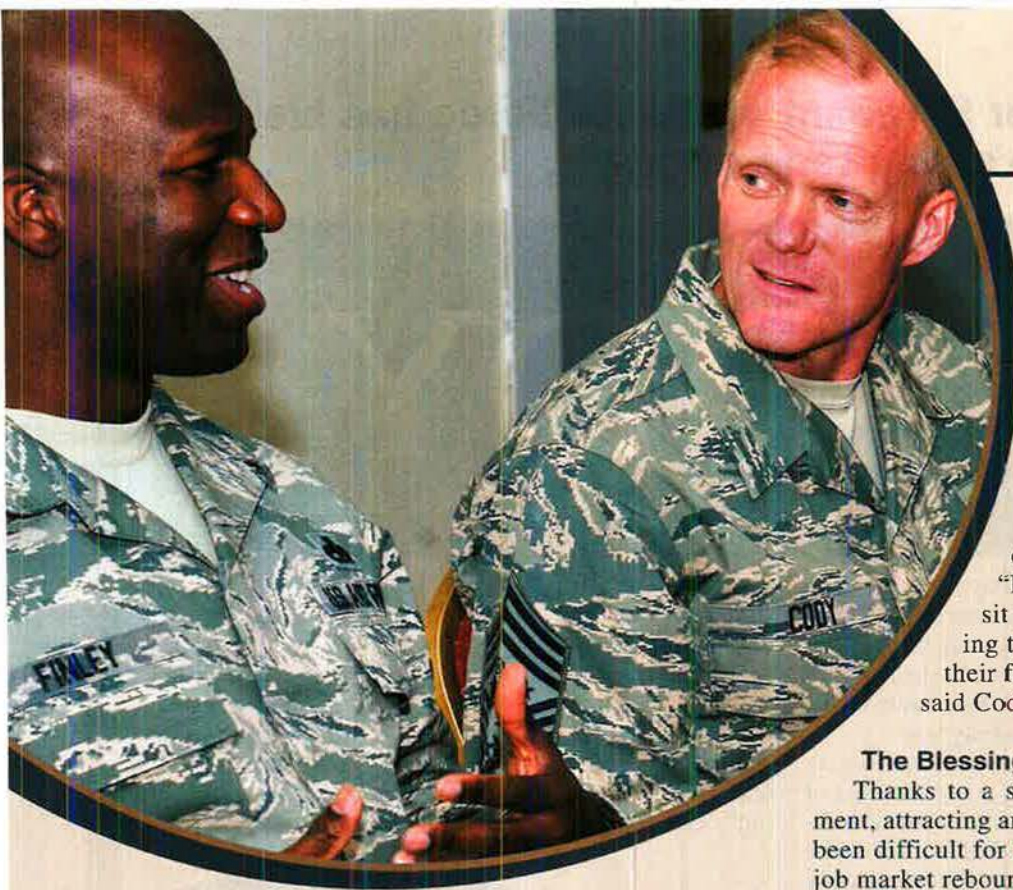
The drawdown will initially be good for airmen, providing some—"and I say some," he stressed—the chance for a well-needed rest.

In specialties such as pararescue or explosive ordnance disposal, demand for airmen's skills is "still so great we can't meet the requirements," he said. As these airmen leave Afghanistan they'll probably redeploy "to some other region," admitted Cody. The Air Force must take care not to "burn out" certain career fields.



Cody greets A1C Geston Gordon and his military working dog, Djule. The new Chief Master Sergeant of the Air Force says treating all airmen with respect is key.





**Cody chats with SMSgt. Jeffery Finley during a dinner with airmen.**

USAF photos by TSgt. Christina M. Styer

States Air Force to help airmen and their families as they come back from war," said Cody, adding that USAF is already doing "great things" in this regard.

With as many programs as the service already has, Cody said the near-term concern is making certain airmen and their families "know what those resources are and take advantage of them." This hasn't always proved easy. "I think what is encouraging from where I sit is that there is really pretty much nothing that we won't do to help our airmen and their families, if we're aware of the problem," said Cody.

### The Blessing of the Bad Economy

Thanks to a sluggish economy and high unemployment, attracting and retaining good quality recruits hasn't been difficult for the Air Force in recent years. When the job market rebounds, things will get more difficult, Cody said. With jobs scarce, the Air Force has offered people the opportunity to make money doing something meaningful that also benefits their country. "When that changes—and that will change—we have to be very cognizant of the fact that people may decide to go do something else because the demands and sacrifices we've asked from them for such a long period of time are not reasonable," he commented.

To confront this, he plans to comprehensively review what USAF is requiring of airmen, to make certain the demands

For the rest, the probable transition to peacetime training will require leaders to re-evaluate what they're asking of airmen, to keep them engaged and motivated.

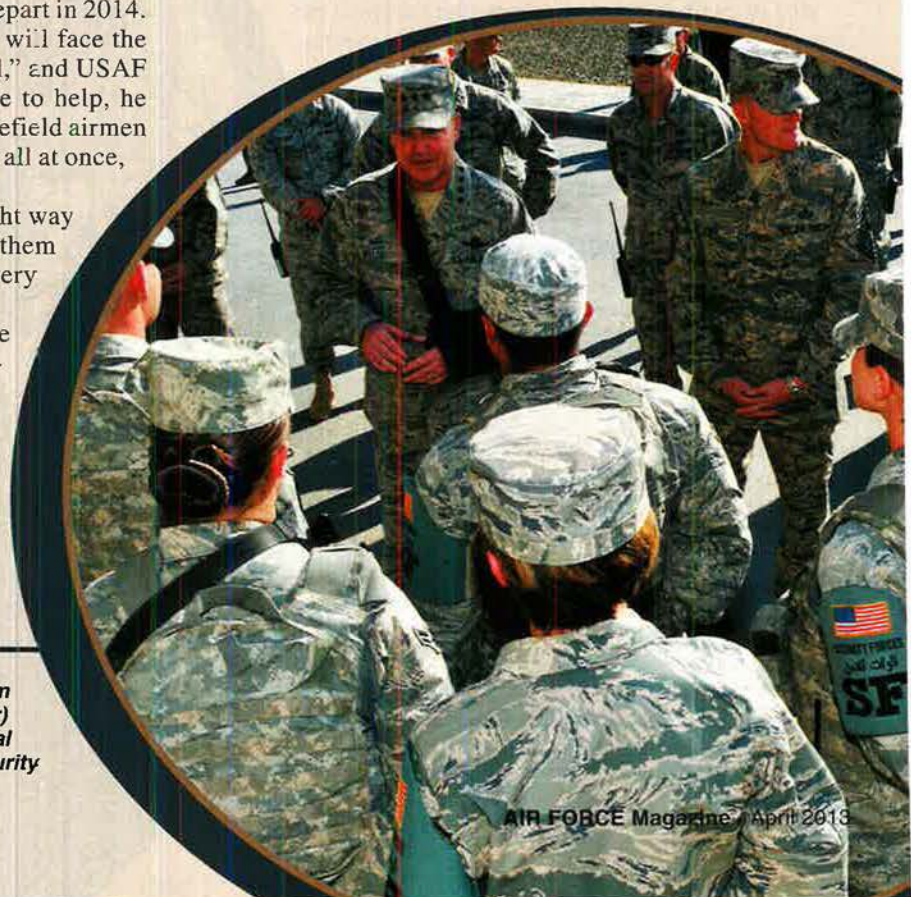
Though combat is drawing to a close, Afghanistan will continue to be a significant part of many airmen's experience. From airlift and logistics to tactical air control on the ground, "we provide a capability that stays in place to almost the very end," said Cody. In his opinion, this means USAF advisors, logistics, and support will linger on in Afghanistan even after combat forces depart in 2014.

When airmen finally do come home, they will face the fresh challenge of adapting to a "new normal," and USAF will commit whatever resources it can spare to help, he stated. As the war winds down and more battlefield airmen with injuries and post-traumatic stress return all at once, this will become an even bigger issue.

"We are trying to figure out what is the right way to reintegrate families—how do we give them time to decompress from what is arguably a very compressed environment," he said.

Adding to this is the fact that many of the psychological effects of combat won't manifest themselves until much later. This means when the long-term effects become clearer, the Air Force will need to be vigilant to adapt its support.

"Part of this is, we don't know everything that we need to know," he pointed out. Going forward, though, "there is commitment from every level of leadership in the United



**USAF Chief of Staff Gen. Mark Welsh III (l)—whom the new Chief Master Sergeant of the Air Force (r) accompanied on a visit to bases in the US Central Command area of responsibility—speaks to security forces airmen there.**



**Outgoing CMSAF James Roy tacks the chevrons on the sleeve of Cody at a transition and retirement ceremony at JB Andrews, Md., in January.**

USAF photo by Jim Varhegyi



it places on them are both reasonable and mission essential; he suspects many currently are not. It may mean reducing how often airmen are required to attend training away from home, or even whether certain qualifications are required for a given job, but “that’s what you’ll see me focus on,” said Cody.

In today’s climate of budgetary uncertainty, the one sure thing is that the Air Force will have fewer training dollars and resources to go around. This makes prioritizing training and cutting unnecessary requirements just as important from a resource stewardship standpoint as it is for airmen and families, Cody explained. Since airmen are probably already aware of what requirements are a needless burden, Cody said USAF plans to solicit their feedback as part of its “holistic” approach to balancing resources and requirements.

“We need to understand what is it that they are being asked to do that clearly doesn’t need to be done.” The service needs to stop spending airmen’s time and USAF money on it, emphasized Cody. “We’re looking for them to tell us what we shouldn’t be doing anymore. ... They have the best vantage point.”

Setting more reasonable demands also means taking a more personal look at what is asked of an individual airman. There isn’t enough manpower to cut deployments—especially in high-demand careers—but there are other measures the Air Force can take to prevent burnout, Cody acknowledged. “I don’t want to step out there and say we’re going to change dwell rates, because we’re probably not. ... There’s just no capability to do that.”

Instead, the Air Force may contemplate extenuating family and personal circumstances in conjunction with the usual deployment metrics. The extent to which airmen are stretched depends not only on their particular career field but also on events in their lives—possibly combat wounds on a previous deployment or the loss of a family member back home.

“Every airman has a story. We need to understand their story,” said Cody. “At any given moment, Airman X could not be the airman to go, even though they would be next to go” in the rotational deployment cycle. To keep good people in the force, Cody said the Air Force needs to be thinking more individually about airmen, above and beyond the tactical and strategic needs of the force. “That airman has a story that would say that this is the right or wrong time,” he explained.

Though the details have yet to be hammered out, Cody said that both Welsh and Air Force Secretary Michael B. Donley encourage this approach and fully back the effort to exercise more personalized judgment in the tasking of airmen. “We’re not necessarily appreciating what we’re asking the individual airman to do” day in and day out over the course of years, he said.

On the other hand, Cody admitted the Air Force has also had trouble communicating expectations to airmen. And when airmen have faltered or had

moral failings, USAF didn’t always hold them properly accountable. The service intends to change this.

The problem was highlighted by the well-publicized sexual abuse of trainees by instructors at basic training, he said. Cody went to lengths to dispel notions that the Air Force has suffered a moral slump, stressing instead that airmen need better education and clearer expectations beyond simple task-level directives.

“I think they’re the kind of airmen I’m looking for already; I think we just have to develop them,” said Cody. He believes the average airman has “very high moral character” and that the “reprehensible” actions of a few hardly characterize today’s force.

He was also quick to add that recent scandals and the rise in sexual assault within the ranks underline that “we have to put some more focus” on moral development. “We will do everything we can to establish the right environment, ensure our airmen and their families understand what the expectation is, and that’s what we’re doing,” he summed up.

Cody conceded this is easier said than done. He called the varied societal cross-section within the force a “huge strength” but said it poses an immense challenge to forging common identity and values.

“The problem in the future” is establishing a “culture that’s built on our Air Force core values,” to both achieve the mission and uphold the honor of the service, he said. It “comes down to dignity and respect—how we treat each other and how airmen view each other.”

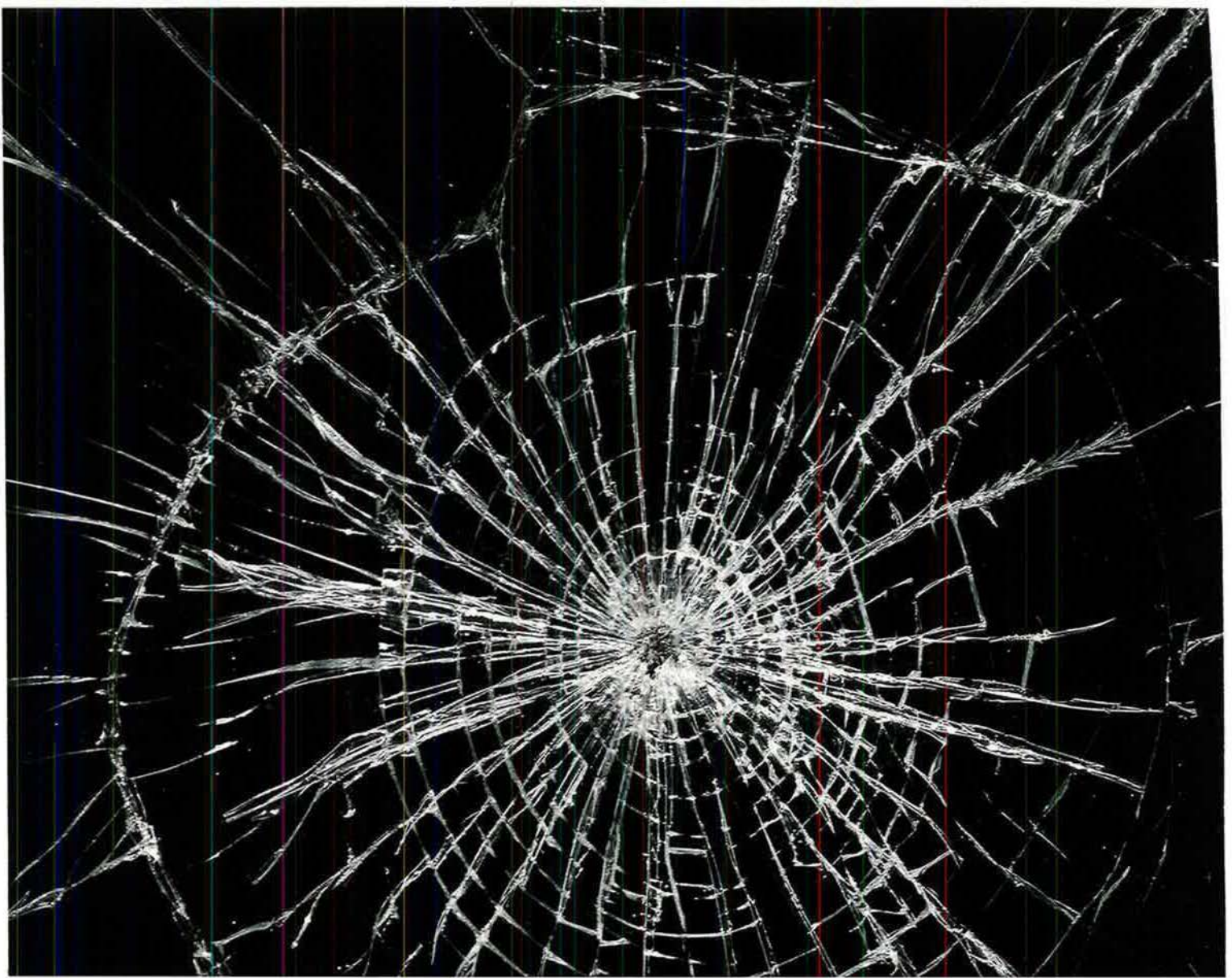
Speaking during the transfer of leadership ceremony at Andrews, Cody said there are few areas in life where you “get something for nothing.” He summed up his commitment by saying that the Air Force will “continue investing in the development of our airmen in the most deliberate way possible,” calling airmen the service’s most important asset.

“We need to protect them by making sure they know how to deal with the stress that comes in the military life. ... We will focus on strengthening relationships, taking care of one another, and holding each other more accountable for measuring up to the high standard demanded of every airman,” he concluded.

Giving his advice to airmen today, he recommended the same path he followed in becoming Chief Master Sergeant of the Air Force: “Do the best job you can.” This doesn’t mean doing a perfect job, but “if you keep working hard, ... our Air Force will recognize that,” he promised. ■







**I**n January, just before Congress held hearings on the sexual assaults at JBSA-Lackland, Tex., senior Air Force officials and advisors were in a classified meeting room at the Pentagon hashing out just how to tackle the problem within the ranks.

Their mission was to answer questions soon to be raised by lawmakers. Among them: "How could there have been such a systematic breakdown of leadership?" and "Is the US military inadvertently creating an environment more conducive to sexual harassment?"

"Why, on what was undoubtedly the worst day of a victim's life, did they not turn to us for help?" asked Air Force Chief of Staff General Mark A. Welsh III before the House Armed Services Committee earlier this year. "We are missing something fundamental in human-to-human interactions that will allow them to feel safe enough to come to us and report and let us put our arms

around them and help them through this horrible event in their life. ... That's at the heart of the problem."

Combing through the last year of sexual assault statistics, Air Force officials came across a shocking figure: Nearly one-third of victims who agreed to participate in the prosecution of their alleged offender changed their mind before the trial and decided not to cooperate with the prosecution.

#### Exposing Myths

"I believe had these victims been represented by their own attorney, many of them would not have declined to cooperate and hold the alleged offender accountable," said Lt. Gen. Richard C. Harding, judge advocate general for the Air Force, at a panel hosted by the US Commission on Civil Rights in January.

As a result, on the heels of the sexual assault charges brought against military training instructors in the basic training program at Lackland, USAF instituted

in January a new pilot project to provide troops who report that they have been victims of sexual assault with a personal attorney at the Air Force's expense.

"It's unique among federal agencies, in providing this level and kind of support to combat sexual assault," said Harding, who added that he believes the program will increase prosecutions for sexual assault.

These attorneys will provide "a zealous advocate of their client," he said, which will "help preclude victims feeling revictimized by having to endure alone a complex, exhausting, and often confusing criminal justice process."

Victims need this sort of advocacy, Pentagon consultants stress, because perpetrators are often practiced predators who work hard to create plenty of plausible deniability.

"Contrary to long-standing societal myths, research suggests that most sexual assaults occur between people who know each other," said retired Lt.



# Seeking the Sex-Assault Solution

**There's no magic bullet.**

By Anna Mulrine

Col. Nate Galbreath, former deputy director of the Pentagon's Sexual Assault Prevention Response Office (SAPRO) and now an advisor to the organization.

Though this is true among civilians and within the military, there are other factors that complicate the experience of sexual assault in the military, he said.

"First, sexual assault [in the military] typically occurs where a victim lives and works. Some victims are concerned that making a report will cause them to lose their privacy, subject them to unwanted scrutiny, and mistakenly mark them as weak."

What's more, when a perpetrator works in the same unit as the victim, "sexual assault can set up a potentially damaging dynamic that can rip units apart," he said. "If news of the sexual assault gets out, unit members can take sides, causing all to lose focus of the mission."

It can also cause them to take frustrations out on the victim, said Anne P.

Munch, an attorney and sexual assault prevention consultant for the military.

During many US military legal proceedings, "victim blaming is rampant, and protecting the perpetrators is sport at this point," she asserted to the group gathered at the Pentagon. "No one is on the victim's side—they are all on the perpetrator's side cheering."

Part of the challenge, the group acknowledges, is being open to the possibility that there can be predators in the ranks who are actually quite likable.

"It's about my personal willingness to make room for the fact that even though everyone in the unit said this is a great person, he did this," Munch said. "How do you confront the fact that you might think you know this person, and you don't?"

"Or that you think the climate in your unit is good, and it's not," adds Brig. Gen. Eden J. Murrie, director of Air Force Services, who led USAF's Pentagon meetings on the topic. "If you're trying to teach about 'the undetected

## Searching for Cultural Change

Deep in the Pentagon this January, representatives from the Air Force's education programs—from basic training to ROTC—were trying to pinpoint how to make sure the newest members of the Air Force get the message that leadership actually wants to know if they have been hurt. Equally important would be notifying those preying on their fellow troops that they will be found and prosecuted with new tools that the force has not used in the past.

"It's not just 'Don't sexually assault people.' This is a piece of respect—how do you weave that in? It's about how you lead people, how you treat people," said Brig. Gen. Eden J. Murrie, director of Air Force Services, leading the meeting. "That's what we're doing today. We're looking at everything. Does it need to be radically changed? Do we just tweak it around the edges?"

On dry erase boards and PowerPoint slides around the room were programs the Air Force was using in an effort to impart to the troops the unacceptability of assault. The meetings were designed to find how to best integrate anti-assault messages into education and training curricula. The existing programs run the spectrum from "Frank: The Undetected Rapist" to "Street Smarts: You Deserve To Be Here" to "Sex Offenders, Service Members, and You: Leadership Beyond the Obvious."

Conversation turned to "hunting season" at the Air Force Academy—"that's the undergraduates' name for it, not ours," one of the academy representatives at the meeting chimed in—the time when underclassmen have completed their first year of schooling and are allowed to date.

"That would offer a really good opportunity for conversation: 'What do you think of that term?' Let's talk about maybe why we don't want that in our culture anymore," said Anne P. Munch, an attorney and sexual assault prevention consultant for the Pentagon.

"And how does this idea coincide with the idea of being a wingman?" added another meeting attendee. The Air Force has been emphasizing the notion of bystander intervention, the idea that when a fellow airman is being harassed, a "wingman" should step in and stop it.

"Or being a leader? You can't be a 'hunter' on a base, either," said Murrie. "How do you recognize the hunters that key in on new people on base?"



rapist,' how do you recognize that as a commander? How do you evaluate the climate in your unit to change it?"

"How many people thought Jerry Sandusky was innocent until the day that indictment came out?" asks David Lisak, a Pentagon forensic consultant who testified before Congress in the January hearing about Lackland.

Laura L. Miller, a social scientist from the RAND Corp. also in the meetings, said, "You have to deal with that black-and-white thinking, especially in the military—the idea that you are the enemy, or you're not," since this sort of binary logic can seep into thinking about sexual assaults as well.

These were the same issues raised by lawmakers during the House Armed Services Committee hearing as they recounted stories of new Air Force recruits being directed to meet their trainers in laundry rooms and broom closets, where they were sexually assaulted and raped.

Welsh told lawmakers that he is combing through programs to try to figure out what works and what doesn't. He asked staff to "bring in something new" every week.

"Something we haven't tried, some idea they've found somewhere else—from a member of Congress, from an advocacy group, from a university or another service that tried something that seemed to work at a certain base or a certain demographic group," he said.

Just before the hearing on Capitol Hill, the Air Force announced that it had conducted a sweep of more than 100 installations for pornography and other offensive materials, from videos and calendars to coffee mugs and song lyrics.

"While these things may or may not directly relate to sexual assault, they certainly do create an environment more conducive to sexual harassment and unprofessional relationships, and I personally believe that both of those are leading indicators for sexual assault," Welsh said.

"We have to do everything possible to prevent it. We can't accept this," he added. "It's horrible, and we all know that."

In the Pentagon's E-Ring, senior military officials say that they hope the recent move to lift the ban on women in combat will have a positive impact on sexual assault within the ranks as well.

Army Gen. Martin E. Dempsey, Chairman of the Joint Chiefs of Staff, said moving women into all military career fields could create an environment of

greater respect for women. "I believe it's because we've had separate classes of military personnel, at some level."

He is quick to add that sexual assault is "far more complicated than that, but when you have one part of the population that is designated as warriors and another part that's designated as something else, I think that disparity begins to establish a psychology that in some cases led to that environment.

"I have to believe, the more we can treat people equally, the more likely they are to treat each other equally."

Dempsey's sentiment is echoed among advocates for victims of sexual assault. "A culture where there's hierarchy and all of the people who have power over women are men, it creates a culture in which some are going to be inclined to abuse their power," said Anne M. Coughlin, a law professor at the University of Virginia who has advised plaintiffs suing the military for integration into combat units.

Though the steps to more fully integrate women into some of the toughest jobs in the military are positive, some argue that long-term efforts to prevent sexual assault fundamentally come down to leadership.

### **Naming the Real Problem**

"This is a predator problem, not a female problem," said Colleen Bushnell, formerly a staff sergeant in the Air Force, who was sexually assaulted in 2003 while at Lackland.

"That's an abuse of authority, that's a fundamental breakdown in the culture—it's about translating the core values of the military into the actions of leadership," said Bushnell, now a member on the board of Protect Our Defenders, an advocacy group for victims of sexual assault.

"This is a serious problem that cannot be fixed with one solution. There will be many solutions, and it may take many years for the culture to transform to where we would like it to be."

Then-Defense Secretary Leon E. Panetta, for his part, weighed in on what he believed to be the most pervasive systemic problem—and how to fix it. "The most important thing we can do is prosecute the offenders," he said. "If we can do that, then we can begin to deal with this issue."

Part of the challenge includes increasing the penalty for sexual assault, which is beginning to inch up. The rate of courts-martial for sexual assault cases has increased from 410 in 2009 to 489

in 2011, the most recent year for which figures are available.

Yet some within the military fear the pressure to increase prosecutions of sexual assault could result in a witch hunt mentality. The Chief of Naval Operations, Adm. Jonathan W. Greenert, discussed this dynamic from his perspective in July 2012.

"Because of the concern of the Congress on the number of sexual assaults in the military, there were a couple of bills that have come up in the House of Representatives which are going to take the reconciliation—litigation if you will—necessary for sexual assault out of our hands," he said. "They said, 'You haven't been handling this right. Very few people are being punished,' and all that."

Yet Greenert acknowledged, too, that the low prosecution rates were the result of "some 'not the best' investigations."

To that end, in April 2012 Panetta announced a new DOD-wide "special victims unit" (SVU) that will help better train military lawyers to prosecute sexual assault cases, which are widely acknowledged to be some of the most complex cases to prosecute.

Particularly tricky in both DOD investigations and prosecutions has been the military defenders' tendency to emphasize the behavior of the victim, said Russell W. Strand, chief of the family advocacy law enforcement training division at the Army military police school at Fort Leonard Wood, Mo. "We don't look at burglary or robbery [victims] and say, 'Well, they gave away money before,' or 'They went to the ATM machine all dressed up.'"

As prosecutors have begun to take the emphasis off the victims, they are able to delve into the profiles of perpetrators more effectively, Strand said, and in doing so have found that many of the sexual assaults in the US military are perpetrated by experienced predators who may engage in as many as 300 sexual assaults during their lifetime.

### **Predators Under the Radar**

The US military is an ideal place for sexual predators to prey on victims, with a strict hierarchy that makes it a "target rich" environment, said retired Army Brig. Gen. Loree K. Sutton, who was the director of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury.

US military officials are beginning to think about rape "as more than this stranger danger of someone walking



## Overturing a Jury's Decision

Just a few months after Air Education and Training Command launched an investigation into a string of sexual misconduct cases at basic military training at JBSA-Lackland, Tex., the Air Force has once again found itself in the middle of a sexual abuse scandal.

The controversy stems from a late-February decision by 3rd Air Force Commander Lt. Gen. Craig A. Franklin to overturn the sexual misconduct conviction of Lt. Col. James Wilkerson. In November, a general court-martial found Wilkerson—the former inspector general for the 31st Fighter Wing at Aviano AB, Italy—guilty of five separate violations of the Uniform Code of Military Justice for improper sexual conduct with a female civilian base employee. A military court later sentenced Wilkerson to one-year confinement and dismissal from the Air Force.

Franklin, however, ruled that “evidence presented at trial did not amount to proof beyond a reasonable doubt, and he declined to approve the conviction,” US Air Forces in Europe-Air Forces Africa spokesman Lt. Col. Paul Baldwin told *Air Force Magazine*. Wilkerson consequently was released from the brig on Feb. 26.

As of early March, Air Force officials were trying to determine whether he should be promoted to full colonel and what his next assignment would be, said Baldwin.

The decision infuriated female senators who demanded newly confirmed Defense Secretary Chuck Hagel investigate the matter and report back to Congress.

“This is a travesty of justice,” wrote Sen. Barbara Boxer (D-Calif.) and Sen. Jeanne Shaheen (D-N.H.) in a March 4 letter to Hagel. “At a time when the military has unequivocally stated that there is zero tolerance for sexual assault, this is not the message it should be sending to our service men and women and to our nation.”

During a March 5 Senate Armed Services Committee hearing, Sen. Claire McCaskill (D-Mo.) emotionally spoke out about the decision.

“Now my heart is beating fast right now, I’m so upset about this,” said McCaskill. She added, “I question now whether that unit that that man returns to, [whether] there’s any chance a woman who is sexually assaulted in that unit would ever say a word because what that general said is that [the] jury’s decision didn’t matter.”

Boxer and Shaheen said the issue “raises serious concerns about the military justice system” and all three senators questioned whether one general should have the authority to overturn a jury’s decision.

“It is clear that despite sweeping reforms by the Department of Defense to improve prevention, investigation, and prosecution of military sexual assaults—including adding specially trained legal personnel and victim advocates—these efforts become irrelevant when a case of this magnitude can be thrown out at the discretion of a convening authority,” states the March 4 letter.

Baldwin said Franklin “acted within his authority in deciding the conviction should not stand. Under these circumstances, Lieutenant General Franklin would not have performed his duties had he taken any other course of action.” He also emphasized that Franklin “does not personally know” nor does he recall “ever [having] interacted in any social setting” with Wilkerson.

—Amy McCullough

behind an alley jumping out behind bushes,” said Galbreath. “We know that a lot of the people who perpetrate sexual assaults have done it before. These people are very practiced at what they do and they do it well.”

Indeed, most perpetrators work within socially acceptable norms, said Strand. “Most sex offenders aren’t the obnoxious people slapping peoples’ behinds and making sexist comments.”

Instead, they often systematically “groom” their victims, gaining their

confidence. They encourage them to take part in activities that might get them in trouble as well if commanders learned of them—such as underage drinking.

Well-meaning amateur victim advocates would often advise the victim against reporting the crime to avoid being prosecuted for such offenses. Perpetrators are aware of this and often

lure their victims into compromising situations that might prevent them from reporting an assault.

These are behaviors that US military prosecutors are learning to focus on during trials. “Basically what we’re doing is examining the crime, as opposed to the victims,” Strand said.

Key to this is learning new interview techniques for victims of the assault, which are being integrated into the military’s new SVU training programs.

In the past, when investigators would uncover inconsistencies in the victims’ testimonies, they would immediately discredit them. “We thought inconsistencies equal a lie, which is really not true,” Strand said.

The change in thinking is due to new neurobiology research, he adds, which has found that “when a traumatic event occurs, the prefrontal cortex of the brain shuts down and the brain stem takes over, which records sights, sounds, smells, and feelings.”

What the brain doesn’t record as effectively, Strand said, is often basic facts. “We’d ask questions of the victims like, ‘What kind of socks was the perpetrator wearing? What time was it? Which hand did he use to touch you?’”

These were questions, Strand said, that in their traumatized state, victims were not always prepared to answer. “Now, if I have a report without some inconsistent statements I tend to get a little concerned,” he said.

Prosecution rates, he added, are going up.

At the same time, the US military is rethinking its education campaigns, Galbreath said. Before, a public service campaign might focus on encouraging soldiers to use the “buddy system” when walking at night, for example.

“The issue should not be, ‘Were you with your buddy?’ Even if you were with your buddy, the perpetrator is bent on sexual assault—and the only person responsible for the assault is the perpetrator.”

In short, said Murrie, the Air Force is now engaged in a servicewide effort. “We’re trying to find out: What is the tipping point we need to reach to solve sexual assault? This is a preventable issue.

“But there’s no magic bullet. I keep asking, ‘Does anyone have a magic bullet?’” she asked. “Because I’ll buy it.” ■

*Anna Mulrine, a staff writer for the Christian Science Monitor, reports frequently from Iraq and Afghanistan. Her last article for Air Force Magazine, “The Vets Courts,” appeared in March.*



# Moving Into Sequestration

**This is going to hurt.**

By John A. Tirpak, Executive Editor

*USAF Chief of Staff Gen. Mark Welsh III (far right) testifies with other DOD officials at a Senate Armed Services Committee hearing. Welsh and Air Force Secretary Michael Donley believe sequestration will have "immediate and devastating impacts" on the readiness of the force.*



FEB. 28, 2013

**A**fter more than a year of resisting preparations for a possible budget sequestration in 2013—certain Congress would never allow such a destructive hit on the nation's military—then-Defense Secretary Leon E. Panetta in January reluctantly ordered the services to hunker down and hoard cash. The move was intended to blunt—however minimally—the effects of what he called a “perfect storm of budget uncertainty.”

Speaking with reporters in the Pentagon on Jan. 10, Panetta admitted that “we have no idea what the hell’s going to happen” with regard to military budgets in this and future fiscal years, making it impossible to plan and wickedly hard to manage defense spending. During the press conference and subsequent media interviews, he pleaded for action that would avert severe harm to military readiness, personnel, and investment.

However, forced to confront the growing likelihood that Congress wouldn’t act to prevent what he called arbitrary, “meat-ax” cuts across operating and investment accounts, Panetta ordered the services to stop or slow spending money on a range of things—from sailing and flying hours to property maintenance to travel.

In a Jan. 7 memo to Panetta, Air Force Secretary Michael B. Donley and Chief of Staff Gen. Mark A. Welsh III proposed 10 “near term actions” they would take to prepare for the sequester. These included a civilian hiring freeze; warning current employees of a possible furlough; canceling travel, air shows, and conferences; curtailing or canceling any studies either not critical or mandated by Congress; halting the pur-

chase of furniture and replacement information technology gear; deferring facilities maintenance by half; shortening contracts to cover only Fiscal 2013; and either halting or delaying contracts.

The top USAF leaders also said they’d “review overseas contingency operation requirements”—war spending needs not covered in the base budget—and “identify potential deferments” among them.

These actions would “only achieve a small share of the total sequestration reduction,” Donley and Welsh said, meaning they would have to raid readiness and investment accounts to find the rest of the money.

## Just Some of the Pain

If Congress didn’t act before the deadline, they described how USAF would be hurt. The pain would include:

- A 17 percent cut in depot maintenance and aircraft engine overhauls, “pushing aircraft availability and mission capable rates much further below standards.”
- An 18 percent reduction of flying hours, potentially resulting in a “flying stand-down from late July through September and driving nearly all flying units to unacceptable readiness levels” by October.
- Civilian furloughs without being able to apply the usual reduction-in-force procedures, across the Active Duty, Guard, and Reserve.

Overall, sequestration would have “immediate and devastating impacts to [the] readiness” of the Air Force, Donley and Welsh wrote, especially since they have limited ability to reduce pay and benefits, and because the reductions would have to yield savings so fast.





Longer-term damage to the Air Force would be significant, the two top leaders wrote. While the new national strategy demands “a high state of readiness,” it cannot be executed with tiered readiness, they said.

“The flying hour reductions would compel us to focus almost exclusively on current missions such as training pipelines” and spin-up of units headed to Afghanistan and other deployments “while sacrificing preparedness for contingencies” and major war plans, including the nuclear deterrence mission.

As a result, the 18 percent reduction would be “disproportionately applied across the force,” compelling the flying stand-downs and pushing units Air Force-wide to “the lowest readiness levels” and requiring “extensive time and funding to recover.”

However, Air Combat Command chief Gen. G. Michael Hostage said on Feb. 21 that ACC will move toward tiered readiness. Units returning from Afghanistan will simply have to stand down, he said, in order to keep at least some portion of the force combat capable.

Sequestration would impose a backlog on depot maintenance, and the 50-50 ratio of contractor-to-organic maintenance work mandated by Congress itself “will be at risk,” Donley and Welsh said.

The civilian furloughs and hiring freezes would “drive nearly immediate capability gaps in all critical skill sets and have a direct impact on unit readiness, military productivity, morale, and quality of life,” the two USAF leaders said. The paucity of funds for facility maintenance would affect “new mission beddows, range upgrades, runway repairs, energy initiatives, and drive substantial costs in the future.”

And given that priority would have to go to maintaining forces in combat at the expense of all other things, Donley and Welsh warned that sequestration would deliver “a protracted disruptive effect” on modernization programs. Specifically, it would cause “canceled or delayed delivery of modernization capability which is already under-capitalized to meet the new defense strategy.”

Donley, in a Pentagon press conference with Welsh, was asked if the Air Force, already shrinking in order to maintain a ready force, would have to get smaller to continue presenting forces that are not hollow to regional commanders.

“I think there are questions about how much smaller the Air Force can go in some of these areas without impacting the capability we provide to the joint and the coalition teams,” he answered. Donley had recently penned a multipart essay for AOL.com in which he argued that the Air Force could no longer do all the missions expected of it if its staffing and modernization needs were not met. The service’s equipment and people, he said, can’t be in two places at the same time.

“Our ‘supply’ of forces is equal to the strategic ‘demand’ with almost no margin in capacity,” Donley wrote in one of the essays.

“Today’s Air Force has very few options for further reductions in force structure without incurring significant risk to the capabilities we provide to joint and coalition forces.”

Deputy Defense Secretary Ashton B. Carter, speaking to the House Armed Services Committee on Feb. 13, said that if the full sequester took hold on March 1, it would constitute “an inability to execute our strategy.”



Initially intended to coerce Republicans to reach a deal on deficit reductions, the defense cuts no longer seemed to be much of a stick by late January.

Rep. Paul Ryan (R-Wis.), head of the House Budget Committee and his party's vice presidential nominee last fall, said on the NBC talk show "Meet the Press" in late January that "I think the sequester is going to happen."

Republicans feel the sequester may be the only way to get the spending cuts they demand, Ryan said.

"We think these sequesters will happen because the Democrats have opposed our efforts to replace those cuts with others and they've offered no alternatives," he claimed.

"We are more than happy to keep spending at those [Fiscal 2012] levels going on into the future while we debate how to balance the budget, how to grow the economy, how to create economic opportunity," Ryan said.

House Speaker Rep. John Boehner (R-Ohio) said that his party had largely come to accept the defense cuts as the only way to get spending reductions without also having to increase taxes.

Panetta, however, speaking a week after Ryan on the same program, said if Congress "stands back and allows sequester to take place, I think it would really be a shameful and irresponsible act." The cuts would "badly damage the readiness of the United States of America. ... We are going to weaken the United States. And make it much more difficult for us to respond to the crises in the world."

He added, "In a world of responsible politics, it should not happen."

House Armed Services Committee Chairman Howard P. McKeon (R-Calif.) told reporters in Washington on Feb. 15 he believed the sequester would be allowed to kick in, saying, "I think we've locked ourselves into positions we can't seem to get away from. I think we'll be forced into it." He offered some hope that after "about a month," the pain of sequester would be felt so deeply by the country that it might provide sufficient pressure to compel Congress to act.

### Three-Quarters of a Million Furloughs?

Up to 800,000 civilian employees around the country could be furloughed for as long as 22 days, in effect a potential 20 percent cut in salary, said Panetta during a Feb. 6 speech to students at Georgetown University. A hiring freeze already was applied. Only units now or soon to be in combat would be spared, meaning other units would be hurt even more.

"Regardless of what Congress does or fails to do, we still have an obligation to protect this country," Panetta asserted in January. That's why "the leadership of this department has decided that it must begin to take steps in the coming weeks that would reduce the potential damage."

At the Defense Department, he said, "we really have no choice but to prepare for the worst."

Three main factors were in play: a postponement of the governmentwide sequestration until March 1; uncertainty as to whether DOD would actually get an enacted 2013 budget or operate under another continuing resolution at 2012 spending levels; and a political crisis, also coming to a head in March, as to whether Congress would allow an increase in the federal debt ceiling.

On Jan. 31, Congress voted to delay the debt ceiling showdown until late this summer. The action didn't grant an increase in the \$16.4 trillion national debt limit, but effectively allows the Treasury to ignore the ceiling until May 19, at which time it must resort to unnamed "extraordinary

measures" to pay the nation's bills. Reconsideration of the limit will come in August.

Sequestration was to be the painful enforcement penalty—the "stick"—in the 2011 Budget Control Act that also mandated some \$487 billion of defense spending cuts. It was meant to be the unbearable consequence if Congress couldn't agree on an overarching federal deficit reduction plan beyond those reductions. Failure to make a deal would trigger cuts to defense and social programs alike by more than a trillion dollars over a 10-year period, and do so with a simple, rough 10 percent cut to all accounts, without the flexibility to choose priorities. Defense cuts were the stick to get Republicans to deal, while social programs were to be the stick for Democrats.

While a temporary agreement was reached on Jan. 1, all it did was delay sequestration until March 1, Panetta noted. That made the effect even worse.

"The unfortunate thing is that ... the sequester threat was not removed," he said. If allowed to take place in March, the sequester would compel the Pentagon to reduce spending 20 percent in Fiscal 2013—but compress those cuts into just the last six months of the fiscal year. By any measure, the reductions would be draconian.

Panetta ordered the services to immediately curtail maintenance of facilities deemed nonmission-critical; delay certain contract awards; and scrutinize all other operating expenses to defer any spending not directly related to the Afghanistan war effort.

He also ordered the services to develop plans for how they would cope with sequestration, if it happened. The planning was necessary, he said, because "there will be so little time to respond" to a sequestration. "I mean, we're almost halfway through the fiscal year," he said.

The measures he ordered, Panetta said, "must be reversible to the extent feasible and must minimize harmful effects on readiness." He emphasized, however, that "no amount of planning ... can fully offset the harm that would result from sequestration, if that happens."

Carter told reporters in January that the Pentagon already had begun laying off some of its 46,000 temporary and contract workers, all of whom, he said, are "now subject to release." Carter said it is essential DOD slow its spending or funds "burn rate." He also said the 800,000 or so civilian employees of DOD would likely have to take one unpaid day off in five, starting in April, if the sequester were to kick in. Asking the employees to suffer a 20 percent pay cut is "unfair and unreasonable" but unavoidable, Carter said in a Pentagon press briefing.

"Obviously, this is a terrible thing to have to do to our employees and to the mission," he said. However, the move will save \$5 billion and "we have to find that money."

He emphasized that the pain will not just involve inside-the-beltway contractors and consultants but employees nationwide.

"I hope the Congress understands it's going to affect each and every state and district," he said.

Air Force officials developing an assessment of the impact of sequestration bore out Carter's assertion. The worst hurt states—due to Air Force austerity alone—would be Oklahoma, Texas, Georgia, and Ohio, which because of civilian-intensive logistics center or program management work, would all see payroll hits well in excess of \$110 million. Deferred military construction contracts nationwide—again, for the Air Force alone—would exceed the half-billion dollar mark, hitting local construction hard even as the nation struggles to get the industry back on its feet.

Carter, in his Feb. 13 HASC testimony, also pointed out that "the impact will be even greater on our contractors" than



expected, because “between 60 cents and 70 cents of every dollar we contract is subcontracted to the tier below the prime contractors. Many of these smaller companies don’t have the capital structure that will allow them to withstand this uncertainty and turmoil. ... Many of them are small businesses.”

The Aerospace Industries Association in February rereleased a study it sponsored indicating that sequestration would claim 2.1 million jobs in the US and raise the national unemployment rate by 1.5 percent.

Welsh, in the same hearing as Carter, said sequestration would mean “roughly two-thirds of our Active Duty combat Air Force units will curtail home station training beginning in March and will drop below acceptable readiness levels by mid-May. And most, if not all, will be completely nonmission-capable by July.” The sequester would mean postponing depot maintenance on “about 150 aircraft and 85 engines, ... which creates a backlog that will keep ‘giving’ for years,” Welsh said.

### A Pervasive Crisis in Readiness

“Sequestration will have an almost immediate effect on our ability to respond to multiple concurrent operations around the globe,” Welsh continued, “something that we’ve been asked to do ... many times in the past.” Acquisition program effects will create delays and inefficiencies that will “raise unit costs, and they’ll delay delivery of validated capabilities to warfighters in the field.”

Welsh said the Air Force is “long overdue for reconstitution following more than two decades of war.” The service finds itself “stuck in the unenviable trade space between readiness and modernization, and we need your help to get out.”

None of the Pentagon leaders mentioned another, potentially huge cost of sequestration: the effect of breaking defense contracts. Practically every Pentagon contract provides some form of compensation to a vendor if the program is terminated early or significantly changed. These costs could run to the billions, dramatically reducing any “savings” to be obtained by imposing sequestration. Broadly, the Defense Department has moved to scrutinize all major contracts.

An early January memo from Carter to all DOD departments directed the services to get clearance from the Undersecretary for Acquisition, Technology, and Logistics Frank Kendall III before incurring any obligations greater than \$500 million. In a follow-up memo, Kendall specified that the services have to explain the broad anticipated value of any such obligations.

To prevent branches from awarding contracts just under the threshold, the timing of funding, the purpose of the program, and compelling reasons why it can’t be delayed also must be included in the explanation.

Air Force Undersecretary Jamie M. Morin, in a Feb. 7 meeting with reporters to discuss how USAF would be affected by sequestration, said numerous procurement programs would feel the bite. The KC-46 tanker project would probably have to be renegotiated, Morin said, and the potential cost to the service—possibly more than \$1 billion—would be a “significant” percentage of the sequester all by itself. Morin also said at least two F-35s would have to be cut from the next production lot, dropping the quantity from 19 to 17. The Air Force had put extra money into F-35 software to maintain momentum, but that would also evaporate, Morin said. Two Space Based Infrared Systems would have to be deferred, and Morin also said the C-5M re-engining project would be imperiled.

Air Force leaders said they would try to protect the KC-46, F-35, and Long-Range Strike Bomber from cuts, but Morin

said all major programs “will face disruption,” which usually translates to “increased cost to the taxpayer.”

Asked what the overall expense of termination fees would be, Morin said there’s “no way” that could be calculated until the sequester happens, but it would be a large number.

Memos from the Army and Navy Chiefs, similar to Donley and Welsh’s, circulated in late January, describing harsh reductions in the deployed naval fleet, reductions in training time, and greater demands on service members in the wake of sequestration. Chief of Naval Operations Adm. Jonathan W. Greenert, for example, detailed steps such as cutting travel, reducing exercises, and a civilian hiring freeze. But he also warned that, because refit of ships could be delayed quite some time, the ships now preparing to put out to sea could be “extended indefinitely” on their cruises, because there wouldn’t be a relief ship available in a timely manner.

Moreover, Adm. William E. Gortney, commander of Fleet Forces Command, said some ships may tie up at a pier and simply not deploy at all, and Navy air wings may simply shut down. Specifically, one effect would be the reduction of two carriers stationed in the Persian Gulf to just one—a direct impact on an area of critical interest to the US. Sailor and family support programs also would be at risk.

Army Chief of Staff Gen. Raymond T. Odierno, speaking in late January at an Association of the US Army event, said sequestration would take a “\$6 billion-plus bite” from the Army right away, and a continuing resolution would eat another \$6 billion, chiefly out of operations and maintenance.

The Army already is facing about a \$5 billion to \$7 billion “shortfall” in its overseas contingency operations account for Fiscal 2013, he said. Acquisition programs facing hits would be the CH-47 helicopter and the new Ground Combat Vehicle programs; funding to run Army bases could take a 30 percent hit, he said.

The sequestration, continuing resolution, and other fiscal calamities are creating “a pervasive crisis in readiness,” Carter said.

The uncertainty about defense spending was already beginning to affect the national economy in 2012. In January, the Federal Reserve reported the economy contracted at an annual rate of a tenth of a percent in the last quarter of calendar 2012. White House press secretary Jay Carney said, “The GDP number ... was driven ... in large part by a sharp decrease in defense spending—the sharpest drop since, I think, 1972. And at least some of that has to do with the uncertainty created by the prospect of sequester.”

McKeon, in the Feb. 13 hearing about the sequester, opened the session by saying, “We meet this morning at the 11th hour” and noted that the witnesses—comprising Carter, DOD comptroller Robert F. Hale, and all the Joint Chiefs of Staff—was an “unprecedented” assemblage during his tenure.

“Now it appears that this self-inflicted wound is poised to cripple our military forces in just a few days,” McKeon said. He acknowledged a letter from the Joint Chiefs saying, “We are on the brink of creating a hollow force,” and said neither Congress nor the White House comes to the debt crisis “with clean hands.” It was “decades in the making.”

McKeon said his fear is that “many may choose to soften the blow of these choices by turning once again to the Department of Defense,” which he noted had already given up \$487 billion in budget reductions. He said he would support no spending plan “regardless of how it addresses entitlement spending or revenue, unless it also offers meaningful and real relief for the DOD from [the] sequester.” ■



**EOD technician SSgt. Beau Chastain walked into a trap ... and all the way back to active duty.**

# **WALKING BACK**

By Aaron M. U. Church, Associate Editor





**T**HE improvised explosive device—usually in the form of a roadside bomb—has been the signature enemy weapon over the last 12 years of combat in Afghanistan and Iraq. As a result, explosive ordnance disposal has become one of the most in-demand military specialties, with EOD troops deploying far more frequently than practically any other.

Embedded with ground units, highly trained EOD techs must often disarm explosives under fire. The enemy knows EOD can neutralize their preferred weapon, and insurgents purposely target the bomb squads in ambushes.

The years of war have been harrowing for EOD techs and their families. For the airmen, the missions come in a seemingly never-ending series, hazardous and extremely stressful, and they know that troops depend on them for their lives.

Their families live with the ever-present knowledge that their absent loved one is doing one of the most unpredictable and dangerous—but utterly crucial—combat jobs in the Air Force.

On his fourth combat deployment, EOD technician SSgt. Beau Chastain walked into a trap. During a June 6, 2011, foot patrol, he was sweeping a particularly dangerous area of Helmand province, Afghanistan, for IEDs. Insurgents in the area had purposely planted an IED ahead of the British Army platoon Chastain was embedded with, trying to lure the troops into the open.

The platoon had been making its way along, probing for explosives. “We kind of lost our bearings on where we were, and where the closest other element was, and ended up right where we weren’t supposed to be,” Chastain recalled in a January interview.

The waiting insurgents sprang from hiding and sprayed the column with gunfire, wounding several of the British soldiers. As he scrambled for cover, a single round slammed into Chastain’s left thigh, dropping him in his tracks.

The large-caliber round carved away a large chunk of Chastain’s leg muscle, leaving him bleeding profusely. The British platoon sergeant braved the heavy fire and quickly ran over to help Chastain, who was lying in a growing pool of his own blood.

The sergeant applied a tourniquet, stopping the bleeding and postponing the most immediate danger.

### The Dreaded Call

The platoon was still in extreme peril, however. The firefight was too intense for a medevac helicopter to attempt a landing, and casualties stacked up.

“We were under such constant fire from the enemy that they actually radioed us back and said that they wouldn’t send a helicopter because they were afraid that it would get shot down,” Chastain said. “It sounds kind of dramatic saying it out loud, but we had to fight our way back out.”

The nearest sheltered landing zone was several hundred meters down the road. Because Chastain couldn’t walk, SSgt. Steven Dauck—one of the two other EOD airmen embedded with the patrol—picked him up and lugged him to the LZ.

“He actually ended up dragging me probably two or three hundred meters, which was quite a physical feat when you consider all the gear that we have to wear. ... I guess adrenaline comes into play,” said Chastain.

At 4 a.m. back in Wichita, Kan., the phone rang. Amanda Chastain scurried out of bed to grab it before the kids woke up. It was Beau on the other end.

A call at that time of the morning is “never a good sign,” she said in a recent interview, but hearing his voice was a relief because it meant he was alive. His first words were, “All right, don’t freak out,” she said with a nervous laugh, “which is never good either.”

He explained he was in a hospital in Afghanistan, saying simply, “I was shot.” Only a few hours earlier, he’d been rushed from the field, got through emergency surgery, and was still a “little loopy” from blood loss and painkillers, according to Amanda.

“He was trying to play it off like it wasn’t a big deal and that he would be back to work the next week,” she said. “I don’t know if he fully comprehended what had happened.”

Packed with filth from the battle and from his being dragged down the rural Afghan road, Chastain’s wounds quickly became infected. The doctors initially operated to open and clean the wound, and over the next few days performed several surgeries to piece his thigh back together. However, because he’d been taken to a British field hospital, he was completely outside the Air Force’s notification system. Fortunately, someone gave him a satellite phone. It turned out to be the only way of keeping Amanda and his unit back at McConnell AFB, Kan., informed of where he was and how he was doing between surgeries.

Airmen with injuries as serious as Chastain’s are usually flown quickly to Germany, then on to the United States for follow-on care and recovery. Instead, the allied doctors at first wanted to keep him in Afghanistan for three months of rehabilitation and put him back in the field for the final month of his tour.

Chastain secured his release in a couple of weeks and essentially hitchhiked his way to Germany, dragging his equipment



through several passenger terminals to catch a spare “space-A” seat on a cargo flight to Ramstein AB, Germany, the typical way station for regular and wounded troops headed home.

“I was on crutches and I could barely walk,” let alone carry equipment and deployment bags, he said.

Since he wasn’t in the system, there was no one waiting for him at Ramstein. Eventually someone picked him up from the flight line and drove him to nearby Landstuhl Regional Medical Center. By then, “my dressing had completely bled through and I had a big blood stain on my uniform,” he said. “The Air Force isn’t used to dealing with situations like this, and that became painfully obvious in my case,” he observed.

Nevertheless, the Landstuhl medical team quickly got him cleaned up and

treated him for about a week before allowing him to make the last leg of the trip home.

Through multiple deployments to Iraq and Afghanistan, airmen and their families simply have had to come to terms with injury and death. The EOD community, as with many ground combat-related specialties, is small, and most technicians have had close friends lose limbs or even their lives in the line of duty.

### **A Strange Sense of Relief**

Airmen like Chastain consider themselves blessed. Lying in an Afghan farmer’s field “with the tourniquet on my leg, ... I was almost relieved,” he said. “The EOD guys especially are dealing with explosives and there’s either nothing left of you, or you’re missing limbs—multiple limbs.” Having

only taken a bullet, “I was extremely thankful,” he said.

Amanda admitted that her first reaction to the news was also relief. EOD spouses understand the risk their loved ones run and “mentally prepare that they’re not going to come back,” she said. In January, “one of my best friends lost her husband in Afghanistan, so I know that’s the reality,” she said. Spouses are also fully aware EOD airmen “usually have a bounty on their heads,” that insurgents often lay traps—as in Chastain’s case—specifically to kill EOD teams.

“They knew they would come to try to disarm the IEDs and they were waiting,” she said.

The lifestyle takes its toll on airmen and families alike, not just in terms of life and limb but also mentally and emotionally.



Photo by SSgt. Beau Chastain



## Two Sides of the Combat Coin

Airmen in high-demand battlefield roles who've repeatedly deployed to Southwest Asia have motivations and perspectives on combat differing sharply from that of their families back home.

For SSgt. Beau Chastain, an EOD tech assigned to the 22nd Civil Engineering Squadron at McConnell AFB, Kan., now on his fifth deployment, combat has simply become his job. "I don't look at it from the aspect that every day I wake up and think, 'I'm going to go save somebody's life today' or anything like that—nothing so melodramatic. You become used to what you do and you don't think of the possible consequences."

What motivates him is a sense of obligation to his fellow EOD techs, to share the danger and burden of their chosen profession.

Back home, it's a different story. Chastain's wife, Amanda—the Air Force's 2012 Joan Orr Spouse of the Year—said, "For me and the kids, ... the way we're able to deal with it is to think that he's out there saving lives." Though her husband may not look at it the same way, "that's how we deal with it: Dad has to go away; he's doing a good thing," she said.

For the whole family, though, one thought remains the same: "If he's not there to disarm those IEDs, ... our friends' dads are going to get killed, so that's kind of how we—I guess—deal with it," Amanda Chastain said.

"I don't know any EOD techs who are in combat situations who are coming back without any problems," Amanda asserted. All of them, she explained, have a least some lingering psychological damage, especially if they've lost comrades or been wounded on deployment, as many have. After months of alertness to every potential threat, they have to adjust to a secure home environment, surrounded by family instead of enemy insurgents. It's difficult "to come back and turn that off, especially when you have kids around the house and they're running around making noises and stuff," she pointed out.

Beau's return from all three of his previous combat deployments had been hard for Amanda—who'd known him since high school—but she admitted that this time was much worse. He had nightmares for the first time and wrestled with uncharacteristic bouts of irritability and short temper.

"I could see him restraining himself all the time, which is so not him at all," she said. "For him to ever raise his voice or be short to temper is just completely out of character," she continued. "I think it was really frustrating for him because you want to be in control," but with his post-traumatic stress he really wasn't.

"I think it's a topic no one wants to discuss—it's like a shameful thing or something—but in a lot of jobs like EOD, it's just a reality," she said.

### Transitioning Home

Combat airmen most commonly suffer post-traumatic stress disorder, but are often reluctant to seek help, worrying it will damage their career and ability to deploy, burdening their comrades. When an EOD is constrained from going back to the fight, "you feel like you're letting your brothers down. ... It puts more strain on the ones that are still there,"

said Chastain. Getting back to the field became one of the main impulses driving him to recover.

This mentality extends to the families as well. "There is not another career field in the Air Force that you can rely on more heavily than ours" to support one another, he said.

Though scattered to small shops worldwide and deploying only two or three at a time, EOD airmen and, by extension, their families form a close-knit community. When Beau was injured, Amanda had "EOD 'sisters'" calling from Japan and New Mexico, "checking in on me and talking it through," she said. There's "something intangible about our community that is just on another level."

The Air Force makes a conscious effort to help airmen transitioning home from combat through its Deployment Transition Center at Ramstein. Chastain's unit came back from Afghanistan four months after he got home. The Air Force flew him back to Ramstein to go through the DTC debrief and unload with his unit.

"That was cool for him and them to have closure—they could see he was doing better," Amanda commented, but she said help for the family has been much harder to get.

"I'm advocating for that a little bit, because I feel, ... at least in the Air Force, ... there's not quite enough support for families dealing with them coming back," she said.

Learning to care for its battlefield airmen has taken the Air Force time, given that historically, it's used to combat at 30,000 feet. Moreover, the effect on families of back-to-back deployments has yet to be fully understood.

"It's taking a toll on the families and I don't think that there's enough help, other than handing you a booklet saying

*Left: The farmer's field in Afghanistan where Chastain—approximately five minutes after he took this picture—was shot.*







Lying in the LZ for 45 minutes, one of his first thoughts was of gratitude.

"I didn't want to get out of the Air Force," he said. While lowering his expectations is difficult, he's "thankful" the PT score did not disqualify him. Staying in as an EOD tech "was the one thing that I wanted to try to hold on to," he said.

On Nov. 6, 2012—less than 18 months after his injury—Chastain re-enlisted and three days later shipped out on deployment—this time to the Middle East. The deployment is Chastain's fifth since his six-year-old son, Ethan, was born.

"That's all that [Ethan has] ever known," Amanda said. For the family, Chastain's



**Top:** Then Brig. Gen. Tod Wolters presents a Purple Heart to SSgt. Beau Chastain in the hospital at Camp Bastion, Afghanistan. **Above:** Chastain (c) is flanked by Col. Mark Evans (l) and Command CMSgt. Michael Edwards upon arrival at Wichita Mid-Continent Airport. Chastain's trip home was long and arduous.

that this is normal. ... You just feel very alone in it," Amanda said.

"It's not like they're not offering anything," but the Air Force needs to support families at a deeper and more personal level in coping with reintegrating their loved ones at home, she maintained.

Amanda and the Chastain children found a workshop and day camp at nearby Fort Riley, Kan., that helped her with "coping skills" and open discussion.

"I think the Army just has that a little bit more together because they've had to deal with it a lot more," she said. Especially as the war in Afghanistan winds down and increasing numbers of airmen come home for longer periods, "they're probably going to need to do more."

From the time he was wounded, it took Chastain almost a month to get back to the US. After that, he spent

several months in physical therapy and on crutches, unable to bear his own weight. Initially, his wound was still stitched shut and oozing. Getting his sutures removed "was probably the most pain that I've ever seen him in," Amanda said. Finally, he graduated to a cane, and after nearly a year-and-a-half of rehab, he passed the Air Force physical fitness test once again.

#### Lucky Shot

"If the bullet had been an inch to the right, I would have lost my leg," he noted. Instead, he'll just have to be content with lower PT scores than he's been accustomed to, his doctor told him.

Amanda revealed that when the helicopter finally came to pick Beau up after the ambush, Chastain chose to wait for the next one, so more seriously wounded comrades could go first.

last return—with post-traumatic stress—was "the hardest part." Though their son and junior-high-age daughter have been "just amazing," Amanda wonders how much longer they can soldier on. With Chastain already three months into his deployment, she explained that Ethan's had "a really, really hard time," worrying that his father won't come back.

Amanda confessed she probably would have "freaked out" if he had headed back to Afghanistan, but this latest deployment brought a strange mix of emotions.

"I almost felt guilty because, in some ways, it's easier because you're not walking around on eggshells" to avoid frustrating him. At the same time, "I'd rather him be here," she said. "I know things aren't going to be magically different when he gets back, so I'm a little nervous," she said. "However hard, we'll get through it. ... We're just blessed to still have him." ■



## Apocalypse Then

*Starting in the 1920s, the world more and more came to fear the bomber as an agent of the Apocalypse, poised to turn cities into instant infernos. This was the doing of an Italian Army general, Giulio Douhet. "The Command of the Air," his 34,000-word essay of 1921, was the first comprehensive analysis of airpower. (He added an 18,000-word coda in 1926.) Douhet was at his most vivid when describing how bombers would leap national borders and terrorize populations with fires, poison gas, and more. Ever after, critics linked Douhet—and airpower generally—with mass murder. Douhet himself conceded that his preferred form of war "cannot but disturb the coolest minds."*

**T**he prevailing forms of social organization have given war a character of national totality—that is, the entire population and all the resources of a nation are sucked into the maw of war. ...

Chemistry, which has already provided us with the most powerful of explosives, will now furnish us with poison gases even more potent, and bacteriology may give us even more formidable ones. To get an idea of the nature of future wars, one need only imagine what power of destruction that nation would possess whose bacteriologists should discover the means of spreading epidemics in the enemy's country and at the same time immunize its own people. Airpower makes it possible. ...

Only a minority of the peoples involved [in the World War] actually fought and died. ... But that situation is a thing of the past; for now it is possible to go far behind the fortified lines of defense without first breaking through them. It is airpower which makes this possible. ...

The battlefield will be limited only by the boundaries of the nations at war, and all of their citizens will become combatants, since all of them will be exposed to the aerial offensives of the enemy. ...

In general, aerial offensives will be directed against such targets as peacetime industrial and commercial establishments; important buildings, private and public; transportation arteries and centers; and certain designated areas of civilian population as well. To destroy these targets three kinds of bombs are needed—explosive, incendiary, and poison gas—apportioned as the situation may require. The explosives will demolish the target, the incendiaries set fire to it, and the poison-gas bombs prevent firefighters from extinguishing the fires.

Gas attacks must be so planned as to leave the target permeated with gas which will last over a period of time, whole days, indeed, a result which can be attained either by the quality of the gases used or by using bombs with varying delayed-action fuses. It is easy to see how the use of this method, even with limited supplies of explosive and incendiary bombs, could completely wreck large areas. ...

This same offensive power, the possibility of which was not even dreamed of 15 years ago, is increasing daily, precisely because the building and development of large, heavy planes goes on all the time. The same thing is true of new explosives, incendiaries, and especially poison gases. ...

How could a country go on living and working under this constant threat, oppressed by the nightmare of imminent destruction and death? How indeed! We should always keep in mind that aerial

### "The Command of the Air"

("Il Dominio dell'Aria")  
Brig. Gen. Giulio Douhet  
Royal Army of Italy  
Rome, 1921

Find the full text on the  
*Air Force Magazine's* website  
[www.airforcemag.com](http://www.airforcemag.com)  
"Keeper File"

offensives can be directed not only against objectives of least physical resistance, but against those of least moral resistance as well. ... When the working personnel of a factory see one of its machine shops destroyed, even with a minimum loss of life, it quickly breaks up and the plant ceases to function. ...

By bombing the most vital civilian centers it [an air force] could spread terror through the nation and quickly break down [that nation's] material and moral resistance. ...

I have no doubt that its impact upon the people would be terrible. Here is what would be likely to happen to the center of the city within a radius of about 250 meters: Within a few minutes some 20 tons of high-explosive, incendiary, and gas bombs would rain down. First would come explosions, then fires, then deadly gases floating on the surface and preventing any approach to the stricken area. As the hours passed and night advanced, the fires would spread while the poison gas paralyzed all life. ...

What could happen to a single city in a single day could also happen to 10, 20, 50 cities. And, since news travels fast, even without telegraph, telephone, or radio, what, I ask you, would be the effect upon civilians of other cities, not yet stricken but equally subject to bombing attacks? What civil or military authority could keep order, public services functioning, and production going under such a threat? ... Normal life would be impossible in this constant nightmare of imminent death and destruction. ...

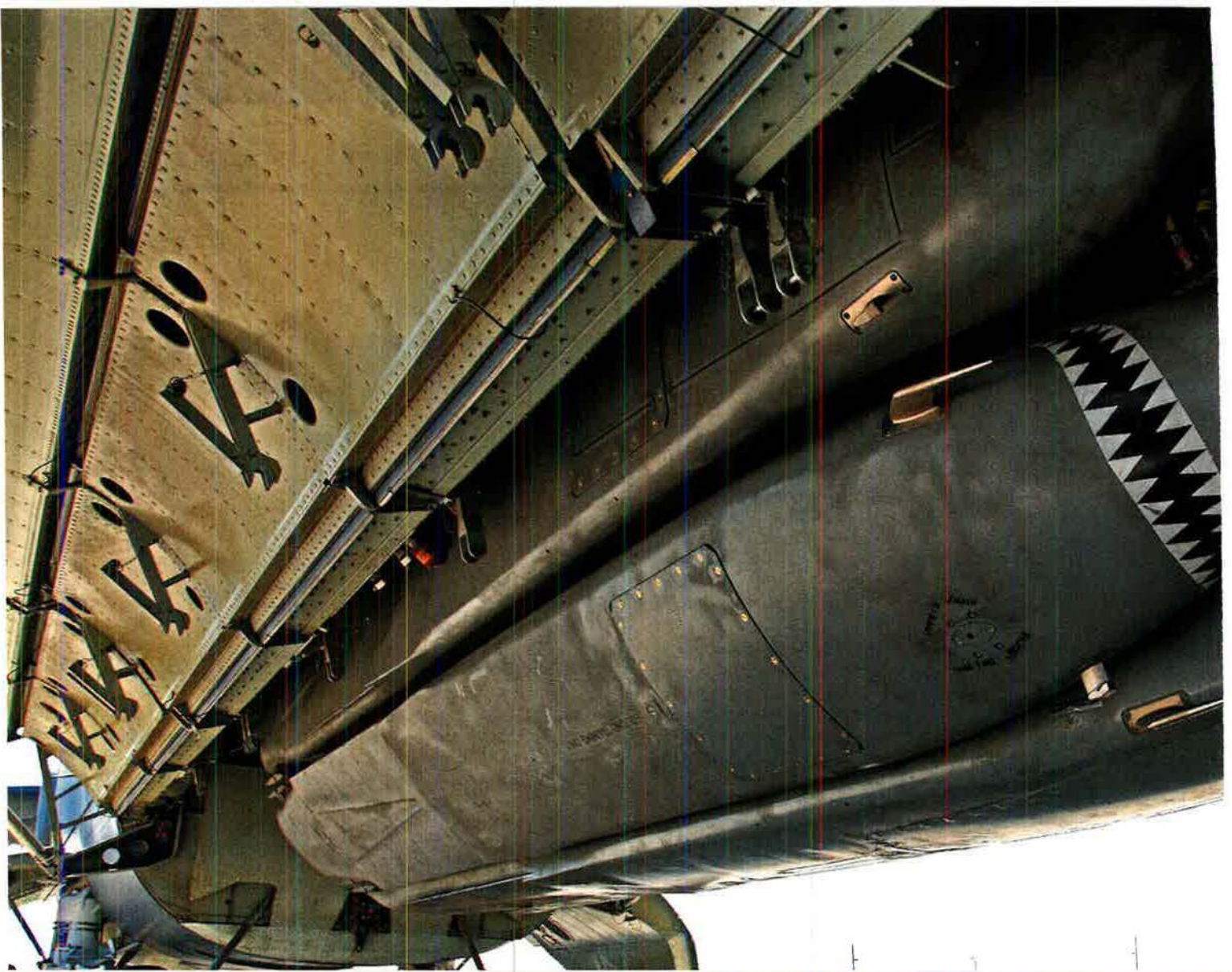
A complete breakdown of the social structure cannot but take place in a country subjected to this kind of merciless pounding from the air. The time would soon come when, to put an end to horror and suffering, the people themselves, driven by the instinct of self-preservation, would rise up and demand an end to the war. ...

Even in this brief resume we can catch a glimpse of the heights of atrocity to which aerial warfare may reach. ...

The decision in this kind of war must depend upon smashing the material and moral resources of a people caught up in a frightful cataclysm which haunts them everywhere without cease until the final collapse of all social organization. Mercifully, the decision will be quick in this kind of war, since the decisive blows will be directed at civilians, that element of the countries at war least able to sustain them. ...

I see in the reality of tomorrow something which cannot but disturb the coolest minds. ■





# ARSENAL ADJUSTMENT

**T**he maintenance of a capable, credible nuclear deterrent seems to have consensus governmental support.

Despite heavy investment in the nuclear mission over the last few years, Air Force and senior defense officials say much work lies ahead for the nation's stockpile of nuclear warheads.

Not long ago, ambitious plans were on the books for a new nuclear earth-penetrating weapon and the first new-build warhead since the Cold War. Then, Administrations changed and the budget crunch hit.

In the aftermath of the New START agreement and the 2010 Nuclear Posture Review, the nuclear arsenal is in the midst of substantive changes, as the

size of the deployed strategic arsenal shrinks and the US reviews its nuclear requirements.

Defense and Energy Department leaders want to streamline and standardize the maintenance of the nation's warheads—a process that has long been unpredictable and irregular, according to a senior USAF official working in the Air Staff's nuclear deterrence shop.

## Consolidation

"We are in a period of transition," said Billy W. Mullins, the associate assistant chief of staff for strategic deterrence and nuclear integration on the Air Staff.

Counting variants, the US currently maintains 12 warhead types in its stockpile, Mullins noted—five alone for the

B61 nuclear gravity bomb, carried by the B-52 and B-2 bomber fleets.

In the near future, officials want to consolidate the number of warheads to curb costs and accommodate an evolving concept of nuclear deterrence, which may be far different from the policies and assumptions that dominated the Cold War. The task is to bring the nuclear weapons complex—the nation's nuclear warheads and the laboratories and facilities charged with their care, testing, and maintenance—into the 21st century.

As a result, over the coming decade-plus, the National Nuclear Security Administration—the Department of Energy's organization responsible for stockpile maintenance—will shrink the number of warhead variants in the stock-





Photos by Tim Carlson

## The US is preparing to sustain, and simplify, its nuclear warhead stockpile.

By Marc V. Schanz, Senior Editor

*Here: AGM-86 Air Launched Cruise Missiles are packed into the bomb bay of a B-52 on the ramp at Minot AFB, N.D. Eventually, the venerable bombers will carry a new weapon called the long-range standoff vehicle. Above right: SSgt. Keith McClain (l) and SrA. Malcolm Salyards maintain a Minuteman III missile in a silo at Minot.*

pile to five, as part of a plan dubbed “three plus two.”

The streamlining and standardizing effort must coordinate requirements across DOD and DOE agencies, the Air Force, and the Navy.

The Nuclear Weapons Council, the joint DOD-DOE body managing nuclear requirements, signed off on the “three plus two” strategy in December 2012, beginning the consolidation process. As

part of the 25-year plan, the first three warhead life extension programs (LEPs) are moving forward, for the B61, W78, and W88. The resulting inventory of between 78 and 88 warheads will be shared between USAF and the Navy, for use on the submarine launched ballistic missile (SLBM) fleet and the Air Force’s Minuteman III ICBMs.

The B61-12 would be the only variant used for the B-2 and the tactical nuclear mission in Europe, now performed by dual-capable F-16s but soon to transition to the F-35.

The W78 and W88 LEPs will utilize a “common physics package” (the term used for the uranium, plutonium, and explosive aspect of a nuclear weapon) for the ballistic missile fleet, Mullins noted—a strategy followed with bombs and cruise missiles.

With two backup warheads in addition to the three designs, the warhead stockpile will streamline to five types over the next two decades if all goes well. The first B61 delivery is anticipated for Fiscal 2019, while the first production unit of the 78-88 LEP is planned for Fiscal 2025. The strategy, having been blessed by the NWC, was briefed to Deputy Secretary of Defense Ashton B. Carter and passed to the budgeting process.

As part of its effort to win congressional support for its nuclear force reductions, the Obama Administration says it will invest upward of \$200 billion across the nuclear enterprise in the coming decade to keep the deterrent viable.

“As long as nuclear weapons remain in existence, the United States will maintain a safe, secure, and effective arsenal,” according to the January 2012 defense strategic guidance document. It identified nuclear deterrence as one of the US military’s core missions.

“What we’re trying to do is align the warhead modernization with platform modernization,” Mullins said.

A new long-range strike bomber is working its way through requirements, and the future of the ICBM fleet past 2030 is under study as well. Air Force nuclear officials are reviewing what warhead or family of warheads might equip a follow-on nuclear-capable air launched cruise missile, Mullins said.

The weapon is called the long-range standoff (LRSO) vehicle and is part of the “family of systems” for the long-range strike portfolio. Probably, a variant of the B61, the W80 warhead equipping the air launched cruise missile fleet, or the W84 that once armed ground launched cruise missiles will be incorporated into the LRSO, which will eventually fly with the B-52 and the B-2 fleets.

Mullins correlated the process to how the Air Force maintains its aircraft.

“We’re trying to standardize ... like depot maintenance,” he said. “We’re trying to go from an episodic [way of maintaining our stockpile] into a predictable process.” In the Cold War, costs were less of a concern; the emphasis for the science side of the nuclear mission was to generate yields per pound, he pointed out.



As a result, many warheads became “custom designs” with few interoperable electronics—those components or other elements that might help planners keep maintenance costs lower.

“There’s no more custom design. ... You [get] common components, you can test more often, and maybe you might fail a bit more—but you test them more and the confidence goes up,” Mullins said. He said that often, in older warheads, every firing set would be a custom match to each warhead, in order to maximize yield. “We spent a little extra back then. Now we’re into getting the right yield for the right capabilities,” he said. The days when accounts for the nation’s laboratories and nuclear scientists were flush are long gone.

We are taking this into a world that is no longer “bipolar,” Mullins said. This means the nuclear stockpile must be retooled for a nuclear deterrent far more scalable than during the Cold War.

The days of explosive testing are also over—the US last tested a live nuclear weapon in 1992—and the science of “stockpile stewardship” has improved greatly since then.

“We can have redundancies [in our deterrent], but we also realize this is a new age and a new time,” said Maj. Gen. Garrett Harencak, then commander of the Air Force Nuclear Weapons Center at Kirtland AFB, N.M., USAF’s nuclear-support nerve center.

Harencak has since moved to the Pentagon where he has taken over the Air Staff’s nuclear deterrence directorate, A10.

“It’s become more important that we get the science right,” Harencak said in a January interview. “The good news is, ... we have the answers to this ... in a lot of cases.” USAF officials and scientists and civilians working in the weapons complex have a “far greater understanding” of nuclear explosive packages than they did a generation ago, he said. As technology has advanced, so has the ability to do advanced simulations and modeling work in place of explosive testing.

“That is sometimes hard for some of the older scientists because that’s not how it worked back in the Cold War,” Harencak commented. He said as part of the plan to refurbish the stockpile, the AFNWC works with a wide range of stakeholders—from the Defense Threat Reduction Agency to the National Nuclear Security Administration, the Navy, and others.

“We have a lot of smart, young people who are motivated,” and USAF wants to address these systems. “We want to



**A B61 nuclear bomb in a hangar at Minot. As part of a 25-year plan, a life extension program is moving forward for the B61, W78, and W88 warheads.**

open them and address as many aging components as we can one time and then prepare [these warheads] for the rest of their lives,” Harencak said.

Mullins and Harencak said the hard work ahead is in standardizing maintenance activities, along with investment and refurbishment across the enterprise in the coming years. Given the nation’s budget woes, however, choices must be made as far as investments in the complex. For example, the NNSA is now deferring for five years construction of the final phase of the Chemistry and Metallurgy Research Replacement (CMRR) project at Los Alamos National Laboratory in New Mexico and accelerating construction plans for the Uranium Processing Facility at Y-12 National Security Complex at Oak Ridge, Tenn.

### **Budget Woes, Of Course**

Part of the new “three plus two” plan is scaling back the so-called “hedge”—the nondeployed portion of the nation’s nuclear stockpile—which will mean divesting some excess infrastructure as this occurs. Costs are already under scrutiny, as the B61-12 LEP has recently been scaled back by NNSA due to cost growth—with some cost projections showing the program effectively doubled in size, to about \$10 billion.

While the nuclear complex is receiving great attention, the budget crisis is forcing many in the nuclear weapons community to curb ambitious plans for modernizing the arsenal.

There is a danger “that stockpile stewardship may be compromised by a desire to do exciting but unnecessary engineering,” said Jeffrey Lewis, director of the East Asia Nonproliferation Program at the Monterey Institute’s James Martin Center for Nonproliferation Studies. The leadership of NNSA has done a good job under trying circumstances, he noted, as

there remains a great deal of resistance due to nostalgia for the salad days of live testing.

Due to funding priorities, however, and the arrival of a younger generation of scientists and engineers, this mindset is slowly shifting. “I doubt the lab directors, if given a little extra money, would put that toward a test instead of infrastructure spending,” Lewis surmised.

“What we are trying to do is get this science where we are measuring part of the explosive chain and connect that science to the next [life extension program],” Mullins said.

The US can’t afford the episodic, inconsistent work flows and shifts that marked stockpile maintenance in the past. The DOD, DOE, and others want to get to a point where work orders—from plutonium construction to maintenance on electronics—are cyclical.

The plan is ambitious and will take more than 20 years to reach fruition, and much remains to be decided as far as funding.

“This is a complex problem, as we consolidate and work with the Navy to make sure we have common adaptable components,” Harencak said. “A nuclear weapon is a complex thing,” and the NWC’s job is to “ensure everyone’s requirements are integrated and there is collaboration and nobody is moving forward without taking a look at the whole. ... ‘Three plus two’ is a simple sounding equation, but there are a lot of moving parts in that.”

The consolidation is long overdue, Mullins asserted.

“We kicked the can down the road. If you’re going to be a member of the nuclear club, there is a cover fee you have to pay and we’ve ignored it for a while. As some senior folks around here say, if it’s a real priority, we will have the money to fix it.” ■



## Flight of the Fashionista



Photo from National Air and Space Museum

On Oct. 7, 1908, Wilbur Wright was in Auvours, France, wowing a well-heeled crowd with demonstrations of his Flyer. Edith Berg, the wife of the Wright's business agent, asked for a ride. That two-minute flight turned Mrs. Berg into a fashion statement. She had a cord tied around her dress below the knees (above) to keep the wind from revealing too much to those on the ground. When she stepped from the Flyer, that cord caused her to exhibit a mincing, hobbled step. It reportedly caught the eye of Parisian fashion king Paul Poiret (photo far right) and inspired his "hobble skirt," soon a fashion craze (see postcard right). Another onlooker was the Dowager Queen of Italy, Margherita. She wanted to go aloft but did not. While the dowager may have lost a chance to inspire a high-fashion garment, she already was the namesake of a famous pizza, the Margherita.







# Up in the Air

## With Milton Caniff

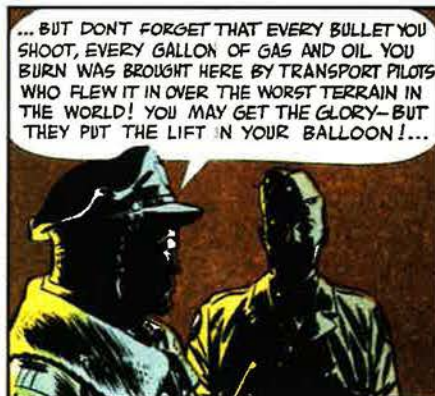
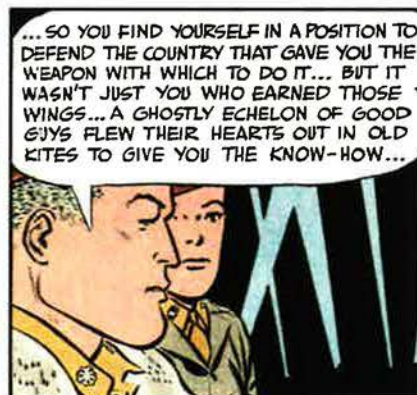
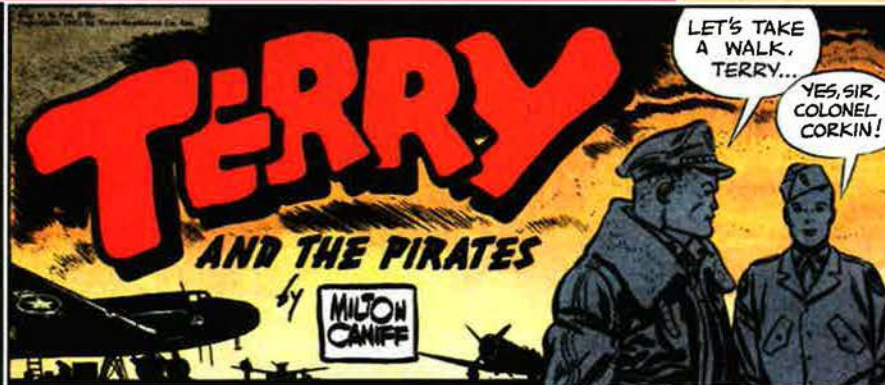
By John T. Correll



There was Terry and the Pirates and Steve Canyon, to say nothing of the Dragon Lady.

**W**hen Raven Sherman, a character in "Terry and the Pirates," met her demise in October 1941, there was a tumult of reaction. Cartoonist Milton Caniff got 1,400 letters, newspapers reported the event as news, and 450 students at Loyola University staged a vigil in memory of Raven.

Left: In his studio in the Hudson highlands of New York state, Milton Caniff shows off the "Steve Canyon" Sunday page for September 1947.



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*Above: The blue and gold bar on Terry's cap indicates that he is a flight officer, a new AAF grade created in 1942. Below: Terry in a P-40 evades three Japanese Zeros. Moments later, Flip Corkin showed up to help. Right: The pace of the story always quickened when the pirate queen made an appearance.*

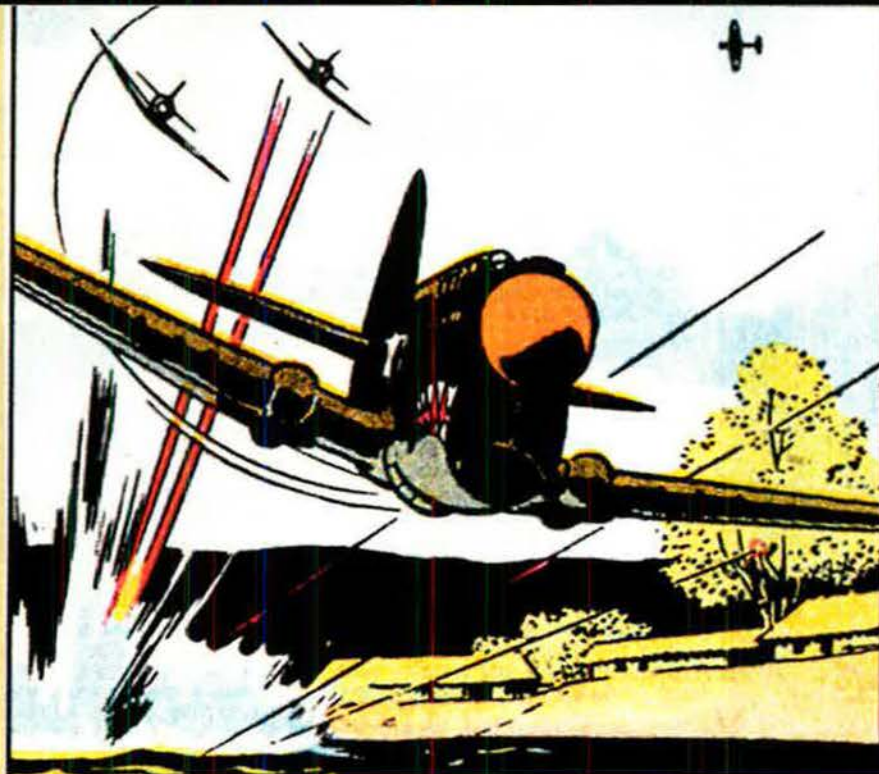
**CAUTIOUSLY, THE DRAGON LADY  
DRAWS A SMALL AUTOMATIC FROM  
A POCKET IN THE LINING OF HER CAPE**

Such was the popularity of newspaper comic strips and "Terry and the Pirates" in particular in the days before television. Terry had already spun off a network radio show in 1937 and a movie serial in 1940. Some 20 million readers faithfully followed his exploits daily in the comics.

The strip began in 1934 when Terry Lee—described as a "wide-awake American boy"—and Pat Ryan, a "two-fisted adventurer," arrived in China with a treasure map left to Terry by his grandfather. They soon ran afoul of the Dragon Lady, the beautiful but cold-blooded boss of the river pirates for whom the strip was named. Over the next several years, Terry and Pat battled renegades and cutthroats on the China coast. There were also assorted damsels needing to be rescued.

Caniff grew up in Dayton, Ohio, home of the Wright brothers, but at the time of the Raven Sherman uproar in 1941 "Terry" was not yet an aviation strip. However, it could not go on as a picaresque adventure story. War had engulfed China and even the Dragon Lady and the pirates were fighting the Japanese.

Caniff, convinced that the United States would be pulled in, decided before Pearl Harbor that Terry would spend the war years in the US armed forces. Grown to young manhood, Terry learned to fly



in China in 1943, joined the Army Air Forces, and flew P-40s and P-51s with the Fourteenth Air Force "Flying Tigers."

For the rest of his life, Caniff was closely aligned with the Air Force. He drew "Terry and the Pirates" until 1946, when he gave

it up to start a new strip, "Steve Canyon," which he continued until his death in 1988. He forged a unique bond with airmen, who made Terry Lee and Steve Canyon lasting parts of the heritage of the force. During World War II, AAF Chief Henry





syndicate to do an adventure strip set in China. Strips in those days were owned not by their creators but by the syndicates that sold them. It was Patterson who decided on the hero's name (Caniff had proposed "Tommy") and dictated the title of the strip. Terry made his debut on Oct. 22, 1934.

Caniff was an excellent storyteller with a good ear for dialogue. Few newspaper artists of the day could match his drawing ability and the strip caught on quickly. The distinctive "Terry" logo with the fat drop-shadow letters appeared in August 1935, done by Noel D. Sickles, with whom Caniff shared a studio. Later on, Sickles did a similar logo for "Steve Canyon." It was from Sickles that Caniff adapted the "chiaroscuro" technique of strong black and white contrasts that often gave his panels a strikingly dramatic effect.

A natural left-hander, Caniff was pressured by his first grade teacher to use his right hand. Thereafter he wrote with his right but drew (and drank coffee) with his left. To avoid smearing, he began the inking of his pages from his right side and worked to the left.

The Japanese—initially called "the invaders"—showed up in the strip in 1938,

Left: In 1949, Steve joined a mercenary air outfit fighting the Red Chinese. And yes, the Summer Smith shown here is the same Summer Smith who eventually married Steve Canyon. Below: The general pinning on Terry's wings is a dead ringer for Claire Chennault.

H. "Hap" Arnold detailed an officer to assist Caniff with any help or technical details to maintain authenticity. In the 1950s, the Air Force gave Steve Canyon his own serial number (AO 041044) and the Air Force Chief of Staff, Gen. Nathan F. Twining, identified him as "an officer in my command."

### Terry and the Invaders

From the perspective of 2013, it may be difficult to comprehend how comic strips were regarded as that important. Back then, almost everyone read the funnies, eagerly awaiting the next installment of the adventure continuities that could last for months. Cartoon strips in the daily newspapers were twice the size of comic

strips today and the most popular ones got a full page in color on Sunday.

Nobody did it better than Milton Arthur Paul Caniff, who created his first comic strip when he was 12 years old and graduated from Ohio State in 1930 with a major in fine arts. Curtis E. LeMay, future Air Force Chief of Staff, was at Ohio State at the same time, but they were not friends. Caniff, who supplemented his income with artwork for hire, did a poster for a group protesting military training for a fee of \$25. ROTC cadet LeMay was not amused.

After graduation, Caniff went to New York, where he drew "Dickie Dare" for the Associated Press. From there he was recruited by Joseph M. Patterson of the *Chicago Tribune-New York Daily News*







Right: In this Caniff cover for Air Force Magazine in 1972, Caniff drew Steve Canyon in World War II uniform talking with an F-15 pilot. Above: Steve retrains to jets in December 1952.

opposed by the Dragor Lady's guerillas operating in loose cooperation with Terry and Pat.

"They were referred to as 'the invader,' but everyone knew who they were," Caniff said. "They were portrayed as villains. Patterson and his cousin, Col. Robert R. McCormick, who was the publisher of the *Chicago Tribune*, were both isolationists and their newspapers reflected that stance."

Patterson summoned Caniff to his office in September 1941 after a strip had shown invader aircraft clearly marked with the Imperial Rising Sun. "Don't think we want the Japanese in there," Patterson said and overrode Caniff's disagreement. "The Japanese bombed Pearl Harbor shortly after our discussion and I heard no more about not using 'the invader' in China," Caniff said.

### Terry Wins His Wings

In the fall of 1941, Caniff received a visit that had lasting consequences. The caller was Philip G. Cochran, a first lieutenant in the Air Corps and commander of the 65th Pursuit Squadron flying P-40 Warhawks at a small airfield near Groton, Conn. Cochran, also an Ohio State graduate, had a slight acquaintance with Caniff and had come to Caniff's studio in the Hudson Valley, 40 miles north of New York, seeking a favor.

He wanted Caniff to design an insignia for his squadron. Caniff readily agreed but spent the rest of the afternoon pumping Cochran about flying. Cochran's descriptions, in the picturesque vernacular of the fighter pilot, jelled Caniff's plans for Terry.

At Caniff's request, Cochran spent the next four evenings at Groton writing out details of how he taught flying. The product was 23 pages long and coached Caniff on

jargon as well as details of instruction. Caniff filed it away until he was ready for Terry to begin training.

Caniff gathered additional background on trips to Groton. "He would come down and watch us," Cochran said. "We would dive bomb right off the edge of the field there into the [Long Island] Sound, and we had aerial gunnery right close that he could watch. He would watch our aerial combat work, and then he would talk with the kids."

"Suddenly it dawned on me that I was sitting on top of one of the most colorful

characters that I or anybody else had ever seen," Caniff later said. Terry's combat leader and mentor would be "Flip Corkin," who looked and sounded exactly like Phil Cochran.

Caniff did not want to divert Terry away from China for training. Besides, there were other complications. Terry was still too young to be an officer, and in a decade of knocking around the Orient, he had gotten little formal education. At the suggestion of a reader who wrote in, Caniff considered the possibility of Terry becoming a flying sergeant.

SEPTEMBER 1972 / \$2

# AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION

MAGAZINE

## A Silver Anniversary Review







Milton Caniff never served in the armed forces. He got an induction notice in January 1943 when he was 35, just barely inside the age bracket for the draft, but was declared 4-F because of chronic phlebitis, inflammation of a vein. This seems to have enhanced Caniff's commitment to support those who did serve.

Terry was the special favorite of those in the Air Force, but there were plenty of readers in the other services, too. Pat Ryan, Terry's old China buddy, was an officer in the Navy and figured in several adventures. Army and Navy ground troops appeared regularly. There was even a Canadian officer who flew with Terry's squadron.

Caniff built his following in the armed forces with great attention to authenticity and extraordinary effort to ensure that everything—uniforms, equipment, terminology, procedures—was absolutely accurate. His studio bulged with photos, notes, Army manuals, and artifacts that

3-12

CADET LEE,  
THESE TRAINERS  
LAND SLOWLY—

...BUT YOU MUST HAVE  
ENOUGH SPEED LEFT  
TO MISS A HAYSTACK  
—OR LIFT A WING OVER  
A TELEPHONE POLE...



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Above left: Caniff based many of his characters on real people. This gallery is from our July 1957 cover and includes (from top, left to right) Poteet Canyon (based on Nancy O'Neal); Dude Hennick (Frank Higgs); Col. Flip Corkin (Philip Cochran); Lt. Upton Bucket (Bill Mauldin); Col. Vince Casey (C. D. Vincent); CAP Cadet Scooter McGruder (Margaret Kennefick); Allee McDean (Alice McDermott); Maj. Gen. Claire Chennault (himself); Steve Canyon ("a composite"); Gen. Joseph Stilwell (himself); Lt. Taffy Tucker (Bernice Taylor); Miss Lace (Dorothy Partington); Maj. Luke Adew (William Lookadoo); Col. Soup Davey (David F. McCallister); Lt. Peter Piper "the Piper" (John F. Kennedy); Brig. Gen. P. G. "Shanty" Town (also C. D. Vincent); and Miss Mizzou (Marilyn Monroe). Left: Part of the appeal of "Terry and the Pirates" was Caniff's superb rendering of scenes in China.

The solution was for Terry, suitably aged and sponsored by the US Army, to enter the Chinese Army Flight Sergeants School in February 1943. Corkin augmented his instruction. Upon Terry's graduation, an Army board appointed him a flight officer, a new grade established in 1942, approximately equivalent to warrant officer. In October 1943, a general—who was a dead ringer for Claire Chennault of Flying Tiger fame—pinned on Terry's wings.

In the most famous Caniff Sunday page of all time, the "Let's Take a Walk, Terry" segment on Oct. 17, 1943, Corkin walks around the flight line with newly fledged pilot Terry and delivers an inspirational talk about the war and the Air Force. This page, often reprinted, was "read" into the Congressional Record and appeared as an *Air Force* Magazine guest editorial in September 1985.

included a Chinese tongue scraper and a license plate from Shanghai.

In addition to his work on "Terry," Caniff produced a weekly strip, "Male Call," for the Army's Camp Newspaper Service. It featured Miss Lace, a sultry siren in a slinky, low-cut dress who concentrated her attentions on enlisted men instead of officers. Forty years later, Caniff was still getting requests for Miss Lace pinups.

Flip and Terry tangled with saboteurs and spies as well as Japanese pilots and in early 1944 they traded in their P-40s for P-51 Mustangs. They were joined by Lt. Charles C. Charles, "Hotshot Charlie," who stayed on as Terry's sidekick. When Phil Cochran got a promotion, so did Flip Corkin. Both moved up to full colonel. Newspapers in the United States carried features about Cochran as "the real Flip Corkin."





Above: When "Steve Canyon" began in January 1947, Time magazine's cover pictured Caniff, Steve, and Copper Calhoon. Right: This self-caricature from 1942 noted Caniff's obsession with getting the details right.



In February 1944, Corkin was alerted for a "big job coming up" and, along with Terry, deployed to a staging base in India. In the March 17 strip, Fl-p briefs his crews on operations from an "advanced field." Passing comments in other panels left no doubt that the airstrip was in Burma.

On March 18, the Associated Press reported that Allied troops were engaged behind Japanese lines in Burma, having been inserted by a special air unit commanded by Cochran. (See "The Air Invasion of Burma," *Air Force Magazine*, November 2009.)

The FBI was on Caniff's doorstep forthwith. Caniff drew the strip four weeks ahead of publication. How did he know about Burma so far in advance?

Caniff said it was a coincidence. He had been aware that Cochran went to India and the overall Allied counteroffensive in Burma had been in the news for months. The "Terry" story had nothing in common with the real operation except the location. Caniff said that Cochran never told him anything.

Shortly thereafter, Caniff decided to leave the Tribune-News syndicate and give up "Terry and the Pirates," for

which the syndicate held the copyright. He wanted a strip of his own and in December 1944 signed a contract with the Field Enterprises syndicate to produce a new strip, with Caniff keeping ownership and full editorial control. His contract with Tribune-News had another two years to run. He continued to give "Terry" his best effort and the quality of the strip never flagged.

Terry became a second lieutenant in 1944 and was promoted to first lieutenant just before the war ended. Recruited by Army intelligence as an undercover agent, Terry took a postwar job as a pilot for Air Cathay, a down-at-the-heels freight line flying war surplus transports. Hotshot Charlie and the Dragon Lady returned for one last rollicking adventure in 1946.

### Horizons Unlimited

Caniff's last Terry appeared Dec. 29, 1946. When he left, the strip ran in 220 newspapers and had 31 million readers, among them the Duke of Windsor, Margaret Truman, and novelist John Steinbeck. Even before the name of the new strip was announced, 125 newspapers signed up to carry it.

"Steve Canyon" made its debut Jan. 13, 1947. Caniff's departure from "Terry" was front page news. The *Time* magazine cover story said it was "comparable to Henry Ford quitting his motor company and setting up shop in competition across the street."

Stevenson Burtor Canyon was an older and more rugged version of Terry. He flew B-25 bombers in World War II and left service as a captain. In 1947, he was the proprietor of Horizons Unlimited, a one-airplane air service that specialized in dangerous missions. Right away, Steve encountered Copper Calhoon, a hard-boiled babe in the mold of the Dragon Lady. She reappeared now and then in all her malevolence over the next 30 years.

It took Caniff a while to define his characters and story line. In the second year, mishaps in the Middle East eliminated the confining entanglements of Horizons Unlimited and the still-unpaid-for airplane, leaving Steve free to pursue adventures on his own. There was a flash of the old Caniff wartime flavor in 1949 when Steve joined a mercenary air outfit fighting the Red Chinese revolutionaries.

The strip gained its long-term focus and









# The Mustangs of Iwo

By Barrett Tillman

**A**ny pilot who has flown a single-engine airplane beyond sight of land has experienced the syndrome: enhanced hearing and a pessimistic anticipation of trouble. But imagine a 1,500-mile combat mission over the Pacific Ocean, with the only landfall occupied by people who cut off the heads of captured airmen—or worse.

Such was the world of the airmen flying the Mustangs of Iwo Jima.

From Guam, a glance at the map showed the way to Japan: the Bonin Islands, midway between the Mariana Islands and Honshu, some 750 statute miles south of Tokyo. They put the home islands within range of the long-legged North American P-51D Mustang. With the Bonins in American hands, fighters could escort B-29s anywhere over southern Japan.

In February 1945 at Iwo Jima, the largest of the Bonin Islands boasted three airfields. The fields had been taken by

three Marine Corps divisions at the cost of 4,554 American lives.

Seventh Air Force VII Fighter Command was ready to move to Iwo as soon as facilities were readied. Planning for very long-range (VLR) escort missions had begun the previous summer, as Brig. Gen. Ernest M. Moore prepared his “Sunsetters” for the challenging mission.

Moore was typical of the young flying generals in the Army Air Forces. A 37-year-old West Pointer, he had been in



**The P-51 pilots out of Iwo Jima had to fly 1,500 miles over water to protect B-29s over Japan for less than an hour.**



USAF photo via Warren Thompson

the Pacific since 1939. Having assumed leadership of VII Fighter Command in May 1944, he led from the front and landed the first Mustang on Iwo Jima on March 6. Behind him were three squadrons from the 15th Fighter Group. Eleven days later the first element of the 21st Fighter Group landed. Most of the pilots were new, averaging fewer than 300 flight hours.

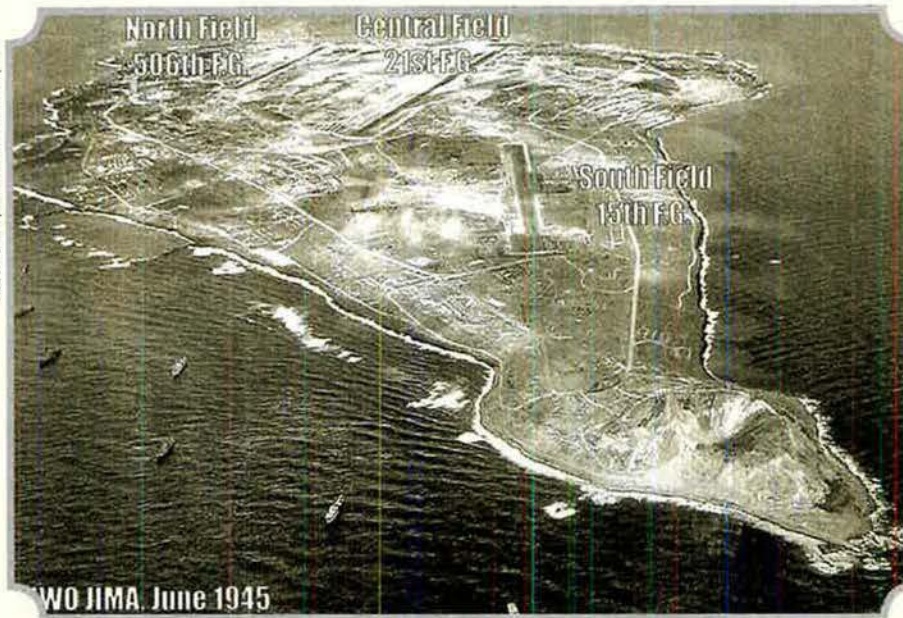
Iwo Jima was crammed with airplanes: two P-61 night-fighter squad-

rons, Navy and Marine Corps strike aircraft, and air-sea rescue airplanes. But the P-51s were the most numerous and strategically the most important.

Other than flying local patrols and occasionally striking other islands in the Bonins, pilots on Iwo had precious little diversion. Some didn't mind: The 72nd Fighter Squadron's Capt. Harry C. Crim Jr. said, "Iwo was perhaps the most hostile ground environment an airman could find himself in. Nature

**Left: Mustangs from the 21st Fighter Group head out on their first long-range escort mission to Japan in April 1945. Above: Capt. Harry Crim Jr. (l) briefs Brig. Gen. Ernest Moore, commander of VII Fighter Command, on a flight line at Iwo Jima. At right is another Mustang pilot, Maj. Dewitt Spain. Crim became an ace, with six kills. Spain went on to become a brigadier general.**





*An aerial view of Iwo Jima in 1945 shows the individual airfields that each fighter group operated from. South Field was used by the 15th Fighter Group, Central Field by the 21st FG, and North Field accommodated the 506th FG.*

provided an active volcano (Mount Suribachi), and man provided the war.”

There was literally no place to go, not much to do, and precious little to see. However, the Army fliers found ways to spend their idle time.

One primary diversion was commerce with the eminently “negotiable” Navy Seabees. Engaged in expanding Airfields No. 1 and 2 (No. 3’s expansion was never completed), the sailors’ motto seemed to be, “We’ll do anything for whiskey.”

When the airmen discovered the Seabees had an ice machine but no booze, the law of supply and demand took over. The 21st Fighter Group traded 15 bottles of whiskey for the ice machine, installation included. Dug in, sandbagged, and camouflaged, the precious device escaped detection by the irate Navy commander until Moore became island commander. After that, the fliers had no worries.

Crim, an aggressive Floridian, was one of the Sunsetters’ most experienced pilots, with 2,200 flight hours. He had flown 50 P-38 missions in the Mediterranean, enduring sand, flies, and disease while losing 50 pounds. Consequently, he became “an Iwo booster.” He believed that being able to concentrate 100 percent on combat training, without serious diversions, was one of the island’s strong points. He helped his pilots devote their attention to flying and fighting, thus preventing their going “rock happy.”

But there was unexpected drama. The 21st FG had been ashore barely a week on March 27, 1945, when eight dawn-patrol pilots were walking to the airfield. They were suddenly overcome by some 350 Japanese who poured out of underground caves and tunnels. The

pilots were instantly and unexpectedly embroiled in a vicious infantry war.

After five hours of fighting, all the Japanese were dead or captured, but VII Fighter Command had suffered 44 killed and nearly 100 wounded. Crim replaced the wounded commanding officer of the 531st Fighter Squadron, and the next day the group flew its first mission, strafing Haha Jima

### The Mustang

Thirty years after the war, Moore wrote, “I don’t believe there is any question about the P-51 being the best prop fighter of World War II. It was our top air fighter and, hence, best for escort missions and equal to the [P]-47 as an attacker against ground targets.” Squadron and group COs described the sleek North American as “perfect for these missions.”

Neither the 15th nor the 21st had much time for P-51 checkcuts before leaving for Iwo. In the 21st, the more senior pilots averaged perhaps 20 hours “in type” before landing at the advanced base. Most pilots were newly out of operational training and averaged merely five to 10 Mustang hours.

In the Pacific—the largest theater of war in history—the Mustang’s long legs made the difference. In Europe the usual drop tank was 110-gallon capacity, but VLR missions produced 165-gallon “drops.” Fully loaded, two such tanks added a ton to the Mustang’s 10,100-pound “clean” combat weight, but they allowed an hour or more of loitering over Japan instead of 20 or 30 minutes on internal fuel.

With such heavy loads, the Mustangs needed a long takeoff run even at sea

level. Airfield No. 1 had 5,000- and 3,900-foot runways; No. 2 had 5,200 and 4,400 feet. Originally the strips were barely 2,000 feet long, and that was often inadequate for B-29 emergencies. The hazards also extended to the local area: The 531st Fighter Squadron’s flight line coffee tent was wiped out three times before it was moved to the upwind side of the runway.

The standard tour for a Sunsetter P-51 pilot was 15 VLRs—about 105 hours of flight time—plus local ground attacks and standing patrols. Moore restricted pilots to three long-range missions a week but few logged more than six in a month. Moore managed to fly about 20 hours a month though he was prohibited from combat.

When Col. Bryan B. Harper’s 506th Fighter Group arrived in mid-May, it lifted some of the burden off the first two groups. The 506th alternated with the others in launching two-group missions to the home islands, so one group could ease pilot strain and catch up on deferred maintenance.

The universal comment from Sunsetter pilots was, “Maintenance on Iwo was tops.” If a flier wanted a new carburetor, he needed only mention it. Many crew chiefs kept their aircraft waxed for extra speed, though some joked it was because there was nothing better to do. The mechanics conscientiously changed spark plugs after every VLR to avoid later fouling, as prolonged low-RPM cruising could burn up the plugs.

Lt. Harve Phipps of the 72nd Fighter Squadron recalled, “The squadron had been in the VII from the beginning and the [ground crews] were not rotated very often. They were experienced, and we had practically no aborts because of [bad] maintenance.” Pilots deeply appreciated such diligence: The last thing they wanted to worry about was engine failure 600 saltwater miles from home.

A far greater concern than mechanical failure was the North Pacific weather. Three to five fronts usually



moved south daily from the Japanese coast, and that made mission planning difficult. High, dense cloud formations often were a factor.

Mustangs seldom penetrated a front but tried to fly between the thunderheads.

When possible, they remained in the clear to avoid major turbulence, as the 85-gallon fuselage tank became a critical factor.

In rough weather, “the -51 with the fuselage tank full didn’t fly like anything resembling an airplane,” Crim said. Before entering weather, standard procedure was to run the tank down to 40 gallons to put the center of gravity on the near side of controllability. Even then it was no fun flying a P-51 in turbulence. When the drop tanks were partially empty, the gas sloshed from front to back, creating a roller-coaster sensation. It was almost impossible to fly straight and level visually, far less so on instruments.

From late April to late June, 830 P-51 strike sorties were dispatched but fewer than half reached their targets. Four missions were completely spoiled by heavy clouds, and the Mustangs were grounded for 10 days in early May because of the bad weather.

The worst weather problem occurred on June 1 when the Sunsetters launched 148 Mustangs only to encounter a solid front from sea level to 23,000 feet.

B-29 weather airplanes with fighter pilots aboard preceded each strike and reported the front thin enough to penetrate. But the Mustangs hit a severe thunderhead and had no option but to make an immediate turn out of “the soup.”

Flying completely blind in extreme turbulence, several P-51s collided and others fell prey to violent winds. Twenty-seven fighters were lost, along with all but three of their pilots. The 506th Group, which had been operational for only two weeks, lost 15 aircraft and 12 pilots. Eventually, 27 Mustangs broke through to escort the bombers over Osaka.

On another mission, a lone 21st FG pilot stuck it out through the weather to find himself the sole escort for about 400 B-29s.

*P-51 Mustangs from the 462nd Fighter Squadron pull up close to a B-29 during a long-range escort mission. VII Fighter Command Mustangs did not escort specific B-29s but a stream of them, sometimes 200 miles long.*

### Navigating the Pacific

Flying single-engine fighters on 1,500-mile round-trips over a vast ocean with minimal navigation aids required a confidence born of experience. It was a task none of the Mustangs, and few of the pilots, were equipped to attempt on their own. The standard P-51D had a magnetic and gyro compass plus a radio compass—the latter of limited range. Voice communication was available on one VHF four-channel radio, and that was all.

“You lose your radio or dynamotor and you have to time-and-distance 600 nautical miles to a spot in the ocean less than four miles in diameter,” said Crim. “Coming back, if your radio worked you could get a steer for the last 100 miles from radar, if it was working. That’s why you didn’t want to be alone.”

Fortunately, help was available. Six B-29 navigation airplanes in three pairs led about 100 Mustangs on each mission to a designated point off the Japanese coast, circling while the fighters flew inland. When the Mustangs began to return to the rendezvous point, the first pair of B-29s waited until about half had arrived, then set course for Iwo. The other two pairs of bombers departed the coast at 10-minute intervals to allow latecomers to latch on to one navigation group or another. The last B-29 to depart transmitted the Morse Code letters for U and D on the “Uncle-Dog” radio frequency so that stragglers could home in.

Six islands, or islet groups, strewn along the watery path aided visual navigation

—but they were often hidden beneath a cloud deck. Consequently, Uncle Dog and accurate dead reckoning were essential.

The bare statistics of what was involved in one VLR mission did not begin to tell the story. In round numbers, nearly 100 Mustangs took off with 57,000 gallons of high-octane fuel and some 230,000 rounds of .50-caliber ammunition. The round-trip distance was equal to halfway across North America, from Los Angeles to Little Rock, Ark. Except for the time spent over Japan, the entire mission was flown above water. Seven-hour sorties were routine; eight hours were not unknown.

Contrary to the procedure in Europe, VII Fighter Command Mustangs did not escort specific bomber boxes but guarded a stream of B-29s as much as 200 miles long. One fighter group was assigned target cover from the initial point to the target; another provided withdrawal support.

Usually flying 2,000 feet above the bombers, the three “TarCAP” squadrons flew two on one side of the bomber stream and one on the other, with four-airplane flights about half-a-mile apart. The three squadrons were staggered line astern, flying in the same direction as the Superforts that were approaching the drop point.

Flak was the most common resistance, but 90-degree course changes with slight altitude variation allowed the fighters to remain under anti-aircraft fire for nearly an hour with little damage.



Robert Grant photo via Warren Thompson





"Finding enemy aircraft was difficult," Crim recalled. "They weren't interested in tangling with us, and the only aggression I saw was when they thought they had us at a great disadvantage. Some of the pilots were skillful, but there weren't enough of them to make much difference."

The first VLR escort, a Tokyo mission on April 7, was an exceptional occasion. It featured beautiful weather and plenty of "bandits." The 15th and 21st Fighter Groups escorted 107 B-29s and encountered stiff opposition during the 15 minutes over the target. Pilots estimated 75 to 100 Japanese fighters were seen and claimed 21 downed while only losing two Mustangs.

The 15th saw the most combat that day, returning with claims of 17 destroyed and one probable. Maj. James B. Tapp was the belle of the brawl, bagging four aircraft. Crim headed the 21st's score column with two of the group's four kills. Tapp and Crim became two of Iwo's four aces, with Tapp being first to achieve that distinction on April 12.

Nothing else over Japan had the Mustang's speed, and nothing could match its acceleration or high-altitude performance. The Mitsubishi Zero was some 80 mph slower, and could only hope to outturn or outclimb it at low-to-medium altitudes. Among the fastest enemy fighters, the Nakajima Frank gave away 40 mph to the P-51, but it climbed and turned better. Still, a Mustang using combat flaps could stay with a Frank long enough for a kill if the P-51's speed was not excessive.

Few pilots fired their guns at airborne bandits on more than five mis-

sions; top gun Maj. Robert W. Mocre of the 15th Fighter Group had 11 kills in seven engagements. A handful of others added to previous records, most notably Col. John W. Mitchell, who took over the 15th FG that summer. Having led the Yamamoto interception in 1943, Mitchell downed three airplanes over Japan to run his total to 11. He also commanded an F-36 wing in Korea, adding four MiGs to his World War II tally.

### Sunsetters Sunset

Always fuel conscious, the Mustang pilots "coasted in" at a fairly high power, hoping to keep their spark plugs clean and the aircraft in fighting trim. They wanted the fuselage tank to contain less than 40 gallons because in a steep turn, shifting fuel weight could cause control reversal, and the aircraft would try to snap roll. As a rule, the P-51s escorted and fought using the fuselage tank; they would jettison the "drops" for a dogfight. When the fuselage tank ran dry it was time to think about heading home, as the internal wing tanks only provided a bare margin for return.

To some pilots, the 20 to 60 minutes over Japan were just the thing to shake off the lethargy of the long northward flight. Phipps said, "I think the combat break midway in the mission served to stimulate you enough that you didn't get bored. The main problem was the cramped space for the time involved."

For the return flight, Crim explained, "We dropped our tanks, shot up all our

**Maintainers work on attaching external fuel tanks to Mustangs—including "Nina Lou," assigned to P-51 pilot 1st Lt. Arden Gibson—on a ramp at one of three airfields on Iwo Jima. Maintenance was top notch.**

ammo, and tested the relief tube." Then it was a matter of managing fuel for the 750-mile flight home. Cruising at 40 gallons per hour could burn up a set of plugs but the hardy Merlin engines did not seem to mind.

In addition to bomber escort, the Sunsetters flew an increasing proportion of strike missions. Their primary targets were Japanese airfields or industrial facilities, and they were often loaded with five-inch high-velocity aerial rockets. Six HVARs added about 700 pounds to takeoff weight but they packed a tremendous punch—equal to a destroyer's broadside—and were effective against shipping and reinforced buildings.

The Sunsetters' last aerial combat occurred near Tokyo on Aug. 10, when the 15th and 506th FGs claimed seven kills. In all, Iwo's Mustangs were credited with 206 Japanese airplanes shot down between April and August 1945—75 percent of the Pacific P-51 aerial victories. The 15th FG led with 111 kills; the 21st notched 71; and the 506th got 24.

At war's end Crim prepared to return to college as a sophomore—and an ace. He asserted, "I fought the Germans for patriotism and the Japanese for fun. Next time, I'm fighting for money!" ■

*Barrett Tillman is a professional author and speaker who has flown a variety of historic aircraft and has received six writing awards for history and literature. His most recent article for Air Force Magazine, "The Forgotten Fifteenth," appeared in September 2012.*



By Frances McKenney, Assistant Managing Editor

## Dynamic and Continually Evolving

"The **Central Florida Chapter** is dedicated to supporting aerospace education," Chapter President Michael J. Liquori told the audience at the Air Warfare Symposium Gala in Orlando, Fla.

The 29th annual banquet—part of the three-day Air Force Association event—emphasized this support by focusing on USAF education and training.

During awards presentations at the gala, Liquori characterized Air Education and Training Command, its components, and its industry partners as a "dynamic and continually evolving" system enabling the Air Force's success.

Air University received the first honor that evening, followed by the AETC medical training organizations, Cessna Aircraft Co., AETC's Technical Training Division, and the Community College of the Air Force. The Central Florida Chapter named all of these entities Jimmy Doolittle Fellows.

CMSAF James A. Cody and SrA. Emily Barchenger then joined Liquori and Gala Chairman John Timothy Brock on stage to highlight the more than 40 years that have passed since CCAF's establishment in April 1972 at Randolph AFB, Tex.

Cody presented Barchenger with her diploma, marking the 400,000th associate degree in applied science awarded by CCAF. Barchenger earned the degree in intelligence studies and technology while deployed to the 379th Air Expeditionary Wing, Southwest Asia.

In other presentations at the gala, Central Florida Chapter members and supporters donated \$10,000 to the Air Force Memorial Foundation. The chapter's total donation to the memorial now comes to a quarter-million dollars.

## Recognizing Excellence

The **Central Oklahoma (Gerrity) Chapter** recognized that it had an unusually strong CyberPatriot supporter in Rose State College.

So Chapter VP Mark L. Tarpley suggested that the community college be named a Center of Excellence for CyberPatriot, AFA's national high school cyber defense competition. In January the school in Midwest City, Okla., received the designation. It is the CyberPatriot program's fourth Center of Excellence.



Photo by Den Higgins

*With AFA Board Chairman George Muellner (second from right) on stage at the Florida Gala are (l-r): Gala Chairman Tim Brock, AFA President Craig McKinley, and Central Florida Chapter President Mike Liquori. They are displaying the Central Florida Chapter's \$65,000 donation toward AFA's aerospace education endeavors.*

The others are the Los Angeles Unified School District, the City of San Antonio, and Spokane Public Schools.

Rose State College has nearly 12,000 students and had earlier been named a National Security Agency Center of Academic Excellence in Information Assurance. That's when the Gerrity Chapter's cyber security VP, David A. Wagie, began developing a connection between the school and the chapter.

James Putnam, chapter aerospace education VP, listed how the college has helped CyberPatriot in the past three years: First, computer science faculty members have conducted teaching sessions for teams interested in competing. Last fall, they held six Saturday sessions on cybersecurity basics.

Second, the instructors recorded the sessions and posted them online. Putnam said 15 of the 23 teams from Oklahoma worked directly with Kenneth Dewey and other Rose State College volunteers, and they know that at least one school—in California—used the online training.

Third, said Putnam, Rose State does a direct mailing of some 800 letters

describing their free course. In addition, the state department of education helps the chapter promote CyberPatriot through e-mail announcements.

Putnam, who presented a CP briefing to a conference of teachers last August, commented that the college has made "over and above efforts to help the Oklahoma high school teams."

## The Academic Award in Hawaii

TSgt. Jason M. Hibbetts received the Academic Achievement Award, sponsored by the **Hawaii Chapter**, at his NCO Academy graduation at JB Pearl Harbor-Hickam in February.

AFA was well-represented at the Binnicker Professional Military Education Center's graduation ceremony and awards banquet: Chapter President John Murphy was there, and retired CMSAF James M. McCoy served as guest speaker. McCoy had been AFA's Chairman of the Board 1994-1996 and was in Honolulu this February to visit family and Hickam airmen.

Murphy said he always finds out the awardee's name ahead of time, so he can get a plaque appropriately





*Tidewater Chapter Secretary Gordon Strong flips the flapjacks at a pancake breakfast in Virginia. AFJROTC cadets from six units in the Chesapeake, Va., area sold more than 500 tickets to the annual event. Money raised helps pay for a cadet field trip to Washington, D.C.*

from the NCO Academy at the Binnicker PME Center.

Pacific Air Forces and Hickam's 15th Wing dedicated the center in February 2012 to CMSAF James C. Binnicker, the ninth Chief Master Sergeant of the Air Force (1986-1990).

**The Winner Is One of Our Own**

The **Fort Worth Chapter** of Texas recently learned that its Earle North Parker essay competition winner has won at the state level as well.

It seemed especially appropriate since the writing contest is named for the Fort Worth businessman who founded the chapter.

Last fall, AFJROTC cadet Alexander Maberry, from Western Hills High School in Fort Worth, wrote a two-page essay on the assigned topic, remotely piloted vehicles and their role in national security. He covered, in particular, the demands of RPV operations on the enlisted personnel who run the sensors. "With all the training sensor operators receive,

they become masters of intelligence, which makes them a valuable asset in national security," Maberry wrote.

His essay earned him \$1,000, as first-place winner for the chapter. Texas State President William Lawson made the presentation.

In February, the judges, led by Texas AFA Scholastic Awards VP Vance M. Clarke of the **Northeast Texas Chapter**, named Maberry as the 2013 statewide winner. This garnered the student another \$2,000. Lawson said Maberry wants to become a Air Force officer.

The Parker contest is open to all seniors in Texas. Its namesake served as a fighter pilot with the Army Air Forces' 94th Fighter Squadron in World War II. He became a banker in his civilian career and started the essay contest in 1963. Parker died in 1993.

**California Teacher Flips It**

In California, the **Maj. Gen. Charles I. Bennett Jr. Chapter's** Teacher of the Year award went to an instructor using a "flipped classroom."

Aaron Filbrun received the award during a surprise classroom visit from Chapter President Frank D. Walterscheid in late January.

Filbrun teaches seventh- and eighth-graders life sciences and physical sci-

engraved, but the winner isn't formally announced until the diploma-and-awards presentations, held at Hickam's Tradewinds Enlisted Club. Hibbetts, from the 25th Air Support Operations Squadron, was "surprised and very pleased" by the award, Murphy reported.

Hibbetts earned the honor on the basis of test grades and writing and speaking evaluation scores. His class, 13-1, was the first to graduate this year



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**Frank Walterscheid (left), president of the Maj. Gen. Charles I. Bennett Jr. Chapter, listens to school principal Sharolyn Larson introduce the chapter's Teacher of the Year, Aaron Filbrun (center).**

ences, in alternate years, at Big Valley Christian School in Modesto, Calif. The school has more than 700 pupils, from preschool through high school.

A Big Valley teacher for the past nine years, Filbrun keeps up with technology that helps him motivate students, and he conducts seminars to share his knowledge with fellow teachers.

This school session, Filbrun decided to try the flipped classroom approach, combining technology with teaching: He provides the lesson content online ahead of time. Then, when his students come to class, they carry out discovery

activities for their 50-minute period, instead of only listening to chalk talk.

Flipped teaching has been around for some 10 years, used by educational institutions ranging from elementary schools to Harvard. It uses teacher-produced or commercially made videos and podcasts that students access at home through computers and other mobile devices.

#### Project Bionic Arm

In California, the **Robert H. Goddard Chapter** president, Juan E. Cruz, attended a Santa Barbara County Education Office awards dinner in March.

On the chapter's behalf, Cruz presented a \$500 grant to Chris Ladwig, a seventh- and eighth-grade science teacher at Vandenberg Middle School. The funds from AFA will support a robotics activity called the Bionic Arm Project. It requires Ladwig's students to integrate several science, math, technology, and engineering topics, among them: physics, hydraulics, electronic circuitry, and the properties of gases and liquids.

Earlier, Cruz spoke at an awards dinner for the Santa Barbara Civil Air Patrol unit. He told the audience at a restaurant at Santa Barbara Airport about AFA's mission and the importance of studying STEM subjects.

He also described chapter- and national-level AFA incentives available to them: CAP aerospace educator and unit grants and the CAP Cadet Medal.

#### More Chapter News

- In January, the Commander's Call for the 203rd Red Horse Squadron included presentations for the 2012 Outstanding Airmen of the Year. **Tide-water Chapter (Va.)** President Kenneth S. Turner, VP Allan G. Berg, Treasurer Robert C. Hudson, and Executive Committee member Chip Moran attended this Camp Pendleton, Va., gathering to honor the Air National Guardsmen. Turner presented the awards and AFA memberships to Outstanding Airman of the Year SrA. Jacob L. Fleming, NCO of the Year TSgt. Arthur G. Wagoner, and Senior NCO of the Year MSgt. Andre S. Davis.

- **Mercer County Chapter's** Teacher of the Year has also been named the New Jersey State Teacher of the Year, Chapter President Stephen LaPoint has announced. Mark Lamb teaches aviation aerospace technology at Ocean County Vocational Technical School. Among the local officials at Lamb's award presentation were Chapter VP Grieg Moore, Stewart Zitzner, and Jerry Iacona, chapter, state, and region aerospace education VP. Steve LaPoint is the chapter president.

- **Maj. Gen. Oris B. Johnson Chapter** in Louisiana members watched "The Last Bomb" at their January gathering. The 1945 Army Air Forces documentary film covers the conventional-phase B-29 bombing of Japan. The audience, including AFROTC cadets from Louisiana State University, then got a personal viewpoint of such missions from Chapter Secretary Ralph Stephenson, a World War II Superfortress bombardier. ■

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## Reunions

[reunions@afa.org](mailto:reunions@afa.org)

**20th Fighter Wing Assn**, including 20th Fighter Gp, Fighter-Bomber Wg, Tactical Fighter Wg (1930s-present). Oct. 23-27 in Charleston, SC. **Contact:** Dave Skilling (770-429-9955) (abbyndavid@aol.com).

**20th-81st TFW**, UK. Sept. 25-29 in San Antonio. **Contacts:** Dave Hayes (330-225-7153) or Richard Voytasko (210-436-8643).

**49th Fighter-Interceptor Sq.** Oct. 3-6 in Dallas. **Contact:** Ron Morrissette (ronmorr1@verizon.net).

**81st FW Assn.** Sept. 21-24 at the Hyatt Regency River Walk, San Antonio. **Contact:** Harry Eckes (972-539-7259) (harryeckes@verizon.net).

**677th, 932nd, 933rd, 934th Aircraft Control & Warning Sq.** Oct. 7-11 at the Magnuson Hotel & Meridian Convention Center in Oklahoma City. **Contact:** William Crick (803-422-9486) (littlechick@msn.com).

**AF Security Forces Assn.** Sept. 19-21 in Tampa, FL. **Contact:** Jerry Bullock, 818 Willow Creek Cir., San Marcos, TX 78666 (1-888-250-9876) (jerry.bullock193@gmail.com). **B-57 Canberra Assn.** Oct. 3-7 at Wright-Patterson AFB, OH. **Con-**

**tact:** Gayle Johnson (920-261-3879) (gaylejp35@att.net).

**Pilot Training Class 55-I.** Sept. 10-14 at the Grand Plaza Hotel in Branson, MO. **Contact:** Darold Korzan, 1030 NE 451st Rd., Concordia, MO 64020 (660-463-5799) (korzan@centurytel.net).

**Retired USAF Fire Chiefs.** Aug. 6-8 at the Homewood Suites Mayfaire in Wilmington, NC. **Contact:** Charlie Richardson (386-760-6286) (clardb@att.net).

**US Air Forces Escape & Evasion Society.** May 8-12 in Tampa, FL. **Contact:** Richard Shandor, PO Box 254, Cresskn, PA 16630 (814-886-2735).

**Wolfhounds of Soesterberg.** Sept. 13-21 at Soesterberg, Netherlands. **Contact:** Cynthia Wilson (+31-6-244-32-607) (cynthia.wilson@wwclassiconline.com).

E-mail unit reunion notices four months ahead of the event to [reunions@afa.org](mailto:reunions@afa.org), or mail notices to "Unit Reunions," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Please designate the unit holding the reunion, time, location, and a contact for more information. We reserve the right to condense notices.

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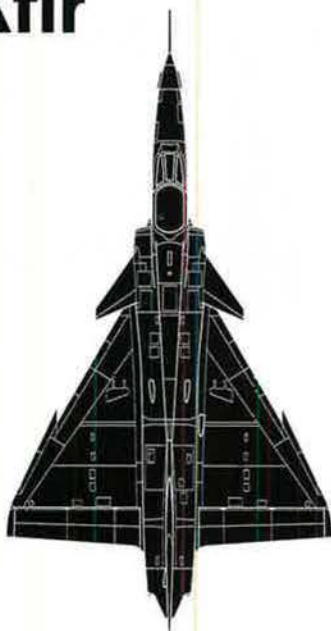
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## Kfir



The Israeli Kfir (Hebrew for “lion cub”) proved itself over more than two decades to be among the world’s most capable multirole fighters. It has been called—without a shred of disrespect—a kind of “frankenplane,” featuring a modified French airframe, US engine, Israeli electronics, and bits and pieces from other sources. This odd confluence of technology—and a bit of skullduggery—resulted in a superb combat aircraft, flown by Israel and five other air arms.

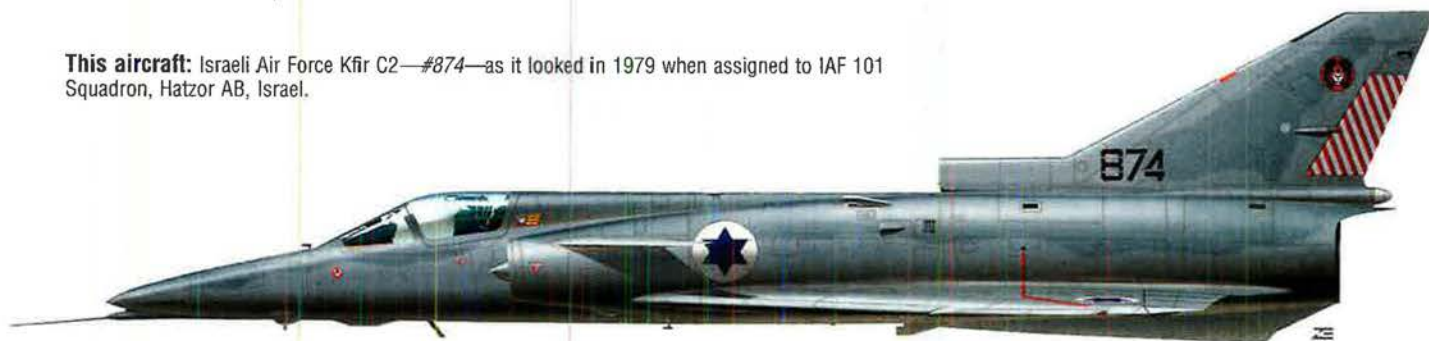
In the first two decades of Israel’s existence, the primary source of its front-line fighters was France. Paris had provided the Dassault Ouragan, Mirage IIICJ, and Mystère IIIC. However, French-Israeli relations foundered in the June 1967 Arab-Israeli War. Though victorious, the Israeli air arm suffered

60 losses and desperately needed new combat aircraft, but France instead imposed an embargo on new shipments. Capitalizing on some covert sympathy within the Dassault organization, Israel mounted a brilliant national effort to adapt the Mirage III design to Israeli needs. The Kfir emerged in 1973.

A subsequent and more ambitious effort led to the Kfir C2 variant. It featured swept canard foreplanes, a revised wing profile, and small strakes under the forward fuselage. These aerodynamic advances improved the Kfir’s short-field performance and maneuverability. After 25 years of service, the Kfir finally was withdrawn from active Israeli service in the late 1990s.

—Walter J. Boyne

**This aircraft:** Israeli Air Force Kfir C2—#874—as it looked in 1979 when assigned to IAF 101 Squadron, Hatzor AB, Israel.



DOD photo by PHC Robert L. Lawson, USN (Ret.)



Two US Navy F-21A Kfir aircraft in formation near NAS Fallon, Nev.

### In Brief

Designed, built by Israeli Aircraft Industries ★ first flight June 1973 ★ number built 212 ★ crew of one or two (trainer) ★ armament two 30 mm cannons, up to 13,000 lb of ordnance ★ **Specific to Kfir C2:** one General Electric J79 turbojet engine ★ max speed, 1,520 mph ★ cruise speed 680 mph ★ max range 215 mi ★ weight (loaded) 36,000 lb ★ span 26 ft 11 in ★ length 51 ft 4 in ★ height 14 ft 11 in.

### Famous Fliers

**Ace:** Giora Epstein. **Test pilot:** Dani Shapira. **Other notable:** Carroll LeFon (retired USN captain), died in crash of a Kfir operated by a commercial firm. (Israeli security practice for the most part prevents disclosure of pilot names or activities.)

### Interesting Facts

Designed as an interceptor, but used as a CAS aircraft ★ supplanted in air superiority role by F-15 and F-16 ★ flown by US Navy, Marine Corps as aggressor aircraft ★ scored a single aerial victory—the downing of a Syrian MiG-21 in June 1979 ★ operated by the air arms of Colombia, Ecuador, and Sri Lanka ★ produced without a valid airframe license from Dassault ★ flown by Airborne Tactical Advantage Co., US commercial firm contracting with the US military.





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