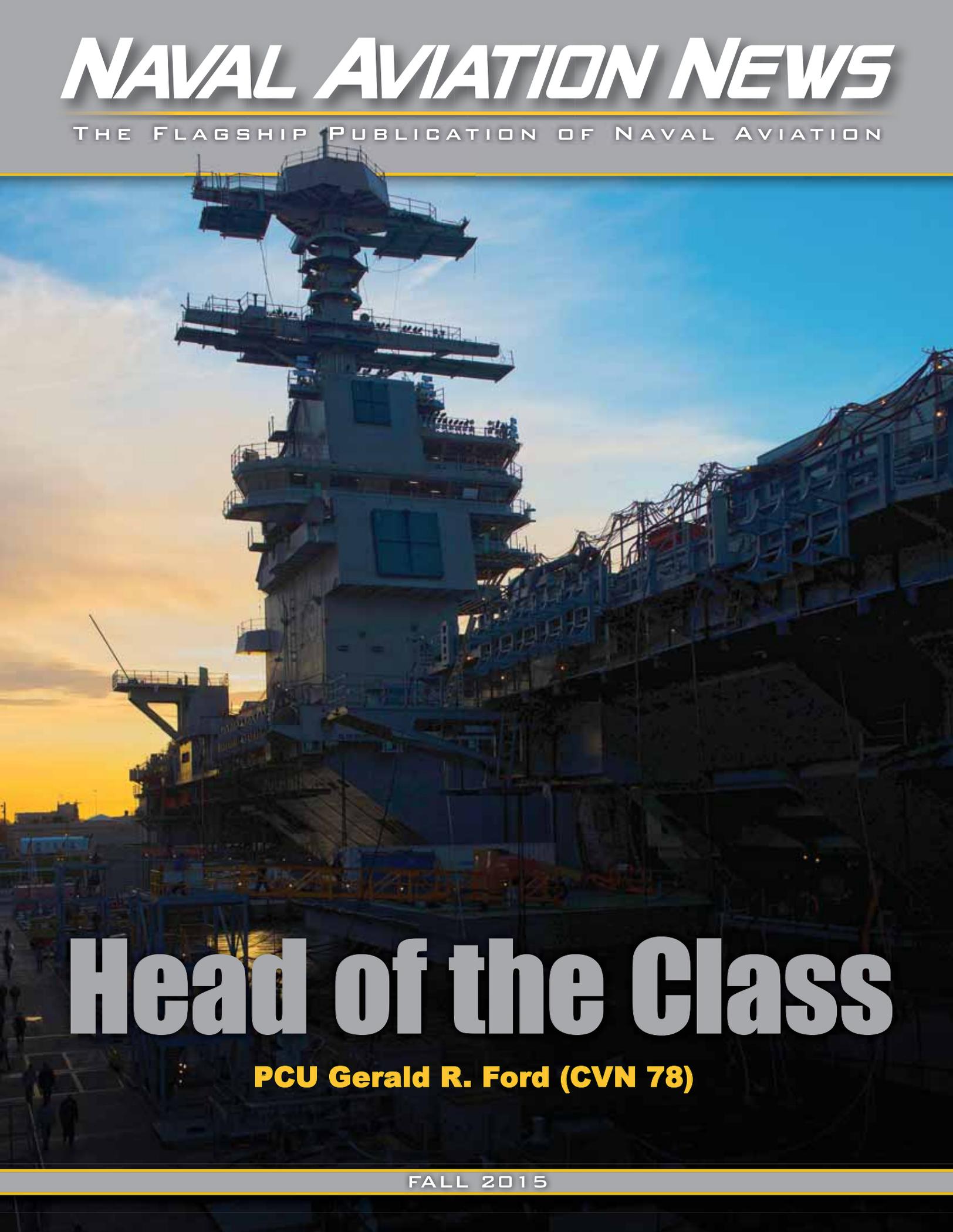


# NAVAL AVIATION NEWS

THE FLAGSHIP PUBLICATION OF NAVAL AVIATION



## Head of the Class

**PCU Gerald R. Ford (CVN 78)**

FALL 2015



*An MQ-4C Triton is lifted inside an anechoic chamber Aug. 12 for electromagnetic compatibility testing at Patuxent River, Md. This event marked the first time that an unmanned aircraft inside the chamber was controlled from an external ground control station.*

U.S. Navy photo by Kelly Schindler

# NAVAL AVIATION NEWS

FALL 2015

VOLUME 97, NO. 3

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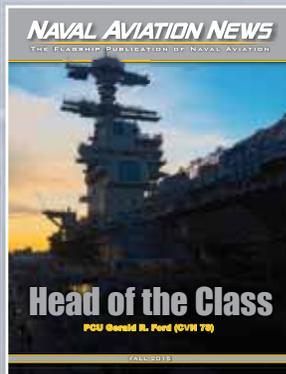
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## ON THE COVER



The U.S. Navy will induct its first new class of aircraft carrier in more than 40 years this spring with the delivery of pre-commissioning unit Gerald R. Ford (CVN 78), a next-generation flattop, which builds on the previous Nimitz-class carriers with improvements aimed at increasing sortie rates while reducing ownership costs over the warship's 50-year lifespan. The ship that will usher Naval Aviation into its second century, the Ford is the focus of this issue. Sprinkled within the main feature on page 14 are sidebars detailing the Ford's testing milestones, training of its Sailors aboard USS George Washington (CVN 73), the 55-year career of a naval catapult engineer, and the keel laying for the second member of the Ford class, John F. Kennedy (CVN 79). (Cover photo by Ricky Thompson courtesy of Huntington Ingalls Industries)

**On the Back Cover:** Sailors assigned to Explosive Ordnance Disposal Mobile Unit (EODMU) 5 conduct a special patrol insertion/extraction exercise aboard aircraft carrier USS Ronald Reagan (CVN 76). Ronald Reagan and its embarked air wing, Carrier Air Wing (CVW) 5, provide a combat-ready force that protects and defends the collective maritime interests of the U.S. and its allies and partners in the Indo-Asia-Pacific region. (U.S. Navy photo by MC2 Paolo Bayas)

*The U.S. Navy's Oldest Periodical, Established 1917*

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*Sailors remove an LAU-61 rocket launcher from an MH-60S Seahawk from the "Golden Falcons" of Helicopter Sea Combat Squadron (HSC) 12 on the flight deck of USS Ronald Reagan (CVN 76).*

U.S. Navy photo by MC2 Paolo Bayas

# Grampaw Pettibone

Gramps from Yesteryear:  
September-October 2005

Illustration by *Ted Wilbur*



WAS THIS **TRAP** NECESSARY?

## Vestibular Valediction

Following a brief from his landing safety officer (LSO) and Lead Safe, a student naval aviator launched on his first carrier qualification flight. He was Dash-4 of a four-plane flight. Once in the pattern, the student performed two touch-and-goes followed by an arrested landing. The first catapult shot was uneventful. After a bolter, the student successfully made his second arrested landing. During the subsequent cat shot, the student inadvertently applied the brake to the right mainmount, blowing the tire.

The Air Boss directed the student to “delta easy” at pattern altitude while the carrier recovered the rest of the event. Once the other Goshawks were aboard, the senior LSO reviewed the basics with the student over the UHF, a brief that proved to be inadequate. On the final pass the student added too much power in close and just missed the four wire. During the bolter, the T-45 swerved nearly 40 degrees to the right and drifted 32 feet right of the landing area’s centerline. The Goshawk flew past the angled deck on a perilous track, and the aircraft’s right wing smashed into the port bow catwalk. The trainer crashed into the water, and the student was killed. 🐦

## Grampaw Pettibone Says ...



Even if this was the first time this sort of thing actually happened, it don’t require too much noggin’ work to presage (with an emphasis on “pre”) that it might have happened. And that’s where the engineers and the test community and the instructors come in. Platforms got to support the mission. Procedures got to address everything possible. Instructors got to prep the newbies end-to-end. Can tires blow? Tarnation, yes. Is a student naval aviator likely to give in to the pucker factor and step on the binders during one of his first cat shots? Double tarnation, yes! Even old salts ain’t immune to the occasional misstep, as it were. I’ve known many a brownshoe what earned the callsign “Boom Boom” over the aeons I’ve been associating with air machines. I remember the first time I was hurled off the pointy end (and the pointy end was more pointy in them days). Woo wee, I was as wide-eyed as a possum at rush hour. Only the grace of the Maker and a hunk of Great-grandmaw Pettibone’s venison jerky stuck in my flight boot (for luck, of course) got me through that wildness intact.

Of course, this student shouldn’t have done what he done here, but Gramps has got a special place in the ol’ ticker for the Fledglings, and few things eat me up worse than seeing the system hang one of them out like this. We gotta do better by our young folks. 🐦

## CNO: Innovation Comes from Learning Faster

From Chief of Naval Operations  
Public Affairs

WASHINGTON—Creativity and initiative are important to the future of the Navy, CNO Adm. John Richardson said at the Reagan National Defense Forum in Simi Valley, California.

During his remarks on the panel, *Harnessing Innovation for Defense: the Role of Defense and Non-defense Companies*, Richardson emphasized that with the current speed of change, learning faster on both the individual and the team level is key to keeping pace with and enabling innovation.

“I see the pace of technology picking up very, very quickly,” Richardson said. “How can we better learn how to acquire systems, so we can ride this technology curve, and have even the faintest hope of keeping up with the technological advances that are going on?”

“It’s about the team that can bring the people, the technology and the processes together to learn the fastest—that’s the team that has the advantage,” Richardson said.

Richardson noted that innovation is commonplace in the fleet, likening the ingenuity with which Sailors accomplish the Navy’s objectives using their available tools to the Apollo 13 mission.

“There’s a tremendous amount of creativity going on at the fleet level,” Richardson said. “They’re the end users of all that we send them, and sometimes those tools are ideally suited to the situation that they face. Oftentimes, the situation has changed, and they have this toolkit that’s been given to them—then the ingenuity starts. It’s like the Apollo 13 scene in the movie where they just dump all this stuff on the table and say ‘OK, this is what we have, how are we going to make this work?’”



U.S. Navy photo by Cmdr. Chris Servello

*Adm. John Richardson, fourth from left, answers a question from moderator Doug Cameron of the Wall Street Journal during a panel discussion Nov. 7 at the Reagan National Defense Forum in Simi Valley, Calif. Richardson and other defense sector leaders discussed the need to learn faster in today’s national security environment.*

A challenge Richardson addressed is connecting the innovation occurring on the tactical level to the operational and strategic levels as well as the Navy’s acquisition system.

“The first step is getting visibility on this fleet-level innovation,” Richardson said. “I had a chance to go and see some of that innovation firsthand, and I’m happy to use whatever top-down pressure I can to inject that into the acquisition system. There’s a lot of ‘HOV lanes’ being created around the more traditional acquisition system, just because speed is of such an essence.”

He highlighted new communication technologies as key to gaining visibility on and connecting with tactical innovation, and sees opportunity in connecting the Sailors using systems in the fleet directly with the Navy’s industry partners and their teams responsible for designing and developing Navy systems.

“One of the most rewarding things that I’ve been able to do is bring some of the people that do this research and development out to the waterfront—on that carrier, that submarine, that destroyer or aircraft—and say ‘Hey look, this is what you did,’” Richardson said. “Then they get to interact with the Sailors that are using that equipment, and that’s a very powerful dynamic.”

As the panel addressed creating environments that cultivate innovation, the discussion touched on the role of failure, a fear of which can stifle cutting-edge ideas.

“Experimentation and failure is appropriate early on in the development process,” Richardson said. “That environment needs to be a little more agile and perhaps a little bit riskier. Going through that, we actually gain confidence and field a much better tested product, so that when it goes forward into the fight, it’s completely tested. So, failure at the proper point is key to getting to a higher level of confidence faster.”

The panel also included Under Secretary of Defense for Acquisition, Technology and Logistics Frank Kendall; William Brown, chairman, president and CEO for Harris Corporation; Wes Bush, chairman, CEO and president for Northrop Grumman; and Gwynne Shotwell, president and chief operating officer (COO) for SpaceX.

Reagan National Defense Forum brings together leaders and key stakeholders in the defense community, including members of Congress, military and civilian defense officials and leaders in the defense industry, to address the health of American national defense and stimulate discussions that promote policies to strengthen the U.S. military. 🇺🇸

## U.S. Marine Corps' CH-53K Helicopter Takes First Flight



U.S. Navy photo courtesy of Sikorsky

A CH-53K King Stallion, the U.S. Marine Corps' newest helicopter, takes off Oct. 27 from Sikorsky Aircraft Corporation's Development Flight Center at West Palm Beach, Fla. The helicopter completed its first flight while the test team assessed basic aircraft controllability and landing.

WEST PALM BEACH, Fla.—The U.S. Marine Corps' CH-53K helicopter entered flight test phase Oct. 27 upon completing its first flight at Sikorsky Aircraft Corporation's Development Flight Center in West Palm Beach.

The CH-53K King Stallion took off and hovered for 30 minutes at 25 feet to assess basic aircraft controllability and landing, and handled as predicted.

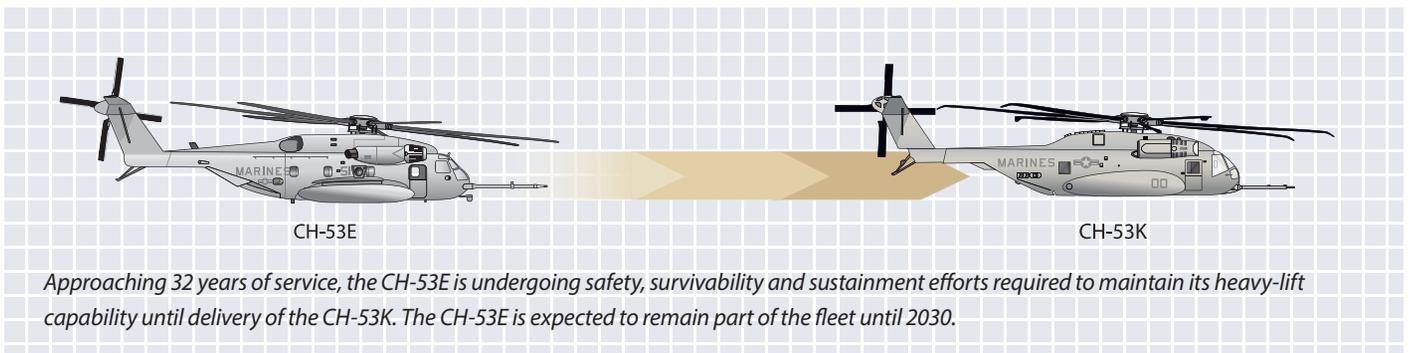
"We have entered a much anticipated phase in this developmental program," said Col. Hank Vanderborgh, U.S. Marine Corps program manager for heavy lift

helicopters. "We have experienced significant learning at the system and sub-system levels, which continues to build our confidence in the capabilities of the 53K. With first flight behind us, we look forward to execution of the development and operational testing and the deployment of this incredible heavy lift capability to our warfighters."

The CH-53K is the Marine Corps' new build, heavy-lift replacement for the CH-53E, and will transport Marines, heavy equipment and supplies during ship-to-shore movement in support of

amphibious assault and subsequent operations ashore. The CH-53K will expand the fleet's ability to move more material, more rapidly throughout the area of responsibility. Using proven and matured technologies, the King Stallion is designed to lift 14 tons at a mission radius of 110 nautical miles in Navy high/hot environments—three times the baseline CH-53E lift capability.

The CH-53K program is currently on track to provide an initial operating capability in 2019, with a procurement objective for 200 helicopters. ✈



CH-53E

CH-53K

Approaching 32 years of service, the CH-53E is undergoing safety, survivability and sustainment efforts required to maintain its heavy-lift capability until delivery of the CH-53K. The CH-53E is expected to remain part of the fleet until 2030.

## Air-to-Air Missile Reaches Production Milestone

PATUXENT RIVER, Md.—Featuring a “lock on after launch” capability and other advances, the joint Navy and Air Force air-intercept missile (AIM)-9X Sidewinder Block II reached its full rate production (FRP) milestone Aug. 17.

Sean Stackley, Assistant Secretary of the Navy for Research, Development and Acquisition, signed the Acquisition Decision Memorandum allowing the Air-to-Air Missile Systems Program Office (PMA-259) and industry partner Raytheon Missile Systems to move forward with mass production of the missile.

“With our adversaries constantly advancing technologies within their aircraft and weaponry, we must continue to advance our capabilities to stay ahead of future threats,” said Capt. James Stoneman, PMA-259 program manager. “AIM-9X FRP is the end product of much

engineering and testing to ensure our warfighters are equipped and ready to respond to any scenario.”

Approximately 6,000 AIM-9X Blk II missiles will be procured through 2026.

Upgraded from the Block I series, the AIM-9X Block II missile incorporates new software, an upgraded guidance control unit and a longer battery life. The new technology improves probability of kill, increases launch range and enhances the target detector functionality. A key characteristic is its rapid response capability in air combat scenarios.

The most significant change incorporated into the Block II series is the “lock on after launch” capability. Rather than requiring the warfighter to actually see the target to lock the missile on, the warfighter can launch at the target without knowing its exact position. Once the missile is launched

from the aircraft, the seeker—a sensor inside the missile—locates the target via either infrared emissions or datalink and proceeds to execute its mission.

“The effectiveness, coupled with increased reliability of the AIM-9X, exceeds our original expectations,” said Lt. Cmdr. Robert Betts, AIM-9X Block II military integrated product team lead. He said the effort advanced as scheduled after the Navy reached its initial operational capability milestone in March.

The air-intercept missile is 119 inches in length, weighs 186 pounds and is capable of being launched from the Navy’s F/A-18 Hornet and Super Hornet, the Air Force’s F-15 Eagle and F-16 Fighting Falcon and equivalent international partner aircraft. Its purpose is to detect, acquire, intercept and destroy a wide range of high-performance airborne and surface threats. ✈️



*An AIM-9X Block II Sidewinder, a within-and-beyond visual range air-intercept missile, is loaded on an Air Force F-15 Eagle shortly before take-off during a developmental test event at Eglin Air Force Base, Valparaiso, Fla. The Sidewinder reached the full rate production milestone Aug. 17.*

## T-2C Buckeye Ends 56-Year Navy Career

PATUXENT RIVER, Md.—The Navy’s last flying T-2C Buckeye made its final flight at Naval Air Station (NAS) Patuxent River, Sept. 25, capping 56 years of the aircraft’s service to the fleet.

Although T-2s were officially retired from service in 2008, Air Test and Evaluation Squadron (VX) 20 at NAS Patuxent River continued to use three Buckeyes as safety chase aircraft during test and evaluation flights of the E-2D Hawkeye, P-8A Poseidon and MQ-4C Triton unmanned aerial system.

“The T-2s have been a reliable and valuable part of our squadron for the last seven years, following what was already a distinguished career of training thousands of naval aviators,” said VX-20 Commanding Officer Cmdr. William Selk, who conducted the final flight in aircraft 320, along with retired naval aviator Kent Vandergrift. “We’re sad to see her go, but we’re thankful for all those years of faithful service. The T-2 has earned its place in Naval Aviation history many times over.”

The two-seat, twin-engine jet was introduced in 1959 for training including carrier-based arrested recoveries. The Buckeye had trained more than 11,000 Navy and Marine Corps student pilots before it was replaced by the T-45 Goshawk.

Aircraft number 320 ended its final flight Sept. 25, with a total of 13,945 flight hours on record.

With the retirement of the T-2, VX-20 is transitioning to the C-38 Courier to serve as chase aircraft, radar test targets and pilot proficiency aircraft. ✈️



The U.S. Navy’s last T-2C Buckeye, which accumulated a total of 13,945 flight hours on record, returns from its final flight Sept. 25.

U.S. Navy photo



U.S. Navy photo

Retired naval aviator Kent Vandergrift, left, and Air Test and Evaluation Squadron (VX) 20 Commanding Officer Cmdr. William Selk stand with aircraft number 320 following its final flight Sept. 25. Since 2008, the jet had served as a safety chase aircraft during test and evaluation flights of the E-2D Hawkeye, P-8A Poseidon and MQ-4C Triton unmanned aircraft system.



The U.S. Navy’s last T-2C Buckeye takes its final flight Sept. 25 over the Chesapeake Bay. Since 2008, three T-2s belonging to Air Test and Evaluation Squadron (VX) 20 at Naval Air Station Patuxent River, Md., flew 1,978 sorties, 2,672 flight hours and 850 photo/safety chase events.

U.S. Navy photo

## U.S. Navy Awards Production Contract for Additional P-8A Aircraft

PATUXENT RIVER, Md.—The U.S. Navy awarded a nearly \$1.5 billion contract Aug. 27 to Boeing Defense, Space & Security for the procurement of 13 full rate production Lot 2 P-8A Poseidon aircraft.

Nine planes will join the U.S. fleet and four will join the Royal Australian Air Force (RAAF), which has been a cooperative partner in the P-8A joint program office since 2009.

The contract also provides an option to procure 20 additional full rate production Lot 3 planes, 16 of which will go to the U.S. Navy and four to the RAAF.

“The Royal Australian Air Force and U.S. Navy have long been partners in maritime patrol,” said Capt. Scott Dillon, Maritime Patrol & Reconnaissance Aircraft Program Office (PMA-290) program manager. “Australia’s parallel transition from P-3C to P-8A will

U.S. Air Force photo by Airman 1st Class Timothy Kim



A P-8A Poseidon maritime patrol and reconnaissance aircraft rests on a ramp during a Baltic Operations 2015 mission on the flight line of Spangdahlem Air Base, Germany, June 9.

maximize interoperability while both forces continue to receive the benefits of a highly cost effective, highly reliable and persistent aircraft.”

The eight RAAF planes included in the contract will be the first P-8A aircraft delivered to Australia, with initial delivery set for autumn 2016.

“Through the P-8A cooperative program partnership, Australia is acquiring an affordable, state-of-the-art capability that will support Australia’s maritime security well into the future, leveraging the

combined expertise and experience of the U.S. Navy, Royal Australian Air Force and Boeing,” said Wing Commander David Houghton, PMA-290 P-8A Joint Program Office lead.

Boeing has delivered 28 planes to the Navy, the latest of which arrived Aug. 18 in Jacksonville, Florida.

The P-8A is replacing the P-3C Orion as the Navy’s long-range anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft. 🇺🇸

## SECNAV names Deputy Assistant Secretary of the Navy for Unmanned Systems

WASHINGTON—Secretary of the Navy Ray Mabus named retired Brig. Gen. Frank Kelley to be deputy assistant Secretary of the Navy (DASN) for Unmanned Systems during a speech Oct. 27 at the Association for Unmanned Vehicle Systems International’s Unmanned Systems Defense 2015 event.

“General Kelley’s superb operational experience as a U.S. Marine, as well as his professional expertise in the field of electronic warfare and unmanned technology make him perfectly qualified to lead this new enterprise in the Department of the Navy, and I look forward to the great work he and his team will be spearheading,” said Mabus.

Kelley is the first DASN for Unmanned Systems and will assist in the planning and prioritization of unmanned systems as well as develop acquisition strategies to obtain these emerging capabilities.

DoN officially launched the Unmanned Warfare Systems Division (N99) Sept. 15 as part of the office of the Chief of Naval Operations (OPNAV) staff. Rear Adm. Robert Girrier was named director, Unmanned Warfare Systems (N99).

“The change to the organization is a reflection of the priority we’re placing on this emerging capability, and how critical it is that there is centralized leadership for our unmanned programs,” Mabus said.



U.S. Marine Corps photo

Retired Brig. Gen. Frank Kelley, the first deputy assistant Secretary of the Navy for Unmanned Systems, will assist in the planning and prioritization of unmanned systems.

N99 is responsible for developing and accelerating unmanned systems into the Navy’s warfighting capabilities as well as assessing integration of unmanned systems within the Navy. Through this new approach, resources are optimized and technical risk is reduced, saving time and money.

Girrier is responsible for the rapid development and integration of unmanned systems across portfolios currently resourced by four warfare divisions—Expeditionary Warfare (N95), Surface Warfare (N96), Undersea Warfare (N97) and Air Warfare (N98)—as well as the deputy chief of Naval Operations for Information Dominance and director of Naval Intelligence (N2/N6). 🇺🇸

# F-35B SQUADRON READY FOR WORLDWIDE DEPLOYMENT

*By DoD News and Defense Media Activity*



**On July 31, the Marine Corps declared that a squadron of 10 F-35B Lightning II aircraft is ready for worldwide deployment.**

**T**he Marines' declaration of initial operational capability (IOC) for its squadron of F-35Bs "marks a significant milestone in the continued evolution of the F-35 Joint Strike Fighter program," said Frank Kendall, undersecretary of Defense for Acquisition, Technology and Logistics.

"The decision was made following a thorough operational readiness inspection, which assessed the Marine Corps' ability to employ this complex weapon system in an operational environment," Kendall said. "This achievement is a testament to the efforts of the F-35 Joint Program Office and industry team, as well as the hard work and support from the Marine Corps."

## **On Track**

"This accomplishment is an affirmation that the F-35 program is on track to deliver essential fifth-generation warfighting capabilities to our U.S. services and international partners," Kendall said. "It is also a reminder that we still have work

ahead to deliver the full warfighting capability required by all three services and our partners while we continue our successful efforts to drive cost out of the program."

Marine Fighter Attack Squadron (VMFA) 121, based in Yuma, Arizona, is the first squadron to become operational with an F-35 variant, following a five-day operational readiness inspection, which concluded July 17.

"I am pleased to announce that VMFA-121 has achieved initial operational capability in the F-35B, as defined by requirements outlined in the June 2014 Joint Report to Congressional Defense Committees," said Gen. Joseph F. Dunford Jr., then commandant of the Marine Corps. Dunford became chairman of the Joint Chiefs of Staff on July 29.

"VMFA-121 has 10 aircraft in the Block 2B configuration with the requisite performance envelope and weapons clearances, to include the training, sustainment capabilities and infrastructure to deploy to an austere site or a ship," Dunford said. "It is capable of conducting close air support, offensive and defensive counter air, air interdiction, assault support escort and armed reconnaissance as part of a Marine air-ground task force, or in support of the joint force."

Dunford said he has his full confidence in the F-35B's ability



*An F-35B Lightning II Joint Strike Fighter with Marine Fighter Attack Squadron (VMFA) 121, 3rd Marine Aircraft Wing (MAW), flies next to an AV-8B Harrier with Marine Attack Squadron (VMA) 211, 3rd MAW, during fixed-wing aerial refueling training Aug. 27 over eastern California.*

U.S. Marine Corps photo by Lance Cpl. Raquel Barraza

*“The F-35B’s ability to conduct operations from expeditionary airstrips or sea-based carriers provides our nation with its first fifth-generation strike fighter, which will transform the way we fight and win.”*

to support Marines in combat, predicated on years of concurrent developmental testing and operational flying.

“Prior to declaring [IOC], we have conducted flight operations for seven weeks at sea aboard an L-Class carrier, participated in multiple large force exercises and executed a recent operational evaluation, which included multiple live ordnance sorties,” Dunford said. “The F-35B’s ability to conduct operations from expeditionary airstrips or sea-based carriers provides our nation with its first fifth-generation strike fighter, which will transform the way we fight and win.”

### **Replaces Legacy Aircraft**

As the future of Marine Corps tactical aviation, the F-35 will eventually replace three legacy platforms: the AV-8B Harrier, the F/A-18 Hornet and the EA-6B Prowler.

“The success of VMFA-121 is a reflection of the hard work and effort by the Marines in the squadron, those involved in the program over many years, and the support we have received from across the Department of the Navy, the joint program office, our industry partners and the undersecretary of defense,” Dunford said. “Achieving [IOC] has truly been a team effort.”

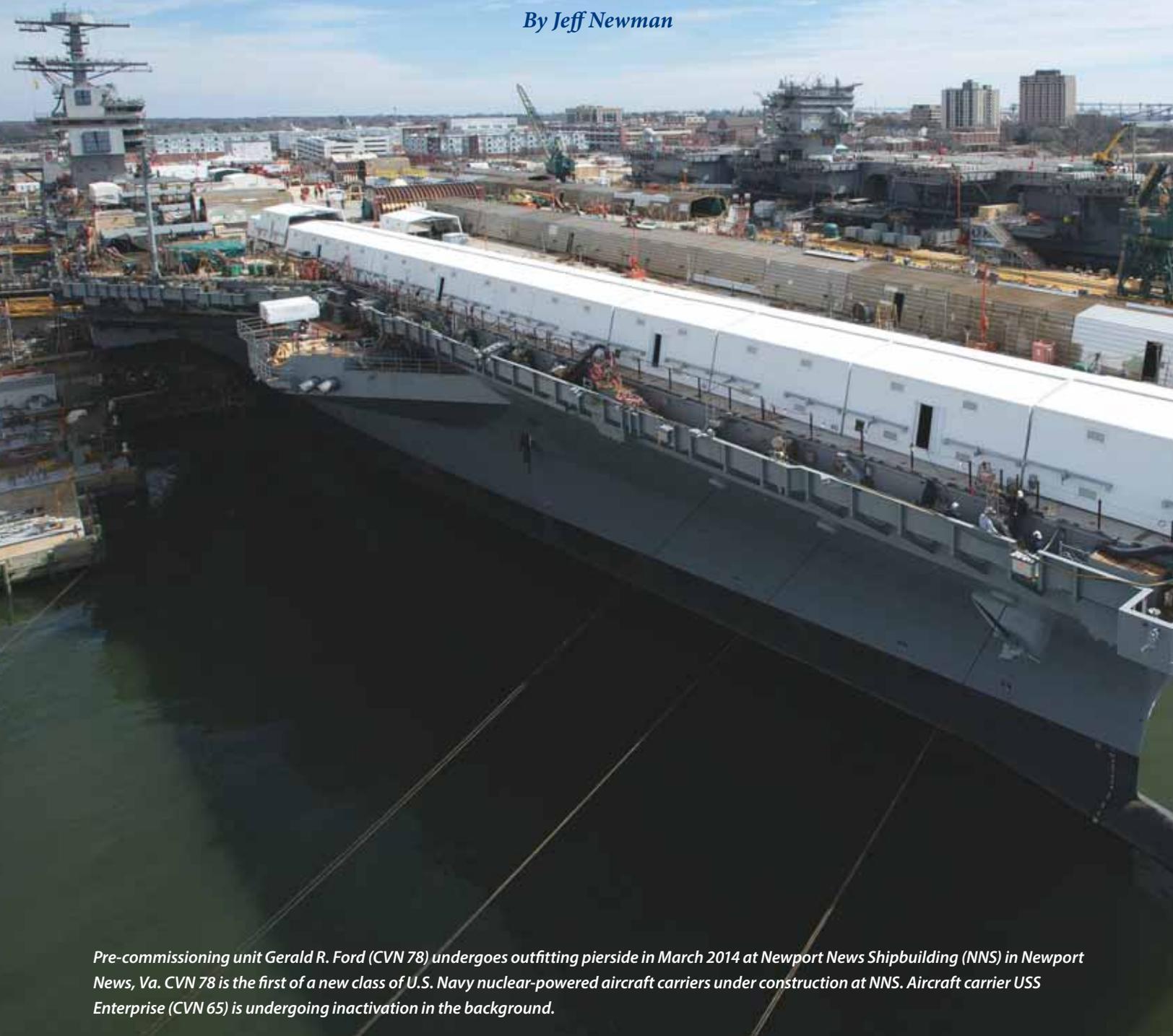
The Marine Corps has trained and qualified more than 50 Marine F-35B pilots and certified about 500 maintenance personnel to assume autonomous, organic-level maintenance support for the F-35B.

Two AV-8B Harrier II squadrons will be the next to transition to the F-35B. Marine Attack Squadron (VMA) 211 is scheduled to transition in fiscal year 2016, and VMFA-311 will conduct its transition in 2018. ✈️

# Head of the Class

The lead ship in the first U.S. carrier class in more than 40 years, pre-commissioning unit (PCU) Gerald R. Ford (CVN 78), will usher Naval Aviation into its second century with improvements on the previous Nimitz-class to increase sortie rates, boost efficiency and reduce ownership costs over the course of its 50-year lifespan.

*By Jeff Newman*



*Pre-commissioning unit Gerald R. Ford (CVN 78) undergoes outfitting pierside in March 2014 at Newport News Shipbuilding (NNS) in Newport News, Va. CVN 78 is the first of a new class of U.S. Navy nuclear-powered aircraft carriers under construction at NNS. Aircraft carrier USS Enterprise (CVN 65) is undergoing inactivation in the background.*



Photo by John Whalen courtesy of Huntington Ingalls Industries

**W**ith construction more than 96 percent complete and 89 percent of compartments turned over to the crew, the warship is well on its way to being delivered to the Navy this spring. “Ford has more than 1,800 Sailors in her crew today, and will be at its full complement next spring,” said Lt. Cmdr. Sean Robertson, the ship’s public affairs officer. When she first deploys, there will be between 500 to 900 fewer Sailors in the ship’s company than her Nimitz counterpart.

A recent tour of the 100,000-ton supercarrier as it sat tethered to the dock in Newport News, Virginia, revealed an immense pride among the crew. Each Sailor participating in the tour was eager to emphasize how both the mission and their quality of life would be improved by the ship’s new technologies and design.

## Electromagnetic Aircraft Launch System

The most high-profile upgrade is the transition from the steam catapult to the Electromagnetic Aircraft Launch System (EMALS), which employs electromagnetic energy to propel aircraft. Beneath the flight deck, two rows of linear motor “stators” run the length of the 300-foot catapult track. Between the stators rides an armature, which is linked to the launching aircraft through a slot in the flight deck. The stators release electromagnetic pulses that propel the armature—and the aircraft—down the track.

Three energy storage groups (ESGs) produce the electricity needed to fire the catapults, and each ESG has four motor generators that draw power from the ship’s twin nuclear reactors and store it for launch. Each launch requires an enormous amount of energy, but Ford will be able to fire all four catapults in quick succession, within five to seven seconds of each other, said Petty Officer 1st Class Anthony Couitt, an aviation boatswain’s equipment mate.

“The only limitation we have is how fast the motor generators can recharge themselves. If all 12 [generators] are up and

running, and we have a lot of power, we can go bang-bang-bang-bang.”

Two of Ford’s four catapults successfully launched dead-load sleds into Virginia’s James River in June, and the other two recently had their armatures installed and began testing.

The system steadily accelerates aircraft throughout the launch, putting less stress on the airframe than the abrupt force released by the steam catapult, and theoretically extending the service life of aircraft.

In addition to the reduced strain on aircraft, EMALS also lessens the burden on the ship’s crew.

“It’s a lot easier on the manpower,” Couitt said. “We have fewer watch stations. It’s better living conditions for the crew. We have a lot less maintenance, whereas on Nimitz-class carriers, we were up all night. Steam from the launch valves means it’s hot all the time, we’re sweating, covered in grease, working late. [EMALS] has a lot of maintenance that goes along with it, but it will be a lot easier on us.”

A “maintenance work station” console monitors the system and diagnoses and troubleshoots problems.

“[If] any one thing goes wrong in the entire system, it will pop up [and we] will know exactly what’s wrong and how to fix it,” Couitt said.

Gone are the maintenance-intensive water brakes required to stop a steam catapult’s pistons; to stop the armature following launch, EMALS merely reverses the magnetic forces. In the event it fails to brake, the system employs a rudimentary failsafe—a series of stainless steel honeycomb blocks sit at the end of the catapult track, awaiting a wayward armature. Should the failsafe be needed, crunched blocks are simply changed out for new ones.

“They’re just cubes that are meant to be crushed,” Couitt said.

In addition to the reduced maintenance, the new braking system brings a less obvious benefit to the crew—the lack of booming water brakes makes for smoother sleep for Sailors housed in berthing beneath the first and second catapults.

*“Elsewhere on the ship’s deck, the island superstructure has been moved roughly 140 feet aft to provide a ‘better visibility and better usage of the flight deck area.’”*



Photo courtesy of Huntington Ingalls Industries

Leon Walston, a Newport News Shipbuilding welder, displays the welded initials of Caroline Kennedy, the sponsor of the aircraft carrier John F. Kennedy (CVN 79). Also pictured (left to right) are Rear Adm. Earl Yates, the first commanding officer of the previous aircraft carrier USS John F. Kennedy (CV 67); Newport News Shipbuilding President Matt Mulherin; Virginia Gov. Terry McAuliffe; and U.S. Rep. Joseph Kennedy.

## Keel Laid for Future Aircraft Carrier John F. Kennedy

NEWPORT NEWS, Va.—The Navy celebrated the keel laying for the second Gerald R. Ford-class aircraft carrier John F. Kennedy (CVN 79) in an Aug. 22 ceremony at the Huntington Ingalls Industries shipyard in Newport News.

John F. Kennedy, designated CVN 79, is the second aircraft carrier to honor the 35th President of the United States for his lifetime of service. The ship’s sponsor, Ambassador Caroline Kennedy, President Kennedy’s daughter, declared the keel “truly and fairly laid” via video to signify the ceremonial start of construction.

“Every ship has a personality,” Kennedy said. “I like to hope that this next ship called ‘John F. Kennedy’ will take on some of the personality of the person for whom it is named. My father displayed a spirit that challenged people to do more for their country and reach for that next level. I hope that all those who sail on this ship will sail with the same sense of service to the nation that my father felt.”

The first USS John F. Kennedy (CVA 67) was christened in May 1968 and went on 17 deployments before being decommissioned in August 2007 as the last conventionally-powered carrier designed by the Navy.

John F. Kennedy (CVN 79) is the numerical replacement for USS Nimitz (CVN 68), which is slated for inactivation in 2025. The carrier is scheduled to launch in February 2020 and be delivered in June 2022. 🇺🇸

Combined with flight deck reconfigurations designed to hasten flight operations, EMALS boasts a projected ability to sustain a launch rate of more than 160 sorties per day, a 33 percent increase when compared to Nimitz-class carriers. That figure spikes to 270 sorties per day during intensive operations.

The bolstered sortie rate called for a commensurate uptick in the flow of weapons, so the Ford comes outfitted with 11 electromagnetic weapons elevators—four of which reach the flight deck—that can each carry a maximum load of 24,000 pounds, versus the hydraulic elevators on Nimitz-class ships, which max out at 10,500 pounds. Instead of in a cramped assembly area known as the “bomb farm” on the flight deck of Nimitz-class carriers, weapons on Ford are stored and handled below deck in a cavernous chamber before being transferred up in the weapons elevators.

“I’m a big fan,” said Petty Officer 2nd Class James Henderson, an ordnance handling officer. “Old days, on Nimitz-class, if it was raining and you had ordnance on deck, you were out in the rain on deck with it hanging out, chilling. This is safer for everyone involved in the ordnance evolution.”

## More Efficient Flight Deck Operations

Elsewhere on the ship’s deck, the island superstructure has been moved roughly 140 feet aft to provide “better visibility and better usage of the flight deck area” by removing the ‘bomb farm’ and an aircraft elevator that, on Nimitz-class carriers, sit between the island and outboard line of the ship, said Cmdr. Scott Kramarik, Ford’s navigator.

The relocation results in an ‘incredibly bigger’ workable space on the deck, allowing the crew to line up more aircraft behind the catapults, said Petty Officer 1st Class Kyle Bouska, an aviation boatswain’s handling mate. It is typical to back-and-

stack up to six aircraft—a “six pack”—on a Nimitz-class carrier, but on Ford, the increased deck area allows for the staging of up to 10 aircraft, he said.

“So, for the first and second goes, we’ll be able to have them right here ready to go, with fewer aircraft on the fantail for us to shuffle around, so we’re pretty much set up for recovery already,” Bouska said.

The island has also been moved a few feet outboard “so you have a better line of sight right down the edge of the ship,” Kramarik said.

The captain’s sightline during embarking or replenishments at sea is further bolstered by the placement of the Starboard Conning station near Kramarik’s station on the main bridge.

“He wants to be able to look right down the side of the ship so he knows exactly how close we’re getting to the pier or to those other ships,” Kramarik said. “All of those things together, somebody thought about whenever the ship was designed.”

Scattered across the flight deck are six in-deck fueling stations, which have been placed in high-traffic spots to cut down on the time spent dragging fuel hoses across the runway. On Nimitz-class carriers, the fuel hoses are located along the edge of the ship.

“With aircraft moving around, it’s easier for us to have the in-deck stations instead of doing long pulls,” said Petty Officer 2nd Class Roderick Sinclair, an aviation boatswain’s fuels mate.

Aircraft waiting to take off will often receive a top-off to replace the fuel burned while idling on the runway, Sinclair said. Instead of dragging a fuel hose from the edge of the ship, Ford’s in-deck stations have been laid out specifically to serve areas on the flight deck where aircraft most often need refueling.

“It helps cut down on the distance, and you can get them out of here faster,” Sinclair said.

In addition, Catapult Two’s jet blast deflector (JBD) has been moved so that it will no longer foul the landing area while raised for launch, eliminating time wasted waiting for the JBD to lower before aircraft recovery can begin.



Photo courtesy of Huntington Ingalls Industries

*The next generation Electromagnetic Aircraft Launch System (EMALS) launched a 15,000-pound sled off the flight deck of PCU Gerald R. Ford (CVN 78) June 5.*



U.S. Navy photo by Jennifer Neal

*Cmdr. Scott Kramarik, PCU Gerald R. Ford’s (CVN 78) navigator, highlights improved flight operations resulting from the shifting of the island further aft while giving a tour of the ship’s bridge Sept. 17.*

## Gerald R. Ford Sailors Train for the Future aboard GW

By MCSN Kiana Raines

PACIFIC OCEAN, At Sea—When USS George Washington (CVN 73) pulled away Sept. 8 from the pier at Naval Air Station North Island, San Diego, Calif., she took 42 Sailors from pre-commissioning unit Gerald R. Ford (CVN 78) with her.

Many of those Sailors volunteered for the opportunity, a chance to train in qualifications only available underway.

"I was at the Huntington Hall quarterdeck when I received a text message asking for names to go out with Washington. I immediately volunteered," said Ryan Norman, an airman apprentice. "I came out to get my warfare and in-rate qualifications, to further my career. The qualifications I've earned so far will help me assist our ship in setting up programs and training people."

"We have an array of qualifications we came out to achieve," said Senior Chief Robert Mendoza, an aviation electrician's mate and Ford detachment's leading chief petty officer. "It's one thing to be taught in a classroom, but when you have actually worked with the equipment, it provides real-time experience."

The 10 Sailors that make up Air Department's V-1 detachment have already earned three Enlisted Aviation Warfare Specialist (EAWS) and one Enlisted Surface Warfare Specialist (ESWS) qualifications.

"More of us are waiting for boards on our qualifications," said Petty Officer 1st Class Dylan Tiefert, an aviation boatswain's mate, referring to the oral test Sailors must pass to earn a designation.

Other Sailors, assigned to Deck, Media, Intelligence, Air,

Operations and the Aviation Intermediate Maintenance Department (AIMD), are 80-percent qualified in-rate, with 38 enrolled in warfare programs.

"We have Ford Sailors [serving] as day-check supervisors, night-check supervisors and first-class petty officers in leadership positions here in Weapon's G-3 division," said Petty Officer 1st Class Shawn Locklear, an aviation ordnanceman. "Our guys are stepping into leadership roles."

Junior Sailors like Norman are earning certifications, which are vital to Ford's commissioning in 2016.

"He's ordnance certified, which is a huge deal for us," said Locklear. "You can't touch ordnance unless you're team-member qualified. He can take all this knowledge back and train the junior guys on Ford. Ford's G-3 division has about 150 Sailors now, most of them airman and below who've never touched a bomb and are not qualified. Norman, one of their peers, could easily give them training. He's seen the bombs, qualified and knows the hands-on side of the rate on an operational carrier."

The Sailors' experience while aboard Washington is two-fold in contributing to the mission of both Washington and Ford.

"We're upholding the Ford and representing it the best we can," said Locklear. "We're ready to come back [with] our experiences and qualifications, and help Ford meet the mission of building the command we've always wanted."

*Mass Communication Specialist Seaman Kiana Raines serves the media aboard USS George Washington (CVN 73).* 🚢



U.S. Navy photo by MCSN Kiana A. Raines

*Sailors perform maintenance on a catapult aboard USS George Washington (CVN 73) while underway.*



U.S. Navy photo by MCSN Clemente A. Lynch

*An aviation boatswain's mate fuels an F/A-18E Super Hornet on the flight deck of USS George Washington (CVN 73).*

The new deck layout also allows for more room to store aircraft. For instance, the “finger,” located aft of one of the aircraft elevators, can store only one plane on Nimitz-class carriers; on Ford, the area can fit three aircraft, Bouska said.

“It’s going to be interesting to get all the aircraft up here and move them around and maximize our space,” he said.

Though they’ll be aboard the most technologically advanced carrier in history, Ford’s crew will spend their first year at sea navigating the “old school” way, with paper charts, Kramarik said.

The ship was designed to be navigated electronically, but an updated version of the voyage management system has not been fully approved for Ford, Kramarik said. Other Navy platforms, including several destroyers, are already running the latest software, while the rest of the fleet’s carriers navigate electronically with an older version of the system, he said.

“There’s a little bit off hesitancy on our side, only because nobody really does [paper charts] as much anymore since we’ve transitioned to [electronic navigation], but I’ve got plenty of folks with plenty of experience on paper, so I’m not concerned,” Kramarik said.

The delayed implementation of the voyage management system has also spurred a minor redesign of the Ford’s bridge—during the tour, construction crews were working to clear out space near Kramarik’s station for a chart table.

“One of my biggest things from the minute that I stepped in here was, that I need a chart table on the bridge,” Kramarik said.

Though it is not yet allowed to fully navigate with the new system, Ford can use it for situational awareness, Kramarik said. Once the system is approved, the crew will no longer be allowed to use paper charts, he said.

## Crew Training

Ford Sailors are currently undergoing training across the globe in preparation for the ship’s maiden voyage.

*“With the full crew set to be on board by spring, several Sailors who have witnessed the ship’s development mentioned the possibility of extending their tours so they could serve on the Ford’s initial shakedown cruises.”*



U.S. Navy photo by Jennifer Neal

Sailors aboard PCU Gerald R. Ford (CVN 78) conduct a foreign object debris (FOD) walk along the ship’s flight deck during a Sept. 17 tour of the vessel.



U.S. Navy photo by Jennifer Neal

The 11 electromagnetic weapons elevators aboard PCU Gerald R. Ford (CVN 78) can each carry a maximum load of 24,000 pounds, compared to the hydraulic elevators on Nimitz-class carriers, which max out at 10,500 pounds. The additional lift capacity allows for an increased flow of weapons as demanded by the ship’s improved sortie rate.

“I have some simulator access in different locations, but the absolute best place is to get underway on another carrier, so we’ll send them out on, you name it,” Kramarik said. “We have [42] Sailors completing various training onboard the USS George Washington (CVN 73), that’s working her way around from the West Coast to the East Coast right now.”

With the full crew set to be on board by spring, several Sailors who have witnessed the ship’s development mentioned the possibility of extending their tours so they could serve on the Ford’s initial shakedown cruises.

Couitt called it “pretty exciting” to be part of the first crew to operate and maintain EMALS, and hoped he would get to see the system as a finished product.

“Hopefully we get to launch aircraft on it before I leave here,” he said.

*Jeff Newman is a staff writer and contributing editor to Naval Aviation News magazine.* 🐦

# FULL STEAM AHEAD:

## Navy Engineer’s Career Tracks Catapult Evolution

*By Paula Paige*

There’s nothing “modest” about the Navy’s new Electromagnetic Aircraft Launch System (EMALS), and perhaps one naval engineer knows this best.

Eighty-year-old Modest (moh-DEST’) Zacharczenko (za-kar-CHEN’-ko) has spent most of his 55-year career working on the Navy’s aircraft launch and recovery systems, 43 of them in the Aircraft Launch and Recovery Equipment Program Office (PMA-251) at Naval Air Station (NAS) Patuxent River, Maryland.

Although the veteran engineer didn’t witness the June 5 EMALS test aboard pre-commissioning unit Gerald R. Ford (CVN 78), he influenced the evolution of the catapult system that will eventually replace the current steam-powered version.

Zacharczenko is the Aviation Ship Integration (ASI) Department’s deputy director for aviation systems at Program Executive Office (PEO) for Aircraft Carriers, a job ensuring the successful integration of the Navy’s aviation and shipboard systems. Although based at the Navy Yard in Washington, D.C., he is aligned under Naval Air Systems Command (NAVAIR).

Despite the complexities of working with different organizations,

### Ford’s Aircraft Launch and Recovery Test Milestones

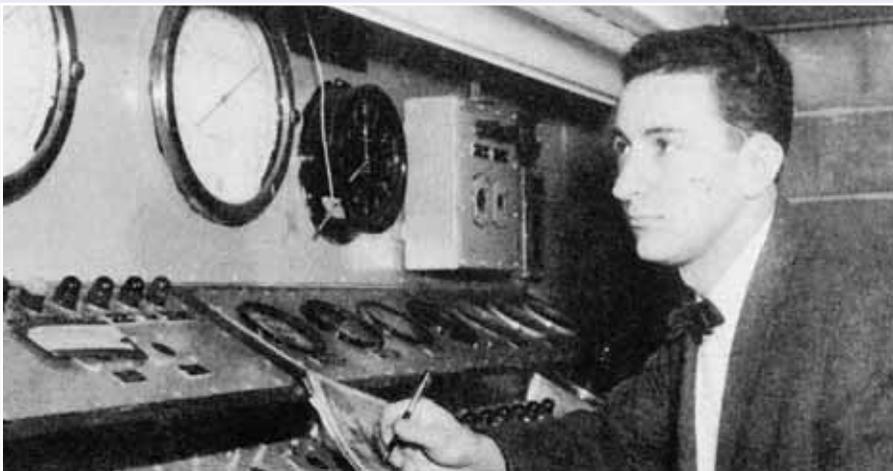
CVN 78 began EMALS shipboard testing in August 2014. Catapult testing with dead-loads, or aircraft-representative weighted sleds, began in June 2015; and to date, 109 dead-load launches have been successfully completed aboard the carrier. The testing checks system functionality and establishes each catapult’s individual performance characteristics. The ship’s test data will be compared to land-based test data, and following adjustments, will become the basis for the first manned F/A-18E Super Hornet aircraft launch from Ford, expected next year.

Extensive land-based testing on the Advanced Arresting Gear (AAG) system continues at the Jet Car Track Site (JCTS) at the Naval Air Warfare Center Aircraft Division in Lakehurst, New Jersey.

AAG is a modular, integrated system consisting of energy absorbers, power conditioning equipment and digital controls, designed to safely arrest aircraft on CVN 78-class aircraft carriers. AAG is the follow-on to the Mark-7 (Mk-7) aircraft carrier arresting gear system, which the Navy currently uses on all active Nimitz-class aircraft carriers.

The AAG architecture, Health Monitoring Assessment and Prognostics technology and digital control system provides for built-in test and diagnosis, which requires less maintenance and manpower to operate than the Mk-7. This change is designed to provide higher reliability and reduced fatigue impact to aircraft, at a reduced operating cost. The system allows for the recovery of all current and projected carrier-based aircraft, from the lightest unmanned aerial vehicles to the heaviest manned fighters.

All AAG hardware re-designs are now complete, with every design change tested at the JCTS prior to implementation into the shipboard hardware. Current testing focuses on fine tuning the software control system, particularly for degraded mode arrestments. As of August 2015, the Navy team has executed 1,046 dead-load arrestments, 663 of which were conducted using re-designed water twisters. The Navy is working to commission the Runway Aircraft Landing Site and conduct the first manned aircraft arrestment in early 2016. Concurrently, all AAG hardware has been delivered to CVN 78 and testing, which began in July 2015, is underway and projected to be completed in time to support first scheduled flight operations in summer 2016.—*Aircraft Launch and Recovery Equipment Program Office (PMA-251)* 🐦



Modest Zacharczenko monitors steam accumulator pressure in the control room of the C-13 Mod 0 catapult at the land-based test site in Lakehurst, N.J., in 1960.



U.S. Navy photo

Courtesy photo

The deputy director for aviation systems at Program Executive Office (PEO) for Aircraft Carriers, Modest Zacharczenko's 55-year naval career parallels the development of the Navy's launching systems/catapults.

Zacharczenko said he "is simply focused on getting aircraft safely in the air and back on deck and providing support for every ship afloat.

"Without the installed aircraft catapults and arresting gear, there would be no naval tactical aviation as we know it," he said. "The bottom line in aircraft carrier aviation is flight safety of manned and unmanned aircraft."

For Zacharczenko, who calls EMALS the "Navy's future workhorse," the delivery of the Ford is also a harbinger of his eventual retirement.

"My goal is to see the Ford commissioned and go on the trials with EMALS onboard," he said. "Then, my job will be done."

For now, however, he is focused on ensuring the catapult's transition from steam to electromagnetics. Although EMALS will eventually replace steam catapults on Ford-class aircraft carriers, Zacharczenko said it deserved a salute.

"Steam has served us superbly," he said. "The Navy will use a mix of EMALS and steam catapults, with steam being used on Nimitz-class carriers and continue to be used until 2059."

### His first steam engine

Born in Ukraine, Zacharczenko said he was 8 years old when an uncle presented him with a small-scale working steam engine, piquing his interest in an eventual career. But the turmoil of war would steal his childhood.

Zacharczenko said he and his family were forced to flee Ukraine during World War II to escape brutal Communist and Nazi forces that executed and deported millions of citizens.

"My granddad and father's older brothers were all executed," he said. "My father was on a hit list to be

executed by the Communists. He was the only male survivor in his family."

Eventually, Zacharczenko and his family made their way to New York City via a converted troop carrier ship. By then, he was 14. He graduated from high school and earned a scholarship to attend City College of New York. Along the way, he became a U.S. citizen in 1953 and said he was "proud to cast his first vote for Dwight D. Eisenhower for president."

Upon graduation in 1959 and concurrent commissioning as a second lieutenant under the Army Reserve Officer Training Corps program, he landed a job as a development test engineer at then-Naval Air Test Facility, Lakehurst, New Jersey. Zacharczenko later left Lakehurst for NAVAIR headquarters in Crystal City, Virginia, moving with the command to NAS Patuxent River.

During that time, he implemented significant advancements in the catapult's development. Recognizing the need to minimize demand for high-pressure steam and competition with the ship's propulsion system, in 1982 he led the development of the low-pressure catapult, the C-13 Mod 2 "Fat Cat," which reduced the frequency and extent of maintenance actions of the propulsion components aboard Nimitz-class carriers.

The effort saved the Navy more than \$600 million and earned Zacharczenko NAVAIR's Cost Reduction Achievement Award for a single action. Additionally, in 2003, he helped establish the ASI Department, which bridges the gap between the Navy's aviation and maritime capabilities.

Formerly a public affairs officer for NAVAIR's Program Management competency, Paula Paige is chief, strategic communication for the Veteran Employment Services Office, Department of Veterans Affairs. 🇺🇸

# 'Harnessing the Sky'

By Jeff Newman

Trapnell launches off USS Lexington



Frederick "Trap" Trapnell 1939



Flight school graduating class, 1927

## A Son and Granddaughter Deliver Long Overdue Biography of Naval Aviation's 'Godfather'

Frederick Trapnell Jr. had always resisted writing a biography of his father, who left little material on which to base his life's story. As a result, the legacy of Frederick "Trap" Trapnell as one of the U.S. Navy's pioneering aviators and its foremost test pilot had been preserved only in the archives and memories of those who served beside him, but not in print.

And yet, Trapnell Jr. and his daughter, Dana Tibbitts, knew it was a story worth telling. It just took a little prodding from friends who knew something of Trap's story and "browbeat me into thinking this was important," said Trapnell Jr., who alongside Tibbitts began researching and writing the book in 2010—a process that culminated this year with the publishing of "Harnessing the Sky: Frederick 'Trap' Trapnell, the U.S. Navy's Aviation Pioneer, 1923-1952."

A must-read for aviation and World War II buffs alike, the book spends a

couple brief chapters reviewing both Naval Aviation's infancy and Trapnell's early years as a New Jersey youth before diving headlong into his career shepherding the service through one aviation advancement after another. In many ways, in telling Trapnell's story, his son and granddaughter have also written a history of Naval Aviation.

Trapnell graduated from the U.S. Naval Academy in 1923 and served as a line officer on two vessels before enrolling in the Navy's flight school in 1926. Upon graduation, he flew in various squadrons aboard carrier USS Lexington (CV 2), where he distinguished himself as an outstanding pilot with a special skill in diagnosing quirks and problems in the flying characteristics of airplanes. This earned him a 1930 assignment to the Flight Test Section at Naval Air Station Anacostia in Washington, D.C., where he established himself as one of the Navy's top test pilots, pioneering an approach to

flight testing that called for the in-flight collection of quantitative data and laid the foundation for a new concept in aviation—the engineering test pilot.

Trapnell spent 19 months in the section's five-member flight test unit before transferring to the airplane unit aboard airships USS Akron (ZRS 4) and Macon (ZRS 5). Beginning in 1932, he spent two years as an aviator aboard a heavy cruiser and then four more as the executive and commanding officer of patrol squadrons in the Pacific.

By May 1940, with the country preparing for war, the Navy was facing the cold reality that its fighter planes did not have the performance or fire power of counterparts in the German Luftwaffe or the British Royal Air Force. Needing to develop a new roster of warplanes and with little time to do so, the Bureau of Aeronautics, a precursor to Naval Air Systems Command, called Trapnell back to Anacostia to head up Flight Test and overhaul the Navy's process for testing and evaluating new aircraft.

"They simply did not have the luxury of four years to develop the airplanes

F9C Sparrowhawk  
hooking onto  
the trapeze of  
the USS Macon

**“Trapnell played a critical role in the development of the Navy’s two preeminent World War II-era fighters—the Vought Chance F4U Corsair and Grumman F6F Hellcat.”**



Trapnell (far right) joins the Navy’s aerial demonstration team, The Three Flying Fish



Trapnell named head of the Heavier-Than-Air (HTA) unit, USS Macon



Trapnell inducted into the Caterpillar Club, 1929

Trapnell transfers to Torpedo Squadron 1 aboard USS Lexington

needed to win the impending war,” the book states. “Trap would have to figure out a way to streamline the process without compromising integrity, a radical change for the muscle-bound Navy culture.”

Trapnell instilled in his protégé test pilots the methods and data-driven concepts he had helped establish a decade prior. “Get the numbers” became their credo.

As the leader of Flight Test, Trapnell left his largest mark on the war in the critical role he played in developing the Navy’s two preeminent World War II-era fighters—the Chance Vought F4U Corsair and Grumman F6F Hellcat.

The Corsair was one of three fighter prototypes ordered by the Navy in the run-up to the war, and though he found none of them impressive during testing, Trapnell determined the Vought airplane was the most fit to move forward. The best performer of the group, it became the first U.S. fighter to exceed 400 mph during a speed run piloted by Trapnell in 1940. But the plane also had serious flaws including poor pilot visibility, a dangerous power-on stall, inadequate firepower,

insufficient fuel capacity and, chief among Trapnell’s concerns, a dismal roll rate, which could prove lethal in combat. Vought executives doubted whether they could address every shortcoming.

“There was, they insisted, simply not enough room in the airframe to do everything the Navy was asking for,” the book states.

So, Trapnell and his team sketched out a redesign on their own, making “major alterations” that moved the cockpit to both increase fuel capacity and enhance pilot visibility and called for longer-span ailerons and shorter-length flaps to improve the roll rate. Although taken aback by the proposals, which amounted to a complete overhaul of the aircraft, Vought ultimately accepted the challenge.

Much of the redesign was a reconfiguring of the airframe’s layout, but getting the plane to roll to Trapnell’s satisfaction required a redesign of the wing and aileron. His demands ultimately proved prophetic, as they forced Vought’s engineers to make a laborious series of changes to improve the Corsair’s maneuverability.

“I don’t know whether the Navy

already had advanced knowledge of the still-secretive Japanese Zero and its incredible maneuverability,” former Vought test pilot Boone Guyton wrote in a book excerpted by Trapnell Jr. and Tibbitts. “Perhaps they did—for their request was right on the mark, and timely. Later in the war, the Corsair’s maneuvering performance would receive the highest praise from fighter pilots who had their lives on the line. Its fast rate of roll, especially at extremely high speeds, was to become legendary.”

Though designed as a carrier-based aircraft, the Corsair initially proved too difficult to land aboard a ship due to the power-on stall and wheel struts that made the aircraft bounce upon a hard landing. Thus, the Corsair began its career as a land-based fighter in the Marine and Navy campaign in the Solomons before going aboard ship as a high-performance fighter in 1944. It racked up an 11-to-1 kill ratio during the war.

In 1943, the Navy turned to the Grumman F6F Hellcat to replace the Grumman F4F Wildcat in carrier air wings. The first prototype Hellcat flew

*Trapnell flew the first production Grumman F6F Hellcat*



*Trap tested the North American FJ-1 Fury—the U.S. Navy's first jet fighter*



*Responsible for extensive modifications to improve the Vought F4U Corsair*



*Trapnell as commanding officer of Naval Air Test Center, Patuxent River, Md*



*Trapnell and Rear Adm. Apollo Sourcek at Naval Air Station, Patuxent River, Md*

in June 1942, and a production-level airplane rolled out in October.

To expedite production of the much-needed fighter rather than put the Hellcat through the Navy's standard 6- to 8-month approval process, Grumman founder Leroy "Roy" Grumman proposed that the Navy simply allow Trapnell to personally test the aircraft and determine whether it was fit for service. Largely based on Trapnell's reputation, the Navy agreed.

Trapnell flew and approved the Hellcat in October 1942, sending the fighter into immediate production. Four months later, the airplane was aboard USS Essex (CV 9) in the Pacific. It finished the war as the most successful fighter in Navy history, recording nearly 5,200 kills.

Trapnell left Flight Test in 1943, one month before its relocation to Naval Air Station Patuxent River, Maryland. He commanded patrol wings and USS Breton (CVE 23) before serving as Rear Adm. Arthur Radford's chief of staff for the last year of the war.

After the war, when Radford took over as the deputy chief of naval operations

for air, the Navy was just beginning its transition from propeller planes to jet aircraft. The admiral needed someone to command the redubbed Naval Air Test Center (NATC) at Patuxent River and lead the way on jets, and he knew exactly who to call.

Trapnell had already become the Navy's first jet pilot when he flew the Bell P-59A Airacomet in April 1943. His report on the flight noted that he had just witnessed the future of aviation, and of course, he turned out to be right.

Serving as the NATC's second commanding officer from June 1946 until April 1950, Trapnell assembled a crack team of elite test pilots and successfully pushed for the establishment of the U.S. Naval Test Pilot School. He established the service's requirements for its jet aircraft and insisted on personally test-flying every newly proposed prototype. He worked with the nation's largest aircraft manufacturers in a collaborative effort that ultimately produced the Navy's first jet fighters—the North American FJ-1 Fury, Grumman F9F Panther, McDonnell F2H-1 Banshee and the Douglas F3D-1 Skyknight.

"Trap insisted that the Navy wanted airplanes that were stable and controllable in all requisite flight regimes. He did not want hot rods that sacrificed safety for speed," Trapnell Jr. said in an interview. "Most losses in World War II were operational, not from enemy action; he wanted to minimize these."

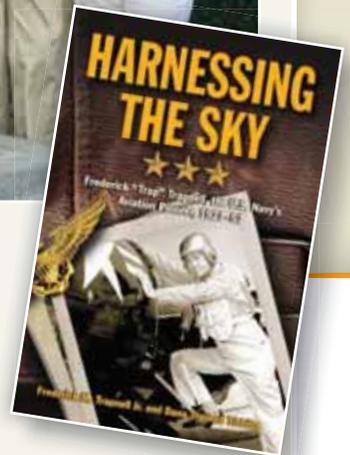
Trapnell left NATC to command the big carrier USS Coral Sea (CV 43) for one year, earning the rank of rear admiral. He suffered a heart attack in April 1952 and, following an extended hospitalization, retired that September, having accumulated more than 6,200 flight hours during 5,000-plus flights in 162 different airplanes. Upon retirement, he was promoted one rank to vice admiral.

Quite the career, one whose details the authors mostly had to hunt down inside Trapnell's flight logs and in oral histories of his colleagues filed away at the National Archives at College Park, Maryland, the Naval History and Heritage Command at the Washington Navy Yard, and the U.S. Naval Institute's research library in Annapolis.

"My father left practically nothing in writing," Trapnell Jr. said. "Like many



U.S. Navy photo by Noel Hepp



## 'Labor of Love': Authors Visit Trapnell Memorial

military people in that day, he also didn't talk about what he did. He just didn't think his work was interesting to other people. If you tried to pin him down about it, you'd likely get a very brief answer. But he was an open conversationalist and would talk about anything else."

Trapnell's legacy is perhaps best related in the book's many quotations from his colleagues. In 1994, 20 years after Trap died, retired Vice Adm. Donald Egan, who would go on to serve as director of the National Air and Space Museum from July 1996 until his death three years later, called Trapnell the "godfather of current naval aviation."

In April 1975, a few months after his father's death from flu complications, Trapnell Jr. received a letter from retired Adm. Arleigh Burke, former chief of naval operations and Trapnell's classmate at the Naval Academy, who wrote, "It is unusual for any man to be universally acclaimed as being the best in his field of work, but Trapnell had the unique distinction of having the reputation of being just that—the very best flight test engineer there was."

Though there are times when the

Co-authors Frederick Trapnell Jr. and his daughter Dana Tibbitts visit the Trapnell airfield memorial Nov. 12 at Naval Air Station Patuxent River, Maryland. The airfield was dedicated in honor of Frederick "Trap" Trapnell in April 1976.

Trapnell's leadership paved the way for Naval Aviation, flight test and the formal establishment of the U.S. Naval Test Pilot School at Pax River. He was the Naval Air Test Center's second commanding officer and assigned to Pax from June 1946 through April 1950 during a critical time in Naval Aviation as aircraft shifted from propeller to jet propulsion.

"If you and your father don't tell the story of Trap, it will never be told," Bill Allen, founder of the Allen Airways Flying Museum at Gillespie Field in El Cajon, California, told Tibbitts.

"What followed was a six-year labor of love," Tibbitts said. ✈️

chronology can become confusing—many of Trapnell's career milestones occurred simultaneously—the book wonderfully weaves the narrative with technical descriptions of aircraft that even the most nescient can comprehend.

"Our intent was to write a book that just about anybody could read and enjoy, whether you're an aviation enthusiast or not, you could still read the book and get it," Trapnell Jr. said.

And though there comes an obvious sense of pride with writing your father's

deserved biography, Trapnell Jr. said he and Tibbitts did their best to approach the story as unbiased outsiders.

"We were trying to write a story that was worth telling, and of course I'm proud of his career, but that wasn't the motivating factor," he said. "The motivating factor was we found so many interesting things that nobody knew about. We just think it's an important story."

*Jeff Newman is a staff writer and contributing editor to Naval Aviation News magazine.* ✈️

# Suicide Awareness: Caring for Each Other

"When you need help, ask."

"It's about being there for our shipmates every day."



## A.C.T. NOW

To someone going through a difficult time, one simple act has the power to make a difference.

### Ask

if someone is thinking about suicide

### Care

let them know you are there to help

### Treat

get them assistance as soon as possible

Talking about suicide is one of the most helpful things we can do to let our shipmates know that it's **okay to speak up** when you're down.

## Reasons why shipmates won't seek help:

Worried about job or career

Stigma and judgment

Cannot see a way out or do not know where to turn

Feeling disconnected and isolated

Hopelessness



## Recognize the Warning Signs

- Appearing sad or depressed most of the time
- Neglecting personal appearance
- Withdrawing from friends, family and society
- Losing interest in things one used to care about
- Frequent and dramatic mood changes
- Expressing feelings of excessive guilt or shame
- Feelings of failure or decreased performance
- Having no sense of purpose
- Talk about feeling trapped—no way out

## Help is always available

Seeking help is a sign of strength.

For confidential, 24/7 support, contact the Military Crisis Line  
**800-273-8255 (TALK)**

Prevention Resources:  
[www.veteranscrisisline.net](http://www.veteranscrisisline.net)  
[www.suicide.navy.mil](http://www.suicide.navy.mil)

Always Take Care of Yourself and Those Around You



# Squadrons Recognized for Saving Energy

Two fighter squadrons were recognized for energy conservation efforts in October, marking the first time Naval Aviation was incorporated in the annual SECNAV Energy Award program.

The winners, Strike Fighter Squadron (VFA) 14, Commander, Naval Air Force, U.S. Pacific Fleet (CNAP), and VFA-131, Commander, Naval Air Force, U.S. Atlantic Fleet (CNAL), are participants in the Aviation Energy Conservation (Air ENCON) program designed to reduce fuel consumption without adversely impacting safety or mission execution to ensure the right amount of fuel is available for sustained mission readiness. The three main pillars of the program include:

- Developing energy awareness throughout Naval Aviation
- Building a culture of innovation and sharing of best practices
- Eliminating energy-consuming inefficiencies throughout the organization

Squadrons were evaluated on total energy saved, awareness and training, and innovation.

Initiated by the Aviation Working Group within the Navy's Task Force Energy, the integrated project team (IPT)

## Energy Conservation Winner: WEST COAST

### Strike Fighter Squadron (VFA) 14 "Tophatters"

#### Total Energy Saved

Energy conservation efforts during flight operations resulted in a lower fuel burn rate (gallons per flight hour) than the historical burn rate for all 26 F/A-18 E/F Super Hornet squadrons in two of the four quarters in fiscal year 2014.

#### Awareness and Training

Squadron standard operating procedures limit Auxiliary Power Unit (APU) start time to 25 minutes prior to takeoff, which equates to the amount of time required to efficiently initialize aircraft systems while minimizing fuel burn while on deck awaiting takeoff.

Aircrew fly maximum range and/or endurance flight profiles during transits to and from operational training areas, minimizing fuel consumption during administrative portions of flight.

Senior aviators train, mentor and execute aggressive fuel conservation techniques to junior aviators, including fuel flow settings, airspeeds, alpha numbers, Flight Path Advisory System usage and descents using "IDLE" thrust to minimize fuel burn during administrative portions of flight.

VFA-14 aircrew briefed aerial refueling consolidation techniques to relieve airborne tankers of excessive "give" when operating at sea.

#### Innovation

VFA-14 provided four fuel-savings ideas to the Air ENCON IPT:

- Recommended a change in the course rules for arrival and departure, which allows aircraft to remain at higher altitudes longer, a more fuel efficient flight regime
- Shut down one of the two engines while hot pit refueling
- Conduct military thrust vice afterburner thrust take offs when light loaded on fuel, such as with field carrier landing practice
- Recommended increasing the F/A-18E/F maximum trap landing weight onboard the aircraft carrier from 44,000 pounds to 48,000 pounds, which is equivalent to the EA-18G Growler.



U.S. Navy photo by MCSN Kelly M. Agee

An F/A-18E Super Hornet assigned to the "Tophatters" of Strike Fighter Squadron (VFA) 14 is directed onto a catapult on the flight deck of aircraft carrier USS Nimitz (CVN 68).

comprises CNAP, CNAL and Naval Air Systems Command (NAVAIR).

The team is responsible for overseeing the programs' development, designing an effective implementation strategy and managing sustainment of energy conservation initiatives.

Positive effects of the program can already be seen in the fleet. The Short-Cycle Mission and Recovery Tanking (SMART), for example, offers operators an option for airborne tanking operations at sea. SMART, or any of the many hybrid variations, has helped improve fuel efficiency.

Another example is MAGIC CARPET, or Maritime Augmented Guidance with Integrated Controls for Carrier Approach and Recovery Precision Enabling Technologies. MAGIC CARPET is software designed to make landing on an aircraft carrier easier by maintaining a commanded glidescope and angle of attack, allowing the pilot to focus more attention on maintaining a proper line-up. CNAP and NAVAIR have accelerated this new technology for F/A-18 E/F

Super Hornets and EA-18G Growlers, which further reduces tanking requirements and increases efficient aircraft recovery operations.

In order for Air ENCON to succeed, it requires participation from all levels of the Naval Aviation community—the type wings, air wing and squadron commanders, aircrew, maintenance crew and logistics personnel.

To help gain awareness, Fleet Energy Training Symposiums in San Diego, California; Norfolk, Virginia; Jacksonville, Florida; and Yokosuka, Japan, have educated audiences and engaged warfighting communities in open discussion.

Units deployed next year will participate in the Great Green Fleet 2016, demonstrating energy conservation measures that are consistent with operational readiness requirements during deployed operations and further exploring the potential for the operational use of biofuels.

*Compiled from Naval Air Force Pacific Public Affairs article and squadron awards. ✈️*

## Energy Conservation Winner: EAST COAST

### Strike Fighter Squadron (VFA) 131 "Wildcats"

#### Total Energy Saved

Energy conservation efforts focused on implementing ground operation efficiencies to minimize fuel consumption during post-landing operations, hot refueling and crew switch. Reduced fuel use techniques during ground operations resulted in greater fuel availability for inflight training. In a single quarter, the squadron saved 33,000 pounds (4,800

gallons) of fuel for training, which would otherwise have been consumed on the ground.

Energy conservation efforts during flight operations resulted in a fuel burn rate (gallons per flight hour) that was lower in two of the four quarters in fiscal year 2014 than the historical burn rate for all nine F/A-18 A-D Hornet squadrons.

#### Awareness and Training

VFA-131 developed single-engine hot pit refueling and taxi procedures, and provided training to aircrew and ground crew in order to safely initiate the practice.

#### Innovation

VFA-131 realized that single-engine hot pit refueling would save approximately 200 pounds (30 gallons) of fuel per aircraft per refueling operation. Additional savings would also be achieved during post-refueling taxi. These techniques resulted in a 13 percent cost per flight hour reduction in a single quarter. The F/A-18C operated by VFA-131 has redundant systems and does not require both engines to be operating to safely conduct hot pit operations.



U.S. Navy photo by MC3 Jameson E. Lynch

*An F/A-18E Super Hornet assigned to the "Wildcats" of Strike Fighter Squadron (VFA) 131 prepares to land on the flight deck of aircraft carrier USS Dwight D. Eisenhower (CVN 69) while underway conducting flight deck certifications.*

# SPECIAL DELIVERY:

## C-2A Greyhound Celebrates 50 Years as Carrier Onboard Delivery Aircraft

By Elizabeth Fahrner



A C-2A Greyhound assigned to the "Rawhides" of Fleet Logistic Support Squadron (VRC) 40 lands on the flight deck of aircraft carrier USS Harry S. Truman (CVN 75).

U.S. Navy photo by MC3 E. T. Miller

**SEAL teams, a baby whale and love letters have one thing in common: the C-2A Greyhound has transported them all.**



operating all over the world, the C-2A has supported the warfighter through its Carrier Onboard Delivery (COD) mission since the Vietnam War. It has carried key supplies and parts, distinguished visitors, fallen heroes, special operations forces, Sailors bound for

deployment or returning home, and much-awaited mail between shore bases and aircraft carriers. From the mid-1960s to today, the C-2A has served as the linchpin of the Navy's logistics operations.

"For half a century, the C-2A Greyhound has enabled carrier strike groups to operate forward by transporting cargo between shore and ship," said Capt. John Lemmon, E-2/C-2 Airborne Tactical Data System Program Office (PMA-231) program man-

ager. "With its demonstrated capability to reliably and effectively perform the Carrier Onboard Delivery mission, the C-2 keeps U.S. maritime forces around the globe ready to fight and win."

Thirty-five C-2A aircraft are currently in service, divided between Fleet Logistics Support squadrons (VRC) 40 and 30, as well as a fleet training squadron and a test and evaluation squadron.

The C-2A's legacy of logistics support began more than 50 years ago when the first of two prototypes took flight in November 1964. Production on the C-2A began in 1965, and the aircraft became part of the Navy's logistics team in 1966. Nearly 20 years later in 1984, the Navy awarded a contract for 39 new C-2A aircraft to replace the earlier airframes. The older models were phased out in 1987, and the last of the 39 were delivered in 1990. The aircraft

U.S. Navy photo



Flight deck personnel unload mail from a C-2A Greyhound on the flight deck aboard USS Theodore Roosevelt (CVN 71) in support of Operation Iraqi Freedom in 2003.

In 2004, Sailors aboard USS Abraham Lincoln (CVN 72) off load water from a C-2A Greyhound for transport to Banda Aceh, Sumatra, Indonesia, by way of helicopters, supporting humanitarian airlifts to the tsunami-stricken coastal regions.



U.S. Navy photo



U.S. Navy photo

Sailors and Marines assist in loading offgoing mail onto a C-2A Greyhound onboard USS Carl Vinson (CVN 70) during deployment to the Arabian Gulf in 2005.



U.S. Navy photo

Sailors from Fleet Logistics Squadron (VRC) 30 load meat, bread and plastic dinnerware into C-2A Greyhound logistics aircraft at Naval Base Coronado, Calif.

has undergone several modifications and a service life extension program extending the Greyhound's service life through 2028.

As the Navy's only aircraft performing the COD mission, it transports all types of cargo and participates in a full range of sea-based military operations. A derivative of the E-2 Hawkeye, the C-2A boasts a wider fuselage and a rear ramp for quick loading and unloading.

"I am always amazed at the ever-changing missions we are able to accomplish," said Naval Aircrewman Mechanical 2nd Class Michael Cordoza. "One day we are flying out mail and passengers to a carrier at sea, and the next day we are launching a combat rubber raiding craft over the bay with five SEALs jumping out after it."

"As a COD pilot for 25 years, I have seen this aircraft do amazing things around the globe—from standard missions supporting the fleet, landing on every carrier including seven now retired, to animal rescues, humanitarian assistance and development,

supporting forward-deployed units in combat, and missions of diplomacy with ministers of defense and heads of state," said Capt. Drew Basden, commodore of the Navy's Airborne Command Control and Logistics Wing.

Basden's most memorable and challenging mission flying the C-2 was transporting a baby pygmy sperm whale from Baltimore to St. Augustine, Florida. The whale was rescued after being washed ashore in New Jersey in 1993. The crew safely delivered the mammal, but not before the frightened whale sprayed a foul-smelling ink inside the cargo area. According to Basden, the stench lingered for six months.

One of the most routine items to transport sometimes holds the most value for the men and women on the ship, said Lt. Cmdr. Matt Blazel, PMA-213 class desk and previous C-2A pilot for VRC-40.

"The most satisfying mission we performed was delivering the mail to the carrier," said Blazel. "For me, there are few better



*“Whether mail or mammals, spare parts or SEAL teams, the C-2A has efficiently served as the Navy’s multi-mission workhorse for the last 50 years and remains the heart of the Navy’s logistics effort.”*

*Sailors secure a wing of a C-2A Greyhound assigned to the “Rawhides” of Fleet Logistics Support Squadron (VRC) 40 on the flight deck of aircraft carrier USS Dwight D. Eisenhower (CVN 69).*

U.S. Navy photo by MCSN Anderson W. Branch

## Ship to Shore Quick C-2A Greyhound Facts

### **Estimated totals for VRC-30 and VRC-40 from 2005 to 2015:**

- 305,800 passengers
- 45,931,500 pounds cargo and mail
- 85,700 flight hours
- 34,400 sorties

### **Saving lives**

VRC-40 and VRC-30 have participated in multiple humanitarian relief operations, including Operation Unified Response, Operation Tomodachi and Operation Damayan. After the 7.0-magnitude earthquake in Haiti in 2010, VRC-40 transported more than 300 tons of humanitarian assistance and disaster relief cargo to the local population. 🐦

ways to break up a long deployment than to get a care package and a letter from home. We delivered those packages to the Sailors who worked so hard day after day, and it felt good to be the final link in the chain that brought them their little bit of home.”

While the C-2A transports mail year round, the quantity increases during the holidays.

“One Christmas, we flew 12 COD sorties in three days, taking over 40,000 pounds of mail to the ship,” said VRC-30 pilot Lt. Ben “Bean Bag” Ruth. “The mail filled up the entire elevator in front of the tower. A great memory, and a big reason I wear with pride the [U.S Postal Service ] patch on my flight suit.”

Whether mail or mammals, spare parts or SEAL teams, the C-2A has efficiently served as the Navy’s multi-mission workhorse for the last 50 years and remains the heart of the Navy’s logistics effort.

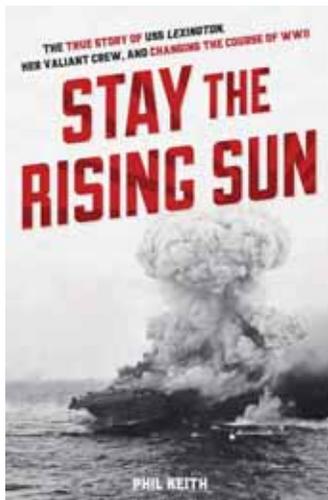
*Elizabeth Fahrner is a communications specialist supporting the E-2/C-2 Airborne Tactical Data System Program Office. 🐦*

# Professional Reading

By Cmdr. Peter Mersky, USNR (Ret.)

## **Stay the Rising Sun: The True Story of USS Lexington, Her Valiant Crew, and Changing the Course of World War II**

Phil Keith, Zenith Press,  
Minneapolis, MN.  
2015. 272 pp. Ill. \$30.00



While a lot has been written about the battle of the Coral Sea (May 4-8, 1942) and its strategic importance, the loss of USS Lexington (CV 2) to enemy airpower is one of the most significant. Written by a former naval aviator, this book informs readers about the legendary ship's prewar history and its sinking by torpedo attacks from Nakajima B5N torpedo bombers and Aichi D3A dive-bombers.

Author Phil Keith has the characteristics of a good historian in that he devotes time and effort to delving into the small details to better set the scene or paint a picture of an individual's personality, which provides a much better read. Keith tells the story of Lexington's design and prewar service that helped the U.S.

Navy develop its own brand of seaborne aviation. He describes the early campaigns that struggled to keep the Japanese from advancing further west. After Pearl Harbor, the U.S. Pacific Fleet struggled to get back on its feet. There were not enough cruisers, battleships and carriers, along with air support.

In addition to the Mitsubishi Zero—later called “Zeke,” and the Nakajima B5N, later known as “Kate”—Japan had a cadre of highly experienced flight crews who had spent many years fighting in China against Soviet Russian and Chinese aviators. Early American aerial victories were pilot versus pilot, rather than combat experience.

The attacks on May 8, 1942, by Japanese B5Ns and D3A dive-bombers doomed “Lady Lex.” The descriptions of these attacks, and the captain and crew's heroic fight to save the ship make for thrilling reading. Even after they had to abandon her—her hull was glowing “cherry red” from the growing internal explosions and fires—Lexington refused to go down until sunk by a reluctant American destroyer captain.

The book ends with a description of how CV 2's illustrious name was carried on by CV 16, and an interesting biographical section of the main participants during the Battle of the Coral Sea, both Japanese and American.

The photo folio shows several interesting views of the Lexington before and after her conversion to a carrier. As a cruiser (CC 2), she had a sleek silhouette that spoke well of her prewar design.

Many readers should find this biography of one of America's most iconic ships interesting. 🛩️



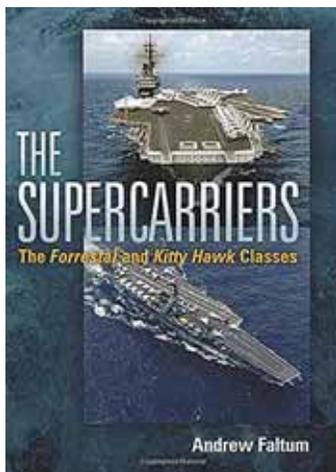
USS Lexington (CV 2) underway passing the USS Ranger 1938.



Abandoning ship: USS Lexington (CV 2) at the Battle of the Coral Sea, May 1942.

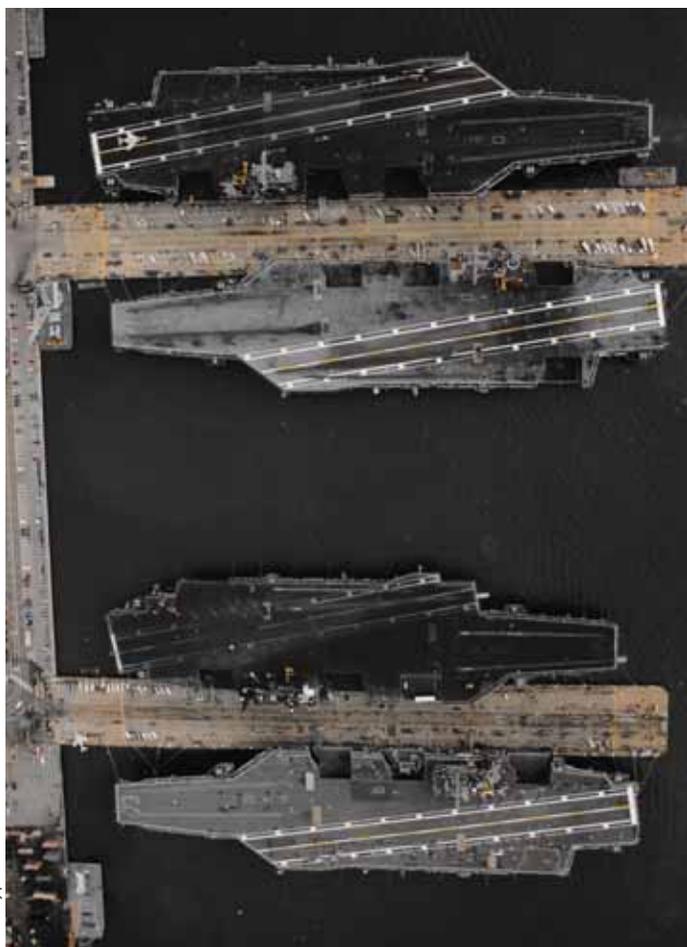
## The Supercarriers: The Forrestal and Kitty Hawk Classes

Andrew Faltum, Naval Institute Press, Annapolis, MD. 2014. 288 pp. Ill. \$42.95



With other carrier titles to his credit, Andrew Faltum offers an overview of the four Forrestals (CV 59, CV 60, CV 61 and CV 62), the three ships making up the Kitty Hawk class (CV 63, CV 64 and CV 66), the first nuclear aircraft carrier, USS Enterprise (CVN 65), and USS John F. Kennedy (CV 67). As a former air intelligence officer with tours aboard USS Midway (CV 41), Faltum had the opportunity to learn the culture of carriers in general, and his writing reflects that knowledge.

“The Supercarriers” provides a detailed history of these important assets that defined the Navy for decades, and provided platforms for many of the Navy’s elite aircraft. In Southeast Asia, the Forrestals and their follow-ons provided launching pads for alpha strikes that hammered North Vietnamese facilities and airfields. The book provides a wide selection of photos and detailed tables and appendixes that enhance the narrative and provide ready references for researchers and historians. There are also individual histories for each carrier and a history table annotating individual air wings and squadrons for every ship’s deployment. Overall, “The Supercarriers” is an excellent reference for carrier and Naval Aviation enthusiasts. ✈️



U.S. Navy photo

Carrier country at Naval Station, Norfolk, Va. Top to bottom: USS Dwight D. Eisenhower (CVN 69), USS Theodore Roosevelt (CVN 71), USS America (CV 66), USS George Washington (CVN 73).



U.S. Navy photo by PH2 James P. Kiser

USS Forrestal (CV 59) in the Mediterranean, August 1975.

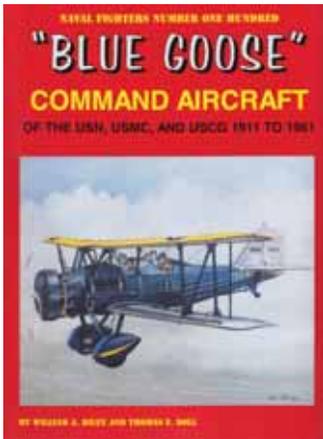


U.S. Navy photo

USS Constellation (CV 64) underway with Carrier Air Wing (CVW) 9 aboard.

## ***“Blue Goose” Command Aircraft of the USN, USMC, and USCG 1911 to 1961***

William A. Riley and Thomas E. Doll. Ginter Books, Simi Valley, CA. 2015. 129 pp. Ill. \$39.95



One of the perks of being a captain or admiral in charge of a fleet or major aviation command in the 1930s and 1940s was the use of your own aircraft, painted in a unique paint scheme that included your name, command and command plaque. Commonly called “Blue Goose” because the overall color scheme featured a Navy blue fuselage, these aircraft were a unique part of Naval Aviation. Steve Ginter’s new book, No. 100 of his highly successful Naval Fighters series, is an enjoyable and useful collection of vintage photographs and color profiles that show off this unique family of eye-catching aircraft.

The authors do a fine job of explaining each photo. William Riley was a retired chief yeoman with considerable experience in Naval Aviation,

including time as an aviation ordnanceman. Tom Doll has his own impressive list of credentials and several books to his credit including working at the famous Lockheed Skunk Works, which produced the U-2 and SR-71.

The brief text and expansive captions add vital information to the photographs. Not all of the aircraft shown carry the all-blue color scheme, which depended on the year and theater in which they were serving. There are props and jets, bi-planes and monoplanes, land planes, floatplanes and flying boats, including several rare types enthusiasts might not know. Modelers looking for unusual subjects will not be disappointed.

This new book from prolific publisher, Steve Ginter, is one of his most unique. 🦋

*A prototype XR2O-1 staff transport for SECNAV on the flight line of Naval Air Station Anacostia, Washington, D.C., 1936. The plane’s blue-and-gold color scheme was typical of the period. Note the large underwing national insignia.*



Photo courtesy of Peter B. Mersky collection



Photo courtesy of Peter B. Mersky collection

*The Navy’s only WWI ace, David Ingalls, poses with his blue-and-gold Curtiss XF8C-7 in 1930, when he was Navy Undersecretary for Air.*

# Squadron Spotlight

## Patrol Squadron (VP) 5 “Mad Foxes”

**Founded:** 1937

**Based:** Naval Air Station Jacksonville, Florida

**Current Commanding Officer:**

Cmdr. Alan M. D’Jock

**Mission:** *Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), Intelligence, Surveillance and Reconnaissance (ISR)*

**Brief History:** For over 75 years, VP-5 has served as a valuable member of the Maritime Patrol and Reconnaissance Aviation (MPRA) community. Originally known as the VP-17 “Blind Foxes,” hinting at the ability to fly blindly into adverse weather conditions, the squadron became VP-5 in 1948 and renamed “Mad Foxes” for the Magnetic Anomaly Detection (MAD)-equipped P2V Neptune that could detect large objects underwater. The Navy’s second VP squadron played a role in several historically significant events including providing support for the recovery of Cmdr. Alan Shepard’s Freedom 7 space capsule, monitoring Russian forces during the Cuban Missile Crisis, and employing weapons in the collective defense of a merchant vessel during the Libyan turmoil of 2011. In July 2014, the Mad Foxes deployed to



Kadena Airbase in Okinawa, Japan, the squadron’s inaugural deployment with the P-8A Poseidon. The Mad Foxes executed over 20 detachments to countries and territories including Australia, Malaysia, Diego Garcia, Bangladesh, Guam, the Philippines, Singapore, Thailand and the Republic of Korea. VP-5 continues to be known as one of the premier MPRA squadrons while embodying their motto, “No Fox Like a Mad Fox!”

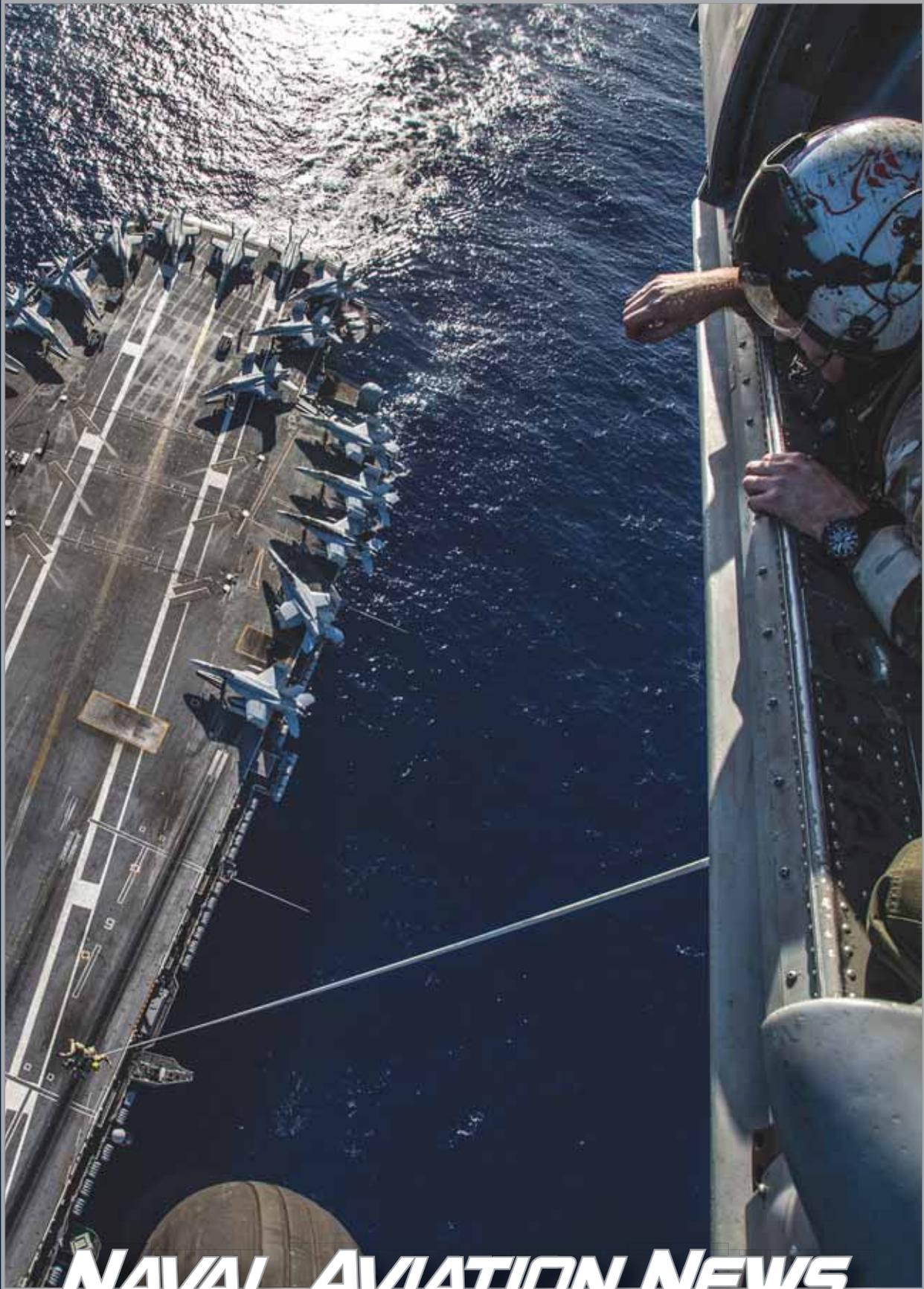
**Aircraft Flown:** P-8A Poseidon

**Number of People in Unit:** 300 military personnel

### Significant Accomplishments:

- Provided air support in recovery of astronauts from Mercury missions
- Tracked Russian forces during Cuban Missile Crisis
- Supported early stages of Operation Enduring Freedom in Iraq
- First MPRA asset to successfully employ the AGM-65F Maverick missile
- Completed MPRA’s second P-8A deployment to 7th Fleet in 2015





# **NAVAL AVIATION NEWS**