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FEATURES

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Disabled CAP Member, Others Learn To Fly

Always a hit with Civil Air Patrol cadets, 89-yearold Col. Mary Feik is surrounded by youth at the 2013 Middle East Region Tri-Wing Cadet Leadership School. An ambassador for



CAP, Feik frequently travels across the United States to tell about her journey and experiences in aviation.

Photo by Lt. Col. John Lierenz, Delaware Wing

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ON OUR COVER

Cadet 1st Lt. Elizabeth Bell of Civil Air Patrol's Connecticut Wing enjoys the flight of her life at the Northeast Region Glider Academy in Springfield, Vt. Bell, who "pre-soloed" this glider in 2012 with the guidance of her instructor, Lt. Col. Phil Jones, returned this year to serve as cadet commander of the academy. And, yes, she soloed in a CAP glider this time around. Read more about CAP's soaring cadets, beginning on page 39.

Photo by Lt. Col. Phil Jones, Pennsylvania Wing

Civil Air Patrol Volunteer is oriented toward both internal (CAP) and external audiences. For that reason, it uses the Associated Press style for such things as military abbreviations. Official internal CAP communications should continue to use the U.S. Air Force rank abbreviations found in CAPR 35-5.

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New 1st Air Force commander receives first CAP flight

Lt. Gen. William Etter. Continental U.S. North American Aerospace Defense Command Region — 1st Air Force (Air Forces Northern) commander,

recently experienced the Florida Wing's Eglin Air Force Base fire patrol mission firsthand. Lt. Col. Gerrold Heikkinen, Tyndall-Panama Composite Squadron's assistant operations officer and an instructor pilot, flew with Etter on fire patrol over Eglin in what was also Etter's first flight in a CAP plane since becoming Air Force North commander on March 7. He was impressed, he said, by the capabilities of the avionics suite of the Cessna 182 G1000 glass cockpit. Etter was also introduced to several of the aircraft's systems and to how CAP aircrews perform various missions such as search and rescue. "I have never flown an aircraft with all of the navigation avionics capabilities in the C-182," he said afterward. "This is an excellent platform for conducting CAP missions." Florida Wing aircrews fly fire patrol missions twice a day as part of an ongoing effort to locate and control fires across the vast Eglin ranges. Photo courtesy of U.S. Air Force

Mai Todd Domachowski

Encampment cadets hear Pennsylvania Wing bugler blow his horn

As far as Senior Master Sgt. Les Hart was concerned, something was lacking at the Wisconsin Wing Encampment at Volk Field, Camp Douglas. Such gatherings normally feature recorded renditions of reveille, taps and retreat, but Hart - who was



attending the Great Lakes Region Chaplain Corps Staff College there felt that wouldn't provide the right atmosphere of respect during the daily formations. So, he took matters — and his trumpet — into his own hands and played all three calls. A member of the Pennsylvania Wing's Keystone Country Cadet Squadron 1504, Hart is frequently called on to play taps at military funerals. He became interested in playing the trumpet for military ceremonies in 1982 while stationed at Langley Air Force Base, Va., as senior noncommissioned officer in charge of the base honor guard for three years while on extended active duty. Photo by Cadet 2nd Lt. Boaz Fink, Minnesota Wing

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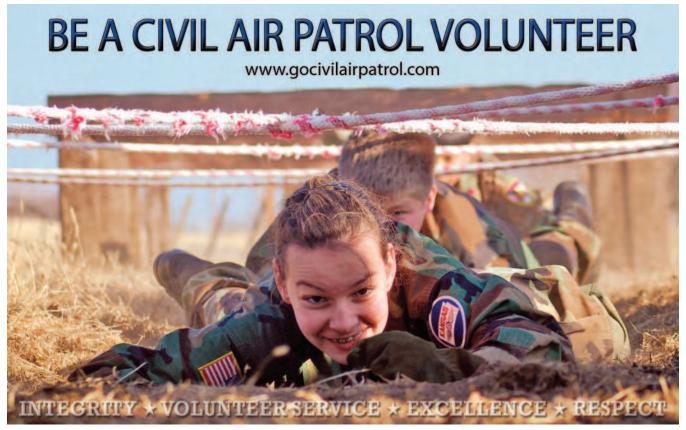
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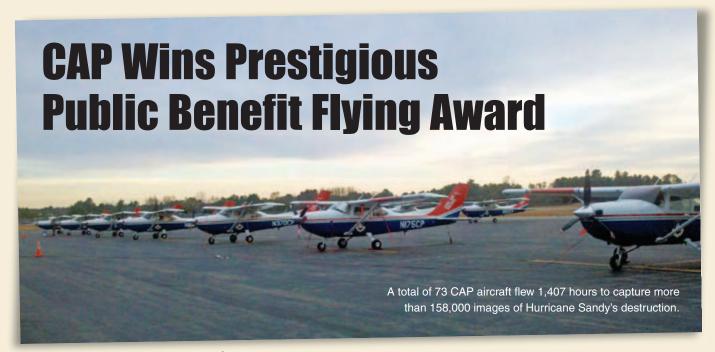
ON THE WEB

Visit www.capvolunteernow.com daily for squadron and wing news.

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Service Delivered & Service Recognized

By Kristi Carr

No one joins Civil Air Patrol for the glory. In fact, it's often said CAP members are unsung heroes, with most citing their greatest reward as helping save a life, simply serving their country or being recognized with an award.

Recently, more than 250 members got their just dues when CAP was selected for the 2013 award for Outstanding Achievement in Advancement of Public Benefit Flying by the National Aeronautic Association in partnership with Air Care Alliance — both nationwide humanitarian flying organizations.

The award, which will be presented Nov. 12 at the NAA's Fall Awards Banquet in Arlington, Va., recognizes CAP's mammoth and innovative response — dubbed Operation Looking Glass — to the destruction wrought by Hurricane Sandy. The enormous storm struck the Eastern Seaboard in the fall of 2012, devastating parts of 14 states and the District of Columbia, killing 100 and leaving thousands without potable water, electricity and shelter.

CAP's honor is one of a series of Public Benefit Flying awards given annually to U.S. individuals or organizations distinguishing themselves in using general aviation aircraft to support the health and well-being of anyone needing charitable assistance or for the benefit of the general public.

Size matters

The massive storm demanded a massive response, and that's what CAP delivered. A multi-jurisdictional effort was called for, and with its nationwide reach and aerial photography expertise, CAP was ideally suited for the mission. "Based on working with CAP in the past, FEMA knew we could count on CAP to deliver muchneeded information following Sandy's landfall," said Chris Vaughan, geospatial information officer for the Federal Emergency Management Agency.

Working with FEMA and numerous state and relief agencies, CAP tapped members from 21 wings in one of the organization's largest disaster relief missions in its 72-year history. The mission spanned 40 days, involved 73 CAP aircraft flying 696 sorties totaling more than 1,407 hours, deployed crews both on the ground and in the air and was overseen by numerous incident commanders. Aircrews captured more than 158,000 images, while ground crews manned shelters and helped deliver critical supplies.

FEMA and CAP collaborated daily during the mission to establish which areas needed to be photographed. That began as a list of cities but soon evolved into precise coordinates transferred to an online spreadsheet,



Civil Air Patrol's goal was to deliver more photos as quickly as possible. To do this, aircrews took photos at higher altitudes and at 45-degree angles; areas with the most critical needs were readily identified through crowdsourcing, a process involving thousands of people simultaneously reviewing and rating each photo's urgency for response. Inset: One of the good things to come of the tragedy wrought by Hurricane Sandy was an uptick in the number of CAP members trained as aerial photographers. Maj. Richard Stuart reported having only eight to 10 certified aerial photographers to draw from for the Maryland Wing's Sandy flights, but said 17 are now fully qualified, with more members pursing the training. Photo by Col. Kay Walling, Maryland Wing

enabling subordinate incident command posts to pull the locations in their jurisdiction and assign aircrews to fly requested routes. To be able to precisely fly the grid patterns requested, only CAP Cessna 182s equipped with Garmin G-1000 technology were used.

Innovations

Since the day after the 9/11 terrorist attacks, when a single CAP plane was tasked to capture images of what was left of the World Trade Center twin towers, CAP has continued to make a name for itself in aerial photography. The Hurricane Sandy response required more than just photos, though. This disaster was different from 9/11, because so many victims were still alive and in desperate need of help.

It also was different from the 2010 Gulf oil spill, because the damage was more than environmental, this time also including homes, businesses and vital infrastructure. The disaster called for speed and triage, and as the saying goes, "necessity is the mother of invention."

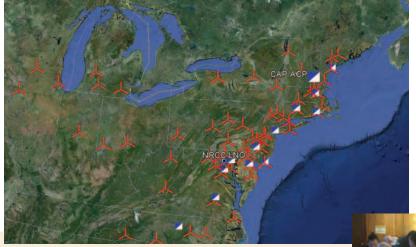
"Hurricane Sandy was a shift in the way CAP took its

photos," Vaughan said. "The veracity and volume of the Hurricane Sandy photos were exponentially advanced over any previous CAP/FEMA collaboration." He traced procedural changes to a rare planning opportunity for FEMA, CAP and others at a summer 2012 brainstorming session at the Naval Post-Graduate School's RELIEF (Research & Experimentation for Local & International Emergency & First Responders) Field Experiment at Camp Roberts, Calif.

In a nutshell, FEMA wanted more photos delivered as quickly as possible.

"The beauty of Camp Roberts is we are free to try lots of stuff, but also we are free to fail," said Dr. Linton Wells II, director of the Center for Technology and National Security Policy at the National Defense University in Washington, D.C. Part of Wells' job is to integrate military and civilian resources to provide sustainable support for populations under stress, as in times of war or disaster. He was on hand at Camp Roberts for the August 2012 session.

One hypothesis tested then was: Can more aerial



This map depicts the locations of CAP aircraft (red props) and command personnel responding to the mission, including the area command post in Concord, N.H. (larger blue and white box at top), numerous incident command posts (smaller blue and white boxes) and the FEMA National Response Coordination Center in the District of Columbia.

photos be taken if planes fly at higher altitudes? The answer proved to be "yes." At higher altitudes, planes could cover more ground — up to 4 square miles of imagery in one flight — in the same amount of time and still capture more images.

Another hypothesis discussed was crowdsourcing, a technique where thousands of people — regardless of where they work or live — can quickly and simultaneously review the photos online through applications like the Humanitarian OpenStreetMap Team's MapMill, rating them with red, yellow or green tags to indicate the urgency for responding.

Other refinements also were investigated at Camp Roberts, resulting in significant changes to CAP's standard operating procedures for aerial photography. Not only would the planes fly at higher altitudes, but the angle for taking the photos would also change from almost directly overhead — resulting in views similar to what a satellite image would show — to 45 degrees. These diverse imagery angles, coupled with the usual way of taking photos from the side, helped FEMA assess the damage.

"You could determine how far water had risen up the side of a building or what might be inside a ground structure, such as cars parked inside a garage," said Maj. Richard Stuart of the Maryland Wing, one of CAP's incident commanders.

CAP's geotagged images were placed on FEMA's

Civil Air Patrol and FEMA personnel collaborated at the CAP area command post in Concord, N.H., to establish precise parameters for aerial photography flights, which were then posted on an online spreadsheet, ready to be accessed by incident commanders throughout afflicted areas.

Photo by Col. Christopher J. Hayden, Northeast Region

GeoPlatform, as well as on the U.S. Geological Survey's Hazards Data Distribution System, which made crowdsourcing technologies, such as MapMill, a reality. MapMill leveraged thousands of volunteers, many of them CAP members, to view and rate the photos online, providing the emergency management community with impact assessments that improved situational awareness of the event.

While technology made possible many of the innovations coming out of the Camp Roberts session, the various organizations' assembling there also "resulted in a lot of social networking that paid big benefits with Hurricane Sandy," Wells said.

A hint of things to come

Expect continued refining of CAP's aerial photography program, but the next big thing in CAP photography might just well be on the ground. Glen Russell, FEMA's remote sensing coordinator, noted the value of CAP ground team photos taken following the Moore, Okla., tornado in May.

Ever vigilant — semper vigilans — CAP, though deeply appreciative of the Public Benefit Flying award, can't afford to rest on its laurels. To keep its large-scale disaster skills fresh, the organization held numerous multistate and multiregional training exercises during the summer, including FEMA-simulated requests for aerial photography across the country.

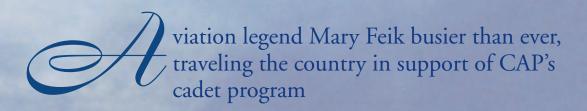


Col. Mary Feik, 89, is considered by NASA to be one of the most influential women in aerospace.

Photo by Capt. Allen Moore, Virginia Wing; background photo courtesy of Aimée Harbin

89 and Still Inspiring

By Mitzi Palmer



At age 89, Col. Mary Feik of the Maryland Wing shows no sign of slowing down. She is still soaking up as much flight knowledge as she can. Still traveling around the world representing women in aviation. Still flying her own Piper Comanche, making house calls in her pickup when fellow flying buddies need help diagnosing what's wrong with their airplane.

Keeping her batteries charged

Feik says the most important thing in her life is the CAP cadet program.

"You have no idea how wonderful the teenage cadets are to me," she said, adding the teenagers keep her batteries charged. "I get so much sweet attention from the cadets that I feel like I've already gone to heaven. Seriously."

Unlike most women one year shy of turning 90, Feik strives to stay knowledgeable about the latest aviation developments.

"My function in life now is to stay ahead of technology," she said. "I have to find out how they do repairs with carbon fiber. I know there will be cadets who ask me. As an old lady, I don't have all the answers. I have to keep learning."

Traveling and learning

Even though Feik has been retired since 1985, she maintains a busy schedule traveling across the country speaking to crowds about her journey and experiences in aviation. In the past three years alone, her appearances total 71.

Modesty is important to Feik. At CAP gatherings she never sits at the head table and doesn't even wear her uniform. Instead, she dresses in a business suit and wears her jewelry on her lapel.

"I always sit with the cadets," she noted. "I feel

During a break at the 2013 Virginia Wing Conference, Col. Mary Feik talks with Capt. William R. Cowherd, commander of the Virginia Wing's Fort Pickett Composite Squadron, about her work as chief aircraft restorer at the National Air and Space Museum. Photo by



Capt. Allen Moore, Virginia Wing

"I get so much sweet attention from the cadets that I feel like I've already gone to heaven. Seriously." — Col. Mary Feik



Col. Mary Feik always gravitates toward the cadets, who enjoy her company as much as she does theirs. More often than not she is on hand to present the Mary Feik Achievement award to deserving cadets, like Cadet Master Sgt.

Shawna Mumma of the Virginia Wing's Fredericksburg Composite Squadron, pictured here with Feik and her ribbon at this year's Virginia Wing Conference.

Photo by Capt. Allen Moore, Virginia Wing

NAA to Honor Mary Feik with 2013 Katharine Wright Trophy

Ool. Mary Feik will be awarded the 2013 Katharine Wright Trophy in November.

The award is presented annually to a woman who has contributed to the success of others or made a personal contribution to the advancement of the art, sport and science of aviation and space flight over an extended period of time. The award was named in honor of Orville and Wilbur Wright's sister, Katharine, who was a crucial supporter of her brothers' timeless work in development of the first airplane.

The trophy is administered by the National Aeronautic Association in partnership with The Ninety-Nines, the International Organization of Women Pilots.

Feik will be joined by Kim de Groh, a senior materials research engineer at the NASA Glenn Research Center, who is being honored for her tireless efforts in mentoring young women for over two decades and for her numerous technical achievements in the advancement of materials durability in the space environment.

"The Katharine Wright Trophy was established 30 years ago to acknowledge the important role women have played in aviation. We are extremely proud to award the Katharine Wright Trophy to Col. Feik and Ms. De Groh for their outstanding careers in aviation and aerospace," said Jonathan Gaffney, NAA president and CEO.

The award will be presented at the NAA Fall Awards Banquet on Nov. 12 at the Crystal Gateway Marriott in Arlington, Va.

comfortable with them, and I get a lot of information from them about how they feel about CAP, and that's what I really want to know."

Feik recalls a recent favorite trip to a conference in Texas.

"I was standing in line for dinner and a man came up to me, asked to take a picture with me, then hugged me and started to cry," she remembered. "He said, 'Ma'am, my cadets love you.' Sadly, I don't know who it was, but these things happen to me often and it keeps me going."

There are no signs Feik will be slowing down anytime soon.

"I feel like I'm investing in the future and this country," she

said about her CAP involvement. "And I think a lot of people in CAP feel that."

Feik has been awarded an honorary life membership in CAP — one of the organization's highest honors. She also has a cadet award named after her — the Mary Feik Achievement, earned by more than 24,500 cadets since it was established in 2003.

A lifetime of aviation

Feik, who overhauled her first auto engine at the age of 13 and was teaching aviation mechanics for the U.S. Army Air Corps at 18, is considered one of the most influential women in aerospace by NASA and others. Her biography is lengthy and her list of achievements impressive.

Perhaps one of her most noteworthy awards to date is the Federal Aviation Administration's Charles Taylor Master Mechanic Award she received in 1996 in recognition of her many contributions to aviation safety. Feik was the first woman to ever receive the award, named for the Wright brothers' mechanic and engineer.

During World War II, the Annapolis, Md., resident became an expert on several fighter planes and is credited with becoming the first woman engineer in research and development for Air Technical Service Command.

"Basically my job, even as a teen, was a master mechanic in charge of flight training," she said. "I was a test pilot for 9,000 hours and wrote the flight training manual for the airplanes."

Feik, who wasn't allowed to study engineering in college — even with a 4.0 grade-point average — because she was female, got her first job in the Army Air Corps. She worked for 20 years with males only — airmen and sergeants.

"I had a wonderful, wonderful career working only with men," she said. "They pushed me and I worked hard."

Feik has also helped restore famous planes at the National Air and Space Museum. She stills works as a professional restorer of antique and classic aircraft.

Her husband of 54 years, Robert Feik, passed away in 2004, and was also a Maryland Wing member. He had a noteworthy career in aviation as well, serving as a chief scientist for Air Force Communications Command. This year, he was inducted into the Air Force Cyberspace Operations and Support Hall of Fame.

Feik's daughter, Lt. Col. Robin Vest, and son-in-law, Col. Warren Vest, are also CAP members.



At aviation shows like this
"Women Can Fly" event held
earlier this year at WarrentonFauquier Airport in Virginia, Col.
Mary Feik is like a magnet for
Civil Air Patrol officers and cadets
who are always eager to get their
picture taken with her. Here, Feik,
center, poses with members of
the Virginia Wing — from left,
Cadet Chief Master Sgt. Aaron
Corbett, Cadet 2nd Lt. Gina
Scalzo, 1st Lt. Kelly Muzzin and
Cadet 1st Lt. Elena Shriner.
Photo courtesy of Christine DeLude



By Kristi Carr

Since Civil Air Patrol's Surrogate Remotely Piloted Aircraft (SRPA) program was launched in 2009, participation among CAP members has increased exponentially—first as Green Flag East in Louisiana and later as Green Flag West in Nevada.

What the Green Flag program offers is realistic training for U.S. military personnel so they can fully understand the strategic and tactical capabilities of RPAs, like the U.S. Air Force's MQ-9 Reaper or MQ-1 Predator, as they prepare to go "in theatre" overseas.

While the wars in the Middle East may be ebbing, the use of RPAs and CAP's role with the program are not.

Then and now

The SRPA program started out modestly with only 18 CAP personnel and two CAP aircraft in early 2010.

There are still only two dedicated CAP aircraft, one each at Green Flag East and Green Flag West. Both are outfitted with a sophisticated under-wing Multi-Spectral Targeting System-Alfa that streams live video of the ground below and uses advanced software capable of noting anomalies, heat signatures and other identifying characteristics.

But today, the number of CAP members participating as aircrews and support staff is upwards of 75. "The

reasons behind this substantial increase," said Maj. Phil Blank, CAP's Green Flag group commander, "are the intensity of the work, the number of hours being flown and the overriding need to ensure safety."

At the program's start, it was mandatory that participating CAP members be former military, but this is no longer the case. CAP sensor operators need not even be pilots, and a Green Flag University provides thorough training for aircrews.

In addition to the flight crew, CAP also employs a robust ground presence of professionally trained volunteers, including two squadron commanders, safety officers, incident commanders, liaison officers and others, not to mention active-duty Air Force and CAP-USAF personnel who closely monitor and supervise training exercises.

How it works

CAP's role in training U.S. troops can best be explained by first understanding how the military operates its RPA program.

Basically, the military uses four personnel. One is overseas, or "in theatre," embedded with troops; this is the joint terminal air controller, or JTAC, whose job is to direct RPAs to a particular location. Meanwhile, at a ground station typically on U.S. soil, a pilot controls the flight of the RPA while a systems operator handles the MTS-Alfa and system software. A third person functions as supervisor.

"In the training involving CAP, the CAP aircraft substitutes for the RPA and the three CAP members substitute for the military's ground station team," Blank explained.

The goal is to have the CAP plane/aircrew combination mimic the Reaper or Predator mission capabilities of tracking and even performing simulated attacks of targets on the ground. This is accomplished through a coordination of equipment and manpower, as directed by the military's JTAC on site. The JTAC, for instance, might task the CAP SRPA to fly along a particular path to search for

Opposite page: A CAP aircraft outfitted with a Multi-Spectral Targeting System-Alfa flies over Fort Polk, La., in a Green Flag East operation. Photo by Capt. Steve Gladwin, Texas Wing

improvised explosive devices, check for enemy movement or circle overhead to provide cover to ground troops. If the JTAC decides a target should be engaged, he can call in an available fighter air strike and the RPA will observe the target while the fighter engages it or the RPA can fire a missile. In training with CAP, any such firing is simulated, as no weapons are carried on the SRPA.

Surrogate's popularity

CAP's Green Flag RPA work is primarily done in support of the U.S. Air Force's 548th and 549th combat training squadrons. Beyond Green Flag, recent missions have also included Emerald Warrior, a large-scale war game; Cactus Starfighter, a simulated exercise that includes air/ground scenarios and combat rescue; and a special request for an interoperability mission for the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS).



Lt. Col. Keith Riddle conducts a post-op debriefing session to review ground images. Photo by Lt. Col. Greg Clasen, Georgia Wing

At California's Fort Irwin National Training Center, CAP has participated in a U.S. Army brigade-level training exercise that covers RPA use for as many as 4,000-6,000 soldiers at a time during a two-week period. "During this exercise," Blank said, "the soldiers basically 'fight' a mini-war over terrain that includes mock villages, replete with civilians playing the parts of villagers." Although the "range" at Green Flag East is smaller, similar scenarios in a more urban environment are often played out.



A CAP aircrew — from left,
Lt. Col. Bob McDonnell of the
Southwest Region, Lt. Col.
Keith Riddle of the Mississippi
Wing and Maj. Michael Rich
of the Arizona Wing —
reviews its instructions for a
Green Flag exercise in a
preflight planning session.

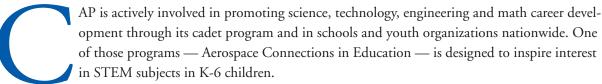
Photo by Lt. Col. Greg Clasen, Georgia Wing

Many of the CAP members involved with the SRPA program are retirees or selfemployed. They're volunteer professionals who have time to devote to lengthy exercises and training sessions. "Each is incredibly dedicated, spending many hours a week ensuring our operations are safe and effective," acknowledged Blank, who, besides his CAP duties, is a full-time information technology executive for a multibillion-dollar healthcare provider.

"As for the military, not only do they appreciate CAP's professionalism, but everyone is also discovering how extremely cost-effective CAP is compared to running a real Predator," he added. The military obviously makes good use of CAP and its Surrogate program, a claim supported by the fact that the two Green Flag SRPAs, from a total fleet of about 550 planes, account for an impressive 3 percent of the hours flown by CAP on a yearly basis.

Beyond the scope of military training support, Green Flag aircraft, crews and support staff have also supported Defense Support of Civil Authorities/Disaster Relief missions at the request of 1st Air Force and missing person searches when full-motion video has been requested.

"It is important to note CAP adheres to the Posse Comitatus Act, which prohibits the federal government from using military personnel to enforce state laws," said Blank. "CAP, as the official auxiliary of the U.S. Air Force, can do reconnaissance to look for and find a defined object or target — for example, a lost hiker or aircraft — but cannot run surveillance of an object or target merely in the hope that something illegal or improper will be found." \blacktriangle



Currently being conducted in more than 28 states across the country, the ACE program annually reaches approximately 20,000 students. The program's success is driven by grade-specific, aerospace-themed courses of study focused not only on academics but also on character development and physical fitness.

The hands-on, inquiry-based lessons, which are created by Civil Air Patrol and provided to educators free of charge, are aligned with national academic standards.

The U.S. Department of Education's website, ED.gov, clearly defines STEM's critical role: "The United States has become a global leader, in large part, through the genius and hard work of its scientists, engineers and innovators. Yet today, that position is threatened as comparatively few American students pursue expertise in the fields of science, technology, engineering and mathematics (STEM) — and by an inadequate pipeline of teachers skilled in those subjects."

President Barack Obama's Educate to Innovate initiative is working to increase the number of students and teachers who are proficient in these vital fields. "One of the things that I've been focused on as president is how we create an all-hands-on-deck approach to science, technology, engineering and math. ... We need to make this a priority to train an army of new teachers in these subject areas, and to make sure that all of us as a country are lifting up these subjects for the respect that they deserve," Obama said during the third annual White House Science Fair in April.

Educating and inspiring America's youth to embrace science, technology, engineering and math are of critical importance to the national security of our great nation. As this school year begins, CAP adults, cadets and educator members are encouraged to support CAP's ACE program by lending their talents and experiences to ACE classrooms in their communities.

The feature story starting on the following page provides more details about the ACE program and how your colleagues in CAP are working to make a difference in the lives of youth in their communities. To learn more about ACE and how to volunteer for this program, visit www.capmembers.com/ace.

Don Rowland

Chief Operating Officer
CAP National Headquarters



Volunteers Connect Youth to Aerospace Education

By Mitzi Palmer

s one of Civil Air Patrol's three congressionally mandated missions, Aerospace Education initiatives are being conducted in CAP squadrons and K-12 classrooms across the nation. One unique AE program, the K-6 Aerospace Connections in Education (ACE) program, is bringing squadrons and classrooms together to introduce and ignite an interest in science, technology, engineering, math (STEM subjects) and related careers.

"To say we have changed many lives is an understatement. With the ACE program, I really believe we are opening some young eyes to the wide world of opportunities outside their small world." — Lt. Col. Louis Fifer, California Wing

Most impressive to Susan Mallett, CAP's Youth Development Program coordinator, is the schools' efforts are being supplemented by volunteers in the classrooms. "School-based educators are not conducting the program alone. CAP adult and cadet members are connecting with schools to bring specialized aviation knowledge as well as positive role models into the classrooms," she noted.

Giving Time

"ACE is not only a great introduction to the CAP cadet program, it is also an excellent outreach opportunity for CAP members," said Lt. Col. Pete Feltz, who promotes the program in Arizona schools alongside Maj. Phillip Hubacek. "CAP members introduce the structured AE program to schools, teach ACE lessons to the students and represent CAP during various school programs." Feltz is the Arizona Wing's director of aerospace education, and Hubacek is deputy director.

"This team works tirelessly to reach out to area schools to help them conduct the ACE program," said Mallett. "They are present every year at numerous ACE school liftoff events, in the classroom conducting lessons and presenting ACE completion certificates and plaques at school awards programs, in addition to representing CAP at air shows, school system STEM fairs and community events to promote CAP's K-12 programs."

Several Arizona participants under the leadership of Feltz and Hubacek have earned national ACE school and educator awards in recent years for their outstanding efforts.

In Arizona's neighbor to the east, Col. Mark Smith, New Mexico Wing commander, said the Albuquerque School System has endorsed CAP's Cadets at School program curriculum for its middle schools and has provided more than \$200,000 in support. CAP leaders "have identified the need for early introduction to



Cadet Col. Ryan Erskine of the Alabama Wing's Auburn
Composite Squadron poses alongside a young ACE student in
Boaz, where Erskine volunteered for three years to mentor ACE
students. The ACE program provides "a wonderful opportunity
for students to explore their scientific interests that may not be
fully explored in their regular curriculum," said Erskine. "It's
amazing to see their new interests and goals that spring from
experiencing science firsthand."



Col. Edward Phelka, CAP national controller, speaks to students at Sayre Elementary School in South Lyon, Mich.

Photo courtesy of Business Buddies Coordinator Lauren Bedich

STEM education and will begin promoting the ACE program this school year."

For Col. Edward Phelka, CAP national controller, it was an afternoon of volunteering for his son's second-grade classroom in South Lyon, Mich., that unexpectedly got him involved with the ACE program.

"When his teacher found out I was a pilot and served in Civil Air Patrol, she put me in touch with the coordinator of the local 'Business Buddies' (a South Lyon Community Schools program), who arranges for guests from the community to speak to students to enhance the curriculum," he said. "I was then invited to make a presentation about Newton's laws of motion and, using some of the ACE materials, the lesson was a big hit. I kept getting asked back for more presentations around the district."

After his presentation, Phelka received several hand-crafted thank-you letters from students. One said: "Thank you for teaching me about airplanes. You changed my life. Now I want to be a female pilot." Another wrote: "I have always been afraid of heights but now that you told me about friction and gravity, I'm not anymore! I really want to be a pilot just like you."

Since that initial speaking engagement, Phelka has

spoken at the school's career fair about aviation careers and volunteered to supplement science units at the fourth- and fifth-grade levels using the ACE materials as the basis for his presentations. He also uses these opportunities to explain the CAP cadet program to the young students.

"Everyone learns in a different way," he said. "What I think is great about the ACE program is it provides both an academic lesson and a hands-on component that helps get students excited and enthusiastic about the subject being taught."

Making an Impact

Lt. Col. Louis Fifer, commander of the California Wing's Sacramento Composite Squadron 14, is also a regular volunteer educator in the ACE program. Alongside his aerospace education officer, Maj. Roger Dunn, he worked to implement the program in three schools last year.

"I added the CAP ACE/STEM program to my regular in-school, five-days-a-week tutoring program at Thomas Edison Language Institute (a school for grades K-7)," said the retired U.S. Navy helicopter pilot. "My use of the ACE materials was to augment my before-school



Students at Anthem Elementary in Anthem, Ariz., celebrate receiving CAP's ACE School of the Year award in June 2011 with a rocket launch. Photo courtesy of Anthem Elementary staff



Col. Brad Lynn, Alabama Wing commander, views the ACE program as the perfect way to introduce young people to CAP at an early age, igniting interest among youth and their parents.

Theory of Flight classes, wherein I teach the basics of science, technology, engineering and mathematics to show my fifth-graders how various devices have flown."

Fifer, who began tutoring at Thomas Edison in May 2008 with a beta test to define a very closely controlled series of K-6 tutoring goals and techniques, now has an additional 100 tutors in his task force and cites many memorable moments with the children.

"We are really reaching these kids with notable learning experiences," he said. "I believe our greatest impact on our students last year was the series of flight models I helped all our kids make, fly, study and use in mock aviation scenarios."

Fifer recalls a moment last year during a class graduation field trip to the California Aerospace Museum, when one of the fifth-graders was so taken by an assistant aerospace education officer — who came to help the kids with the flight simulators and to explain the different aircraft types — she insisted he was her "new grandfather."

"To say we have changed many lives is an understatement," said Fifer. "With the ACE program, I really believe we are opening some young eyes to the wide world of opportunities outside their small world."

ABOUT THE ACE PROGRAM

Civil Air Patrol's efforts in STEM (science, technology, engineering and math) education, which began more than 70 years ago, complement President Barack Obama's "Educate to Innovate" campaign launched in 2009 to move American students from the middle to the top of the global pack in science and math achievement over the next decade.

Now in its sixth year, CAP's K-6 Aerospace Connections in Education program has reached nearly 100,000 students nationwide — guiding them in STEM subjects while introducing them to the world of aerospace education.

"Designed as a grade-level specific program for all types of public, private and home schools, ACE has yielded increasingly more impressive results each year," said Susan Mallett, Youth Development Program coordinator at CAP National Headquarters.

In tracked schools implementing the program, student interest in STEM careers has increased by 70 percent and science test scores by 26 percent. Additionally, each year 90 percent of participating educators indicate an intention to continue the program to enrich their core curriculum requirements.

LEARN MORE:

For more information about the ACE program and how to volunteer or support it, visit www.capmembers.com/ace or contact ace@capnhq.gov.



Wreath Project Soaring to New Heights

CAP volunteers drive growth of Wreaths Across America, HART ceremonies

By Markeshia Ricks

his year, Civil Air Patrol volunteers and cadets placed more wreaths at national, state and municipal cemeteries and conducted more ceremonies with Wreaths Across America and its Canadian-recognition counterpart, Honoring Allies and Remembering Together (HART), than ever before.

Volunteers are on pace to do even more through those programs as the 150th anniversary of Arlington National Cemetery approaches in 2014 and as their Canadian allies step up efforts to triple the number of border crossings between the U.S. and Canada for HART ceremonies.

Col. Daniel M. Leclair, former Maine Wing commander and new Northeast Region commander, serves on the Wreaths Across America board of directors. He's done so for the last five of the eight years he's been involved with the organization.

"Time flies when you're having fun," he said.

But for Leclair, it's more than fun. Each year's successful completion of wreath ceremonies is the culmination of a lot of effort by him and thousands of CAP volunteers just like him, who believe in Wreaths Across America's mission to remember, honor and teach. Many CAP squadrons annually solicit donations for wreaths, hold ceremonies that honor veterans and place wreaths on the graves of those who have given their lives for their country.

On a Saturday each December — National Wreaths Across America Day — wreath ceremonies take place at more than 800 locations across the country and overseas. A week before the event, CAP cadets, volunteers,



Cadet 2nd Lt. Joshua H. Bauerle of the Michigan Wing's
Livingston Composite Squadron stands guard during the 2012
HART ceremony on the Ambassador Bridge, which connects
Detroit with Windsor, Ontario. Photo by Capt. Robert Bowden, Michigan Wing

supporters, Gold Star Families and veterans wind their way from Maine to Arlington National Cemetery in Washington, D.C., to deliver remembrance wreaths, all the while honoring, remembering and teaching about the sacrifice of members of the military. The 600-mile journey makes the trip the longest annual veterans' celebration in the country.

Leclair, who served in the U.S. Air Force more than 20 years, knows well the sacrifice of veterans. That, he said, is one of the main reasons he continues to give so much of his time to help make Wreaths Across America



and "Honoring Allies and Remembering Together" happen each year. "It is a great way of acknowledging what our veterans have

done," he said.

Making it personal

It started out with taking 5,000 wreaths to Arlington National Cemetery as a way to say thanks, said Karen Worcester, executive director of Wreaths Across America — thanks to the men and women who made the ultimate sacrifice for their country and the freedoms Worcester and her family enjoy, and thanks for defending their freedom to worship as they please, to speak truth to power and to own a successful business in a free land.

The mission is no longer just about saying "thank you" but also about fulfilling a promise to never forget the sacrifice of men and women in uniform, to always honor their sacrifice and to teach the next generation about their legacy. And it's a promise Worcester said her family couldn't keep without the support of CAP and thousands of volunteers across the country.

Not only do CAP volunteers help coordinate wreath ceremonies in the U.S. and at the Canadian border, they also serve on the board of directors and generally help in any way they can, Worcester said.

"Almost everybody that gets involved in Wreaths Across America is doing it out of the love and respect for somebody they know who made a sacrifice," she said. "They understand when they look at the name on the gravestone of a young man or woman, they get that there is something personal (to each of us) in the fact that somebody

Civil Air Patrol color guard cadets are front and center at Arlington National Cemetery on Dec. 15, 2012, before the National Wreaths Across America Remembrance Ceremony.

Inset: Karen Worcester, executive director of Wreaths Across America, is joined by her husband, Morrill Worcester, owner of Worcester Wreath Co., at the Arlington wreath-laying event.

died for our freedom."

Civil Air Patrol volunteers understand that personal sacrifice, Worcester said, because often they're connected to someone who served in the armed forces and died fighting for their country. She said CAP has supported and worked to grow Wreaths Across America since its inception. CAP has even taken on the mission of strengthening relations with Canadian allies through the HART ceremonies, Worcester said.

"This whole thing has evolved from being a 'thank you' to, honestly, a pledge from our organization — and I believe CAP shares that with us — that we will not forget not only those that served, but also what they served for and the value of that," she said.

In 2012, with the help of CAP and other organizations such as the Veterans of Foreign Wars, the American

Legion and the Boy Scouts of America, Wreaths Across America placed more than 420,000 wreaths at national, state and municipal veterans cemeteries, including more than 130,000 at Arlington National Cemetery. CAP, which often coordinates wreath layings, and in the case of HART ceremonies wreath



More than 110,000 Wreaths Across America evergreens were laid at Arlington last year, creating solemn picture-postcard scenes like this.

exchanges, has conducted more than 800 ceremonies across the country and at the border between the U.S. and Canada.

Worcester said she believes with the continued dedication of CAP volunteers, not only will Wreaths Across America meet the challenge of placing the more than 220,000 wreaths needed to cover all of Arlington during the 150th anniversary, but also even more ceremonies will be held across the nation.

"It's a big challenge, but look at the growth we've had in just a short amount of time," she said. "I appreciate the Civil Air Patrol being one of the first groups that stuck by us, not just those who serve on our board, but also the hierarchy at CAP, from the highest person at National Headquarters on down to the cadets who do all they can to help us with our mission."

From sea to sea

Getting ready for the Arlington anniversary isn't the only challenge on CAP's plate. The organization's Canadian allies want to increase the number of HART observations and have set a goal of having at least one ceremony with every state that touches a Canadian province.

"We've only about seven provinces that touch on the U.S. but it's about 12 states that touch on Canada, so

some touch on two provinces," said Thomas P. White, Air Cadet League of Canada national president. "We're challenging the people that we want it from sea to sea."

Border ceremonies are notorious for the amount of coordination and red tape involved in getting both countries to allow contingents

from each to march to the international boundary lines and exchange wreaths. In many cases, the ceremonies involve shutting down a major thoroughfare for border crossings and navigating the rules and regulations imposed by each nation. Both White and Leclair said it takes a lot of effort and preparation, but it's worth it.

"It just shows the friendship and cooperation between the two countries," White said. "We're intermarried back and forth across the border. People attend each others' "It just shows the friendship and cooperation between the two countries. We're intermarried back and forth across the border. People attend each others' family functions, christenings, birthdays and graduations.

We're not only neighbors, we are relatives."

— Air Cadet League of Canada National President Thomas P. White

family functions, christenings, birthdays and graduations. We're not only neighbors, we are relatives."

In various times of war, Canadians have served in the U.S. armed forces, and U.S. citizens have reciprocated. Until introduction of the HART ceremonies in 2008, there wasn't a dedicated way of honoring troops of Canadian or U.S. origin who had died while serving in the other country's uniform, Worcester said.

"It kind of leaves their families in limbo, because they don't fit the criteria to be Gold Star Families because they are Canadian citizens, and they don't fit the Canadian Silver Cross Mothers (now known as the Memorial Cross Wearers) criteria because they've chosen to serve in our military," she said.

When the American Gold Star Mothers recommended creating a wreath ceremony with the aim of bringing people from the U.S. and Canada together to honor the sacrifice of both countries, it made sense, Worcester said.

"It's a very special thing, and CAP pretty much has taken on that mission. It is good to see them and the Canadian cadets come together," she said.

CAP cadets and Air League of Canada cadets are responsible for carrying out the ceremonies and wreath presentations, which presents a great leadership opportunity, White said.

In 2012, HART ceremonies were conducted in Calais, Maine; Detroit; Coutts, Mont.; and Yellowknife, Yukon, which borders Alaska. Each year, navigation of the rules of both countries gets easier, Leclair said. The Gold Star Mothers and the Canadian Memorial Cross Wearers also play an integral role in the HART ceremonies.

"They're very excited about supporting this because it

has all the good components going for it, which is engaging our next generation on the value of veterans and also honoring our veterans and veterans' families," Leclair said.

White said he couldn't be more pleased with how much easier the border crossing is getting, and he looks forward to HART ceremonies being held every place where the two nations share a border.

"The border people are excellent," White said. "They shut down an international bridge ... and we march to the center of the bridge where the international border line is, and the wreaths are exchanged there. There are a whole lot of spectators, a whole lot of cadets, a whole lot of civilians. It has been quite successful."

Fundraising and community service

Working with Wreaths Across America not only gives CAP volunteers and cadets a way of honoring veterans and their families, it also serves as a primary fundraising vehicle for many squadrons, Leclair said. In a time of federal sequestration, when CAP and the Air Force face tough budget constraints, the wreath project brings in new revenue while still allowing CAP to provide a valuable service to the community, he said.

"I just think this is a wonderful program in many different ways," Leclair said. "It engages our cadets, it's a great community service and it provides our squadrons a source of funding so they can continue on with their great community service. It's a great collaboration. I know of no other new funding sources other than this that are bringing in this much money. It is a prime example of how we can bring in additional funding while doing community service."

fter six years of steady progress toward fulfilling the U.S. Navy's goal of unmanned carrier integration, the Navy Unmanned Combat Air System (N-UCAS) program has successfully demonstrated launch and arrested landing aboard a ship.

Robert Benner, an aerospace engineer for Naval Air Systems Command (NAVAIR) and aerospace education officer for the Maryland Wing's St. Marys Composite Squadron, said one of the program's overall goals was to help develop and mature technologies required to operate an unmanned aircraft in a shipboard environment.



"It was used to demonstrate how we might operate an unmanned aircraft in the carrier environment and pass what we learned to future programs," Benner said. "The X-47B (the unmanned aircraft used in these demonstrations) will never be used in combat."

The X-47B was launched May 14 from the USS George H.W. Bush (CVN 77) and made its final landing July 15.

According to a U.S. Navy news release, during its time at sea the aircraft completed a total of 16 precision approaches to the carrier flight deck, including five planned tests of X-47B wave-off functions, nine touchand-go landings, two arrested landings and three catapult launches.

Comprehending Intel

The data collected at sea will be compared to the data accumulated from more than 160 precision approaches and six arrested landings at Naval Air Station Patuxent River, as well as thousands of high-fidelity simulated landings.

"The technologies developed and lessons learned from the UCAS project will be used to help develop the next carrier-capable unmanned aircraft," said Benner.

Known as Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS), it will be an operational aircraft deployed aboard aircraft carriers and used to provide persistent intelligence, surveillance, reconnaissance and strike capabilities for the Navy.

"UCLASS will be a better product because of UCAS-D (Demonstration) and the X-47B," added Benner, who joined the UCAS-D program in 2010 and became the flight test engineer in charge of surrogate flight testing.





The Team

During the X-47B sea trials, Benner and the rest of the team were in the test control center conducting the flight or monitoring certain systems.

In order to make very tight carrier timelines in May and July, the program team accelerated the flight rate up to four times more than originally planned, ultimately executing 48 test flights in a 90-day period before embarking aboard CVN 77.

"The folks from Northrop Grumman and the other contractors who designed the X-47B, its subsystems and the ship segment are some of the smartest people I've met," Benner said. "And the aircraft maintainers are the hardest-working people in the world — seriously.

"It's not easy to keep two one-of-a-kind experimental aircraft up and ready to fly every day."

First Lt. Robert Benner, aerospace education officer with the Maryland Wing's St. Marys Composite Squadron, stands in front of the X-47B, an unmanned U.S. Navy aircraft that made history earlier this year by successfully demonstrating launch and arrested landing aboard the USS George H.W. Bush (CVN 77). Benner, an aerospace engineer for Naval Air Systems Command (NAVAIR), played an important role in the project, which helped the Navy achieve its goal of unmanned carrier integration. Photo courtesy of Erik Hildebrandt, U.S. Navy

A Glimpse of the Future

"It isn't very often you get a glimpse of the future," Secretary of the Navy Ray Mabus said after observing the historic landing event in July. "Today, those of us aboard USS George H.W. Bush got that chance as we witnessed the X-47B make its first-ever arrested landing aboard an aircraft carrier. The operational unmanned aircraft soon to be developed have the opportunity to radically change the way presence and combat power are delivered from our aircraft carriers."

TO LEARN MORE

For more information about the UCAS-D program and the historic launch and landing of the X-47B, go to navy.mil.



Critical Role in National Defense

The Colorado Wing's Mustang Cadet Squadron posted the colors.

The 2013 National Conference and Command Council in Denver attracted more than 600 members from across the nation. Participants took advantage of six preconference sessions, more than 40 learning labs and the opportunity to

watch CAP's Command Council at work. Special events included opening and first-time-attendees receptions, presentation of 29 national awards and the always-spectacular banquet, featuring keynote remarks from Gen.

Stephen R. Lorenz, president and chief executive officer of the Air Force Academy Endowment. Mixed in with education, networking and member recognitions was the chance to visit Denver's historic 16th Street. Built in 1982, the treelined pedestrian promenade was within walking distance of outdoor cafes, shops and restaurants.

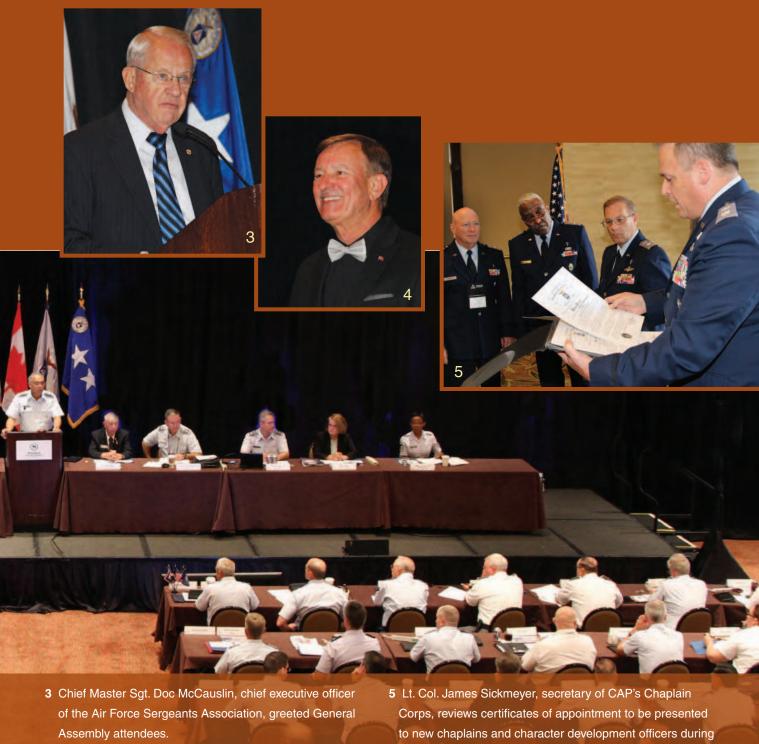
A pictorial snippet of the festivities for those who were there and those who were there in spirit follows.



Background: CAP's Command Council meeting featured updates on a variety of topics, including safety, finance, strategic planning, operations, cadet programs, aerospace education and Wreaths Across America.

Photos by Susan Schneider, CAP National Headquarters

- 1 Cadet Col. Christopher Weinzapfel, chairman of the National Cadet Advisory Council, led the Awards Program and General Assembly as emcee, adding a youthful ambience to the events.
- 2 Gen. Stephen R. Lorenz, president and chief executive officer of the Air Force Academy Endowment, was the banquet guest speaker. His presentation on leadership featured tips for success, complemented by entertaining video clips illustrating his key messages. Here, Maj. Gen. Chuck Carr, CAP national commander, presents Lorenz with a clay eagle and commemorative plaque in appreciation of his speech.



- 4 For the second year, CAP was honored to have Senior Member Ken Goss, Spaatz Cadet No. 39, serve as Banquet Master of Ceremony. "None of what we have done or ever will do is possible without the service and sacrifice of our members," said Goss, who highlighted CAP's contributions to national defense.
- Corps, reviews certificates of appointment to be presented to new chaplains and character development officers during the Chaplain Corps Advisory Council meeting. With him, from left, are Chaplain Lt. Col. Jim Howell, Southeast Region chaplain; Chaplain Col. J. Delano Ellis II, chief of the Chaplain Corps; and Lt. Col. Kenneth Van Loon, past Chaplain Corps deputy chief.



- 6 Charles Bostwick, director of Vanguard's CAP division, assists Lt. Col. Sharon Williams of the Northeast Region with a purchase. Vanguard, one of eight conference sponsors, is CAP's merchandising vendor.
- **7** Maj. Gen. Chuck Carr, CAP's national commander, second from left, and

Brig. Gen. Joe Vazquez, vice commander, second from right, pose with, from left, Kevin Patrick, Bill Anderson and Carl Craig, all representatives of Cessna, sponsor of the Opening Reception. The cowboy-themed event featured carving stations, a dessert table, cheese trays and assorted hors d'oeuvres.

8 Kevin Patrick, a field service engineer with Cessna, offered opening remarks during an Aircraft Management learning lab, one of more than 40 seminars presented during the conference.

Meet some of CAP's

Brightest Stars

By Kristi Carr

If Civil Air Patrol used a red carpet, these members would be walking on it. Each was recognized at CAP's National Conference in Denver, and each brings great credit to the organization for outstanding work in 2012.

Lt. Col. Willard F. Gordon, Senior Member of the Year

Lt. Col. Willard F. Gordon's star has been part of the CAP universe for almost six decades, beginning 58 years ago and including his years of active duty as an F-86 Air Defense pilot, later as a reservist with the U.S. Air Force and then as a captain for American Airlines.

He was able at times to combine his jobs with his

volunteer work for CAP. While in the Air Force Reserve, he organized a CAP flight encampment to help 18 financially strapped cadets earn their solo wings. As a commercial pilot, he used direction-finding procedures to advise air traffic control about emergency locator beacons that were transmitting; in one case, his diligence resulted in finding a small aircraft that had crashed in the mountains near San Diego.

Often serving the California Wing as a mission pilot, to date his search-and-rescue mission sorties number an impressive 331. Serving as the incident commander on some 80 missions, he cites one, in particular, as making "the whole CAP career worthwhile," when in 1986 he helped save two lives.

His influence on cadets — often taking them on orientation flights in his personal plane — introduced many to careers in aviation as well as to continued service in CAP.

With more than one stint as a squadron commander, he has also held leadership positions in San Diego Group 3 and the California Wing. In 1992 he founded Fallbrook Senior Squadron 87, where he remains an active member, serving as special adviser to the commander.

"Receiving this award is an honor of the greatest magnitude," Gordon said, "yet there is no greater reward than being on a CAP team whose efforts result in saving a life. Now in my later years, I also take great satisfaction in seeing my former cadets as leaders in CAP, the military and



Civil Air Patrol National Commander Maj. Gen. Chuck Carr, left, and retired U.S. Air Force Brig. Gen. Sandy Schlitt of CAP's Board of Governors congratulate the 2012 Senior Member of the Year, Lt. Col. Willard F. Gordon. Photo by Susan Schneider, CAP National Headquarters

What a difference a CAP senior member can make!

Helping cadets over the years has been one of the great joys for the 2012 CAP Senior Member of the Year, Lt. Col. Willard F. Gordon of the California Wing. One whose life he touched is Richard Drury, a retired U.S. Air Force fighter pilot and renowned author, including "My Secret War," which chronicles his wartime experiences in Vietnam and has become a favorite of aviation readers.

"You do not have an award large enough for him," Drury said of Gordon. "If the question came up about who was the one person who had the most influence on my career, I'd easily choose him. He put up with all my foibles as a youngster, helped me through the CAP years and was always my hero. At my advanced age, I'd have to say I owe it all to Will Gordon!"



civilian aerospace.

"The more one is available, qualified and current, the more chances there are to be involved in worthwhile CAP missions like these," he said.

Cadet Col. Sara Fishbein, Cadet of the Year

Though only 19 years old, Cadet Col. Sara Fishbein's star shines brightly in her service to CAP. Already having served CAP at all levels — local to national — she worked her way up through every cadet position in the Ohio Wing's Wright-Patterson Composite Squadron, culminating with cadet commander. There she redefined the role of the cadet staff and instituted cadet program review boards to the point where she became an adviser to the group commander.

With her involvement in 10 encampments across four different wings, including service as cadet commander of the 2012 Michigan Wing encampment, she's estimated to have influenced the leadership development of more than 800 cadets.



As cadet commander of the Michigan Wing encampment, Cadet Col. Sara Fishbein, right, CAP's 2012 Cadet of the Year, often mentored younger cadets. "By far the greatest gift CAP has given to me," she said, "is the opportunity to lead my peers. I have learned so much from each cadet I have ever worked with and every activity I have ever participated in." Photo by Capt. Robert L. Bowden, Michigan Wing

Fishbein has numerous national CAP activities to her credit, including participation in an International Air Cadet Exchange trip to Australia and in the National Cadet Competition, Civic Leadership Academy and courses in pararescue and civil engineering.

Outside CAP, she has participated in two Dayton, Ohio, youth orchestras, is a member of a local rowing team and is active in a local Judaic youth group. Home-schooled, she graduated from high school in 2012 with a 3.9 grade-point average. Having completed her term at Northwestern Preparatory Academy, she is currently pursuing a commission as

Lt. Col. Willard F. Gordon, CAP's 2012 Senior Member of the Year, takes the pilot's seat — a position he was to occupy often during the next several decades — in a CAP Stinson L-5 in the mid-1960s.

an Air Force officer at the U.S. Air Force Academy.

"CAP has helped me tremendously in my development as a leader and as a person," Fishbein said. "I remember doing flutter kicks in the middle of nowhere in New Mexico, speaking to the director of the CIA or meeting Australian veterans and thinking, 'Not many people get to do this.'

"Going through basic cadet training at the Air Force Academy," she added, "my CAP background gave me a bit of a different perspective than most of my classmates. Some things such as drill and uniform were a little easier, but the biggest asset I had was the teamwork I learned at CAP's pararescue orientation course. During this year my first at the academy — I will continue to learn from the leaders around me and rely on some of the lessons I've learned from CAP."

Maj. Michael E. Eckert, F. Ward Reilly **Le**adership Award

The F. Ward Reilly Leadership Award is presented in conjunction with the Squadron of Distinction Award, which went this year to the New Mexico Wing's Albuquerque Heights Composite Squadron, commonly called

Spirit Squadron, for its outstanding progress in 2012. Under the leadership of its commander, Maj. Michael E. Eckert, the squadron excelled in all three of CAP's congressional chartered missions — emergency services, cadet programs and aerospace education.

By planning emergency services exercises with varying degrees of challenges, the squadron ensured all members could participate, no matter their training or skill levels. In 2012, the squadron executed a memorandum of understanding with the Cibola

National Forest Service so future exercises could be held there. And in March 2012, squadron members organized the first Ground Team 3 Academy to help members achieve requirements for that level, thereby strengthening the unit's ground team capabilities.

Meanwhile, the squadron delivered an exciting and comprehensive cadet program. Squadron cadets were heavily involved with Wreaths Across America, obtaining sponsors for more than 300 wreaths and being invited to serve as color guard in wreath-laying ceremonies in Santa Fe. And they played a major role in many of the squadron's aerospace education activities, especially with model rocket events, CyberPatriot competition and balloon flight instruction.

In less than a year, the Spirit Squadron increased its membership by 26 percent, with members advancing in training level and rank. Fundraising — participation at the local wine festival alone raised more than \$7,200 helped ensure a full slate of activities for the squadron.

Eckert tossed the credit for the award right back to his squadron, saying, "I am very grateful for this award, but it was earned by all the great senior members and cadets in the squadron."



Maj. Michael E. Eckert, right, commander of the New Mexico Wing's Albuquerque Heights Composite Squadron and winner of this year's F. Ward Reilly Award, takes a hands-on approach with his members. Here he helps cadets from his squadron place memorial wreaths on veterans' graves at Santa Fe National Cemetery.

Photo by 2nd Lt. Mary Fox, New Mexico Wing

AFNORTH Commander's Award

Like "the elephant in the room," it was impossible to ignore Hurricane Sandy when it came to this award, which recognizes the aircrew carrying out the most meritorious CAP mission. The massive storm, which struck the East Coast in November, killing more than 100 and leaving millions without power or potable water and thousands homeless, set in motion one of the largest missions in CAP's 72-year history. Scores of CAP members from 21 wings responded.

While ground teams aided the American Red Cross and other relief agencies, CAP's unique contribution was its aerial photography, which evolved into Operation Looking Glass. CAP aircrews made 696 flights, logging 1,407 hours, to capture images of the destruction on the ground. The pilots flew precisely defined grid patterns at an altitude of 3,000 feet along the coastline from southern New Jersey to Cape Cod, Mass., while photographers



U.S. Air Force Col. Van Wimmer, second from left, representing 1st Air Force, presents the AFNORTH Commander's Award with the aid of CAP National Commander Maj. Gen. Chuck Carr, left. Accepting on behalf of the Great Lakes, Northeast and Middle East regions, respectively, are, from left, Cols. Robert M. Karton, Daniel M. Leclair and Larry J. Ragland. Photo by Susan Schneider, CAP National Headquarters

took pictures every five seconds from an open photo window in winter temperatures, high winds and turbulent conditions.

Using online crowdsourcing to speed the photo analysis process, CAP provided the Federal Emergency Management Agency and others with more than 158,000 geotagged images, helping public officials make critical triage decisions.

CAP's Hurricane Sandy response pulled into focus the organization's strengths — trained personnel, low-and-slow aircraft capable of capturing great photos and a military-style command structure able to perform over a huge geographical and multi-jurisdictional area, all at a very reasonable cost.

On behalf of their regions, Cols. Robert M. Karton of the Great Lakes Region, Daniel M. Leclair of the Northeast Region and Larry J. Ragland of the Middle East Region accepted the AFNORTH Commander's Award for the missions CAP undertook in the storm's wake.

"The response by Great Lakes Region members was beyond belief," Karton said. "I asked for volunteers who were qualified aircrews, ground personnel and ICS staff to be ready to deploy within 24 hours for up to a week and had wing commanders responding with the names and contact information of the volunteers within 15 minutes; all positions were filled with highly qualified personnel within two hours."

Ragland said, "The Middle East Region continued to live up to our commitment of 'no boundaries and no limits' when it came to responding to Sandy. Our flight crews flew long distances and worked hard to assist the Northeast Region during this disaster, and I am very proud of the way Civil Air Patrol responded to the critical needs of our citizens."

Col. Christopher J. Hayden, who was Northeast Region commander during the mission, added, "What has been most evident throughout the Hurricane Sandy operation has been the stretching out of hands across wings and regions. Working together is one of the most rewarding components of CAP membership. Multi-wing and multi-region training exercises coupled with a national-level doctrine for such operations are critical to our future as an organization."



CAP's 2012 Aerospace Education Teacher of the Year, Dan Caron, right, of the New Hampshire Wing, provides young students like Kaleb Brown with plenty of exciting opportunities, such as a seat in the cockpit at C-R Helicopters in Nashua, N.H. Photo by Senior Member Christine Landry, New Hampshire Wing

Dan Caron, Teacher of the Year

A teacher who brings a 3-D printer and a home-built flight simulator into his classroom is bound to gain the attention of his students. That's just what Dan Caron did.

Despite, or perhaps because of, his more than 33 years teaching technology at the middle, high school and college levels, the subject of aerospace education never grows old for Caron, a CAP aerospace education member teaching technology and engineering education at Bedford High School in New Hampshire. Caron pairs his Bedford students with professionals in the aerospace industry in an e-mentoring program, and when a student expressed an interest in meteorology, he lost no time in providing instruction in that area as well.

Previously employed at Nashua Senior High School, he joined forces with a physics teacher there to provide students with astronaut training, flying missions in a shuttle/mission control simulator they had built themselves. They spoke via ham radio to astronauts and cosmonauts on Space Shuttle Columbia and space station Mir.

During Caron's time at Kingswood Regional High School in Wolfeboro, N.H., he taught a model rocketry unit, and his students also flew a Space Experiment Module and participated in two STARSHINE (Student-Tracked Atmospheric Research Satellite for Heuristic International Networking Equipment) missions. For 10 summers he directed a space academy for students in grades 3-8.

As an aerospace education member, Caron has been active in both CAP's Aerospace Education Excellence program for older students and the Federal Aviation Administration's Aerospace Career Education Academy Program for lower grades. By involving the New Hampshire Wing, the ACE program he teaches has become a feeder program to the local Hawk Composite Squadron's cadet program.

An author and curriculum specialist for Engineering byDesign through the STEM Center for Teaching and Learning, Caron was the 2004 Air Force Association Teacher of the Year and is a Space Foundation Teacher Liaison Program alumnus.

"CAP has been an invaluable partner in aerospace education in New Hampshire," he said. "CAP's curriculum materials, its ground transportation, static displays, briefings from the wing and career speakers from local squadrons make it possible for our program at the Aviation and Aerospace Education Center in Winnipesaukee to grow each year."

Cadet Chief Master Sgt. Katherine A. Leo, **Ai**r Force Sergeants Association Cadet Noncommissioned Officer of the Year

Cadet Chief Master Sgt. Katherine A. Leo of the New York Wing has experienced a meteoric rise in the 2½ years since she joined Civil Air Patrol. Most recently charged with leading the Rochester Composite Squadron's new cadet training program, she proved her ability to organize and execute a plan with limited supervision as she managed a staff of five in addition to 20 new trainees four times a year.

Serving on the wing's Cadet Advisory
Council, Leo took an active role in squadron activities, from encampments to emergency services training to veteran events. She graduated from Rush-Henrietta Senior High School in Henrietta this year, having taken numerous advanced placement classes and achieving close to a 4.0 grade-point average. Some of her many high school activities included varsity softball, Model United Nations, National Honor Society and Student Council. In both 2011 and 2012 she won her school's Outstanding Student and Citizenship awards.

Working part-time, she also volunteered in her community at the Bivona Child Advocacy Center in Rochester, the Salvation Army and the Elim Gospel Church in Lima. She is attending the U.S. Air Force Academy, where she first learned of the award while making her way through basic cadet training.

"The award presented the fortunate opportunity to reflect upon the time that has passed

since I first joined Civil Air Patrol in 2011," Leo said. "One of the most important details I noticed is I still hold onto and cherish the values I developed during my time in CAP — this fact alone demonstrates how great of an impact the cadet program can have on an individual who chooses to dedicate his or her time and effort to Civil Air Patrol.

"I place a vast importance on many of the same factors that have pushed me to succeed in Civil Air Patrol and life outside of it in general: character, sacrifice, taking care of my people, leadership (of course), the CAP four core values and leaving the world better than I found it. I have grown so much because of Civil Air Patrol, and I cannot imagine what my high school career would have been like without it. I am so very honored to have received this award, and I owe it to those who were with me from the beginning of my cadet career that were willing to help me develop into the person I am today."



CAP Cadet Chief Master Sgt. Katherine A. Leo, the 2012 Air Force Sergeants Association Cadet Noncommissioned Officer of the Year, exchanged her CAP uniform for one from the U.S. Air Force when she became a cadet at the Air Force Academy.



CAP Focuses on Youth

By Jenn Rowell

The 2013 National Conference featured a day for Civil Air Patrol cadets.

bout 35 cadets, mostly from the Colorado area, attended Cadet Day events during the National Conference that featured CAP National Commander Maj. Gen. Chuck Carr, retired U.S. Air Force Gen. Stephen R. Lorenz and Col. Mary Feik.

For Cadet Tech. Sgt. Hannah Christian, the Cadet Day program offered her a chance to meet cadets from other wings, catch up with those she had previously met and learn more about what CAP offers. The Colorado Wing cadet also enjoyed interacting with special guests, especially Feik, an aviation engineer, master mechanic, pilot, instructor and aircraft restorer who became an expert on military aircraft during World War II. (*See story on page 8*.)

"I learned a lot about leadership, cadet programs and being a successful leader and cadet," Christian said. "I was happy to have the opportunity to go, and I think Cadet Day is a great idea."

Cadet Chief Master Sgt. Qashr Middleton, also a member of the Colorado Wing, has participated in wing Cadet Day programs, but this was his first at the national level. He said he "got to have fellowship with other CAP members" and see how other wings function. Middleton is planning to join the Air Force after high school; he hopes to receive an appointment to the Air Force Academy and go into intelligence.

Officers and cadets participating in Cadet Day pose for a photo with Maj. Gen. Chuck Carr, Civil Air Patrol's national commander, and Brig. Gen. Joe Vazquez, national vice commander. Photos by Susan Schneider, CAP National Headquarters



Cadet 2nd Lt. Adam Nelson, left, Cadet Chief Master Sgt. Qashr Middleton, Cadet Lt. Col. Matthew J. Ten Eyck and Capt. Caitlynn Graham enjoy a front-row seat at Civil Air Patrol's National Conference in Denver. The cadets also participated in Cadet Day, attending events that featured CAP National Commander Maj. Gen. Chuck Carr, retired U.S. Air Force Gen. Stephen R. Lorenz and Col. Mary Feik.

The idea of a day just for cadets was appealing to him, as was learning about CAP, military careers, leadership and other topics with his peers. "I think it's an important experience for cadets," Middleton said. "It's something that's offered for us that we can really benefit from."

He started flying before joining CAP but appreciates the aviation opportunities the organization offers, as well as the military structure.

Military service runs in his family; his grandfather was a Tuskegee Airman and the first top gun, he said. His stepdad was a parajumper, and his stepdad's dad was a Triple Nickle, the first all-black paratrooper company. His uncle was an Air Force specialist, and his brother an Army soldier. "It's a family thing," he said.

Middleton said cadets should take advantage of opportunities like Cadet Day whenever possible, especially when they offer practical information and handson activities.

Cadet Col. Sara Fishbein of the Ohio Wing, who was honored as Cadet of the Year during the conference, also spoke to the cadets during Cadet Day. Also attending was Cadet Chief Master Sgt. Katherine A. Leo of the New York Wing, who was honored at the conference as the Air Force Sergeants Association Cadet Noncommissioned Officer of the Year.

"I learned a lot about leadership, cadet programs and being a successful leader and cadet. I was happy to have the opportunity to go, and I think Cadet Day is a great idea." — Cadet Tech. Sgt. Hannah Christian







Cadet 2nd Lt. Chris
Cashman demonstrates
his landing technique as
his instructor, Maj. John
Williams, looks on during
the 2012 Northeast
Region Glider Academy
in Springfield, Vt. The
region's four glider
academies graduate
about 60 cadets each
year. Photo by Col. James Linker,
Northeast Region

CAP's cadet program and the Soaring Society of America have a common mission to foster and promote glider flight, and since the mid-1990s their partnership has benefitted both organizations. SSA has assets, gliders and personnel located in its affiliate clubs across the nation, and CAP has nearly 26,000 aviation-minded cadets. Marrying the two programs simply makes sense. The SSA's youth program is the partnership's newest amenity.

Capt. Sue Martin of the Florida Wing's Ti-Co Composite Squadron is active in both SSA and CAP's glider program and has been working to expand gliding in her area. Whenever cadets take a training flight or attend a glider encampment or academy, Martin said, they're eligible for the free SSA membership package.

"We encourage the cadets after they take an orientation flight to go to the SSA website and join," she said.

Flying gliders helps develop the basic "stick and rudder" skill set, said Col. Jack Buschmann, national glider program officer and former Colorado Wing commander. Buschmann has been a member of SSA since the 1970s and has belonged to CAP since his cadet days more than 57 years ago.



"There's no engine, so you don't have the distraction of power," he said. "It's a great introduction to the purity of flight."

Orientation rides make an impression on cadets. "They will usually get out of the gliders with a great big smile on their face," Buschmann said. "It's less intimidating than powered flight. It is a basic introduction to flying."

CAP has 43 gliders nationally, which limits availability, though glider flight academies and encampments help expand opportunities. "Every one of our wings has powered planes, but only half our wings have gliders, which is why glider flight academies and encampments are good activities," Buschmann said. "In some places wings conduct glider flight encampments just for their cadets, and the national academies accept cadets from all over the country."

Another benefit of the SSA partnership is local chapters of that organization can also provide orientation flights. "If an SSA member or club wants to do that, they can offer the use of their gliders for free or at a nominal charge," Buschmann said. "They can also offer their tow planes."

Martin said her strong interest in gliders began about seven years ago when her son, then 11, first tried glider flight. "I saw how much he enjoyed gliders, and I thought other kids would too," she said. So, she joined SSA and began to push for growth in the CAP glider program.

Martin's son, Cadet 2nd Lt. Patrick Good of Ormond Beach Composite Squadron, also joined SSA at that time and is currently participating in cross-country competitions and working toward his Certified Flight Instructor-Gliders rating so he can be an instructor next year.

"I'm hoping to open up more opportunities — to get more SSA-registered glider ports to provide cadets orientation flights and cadet training and to help cadets get their private glider licenses and eventually do cross-country soaring," Martin said.

Details about the SSA electronic cadet introductory membership are available at cadet.ssa.org. \blacktriangle



At the National Conference in Denver, Civil Air Patrol National Commander Maj. Gen. Chuck Carr signs a memorandum of agreement that renews CAP's glider program partnership with the Soaring Society of America.

Photo by Susan Schneider, CAP National Headquarters



Former Spaatz Cadet Celebrates Century-Old First Flight Across Lake Michigan

By Mitzi Palmer

On July 1, Faith Vilas climbed into the cockpit of a Cessna 185 seaplane at Southwest Michigan Regional Airport to celebrate her grandfather, pioneer aviator Logan "Jack" Vilas. Her mission was to recreate his flight across Lake Michigan exactly 100 years earlier — the first flight ever across the Great Lake.

Despite windy conditions, Vilas, senior scientist at the Planetary Science Institute and a Gen. Carl A. Spaatz Award recipient when she was a Civil Air Patrol cadet, was able to successfully complete her task, which took nearly two years of training and preparation.

"I am so glad to complete this journey successfully on the 100th anniversary of my grandfather's landing — at that time the longest flight over water in aviation history," said the 61-year-old third-generation pilot. "This is the culmination of years of work on the part of admirers of Jack's accomplishment, and it is great to complete this effort on behalf of my family and friends, and especially in honor of my grandfather."

Former CAP cadet, now senior scientist at the Planetary Science Institute, Faith Vilas pilots a seaplane on July 1, recreating her grandfather's pioneering flight 100 years earlier. Vilas is pictured with Derek DeRuiter of Northwoods Aviation, owner of the Cessna 185. Photo courtesy of Derek DeRuiter

About Faith Vilas

aith Vilas has more than 30 years' experience in planetary sciences and astronomy, completing her tenure as director of the Multiple Mirror Telescope Observatory in Arizona before transitioning to become the Atsa Suborbital Observatory Project Scientist at the Planetary Science Institute. She spent 20 years working for NASA conducting ground-based and spacebased observational research in planetary sciences and of man-made debris in low Earth and geosynchronous orbits. She also served as Discovery Program Scientist at NASA Headquarters in 2001-2002.

She is one of the discoverers of the rings of Neptune, and she designed the coronagraph used to produce the first-ever image of a circumstellar disk around another star (Beta Pictoris) in 1984.

Vilas has been part of the 1996 DoD Midcourse Space Experiment Space Surveillance and the Hayabusa (MUSES C) joint Japanese-U.S. science team for the 2005 mission to asteroid 25143 Itokawa. She is currently a participating scientist in NASA's Mercury MESSENGER mission. In 1989, she was honored by the International Astronomical Union with the designation of Minor Planet 3507 Vilas.

From 1913 to 2013

Even though the flight path was the same, transportation a century later is quite different. Vilas flew a modern Cessna 185 with 300 horsepower; her 21-year-old grandfather piloted an aircraft with just 90 horsepower and without even a compass.

According to the Seaplane Pilots Association, he navigated his pioneering flight by following lake steamer boat wakes to the middle of Lake Michigan until he could see smoke from the Gary, Ind., steel mills on his left side.

The major hitch during his flight occurred when a pipe burst and started spraying boiling water near his back. Luckily, it happened as the aircraft was approaching Chicago's downtown breakwater, and he was able to land safely in the water.

"I remember him telling me people were running toward the beach when he landed, because they had never seen a plane before," Vilas recalled. She said it was important to her to fly the same route as her grandfather, despite worries about bad weather.

The idea for the commemorative flight was born about five years ago, Vilas said. "In fact, one of my old friends from CAP, Geoff Sjostrom, suggested it and helped me organize everything," she said.

Vilas said her connection with the historic event truly hit home the day before, as she was being given a tour on the beach where a plaque stands in honor of her grandfather's century-old flight.

"At that moment — when I walked to the pier and looked back — I had a real sense of what my grandfather did and a real gut connection with the event," she said. "And the flight itself was just gorgeous."

She and the seaplane's owner — Derek DeRuiter of Northwoods Aviation in Cadillac, Mich., who was beside her in the cockpit — didn't think they would be able to land on the lake as her grandfather had 100 years earlier because of choppy water, she said.

"But on the third try, we landed safely," she said. "I was thrilled I had made the flight and even landed roughly in the same place as my grandfather."

Jack's Legacy

Jack Vilas was the sixth person in the United States to earn a seaplane pilot's license. He made his historic flight across Lake Michigan on July 1, 1913, with only six weeks of flight instruction and experience.

The Chicago native, who later also became an Illinois Wing member, is known for pioneering aerial forest fire surveillance in 1915 when he flew







Faith Vilas, left in bottom photo, fourth from left in top left photo, attended the 1969 CAP Flying Encampment, taught by the Aviation Department at Oklahoma State University in Stillwater. Image courtesy of Michael Murphy

in a \$7,000 open cockpit Curtiss Model F flying boat at North Trout Lake in Boulder Junction, Wis.

Her grandfather died when she was 24, but Vilas still recalls his great story-telling ability.

"I very much remember one evening in college his making a fire and me sitting with a dear college friend listening to tons of stories," she said. "He liked to fly and was adventurous for sure; and I think at some level that is a genetic trait."

Faith's Contributions

A Spaatz award recipient in 1970, Faith was the 132nd to achieve the coveted CAP honor — earned by less than one-half of 1 percent of cadets.

"I joined CAP when I was a sophomore in high

school in Evanston, Ill.," she said. "I wanted to learn how to fly, and I knew at some point I wanted to be involved in the space program."

Most of her time in CAP was spent with the Massachusetts Wing. After she moved there for college, she joined the local squadron and eventually attended summer encampments.

At one, "I remember it was the first time a female was a summer encampment commander," she recalled, "and it was pretty controversial at the time."

She also made an International Aerospace Cadet Exchange visit to Israel in 1972.

Eager to explore and accomplish even more, she has goals to go into space as part of PSI's Atsa Suborbital Observatory project, which will see scientists and students operate a telescope while aboard a reusable spacecraft, XCOR Aerospace's Lynx.

"It will be fantastic to fly and use the Atsa in suborbital space," she said. "Open human space flight is our future."

Follow Your Dreams and Stay Clean

CAP to Promote Drug-Free Lifestyle During Red Ribbon Week

By Mitzi Palmer



n support of the oldest and largest drug prevention campaign in the United States, Civil Air Patrol's Drug Demand Reduction Program will once again sponsor the organization's participation in the annual Red Ribbon Week during the last week of October.

This year, the red ribbons CAP members will be wearing and distributing have been printed with the message "Follow Your Dreams and Stay Clean."

Paying Tribute

Red Ribbon Week's roots date back to 1985, when residents of Imperial Valley, Calif., wanted to honor the memory of a U.S. Drug Enforcement Administration agent, Enrique "Kiki" Camarena, who was slain in the line of duty by a Mexican drug cartel. Camarena's friends and family wore red ribbons to commemorate his sacrifice; today the red ribbon is a nationally recognized symbol of the effort to reduce the demand for illegal drugs.

In 1988, Congress officially proclaimed the final week of October as "Red Ribbon Week for a Drug-Free America."

DDR Program

"Young people today are under tremendous pressure from school, grades, scholar-ships, sports and service projects — and there is so much they want to do," said Lt. Col. Jett Mayhew, national DDR officer. "They want to get into college and become pilots and engineers and doctors. One seemingly harmless action — one split-second decision — can ruin the dreams they have."

That's where CAP's DDR program comes in.

Mayhew said the DDR program offers an abundance of resources and educational materials for children of all ages to use as they learn about how to stay drug-free.

"We work year-round with units at all levels to instill an aggressive, positive,



drug-free attitude in CAP members, Air Force families, Department of Defense civilians and school-age children," she said.

The DDR program also operates a Red Ribbon Leadership Academy that places cadets in front of middle-school students to serve as role models and leadership educators during a three-hour workshop.

"Wings are even encouraged to hold National Character Days, which include distinguished guest speakers and character challenges to motivate cadets to take seriously the issues of character and honor," Mayhew added. "With these programs, CAP is expanding its membership and its message that it provides positive alternatives and opportunities for America's youth."

In addition, CAP members frequently attend various CAP, aviation and community events throughout the year to represent the DDR program and the drug-free, positive lifestyle message it conveys.

Supporting Red Ribbon Week

To learn more about how to support Red Ribbon Week and CAP's DDR program, go to capmembers.com/ddr.



Civil Air Patrol's Florida Wing has adopted this composite to help promote the wing's DDR message as well as its cadet programs. Compiled by Maj. Kevin McSparron, the image features cadets from the South Brevard Cadet Squadron he commands — from left, Cadet Staff Sgt. Ryan Kressler, Cadet Chief Master Sgt. Mitchell Roy and Cadet 2nd Lt. Matt Knudsen.

Above: Cadet Senior Airman Josh Eckelberry and Cadet Airman Basic Kolyn Vang assist an Air Force reservists' child out of a BD-5 Micro cockpit after having an opportunity to fire up the craft's engine at the 934th Airlift Wing's Family Day at Minneapolis-St. Paul Air Reserve Station. The CAP aircraft is marked with a drug-free message encouraging aviation, not drugs.

Can you answer

these questions? Cadets who attend Air Force

What is the cheapest and easiest way for an adversary to disrupt spacecraft command and control activities?

- a. Direct ascent Anti-Satellite System
- b. Attacking the ground segment
- c. Spoofing the satellite command and control
- d. Degrading solar arrays with directed energy weapons

Which is the primary objective of the Evolved Expendable Launch **Vehicle Program?**

- a. Compensate for the retirement of the shuttle program
- b. Enable the Operationally Responsive Space initiative
- c. Replace Titan, Atlas and Delta heritage launch systems
- d. Reduce expenses and timelines required to tailor bus/payload interfaces

What is roughly the speed required in order to remain in low earth orbit?

- a. 180 mph
- b. 1,800 mph
- c. 18,000 mph
- d. 180,000 mph

(The answers are at the end of this story.)

By Lt. Col. Steven Solomon

Don't feel bad if you have trouble with questions like these...

The two dozen cadets specially chosen to attend this summer's Air Force Space Command Familiarization Course in Colorado couldn't answer these questions either. At first.

Cadet Lt. Col. Dominic Romeo, 19, of the Maryland Wing's St. Marys Composite Squadron applied to attend AFSPC-FC in Colorado to find out more about career opportunities in space. "I liked visiting the operational squadrons. It provided a unique opportunity to see firsthand the day-to-day work of an Air Force officer in Space Command," he said. Romeo, who previously attended AFSPC-FC at Patrick Air Force Base, Fla., was named this year's co-distinguished graduate.

Romeo and the other cadets spent a week touring and receiving briefings at Air Force and private contractor facilities that are offlimits to the general public. That included Peterson Air Force Base, where cadets learned about space surveillance, command and control; Cheyenne Mountain Air Force Station, command and control, which features joint U.S./Canada operations; Schriever AFB, which is focused on satellite operations and missile defense; and Lockheed Martin Corp., which provides spacelift and space engineering capabilities.

Briefings conducted by Air Force officers and civilians at the Space Education and Training Center at Peterson AFB focused on space operations, including missiles, satellites and cyber operations. At the



Cadet 2nd Lt. Christian Tynan of the Connecticut Wing takes photos at Peterson Air Force Base Air and Space Museum, one of the educational sites included in the Air Force Space Command Familiarization Course.

Space Command Familiarization *can*

nearby North American Aerospace Defense Command, cadets were personally greeted by Brig. Gen. Richard Scobee, deputy director of operations and son of astronaut Dick Scobee, the spacecraft commander who died when the Challenger shuttle exploded in 1986.

"I'm a big fan of CAP," Scobee said, noting that almost once a week CAP pilots fly missions as targets for fighter jets practicing intercept sorties. "It's a great partnership we have."

Cadets also toured the U.S. Air Force Academy to sample student life and what an astronautical engineering education encompasses. A dozen cadets helped the

Protestant chaplain during various parts of the Sunday service, giving readings and helping with offerings.

At Lockheed Martin's campus, cadets watched commands being sent to vehicles on or around Mars, saw where GPS satellites are being built and visited facilities that simulate actions in space.

They also had some time away from presentations and tours, visiting the 14,110-foot Pikes Peak summit and the 1,350-acre Garden of the Gods rock formations and attending a Colorado Springs Sky Sox Triple-A baseball game, where the cadets were featured on the main video screen. One even caught a foul ball.

"I'd say the best thing about this was getting to see an operational perspective of the Air Force with fellow cadets that were equally interested in learning about aviation and the Air Force Space Command," said Cadet Lt. Col. Charles Arvey of the Georgia Wing's Griffin Composite Squadron. "There were an exceptional group of cadets at this event, and the presence of cadets who were both professional and relaxed made the experience significantly more enjoyable." Arvey received the professionalism and peer awards at graduation.



CAP cadets gather inside a Lockheed EC-121T Warning Star, a U.S. Air Force and U.S. Navy airborne early warning radar surveillance aircraft on display at Peterson Air Force Base Air and Space Museum. The tour was one of many experiences the cadets enjoyed as part of AFSPC-FC. Photo by Col. Mike Mouw, Iowa Wing

"The course is designed to give cadets an idea about space career fields in the Air Force, other military branches and the civilian sector," said Lt. Col. Adam Brandao, cadet programs officer for Group IV in the California Wing and also an active-duty Air Force captain at the Joint Air and Space Operations Center at Vandenberg AFB. "The activity gives the cadets some of the training a space professional would receive, the STEM (science, technology, engineering and math) education behind the training, tours of some of the most important and interesting space facilities and a chance to evaluate the knowledge they gained in the course."

The cadets' favorite tour was of Cheyenne Mountain Air Force Station, popularized by the 1983 adventure movie "WarGames" starring Matthew Broderick and Ally



Civil Air Patrol cadets and staff pose for a photo with Air Force Brig. Gen. Richard Scobee, deputy director of operations at North American Aerospace Defense Command (NORAD), in front of NORAD/US NORTHCOM headquarters at Peterson Air Force Base. Scobee's father was Lt. Col. Dick Scobee, commander of the Space Shuttle Challenger, which exploded shortly after it was launched in 1986.

Photo courtesy of U.S. Air Force

Sheedy. Behind the 50-ton door, cadets were allowed into the alternate command center, which would be used when the nuclear blast- and electromagnetic-hard-ened facility is activated in the event of a ballistic missile attack. Cadets were also allowed into a conference room set up for a meeting the following day chaired by Secretary of Defense Chuck Hagel.

"The best thing was being able to go on all the tours, especially the tour of Cheyenne Mountain Air Force Station," said Cadet Capt. Micah Gale, cadet com-

mander and cadet information technology officer of the Idaho Wing's Boise Composite Squadron. "I really liked this because the tours took what we were learning and showed how this information is actually used, which made it click," said Gale, an academic award winner and co-distinguished graduate this year.

"Cadets attending AFSPC-FC gain an appreciation and understanding of the role of space operations within the Department of Defense," added Capt. Robert Wray, deputy director of the activity, Colorado Springs Cadet Squadron public affairs officer and also an active-duty Air Force captain serving as counterspace training flight commander for the 21st Operations Support Squadron at Peterson.

"This includes the science behind what space personnel do, the impact on national security and the integrated role of the civilian sector as they support, operate and manufacture satellites and other devices employed in space," he added. "It also highlights to cadets the diversity of the missions within Air Force Space Command, from geolocation to cyber security to providing GPS for billions of users around the world."

It's no wonder more than 200 cadets applied for the 26 spots offered for this National Cadet Special Activity.

"In all, it was a fun-packed, nine-day course," Wray said. "I only wish more cadets could attend."

Answers:

What is the cheapest and easiest way for an adversary to disrupt spacecraft command and control activities? Attacking the ground segment

Which is the primary objective of the Evolved Expendable Launch Vehicle Program? Replace Titan, Atlas and Delta heritage launch systems

What is roughly the speed required in order to remain in low earth orbit? 18,000 mph



Program Empowers Disabled to Fly

By Minnie Lamberth

or Capt. Dennis Akins, the childhood dream of becoming a pilot seemed out of reach when a trampoline injury during his teenage years left him paralyzed. But thanks to a nonprofit program called Able Flight, his physical disabilities are no longer a limit.

Able Flight offers scholarships for people with disabilities to participate in a six-week aviation program at Purdue University in Indiana. Earlier this year, Akins applied and was accepted for an Able Flight scholarship, and this summer he and four others spent six weeks in a flight training program that began May 19 at Purdue's campus in West Lafayette.

school program for people with disabilities, Capt. Dennis Akins enjoyed a trip to EAA AirVenture Oshkosh in Wisconsin. There he got a chance to take a close look at vintage planes like this North American Aviation P-51 Mustang. Photo courtesy of Erlinda Romero

Following his participation in Able Flight, an aviation flight

point at airplanes. After the accident, I thought that was something I wouldn't be able to do anymore," he said.

That changed in 2003 when he flew with the **Experimental Aircraft** Association's Young Eagles, which was promoting membership by providing airplane rides. "I took my kids down to the local airport, and they got a ride and I got a ride, too. The guy who took me up said there are a lot of handicapped pilots," he said.

After that, it was just a matter of time before Akins would be in a cockpit. He spent the next decade logging flight hours with a certified instructor, ultimately earning

a Sport Pilot certificate that allows him to fly solo.

"I plan to upgrade my license to private," he said. "That will open up the possibility of finding an aircraft I can rent."

He'd also like to obtain a tailwheel endorsement, which he said requires additional training.

His flight training experiences are also helping Akins in CAP. Currently, he has aircrew qualifications as a mission scanner. "I'm almost to the qualifications as a mission observer," he said. "It helps to have that knowledge as a pilot to perform those duties."

As an aerospace education officer who teaches cadets, he said, "getting that private license also enhances my skill level with them."

What did Akins do during this time? "Eat, sleep and fly," he said. "It was a very intense program."

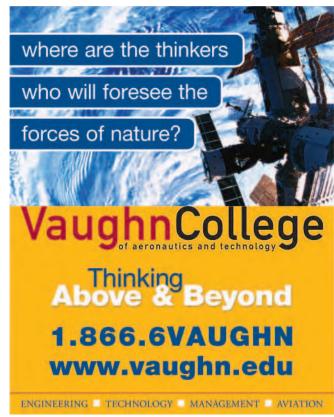
"We did ground school the first three weeks of the program. After we completed ground school, we took the FAA written exam," he said.

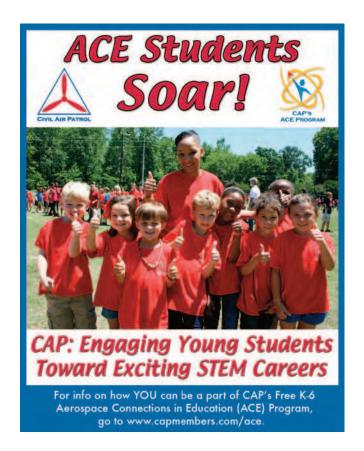
Then, Akins reached his goal: "I soloed on June 7," he said. Now, he tries to fly whenever weather, schedules and maintenance permit.

An engineer with the U.S. Army Corps of Engineers in Fort Worth, Texas, Akins serves as the Mineral Wells Composite Squadron's commander as well as the unit's aerospace education and communications officer.

"I wanted to be a pilot since I was old enough to









Great Lakes

Illinois cadets help support charities in Scott Ruck Challenge

ILLINOIS — When five Scott Composite Squadron cadets strapped on 40-pound rucksacks filled with canned goods and set off for two laps — a total of 13 miles — around the Scott Air Force Base flight line, they weren't only participating in the second annual Scott Ruck Challenge, they were also helping honor those subjected to the Bataan Death March in April 1942 and contributing to several worthy causes. The five cadets, two officers and a parent hauled their own 40-pound packs for the cause. Two other cadets and an officer assisted at water stations along the course.



Cadet Airman Basic Daniel Zeuner calls out cadence as he leads the Scott Composite Squadron team across the finish line for the Scott Ruck Challenge. Photo by Capt. Greg A. Hoffeditz,

"I am extremely proud of the cadets who participated," said Cadet 1st
Lt. John Gulick, the squadron's cadet commander. "They knew it was going to be tough but volunteered anyway. We all came together as a team and persevered to the end. It is a great way to honor those who participated in the Bataan Death March; they endured far worse and should not be forgotten."

Cadet 2nd Lt. Andrew Hall, the squadron's cadet executive officer, added, "It takes a dedicated individual to march 13 miles, but it takes a team (working together) to finish."

The cadets and other participants were helping provide food for the Jefferson Barracks Veterans Administration Medical Center's Fisher House Foundation in St. Louis — the destination for roughly 1,500 pounds of canned goods dropped from the participants' packs at the finish line. In addition, \$1,600 in registration fees and donations was raised for the Wounded Warrior Project.

The event is modeled after the Annual Bataan Memorial Death March at White Sands Missile Range, held to honor New Mexico National Guard soldiers who were part of the march. >> Capt. Greg A. Hoffeditz

Middle East

Disaster exercises prompt heavy Delaware Wing turnout

DELAWARE — More than one-quarter of the Delaware Wing's total membership answered the call when a series of disaster drills and exercises was held in almost all of the Northeast and Middle East regions' wings. In Delaware, more than 100 officers and cadets participated in response missions stemming from a major hurricane scenario. After investing many hours of planning for the event, the incident commander for the day, Maj. David O. Henderson of Dover Composite Squadron, activated "Delaware Mission Base" at Dover Air Force Base.

Numerous flights using all of the wing's aircraft were launched during the exercise. Air missions included simulated search and rescue, aerial photography, delivery of blood and damage assessment of coastal and other critical utilities. Four of the flights included reporters and photographers from civilian media, as well as a representative of the Dover AFB public affairs office. In addition, a mobile communications center was tested, including high-frequency communications with each participating wing.



First Lt. Peter S. VanderKley of New Castle Senior Squadron prepares his CAP plane for the exercise. Photo courtesy of *The News Journal* / Bill Bretzger

A ground team was directed to assess damage to a coastal town and to search for a stranded resident with critical medical issues and then for a lost child with severe emotional limitations. The exercise covered all three counties in the state. By early evening, the exercises had been deemed successful. Many participants completed specified training, earning emergency services credits. >> Col. William S. Bernfeld

North Central

Father, son coordinate re-enactment

KANSAS — The Topeka Eagle Composite Squadron's deputy commander for cadets, 2nd Lt. Nick Nicholson, and his son, Cadet Staff Sgt. Kyle Nicholson, coordinated battlefield re-enactments for the 14th annual observation of the Normandy Invasion. The event was held during Heartland Military Day at the Museum of the Kansas National Guard in Topeka. The two helped continue what's in some respects a family tradition: Heartland Military Day was started by 2nd Lt. Nicholson's father, Gary Nicholson.

The first Heartland Military Day involved six vehicles and two re-enactors. This year, more than 60 re-enactors participated, the younger Nicholson included. "I had fun and I know the other cadets had fun," he said. Four fellow squadron members — Cadet Chief Master Sgt. Thomas Pugh, Cadet Master Sgt. Austin Robberson, Cadet Airman 1st Class Dominic Settanni and Cadet Airman Joachim Settanni — served as color guard during opening ceremonies.



Clockwise, from left, Cadet Airman 1st Class Dominic Settanni, Cadet Master Sgt. Austin Robberson and Cadet Airman Joachim Settanni man a 40 mm anti-aircraft gun on a vehicle belonging to members of the Rolling Thunder chapter of the Military Vehicle Preservation Association. Photo by 2nd Lt. Nick Nicholson, Kansas Wing

The cadets also provided crowd control during the two 30-minute re-enactments. In addition, they set up and staffed a booth where they could educate event participants on Civil Air Patrol's mission and activities. Between the re-enactments, the cadets were able to explore the museum equipment on display and military vehicles from the Military Vehicle Preservation Association's Rolling Thunder chapter. "I enjoyed using the 40 mm anti-aircraft gun," Joachim Settanni said. "I was surprised how easy it was to use the gears to turn it." >> Maj. Michael Mathewson

Northeast



Cadet Capt. Katie Brechbuhl, second from right, poses with her glider tow pilot, Walter Striedieck; Bill Stinson, her FAA-designated pilot examiner; and Maj. John Williams, her instructor. Photo by Cadet Senior Master Sgt. Christian DiDominic, New Hampshire Wing

AF Academy-bound New Hampshire cadet earns glider license

NEW HAMPSHIRE — Like any new high school graduate headed off to her chosen institution of higher learning, Cadet Capt. Katie Brechbuhl of the New Hampshire Wing's Lebanon Composite Squadron had a few loose ends to tie up during the summer. Brechbuhl, though, wasn't just any college-bound teenager. Her destination was the U.S. Air Force Academy, and the item she checked off her to-do list just before leaving for Colorado Springs was passing her Federal Aviation Adminstration practical exam for her glider private pilot license.

Brechbuhl began glider training in August 2012 at a Civil Air Patrol Glider Flight Academy at Hartness State Airport in Springfield, Vt. She then joined the New England Soaring Association with the aid of a scholarship to finish her training. After only five months and a winter's worth of ground school with her instructor, Maj. John Williams of the Greater Nashua Composite Squadron, a certified flight instructor for gliders, she was ready to take the FAA exam.

Brechbuhl also flew with the wing's other three CFIs for gliders — Capts. John Graziano of Seacoast Composite Squadron and Thomas Scheidegger of the Lebanon unit and 1st Lt. Matt Towsley of Greater Nashua Squadron. Williams said Brechbuhl is the first New Hampshire cadet to earn her glider private pilot wings and also the only one to solo in two different gliders — the Schweizer SGS2-33A and the Blanik L-23. >> Maj. Penny Hardy

Pacific

Membership growth spurs formation of 8th California Wing group

CALIFORNIA — The heavily populated California Wing's roster of groups rose to eight with the division of South Coast Group 7 into two groups. The new San Diego Group 8 consists of six units — Escondido Cadet Squadron 714, Fallbrook Senior Squadron 87, San Diego Cadet Squadron 144, San Diego Senior Squadron 57, Skyhawks Composite Squadron 47 and South San Diego Cadet Squadron 201. The reconstituted South Coast Group 7 is made up of Falcon Senior Squadron 40,



Maj. Jim Redmon, left, commander of the newly formed San Diego Group 8, accepts the group's colors from Col. Jon Stokes, California Wing commander. Photo by Capt. Rich Lee, California Wing

Fullerton Composite Squadron 56, Long Beach Senior Squadron 150, Los Alamitos Cadet Squadron 153, Los Alamitos Glider Training Squadron 41 and Saddleback Composite Squadron 68.

The reorganization was in the spotlight when more than 100 members of what was then the 12-unit version of Group 7 came together for the group's Awards Banquet. The Group 8 colors were unfurled for the first time and presented to the new group's commander, Maj. Jim Redmon. In addition, Lt. Col. Robert Calderone assumed command of the reconstituted Group 7, succeeding Lt. Col. David Boehm, who had served for three years. Col. Jon Stokes, wing commander, presided over the ceremony.

With 67 squadrons and some 3,600 members, the California Wing is one of Civil Air Patrol's largest. >> Maj. Audrey I. DiGiantomasso

Rocky Mountain



First Lt. Jo Waite of Boulder Composite Squadron fills in a slot on the air operations status board at mission base. Photo by Lt. Col. Leslie Vazquez, National Headquarters

Colorado Wing pilots fly high for search training

COLORADO — Colorado Wing pilots practiced high-mountain search techniques at a uniquely appropriate site — Leadville's Lake County Airport, 9,929 feet above sea level in the Rocky Mountains, which makes it the highest such facility in the U.S. Organizers of the exercise selected a number of grids characterized by challenging terrain, then assigned participating aircrews to conduct aerial searches of two of the grids. Each aircrew consisted of an instructor pilot and two mission pilots. Each mission pilot flew one search. The instructor pilots were each assigned a search as well.

The crew members all held Mountain Flying Certification, said Maj. Bill Waite, incident commander for the exercise and wing director of operations, "so this exercise was not concerned with training novices. Our intent

was to sharpen specific skills required for searches in high, rugged terrain." While pilots without mountain certification were also involved in the exercise, they didn't participate in the searches. Instead, they completed mountain cross-country training required for a mountain endorsement on their CAPF 5 Pilot Flight Evaluation. Participants flew eight Civil Air Patrol Cessna 182s, both turbocharged and not.

"What surprised me the most is that a non-turbocharged airplane can safely operate above 14,000 feet," said Brig. Gen. Joe Vazquez, CAP's national vice commander, who participated as one of the pilots. "To do that well, you have to operate like a glider and find upslope wind flow to gain altitude where engine power is not enough."

The Salida radio repeater on Fremont Peak, which normally would have been used for communications, wasn't functioning the day of the exercise. That provided an extra, realistic challenge for the participants. >> Lt. Col. Leslie Vazquez

Southeast

Florida cadets travel for overnight encounter with history

FLORIDA — Boca Raton Composite Squadron members received a treat when the U.S. Air Force arranged for them to take a special flight out of Homestead Air Force Base on a C-17 Globemaster III to South Carolina. Accompanied by their unit's commander, Capt. Robin Taber, and deputy commander for cadets, Lt. Col. Michael Harding, nine cadets were able to tour, dine and stay overnight on the USS Yorktown.

The main purpose of the trip was a visit to Patriots Point Naval & Martine Museum on Charleston Bay, a collection of retired U.S. Navy ships that have been converted to museums. The Yorktown, a decommissioned aircraft carrier, houses the Medal of Honor Museum, and its flight deck features displays of



The Boca Raton Composite Squadron's cadet contingent — front row, from left, Cadet Airman 1st Class Charles Greenman, Cadet Staff Sgt. Nicholas Castillo, Cadet Airman Josephine Donis, Cadet Airman Basic Nicholas Gallina and Cadet 2nd Lt. Johann Douglas; back row, from left, Cadet Airman Basic Arthur Brands and Cadet Airmen Jordan Trumbore, Juan Rozo and Francisco Rivera — gears up to tour the USS Yorktown. Photo by Capt. Robin Taber, Florida Wing

airplanes and helicopters from several periods. The Boca Raton members later toured Fort Sumter, where the opening shots of the Civil War were fired.

The trip was coordinated by retired Air Force Col. Jerry Langley, CAP-USAF liaison to the Florida Wing. >> 1st Lt. Jackie Stoerzinger-Zarrilli

Southwest

Arizona Wing cadets flock to aerospace education event

ARIZONA — Cadets from across the state flocked to Phoenix-Mesa Gateway Airport for this year's Arizona Wing aerospace education event at Arizona State University's College of Technology and Innovation. In all, 118 members participated in the activity, which was designed to encourage studies and careers related to aerospace and other science, technology, engineering and math-related fields and to let participants know excellent higher education opportunities can be found in their home state.

A highlight for many of the cadets was a flight line tour of CTI's Airline Transport Pilot facility, led by a flight instructor. They had the opportunity to see the types of simulators and aircraft used for training. Other tour

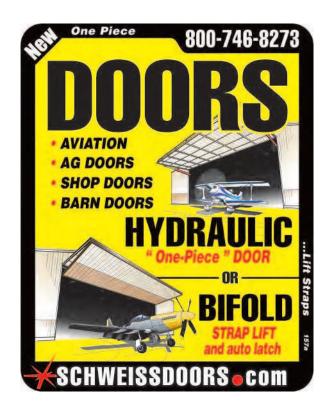


Arizona Wing cadets try out the air traffic control simulator at the Phoenix-Mesa Gateway Airport tower. Photo by 2nd Lt. Joy Olcott, Arizona Wing

stops included CTI orientation, with college staff on hand to discuss the various programs offered and to share tips and requirements for meeting entrance qualifications; an aeronautics class, where a pair of aeronautics professors grilled the cadets on airplane types, with prizes awarded for correct answers; and the engineering lab, where cadets were able to learn about the many tooling and fabricating machines and equipment ASU engineering students use to construct their class projects. A power plants lab, where the visitors learned about the functions of various types of power plants used in both piston and turbine aircraft and their associated systems, and the simulator building, where cadets were able to fly in the personal computer-based aviation training device lab, as well as in the air traffic control simulator, were also part of the tour. >> Lt. Col. Pete Feltz









Achievements



Gill Robb Wilson Award

Highest award for senior members, presented to those who complete Level V of the Civil Air Patrol Senior Member Training Program. (Only about 5 percent of CAP senior members achieve this award.) The senior members listed below received their awards in May, June and July.

Maj. Julian G. Bishop	AL
Lt. Col. Alford Boyd	AL
Maj. James Kilgore	AL
Maj. Ladde L. Mayer	AL
Maj. Christopher J. Rousseau	AL
Lt. Col. James D. Scott	AL
Maj. Peter W. Mountain	ΑZ
Maj. William A. Wetzel	CA
Col. Kenneth E. Chapman	CT
Lt. Col. Thomas W. Litwinczyk	CT
Maj. Joseph J. Palys	CT
Maj. Jeffrey P. Carlson	FL
Maj. John W. Clark	FL
Col. Michael N. Cook	FL
Lt. Col. Roger E. Helton	FL
Lt. Col. Ramon L. Nunez	FL
Lt. Col. Linda J. Pugsley	FL
Lt. Col. Brent E. Bracewell	GA
Lt. Col. Kelley Johnson	GA
Maj. Ernest W. Sanders	GA
Maj. Aaron J. Angelini	IN
Maj. Barbara C. Willis	KS
Maj. Raymond J. LaRose	MA
Lt. Col. David Argentieri	MD
Lt. Col. Edco Bailey	MD
Maj. Mark A. Kukucka	MD
Maj. Sherry McManus	MD
Maj. Christopher J. Roche	MD
Maj. Christian J. Felton	M
Col. Erica R. Williams	MC
Maj. David A. Rogers	MS
Lt. Col. David L. Younce	MS
Maj. Peter A. Bohler	NC
Lt. Col. Norman W. Byerly	NC
Lt. Col. Dan H. Wishnietsky	NC
Lt. Col. Karl K. Eisbach	NE
Lt. Col. Jason P. Johnsen	NE
Lt. Col. Jeffrey S. Michalski	NE
Lt. Col. Charles G. Bishop Jr.	NHC
Lt. Col. Thomas A. Morgan	NHC
Lt. Col. Amy T. Myzie	N
Maj. Thomas J. Cooper	NV



Gen. Carl A. Spaatz Award

Highest award for cadets, presented to those who complete all phases of the CAP Cadet Program and the Spaatz award examination. (Only about one-half of 1 percent of CAP cadets achieve this award.) The cadets listed below received their awards in May, June and July.

William T. Craig	ΑZ
Joshua C. Lanier	CA
Margaret H. Palys	CT
Joshua Dovi	FL
Adam L. Pendleton	GA
Kathleen P. Crockett	MD
Lawton P. Huffman	MO
Josiah L. Gourley	NC
Christopher S. Medina	NM
Brandon T. Koltes	NV
Sara J. Fishbein	OH
Miranda R. Ellinghaus	OK
Carson E. Scalf	TN
Brandon T. Cambio	TX
Kenneth R. Griffing	TX

Lt. Col. Robert F. Flynn	NY
Maj. Richard D. Johns	NY
Maj. Michael Lee	NY
Lt. Col. Daniel A. Rogers	NY
Lt. Col. Mike T. Bodnarik	ОН
Maj. Paul H. Creed	OH
Lt. Col. David J. Jennison	OH
Col. Brian L. Bishop	PCR
Lt. Col. Michael J. Lewis	PCR
Col. Nolan S. Teel	RMR
Col. Francis H. Smith	SC
Lt. Col. William T. Brown	SWR
Maj. Sandra Phelps	TX
Lt. Col. Michael Edward Traylo	or VA
Lt. Col. William H. Adam	WA
Lt. Col. William Howard	WA
Lt. Col. George C. Minnich	WA
Maj. Jeanne M. Stone-Hunter	WY



Paul E. Garber Award

Second-highest award for senior members, presented to those who complete Level IV of the CAP Senior Member Training Program. The senior members listed below received their awards in May, June and July.

Lt. Col. Timothy J. Anderson	AK
Tech. Sgt. Paul J. Barone	CA
Maj. Chris L. Mattson	CA
Maj. William H. Phinizy	CA
Capt. Shane E. Terpstra	CA
Capt. Edith M. Graham	CO
Capt. Megan R. Graham	CO
Maj. Nathan P. Skinner	CO
Lt. Col. Hughie A. Cline	FL
Maj. Cynthia C. Dohm	FL
Lt. Col. James M. Goblet	FL
Maj. Joyce A. Nader	FL
Maj. Paul R. Beliveau	GA
Lt. Col. David Brown	GA
Capt. John W. Holland	GA
Capt. Linda W. Kotula	GA
Maj. Fred J. Miller	KY
Maj. Earl T. Williams	MD
Maj. Cajetan W. von der Linden	MD
Lt. Col. Sheila M. Cerny	MI
Maj. David N. Poland	MO
Capt. Linda S. Poland	MO
Capt. Preston H. Lawrance	NH
Lt. Col. Debra A. Prosser	NV
Lt. Col. William B. Spires	NV
Maj. Barbara G. Jones	NY
Capt. William F. Martin	NY
Maj. Robert R. Ormsbee	NY
Lt. Col. Kenneth E. Curell	ОН
Maj. Alan P. Sandner	OR
Lt. Col. Hugo A. Ficca	PA
Maj. Ryan J. Kelly	PA
.,	PCR
Capt. David G. Small	SD
Lt. Col. Jose D. Avila	TX
Maj. R. R. Lewis	TX
Capt. Jeffrey S. Adler	VA
Capt. Donald D. Walker	WV



Gen. Ira C. Eaker Award

Second-highest award for cadets, presented to those who complete all Phase IV requirements of the CAP Cadet Program. The cadets listed below received their awards in May, June and July.

David A. Carriker	AL
Benjamin Shea	AL
Ashley M. Mayo	CA
Cody R. Draeger	CO
Jeffrey A. Hart Jr.	CO
Ben C. Jakeman	CO
Thomas A. Jessop	CO
Chad Laliberte	CO
William K. Gregory	FL
Jordan L. Harris	FL
Miriam E. Lee	FL
Robert H. Ward	FL
Zelik A. Gil	GA
Jacob J. Brown	KS
Jared J. Brown	KS
Brandon S. Burke	KY
Doug M. Kaiser	KY
Mary A. Palisi	LA
Robert J. Lewis	MD
Victor S. Santos	MD
Ashley M. Thornton	MI
Zechariah A. Vinson	MI
Lawton P. Huffman	MO
Jonathan A. Hester	MS
Rachael L. Bailey	NC
Jacob T. Knox	NC
Taylor R. Wedell	NC
Nathan R. Sanders	NJ
Tianna M. Chin	NY
Tanner Barnes	OH
Aubry M. Lindauer	OH
Derek A. McGuckin	OH
Jared H. Perkins	OR
Nelly C. Perez Melendez	PR
Rafael O. Perez Melendez	PR
Wyatt A. Steele	SC
Stephen A. Lewoczko	TN
Jeffrey B. Wreyford	TN
Graham Andre	TX
Armando Sanchez	TX
Hugh A. Shortt	TX
Alexander W. DeSoto	WA
Timothy A. Sizemore	WA
Kevin G. Felix	WI
Alexander R. Schultze	WI
Jon Ball	WV

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