Rotor Review

Winter 2024
Number 163

Fix, Fly, Fight

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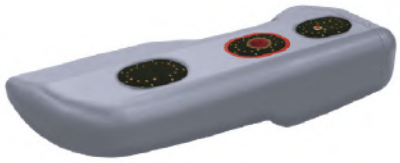

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Winter 2024
ISSUE 163

About the Cover
Maintainers in Action!
Images taken by
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Rotor Review supports the goals of the association, provides a forum for discussion and exchange of information on topics of interest to the Rotary Force and keeps membership informed of NHA activities. As necessary, the President of NHA will provide guidance to the Rotor Review Editorial Board to ensure Rotor Review content continues to support this statement of policy as the Naval Helicopter Association adjusts to the expanding and evolving Rotary Wing and Tilt Rotor Communities.

FOCUS: Fix, Fly, Fight

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COLUMNS

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Score: Houthi Terrorists: 0 - U.S. Navy Rotary Wing: 3, Decisive Win!

By RADM Dan "Dano" Fillion, USN (Ret.)

MH-60R Seahawk helicopter assigned to the "Spartans" of Helicopter Maritime Strike Squadron (HSM) 70 conducted launch of AGM-114N Hellfire missile off the coast of Lithuania. **Photo by Petty Officer 1st Class Theodore Green, USN.**

Why, because the aircrews were Ready, the maintainers ensured the aircraft and weapons system were Ready and because those two components performed superbly some shiitake heads had a really bad day!

Fix, Fly, Fight could not have been scripted any better than the display of capability during that engagement. This issue is focused on Fix, Fly, Fight which is synonymous with teamwork.

The success of the crews who conducted the strike finally validated. the lethality and capability of the Armed Helo Concept and it's not a coincidence that our Symposium 2024 theme is "Be Ready." NHA will continue to advocate for a more robust, actionable discussion at Symposium for FVL (Future of Vertical Lift).

As I write this column, your NHA organization is advocating on behalf of Rotary Wing communities for a state of the art Digital HRS, the Rescue Swimmers Badge (RSB), and Medal of Honor Helo at the front gate of NASNI. I got some very constructive feedback from a retired Master Chief at Fleet Fly-In last November about LTM prices for our Enlisted Aircrew and the world's best Maintainers. The result was in January of this year NHA reduced the price for enlisted warriors substantially. Go to the membership page on the NHA Website and check for yourself! We are seeing an increase in Enlisted LTM Active and Retired. I can't say it enough, this is YOUR organization. The staff at NHA Headquarters is determined to continue to improve the service we provide each of you. That is our contribution to support all of you in uniform and your families to "Be Ready!"

"I Never Lose. I either Win or I Learn!" - Nelson Mandela

As always, I am,

Vr and CNJI (Committed Not just Involved),

Dano

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Trust is the Cornerstone of Mission Success

By CAPT Tommy "Smokey" Butts, USN

Greetings from NHA here in San Diego!

This Rotor Review issue discussing "Fix, Fly, Fight," has me reflecting on the amazing maintainers who I've had the opportunity to work with throughout my career. These men and women are the "wrench turners" who work all day to ensure aircrews are safe when executing the flight portion of the mission, then upon aircraft return prep the birds for the next day. I could go on for pages listing names of these individuals and their amazing accomplishments. I'll talk about one sea story specifically involving a judgment call made by a young Second Class Petty Officer.

Underway in the 4th Fleet AOR during my OIC deployment and upon landing at the completion of the flight day, the post flight inspection revealed a minimal leak that appeared to be coming from the auxiliary fuel tank. Initial inspection determined the leak was "within limits" and the MO assured me that the aircraft would be ready to go the next morning for a two bird high priority mission. Early the next morning, just prior to pre-flight I, was told that it wasn't clear whether the aircraft was up or down. The MO, Chief, and a young AD2 (brand new CDQAR) walked into the office to discuss the issue. There were maintainers on the detachment who felt the aircraft was safe to fly and aircrews who were willing to take it to execute the mission. I simply asked AD2 whether he thought the aircraft was up or down. This was the first "tough" call that he had to make as a CDQAR, and although the leak was teetering on the limit, he did not feel the aircraft was safe to fly and determined that it was down. Upon further troubleshooting, it was later determined that the fuel cell was delaminating, causing fuel to pool and could have led to a far worse, potentially catastrophic situation. I bring this story to light because that young AD2 had to make a tough call on an issue that not everyone agreed upon. He trusted his training and showed intestinal fortitude in making the correct call. At the end of the day, the detachment adjusted to execute the mission with one aircraft. That young AD2 is now ADC Probst. This story is just one example of the hero "wrench turners" who keep our aircrews safe and the trust shared amongst us that leads to mission success.

Coming out of the holiday season, the team here at NHA is laser focused on preparation for the 2024 NHA Symposium that will return to Harrah's Resort Southern California from 15-17 May. As in recent years, I expect that there will be community NARGs onboard NASNI at the beginning of that week leading into Symposium. You will see some similarities to the event last year, however, the NHA Team has taken your feedback to continually evolve and improve our marquee event. Take a look at the NHA Website for Symposium registration / hotel reservation information.

It is an honor to serve as your National President of our professional organization.

V/r,
Smokey
NHA LTM #504

Happy New Year BUT, "Be Ready"…

By CAPT Jim Gillcrist, USN (Ret.)

Amid a hotly contested geopolitical environment around the globe, the forward presence of the U.S. Navy is on full display. As this country's 911 force, Navy ships / air teams, big and small, are ready and already responding. Interestingly, "Be Ready" is the theme for the 2024 NHA National Symposium, which will be held at Harrah's Resort Southern California from 15-17 May.

The focus of this issue, "Fix, Fly, Fight," is on our Maintenance Brothers and Sisters who are integral to every mission we fly no matter what the platform – rotary wing, unmanned, or tilt rotor. Fixing airplanes is core to squadron and detachment readiness. I learned this on my second long deployment with a ringside seat as a Det MO with the HSL-37 Det Four "Bounty Hunters." ADC Cornell, AD2 Seguin, and AE2 Neuwirth among others showed me the amazing things that a small, high functioning team of maintainers can achieve in close quarters aboard USS Bagley (FF-1069). We deployed and operated as one team.

Similarly, NHA is one team and a brotherhood where "every member counts and makes the organization stronger." We are a unique, professional organization of maintainers, aircrewmen, and pilots who remain connected, who help one another, who continue to offer mentorship to one another, and who pay it forward. The best kept secret in this vibrant, professional organization is its members. The NHA Staff has the immense privilege every day of working alongside high caliber folks from National Leadership to Junior Officer and Aircrew Reps across the entire Rotary Force – coast to coast.

As I have stated before, we remain a relationship organization. Meaning, that the relationships we make at the squadron and aboard ship on deployment are lifelong, enriching, and purposeful. These same relationships continue downstream and remain powerful throughout our military careers, as well as when we transition to our next adventure outside of the service. We look after one another and pay it forward continuously. This is why we are members of NHA. This is why you should join and / or renew your membership.

Please keep your membership profile up to date (mailing address and region affiliation). If you should need any assistance at all, give us a call at (619) 435-7139 and we will be happy to help – you will get Linda, Mike, Allyson, or myself.

Warm regards with high hopes, Jim Gillcrist.

Every Member Counts / Stronger Together

Lifetime Members (LTM) in the Spotlight

CAPT Sandy Clark, USN (Ret.) / LTM #184
CAPT Bill Personius, USN (Ret.) / LTM #46

CAPT Sandy "Wolfman" Clark, USN (Ret.) and CAPT Bill "BP" Personius, USN (Ret.) are two Lifetime Members who are making a difference.

Sandy and I served together as HSL Squadron COs on the Flight Line at NAS North Island. He has leaned in as Principal Trustee, taken charge of over one hundred Trustees, and given this talent-rich group purpose to include helping to brand the organization at external events.

Bill and I served aboard USS PELELIU (LHA 5). He was the Ship XO and I served as Air Boss, and we made a challenging long deployment together. Bill is now President, NHA Historical Society and working hard to preserve our helicopter / tilt rotor heritage to include spearheading the CDR Clyde Lassen SH-60F Helicopter Memorial at the front gate of NAS North Island.

Sandy and Bill are wonderful shipmates. This professional organization of ours is full of these powerful, lifelong friendships – it is why we join and even become Lifetime Members!

CDR Clyde Lassen Medal of Honor SH-60F Memorial Aircraft in the Double Dome Hangar at NAS North Island. On the left, CAPT Sandy Clark, USN (Ret.) / LTM #184, in the middle, CAPT Jim Gillcrist, USN (Ret.) / LTM #43, and on the right, CAPT Bill Personius, USN (Ret.) / LTM #46.

VP of membership Report

Max Beep Is in Full Swing!

By LT Brendan "BradChad" McGinnis USN

My purpose here is to acquaint newer members with the Max Beep Membership Drive (01 February to 30 April), and guide them on supporting the squadron, introduce NHA to your fellow squadron mates, encourage early sign-ups for Symposium, and to ensure anyone who can't attend Symposium maintains a current membership. Let's see if another squadron can prevent HSC-21's threepeat!

Max Beep Officer Categories:

- Production (FRS / Training Command Squadron): 50 + wardroom ($1500)
- Operational (CVW or Exped Squadron): 25-49 wardroom ($1000)
- Small Unit (Wing Staff / Weapons School / Detachment: 10-24 ($500)
- Disassociated: < 10 (2 free drink tickets at Flight Suit Social during Symposium for every unit member attending). This will be capped at 10 units with number of Lifetime Members serving as the tie breaker.

SIZE OF THE UNIT WILL BE DETERMINED BY NUMBER OF DESIGNATED HELICOPTER / TILT ROTOR AVIATORS ASSIGNED.

Max Beep Enlisted Categories:

- Aircrew Shop: 15 minimum ($500)
- Maintenance Department / Detachment: 15 minimum ($500)

In other membership news, we have GREATLY changed the structure for NHA Lifetime Membership for our enlisted personnel! For any and all who are yearly participants in the symposium and the Aircrew Challenge, this new Enlisted Lifetime Membership is an easy way for shops to lead right into securing Max Beep and that $500 prize!

Nugget Enlisted (E1-E4), Active Duty Only Lifetime Membership: $75

Enlisted, Active/Selective Reserve/Former/Retired (E1-E6) Lifetime Membership: $100

Enlisted, Active/Selective Reserve/Former/Retired (E7-E9) Lifetime Membership: $150

Age 85 or older: Free-Contact the NHA Office

I need our NHA representatives and Regional presidents to help us identify active and expired NHA memberships within the squadron. Seize the opportunity to highlight the prize money incentive, especially for those who may not track their membership status until the Symposium. Your efforts could be the key to pushing our squadron over the winning threshold!

Should you require assistance in compiling the active list, feel free to share your current squadron roster with us, and we'll gladly cross-check it for you.

I appreciate your commitment to NHA and feedback is always welcome to make us a better organization to serve you.

Fly Navy,

LT Brendan "BradChad" McGinnis
VP of NHA Membership
Brendan.s.mcginnis.mil@us.navy.mil
(724) 809-6548 c

The Bigger Picture

By LT Zoe "Latrina" MacFarlane, USN

Rotary Warriors,

I'm sure everyone reading this issue has an example of a flight or an event that would not have been possible without their squadron maintenance team. The work maintenance provides in fixing any component of an aircraft or its weapons systems allows for an "on-time launch" in a fully mission capable bird. The "Fix, Fly, Fight" mentality has always been relevant in the aviation community, but even more so in just the last month.

It can be easy to lose sight of the bigger picture in the midst of workup cycles, pursuing new qualifications, and so many other daily squadron tasks. But we must remember that every flight, simulator event, and work up evaluation trains us to be ready for when the unexpected happens. These days, we are reminded to expect the unexpected.

With the 2024 NHA Symposium theme of "Be Ready," I immediately thought of the HSM-74 crew that launched off USS Gravely (DDG 107) in response to a merchant vessel's distress call. When the call was made, CVW-3 was ready to lead the fight from aboard USS Dwight D. Eisenhower. After being shot at and returning fire in self-defense, HSM-74's crew was ready for the fight at hand and played like they had been practicing. They had additional support at the ready from their squadron and HSC-7 aboard the carrier.

2024 brings more uncertainty as the geopolitical picture unfolds throughout the world. Faced with ongoing world events that will shape future politics, rotary aviation has proved that we are ready for the fight, however it evolves.

V/r,
Latrina

Fix, Fly, FIGHT

By LT Elisha, "Grudge" Clark, USN

Happy New Year! Yes, we are in month two already, BUT I know all of you have already been hard at work kicking off 2024 with some enriching and informative articles. In my last note, I told you I wanted to hear your stories, your challenges, and your lessons learned. I'm happy to announce that you all delivered. We have an exciting issue for you, packed with all of the above. Among these pages you'll find stories of missing tools, rescue missions, and overcoming unanticipated obstacles. If there is one takeaway I could mention in my relatively short time as a Naval Aviator, it's that I can always learn something new from our tireless and hardworking maintenance personnel. Today was no exception.

As the first Romeo Editor-In-Chief in some time, I'd be remiss if I didn't take a moment to commend HSM-74's actions in the 5th Fleet AOR. It is a not-so-subtle reminder of the importance of being ready for anything, including the order to utilize every piece of training you've had up to that point. This is one of those instances where the follow-on discussion can be just as consequential as the event itself. That conversation starts with you. Take advantage of the magazine's next theme: "Be Ready." I cannot think of a more fitting title aligned with this year's Symposium, purposefully broad, it is a theme designed to create the spark which will ignite a thousand fiery debates, conversations, and engaging trains of thought. I look forward to hearing from you.

V/r
Grudge

Letters to the Editor

It is always great to hear from our membership! We need your input to ensure that *Rotor Review* keeps you informed, connected, and entertained. We maintain many open channels to contact the magazine staff for feedback, suggestions, praise, complaints, or publishing corrections. Please advise us if you do not wish to have your input published in the magazine. Your anonymity will be respected. Post comments on the NHA Facebook Page or send an email to the Editor-in-Chief. Her email is elishasuziclark@gmail.com, or to the Managing Editor at rotorreview@navalhelicopterassn.org. You can use snail mail too. Rotor Review's mailing address is: Letters to the Editor, c/o Naval Helicopter Association, Inc., P.O. Box 180578, Coronado, CA 92178-0578.

Our Readers Write:

Welcome aboard Grudge. The latest RR for Fall '23 is great. I really enjoyed your article on CAPT Sunita Williams. She is truly a helo pilot to astronaut rockstar. Some other facts about Suni: she was the first person to run a marathon in space, running the Boston Marathon in 2007 in real time along with participants on earth. She was the NASA Expedition 33 Mission Commander and subsequent Station Commander of the International Space Station (ISS) in 2012. While aboard the ISS in 2012, she was the first person to do a triathlon in space; running, biking and "swimming" the Nautica Malibu Triathlon. In 2018 she held the record for the most spacewalks and the longest spacewalk for a female astronaut. That year she was also selected to lead a team of nine NASA astronauts to augment and train crews for the SpaceX Crew Dragon and Boeing Starliner Space Flight Programs.

Links to videos of the 2007 marathon run and the 2012 ISS Tour are below.
Astronaut begins the Boston Marathon in space - YouTube
(https://www.youtube.com/watch?v=nDCdDybegVc)
Departing Space Station Commander Provides Tour of Orbital Laboratory - YouTube
(https://www.youtube.com/watch?v=doN4t5NKW-k)

LCDR Chip Lancaster, USN (Ret.)

Introducing Our Assistant Editor-in-Chief (EIC)

LT Quinn "Charity" Stanley, USN

Hello! I am LT Quinn "Charity" Stanley and I am privileged to introduce myself as Grudge's East Coast EIC Assistant! I'm currently an Instructor Pilot at HSC-2 after completing my first sea tour at HSC-28 last year.

Truthfully, I never expected to play a hand in the Rotor Review publication. After incredibly positive interactions with LCDR Mike "Bubbles" Short and LT Annie "Frizzle" Cutchen, I became very aware of the impact of Rotor Review. Not only does this publication serve the rotary wing community as a whole but also the individual members, some still learning to operate their Fleet aircraft and others who have logged countless flight hours and have stories to tell. I, like many readers, find myself somewhere in between and therefore enthralled by the prospect of a community so willing to share, and open to growth.

This edition of Rotor Review is a special tribute to the heart of the aviation community, our maintainers. Most pilots are familiar with the motivating feeling of an on-time launch, despite the gremlins and bugs that attempt to slow us down. Luckily, our community is blessed with some of the hardest working Sailors who take pride in their work and get our aircraft off-deck. That pride directly bolsters the ideals represented by ADM Franchetti and her emphasis on "maintain[ing] the world's most powerful Navy" and our very own NHA Symposium theme of "Be Ready." Please enjoy some fantastic pieces from around the rotary wing community that touch on many thought provoking topics, highlighting the importance of a community that shares and continues to grow.

V/r
Charity

Rotor Review

Articles and news items are welcomed from NHA's general membership and corporate associates. Articles should be of general interest to the readership and geared toward current Navy, Marine Corps and Coast Guard affairs, technical advances in the rotary wing / tilt rotor industry or of historical interest. Humorous articles are encouraged.

Rotor Review and Website Submission Guidelines

- Articles: MS Word Documents for text. Do not embed your images within the document.
- Send as a separate attachment.
- Photos and Vector Images: Should be as high a resolution as possible and sent as a separate file from the article. Please include a suggested caption that has the following information: date, names, ranks or titles, location and credit the photographer or source of your image.
- Videos: Must be in a mp4, mov, wmv or avi format. With your submission, please include the title and caption of all media, photographer's name, command and the length of the video.
- Verify the media does not display any classified information.
- Ensure all maneuvers comply with NATOPS procedures.
- All submissions shall be tasteful and in keeping with good order and discipline.
- All submissions should portray the Navy, Marine Corps, Coast Guard and individual units in a positive light.

All submissions can be sent via email to your community editor, (their emails are on page 3), the Editor-in-Chief (elisha.s.clark2.mil@us.navy.mil). or the Managing Editor (rotorreview@navalhelicopterassn.org).

You can also use the USPS mail.
Our mailing address is: Naval Helicopter Association, P.O. Box 180578, Coronado, CA 92178-0578

Off the Beaten Path

By RADM Gary Jones, USN (Ret.)

This is a tale about a PEP (Personal Exchange Program) tour with the Royal Navy (RN). It's 1982, and near the end of my time as an SH-2F FRS Instructor. The detailer is talking ship's company for future orders.

One day the XO queries me about a PEP opportunity, flying for the Queen as ship's company. PEP sounds intriguing, so I jump on it. Senior officers whose opinion I respect share that PEP is not "career enhancing" and "off the beaten path." The XO shares his thoughts, "at age 65, sitting in a rocking chair, what will you remember most about your time in the Navy?" Undecided, a bachelor, and not thinking about a career, I respond with "flying in the RN sounds memorable."

Told the billet is flying the Lynx (new, fast, and sexy looking), the orders state 829 Naval Air Squadron (NAS) in the Fleet Air Arm. I learn that 829 NAS fly the 1960s vintage Wasp, which I had never laid eyes on, hmm. I trust (??) the detailer, pack my belongings, and head off to fly the Lynx … so I think.

Arriving in London, I check-in at the American Embassy and Naval Attache Office. No one there knows anything about a Lynx billet, and I'm told to report to 829 NAS at Royal Naval Air Station, Portland, England. Once in Portland, I head to the Air Station, and 829's hangar for my first look at a Wasp.

Caught off guard at the diminutive size of the airframe, I'm really astounded when looking inside the "cab" (Fleet Air Arm jargon). This particular Wasp must be awaiting mods / upgrades; there is no gyro, just an artificial horizon and a few steam gauges. The instruments resemble what I saw days earlier while touring the British War Museum in London – the cockpit of a "Battle of Britian" Spitfire.

I compose myself and proceed to other cabs in the hangar. OMG – they're the same. How in the name of Queen Elizabeth II do they fly this thing in the IFR skies over the British Isles? About then my 829 sponsor greets me with "we've been waiting to meet the silly Yank who volunteered to fly the Wasp." There's no escape: the honor of the U.S. Navy, the USA, plus the legitimacy of the Founding Fathers are at stake. I'm to fly the Wasp while representing the "Colonial Navy."

The Wasp entered RN service in 1961 and is nicknamed "the flying dustbin" due to its shape. It earned a measure of respect during the 1982 Falklands War when it shot at, hit, and disabled an Argentinean sub, the first RN helicopter to do so.

Then LT Gary Jones, USN flying the Wasp.

Life in Portland includes driving on the wrong side, warm beer, and trying to understand cricket and football (not the NFL). The Fleet Air Arm means to provide me with an advanced degree in flying. Maneuvers that are prohibited in NATOPS, such as, full autos, wingovers, and torque turns are standard. I learn a torque turn allows an expeditious recovery at sea. At 100 ft, 90 kts, abeam the ship, you pitch 30 deg nose-up, bleed a/s to 40 kts, pull ~ 95 % torque with a little pedal to yaw 180 deg. and voila, short final. Maintenance check flights are stimulating, to include deliberately entering into retreating blade stall following a blade change to confirm proper installation. Learning the "zero a/s auto" however, is to be my thesis.

The zero a/s auto starts at 500 ft AGL and 90 kts. To demo, my Instructor Pilot (IP) bottoms the collective, then back stick to zoom 200+ ft. At zero IAS and nose high, the IP has my full attention: level flight, to zero IAS, to a windscreen now full of English countryside rushing toward me. To add to my

AS-12 Missile Shot

exhilaration, next is a 180 turn (more a pirouette) toward an LZ behind us. My guttural scream reaches full crescendo just as the IP coordinates cyclic and collective to achieve a perfect, soft landing.

Ship's Company aboard HMS Arethusa

The Wasp is single pilot helicopter, weighing 5,500 lbs. with a full fuel tank. Without ordnance, that's about 60-70 mins of flight. If you remove the doors (not kidding), maybe longer. With 10 circuit breakers, a few vacuum tubes, and no TACAN, VOR or IFF, it's a simplistic electrical system. An aircrewman is available for missile aiming, hoisting, and navigation, the latter a necessity for me. Overland nav is not my forte, especially when not near the coast. In poor weather, which is most of the time, if it gets too bad, SOP is to land in a field and wait for it to clear.

I eventually join HMS Arethusa (Leander Class Frigate) as her Flight Commander along with 7 Maintainers. England has no Coast Guard, so RN ships perform a host of maritime duties. Arethusa is often on 24-hour alert for this and other NATO tasking. Arethusa sails with NATO as part of STANAVFORLANT and STANAVFORMED during my time as "Wings," slang for Flight Commander.

The RN uses every bit of equipment / system to its max potential, regardless of age. For example: the Wasp's 1950s UHF radio. With only 12 pre-set channels, each frequency is set via a unique crystal. Refer to Wikipedia, under Primeval Radio Technology, for more information. A VHF radio is available, but seldom at sea, as the antenna interferes with the weapons' racks.

The Wasp is primarily a weapons delivery platform. From the "special weapon" depth bomb, to carrying two Mk-44 torpedoes (a 7-min flight), depth charges, a 7.62mm machine gun plus wire-guided missiles, it can harass bad actors. My job is to fly the Wasp to the very edge of its envelope, deliver ordnance, reload quickly, and do it again. The Fleet Air Arm mantra is "you fight like you train" even when flying a 1950s vintage airframe, employing 1960s ordnance, in the 1980s.

From "off the beaten path," I log 530 hrs. in the Wasp and find PEP the most professionally rewarding tour of my career. Flying the way the RN expects is challenging to say the least, but also exhilarating and satisfying. I leave PEP not only a better aviator but have gained a greater appreciation for other NATO navies, their traditions, professionalism, and leadership styles. While maybe not career enhancing, PEP was the opportunity of a lifetime for me. I took to heart "fight like you train" and try to put that and other RN lessons learned to good use later as CO of a squadron, CO of a big deck amphib, and even as a Flag Officer. I remain extremely thankful for the faith and trust the RN showed me by allowing this Yank to fly the Wasp and lead their Sailors at sea. It was a great lesson in how to earn (and return) trust.


Rotor Running Re-Arm.

Now 71, I don't have to be in a rocking chair to remember and treasure my time in PEP. It brings a smile and true appreciation on how it made me a better pilot, a better person, on top of BEING A BLAST!

Commodore's Corner

Lead Today To Avoid Regret Tomorrow

By CAPT John "Swede" Anderson, USN, Commander, Helicopter Maritime Strike Wing Atlantic

Most importantly, I would like to recognize and applaud the enthusiasm, tactical prowess, professionalism, and ownership across all ranks of rotary aircrews, maintenance rates, civilian staff, and support personnel. That opinion isn't only the musings of a proud Commodore; on the contrary, I can't recall a week whena senior official didn't relay those same observations. Far too often, we get mired in the daily grind where we fail to recognize the breadth of all our accomplishments and immeasurable value to the force. Take a step back and admire your work.

At the higher echelons and down through squadron O5 leadership, the Navy is acutely focused on identifying and prioritizing Quality of Life (QOL) and Quality of Service (QOS) initiatives. I can assure you that Flag leadership is listening to our recommendations and taking action more than any other time that I have witnessed in my career. But despite these ongoing efforts, we must consider how we, as a community, can maximize our current force and hedge against future recruiting or retention shortfalls. I will seize upon this soapbox opportunity to relay thoughts on leadership and how to further enable our ability to Fix, Fly, and Fight.

"You Owe It To The Team" – It is imperative that every maintainer achieve and maintain qualifications on timeline. From years of reviewing anonymous climate surveys and countless non-attribution conversations with maintainers, this is the number one issue that erodes the morale of a maintenance department. High achievers understandably resent those who are delinquent in achieving their qualifications. On the other hand, low achievers claim that they have little to no incentive to gain a qualification that carries with it more responsibility, more work, and, in their mind, a higher chance of losing rank at non-judicial punishment. Within the sports world, former Alabama football head coach, Nick Saban, identified similar concerns in building a championship program: "Mediocre people don't like high achievers, and high achievers don't like mediocre people. So if everybody doesn't buy into the same principles and values of the organization at the same high standard, you're never going to be successful." At every leadership level, our most critical responsibility is to provide a unifying vision while creating a team-oriented culture that incentivizes achievement. We must also ensure that Sailors genuinely believe that our actions in imparting individual discipline aren't acts of vengeance but rather methods of ensuring accountability to the team. The most successful teams are comprised of individuals who all pull equal weight and all row at the same high speed.

"Inspection Ready" – I loathe the publicizing of known inspection dates, as I feel that doing so impedes the development of a proactive culture where we don't adequately recognize and advance high-initiative Sailors who prove that they can operate autonomously. In the current paradigm, Sailors receive recognition and are often ranked based on their performance during inspections.

If we want to know which communities/squadrons/departments/Sailors genuinely value safety and readiness (and lead accordingly), we should observe them via unannounced inspections. And then, we should reward and advance those proactive sailors who have demonstrated that they are always on their game. I am seeking ways to implement this approach within CHSMWL, not to be poised to "Fight Tonight" but to be ready to "Fight Now."

"I've Been There Before" – Reduced manning heightens the importance of considering platform experience during the enlisted detailing process. Sub-optimal squadron manning challenges qualified maintainers to dedicate time to leading maintenance training evolutions, whether the training is on the job or formally structured. New check-ins with prior platform experience minimize training overhead requirements and afford squadron leadership flexibility in appointing detachment LCPO/LPO responsibilities. "Reutilization" metrics exist, and leadership is fighting on your behalf to keep qualified and deserving talent within the community.

"What Is It Gonna Take?" – I'm irritated whenever I hear someone propose dismissing a mishap as a one-off incident, a bad day, or the 'cost of doing business.' Inculcating a strong, learning safety culture throughout every level of our community is the 'price of winning.' We literally can't afford to get this one wrong.

"I Like It Here, I Think I'll Stay" – Retention studies are replete with reasons employees transition out of a career field. Although there are disagreements on the prioritization order of that rationale, there is no doubt that two primary factors are whether an employee feels like they are learning new skills and whether that employee has any desire to follow in their boss' footsteps.

"They Really Do Care" – The most rewarding decision I made during my command tour at HSM-73 was carving out three workdays dedicated exclusively to maintenance training. We brought in outside aviation safety and maintenance experts and spent several days providing rate-specific training across the squadron. I've never seen Sailors so motivated and excited about their work. The maintainers' pride swelled beyond anything I'd seen in the squadron up to that point. Reduced manning means that conducting efficient and impactful maintenance training is even more paramount than before. Our Maintainers desperately want to learn and improve, so let's enable it.

"Thanks To Jank" - I won't lie, I considered leaving Naval Service in the past. I spoke with friends who had transitioned out and those who had never served to get their opinions. So why did I stay? I offer that credit mainly to a former HSM leader of mine, CAPT Patrick "Jank" Jankowski, USN (Ret.). While I was serving as his Department Head, Jank trusted and empowered me. It was the first time I felt I possessed influence commensurate with my rank. It was invigorating, and I wanted to know if all of my post-Department Head Navy jobs would give me the same satisfaction. Around the same time I worked for Jank, I came across the following quote by the author Robert Byrne: "The purpose of life is a life of purpose." During one of our deployments together, I had an epiphany and finally grasped the intangible value of working alongside others who shared a common purpose and ethos. I realized there may be other occupations that pay a higher wage or other career fields that would be less stressful, but there is no other calling that is more distinguished and rewarding than service to one's country. I love making a difference, and the longer I've stayed in, the more ability I've gained to change what previously frustrated me and the more opportunities I've had to impart a 'Jank' style impact on a Sailor's life. If you have one Sailor subordinate to you, remember how much influence you have on their future life decisions. Jank is a significant reason I made it this far; his leadership unleashed my potentia. I strive to return the favor tenfold to those Sailors serving within CHSMWL.

Sailors refuel an MH-60R Sea Hawk helicopter from the "Battlecats" of HSM-73 on the flight deck of the aircraft carrier USS Nimitz (CVN 68). **U.S. Navy photo by Mass Communication Specialist 2nd Class Carson Croom, USN.**

"Amazing Speech – Can I Get A Copy?" In the spring of 2019, I was honored to serve as the Commissioning Officer for one of HSM-73's hot-running Senior Chiefs. The most memorable moment from that day came at the end of the ceremony when the Senior Chief's mother asked me for a copy of my speech. She was so proud of her son and blown away by how I had spoken about him that day. But she was even more shocked when she realized I hadn't written anything elaborate on the sheet of paper I was carrying. And I'll never forget the look on her face when I said, "Ma'am, I didn't write a speech; I simply elaborated on each of your son's career achievements. It was his military biography." You and your Sailors should never lose perspective on how much they have achieved simply by serving. And that, at worst, you are all heroes in your family's eyes.

"Give Me Everything You've Got" - We must continue improving our simulators' fidelity, reliability, and interoperability to drive synthetic training closer to real-world operations. We must maximize every flight hour in the aircraft by learning and improving from every flight by taking pride in leading detailed and blunt debriefs – if there is no rank in the cockpit, then there shouldn't be any in debriefs either.

"How Clear? Crystal Clear" – The iterative pace of war is quickening, and the rotary community's ability to rapidly learn and adjust is central to our Navy's ability to project power in the future. We can no longer wait for post-cruise debriefs to convey lessons learned. Instead, deployed aircrews must rapidly and succinctly articulate seams and vulnerabilities in each after-action report. Steve Jobs once famously said, "It doesn't make sense to hire smart people and tell them what to do; we hire smart people so they can tell us what to do." Your community leadership last deployed a minimum of five years ago, so help us make informed, accurate, and unassailable arguments about what equipment and training we need to win the future fight.

Former Chief of Naval Operations, Admiral Michael Gilday, titled the 2020s a 'Decade of Urgency.' We must understand that tomorrow is too late to start improving ourselves or strengthening our team. We must start today. I'm proud to serve alongside each one of you. Let's get after it.

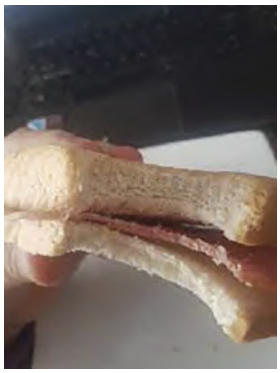
Dry Sandwiches, REDUX.

By CAPT Arne Nelson, USN (Ret.), LTM #4 / RW # 13762
President, NHA Scholarship Fund

Recently, I was asked, "How is a charitable donation like a Navy in-flight box lunch?" Recalling my time in the Fleet, faded memories of quality and quantity of an in-flight box lunch range from a stale baloney sandwich served with a half-gallon can of tomato juice (CVN) to a hot, three-course meal complete with a fresh pie (CLF)…and though I never was able to score one personally, I noted that the Italian Air Force box lunch included a box of vino. Una scatola di vino?…che schifo!

The question lingers. How is a charitable donation like a Navy in-flight box lunch? All hands agree:

- Both the meal and the donation are a surprise – you never know what you are going to get.



- There was always hope for a memorable meal or gift, depending upon the generosity of the contributor (either the ship's cook or the NHA donor).

- The outcome, whether a leadership gift or sustaining meal, was appreciated. 'Nuf said.

Back in 2020, my goal coming to the NHA Scholarship Fund was to set conditions for NHASF sustained growth. Together, the NHASF Committee wrote a vision statement and added a mission statement to guide a five-year plan:

Vision: Provide a sound, growing fund base to incrementally increase the dollar value of the fifteen annual awards total to reach $75K ($5,000 each) in 5 years (2025) and for our members, be a premier scholarship choice in Naval Aviation in 5 years (2025).

Mission Statement: To award college scholarships to eligible members of the naval helicopter community and their families (USN, USMC, and USCG) to pursue their educational goals. Quite simply, to increase the amount of each scholarship to $5,000 and then sustain that growth. Our report card going into 2024 selection board. See table (1) below.

Year	2020	2021	2022	2023	2024	2025
Total Awarded / Planned	$39,500	$54,000	$56,000	$68,000	**$67,500**	$75,000
# Scholarships (Performance and Plan)	15 / $2500 1 / $2,000	15 / $3,000 6 / $1,500	16 / $3,500	17 / $4,000	**15 / $4,500**	15 / $5,000

(Table 1) NHASF Report Card

2024 Application Season. As I write this in mid-January 2024, we are about to close our 2024 application process with about 60 eligible applications received. Historically, this is about average, with the bulk of the applications arriving in January. We have ratcheted up our scholarship value to $4,500 for each of the 15 scholarship awardees. Check out the Scholarship Fund Website at https://www.nhascholarshipfund.org to see our donation options.

As you reflect on donating, please consider giving to our general memorial fund or establishing a new memorial or legacy fund (ex., NHASF General Memorial Fund, HS-5 Night Dipper Memorial Fund, or H-53/Big Iron Fund) to preserve the legacy of our communities and remember the heroes that make up our proud rotary wing heritage.

And finally, before the year draws to a close, I want to remind you of a smart way to give to NHASF. Those who are 72 ½ years of age or older can take advantage of a special approach to make a gift that has tax benefits. This popular gift option is called many things, from "IRA Rollover," "Tax-Free Distribution," or "QCD," but know that it is a simple, tax-wise way to make a difference. Contact your IRA fund administrator (Vanguard, Fidelity, Ameriprise, etc.) for more information.

A gift to the NHA Scholarship fund is tax deductible. The NHA Scholarship Fund is a 501 (c) (3) nonprofit charitable California corporation: TAX ID # 33-0513766. Thank you for your support in the 2023-24 scholarship rounds. I look forward to seeing you at the next NHA National Symposium in May 2024 at Harrah's Resort Southern California.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SH-60F Update

By CAPT Bill Personius, USN (Ret.), President, NHAHS LTM #46 / RW#1621

The good news is the artisans who are going to do the work are very excited about the opportunity to showcase their talents, honored to be involved with the project, and anxious to get started with the actual hands-on effort that is required. This project is something that is different for FRCSW as an opportunity like this doesn't come along very often to be able to work on a Medal of Honor Memorial static display.

The bad news is that this meeting of the minds to discuss the fabrication process generated yet another engineering design change that will need to be approved by both Cherry Point and Navy Region Southwest Engineers and this process effectively sends us "back to the drawing board" with regards to the review and approval process. This means it will take more time to start the stanchion construction. February 3, 2024 is the 3-year anniversary that I have been working on this project. It took a year to generate the request and the gifting letter. Then, it took a year for the letter to be approved by the Under Secretary of the Navy for Energy, Installations, and Environment (ASNEIE). The planning of the engineering design has been the long pole in the tent as we continue to make minor adjustments to it and run the gauntlet of the approval process to receive authorization to start the construction. Procuring the aircraft, moving it to NASNI, and actually doing the restoration work has been the easy part as that has taken eight months and that included taking one month off to dedicate to the 2023 NHA Symposium.

The manufacturing team is confident given an approved new design, that they can complete the work in time to support a Dedication Ceremony in June. However, the changes to the timeline are once again up to the engineering team and those involved with the review process. FRCSW also needs to determine the pricing for the work and a way for NHAHS to be able to pay for their services.

We are going to get this project completed and more good news: we have the support of PMA 299, the H-60 Program Office being on our side. We have over 450 donors with 325 bricks on order so far. Please consider placing a brick order and donating to the project as we need your $upport to reach our goal of $130K between now and the dedication ceremony. Do you know a potential big donor that could help…please introduce me.

The centerfold of this month's magazine is a tribute to our volunteers. Many Sailors and civilians on the base have contributed to the restoration effort by volunteering and dedicating their time and talent to help with any number of tasks to get the aircraft restoration completed. Thank you to all those personnel who have worked on the aircraft and for those who will continue to assist with the project to make the Medal of Honor Memorial a reality.

I want to thank the NBC/NASNI Base CO, CAPT "Bomb" McKissick for his support of the project, and wish him luck at his next assignment. Bomb is a helicopter pilot and was a major supporter of the project along with CAPT Monte Montero who has fleeted-up to be the new base CO on 26 January. I'd like to welcome CAPT Loren "Wookie" Jacobi as the new base XO, who is also a helicopter pilot to the team as we look forward to working with you to get the project across the finish line.

The beat goes on…and we are looking forward to finalizing the mounting hardware design and receiving the go ahead for construction once again. The plan is to focus on a June 19 Dedication ceremony and push to have the project completed on that day as that is the 55-year anniversary of Clyde and his crew performing the rescue. That is the goal right now, however, that date has not been confirmed or approved. I hope by the time that you read this article that is the case and I can formally announce the 19th of June as the official Ceremony Dedication date. Don't mark your calendars or make travel plans just yet until we confirm the date. By the end of February, we should know something definite by then.

For now…we are placing the finishing touches on the aircraft and waiting for the all-important paperwork to be completed so we can move forward. Who knew it would be more difficult to formulate a plan on paper than it would be to restore an aircraft and weld together a supporting structure to mount it? Keep the faith! Please help support the project with a donation or purchase a brick to honor a friend, family member or recognize yourself, thank you.

Naval Helicopter Association Historical Society (NHAHS)
https://www.nhahistoricalsociety.org/

Help Fund the Lassen SH-60F

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Or Donate Online: ***https://sh60fhoas.navalhelicopterassociation.org/***

Enjoy a Q&A with one of our Editors, Capt. Mike "Chowdah" Ayala, USMC

Editor since: Fall 2023

Location: New Orleans, LA

Past Squadrons/Commands:
HMLA-773 Det A "Red Dogs"
;HMLA-267 "Stingers"
VMM-163(REIN) "Evil Eyes"
MAG-39

Favorite Tour:
VMM-163(REIN) as part of the 11th Marine Expeditionary Unit and Boxer Amphibious Ready Group WESTPAC 19.2. It's true what they say: you won't recognize you're experiencing the good times until those times have already passed. Take photos at every opportunity you have when you're away from garrison. The more photos the better.

Favorite EP: Np Overspeed and Underspeed. Because it's the one EP I've seen happen the most to pilots in the Fleet.

Favorite Color: Torn between Red and Black.

Favorite Food: Torn between Tacos and Pizza!

Favorite Hobby: It's snowboarding but there's not a lot of snow, or hills for that matter in Louisiana. So now it's camping and working on my caravan-style travel trailer.

Why did you decide to become a Rotor Review Editor?
Didn't see a whole lot of Marine representation on the list of editors and felt obligated to try and change that. Luckily I didn't have to ask, Grudge asked me and I'm grateful for that.

What is your favorite memory in Naval Aviation?
Flying low altitude through the Philippines with the best friends I'll ever have. If you ever get a chance to fly through the Philippines do it. Plan a route that goes from sea level all the way up to the higher elevations. If you're in Subic Bay, fly up towards Mount Pinatubo. You won't regret it. Jordan was also pretty rad.

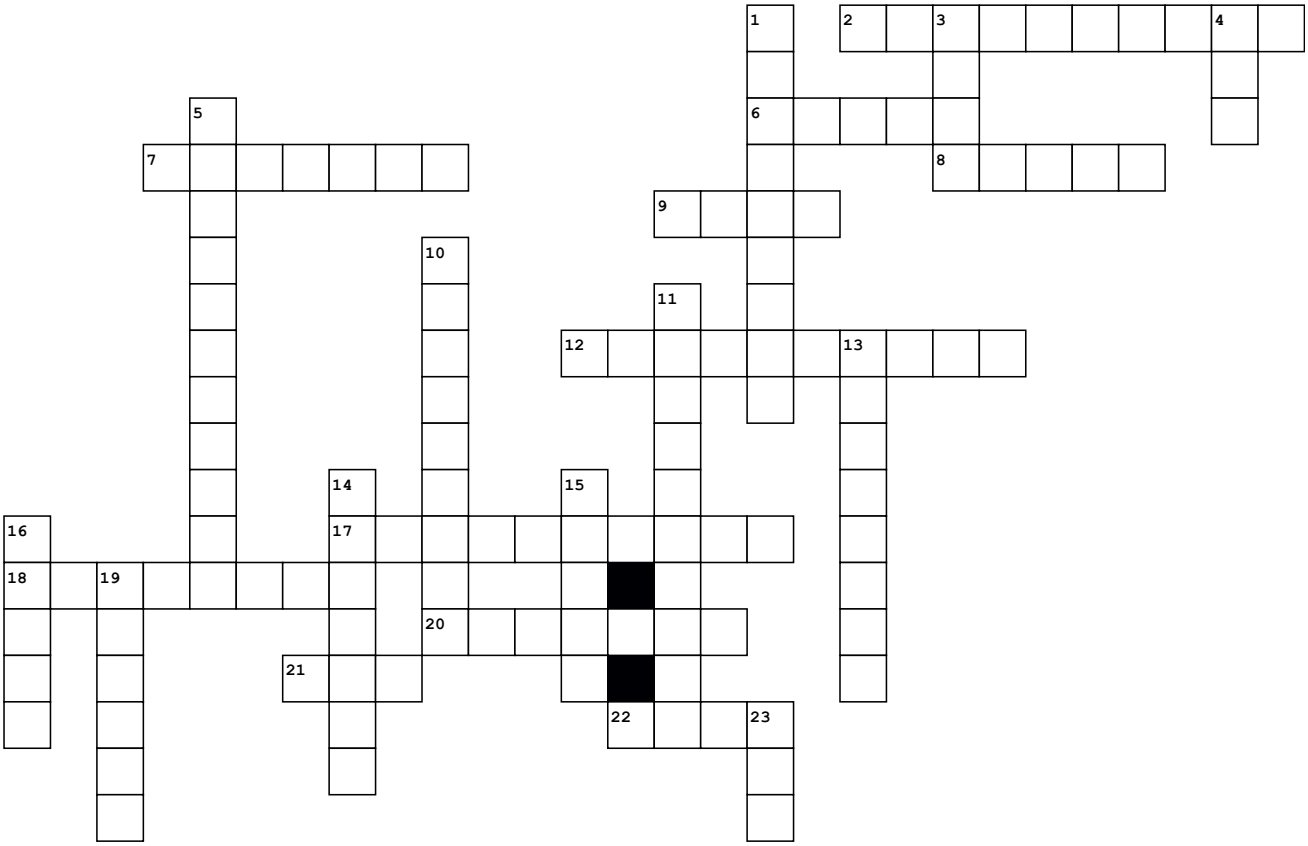
What are your goals for the future?
Right now my sights are on giving precious time back to my family after a long Fleet tour. But professionally I'd like to stick around long enough to maybe do another Fleet tour and hopefully have a shot at a MEU or something cool like a Marine Rotational Force - Darwin. They do some great training out there. The Australians also have sick, off-road caravan-style travel trailers I want to get my eyes on…

Anything else you'd like our readership to know?
I can't reiterate enough how important it is to be technically and tactically proficient. Our jobs are all incredibly important and demand maximum preparation, effort, and commitment from all of us no matter how seemingly small or unimportant your job may seem right now. Our profession is truly a team effort and we need everyone on the team to operate at a high level. At the same time though, it's equally important to not lose sight of who you are and why you took your oath in the first place. Staying humble, and approachable, while also choosing to be receptive to training and growth (especially in uncomfortable or dynamic situations), will help expand your box and make you and ultimately your team better. Stay motivated.

Think you know everything about Maintenance? Try your hand at this crossword puzzle. Good luck!

By LT Quinn "Charity" Stanley, USN

Rotor Review Crossword #2



Across

2. Current CNO
6. Airframe with tandem cockpit and a "Super" variant
7. Helps to keep your footing; on the flight deck and aircraft
8. Flying an aircraft to deliver it to storage
9. No. associated with each individual airframe
12. Inspection good for 24 hours
17. Get the wheels turning
18. Identify the problem; from the Greek words for "apart" and "recognize"
20. Plane ___; NAMP Qualification
21. __, Fly, Flight!
22. Helps determine the U/P/D status per TMS

Down

1. ___Directive; Directs 1-time inspections or modifications
3. Signed after a maintenance action to ensure no FOD hazard
4. Airborne maintainer?
5. First flight event of the day?
10. Type of lubrication with a red hue
11. Personal _____ Equipment
13. 230 Branch
14. Type of inspection based on calendar time or flight hours
15. Color of a safety supervisor's float coat?
16. Supplement to QA Div, abbr.
19. Sign before you fly
23. Discrepancy logged in NALCOMIS

Answers on page 75

Fix, Fly, Fight - WIN

By CAPT George Galdorisi, USN (Ret.)

It is hard to believe that Harry Reasoner's quote about helicopter pilots being different is over a half-century old. Most of you reading this weren't around when he famously offered his opinion on February 16, 1971. That's okay, you may have seen the framed quote on a wall in your squadron spaces or just heard it somewhere as part of the tribal knowledge of being part of our community. Here it is:

"The thing is, helicopters are different from planes. An airplane by its very nature wants to fly and, if not interfered with too strongly by unusual events or by a deliberately incompetent pilot, it will fly. A helicopter does not want to fly. It is maintained in the air by a variety of forces and controls working in opposition to each other and, if there is any disturbance in this delicate balance, the helicopter stops flying; immediately and disastrously. There is no such thing as a gliding helicopter."

"This is why being a helicopter pilot is so different from being an airplane pilot, and why in generality, airplane pilots are open, clear-eyed, buoyant extroverts, and helicopter pilots are brooding introspective anticipators of trouble. They know if something bad has not happened, it is about to."

That was then and this is now. If Harry Reasoner was alive today, he likely would never have said this. Why? Our aircraft are routinely the most reliable and mission capable in all of Naval Aviation. This is due, in no small measure, to the dedicated and tireless work of the men and women who maintain our (now-aging) aircraft and make them ready for flight.

During my first squadron tour, one of my fellow first-tour aviators was complaining about how some of the Sailors under his charge were having this or that issue and that it was taking up a lot of his time. Our skipper called him in for a chat. He asked the young lieutenant if he loved flying. The answer was "yes." "Well then," our CO said, "these men (all men then, this was the early 1970s) come to work every day and do what they likely don't love doing so you can do what you do love doing. Keep that in mind."

Our maintainers are likely challenged more today than ever before. Except for our Osprey fleet (which has its own maintenance challenges) our aircraft are aging. Parts shortages, engendered by budget issues such as continuing resolutions, mean more work for the professionals who ensure the safety of our aircraft. We owe them our thanks.

Maintaining Freedom of the Seas Requires Future Vertical Lift!

By Carl Forsling – Senior Manager, Military Sales and Strategy at Bell
and Tyler Harrell – Manager, Military Sales & Strategy *at Bell*

For nearly half a century, the H-60 family of helicopters has been the warhorse of the United States military's rotary wing fleet, a platform able to perform a wide range of missions ashore and afloat. But with an ever-decreasing U.S. Navy fleet size compared to the constantly increasing number of potential global hotspots, Navy leadership needs to make a "course correction" and do it quickly. An early investment in Future Vertical Lift, both manned and unmanned, would be the "course correction" that could make an immediate and significant impact.

Building more ships isn't enough.

Between a limited topline budget and competing priorities such as strategic deterrence, Next Generation Air Dominance (NGAD), and a shortage of combatant ships, the United States Navy will need to quickly make the hard choices that will affect the fleet for decades. The Navy's 2024 Shipbuilding Plan identifies three alternative long-range projections for the future fleet. All these alternatives result in a 2053 fleet that, best case, returns the fleet to the same size it was in the mid-1990s. Even the most aggressive of those plans leave the naval surface fleet below the present force structure before the next 10 years. This limited fleet size will be stressed to handle even the most basic functions of presence and deterrence in INDOPACOM, much less the Navy's mission worldwide. Each combatant will be required to exert sea control over a vast expanse of ocean. While the MH-60R and S capably fill that role today, will they continue to meet the challenge in the longer term?

The Navy protects American interests at sea in both peace and war.

For over 200 years, the U.S. Navy has fulfilled its' most basic mission by assuring freedom of navigation for US and allied shipping. The Navy's mission statement reflects this: "The United States is a maritime nation, and the U.S. Navy protects America at sea. Alongside our allies and partners, we defend freedom, preserve economic prosperity, and keep the seas open and free." While being prepared to fight and win a peer or near peer conflict is crucial, the U.S. Navy must still maintain presence around the world to maintain peace and deter aggression. The recent Houthi gunboat attack and swift response by U.S. Navy helicopters in the Red Sea shines a light on the lethality and operational capabilities of naval rotorcraft, especially in prosecuting small, fast-moving surface threats. But the range, speed, and endurance of existing rotary-wing aircraft will be insufficient as the Navy's fleet is stretched further and further and threats become more advanced. Embarked helicopters and Group 3 and below UAS cannot provide the necessary protective bubble needed to defend against those threats. This is true not just for Anti-Surface Warfare (ASuW), but for the majority of naval helicopter missions, from Anti-Submarine Warfare (ASW) to Search-and-Rescue (SAR) to long range combat logistics.

The Navy needs Future Vertical Lift platforms.

To conduct these missions in the 2030s and beyond, rotorcraft speed and range need to increase greatly without compromising runway independence. Whatever technology is chosen to fill this emerging capability gap, those requirements will remain. While competing technologies exist, tiltrotor platforms such as the Navy's CMV-22 and the Army's future long range assault aircraft, or FLRAA, are benchmarks for the type of performance that will be necessary in any future platform, manned or unmanned.

Small (Group 1-3) UAS and commercial off-the-shelf (COTS) hardware have a role in mitigating that gap in the near term. Those platforms are excellent at intelligence, surveillance, reconnaissance and targeting (ISR-T), especially at relatively short ranges. However, these platforms' limited payload size and weight prevent them from carrying many of the payloads employed by H-60s, particularly weapons and larger sensors.

Fixed-wing aircraft from CVNs, LHAs, and LHDs have the capability to perform some of the H-60 mission set, such as ASuW. However, their fuel demands, limited on-station time, and flight characteristics make them a poor match for many of the threats routinely encountered by rotorcraft. That also assumes availability of a big-deck and excess sorties, both of which are unlikely given competing operational priorities. Similarly, shore-based maritime patrol may or may not be present when contacts are racing toward U.S. Navy ships or the vessels they are protecting.

It's likely that a multi-layered approach will be necessary to fill this gap in the short term. Capability enhancements to legacy aircraft, UASs, USVs, and other emerging technology will all play a part.

But while the Navy fixes the problems that face it right now, it cannot lose sight of the problems it will face in the future. The proper investments made today in relevant technologies will pay enormous dividends in the 2030s and 2040s.

Future Vertical Lift, both manned and unmanned, will enable each ship to cover more ocean on a persistent basis. High-speed, long-range rotorcraft are essential in maintaining the U.S. Navy's ability to fulfill its mission statement into the second half of the century.

How to Win the Maritime Resupply Logistics War

By CAPT Richard Brasel, USN (Ret.), Chief Revenue Officer, PteroDynamics Inc.

It is no secret to anyone who has had the privilege to serve with the Navy or Marine Corps that maritime logistics and resupply is a time-consuming, complex, and absolutely essential part of Naval operations. Logistics is the lifeblood that makes all operations possible.

The mission becomes much more complicated once a battle group is deployed at sea for any extended time. Maintenance requirements and ensuring critical parts and supplies get to the ships and crews where and when they are needed become a daily focus for many Naval Aviators. As a helicopter pilot, I lived this reality executing many vertical replenishment (VERTREP) missions.

Transwing operating off the flight deck of USNS Burlington (T-EPF 10) during the Hybrid Fleet Campaign Event.

The problem of supplying urgently needed repair cargo to vessels hundreds of miles out at sea – out of range of helicopters – gets more complex, time-intensive, and expensive. These missions require the significant expense of sending a CMV-22 VTOL aircraft or C-2A to a carrier where its cargo can then be transported via helicopter to another vessel.

In addition to operational costs and personnel hours required, these logistics missions reduce the operational lifespan of combat helicopters that are expensive to maintain and operate. That's a lot of money and energy to expend on delivering cargo that almost always weighs less than 50 lb. According to a recent U.S. Navy Sealift Command CASREP, out of nearly 3,500 deliveries, only 10% of the items weighed more than that. In fact, 48% of items delivered weighed less than 1 lb.

The UAS Solution to Maritime Resupply

Recent technological advancements hold the promise to make highly automated VTOL unmanned aerial systems (UAS) an ideal solution for shore-to-ship, ship-to-ship, and ship-to-shore logistics, and the U.S. Navy is working with industry partners to fast-track innovation.

The capability to fly a fleet of small, far less expensive automated VTOL UAS aircraft off carriers, supply ships, or from shore to deliver critical parts and cargo hundreds of miles away would undoubtedly improve readiness levels. Imagine autonomous VTOL UAS aircraft flying to vessels deployed 250-300 miles away to deliver a payload, recharging or refueling, taking off with new cargo, and flying back. What now might take a week to get a critical part could be accomplished in less than a day.

Making autonomous UAS maritime resupply missions like these a feasible reality requires a step up in baseline performance capabilities: superior VTOL performance, range and endurance that surpasses what's available in current designs, speed to reach remote locations, the ability to operate in austere and contested environments, and the technology for highly automated operations. In other words, a highly automated UAS platform that performs like a great fixed-wing aircraft with superb VTOL capabilities.

UAS Coming of Age at the Navy's Hybrid Fleet Campaign Event

We're beginning to see UAS platforms that meet many of these performance capabilities. PteroDynamics demonstrated the capabilities of its automated Transwing® VTOL UAS at the U.S. Naval Forces Southern Command/U.S. 4th Fleet Hybrid Fleet Campaign Event (HFCE) last October. The event was a proving ground for emerging unmanned systems and an opportunity for senior leaders to see the capabilities that could support the Fleet. In attendance were Navy leaders including Chief of Naval Operations, Admiral Lisa Franchetti, representatives from 10 foreign partner countries, and 18 industry partners.

Transwing aircraft flew nine autonomous launch and recovery flights from USNS Burlington (T-EPF-10) during the HFCE. The Transwing represents a very different approach to VTOL aircraft design. It overcomes inherent limitations in other VTOL designs by combining the speed, range, and endurance of fixed-wing aircraft with outstanding

CNO Admiral Franchetti and other representatives receive a briefing on the Transwing from Tim Whitehand, PteroDynamics' VP Engineering. onboard USNS Burlington (T-EPF 10) at the U.S. Naval Forces Southern Command/U.S. 4th Fleet Hybrid Fleet Campaign Event (HFCE) in October 2023.

VTOL performance. Its wings fold and unfold to transition quickly and smoothly between vertical and horizontal flight. With wings folded for VTOL operations, the Transwing has a high degree of controllability so it can take off, land, and maneuver in turbulent winds and in high sea states. When airborne, it then unfolds its wings to become a highly efficient fixed-winged aircraft.

Because the Transwing design eliminates the extra drag and weight of multiple additional propulsors, the aircraft has greater range and endurance and can fly at high speeds to reach remote locations without runways. The aircraft doesn't require additional infrastructure or crew training for launch and recovery, and its folding wings give it a small operational ground footprint for easy storage.

U.S. Navy as an Innovation Partner

The Navy is playing an important, active role in working with industry partners to advance and operationalize the latest technologies, systems, and procedures. October's Hybrid Fleet Campaign Event provided an invaluable experimentation venue for multiple developers of the latest technologies to embark with the operational force, evaluate the capabilities of new innovative systems in a real-world environment, and receive important operational performance data and feedback.

The Transwing's successful flight tests conducted from USNS Burlington provided critical data on the platform's key operational capabilities, including autonomous takeoff and landing from a flight deck with computer vision, integration of the UAS with ship operations, navigation to and from a moving ship at sea, and transition from VTOL to cruise flight performance.

There still is work to be done to advance the underpinning technologies that will lead to the widespread adoption of automated cargo delivery to all the ships in the Fleet. One example is the technology to eliminate the need for a ground control station (GCS) and ground crew on every ship to receive UAS-delivered cargo.

A very important part of this equation is the continued close collaboration between the Navy and industry innovators to define requirements and speed innovation. Programs like the HFCE play a critical role in accelerating the development of the latest unmanned technologies that will provide the Navy with next-generation automated cargo delivery capabilities.

About the Author

CAPT Rich Brasel, USN (Ret.) is Chief Revenue Officer at PteroDynamics, an innovation leader in autonomous VTOL aircraft systems. A former DoD Major Program Manager and Naval Aviator, Rich has over 20 years of experience developing, testing, and fielding unmanned aerial systems. He was a U.S. Navy test pilot and served as the Commanding Officer of the U.S. Naval Test Pilot School. PteroDynamics Inc. is an innovation leader in autonomous vertical takeoff and landing (VTOL) aircraft systems. PteroDynamics' Transwing® aircraft unique capabilities are ideal for automating time-sensitive delivery of critical high-value payloads to-hard-to-reach locations with no runways and in austere conditions, including maritime logistics support, payload delivery to remote locations without airstrips, and reconnaissance and surveillance. For more information, please visit www.pterodynamics.com.

Back in October of 2020

By AM2 (AW/SW) Maka Marote, USN

There I was: somewhere in the grueling heat of the South China Sea, a fairly typical day out on deployment aboard USS Antietam (CG 54). Far beyond our initial expectations of a one-month underway, this deployment had morphed into a grueling 8.5-month journey due to COVID-19. The unexpected extension to our deployment took its toll not only on everyone in our detachment but also on the crew of USS Antietam, creating an atmosphere of fatigue and heightened tension. The prolonged time away from home and the uncertainties of the mission contributed to an environment where every task held heightened significance.

Sailors aboard USS Antietam (CG 54) inspect and prepare to refuel a MH-60R Sea Hawk helicopter assigned to HSM 77 "Saber hawks." **Navy photo by Mass Communication Specialist 1st Class Toni Burton, USN.**

One particular day, towards the tail end of our deployment, routine maintenance on one of our MH-60R aircraft was the priority of the day. The main rotor head hydraulic accumulator fluid level was low, and the aircraft needed to make the flight schedule. The backdrop of the extended deployment added an extra layer of intensity to our tasks, sharpening our awareness of the critical nature of our work. We knew that completing the task was important, and completing it in a timely manner was equally as important.

As my worker and I completed the maintenance task, we gathered our tools for the routine All Tools Accounted For (ATAF) Check. In the process, we realized the toolbox had been disassembled for interior component replacement, turning a practiced routine into an altered version of our usual workflow. The lack of a solid box to ensure all tools were in their respective spots led to a fateful mistake: a small tool known as the "goose neck" had slipped through the cracks during the final ATAF process.

It was only later, during the reassembly of the toolbox, that the goose neck tool was discovered missing. My stomach dropped as the gravity of the oversight hit me with full force. The only other place it could be was connected to the hydraulic gauge of the main rotor accumulator of the helicopter.

And that helicopter was currently flying. At that moment, the weight of the responsibility as a Collateral Duty Inspector (CDI) and Collateral Duty Quality Assurance Representative (CDQAR) became acutely apparent.

On top of being on an extended deployment and the challenges faced by the entire detachment, the realization of the missing tool stirred a mix of emotions within me. The incident became a symbol of the high stakes we face daily, where even the smallest miss-step can have severe consequences. The fear of potential injury or loss of life for fellow crew members and the realization of my accountability would leave a lasting impact.

The incident during that deployment, with its unexpected challenges and prolonged duration, served as a crucible for personal and professional growth. As I continue to progress in my Naval Aviation career, the lessons learned from that day serve as a constant reminder of the critical importance of meticulous attention to detail in the face of the challenges that we may endure out to sea.

Having persevered through the trials of that deployment and the subsequent repercussions of the oversight, I have grown as a maintainer and as a CDI/CDQAR. The incident emphasized the gravity of my responsibilities and the potential consequences of negligence in our line of work. Now, at my third helicopter command getting ready to embark on my fourth deployment, I share my story with junior maintainers. I use it to instill in them the seriousness of our responsibilities, preaching proper tool control and emphasizing the significance of adhering to procedures. My hope is that my experience can serve as a poignant reminder to new maintainers of the potential risks and the importance of avoiding complacency in our vital roles.

In conclusion, the incident aboard the Antietam during our extended deployment remains etched in my memory as a pivotal moment in my Naval Aviation career. The challenges faced, both during this particular maintenance task and on the deployment as a whole, provided an opportunity for personal and professional growth. As I navigate through subsequent deployments and continue to progress in my career, the lessons learned from that day remain a guiding force, propelling me toward ensuring the highest standards of safety and professionalism within the Naval Aviation community.

Normalized Deviation

By LT Lena Reid, USN

Could you describe the culture at your squadron right now? Does your command promote a high emphasis on safety and by-the-book maintenance? Is your command willing to bend a few rules to make the flight schedule or maintain op-tempo? Unfortunately, it usually isn't until we have loss of life or aircraft that questions begin to get asked on how we got to this point. Normalized deviation, or unsafe norms, can go on for years without being noticed and is even sometimes encouraged as long as the mission is getting done. When this occurs, it is up to squadron safety departments to sound the alarm and challenge the cultures that permit normalized deviation.

A norm is established within a group of people, through mutual agreements, how they communicate, interact, collaborate, etc. A norm is not universal however, since those within the Navy H-60 platforms will probably not be found in the Army H-60 community. Norms can vary with location (Norfolk Vs. San Diego), aircraft type/model/series, and with the biggest factor: leadership. If a deviation is allowed to continue, it leads Sailors to perceive these deviations as routine or acceptable. This "norm" will manifest due to various factors: repeated exposure, lack of consequences, or social and organizational influences such as seeing others bending rules whether they be peers or leadership. Most importantly however, deviations often will continue due to a lack of education on previous mishaps and/or hazard reports (HAZREPs).

It's important to have an honest discussion within your wardroom to include maintenance personnel on current squadron norms such as the importance of by-the-book maintenance or why we use certain currencies for DVE or shipboard landings. Aircrew and Sailors have died because of bad norms. They have died due to the Navy's lack of communication, a lack of understanding/teaching, and because young Sailors fear reprisal when they make a mistake and are afraid to own it. Something we do really well, debriefing tactical grade cards, does not translate to everyday flights or to maintenance. There is a lesson learned in every evolution we do, yet it is not debriefed in a way that everyone can learn.

We cannot operate safely and efficiently if we can't have an honest discussion about our shortfalls. In the last 5 years, the Sierra/Romeo Community has had 11 Class A mishaps and 7 Class B mishaps. This number does not include the 2 Class A mishaps that have already occurred in FY24.

All of these mishaps included an underlying factor traced back to procedural non-compliance either from the aviators or from maintenance practices, which in total resulted in 4 loss of aircraft and 5 aircrew fatalities.

The question then becomes: why were Sailors and pilots not following procedures? Was it lack of training? Lack of understanding? Malicious intent? Bad norms? We can say for certain that Sailors are not purposely trying to hurt one another and rule out malicious intent. However, lack of training and understanding can be both rolled into bad community norms.

The lack of instruction on case studies with previous mishaps, and the general lack of understanding of what could happen when not following procedures properly, both come about through a culture that permits normalized deviation. All 5 deaths were caused by maintenance malpractice, by Sailors skipping steps that were deemed not necessary even though there were warnings written that skipping those steps could cause loss of aircraft or even death. Those are five families that will never see their loved ones again because we as a community, maintainers and aviators, did not recognize this normalization of deviance.

How do we fix this? If you are not sharing mishap and HAZREP reports with your wardroom and maintenance department, you are failing. What's more, just droning through a powerpoint about ORM and normalization of deviance, is not how you train young aviators and Sailors on how to recognize risk and deviation. It's easy for commands to get a check in the box by giving lackluster training at safety stand downs. We need to stop doing this. When we have training days, we need to actually have meaningful discussions and review case studies in focus groups. One of the things we do not do well as a community, especially since the Navy has transitioned to RMI for SIRs and ASAPs, is quickly and effectively disseminate safety information to personnel. We need to do better at learning from previous events and passing down information to those who will eventually replace us. That is why it is critical for ASO's to share and review mishap and HAZREPs with their wardroom and the maintenance department.

There is a saying that there are no new mishaps, just new people recreating old mishaps, and to some degree this is true. Normalizing deviance will continue if we do not change the way we operate. Squadron safety representatives need to communicate and disseminate case studies not only to aviators but also to maintainers. When it comes to mistakes, we need to be honest with not only ourselves but with our leadership. Be able to have professional conversations and debrief community issues and lessons learned within your maintenance department and wardroom. If we don't change the way we operate, we will continue to have this discussion and continue to see mishaps due to procedural non compliance and bad norms.

Lack of Assertiveness

By Senior Chief Naval Aircrewman (Helicopter) Erica Gibson, USN
(originally published in MECH Magazine)

Mishap trend analysis in our Risk Management Information (RMI) System shows that in the past five years, nearly 70% of all aviation-related mishaps occurred on the ground. In every report, more than one human factor contributed to a mishap. Lack of assertiveness is one of the contributing human factors, and it's also listed by the Federal Aviation Administration as one of the top 12 human factors that makes human error a causal factor in aviation maintenance related mishaps. Let's dive deeper into what assertiveness is, what causes a lack of assertiveness, and how our warfighters can become more assertive.

Assertiveness is "an individual's willingness to actively participate, state, and maintain a position, until convinced by the facts that other options are better. Assertiveness is respectful and professional, used to resolve problems appropriately, and to improve mission effectiveness and safety (CNAF M-3710)."

Assertiveness is a learned behavior and communication style developed over time. It actively develops from the front matter of our brain, called the prefrontal cortex, through life experiences. "The prefrontal cortex intelligently regulates our thoughts, actions, and emotions through extensive connections with other brain regions. It creates a 'mental sketch pad' (to use a phrase coined by Alan Baddeley) through networks of neurons that can maintain information in the absence of environmental stimulation (Arnsten, 2009)." How much an individual is willing to actively participate and display assertiveness falls on the organization, its culture, and people we engage with on a day-to-day basis.

Causal Factors

As a professional organization with dangerous jobs, how is it possible that our warfighters lack assertiveness? Studies and surveys have shown that we lack assertiveness through inexperience of our predominantly young workforce, inadequate training, or not using the tools at hand to properly train. Additionally, little to no feedback, loopholes and stigmas created in military hierarchy communication, hostile or negative work environments, burn out – or not knowing how to say no – and not understanding a task also contribute to lack of assertiveness.

Lack of resources in the form of personnel, time, parts, tools, and equipment also contribute to the unassertive and undertrained Sailor in the aviation community. Naval Safety Command assessment team members have seen and documented these specific issues across the Fleet time and time again while conducting Tier III local area assessments. When we lack the essentials to do the job correctly, it results in missed or skipped training, gundecking, not finishing a job, and moving on to a different task, which often results in incorrectly performed maintenance.

All these factors then lead to the domino effect of a hostile or negative work environment, Sailor burnout, a break in trust felt throughout the organization, and the mishap that could have been prevented. How do we combat the elements that are given to us in the aviation community? We start by going back to basics and improving the organizational culture through training, mentorship, self-evaluation, self correction, and being assertive.

The Basics of Learning the Job and Working as a Team

Every job or task in the military is built on the required knowledge, skills, and abilities to perform that task successfully, and in the Navy, we start this process in basic training. It's the first exposure to being a U.S. Navy Sailor, combating shipboard elements during battle stations in a high-stress environment and learning how to work together as a team. After basic training, we gain our apprenticeship through formal training at schools with classroom instruction and usually some type of static simulators before reporting to our duty station. It is the first duty station where we become skilled in our jobs. For example, inspecting, testing, maintaining, preserving, repairing, and troubleshooting are key tasks for an organizational level E-4 rated aviation machinist's mate (AD3). The more exposure an AD3 gets in performing these tasks, along with feedback and supervision, the more skilled and able the AD3 will become in maintaining aircraft. The Sailor will gain confidence and competence and become more assertive in the job. As we qualify in rank and rate over time, we are entrusted to inspect, monitor, train, mentor, evaluate and manage our juniors and peers. We are trusted to complete the job or task assigned to us correctly and report daily to those above us. At what point will our skilled AD3 be assertive enough to communicate issues that arise or speak up about an unsafe event or evolution?

Increasing Communication Efforts

Getting our warfighters to speak up and be more assertive requires effective communication and positive behavioral adjustments. This communication effort and behavioral adjustment must occur up and down the chain of command when performing day-to-day duties. It must be flexible and adapt to all personnel performing an event or evolution based on their experience level. If we take a step back and look at our organizational structure, Sailors and Marines E-5 and below are entrusted to do the majority of work in the shop, hangar, and on the flight line or flight deck while still being trained and supervised.

When Sailors and Marines bring up issues or have questions, we must listen and respond with positive and productive feedback, not ignore their communication efforts. On the other hand, feedback or constructive criticism must be welcomed to adjust our thought processes and change our behavior.

Self-Evaluate and Self-Correct: What Communication Style Are You?

Princeton University identifies four common communication styles: passive, aggressive, passive-aggressive and assertive.[1] Someone who passively communicates does not express feelings or needs. They defer to others to make decisions to avoid tension and conflict. Being passive can lead to misunderstandings, built-up anger, and resentment. Aggressive communicators express feelings, needs, and ideas at the expense of others. They can become defensive or hostile during confrontation. They will often alienate and hurt others but can meet needs quickly. A passive-aggressive communicator can appear to be passive but will randomly act out in anger. They will try to control others using sarcasm and indirect communication while trying to avoid conversations. A passive-aggressive communicator lacks consideration of others' rights, needs, and feelings. Assertive communicators are honest and direct with their thoughts and feelings. They respect others' feelings, ideas and needs. Although the assertive communication style is one that builds trust and long-term relationships, sometimes other communication styles are warranted to handle specific situations that undermine the safety and welfare of others.

Being assertive is recognizing a problem and having the courage to speak up about it while offering solutions. A person who is assertive emanates confidence and good judgment. An assertive person does the right thing the first time every time and maintains positive connections while communicating clearly in the organization. An assertive individual gains credibility and builds trusting relationships, establishing an open line of communication. Being able to openly communicate issues helps to promote a safe and productive work environment. A safe and productive work environment builds assertive warfighters. An assertive Sailor lives by and represents the Navy core values of honor, courage, and commitment.

Footnotes

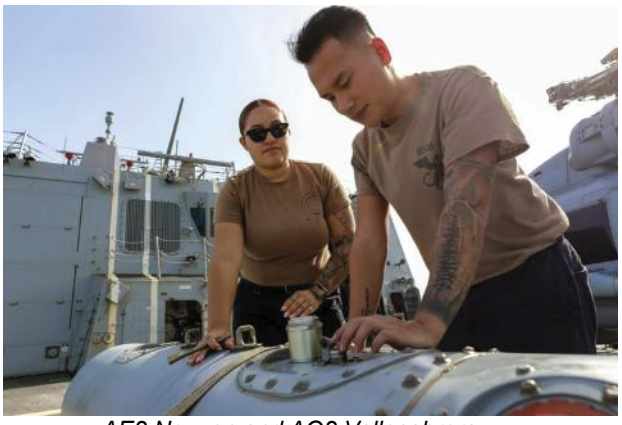
1. Princeton University. "Understanding Your Communication Style." Princeton.edu, 2019, umatter.princeton.edu/respect/tools/communication-styles.

The Maintainers of HSM 79 in Action

By LT Eric "Schneebly" Jensen, USN, HSM-79

Members of HSM-79 embarked on USS Roosevelt (DDG 80 perform maintenance on the bomb rack of an MH060R. The photos were taken by AMC (AW/SW) Matthew Connoly, USN.

AT2 Rojas, and AT1 Logsdon



AE2 Nguyen and AO2 Vallecabrera

AEAN Neely, AD1 Swartz, AE3 Rice, and AOAA Mendoza

HSM-51 Warlord ELVA and Smokelight Approach

By LT Corey Bowes, USN, HSM-51 Warlords, Atsugi, Japan

On July 31, 2023, at approximately 1600, Warlord 04, an MH-60R part of the embarked Helicopter Maritime Strike (HSM) detachment, launched from USS John Finn (DDG 113) to conduct routine surface surveillance operations in the northern Sea of Japan. There were no diverts and no suitable landing sites within the fuel range of the helicopter. Myself along with LCDR Aric "Boogie" McGee, the detachment's Officer in Charge, and AWR2 Alecsander Donlevy, the detachment's lead Aircrewman, were the aircrew on board. While conducting surface surveillance collection (SSC) at an altitude of 5,000 feet, we maneuvered ahead of the ship approximately 75 nautical miles. At 1815 a solid layer of clouds were observed quickly developing well below the aircraft. At the current altitude it was difficult to assess the height of the layer. Our initial estimation was that the cloud tops were forming between 1,000 and 2,000 feet. We decided to descend to verify the actual altitude. Passing through 2,000 feet, the clouds were still well below us which brought some discomfort amongst the crew. At 500 feet we were still above what was now a solid cloud layer. We could no longer see the surface of the ocean below the helicopter. Our standard operating procedure (SOP) for weather minimums during shipboard operations is 500 feet and one nautical mile visibility. At this point we made the decision to abort the mission and turn back to the ship.

Upon querying the ship for a weather update we were notified the ship was also experiencing reduced visibility with deteriorating weather conditions. Ceilings were assessed to be at 200 feet AGL with diminishing visibility at that time. Pushing Warlord 04 at our buster airspeed, we started closing the ship which was now at a distance of approximately 45NM. At 1835 we were overhead the ship and they assessed ceilings at 100 feet at this point. In the aircraft we were still VFR on top and could visually see the ship's mast peeking from the top of the cloud layer. In the time it took for our aircraft and the ship to set up for an approach, the cloud layer had risen upwards to 400 feet. We began to set up for a normal TACAN approach. This approach brings the aircraft down to 200 feet and ½ mile behind the ship but we suspected it would be unlikely that we would break out. This is our normal shipboard approach we fly everyday which would verify the bottom of the clouds from a familiar profile and glideslope. We were unable to break out and visually acquire the ship resulting in a wave off and reset. We decided to climb above the cloud layer to regain visual reference to the horizon which was now steady at approximately 400 feet and re-cage ourselves.

Warlord 04 on approach

On climb out, we requested RADAR guided emergency low visibility approach (ELVA). This approach brings the aircraft down to 50 feet and 100 yards astern of the ship. The ELVA approach is similar to a precision approach RADAR (PAR) but less accurate due to the less precise shipboard equipment used by the Anti-Submarine Warfare Tactical Air Controller (ASTAC) to control the aircraft. Part of the pre-deployment ship-air training is to complete multiple practice ELVA approaches to ensure the crew and the ship are familiar with the procedure. Regularly trained to, but rarely used operationally, the request for an ELVA alerted the watch-standers onboard the ship to the severity of the situation. The ASTAC was primed and ready to execute the ELVA approach. The bridge was now reporting that they were fully engulfed in a surface layer fog with horizontal visibility of approximately 100 feet. A "pocket" of better visibility was observed by the ship's bridge team and recommended the first ELVA be flown from the starboard rear quarter. We were unable to break out and executed yet another missed approach. Once again, we climbed out of the clouds to re-cage and set up for another approach, now knowing that the fog layer was down to the surface of the ocean.

We were growing more concerned about our ability to break out and recover with very limited options going forward. LCDR McGee requested a stern approach ELVA with the recommendation to have smoke markers standing by. Smokes are used for a follow-on emergency approach in which the aircraft comes down to 40 feet and 40 knots and flies behind the ship while smokes are deployed and communicated to the aircraft. This procedure is referred to as a "Smokelight Approach" which helps the aircrew to visually identify the ship's wake and subsequently fly to the stern of the ship using the wake for guidance.

On the second ELVA attempt, AWR2 Donlevy used the onboard RADAR to aid in guiding the pilots to the back of the ship in combination with the ASTAC's directions. Crew resource management (CRM) became crucial in this phase of the flight. As the pilot at controls, I was using an instrument scan making corrections based off of internal communications from AWR2 as well as the ship's controller. LCDR McGee was using an outside/inside scan to back me up as well as coordinating with the ASTAC and Landing Safety Officer (LSO) onboard John Finn. During low visibility, the ship reduces speed for collision avoidance which prevented us from visually acquiring the wake. AWR2 Donlevy was operating the RADAR, providing position reports, recommending corrections, and announcing our distance and closure rate. On the second attempt we were still unable to break out the ship or the ship's wake within 100 yards of the stern. We executed another missed approach and requested the ship to speed up in order to increase wake visibility.

While setting up for the third ELVA, our fourth approach, we directed the LSO to deploy the three smokes at 60 second intervals. Due to the ship's slow speed we wanted separation between the smokes to aid in finding the wake. We were also discussing our fuel state and time of flight remaining. By now we were at approximately 1,000 total pounds of fuel, only 400 pounds above our aircraft limit of a landing with a minimum planned fuel of 600 pounds. 400 pounds of fuel provides approximately 20-25 minutes of flight time enough for one more approach. After coming on course 2 nautical miles behind the ship we began our descent back into the clouds for another ELVA, this time with a planned Smokelight Approach. We slowly descended to 40 feet and 40 knots and were at the lower edge of the current layer with visibility severely diminished. Inside the aircraft we were tense but focused, internal communications were calm but direct. The onboard detachment pilots, aircrew, and maintainers were spread throughout the various watch stations and LSO shack to oversee and coordinate the recovery.

LSO deploys smokes

During the approach at approximately 0.5 nautical miles from the ship we visually acquired the 1st smoke and I could barely make out the ship's wake by looking over my left shoulder out of the door window and down at the water. There was no color to the wake as one would hope for, only slightly distorted water allowing for a loose bread crumb trail for us to see. Following the wake inbound and slowing airspeed even further for fear of losing visual contact or coming into the stern too fast causing another waveoff, we picked up on the 2nd and 3rd smoke markers. We finally broke the ship out at less than 100 yards and landed with twenty minutes of flight time left in fuel before reaching our minimum fuel state.

Although we train regularly for ELVA and Smokelight approaches, this procedure is a rare occurrence and has since created an interest in our community. Unique to naval aircraft and our operating environment is the predicament of bad weather and only one safe landing site. This shiboard recovery highlights the necessity to continue to train and practice emergency procedures as well as maintain strong crew resource management to keep us safe and allow us to make it back home when weather is marginalized.

Lack of Awareness

By Senior Chief Naval Aircrewman (Helicopter) Aaron Hutchinson,USN
(originally published in MECH Magazine)

While operating in dynamic environments, aircrews and maintenance personnel are often placed in dangerous situations due to the nature of the job. Some critical elements to safe and successful operations link back to planning, briefing, and communication, supported by a strong sense of situational awareness and an effective debrief. Failure to recognize a situation and understand what is happening around you can impact the ability of Sailors and Marines to predict the possible results of their actions.

Aviation Machinist's Mate 2nd Class John Foley, and Aviation Machinist's Mate 3rd Class Nicholas Sorenson assigned to the "Spartans" of HSM-70, USS Gerald R. Ford (CVN 78), conduct routine maintenance on an MH-60R Seahawk in the hangar bay. **U.S. Navy photo by Mass Communication Specialist 2nd Class Jennifer Newsome, USN.**

Aircrew and maintenance personnel need to understand the entire picture of their environment. This awareness will help mitigate the development of tunnel vision, ensure there are no conflicts with existing tasks, and that they fully understand the procedures needed to complete a task.

For mishaps across various classes in FY 2019 through FY 2022, a lack of situational awareness accounted for about 20% of the factors linked to the incidents. This statistic shows the grave reality being seen every day in the Fleet. The impact on the Navy and Marine Corps extends beyond monetary value to the health and well-being of our most precious resource, our Sailors and Marines, as well as the readiness of our Fleet. as identified by the Navy and Marine Corp Crew Resource Management Program

COMNAVAIRFORINST 1542.7B defines situational awareness as "the degree of accuracy by which one's perception of the current environment mirrors reality. Maintaining a high level of situational awareness will better prepare crews to respond to unexpected situations."

Situational awareness requires you to know who is responsible for specific activities, what is happening, when are events supposed to occur, and where you are operating within a three dimensional space.

To better maintain an accurate image of reality, personnel should detect and comment on deviations, provide information in advance, identify potential problems, demonstrate awareness of task performance of self and others, state a course of action, and demonstrate an ongoing awareness of the mission or evolution status.

Factors that can reduce situational awareness can include, but are not limited to insufficient communication, fatigue or stress, task overload, task underload, group mindset, "press on regardless" or "make it work" philosophy, and degraded operating conditions.

Common methods to maintain or recover situational awareness are to start with a comprehensive brief, acknowledge potential problems, communicate, use all information sources, maintain a good scan, critically update and revise perception of evolution, and be alert to implications of information received.

Conducting a post-mission review provides an opportunity to evaluate how your tasking was performed and identify mission effectiveness, crew performance, individual and , collective coordination, and areas for future improvement. Effective debriefs are critical in the self-assessment and self-correction process, and every squadron in the Fleet should be conducting them. This means debriefs should be interactive, valuable, selectively reviewed, and timely. While it can be fair to say everyone makes mistakes – it's just human nature, the reality Sailors and Marines face daily is that the Naval Aviation Enterprise is unforgiving of human error. Even a slight mistake can cause a fatal accident, so we must put safety first and minimize the risk to the best of our ability. While command leadership is traditionally responsible for establishing and incorporating safety policies and risk management processes into squadron operations, it falls on all hands to remain vigilant and hold themselves accountable to the safety standards on and off duty. From commanding officers down to the most junior service members, everyone needs to be able to recognize the warning signs, and most importantly, learn how to avoid the impacts that can result from a lack of awareness in the unique operating environments we encounter every day.

A Rare Contingency Perfectly Executed

By LT John "Borat" Kazanjian, USN

Things go wrong all the time in aircraft commander boards. Transmissions fail, ships sink, survivors are located near hostile forces, and all the while your copilot is just plain useless. More often than not, the board will end once the aircraft is on short final or after the landing. Ending the scenario in this manner is sufficient as far as a pilot-in-command is concerned. However, this conclusion prevents an in-depth discussion regarding the necessary follow-on action required to get the aircraft back in the air. For the HSM-37 Detachment Four "Savages" Maintenance Team, they were granted a rare opportunity to see, plan, and execute this follow-on action firsthand.

HSM-37 Detachment Four "Savages" to include AD2 Jacob Moore, AD1 Jeffrey Luk, and AEC Dominick Strona prepare to replace the #1 engine for Easyrider 36 in USS Michael Murphy's port hangar.

The Emergency

Lieutenants Austin "Turkey" Traylor and Daniel "Meat Sweats" Sullivan were conducting a search and rescue exercise flight in November 2021 when they received a #1 ENG OIL PRESS LO Caution (indicating that one of their engines was losing oil) in their MH-60R helicopter. Knowing this could ultimately develop into an engine failure they stopped their current tasking, quickly returned to and coordinated with the ship, and performed a clear deck landing via single-engine profile to USS Michael Murphy (DDG 112). The decision to use a single-engine profile was excellent, as their engine failed when they were 70' above the water and approaching the ship's deck. The question then had to be asked, what happens after an H60 helicopter lands on a destroyer with one engine?

The Rapid Securing Device (RSD) is a large TV-sized, ship-based system and is the primary method to move an embarked helicopter into and out of the ship's hangars. It does this by grasping and locking onto a probe that sticks out of the underside of the helicopter. At the end of a flight schedule, pilots will land the helicopter with enough precision so that this probe is inside the RSD. After the aircraft is shutdown, a Landing Signal Officer (LSO) can then move the RSD around the deck with the help of a hydromechanical system to position the helicopter over a specific track built into the flight deck which runs into the hangar. However, when a helicopter opts to perform a clear deck landing, it does not land with the probe in the RSD. Instead, the RSD is moved off of the landing area and the helicopter lands in the center of the deck. With the helicopter on deck and unable to take off, the RSD could not be used normally. The "Savages" Maintenance Team was forced to use an unorthodox procedure.

The Plan

The first challenge at hand was getting the helicopter into the hangar so maintenance could begin replacing the #1 engine. Moving the helicopter solely with the RSD was out of the question, so it now had to be moved manually. The emergency procedures chapter of the Aircraft Operating Procedures for Air-Capable Ships NATOPS Manual states that this procedure is "not routine" and "authorized in cases of emergency or operational necessity."

A comprehensive brief was promptly prepared by the detachment's maintenance leadership immediately after the landing. The brief contained the risks identified by the detachment, the controls put in place to mitigate the risks, and the projected movements of the aircraft based on its current orientation. Then,-Detachment Maintenance Officer, Lieutenant Brett "Scotty" Nellis, recalls the ORM involved in devising a successful manual move with the maintenance team. "We took a full day and the helicopter sat on the deck for the full day because we wanted to make sure we got it right." From the extensive list of risks that were identified, personnel injuries while moving the aircraft were undoubtedly the most critical. These injuries could have manifested in a few dangerous ways, such as someone getting pinned by the aircraft as it moved about the deck, or from aircraft static rollover caused by unstable ship motion. Mitigating static rollover was easily accomplished by requesting a steady deck from the ship and ensuring the helicopter was moved in a smooth, deliberate manner. The risk of someone getting pinned by the aircraft, however, required a more creative solution. "We started out with just the static hold test," said

Scotty. "So we had a rhythm where we would go 'tension-on' so everyone is pulling or pushing on where their perfect points are, and then chocks out to build up a rhythm." This procedure introduced the moving team members to the sound and rhythm of the calls, familiarized them with the overall weight of the helicopter once it was no longer resting on the chocks and chains, and consequently, prevented the aircraft from rolling down the slanted flight deck.

Given the rarity of this particular occurrence, the maintenance team was more or less on their own to develop a plan for moving the helicopter. They looked at the helicopter's orientation on the flight deck and formed an idea of how the helicopter would ultimately be moved into position. Similar to a car conducting a three-point turn, the helicopter would be pushed and pulled, back and forth, across the flight deck until the body of the aircraft was aligned with the RSD track in the flight deck. At that time, the LSO would move the RSD under the aircraft, the aircraft's probe would be lowered into the RSD, and the aircraft would finally be moved normally into the hangar using the hydromechanical system.

Brief attendees included the entire air detachment, the ship's Captain, and about five of USS Michael Murphy's burliest Sailors who would help move the helicopter. The moving team was affably dubbed "The 20,000 lb. Club" by the "Savages" Maintenance Team. Now that the in-depth ORM had been conducted, it was time to put the plan into action.

Joining the 20,000 lb. Club

Everyone was thoroughly prepared on the day of the move. Those who were involved in planning had thought of every way the move could go wrong. Those who were there to move the helicopter were thoroughly briefed on what to expect and what to do. Prior to beginning the move, maintenance leadership gave a final brief to all of the movers to remind them of what the cadence of each movement would sound like and to address any last-minute questions. The movers then took their positions all around the helicopter from the nose to the tail wheel. Wielding a megaphone was Detachment Chief Petty Officer, ATC Roger Grey, who would be directing the aircraft's movements throughout the entire evolution. No issues were noted, no complaints were given after he kicked things off with the "tension-on test." The team then continued on with the game plan. About fifteen movements and 45 minutes later, the 20,000 lb. Club was successful. At the completion of the move, the LSO slid the RSD under the helicopter which was now aligned with the RSD track leading into the ship's port hangar.

USS Michael Murphy (DDG 112) pulled into Djibouti for a brief stop for fuel about one week after the manual move. During this time, a brand-new helicopter engine was transferred onboard the ship for the "Savages" Maintenance Team to begin the replacement. A few days and one standard procedure later, the Detachment Four "Savages" had their second helicopter flying in the air to resume operational tasking and aircrew training.

Making Manual Move Planning More…Automatic

In aviation, we are always concerned with the debrief as much as we are with the pre-flight preparation. Learning from past experience is how we grow, train, and standardize. "Positioning it was the only thing that took a little bit more time than it should have, but that's going to be inherent with everybody doing it for the first time ever," said AE1 Strona. Publishing and broadcasting lessons-learned from rare operations provides critical information that can potentially save a detachment effort and resources when no one has any prior experience. "I wish there were some better products provided such as, this is the history of people who have done it before, here's what they did," said Scotty. Furthermore, Scotty added "I know people have done it in the HSM Community but it's not really shared well." For squadrons and detachments, both current and future, take just ten minutes to accurately note and publicize what was different in your day and how you dealt with it. It may very well happen to someone close to you.

The 20,000 lb Club pushing and pulling Easyrider 36 on USS Michael Murphy's flight deck.

Hiking: Moving Without a Hitch

By Chief Aviation Structural Mechanic Nicholas Lemus, USN, VRM-30
(originally published in MECH Magazine)

On September 23, 2022, a CMV-22B Osprey landed aboard USS Abraham Lincoln (CVN 72). While spinning on deck, the aircrew noticed a popped latch on the right hand (RH) nacelle. The pilots had to shut down the aircraft engines to secure the popped latch. The maintenance crew went to get a ladder and position it next to the RH nacelle so it could be secured. Upon restart of the CMV-22B, the plane received multiple faults from systems associated with the RH nacelle. Maintenance continued to work on the problem for another 15 minutes and determined that more in-depth troubleshooting was needed to figure out what was wrong with the aircraft. The flight deck coordinator requested the aircraft remain on deck but required tail-over-deck to further troubleshoot the issues. The handler told the flight deck coordinator that he wanted the aircraft moved down into the hangar bay to finish the troubleshooting.

Sailors repair a panel from an CMV-22B Osprey, assigned to the Titans of VRM-30, aboard USS Abraham Lincoln (CVN 72). **U.S. Navy photo by Mass Communication Specialist Seaman Apprentice Jett Morgan, USN.**

To allow the aircraft to maneuver into the hangar bay, the nose landing gear needs to be raised. This is to ensure that the spotting dolly can fit around the nose landing gear so it doesn't damage the aircraft's forward-looking infrared (FLIR) camera or gear doors. This is called "hiking" the aircraft. The procedure requires nitrogen to be put into the nose landing strut. This sufficiently raises the strut, which is then kept in place by a hike pin to ensure the strut does not fail. While this is a routine maintenance procedure, it still requires the proper tools and paperwork to be completed correctly and within regulations. However, the maintenance crew did not bring the required licenses to operate the nitrogen cart used to raise the strut. In addition, the maintenance crew did not bring the hike pin to ensure the strut would stay in place. On top of those issues, the crew did not notify ships' personnel that the aircraft was not hiked before moving it from the flight deck to the hangar. The maintenance crew provided a brake rider and no one else for the movement. All of these mistakes were preventable, and they led to a mishap that never should have happened.

The maintenance chiefs went to their shop so they could communicate the situation with their squadron. After a phone call with VRM-30, a maintainer came into the shop and said a chief was needed in the hangar because a mishap had occurred. Due to the aircraft not being hiked by the maintenance crew, the spotting dolly could not fit under the aircraft with an adequate amount of space. As a result, the spotting dolly had hit the FLIR while moving the aircraft in the hangar bay. Looking back at the whole evolution, the squadron failed before even stepping onto the ship. Not bringing the appropriate licenses and support equipment was a mistake from the beginning. The squadron's publications reference moving the aircraft into the hangar, and the evolution requires the aircraft to be hiked before moving it into the hangar bay. The ship's publications also direct maintainers and aircraft handlers to ensure the aircraft is hiked prior to maneuvering in accordance with their spotting procedures. The squadron should have had a member of maintenance leadership stay with the aircraft throughout the whole movement.

The CMV-22B aircraft is fairly new to the Fleet, bringing with it a lack of knowledge and experience moving the aircraft around the carrier's flight deck and hangar bay. VRM-30 will hold multiple trainings before underway periods to mitigate occurrences of this type in the future and will interface with CVN flight and hangar deck crews to ensure they understand the unique requirements of deploying with the CMV-22B.

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Just-in-Time Production

Three U.S. aircraft carriers at Midway represented a vital peacetime investment in naval superiority. (Originally published in Proceedings, January 2023)

By CAPT Matt "Nilla" Wright, USN

According to noted military historian John Keegan, the Battle of Midway was "an 'incredible victory,' as great a reversal of strategic fortune as the naval world had ever seen, before or since."[1] That U.S. victory turned the tide of World War II in the Pacific, just six months after the U.S. Pacific Fleet was mauled by the Imperial Japanese Navy's surprise attack on Pearl Harbor.

Midway's rightful place in history is secure, and at the center of the lore are the battle's three victorious aircraft carriers: USS Yorktown (CV 5), Enterprise (CV 6), and Hornet (CV 8). These three ships, the only available U.S. aircraft carriers in the Pacific, launched the air strikes that wrecked the Kido Butai—Japan's previously invincible "mobile striking force," comprised of the aircraft carriers Akagi, Kaga, Hiryū, and Sōryū.[2]

USS Enterprise (CV 6) was one of three U.S. aircraft carriers—all built during peacetime—at the Battle of Midway. **"Big E"/Mark Karvon**

A significant part of the history around the Battle of Midway as the herculean efforts to repair Yorktown in time to meet the advancing Japanese fleet. Badly damaged during the Battle of the Coral Sea less than a month prior, she was sent to Pearl Harbor, where her repairs were estimated to require three months—to which Fleet Admiral Chester Nimitz famously replied, "We must have this ship back in three days."[3] Yorktown went straight from the repair facility to join the impending battle with hundreds of men still working to patch her battle damage.[4] Her air wing later destroyed the Sōryū and aided Enterprise aircraft in the attack that sank the Hiryū.[5]

It is easy to wonder if Midway would have turned from victory to defeat if the Yorktown had missed the battle. However, a more important question is: What would have happened at Midway if the Yorktown and her sister ships had not been built at all?

Admiral Chester Nimitz, Commander-in-Chief, Pacific Fleet, was willing to risk Yorktown, Enterprise, and Hornet at Midway in part because he knew reinforcements would soon arrive, as the shipbuilding industry was primed to produce warships at scale. A future U.S. admiral may face a similar decision, but without the reassurance new ships are on the way. **Naval History and Heritage Command**

As World War II fades further into the past, the U.S. Navy risks developing a dangerous misperception about its triumph over Japan. Once awakened by the sneak attack at Pearl Harbor, U.S. industrial base might have built an unstoppable military juggernaut that steamrolled an outmatched enemy. While this rings true for the naval triumphs of 1944 and 1945, the ships that held the line against an ascendant Imperial Japan in 1942 were purchased and built during the interwar years. The Battle of the Coral Sea, Midway, and the Guadalcanal Campaign were all fought with ships that made up the "peacetime navy."

Today, with "the People's Republic of China (PRC) as our most consequential strategic competitor," there are lessons to learn from the peacetime investment preceding World War II.[6]

Naval Power as a Political Choice

The U.S. Navy of 1933 was a shadow of its former self. It had grown to parity with the Royal Navy by the end of World War I, with 774 ships, including 39 battleships, in 1918. However, the Fleet quickly aged and dwindled to an interwar low of 308 ships in 1931.[7] The Five-Power Treaty for naval arms limitation signed during the Washington Naval Conference of 1921–22 and subsequent London Naval Treaty of 1930 placed limitations on naval construction for the United States and its potential rivals. In addition, domestic political trends toward isolationism and fiscal austerity further limited U.S. naval construction.

While Japan was contriving to exploit treaty loopholes, the United States limited naval construction with the Cruiser Act of 1929.[8] Shrinking the Navy by 60 percent reduced the nation's shipbuilding capacity, as the number of active private

President Franklin D. Roosevelt (center) signs the 1934 Vinson-Trammell Act, which allowed an increase in shipbuilding within treaty limits. Peacetime legislation, along with Roosevelt's strong advocacy for ship construction, primed the United States to have a massive fleet in advance of its entry into World War II. **Naval History and Heritage Command**

shipyards available to support naval construction atrophied from 13 to 7 during the same period.[9]

The construction of Yorktown and Enterprise represented a dramatic reversal of this downward trend. They were funded through the National Industrial Recovery Act (NIRA) of 1933 during the first year of President Franklin D. Roosevelt's administration.[10] The act was a fundamental aspect of Roosevelt's economic New Deal, and the purchase of two modern aircraft carriers was a minor expenditure compared with its other historic measures, such as creating federal protection for collective bargaining rights.[11]

Contracts for both ships were signed on August 3, 1933, less than two months after the money was allocated—and they were both constructed in Newport News, Virginia. Yorktown's keel was laid on May 21, 1934, and she was commissioned on September 30, 1937. Enterprise followed with her keel laid on July 16, 1934 and her commissioning on May 12, 1938. Both aircraft carriers were built simultaneously in the same yard, with the first vessel commissioned just four years after the initial contract award—a remarkable turnaround by today's standards.[12] In total, the NIRA appropriated twice as much money to naval construction in 1933 as had been done in any year since 1920 and funded 32 new warships.[13]

Both Yorktown and Enterprise were purchased far in advance of World War II—funded while the Washington Conference's Five Power Treaty of 1922 and subsequent 1930 London Naval Treaty arms limitations were still in effect. Hornet was purchased later with funds from the Naval Expansion Act of 1938—after Japan had withdrawn from the respective naval arms limitation treaties, but before World War II had begun in Europe.[14] Hornet's keel was laid on September 25, 1939 and she was commissioned October 20, 1941, less than two months before the attack on Pearl Harbor.

The motivating force behind this reversal of naval fortunes was President Roosevelt. A previous Assistant Secretary of the Navy, Roosevelt was a strong supporter of U.S. naval power in the mold of his fifth cousin, President Theodore Roosevelt. In fact, he often referred to his time "in the Navy" (as Assistant Secretary), relished traveling on U.S. warships, and kept a large collection of model ships.[15] Roosevelt understood the United States' place as a maritime power and the importance of maintaining a strong navy. Furthermore, he believed expanding and modernizing the Fleet would serve those national imperatives while simultaneously providing work for thousands of Americans during the Great Depression.[16]

President Roosevelt was joined in these efforts by Congressman Carl Vinson of Georgia. Vinson led the passage of the Vinson-Trammell Act of 1934, which authorized construction up to treaty limits; the Second Vinson Act of 1938, which significantly expanded and modernized the Navy after Japan withdrew from the naval arms limitation treaties; and the Two Ocean Navy Act of 1940, which built the vast armada that eventually overwhelmed the Japanese Navy in 1944–45.[17] This peacetime legislative leadership alongside strong presidential advocacy for the construction of what Vinson called "a first-class Navy for a first-class nation" came just in time—best evidenced by the fact that all three U.S. aircraft carriers had been in commission for less than five years when they won the Battle of Midway.[18]

Just as important, the large increase in shipbuilding after 1933 primed U.S. industry to build the massive fleet after Pearl Harbor. By December 7, 1941, there were 40 naval shipyards available and more on the way—more than four times the number in 1933.[19]

USS Yorktown (CV 5, foreground) in June 1937, preparing for sea trials at Newport News Shipbuilding, while Enterprise (CV 6) is fitting out in a drydock (upper center). Both carriers were purchased far in advance of World War II and played pivotal roles in the Battle of Midway. **Photo from Naval History and Heritage Command.**

Cautionary Tales

Navalists during the interwar period, including Roosevelt and Vinson, were aware of the failed U.S. effort to quickly grow the Navy during the previous world war. Even though World War I had been underway for more than two years before the United States declared war on Germany on 6 April 1917, the U.S. shipbuilding industry was ill-prepared to respond to wartime demands. With the Naval Act of 1916, Congress attempted to make up for lost time, but the resulting shipbuilding efforts were too little, too late.

After building a prewar average of 12.7 naval vessels a year from 1905 to 1915, U.S. shipyards could only marginally increase ship production to 22 in 1916 and 16 in 1917. It was not until 1918, the year hostilities ceased, that the Fleet was able to significantly grow by 89 new vessels. Even worse, most of the Navy's growth in response to World War I was realized with 157 new ships in 1919, the year after the war ended.[20]

Another World War II naval campaign, fought just months before the Battle of Midway, also warns against relying on an outnumbered and obsolete Fleet to defend U.S. interests in distant waters. The U.S. Asiatic Fleet comprised of 45 warships in 1942, almost all of which entered service before the naval expansion efforts of the 1930s. Shortly after the Pacific Fleet was hobbled at Pearl Harbor, the Asiatic Fleet joined the regional forces of the British, Dutch, and Australian Navies to form the "ABDA Command" in a desperate attempt to stem the Japanese advance into the Dutch East Indies.

Their doomed effort lasted just two months, from January to February 1942, and provided little resistance to Japan's expansion at the cost of 18 ships. One of the U.S. casualties was USS Langley (AV 3), the Navy's first aircraft carrier, but subsequently converted to a seaplane tender. Ironically, she was sunk by Japanese aircraft on February 27, 1942, while transporting U.S. Army Air Corps fighter aircraft on her deactivated flight deck.[21]

A Similarly Precarious State

The modern U.S. Navy finds itself in an eerily similar position regarding shipyard capacity. The United States currently boasts the same number of private shipyards capable of producing new warships as it did in 1933: just seven.[22] In addition, the Navy's four public yards are no longer available for new construction like the ten public yards were in 1933.[23]

From 2012 to 2021, the U.S. fleet added an average of 10.1 new ships a year—even fewer than the inadequate 12.7 production rate before World War I.[24] In fact, the Navy's current plan as represented in the Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2023 (better known as the "30-Year Shipbuilding Plan") increases naval construction expectations to an average of just 12 vessels per year between fiscal year 2023 and 2027.[25] By these metrics, the Navy seems in danger of repeating the errors of World War I's delinquent shipbuilding efforts, the fate Roosevelt and Vinson successfully avoided with their efforts to expand the Fleet in the 1930s.

Today's relative pace of construction makes early investment even more imperative. While Yorktown took only four years from contract award to commissioning, modern vessels take much longer. USS Gerald R. Ford (CVN 78) took nine years to build and did not deploy for a subsequent five years.[26] Granted, the Ford was delayed by the development of multiple technological innovations as the first ship in her class, but USS Raphael Peralta (DDG 115) took six years to build even though she was the 64th copy of her mature ship class.[27] Submarines fare no better. USS Delaware (SSN 791) commissioned on April 4, 2020—more than 11 years after her contract award date.[28] Nuclear power, advanced sensors and weapons, and a reduced domestic shipbuilding industry mean modern warships take much longer to build than their World War II predecessors.

Build Now or Pay Later

Without a massive, predictable boost in U.S. investment in the future navy, the U.S. shipbuilding limitation will not change as it did immediately prior to World War II. Nimitz was willing to risk his precious carriers at Midway in part because he knew reinforcements would soon arrive from an industry prepared to produce warships at scale. A future U.S. admiral may have to face a similar threat knowing that reinforcements are not on the way.[29]

In contrast, China's shipbuilding industry is already operating at levels akin to those in the United States in the decade preceding World War II. China's People's Liberation Army-Navy (PLAN) grew from 220 to 360 ships between 2010 and 2020 and is expected to expand further to 425 battle force ships by 2030.[30] That growth includes China's first six aircraft carriers in the same way Yorktown, Enterprise, and Hornet were in the initial cohort of U.S. aircraft carriers built between world wars.

President Roosevelt and Congressman Vinson could not have predicted that the next world war was less than a decade away when they started naval rearmament in 1933, just as contemporary U.S. political leaders can only guess at the future need for the ships they build today. The immediacy of threats has an obvious effect on the importance of investing in tomorrow's fleet without delay, and China's threat may be much closer than most expect.

Admiral Phil Davidson famously warned during congressional testimony in March 2021 that "the [China] threat is manifest during this decade, in fact in the next six years."[31] Now known as the "Davidson Window," the view that China may soon invade Taiwan argues for an immediate and substantial investment to grow U.S. military ability to deter and/or defeat such aggression. If Admiral Davidson's

concerns are taken to heart, the ships funded today may be ready in time to meet this challenge, just as the Hornet proceeded almost directly from her peacetime acceptance trials to combat in the Pacific.[32]

Admiral Nimitz's command summary on the eve of the Battle of Midway prophetically stated, "The whole course of the war in the Pacific may hinge on the developments of the next two or three days."[33] Although they did not realize it at the time, President Roosevelt and Congressman Vinson could have made a similar prediction as they set out to rebuild the U.S. Navy in the 1930s: The course of the war in the Pacific hinged on their efforts to rebuild a world-class Fleet in the next decade. Yorktown, Enterprise, and Hornet were just three of the scores of ships that joined the Fleet on the eve of World War II, but their fundamental role in winning the war's most pivotal naval battle makes them the best symbols for the importance of peacetime investment in the Navy.

If U.S. naval dominance is not a birthright, it is also true that U.S. naval superiority stems from an intentional political choice.[34] As the Battle of Midway showed, the United States must make the necessary investments in her Navy before it is too late.

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Rescue 612: MEDEVAC to Jeddah, KSA

By LT Rebekkah Roberts, USN

"MUSTER THE MEDEVAC COORDINATION TEAM," blared through the passageways of USS Dwight D. Eisenhower (CVN 69) early on Thursday morning – barely stirring the crewmembers that would be tapped to execute the nearing adventure. Rescue 612 was still in the initial planning stages, the crew members actively being shifted from a daytime Combat Search and Rescue (CSAR) Alert to a medical evacuation (MEDEVAC) that would take all of their skills to execute. The HSC-7 Dusty Dogs had spent the last few weeks focusing on Operation Prosperity Guardian – standing dynamic, long range CSAR Alerts while balancing standard carrier flight operation requirements. On the morning of 18 January 2024, the Dusty Team would be tested with an additional long-range critical medical evacuation that would see the first use of the carrier's enroute care team and challenges with aircraft degradations, communications, and fuel availability.

HSC-7 Helicopter on deck

The mission was the evacuation of a patient to a Level II hospital in Jeddah, Saudi Arabia. The transit was estimated to be about 280 nautical miles (NM) making it 30 miles further than the ship to shore SOP restriction. Due to range, the COD was the first choice for transport, but they were all down for maintenance issues on shore. Captain Scott, CAG of Carrier Air Wing Three, tasked HSC-7 to transport the patient who was confined to a litter, on ventilation, sedated, and in need of further life-saving care. Rescue 612's crew rushed into the bustle of the ready room to brief the known information. Other members of the squadron were still flight planning, filing appropriate paperwork, and coordinating lily pads and fuel contingency plans due to the long range required. The medical team also needed further coordination prior to transport, including switching from the primary to the secondary hospital due to the lack of available ICU beds. In the meantime, 612 planned to launch into the starboard delta to clear the flight deck for fixed-wing operations while the team made final arrangements.

While spinning up, 612 received a #2 Accessory Chip Caution. With only 20 minutes to launch prior to busting the fixed-wing cycle, maintenance wasted no time pulling the detector and screening for chips. No chips were discovered, and the detector was replaced, but the caution remained. The aircraft commander decided to accept the aircraft and launch with the degradation. After establishing in the starboard delta, the crew noticed the chip caution successfully cleared. The crew would continue to wait for approximately two hours for the patient to be prepped. During the wait, CAG Operations, the SDO, and the Zulu Watchstander continued to coordinate potential lily pads for 612 up to Jeddah and on the return.

At 1540L, 612 was cleared to land for patient onload, as well as an enroute care team with an SMT, a flight nurse, and an additional 400 lbs of medical equipment. The aircraft, outfitted with dual auxiliary tanks, refueled to 4950 lbs of gas, to which the flight deck chief commented, "That's the most I've ever seen a bird take!" At this point, Jeddah was estimated to be about 260 NM away – still further than SOP allowed. However, multiple U.S .ships, including two supply ships and one destroyer, were scattered along the route and agreed to have their flight decks ready if required. Ten minutes later, 612 was off deck and flying north as "Rescue 612."

Prior to launching, the crew coordinated with other HSC-7 and HSM-74 aircraft to monitor a common SATCOM channel in order to keep a steady communication flow between the aircraft and the boat. Once out of line of sight and Link-16 range, SATCOM was the only reliable way to pass information. After the exciting preplanning coordination, the transit to Jeddah was rather benign until about 50 NM from the airport. The crew accidentally transferred fuel from both auxiliary tanks rather than the forward tank thereby draining the aft tank below 100 lbs. Due to previous experience with dual auxiliary tanks, the crew knew the troubleshooting required and was on the lookout for potential vapor lock. However, it appeared no troubleshooting was necessary this time. Continuing on, struggling with ATC frequencies and communication barriers (including wrong frequencies, indiscernible accents, and non-standard terms and handling), Rescue 612 landed safe on deck in Jeddah at

1845L and coordinated the patient offload with ambulances that arrived shortly after shut down. The patient transfer took extra time due to customs paperwork processing and lack of appropriate medical equipment. The enroute care team had brought adequate supplies to stabilize the patient in flight, including a ventilator and monitoring equipment, but the initial ambulance was unprepared for the critical state of the patient. After additional coordination, the Saudi medical team arranged for two more ambulances to arrive with the necessary equipment for transport. After nearly two hours on deck, the patient left in the ambulance toward the best available care as coordinated by the afloat CVN medical team.

After transferring the patient, the crew expected to quickly get gas and relaunch toward their floating home. Unbeknownst to them, the next six hours would be a challenging attempt to coordinate refueling with intermittent and receive-only cell service. The only reliable communications were calls outbound from the ship's POTS line, the occasional email, and Snapchat Messenger (yay millennials!). The fueling company required a "fuel release" form pre-coordinated by the crew's "company." After exhausting all options, including a memo signed by CAG approving the fuel card payment, the fueling company finally approved the request and released the fuel. At 2320L, 10 hours after 612's initial launch, the fuel truck arrived and accepted payment, and the crew prepared to spin up to return home. Once spinning, the crew had to wait an additional hour in order to get an approved clearance to exit Jeddah's airspace. The crew attempted multiple ways to file a flight plan – including refiling previous flight plans, filing via ForeFlight, and finally messaging the boat to send an additional 1801 – each unsuccessful until Clearance Delivery got approval from "Radar." Finally 612 was cleared to depart southbound at 2000' and below. Excitedly, and very much ready to be home, the crew completed taxi checks only to look up and see EGI 2 had inexplicably failed. After a deep breath, the HAC restarted the EGI and the crew settled in for another 10 minutes of anticipation to see if the EGI would re-align. Once the crew had valid heading, 612 taxied to the runway in use. Thankfully, by the time 612 pulled on the runway, both EGIs were reporting HNAV.

612 launched southbound, and immediately got into contact with AMBUSH, HSM-74's airborne aircraft, via SATCOM. AMBUSH communicated the previous lily pads were no longer available, and began to communicate fuel state and range back to Ike. Mom was 230 NM from 612's position – still not within the 200 NM shore to ship range limit. Using positive comms with AMBUSH and their passed position updates, 612 established sweet lock, sweet comms with Mom. With 4,000 lbs of fuel and a 20 knot tailwind, the crew pushed onward. The Ike turned north, closing the gap with 612, and AMBUSH pushed position updates via SATCOM throughout the transit. Approximately 100 miles into the transit, the crew noticed the fuel boost pumps were stuck on. The crew troubleshot, checking circuit breakers, switching and restarting pumps, and manipulating the tank selector switch. As the pumps stayed on, the crew opted to pull from the aft tank which had approximately 200 lbs of fuel remaining. At 0255L, 612 began receiving positive TACAN bearing approximately 60 NM from Mom. Finally, at 0320L (15 hours after initial launch), 612 arrived safe on deck with 1500 lbs of usable fuel remaining.

The amount of coordination and support Rescue 612 received cannot be overstated. At every point, effective maintenance and troubleshooting was crucial to the success of the flight. By being prepped with a thorough SATCOM plan, double bubble configuration, and efficient problem solving, the crew was able to combat the initial chip light, double bubble glitches, and EGI issues. The remarkable teamwork between maintenance and aircrew, both internal and external, paved the way for saving the Sailor's life.

HSC-7 Avionics Division has worked tirelessly to be the driving force behind reliable satellite communications in Carrier Strike Group Two. Dusty Avionics Sailors have worked to become the subject matter experts in all things SATCOM. They have spread their knowledge across the Strike Group by integrating with dissimilar platforms and troubleshooting accordingly. Due to their commitment and professionalism, Rescue 612 had no issues coordinating with other platforms on the transits to and from Jeddah. As SATCOM continues to be the only effective over-the-horizon communication tool, a thorough understanding from both maintenance and aircrew is necessary to continue to progress forward.

Operational CSAR Alert requirements and ranges have necessitated Dusty to operate with dual auxiliary tanks for much of the month of January. Maintenance outfitted multiple birds with the double bubble configuration, allowed crews to flesh out potential issues well before 612 launched. Maintenance and aircrew alike implemented lessons learned from previous sorties and knew what to be on the lookout for, including faulty wiring indications, potential vapor lock, and fuel boost pumps stuck "on" during the return flight. Trusted and thorough maintenance was essential to noting potential issues beforehand, and having a plan to deal with each.

All Sailors feel frustration at one point or another when parts break or the first fix isn't the last one, but it is important to remember we are all working toward one goal: getting safe aircraft into the air to accomplish the mission. Due to effective satellite communications, double bubble configuration, passing lessons learned, and efficient coordination between multiple outside entities, a U.S. Navy Sailor's life was saved. Rescue 612's patient is currently stable, conscious, and has significantly improved. The crew sends a tremendous thank you to all who participated in the success of Rescue 612!

Good Vibes

By Aviation Machinist's Mate 1st Class Alexander Rauchfuss, USN, HSM-35

Another day executing the flight schedule, another pre-flight. Theoretically, aircrew shouldn't even have to pre-flight the aircraft if we assume maintenance is done by the book, adherence to strict procedural compliance is met, and all tools and material are accounted for before preflight. However, we're all human and not perfect. Mistakes will be made and it's always good to have an extra set of eyes on the aircraft. In Naval Aviation and at HSM-35, we don't preach a "zero-defect" mentality because we know it's unrealistic. Still, we do preach maintenance by the book, with the book open, sound risk management (RM), and procedural compliance. One can assume that the maintenance conducted before this particular flight was done by the book, with the book open, and completed correctly. Another flight schedule, another pre-flight, right? Well, it doesn't always happen that way.

Aviation Machinist's Mate 1st Class Alexander Rauchfuss, right, and Aviation Electronics Technician 2nd Class Jordan Van Valkenburg, both assigned to HSM-35, guide a helicopter blade into a rack for maintenance in the hangar bay aboard USS Oakland (LCS 24). **U.S. Navy photo by Petty Officer 2nd Class Sang Kim, USN.**

When I was informed the crew was walking to the aircraft to pre-flight, I grabbed my tools and headed to the flight line to stand by for any gripes. If there are gripes, which are usually minor, they're typically corrected on the spot, communicated to the aircrew, and we all move forward with the flight schedule. While the pre-flight was commencing, I was informed the aircrew wanted me to look at something on the head of the aircraft to make sure everything was fine. When I got on top of the aircraft, I noticed there was something wrong with the blue main rotor blade. The blade weights on the blue main rotor blade were improperly installed. The pilots didn't mention it, so I don't think they even saw it. Properly installed blade weights are crucial to keeping the main rotor track and balance within limits and having improperly installed blade weights risk excessive vibration levels and potential damage to the aircraft.

Since I started maintaining aircraft, especially at my squadron, examples of maintenance malpractice have always been talked about and used as lessons learned; this blue blade was no different. We are constantly trained to use proper RM procedures and ask ourselves, "What's different today?" Unfortunately, there have been far too many mishaps, close calls, and safety articles written about what happens when main rotor blades aren't correctly balanced, so naturally I had to act.

After discovering the improperly installed blade weights, I immediately notified maintenance control, corrected the weights, and the flight for the aircraft that day turned into a functional check flight (FCF). Another day of flying? Another pre-flight? Well, this incident shows you that every maintenance day in Naval Aviation is different and no one is perfect. Lessons were learned that day and our responsibility to conduct proper maintenance on aircraft was highlighted. During my time here in San Diego, California, I've seen a lot of shirts that say, "Good Vibes Only." I think we can add a new meaning to the phrase!

Shocking Search & Rescue

By Senior Chief Naval Aircrewman (Helicopter) Erica Gibson, USN

In the summer of 2020, I was a student going through Helicopter Sea Combat (HSC-2), the East Coast MH-60S Fleet Replacement Squadron (FRS). It was time to complete our search and rescue (SAR) jumps syllabus event. It was an annual requalification for myself, but for the other seven rescue swimmers on the flight, it was their initial qualification as Category I students. During the jumps, we train and qualify in direct deployment (DD) procedures. During DD, the rescue swimmer deploys from a 70-foot hover via the helicopter's rescue hoist into the water.

I was the first to go in starting our DD procedures. As I was lowered from the helicopter to the water, I felt an initial shock travel through my hands. Then as my fins touched the surface of the water, I felt a huge shock start at my right hand and travel throughout my body exiting out my left foot. When I was hoisted back into the aircraft, I notified the crew chief. As the DDs continued, another swimmer experienced the same type of shock. Following the two incidents of electrical shock within a 15-minute timeframe, I instructed the crew to "knock it off," and we returned to base.

After we landed, I discovered that receiving a shock during hoisting evolutions was common in the HSC Community and was unfortunately accepted as a risk. I was baffled by the experience because I had never been shocked by the other H-60 platforms (SH-60F/HH-60H/MH-60R). I discussed the occurrence with the aircrew leading chief petty officer of the schoolhouse at the time, and we submitted an Aviation Safety Action Program (ASAP) and Hazard Report (HAZREP) to ensure proper reporting requirements were met.

In 2022, the Search and Rescue Model Manager (SARMM) released SARGRAM Consolidation March 2022, requiring HAZREPs from commands for shock-related incidents. Community leadership knew that incidents were happening, but commands weren't reporting them. Additionally, Naval Air Systems Command (NAVAIR) sent out an Interim Flight Clearance (IFC / P 290616Z APR21 COMNAVAIRLANT NORFOLK, VA). The IFC authorized using the Life Saving Systems Hoist Static Discharge (HSD) Cable. The cable cost $89 and was used by the U.S. Coast Guard. Did I bother to convince the command to order it knowing this information? No. We were busy with a high OPTEMPO and I went back and forth with the Paraloft, or parachute maintenance facilities, on who would take ownership and maintenance of the cable if ordered. It was only when we once again had two separate shock incidents in the command during an overland hoisting evolution that I finally convinced all the stakeholders it was time to eliminate the risk. In the first incident, the rescue swimmer felt a painful shock while direct-deploying to the deck, having to drop to his knees to fully dissipate the shock. In the second incident, the safety observer was struck by the rescue basket (due to rotor down wash) before it landed on the deck and grounded out. The safety observer felt increasing muscle convulsions 40-60 minutes post-shock. Both Sailors were sent to medical for evaluation.

Medical evaluation, with an electrocardiogram post-shocking incident, is critical. Many sources state up to 2,000 volts of continuous charge are enough to fry internal organs. I recommend watching the video on YouTube of a U.S. Coast Guard rescue swimmer getting shocked on the hoist during DD to understand its severity.

When performing a hoisting evolution, swimmers are at risk of shock due to the inability to ground out the hoist. The H-60 helicopters are known to continuously generate 15,000 to 20,000 volts of static electricity. No sources currently identify the exact voltage that dissipates from the rescue hoist when grounding out. To prevent our rescue swimmers at HSC-28 from becoming shocked or hurt, we ordered 14 of the HSD Cables (one per aircraft) and provided training to the shop by following the IFC guidance on HSD Cable use overwater and overland. Although the cable is a bit of an inconvenience being 10 feet in length and in the way while working with rescue equipment, it is worth every bit of risk mitigation.

Across the naval enterprise, we are put into situations daily that require risk management (RM). We are all familiar with the RM process; still, we, the most powerful global naval force, are failing to "implement controls" and accepting unnecessary risks at the cost of our ships, our aircraft and more importantly, our warfighters. We are normalizing deviation by cutting corners, finding workarounds, accepting the hazardous "norms," and not correctly self-assessing and self-correcting. With deviation comes not meeting our warfighting readiness and not supporting our Chief of Naval Operations' "Get Real, Get Better" Initiative. Who is accepting responsibility for this?

Following due diligence, I have written a SAR Action Item Chit for SARMM to mandate HSD Cable incorporation into MH-60R/MH-60S SAR Curtains. In addition to the cable being available to mitigate risks during hoisting evolutions, the chit also mandates educating our community on HSD cable usage and static electricity discharge phenomenon through learning resources such as SAR lectures, wing and squadron SOPs, and applicable type/model/series NATOPS. To get to the main culprit and identify the amount of risk taken, a separate action item to test rescue hoist static discharge during hoisting evolutions was also submitted to NAVAIR's Airworthiness Website.

Bristow: Charting the Skies for over Seven Decades

By Stephen Everage, Chief Pilot & Director of Training

Bristow may not be a name widely known outside of the industry, but within the world of vertical aviation, it is celebrated for its pioneering spirit, innovation and excellence. Established in 1948 in the Alaskan tundra, Bristow has become globally synonymous with reliability and excellence in Offshore Energy Services, Government Services – particularly Search and Rescue (SAR), and the emerging Advanced Air Mobility (AAM) Sector.

Bristow's aviation services include personnel transportation, search and rescue, medevac, fixed-wing transportation, uncrewed air systems, and ad hoc helicopter services. It has customers in Australia, Brazil, Canada, Chile, the Dutch Caribbean, the Falkland Islands, India, Mexico, the Netherlands, Nigeria, Norway, Spain, Suriname, Trinidad, the U.K., and the U.S. The company maintains a global fleet of approximately 220 helicopters, each equipped with the latest technology to ensure safety, efficiency, and reliability in some of the most challenging environments on Earth.

For those in the Navy considering a transition to a civilian career, Bristow presents an ideal pathway. Not only does the company employ many veterans, but it offers an environment where the skills developed in the Navy can be meaningfully utilized, ensuring individuals are able to make a dynamic and impactful contribution.

"Bristow offers a unique opportunity to continue a life of service and challenge," said Steve Everage, Bristow's Chief Pilot, Director of Training and Naval Academy Graduate. "Whether in SAR, offshore energy, maintenance, or even the emerging field of AAM, Bristow provides a platform where military skills and experiences are not only relevant but highly valued. I encourage anyone interested to check us out."

Bristow's backbone: Offshore Energy Services

Offshore Energy Services has been a vital segment of the business for decades. Bristow's helicopters are not just modes of transport; they are vital connectors bridging offshore platforms with the mainland. These operations are crucial for the smooth functioning of the energy sector, transporting personnel, equipment, and supplies to remote offshore locations.

Bristow's largest operation is on the U.S. Gulf Coast, serving numerous customers from its busiest bases in Houma and Lake Charles, Louisiana, 365 days a year. Bristow also has smaller operations in Louisiana as well as Texas and Alabama.

The company employs pilots, aviation maintenance technicians, customer service representatives, and various operational experts at its bases, while back-office support functions are located primarily out of corporate headquarters in Houston.

Gulf of Mexico S-92 SAR Hoist

At its base in Galliano, Louisiana, Bristow has SAR pilots as well as technical crewmember experts such as hoist operators and rescue specialists, whose primary function is to support the company's energy customers for offshore medical emergencies and evacuations.

Bristow uses different helicopters depending on distance and mission. The S-92 is a heavy model capable of carrying up to 19 passengers to the most remote offshore platforms. Complementing the S-92, Bristow also operates a fleet of Leonardo Helicopters' AW189 and AW139 models. These super-medium and medium twins, along with the Airbus EC135 light twin (for utility line patrol over land in places like Arkansas), are versatile for various roles.

A Lifeline in the Skies: Search and Rescue Operations

Bristow's fastest growing sector is in Government Services, and Bristow's SAR Operations comprise the largest segment of Government Services. Since its first SAR mission in the U.K. in 1971, Bristow has been a frontrunner, conducting well over 100,000 SAR flight hours and countless rescues with a fleet of technologically advanced helicopters equipped with SAR Automatic Flight Control Systems, Advanced Search Radar, Night Vision Imaging Systems, and more. These missions, often conducted under extreme conditions, underscore Bristow's dedication to saving lives and providing aid wherever and whenever needed.

Bristow largest presence as a provider of helicopter SAR services is in the U.K., on behalf of U.K.'s Maritime and Coastguard Agency (MCA) since 2013. Bristow operates from strategically located SAR helicopter bases around the country, ready to respond to all SAR incidents for the whole of the U.K. In 2022, Bristow was awarded a £1.6 billion 10-year contract, ensuring the company's presence well into the next decade.

One Bristow U.K. based winchman, Duncan Tripp, was awarded the prestigious 2023 Pride of Britain Emergency Services Award. He was selected from among thousands of nominations for his heroic actions on Ben Nevis, Scotland's highest mountain, during a ferocious winter storm, where he helped save the lives of 24 people.

Bristow also provides 24/7 helicopter SAR services to the Netherlands Coastguard and Dutch Caribbean Coastguard based out of Curaçao. Most recently, Bristow won a 10-year SAR contract to provide rotary and fixed-wing aviation services to the Irish Coast Guard (IRCG). Bristow will begin transitioning operations with the current provider toward the end of this year.

Excellence in Maintenance and Innovation

Bristow's relentless focus on aviation maintenance and innovation has been a cornerstone of the company since its inception. Recognizing that the safety and reliability of its helicopters are paramount, Bristow invests heavily in maintaining its fleet. This commitment to maintenance and upgrades ensures that aircraft are safe and able to conduct their missions.

The company's Louisiana Repair Station in Lake Charles is one example that performs repair work and routine heavy maintenance on Bristow's aircraft to keep them safe and airworthy.

But that's not all. Recently, the team modified two AW139 helicopters, which had been used for oil and gas crew change missions in the Gulf of Mexico, into fully configured and equipped SAR helicopters, complete with dual hoist installation, forward-looking infrared radar, night-vision goggle compliance, and Trakka searchlight installation for use by a government customer in the Caribbean.

Numerous innovations have been produced over the years, many of which have since been adopted by the regulatory authorities or by the Original Equipment Manufacturers (OEM) as industry standards. This has led to several OEM commissioning to develop systems that are incorporated into production line aircraft. A few examples include the Integrated Health & Usage Monitoring System (IHUMS), Automatic Float Deployment System (AFDS), Dual Hoist Systems for SAR aircraft, and Traffic Collision and Avoidance System (TCAS II) in partnership with Rockwell Collins, among others.

Bristow Maintenance Director, Ben Hulshoff, also a Navy veteran based in Lake Charles, reflected on his passion for aviation maintenance, having recently celebrated 20 years with Bristow. "Working the line, with my tools, on various aircraft is what I've enjoyed the most in my career," Hulshoff said. "I'm a mechanic at heart. I love fixing things, getting my hands on some of the most amazing machines imaginable, and learning all there is to know about them. There's nothing like it."

Hulshoff, like Everage, has nothing but encouragement for his fellow Sailors. "Bristow is a great place to start after leaving the Navy. Our Core Values – safety, passion, integrity, teamwork, and progress – are traits that we live by and that drive our behavior, so it's a natural fit here."

Looking to the Future: Advanced Air Mobility

As Bristow looks ahead, its focus on innovation continues with its foray into Advanced Air Mobility (AAM). With 75 years of flying practically every helicopter that's been developed, Bristow is actively shaping the future of aviation, exploring quieter, more accessible, and sustainable aviation solutions.

Partners like Elroy Air, BETA and Volocopter are looking to Bristow to help develop the standards and models that will lead to successful and safe certification of urban air mobility solutions, including eVTOL (electric vertical takeoff and landing) aircraft. This venture into AAM demonstrates Bristow's commitment to staying ahead in an evolving industry, focusing on reducing environmental impact while enhancing operational efficiency.

"Bristow's journey from its humble beginnings to becoming a global leader in vertical flight solutions reflects a story of continuous growth and aspiration," Everage said. "For those in the Navy who aim to soar beyond their current horizons, Bristow is more than a workplace; it's a destination where skills, passion, and dedication to service can continue to flourish. It truly is the beginning of a new, exciting journey, and the people here are great."

About Bristow

To learn more about Bristow Group, please contact Stephen Everage, Chief Pilot & Director of Training, his email is stephen.everage@bristowgroup.com; or Ben Hulshoff, Director of Maintenance, at benjamin.hulshoff@bristowgroup.com or Jenna Manuel, Recruiter at jenna.manuel@bristowgroup.com.

Interested in working at Bristow? Visit Bristow's Career Portal: https://www.bristowgroup.com/careers

A Tale of Two Dreams: The Story of CDR Emily "Hawking" Shilling and the Power of Authenticity

By LT Becca "Blink" Modiano, USN

As graduation loomed on the University of Colorado, Boulder Campus in 2005, a young student was at a crossroads of pursuing two paths: one of dreams, and one of authenticity.

One consisted of attending Officer Candidate School (OCS) to become a Naval Aviator in the footsteps of her father, and ultimately maybe even an astronaut. The other meant accepting her true self and coming out as transgender.

This student, on the precipice of post-grad life, deeply considered whether being a pilot or transitioning in the early 2000s would be more realistically attainable, and which would take the least significant toll on her well-being. Choosing to defer one dream for the other, Officer Candidate Shilling joined the 03-06 OCS Class in Pensacola, FL, prepared to live her life on parallel tracks.

Fast-forward to an early January afternoon in Patuxent River, Maryland. CDR Emily "Hawking" Shilling is no longer a student, but a successful Naval Aviator and Test Pilot with over 1700 hours in 21 aircraft.

She is also the senior trans-identifying Naval Aviator and Line Officer in the U.S. Navy.

As she sat in her PMA-268 NAVAIR office, she shared her story of how her dreams and true identity eventually came together as one.

Choose Your Own Adventure

"Pilot or nothing." That's what Shilling confidently said to the Navy recruiters while applying to OCS. Shilling is someone who has known since childhood who she was and what she wanted to do. In many ways, Shilling's calling for flight seems preordained.

Shilling began her career in Naval Aviation long before her time at OCS. As the child of a Vietnam-era Huey pilot, Shilling spent her childhood surrounded by the aviation community. From eating lunch in elementary school while watching Blue Angel flyovers, to trying on her dad's flight suits, she was hooked.

Any flight student can attest to hearing the deafening sound of the Blue Angels during their time on NAS Pensacola, but growing up with it is quite another experience.

"Being raised in Pensacola with the Blue Angels right where you're going to school – that's badass," said Shilling. "What do you think is going to happen to a young kid watching that all the time?"

When her father was stationed in Iceland during the Reykjavik Summit of 1986, Shilling had a front row seat to Cold War history. If you looked closely into the crowd, you'd even find a small Shilling waving an American flag, proud to represent her country with her family.

As her family ultimately settled in Evergreen, Colorado, Shilling's adolescent years were further consumed with exposure to aviation and a passion for science fiction. She learned to fly her father's M20K Mooney, a mid-century propeller-driven aircraft, in which she attained her private pilot's license as a teenager in the Colorado sky. Growing accustomed to interacting with the surrounding aircraft, one approach was especially memorable.

"I was on short final at Jefferson County Airfield, and this MiG comes up alongside on their own approach." Mesmerized, she said, "I was so distracted watching them land – I wanted to do that!"

Her two interests collided in the hero arcs of science fiction archetypes. "I grew up watching [Star Wars'] Luke Skywalker and Han Solo and [Star Trek's] Geordi La Forge, thinking that these are awesome people, and I want to be like them."

Charting a course inspired by these protagonists' penchants for interweaving flying, science, and adventure, Shilling decided to pursue a degree in Aerospace Engineering Sciences to bolster her budding aviation career.

Shilling finally returned to Pensacola as a Student Naval Aviator (SNA) in her own right, interested in the helicopter pipeline so she could help protect others through its search and rescue (SAR) mission. When it came time to select a platform out of VT-2 at NAS Whiting Field, however, her grades qualified her for the jet pipeline.

"Sh*t," she recalled, "I have to choose my own adventure, choose my own fate."

Deciding to step away from the helicopter community she was raised in, Shilling started on her path in the new world of jets.

Flying the T-45C in VT-9, Shilling faced new challenges, saying, "I kind of struggled with the admin portion, like how to land, but I excelled at the tactical side." Ultimately mastering the art of landing and completing her carrier qualifications (CQs) on the USS George Washington, she was once again in a position to choose her next undertaking: Rhinos or Prowlers?

As a newly winged aviator selecting her Fleet aircraft, her long-standing interest in a crew-oriented aircraft with a focus on serving those in need remained top of mind.

"Because of my initial desire to go search and rescue, I wanted a crew, and I wanted to do something that was protecting or saving life, and the EA-6B Prowler offered me that." Fully bought into the Navy's former motto to be a "Global Force for Good," Shilling embodied this sentiment when choosing her Fleet aircraft.

"The whole point of the Prowler is to protect the people going in." For Shilling, protecting and serving her people would remain a critical theme throughout her forthcoming career.

Kismet

"I grew up in the mountains, and I also love the ocean," Shilling mused of time adventuring around Whidbey Island, Washington in her lifted, manual Jeep. "I loved Whidbey," she said wistfully.

As Shilling explored the new terrain of the Pacific Northwest, she also settled into a battle rhythm with her new squadron, VAQ-131. Embarking on two 10-month deployments in the Middle East, she recalled the big picture of their mission during Operations Enduring Freedom and New Dawn: "We were fighting for women's rights, fighting for human rights, for women to go get educated, and have a say in their lives."

However, the flight that garnered Shilling the most attention during her JOPA tour wasn't over the desert of the Middle East, but rather over the waters off of Southern California.

Launching into the night sky off USS Abraham Lincoln's flight deck during a Composite Training Unit Exercise (COMPTUEX), Shilling immediately noticed something wasn't right with her flight controls. "Immediately off the catapult, my stick just felt weird, didn't feel right." Fielding waves of advice over the radio about how to best troubleshoot, Shilling started to climb into the dark and rainy night. In the midst of her troubleshooting, she hears a 'guunk' as she realizes the stick is now stuck in a pitch up position with decreasing airspeed.

At this point, most aviators are probably thinking about how they would handle the situation, harking back to their flight training, their numerous EP sims, and conversations about how to implement good CRM. What's hard to replicate, though, is the sense of intuition a pilot feels when faced with the unknown while barreling through the night sky.

Trusting her intuition and education, Shilling told her crew she was going to need a lateral input. "I went full left rudder and full aft right stick for pro spin inputs – I had nothing else." Oscillating from low to high G-forces while attempting to regain control of the flight controls, Shilling received an order from the CAG aboard Lincoln to return the aircraft to the ship.

Again, following her gut instinct, Shilling asserted over the radio, "No, sir, I'm going to take it to San Diego."

Assessing her situation while en route to NAS North Island, Shilling was struck with an epiphany from a college lecture about the effects of differential thrust of the engines in F-18s during emergencies. "At the time [of the lecture], it didn't make any applicable sense. But now, this random lecture mattered. It was kismet."

Empowered with the ability to apply a theoretical study with a real-time scenario, Shilling opted to control her approach not with the flight controls, but rather with the throttles, adjusting as necessary to control pitch and airspeed on the descent, and she landed the aircraft safely around midnight.

"The first thing we did was go get pancakes," Shilling chuckled, reflecting a sentiment known all too well to aviators that life often goes on normally after a close-call flight.

Acknowledging her abilities during a perilous situation, Shilling received the Order of Daedalians Distinguished Airmanship Award for superior airmanship during an emergency.

"Understanding the systems in your plane and understanding why the stuff works, it doesn't really make sense why you're learning it at the time. But all of a sudden, those little bits of knowledge that you've gained make a ton of sense and end up saving the plane."

Having an intimate knowledge of her aircraft's systems allowed Shilling to save her aircraft and her crew, and she wanted more.

While the cause of the emergency was determined to be maintenance malpractice, the experience sparked an interest to deepen her already detailed systems knowledge as a Test Pilot.

"I don't like the idea of no second chances"

In 2012, Shilling hit her five-year mark and was looking forward to getting out of the military, eager to turn her attention to the dream left on the back-burner.

"I was a lieutenant, it was hard on my family, I had two kids at the time," she reflected. "We were all broken from that time period."

And then she got the call admitting her to Test Pilot School (TPS).

Shilling began her TPS education at the Naval Post Graduate School for her Master of Systems Engineering. She excelled in her new environment, graduated with honors, and was recognized as the Best Development Test Thesis for her work with the S-3 Viking.

Remembering her most incredible flying experiences in an assortment of aircraft, the F-16 Falcon and A-6 Albatross both came to mind.

Taking a brief look into her father's career, Shilling had the opportunity to climb into the cockpit of a helicopter for the first time. "I got to fly the H-60! It was awesome. I don't have enough hours in helos," she said with remorse. Exhilarated by her flights doing pirouettes and low-level routes, becoming a rotor head could very well be in Shilling's future. "I would love to get more hours in helos. There's still a challenge for me left in helos. I want to go do that and be really good at it."

When asked about which aircraft wasn't for her, one plane stood out. "The thing you'll never get me to fly again is a glider – no thank you!" said Shilling. "I want an engine. I don't like the idea of no second chances."

Even after adding countless aircraft to her logbook, there was still only one aircraft for Shilling. "My one love in life is the Prowler. I trusted her. She spoke to me in the way that the F-18 never did. I was one with the plane."

Her follow-on assignment to VX-23 allowed her to revisit the Prowler during its final years of service in the Navy by flying electronic attack testing missions.

But while her career seemed to be flourishing at VX-23, inside, Shilling was miserable.

After applying to be an astronaut with exceptional qualifications and hopes of accomplishing the highest feats of the dream she pursued, her application wasn't even considered due to her squadron timing. "They said, 'anyone who hasn't been at the squadron for at least a year isn't going to be looked at.' So, my application, the whole thing about how I chose my identity, chose which dream I was going to pursue, was just thrown in the trash."

While many aviators' dreams of shore tours or Fleet aircraft have fallen victim to timing, to Shilling, it was much more than her career that suffered. "Everything was really coming to a head," she said. "I had sold everything that makes me me, everything that's actually important to me, for this dream. To not even get to play was crushing."

Looking towards next steps while trying to care for her inner tumult, Shilling sought out the option that would best suit her personally and professionally. "I got picked up for Department Head, but I was also applying for Acquisition Engineering Duty Officer (AEDO)."

Faced again with determining her own fate, Shilling became an AEDO and started a new path.

Analyzing future alternatives for fields such as next-generation air dominance, the follow-on fighter, and the follow-on aggressor, Shilling was excelling and being noticed for her work. But as Shilling raked in successes as an AEDO, outside forces were about to upend her life.

"Be true to myself"

Shilling, focusing on this new facet of her career, wasn't ready to revisit her other dream quite yet. But the decision was made for her when military trans-inclusive policies were overturned.

"I came out during the ban," Shilling recalled, referring to the policy that banned transgender individuals from serving in the military in any capacity, which went into effect in the spring of 2019. But she wasn't ready to come out. Only two days had passed since the military's new trans policies had been implemented.

Reckoning between her two dreams once again, this time, Shilling chose herself. "Eventually, I came to the point where I said 'frak it,' I'm going to be true to myself and pursue transition."

Shortly after, the Navy began out-processing Shilling. Despite her promising career and costly aviation training, she understood that the Navy was just adhering to the existing policy, even if it meant the end of her time in the Navy. Then, in 2020, the transgender ban was lifted and the policy was revoked. Shilling was allowed to stay in the Navy as an open transgender aviator.

For a while, Shilling was living with two versions of herself – one version at home and the other at work. But in January 2021, she was able to start the process of transitioning and finally merge her dreams.

With the policy change still fresh off the 2020 election, the process was not as smooth as desired. "At the time, [the Navy] still didn't have the procedures or paperwork figured out," she remembered. "I leaned into the pilot mentality of 'who's going to tell me no?' I'm going to figure it out."

Transitioning rapidly accelerated the embrace of her true identity, but it slammed shut one key part of that identity. "I lost my flight clearance. Nobody knew how I could get back up."

She was told she would never fly again. Shilling fought back. Calling upon the Navy's core value of caring for its people, she worked with institutions like the Naval Aerospace Medical Institute (NAMI), the Navy Bureau of Medicine (BUMED), and the Commander, Naval Air Forces (CNAF) to improve the process of returning post-transitioned aviators to flight clearance. And she succeeded, setting a new precedent and enshrining opportunities for all Naval Aviators.

In February 2023, CDR Emily "Hawking" Shilling became the first Naval Aviator to regain flight clearance post-transition.

"We don't choose our calling"

"This is not how I thought I'd be famous," Shilling chuckled, continuing that, "I thought I'd be known as an excellent pilot or an astronaut. Turns out we don't get to choose what our callings are."

In the years since Shilling first came out as a trans woman, she has fully embraced her calling for advocacy. Her long-standing commitment to taking care of her Sailors, her combat crew, and her family has allowed her to channel that energy and expertise into a new type of advocacy.

"As the senior ranking Line Officer and Naval Aviator that openly identifies as transgender, that gives me a privilege and a duty to stand up for our Sailors."

One of her goals is to clarify the policies regarding serving while transgender and clearing the pathways to healthcare for trans military members. As historical inspiration, Shilling and others have turned toward another formerly ground-breaking shift in policy.

"It's really similar to when [the military] first let women fly and fly during pregnancy," remarked Shilling. "Flight docs didn't know how to deal with it so they were kind of making it up, even though there were policies somewhere that said what they could do."

Shilling is fighting to make these policies known and understood by learning from the aviators that came before her. Speaking to some of the first women Naval Aviators about their experiences, she's found comfort and support in their commonalities. They urged her on, saying, "we see what you're trying to do, and you have to keep going." Shilling felt seen. She wasn't alone.

Ultimately, the goal of her advocacy is to be the mentor to others that she never had. "Trying to find a mentor is next to impossible for me." Shilling wants to make sure people know they can be themselves by looking up the ranks and seeing someone who is both openly transgender and in the military.

"I choose to be visible because I need people to see that just because you're trans doesn't mean you're not a high performer, or doesn't mean you can't be a Test Pilot. I want this to become a point where people talk about me and say 'oh, she's a badass pilot or a badass officer, and oh, she just happens to be transgender.'"

Shilling is certain that visibility matters. Intent on saving lives through conversation and commonality, it's changed her leadership style noting that, "Now I lead with vulnerability and authenticity up front."

Last summer, her advocacy made it directly to an audience with Secretary of the Navy Carlos Del Toro, where Shilling shared some honest truths about improving Navy support for transgender sailors. Memorializing the 31 trans servicemembers who died by suicide during the transgender ban in her speech entitled "Thirty-One," she called upon the Secretary's "Get Real, Get Better" approach to leading and empowering our people by embracing pride to save lives:

"The open inclusion of Americans like me, combat-ready, transgender volunteers, enhances our readiness, promotes innovation, and fosters a culture of respect and understanding, that makes the armed forces better… The hard, honest, transparent, and very real fact is that we left 31 servicemembers behind during the toughest battle of their lives." [1]

When asked about how it felt to share such a raw perspective directly with the Secretary, Shilling laughed, saying, "I've always been called irreverent." Her tendency to say the hard things while building mutual respect and empathy earned her a seat at the table. From her position inside the room where decisions are made, Shilling's method of making positive change is to "have a conversation and meet people where they are."

Our Navy

Shilling's story is a resounding triumph in the call to bring vulnerability and authenticity into military service and leadership. It makes us all better at what we're here to do, whether that be an aviator, a maintainer, a family member, or an ally.

"The United States Navy is an open place where you are free to be authentic and free to be yourself, whatever that is," Shilling said proudly.

By embracing her full self while in service to her country, CDR Shilling has made our Navy a better, more inclusive home for everyone.

1. https://replicantfx.com/thirty-one-2023-dod-pride-speech/

Aircraft Carrier Tour is Highlight

By Kirk Kenney

Originally published in the San Diego Union Tribune.

DirecTV Holiday Bowl President, Dennis DuBard, toured USS Abraham Lincoln (CVN 72), on Sunday afternoon, December 24, 2023 with players and coaches from the Louisville and USC Football Teams.

As a port city, San Diego affords an experience few other postseason games can match. The ship tour annually is among the highlights of bowl week for the teams.

This year's tour represented a full-circle moment for DuBard. In 2002, he was Commanding Officer of USS Peleliu (LHA 5), a Marine helicopter carrier then stationed in San Diego. The ship that year hosted players and coaches from Kansas State and Arizona State. "We were pretty excited," DuBard recalled this weekend. "A lot of the crew were very, very excited."

Each year, two members of the crew are selected to be honorary captains. The two from Peleliu included one person who had attended Kansas State and one who had actually played football for ASU. "He got hurt and decided to join the Navy," DuBard said. DuBard shared that the tour provides meaningful moments for both football players and crew members.

He will never forget watching the Kansas State and ASU players as they approached the ship. "We were all the way at the end of the pier, so they had to walk a long way to get there," DuBard said. "I'm on the elevator looking down, waiting for them to come aboard. "I can see their faces and most of them have that deer-in-the-headlight look. The sheer size of the ship, in some cases, if you've never been around it, is a little overwhelming. So they were very, very excited."

Another moment that has stayed with him more than two decades later was watching huge linemen trying to squeeze inside a Marine tank. "We had been doing some workups, so we still had some Marine gear on board," DuBard said. "There were some linemen who were trying to crawl into the little driver's hole to get in. These were 300-pound guys. It was hilarious. Their teammates were laughing. ..."

"You'll never get in there."

"Yes, I will."

DuBard said, "we wanted to make it special for them to see what kids their own age were doing. These guys were playing football, and these kids went in the Navy. They speak the same lingo. It was a good experience for both."

The players will learn some history about a ship that has served in some of the nation's most important missions since it was launched 35 years ago. It was deployed 290 days, longer than any nuclear-powered aircraft carrier in history, in the aftermath of the 9/11 terror attacks.
Abraham Lincoln broke its own record in 2020 when it was deployed 295 days.

Holiday Bowl President CAPT Dennis DuBard, USN (Ret.) (left) greets CAPT Pete Riebe,USN, Commander of USS Abraham Lincoln. **Photo by David Freker DirecTV Holiday Bowl.**

Sunday's visit brought back additional memories for DuBard. Part of his career was spent aboard the Abraham Lincoln as ship navigator. He was intent on sitting again in his chair on the bridge.

DuBard grew up in Texas, attended at Texas A&M and noted that "every male in the state of Texas is a big football fan." Not long after he retired in 2007, DuBard was at an event where he bumped into a Holiday Bowl staff member. "Next thing you know, I got an application, had an interview ,and 14 years later I'm the president," he said. "I was with the Navy for 30 years, moved about every two years, so I never really got involved in the community. So one of the things when I retired is I wanted to give back to the community that had helped me. "I enjoy football, and they do a lot of things in the community. It's perfect."

The volunteers who rise through the Holiday Bowl organization to become president are often business and civic leaders. DuBard brings an entirely different perspective to the position, however. "He's an incredible leader," Holiday Bowl Executive Director Mark Neville said. "With his background and his career, it shines through. The way he runs the board meetings and motivates. He's strong. Very strong. I've learned a lot from him. We've been experiencing a lot of challenges. It's a different leadership style he has that's incredibly effective. I really appreciate and respect his counsel." Recent challenges have included game cancellations related to the COVID-19 pandemic and increasing difficulty finding sponsors amid an economic downturn.

There's also now star players opting out of games to prepare for the NFL Draft or enter the NCAA Transfer Portal. On the horizon, there's an expanded playoff that could further marginalize the bowl system. Crisis management was a day-to-day part of DuBard's life for decades, so his input is welcomed and encouraged. DuBard said he is "thinking long-term strategy. Where do we go from here?" He speaks excitedly about being part of a group whose members are widely recognized for their bright-color coats. "This red jacket," DuBard said. "It's probably the ugliest jacket on the planet, but I feel something when I put this jacket on. It means something to me and a lot of the Redcoats."

Tomorrow Looks Different for Naval Helicopter Training

By LT Michelle Hernandez, USCG and CAPT Chris Hulser, USCG

The U.S. Navy took a first step to enhance rotary-wing aviation capabilities with an innovative approach that will benefit an age-old partnership. Eight Student Naval Aviators (SNA) including five Navy and three Coast Guard students began training under a new joint-Service, public-private partnership program that promises faster time-to-train, greater helicopter simulator availability and in-aircraft training hours, and a better rotary-wing aviator for the joint-maritime services' talent supply lines.

A TH-57C "Sea Ranger" and a TH-73A "Thrasher," assigned to Training Air Wing Five and flown by instructors from HT-8, HT-18, and HT-28, fly over Pensacola, Florida. **Photo by Antonio More.**

These eight students are the first cohort of 48 volunteers (33 Navy and 15 Coast Guard) who have volunteered to participate in a rotary-only training pipeline that could replace traditional primary air training for aspiring helicopter pilots that opt into the program. If the pilot program is successful, the Navy hopes to permanently establish the rotary-only pipeline for helicopter students by fiscal year 2026. So far, CNATRA reports that this new program can reduce time to train in the overall timeline for helicopter students by 13 weeks.

Primary training for helicopter pilots has not fundamentally changed in nearly half a century. Prior to this initiative, prospective rotary-wing Naval Aviators (Navy, Coast Guard, and Marine Corps) reported to training in Pensacola, Florida, and flew fixed wing followed by rotary-wing. This pipeline's time requirement could take upwards of three years to complete. This expanding time requirement was a primary driver for the Chief of Naval Air Training (CNATRA) to carefully study the U.S. Air Force's and U.S. Army's rotary-wing-only training pipeline, which graduates a pilot in just over one year.

Aviation training in the 1940s

In the 1940s, the path to becoming a naval aviator was characterized by rigorous classroom instruction in areas of meteorology, aerodynamics, engineering, aviation safety, aviation physiology and more. In the following decades, the training system was adapted to include rotary-wing training, though it resembled a "bolt-on" addition at the end of fixed wing training. The Army was the first to pioneer a rotary-wing only pipeline in 1955.

Regardless of the service branch or stage of training, most instruction occurred in the aircraft itself. As recently as the 1990s, a task as simple as learning to tune the radio was done in the aircraft, at altitude, at high expense and relatively high-risk. Training systems matured to incorporate simulators, some as basic as a tabletop trainers to manipulate navigation and radio systems, to improve quality and time-to-train. Just like the advent of sloped-deck aircraft carriers in the 1960s, technology made aviation operations and training safer. By today's standards, the majority of aviation training pipelines utilize simulators and advanced technology such as virtual and augmented reality.

Training after World War II took just under one year and was divided into three-phases of training: primary, basic, and advanced. Aspiring aviators accumulated 65 flying hours during primary instruction and 140 hours between basic and advanced training. This equated to roughly 200 hours of in-aircraft training, first in fixed-wing aircraft, and then later in rotary-wing aircraft. Once helicopter training arrived on scene, the obvious solution was to simply add rotary-wing training onto the end of a proven flight training curriculum. Hence, all Naval Aviators are initially trained as fixed-wing pilots. This model has changed little from 1940 to 2023.

The success of the Naval Aviation training system has endured for decades and was crucially tested in the crucibles of WWII, Korea, Vietnam, over the skies of the Middle East and Afghanistan, and reaffirms the principle that quality of training remains a linchpin of military readiness and

success. Understanding the history of this training system, its challenges, successes, and failures is paramount to upholding its legacy and ensuring its continued effectiveness. However, another linchpin of military success is to never rest on laurels – innovation and progress must be embraced. With the advent of modern technology, and the increased time-to-train, Naval Aviation rotary-wing training was thoroughly examined for innovative opportunities.

The Navy's first TH-73A Thrasher arrives at Naval Air Station Whiting Field in Milton. **Photo by LT Michelle Tucker USN.**

A new approach to training

With a similar structure to the Air Force's model, the Navy and Coast Guard are participating in the most impactful change to rotary-wing aviation training in half a century. The Air Force beta-tested a new program labeled by CNATRA as Contract Operated Primary Training – Rotary (COPT-R) throughout 2022. This program questioned the need for a rotary-wing flight student to have any appreciable fixed-wing airplane training. It surmised the time spent in a single-engine airplane would be far better served with training focused solely in helicopters and associated rotary-wing training devices. Further, the system capitalizes on a blend of contract and military training to provide an optimal mix of education and training for new pilots with tangible gains in time and -cost-to-train.

Beginning in the 1990s, as the aviation landscape transformed, decision-makers noted the effectiveness of rotary-wing only training, utilized by the Army for decades with great success. This approach, which aimed to produce skilled helicopter pilots in approximately 12 months, garnered increasing attention as the need for more agile, cost-efficient training solutions became evident. The Naval Aviation helicopter training has now taken a leap into this modern paradigm and the results are promising.

To date, the Air Force's rotary-wing-only program has produced 24 winged aviators in the 12-month program. Initial feedback from squadrons receiving the new pilots is that quality was not sacrificed, and the new pilots are equally ready for transition to their fleet aircraft as the legacy students, which often took two to three times as long.

Collaboration to explore a new program

Unbeknownst to the Navy, a team from the Coast Guard's Aviation Training Center (ATC) and Coast Guard Liaison Office (CGLO) at Naval Air Station Pensacola conducted on-site evaluations of the new Air Force program in January 2023. Simultaneous studies were underway by the CNATRA team for Navy implementation. The findings were inspiring to both services: this hybrid model, which incorporated elements from the Air Force's training program, could provide the services what they needed. This strategic adaptation serves as a crucial step forward in ensuring our maritime aviation forces remain well-prepared and mission-ready in today's dynamic operational environment.

Under this newly developed program, students will complete several discrete phases of training, just like pilots have for decades, but at several locations and some under contract training agreements. While phased training is not new, content of these phases is starkly different. Student Naval Aviators first report to Naval Air Station (NAS) Pensacola for medical screening, indoctrination, and introductory flight training, including academic lessons and approximately 10 hours of "introduction to flight" in a low-performance fixed-wing aircraft. Then, it's on to a contractor owned/contractor operated helicopter flight school called "The Helicopter Institute" in Fort Worth, Texas, to train in the Bell 206 (TH-57 Sea Ranger) helicopter. After completion of this "basic" flight training, in which students amass 50 hours of in-aircraft flight experience, they report to Advanced Helicopter Training at NAS Whiting Field, Florida. The TH-73 Thrasher will soon replace the aging TH-57 Sea Ranger as the advanced air training platform for helicopters at Whiting Field.

"I Have the Controls"
…early under this new training program

The program focuses on hands-on training right from the start. On day two of the 12-week program, students take the controls. This approach breaks training down into four digestible stages that pave the way to master helicopter flight in 81 ground training hours and 50 flight hours.

During Stage One, students delve into the foundational knowledge necessary for a private pilot helicopter license. Ground classes are a deep dive into aeronautical fundamentals, while flight sessions introduced the students to basic Visual Flight Rules (VFR) maneuvers and pre-solo training, laying the groundwork for future success. The syllabus was designed

to have students in the cockpit every other day in order to transfer their knowledge to the controls. This is a stark difference from legacy training syllabi, in which students can be situated in long periods of classroom activities.

This first phase of training sets students up for success with small group learning in a 2.6-to-1 student-to-instructor ratio, and hands-on flying right from the start. Even the location is ideal, utilizing three outlying fields nearby Fort Worth Meacham International Airport. This atmosphere exposes students to one of the busiest Class Bravo and Delta airspaces in the world and a multitude of airports in the Fort Worth/ Dallas area that creates a perfect environment for honing radio communication skills, navigation, and the ability to make critical decisions in the face of ever-changing weather conditions.

Stage Two training marks a transition into navigation and aeronautical general knowledge. In the classroom, students toil over charts, become masters of aviation weather and gain a profound understanding of aeronautical regulations. In the air, students practice performance maneuvers, make a first foray into night flying, and embark on thrilling cross-country journeys, broadening horizons and cultivating expertise, which will result in mastering the craft of aviation.

Stage Three training is a pivotal moment. Ground classes are devoted to special operations, handling emergencies, and preparation for the practical examinations to meet FAA and eventually Navy "check rides" at NAS Whiting Field – South during advanced flight. In the skies, students undertake VFR cross-country flights, coordinate special operations maneuvers in confined areas, and prepare for the end-of-stage practical test, and finally, the "solo." This phase ensures students can navigate any situation with the poise and precision required of a military pilot. As students transition into the final stage, the intrigue of flying by instruments awaits.

Stage Four training reorients focus towards cockpit instrumentation, prioritizing a comprehensive understanding of instrument operations. Ground classes delve deep into the fundamentals of instrument flight, emphasizing instrument interpretation and cross-check procedures to enhance precision and elevate flight capabilities. This stage offers an in-depth education in basic instrument maneuvers, partial panel operations, and precision approach techniques, cultivating proficient aviators with the requisite skills to navigate the skies safely and confidently.

"The Helicopter Institute's" student-friendly curriculum, digestible stages, and diversified learning methodology embraces a hybrid approach to prepare students for advanced helicopter training at NAS Whiting Field and Part 141 Private Pilot Helicopter Course. It ensures students have the required aeronautical knowledge, skills and experience to safely and successfully conduct helicopter flight operations under Day & Night VFR and to meet or exceed the requirements for a helicopter Private Pilot Certificate. In short, when pilots graduate from this phase of flight training, they are ready for military advanced training at NAS Whiting Field. These "new" students will start Advanced Helicopter Training alongside legacy advanced students. However, the students trained under this new system will have 50 hours of in-helicopter flight training, and exposure to helicopter operations from the four stages provided by the COPT-R program.

CNATRA's mission is to train, mentor, and deliver the highest quality Naval Aviators who prevail in competition, crisis, and conflict. Headquartered at NAS Corpus Christi, CNATRA comprises five training air wings in Florida, Mississippi, and Texas, which are home to 17 training squadrons. In addition, CNATRA oversees the Navy Flight Demonstration Squadron the Blue Angels and the training curriculum for all fleet replacement squadrons.

CNAF Legacy Summit

By LT Andrew "Gonzo" Gregory, USN

LEGACY Presenters and Attendees on Day 1. **Photo by LT Taylor Holland USN.**

On a cool and brisk November morning, Officers and Sailors from all across the Naval Aviation Enterprise gathered in Pensacola to attend the Chief of Naval Air Forces' Leadership, Education, Growth, Advocacy, Culture and Youth Outreach (LEGACY) Summit, recognized in previous iterations as the Diversity, Equity and Inclusivity (DEI) Summit.

The year of 2023 witnessed multiple landmarks for historical changes in Naval Aviation and the U.S. military as a whole, including the 75th anniversary of racial desegregation in the armed forces, the 50th anniversary of women serving as Naval Aviators, and the 30th anniversary of women flying in a combat role.

Day 1

Held at the Naval Aviation Museum on NAS Pensacola, the summit began with opening remarks from ADM Lisa Franchetti and VADM Sara Joyner who spoke to the audience via a live video call from the Pentagon. Both Admirals spoke to the fact that our Navy derives its power from its people. They implored us to seek excellence on a daily basis in support of each other and in support of our country as it undergoes the challenges of the future. ADM Franchetti summed it up into a memorable quote: "Warfighting. Warfighers. Winning. If you win every day, you're always going to win."

It was fitting that during a celebration of firsts in Naval Aviation, just one day later ADM Franchetti would become the first woman to serve as Chief of Naval Operations and first woman in the Department of Defense to reside on the U.S. Joint Chiefs of Staff after confirmation from the U.S. Senate.

The first speaker to take the stage was Dr. Chaveso Cook, an active duty Lt. Col. in the Army and co-founder of Military Mentors, who spoke about how listening and learning is essential to good mentorship, an apt beginning to a gathering meant to celebrate the differences and reinforce the bonds that tie Naval Aviation's diverse population together.

The attendees then had the good fortune of seeing multiple legends of Naval Aviation take the stage. First was RADM Larry Chambers, USN (Ret.) the first African American to serve as a CVN Commanding Officer and be promoted to the rank of Rear Admiral. Next was a trio of retired female pilots composed of: CAPT Joellen Oslund, USNR (Ret.), one of the "first six" female Naval Aviators and the first assigned to flying duty on a U.S. Navy vessel; CAPT Mary Louise Griffin, USN (Ret.), a member of the second class of female Naval Aviators and the second female to be assigned to fly in tactical jet aircraft and CAPT Kay Hire, USN (Ret.), the first woman to be assigned as part of a combat aircrew in the Department of Defense who later became an astronaut. These four legends regaled the attendees with sea stories both fun and challenging. They touched upon much of the discrimination and barriers they faced during their careers and how they repeatedly had to prove they belonged in a Navy almost entirely made up of people that did not look like them.

Day 1 concluded with a brief from NASA Astronaut Sunita Williams and Astronaut Candidate Jessica Wittner, both of whom started their careers as Naval Aviators. They walked attendees through NASA's ambitious plan to once again land astronauts on the moon, a mission that Wittner is currently training for and Suni is championing. This mission is vital to our longevity in space as it will serve as a stepping stone to eventually put the first humans on Mars. This opportunity to meet and greet with aviators-turned-astronauts reinforced to younger attendees that there is no limit to what can be accomplished during a career in Naval Aviation.

Day 2

Whereas the first day was primarily focused on celebrating achievements of the past, Day 2 of the summit looked forward to issues that still need to be addressed. Dr. Olenda Johnson, Professor of Strategic Leadership & Leader Development at the U.S. Naval War College, began the conversation by emphasizing the need to embrace new ideas as times change so that our warfighting culture can continue to evolve. Reinforcing the importance of discussing new ideas, CAPT Chandra Newman, Director of the LEGACY Program, then took the stage and briefed attendees on updates to the medical section of CNAF 3710 regarding pregnant individuals in a flying status. Big changes in the pregnancy section include the fact that it is now easier for pregnant aviators to fly in an instructor capacity, it should be easier for them to quickly procure medical clearance to continue flying, and that it is possible for pregnant aviators to get an extension of their NASTP qualification. These concerns were addressed after being mentioned in conversations about pregnancy-related healthcare at the previous year's DEI Summit, demonstrating how this forum can lead to real improvements on policy.

The summit continued with a career timeline brief from PERS-43 and a panel of senior Naval Aviators who have taken non-traditional career paths, demonstrating to the junior officer attendees that there are more ways to serve as Naval Aviators than by just following the "golden path." One tool at the disposal of Naval Aviators seeking a non-traditional career path, the Career Intermission Program (CIP), in which a servicemember may pause their career timing for a period of time and leave active duty (with the obligation to return for at least the amount of time taken off) was discussed in a panel of its own. Many issues with the program were brought to senior leadership's attention including the fact that both Navy HR and Navy Medical resources are unprepared to properly assist with Naval Aviators on CIP, since it is a relatively new and unknown program. Leadership welcomed this previously unheard feedback directly from users of the CIP, and the discussion that ensued led to multiple proposals to make this program better for future users.

The final panel of the afternoon focused on mental and spiritual health and led to discussions about improving our tools for suicide prevention and improving medical care specifically tailored to Naval Aviators in the LGBT+ Community. A particularly notable moment came when the most senior transgender Naval Aviator, and first to receive her flying status back after transitioning, beseeched the medical representatives at the summit to codify the process in which transgender service members are able to return to work after they transition.

The summit concluded with RADM Wikoff (CNAF) and RADM Verissimo (CNAL) hosting a town hall meeting in which they fielded questions and concerns from Naval Aviators on a wide spectrum of topics, including how they can encourage O-5/O-6 leadership to be more creative and empower JOs and Sailors, how we can better communicate about deaths of shipmates from suicide, how we can still address matters relating to diversity, inclusivity and equity without politicizing them, and how we can regain trust in a nation that is losing faith in its military.

Conclusion

In summary, the LEGACY Summit brought together legends of the past, present, and future to celebrate the power of relentlessly pushing for progress and how it leads to a stronger and more cohesive warfighting force. Many barriers to change within the Navy were brought to light, and action items created for senior and junior leaders to address in the coming year. Hopefully, some who read this will be compelled to attend next year's summit to continue to help contribute to building upon a legacy of positive change and improve Naval Aviation in the future.

Attendees discuss mental health issues on Day 2. **Photo by LT Taylor, Holland USN.**

Give Mental Health a Voice

By LT Lizzie "Mickey" Jagoe, USN

Seaman Jonathan Krajesky, assigned to the Arleigh Burke Class guided-missile destroyer, USS Porter (DDG 78), jumps off the ship during a swim call, May 31, 2023. During the ship's Mental Health Awareness Month observation, a day of rest for the crew, Porter Sailors participated in a variety of exercises and discussions about mental health, and had the opportunity to participate in a "Steel Beach Picnic" and swim call on the flight deck. **U.S. Navy photo by Mass Communication Specialist 2nd Class Sawyer Connally, USN.**

Beginnings

My journey to understand the critical issue of mental health among Sailors began when a fellow Sailor entrusted me with a deeply personal revelation: "That's when I saw my daughter for the last time before my custody battle began." This confession opened the floodgates as I engaged with Sailors individually. Their stories unveiled a tapestry of tragic experiences, becoming evident that beneath the uniform, each individual carried a unique purpose for joining - the pursuit of a better and more meaningful life. A shared refrain emerged: the Navy was exacerbating their mental health issues. The turning point came when leadership realized it was time to make mental health our number one priority.

Changing Communication

In our quest to boost mental health and productivity, leadership acknowledged the transformative potential for smartphones and integrated digital communication to reach the younger generation. In the midst of the shift, leaders switched from punitive to celebratory measures. Sailors initially hesitant about qualifications advanced above and beyond. By viewing challenges our Sailors faced as solutions, leadership turned obstacles into opportunities. This optimistic approach gave way to a self-sustaining, uplifted community, elevating both the quality and quantity of work.

Managing Workloads

In our ongoing commitment to addressing mental health, we scrutinized the demanding workload faced by Sailors. Sea tours find Sailors working months on end away from loved ones for extended periods with an absence of outlets for stress relief, exacerbated by the decline in traditional port calls. Not only do they experience strain away from home, but upon return, they encounter prolonged work hours due to work-ups, exercises, and other demands. Shore commands, initially intended as periods of respite, transformed into challenging environments marked by inefficiencies influenced by the strain on the supply chain. This means attempting to do more with less. Surprisingly, the work center's predominant source of fatigue did not stem from daily workload pressures but rather from the extensive training required for new Sailors entering the command. Many new recruits join and are placed on limited duty or resign for mental health reasons. The relentless cycle of training newcomers not only exhausted current team members but also diverted crucial time from aircraft maintenance. The impact on Sailors' mental health became evident as these increased workloads and a lack of work-life balance contributed to heightened stress and burnout.

Embracing Top-Down Leadership

Examining the current evaluation system reveals a tendency among leaders to accentuate the positive aspects of their units, fostering a culture where the emphasis is on projecting an

idealized image. While this inclination is motivated by a genuine desire to showcase success, it inadvertently steers the focus toward upward impressions. The trend hampers our ability to focus downward and not communicate problems upward or even be tempted to mask them by inaccurate reporting. This hesitancy, driven by the fear of negative evaluations, directly contradicts the principles of the Navy's "Get Real Get Better" initiative. On the flip side, an excessively optimistic "can-do" attitude from superiors can exaggerate a unit's capabilities and may unintentionally foster a culture where they overcommit to maintain a positive appearance. Human beings, inclusive of leaders themselves, can only handle a certain workload before experiencing mental strain. Authorities must refrain from automatically agreeing to every request, address genuine issues, and provide honest assessments of material conditions.

Mental Health Stigma

Among contemporary leaders, the common approach in addressing mental health concerns is to direct them to Navy-approved mental health resources. However, leaders overlook the deeper issue that many Sailors may be hesitant to return to an environment that contributed to their mental health challenges initially. When delving into the experiences of valuable personnel grappling with conditions such as PTSD, many of these individuals seek mental health counseling only to be added to a waitlist for help and potentially deemed unfit for continued service. In the past, mental health was often stigmatized and overlooked, deemed too uncomfortable a topic. Today's generation has evolved its perspective, recognizing mental health as an integral aspect of a healthy and happy lifestyle. The Navy must embrace this cultural shift, acknowledging that mental health requires active management.

Moving Forward

Financial incentives and promises of a better life may draw Sailors to the Navy, but they often prove insufficient to retain them. In today's Navy, Sailors at all levels are experiencing burnout due to the existing culture, creating a chain reaction. Breaking this cycle at HSM-40 required concerted efforts to prioritize mental health and well-being, fostering a culture that supports and cares for its members, ultimately contributing to a healthier and more resilient community. The imperative is evident – prioritizing the mental health and well-being of Sailors is paramount for a thriving U.S. Navy.

Change of Command

Naval Air forces
Naval Air Force, U.S. Pacific Fleet

VADM Daniel Cheever, USN
relieved
VADM Kenneth Whitesell, USN
February 1, 2024

HSCWSP
Phoenixes

CDR Dermot Killian, USN
relieved
CDR Nicholas Schnettler, USN
December 8, 2023

HSM-51
Warlords

CDR Tommy McDonald, USN
relieved
CDR M. E. Kawika Chang, USN
December 7, 2023

TACRON 12

CDR David A. Hoopengardner Jr., USN
relieved
CDR Scott E. Welles, USN
November 16, 2023

Naval Base Coronado

CAPT Ladislao R. Montero, USN
relieved
CAPT Charles McKissick, USN
January 26, 2024

VRM-50
Sun hawks

CDR Chris “Wildcat” Pratt, USN
relieved
CDR Emily "ABE" Stellpflug, USN
January 12, 2024

HSC-11
Dragonslayers

CDR Wesley Johnson, USN
relieved
CDR Jeremiah Farwell, USN
November 30, 2023

Naval Air Station North Island Holds Ribbon Cutting Ceremony for New Aircraft Hangar

By Katie Cadiao
Naval Facilities Engineering Systems Command (NAVFAC) Southwest

CAPT "Newt" McKissick,USN, NAB Commanding Officer, CDR Emily "ABE" Stellpflug, USN, VRM 50's Commanding Officer, and CDR Vincent Gomes, USN, VRM-30's Commanding Officer cut the ribbon for the new hangar. CAPT Laurie Scott, USN, and a representative from Hunter Construction stand next to CAPT Justin McCaffree, USN, VRMWING Commodore. **Photo by Raymond Rivard.**

Naval Base Coronado, and Naval Air Station North Island held a ribbon cutting ceremony December 8. 2023 to celebrate Naval Facilities Engineering Systems Command (NAVFAC) Southwest's completion of a new aircraft hangar for VRM-30 and VRM-50.

The CMV-22 aircraft maintenance hangar was built by Harper Construction, who were awarded a contract for the work on June 25, 2019. Construction cost $72 million and took 4.5 years to complete.

The new facility contains a high-bay space, shops and maintenance areas, operations, training, and administrative spaces, and supporting site infrastructure improvements.

The hangar also houses maintenance and operations for the CMV-22B, the Navy's replacement long-range resupply aircraft. The additional space the new hangar provides is essential to ensuring full operational capability of this new model airframe.

In addition to the enhanced capabilities inside the building, construction also improved the surrounding pavement, which will facilitate ingress and egress to the hangar.

"Our construction partner, Harper Construction, really listened to the requirements the Navy outlined for this new hangar and got the job done," said CAPT Laurie Scott, Commanding Officer for NAVFAC Southwest. "Harper delivered a facility that will allow our warfighters to work more efficiently and safely, ensuring Fleet readiness for many years to come."

NAVFAC Southwest supports planning, design, construction, real estate, environmental and public works for U.S Navy, Marine Corps, Army, Air Force and other supported federal agencies in Arizona, California, Nevada, New Mexico, Utah, and Colorado.

Seeing Double: Twin Brothers Cross Paths aboard USS Boxer (LHD 4)

By Petty Officer 2nd Class Brad Kaminksi, USN, USS Boxer (LHD 4)

On October 17, 1991, Robin Trainor gave birth to a set of twins, Tyler and Phillip at Naval Medical Center San Diego. Besides the three minutes of separation that lay between Tyler being born slightly before Phillip, they were identical. Now in their early thirties, the similarities remain: both are serving in the U.S. Navy, aboard the same ship, and both are aviators. Their close tie to one another has not faded in the slightest. If anything, it's only become that much stronger.

Tyler and Phillip Trainor, twin brothers and Naval Aviators serving aboard USS Boxer (LHD 4). **Photo by Petty Officer 2nd Class Brad Kaminksi, USN.**

They were raised in San Diego as their father, CAPT Stephen Trainor, USN (Ret.) also served in the Navy as a helicopter pilot. After relocations to Virginia and Pennsylvania for their father's military career, the Trainor twins moved to Annapolis, Maryland, where their father served as a military professor at his alma mater, the United States Naval Academy. Settled in Annapolis, Tyler and Phillip found their stride in school and athletics, following each other closely as they navigated their way through adolescence together.

"Being a twin has its own unique experiences. We definitely pushed each other but weren't overly competitive with one another," said LT Tyler Trainor, the Passenger Mail Cargo Officer assigned to Tactical Air Control Squadron (TACRON) 11, embarked aboard USS Boxer (LHD 4). "We just got along together really well which helped a lot."

They shared the same advanced placement classes, were in the same friend group, and shared many of the same interests. They both ran cross country and participated in track and field events, running both the 800 meter and the 4x800 relay together. Advancing through their high school years brought many experiences and challenges to the twins, but what really was on the forefront of their mind was their future after graduation. One thought in the back of both of their minds was following in their father's footsteps as a pilot. During their senior year, they finished the application process for the Naval Academy and were accepted together.

"Once I got into the Naval Academy reality set in, then Tyler got in and I knew this was going to be an awesome opportunity for multiple reasons," said LT Phillip Trainor, Boxer's Safety Officer. "Not only was I going to be able to go through it with someone I'm very close to, but my Dad also went to the Naval Academy. It was an opportunity to serve and eventually fly as a pilot, which I wanted to do, so there were a lot of positive things that lead me to that decision."

As they entered the Naval Academy as midshipmen in 2010, they began to experience the new challenges and demands that would be placed on them as future Navy officers, but none of this was without the support of one another. While they may have been separated into different companies, they were still together regularly, spending weekends with each other and friends, participating in the same marathon club team and even running together after class to work in a few more miles during off hours.

After graduation, Phillip checked in to flight school in May 2014 with his brother following close behind him, arriving only a month later. Once again, the Trainor twins found themselves back together again, undergoing the new set of challenges that awaited them in flight school. From primary flight school to both selecting helicopters as their first choice of aircraft as their father did during the start of his career in aviation, Phillip and Tyler continued to tap into that close knit support they had for one another.

Years of running and hundreds of miles spent together taught them valuable lessons; lessons that they would pull from and refer back to as they navigated the multiple levels of qualifications, milestones, and benchmarks each student must achieve before earning their wings and officially becoming a Navy pilot.

"Just like running, you have to put the work in," said Tyler. "It might be more of a marathon than a sprint in some cases and it's not always easy to see the finish line. We definitely pushed each other to get through that."

The culmination of the long and difficult process came in the spring of 2016. Phillip was the first to graduate flight school in March while his brother Tyler was the second to graduate a few weeks later in April. The most significant part of their graduation came when their father pinned them, or what is called being winged among pilots, giving each of his sons a pin that he himself wore when he served.

"You definitely have a bond with other pilots," said LT Phillip Trainor. "But having that bond with your Dad is really cool."

During the course of their careers in aviation, both Tyler and Phillip have remained close. They certified in the same aircraft post-flight school, the MH-60 Sierra, in the same fleet replacement squadron on Naval Air Station North Island in Coronado, California. Following their time in the fleet replacement squadron, both were assigned to squadrons based in San Diego, with Phillip going to Helicopter Sea Combat Squadron (HSC) 23, and Tyler going to HSC-6. A brief shore duty period finally separated the twin pilots, but as fate would have it, they have once again returned to serve aboard the same amphibious assault ship.

With the end of their military careers both coming within the next year, subsequently within a short period of one another, Phillip and Tyler are ready to take their years of experience as Navy pilots and further their education before entering the civilian work force. With more than 25 years of combined Navy service under their belts since beginning their plebe year at the U.S. Naval Academy, Phillip and Tyler have had their share of lessons learned that they have reflected on as they prepare to begin the next chapter in their lives post-military.

"Learning to live in the moment and be appreciative of where you're at and take pride in it," said Phillip. "There's always going to be something to look forward to, but that's not a healthy way to live, constantly trying to live in the future. That's what I've learned most about being in the Navy, appreciating where you're at. It makes things a lot easier."

For Tyler, it's the constant reminder that each military career, no matter how long or short it may be, has its own definition of success.

"Everyone's career progression is their own unique story," he said. At the end of the day, be honest with your command and leadership and they'll support you all the way. Just realize there is no fixed or set way to be successful in your career."

Why Write?

By CAPT George Galdorisi, USN (Ret.)

You Have a Story? – When Are You Going to Write It?

Several years ago at the 2019 NHA Symposium, we had our first-ever NHA Writer's Panel. The intent – and results – of the panel were captured by Lieutenant Sam Calaway in the Summer 2019 issue of Rotor Review. LT Calaway explained why the NHA Staff and our Rotor Review Editor, LT Shelby Gillis, asked us to hold the panel. Here is part of what he said:

If there was a consistent theme and one main thing the panelists conveyed it was this: There are a number of well-known writers who have been producing military fiction and non-fiction for decades – and that's the problem. Most of them are former military folks who used to be well-versed in all aspects of the military, but their information has become so dated their stories are no longer as interesting – or believable – as their earlier works. But that problem creates an opportunity for all of you in flight suits or coveralls. You are living this now and can tell riveting and believable stories that will find their way into print.

LT Gillis and the NHA Staff thought that a "one-time-inoculation" was a good start, but wondered if we could do something along the lines of a constant drumbeat and share some of the tricks of the trade as well as the tactics, techniques ,and procedures to help you get your ideas out into the world and noticed. However, LT Gillis also challenged us to not just talk about writing in our off-duty time, but to talk about the importance – and impact – of writing for all of you who are sea service professionals and still in uniform.

This is the first of several installments aimed at doing both those things – talking about writing on and off duty. These are related – but somewhat different efforts (you may have received a FITREP once that read like science fiction, but most of us haven't). So first, we'll talk about writing with a small "w" – writing at work, and then segue to writing with a big "W" – writing for a mainstream audience. By way of clarification, for that second area, we're not talking about tweets or Facebook posts or the like, we'll be talking about getting something in a respected online venue or in print.

The small "w" - writing at work. Wait a minute! – you might say, we're aviators, "someone else" needs to be doing that. Well, not really. I spent my last 14 years on active duty as either CO, XO, Commodore or Chief of Staff. All that means is that I was at the end of the food chain for tons of written work: Officer FITREPs, Enlisted Evaluations, Naval Messages, White Papers, you name it. And like it or not, this material wasn't written by a select few (those "someone elses") but by every officer, chief petty officer, and senior enlisted.

There is so much talent in the naval rotary wing community that junior officers – in particular – are always asking: How do I break out? What makes me pack-plus? What discriminators does my skipper use to help decide who advances in their career and who doesn't?

As Naval Aviators and leaders, we're likely to focus on those two attributes – flying and leading. They are important. But look at it from your skipper's perspective. Most pilots fly their missions well. Sure, if one pilot in the squadron is voted by his or her peers as pilot of the year, and another bangs up aircraft frequently, it's easy for the skipper to use that as a discriminator. But let's face it, most of us are under that bell-shaped-curve and there's not much to discriminate our flying skills.

It's a similar story with leadership. If one lieutenant gets his or her Sailors recognized with all kinds of awards and they excel on their advancement exams, while another lieutenant is on the frequent flier program with his Sailors at XOI or Captain's Mast, then that gives the skipper a good way to rack and stack them. But most of us are somewhere in the middle of that yawning spectrum.

So what's left to discriminate the hard-chargers from those who are less so? It's writing! Having been on the receiving end of hundreds of officer FITREPs, thousands of enlisted evals, point papers, and etc. etc. I can tell you from first-person experience that the differences in quality are astounding.

And you might find it surprising that it's not the English majors who are writing well, and the EE majors who aren't. It all comes down to the thought and care and craftsmanship you put into everything you write. And this goes vastly beyond being recognized as the best lieutenant in the squadron. I've seen a well-written white paper convince grumpy commodores or unit commanders to do something they originally said they didn't want to do.

Writing has the power to enable you to influence the course of events in your unit – and beyond. And it even has an impact when you're a skipper. I've sat on selection boards and you only have to read a few FITREPs to see which skippers put a great deal of thought, care and craftsmanship into reporting on their officers and which don't. Sadly, those in the latter category put their officers at a disadvantage, because board members can't figure out what the skipper is trying to communicate.

This doesn't have to be a big rock up a steep hill. There is ample "gouge" out there, beginning with the Naval Writing Guide and a host of other books. Ask around your squadron, someone likely has a copy of most of them. Practice, and don't be ashamed to ask those who write well for some help.

We don't want to make this column too long, so I'll touch on the big "W" – writing for a mainstream audience – briefly here, and then talk in more depth in future articles. In the interim, NHA is now communicating with all of us electronically at least monthly, so we can keep the dialogue going more than just once a quarter.

As someone who stayed alive for thirty years on active duty by following a NATOPS Checklist, what I'll share with you over the next few issues of Rotor Review is a bit of a methodical, step-by-step approach to getting your ideas out into the world and noticed. We'll start with what we're doing today, "Why Write?," then move on to "First - and Essential – Steps," and then discuss "Non-Fiction - The Hungry Market."

After that we'll discuss fiction and talk about why and how you might want to write, "The Great American Novel." We'll also discuss "Establishing an Online Presence" and then talk about "Social Media - Challenges and Opportunities." All the while, we'll have ample opportunities to communicate between quarterly issues of Rotor Review.

Why write for a mainstream audience? Perhaps the best way to capture that is to quote my friend Norman Polmar, who is fond of saying, "History is what the historians and writers say it is." Norman has published over forty books on naval history and most consider him the authoritative source on the subject. Someone has to write down what happens…and that becomes ground truth.

Here's another way to look at it, and, I trust it will help you understand that writing stories isn't some odd thing that only a few people do. In *Book People,* John Sutherland put it this way, "Storytelling is as human as breathing. Literature, since it emerged 4,000 years ago, has shaped the lives of most humans on planet Earth. We are what we read."

The NHA Staff has been generous in providing us with an opportunity to share some of what we know about writing, so I'll wrap this up shortly. One of the best answers to the question, "Why Write?" comes from my friend and co-author, Dick Couch. Here's how he put it in an article in our alumni magazine some years ago:

For me, I gotta write, and it's the adventure of it that's hooked me. As the writer, I can do it all. I get to be the National Security Advisor who recommends the action to the President who must commit the forces. I'm the senior officer who sends his men into action and who feels the pain if they don't make it back. I'm the enemy and the defender; logistician and staff planner. But most of all, I'm a young man again, that fresh lieutenant who must lead his men into battle.

Some men want to die with their boots on. When I cash in my chips, I want to be slumped over the keyboard. And they can plant me with my word processor. I may wake up and want to write about it.

Finally, we all recognize we live in a highly technical world. Our aircraft are complex and we need to understand them. But that often makes us turn to data as the king of the hill. It isn't. Here's how Michael Lewis put it in, *The Undoing Project,* "No one ever made a decision based on a number. They need a story."

That, in a nutshell, is why we are starting this column again. So many of you have stories to tell, and we want to help you tell them!

We need your stories. We'll continue the journey in the next issue of Rotor Review. In the meantime, let's keep the dialogue going and keep writing!

Braveship Writers Share Their Secrets
by CAPT George Galdorisi, USN (Ret.) and Kevin McDonald
Reviewed by LCDR Chip Lancaster, USN (Ret.)

Are you a writer? Do you like to write or is it a chore you put off as long as possible? Robert's Rules of Writing says that, "writing takes deliberation, craft and commitment." I like writing, but do I love it? I don't know. George and Kevin's book, *Braveship Writers Share Their Secrets* will help you make that decision. The "Braveship Writers" are a group of mainly Naval Aviators who share many things, some secret some not, but all valuable.

Braveship Secrets is a compendium of information acquired from the experience of actual writers who make it their business. It starts by giving you some perspective. Writing is a form of human communication that humans have been doing since a cave wall could be scratched. Writing is as natural as breathing; humans have to do it, some more than others. The book is broken into short, easily absorbed chapters, perhaps making it an ideal bathroom reader. The chapters cover such things as how to get started answering Rudyard Kipling's questions of what, where, when, how, why and who.

One feature of the book that really stands out is George and Kevin's advice. Their admonitions and encouragements are liberally interspersed with quotes, examples, and advice from many of the other Braveship Writers as well as notable famous names such as Tom Clancy, Dean Koontz, Ian Fleming, and Stephen King, as well as script writers like Larry David, Jerry Seinfeld, and Stanley D. Williams, just to name a few.

The authors reveal how to develop and build characters, plot, and - above all - action. Those are the keywords: plot, characters, and action. *Writer's Secrets* takes you deep into each of those aspects. Aspects that are critical to making the reader not only want to know what is going to happen but command the reader that there is no other choice but to read on. Now that's a page-turner! This guide itself is no thriller, but I did need to turn that page to see where they were going and what was coming up next.

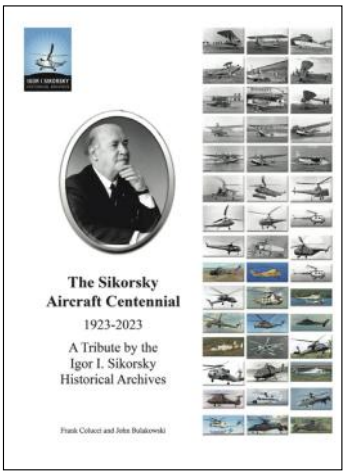
You are not left with just the why, where, when and how but also given an in-depth look into the industry. Turning your thoughts, ideas, and imaginings into hundreds of written pages is just the beginning. The publishing business, agents and marketing are another world entirely. If you're serious about writing a book, then the process of putting one on the street is something you have to seriously consider. I like writing and have written dozens of magazine articles, but I would think twice before I jumped into the publishing and marketing briar patch. George and Kevin don't pull any punches, giving you the good, the bad, and the ugly of the business. I have to smile here as one of the things they stress is to not use too many idioms and cliches and here I am throwing several at you. The difference is I'm a straight article writer not a page-turner writer that you will want to be for your book.

Braveship Writers Share Their Secrets is a short, easy to read 168 pages chock full of knowledge nuggets you will want to know even if you're just an article writer like me. I found it so worthwhile that I trashed it with highlighter. Every chapter gives you half a dozen different things that you presumed you knew all about but really didn't. Every chapter gives you information that you had never even thought of before. At the end, you're treated to other writing resources and all of the Braveship Writers with pictures and biographies. George Galdorisi and Kevin McDonald have given us a beautifully written treasure trove of information that anyone who espouses themself to be any type of writer will find valuable. Check it out and find out if you're a plotter or pantser. I'm a plotter incidentally. Whatever you are, you will not be disappointed. *Braveship Writers* is worth more than the price of admission; there, I did it again. I give it five stars and two enthusiastic thumbs up.

The Sikorsky Aircraft Centennial by Frank Colucci and John Bulakowski

Reviewed by LCDR Chip Lancaster, USN (Ret.)

"The jet may have made the world smaller. The helicopter made it bigger by allowing mankind to live and work in areas that would have been inaccessible by any other vehicle." - Igor Sikorsky



In the 1970s, I boarded a San Francisco and Oakland Helicopter Airlines Sikorsky S-61L at Oakland for a cross bay flight to San Francisco International. The flight was part of my airline ticket out of SFO returning to San Diego following TAD at NAS Alameda. I was suitably impressed, having done a tour with HC-1 flying the H-3G; the Sea King was a great bird. Reading *The Sikorsky Aircraft Centennial* brought me right back to that flight. This book celebrates the 100th anniversary of Sikorsky aircraft, relays the helicopter airline saga, and much more. Frank Colucci and John Bulakowski have compiled an encyclopedia of Sikorsky aircraft history. A history aptly named A Tribute which takes the reader through 100 years of aviation evolution.

Have you ever heard of the Deuce, the Comanche, or an airliner with an outside promenade deck? If you have not heard of them or a hundred other things about Sikorsky aviation, then this is the book for you. From Igor Sikorsky's start in 1890's Russia - Ukraine actually - we learn that he is truly a "Renaissance Man" who understands the connection between science, engineering, mechanics, and people. We are taken on a beautiful ride embellished with hundreds of photos and illustrations. It is an adventure to travel through his work in Russia to his establishment in the U.S., showing us what he did before, during, and after founding Sikorsky Aero Engineering.

Did you know that he was a highly successful fixed-wing designer and engineer too? Sikorsky and his company's growth, successes, and failures are documented categorically by era and mission. The book takes us fully through his airplane phase to his goal of a rotary-wing machine. We see in depth the trials and tribulations of such a controversial design leading to its ultimate success. We are led through Sikorsky helicopter's growth within the Army, Coast Guard, Air Force, Navy, and Marines. Do you have a Winged S on your aircraft? You learn the why, when, and how it came about. The trip takes military expansion from the piston era R-4, S-51/55/58, and behemoth HR2S into the turbine Kings, Stallions, and Hawks.

Commercial birth and growth are fully covered by Colucci and Bulakowski. We are taken from piston to turbine expansion in markets the world over. Sikorsky aircraft were introduced early on as cargo and passenger vehicles at JFK, and they expanded quickly across the country, to Chicago and LA, to overseas companies from Belgium and Italy to Pakistan and Australia, and more. Sikorsky helicopters were quickly covering the earth, with another major market being the oil fields in the U.S., Europe, and Asia. Heavy use of helicopters by the airlines and oil companies led to the expansion of the S-55 and S-58 to the even larger and more capable turbine 61, 76, and 92, among others.

Our worldwide trip comes to a close with a deep dive into design, engineering, and production at Sikorsky during the digital age. You are taken on a comparative trip from the Grand to Clipper, from the 300 to UTTAS, and from the FVL X2 and Raider to the Defiant and beyond. But, just when we think the trip has ended, we are given a treasure trove of new information in two appendices. In Appendix One, we see all of the different Sikorsky plants and presidents since the company was founded. We see information about and pictures of all of the U.S. Sikorsky aircraft from the biplane S-29 to the S-100 Defiant. To keep the various aircraft straight, we're also given a DOD cross reference guide for popular names and alpha-numerical designations from the larger seaplanes to all of the military service helicopters.

Appendix Two is devoted to Igor Sikorsky himself. Starting with a beautiful painting of him surrounded by some of his historic helo designs, we go through full page blowups of a half dozen of his critical fixed and rotary-wing patents, with pages showing every patent from 1935 to 1960. We are given a two-page color spread of his preserved office in Stratford with separate pictures and explanations of the many memorabilia items there.

Just when you think it's all over, you are given the final nugget of treasure. We see the very last letter that he ever wrote followed by thirteen pages of his personal account of his experiences. The account is in his voice with no editing of his accentuation. I have an LP record of Mr. Sikorsky making a speech at an awards dinner in 1967. His personal recollection is indeed in his own words and a moving ending tribute to this book. I cannot recommend The Sikorsky Aircraft Centennial enough. If you are a history buff, or you just want to know more about the aircraft that you may be flying, then this is the book for you. Frank Colucci and John Bulakowski have given us a beautifully written and crafted accounting of a humble yet magnificent man and the aircraft he made famous. I give it five stars and two hearty thumbs up. Get it, read it, pass it on, but make it part of your library. You will not be disappointed.

Congratulations to the next generation of Naval Aviation warfighters who received their Wings of Gold at NAS Whiting Field. These aviators will move to the Fleet to learn their designated platforms.

Congratulations to the New Naval Aviators
January 19, 2024

Congratulations to the New Naval Aviators
December 15, 2023

Congratulations to the New Naval Aviators
December 1, 2023

Congratulations to the New Naval Aviators
November 17, 2023

Congratulations to the New Aircrew of HSC-3
January 26, 2024

AWS3 Noah Barnas, USN, AWS3 Wells Byrnes,USN, AWS3 Dakota Jackson, USN, AWS3 Kasra Parsa, USN, AWS3 Nicholas Nygrn, USN, and AWS3 Jackson Stacy, USN

Congratulations to the New Aircrew of HSM-41
December 15, 2023

AWR3 Jacob DeRossett, USN, AWR3 Gabriel Thompson, USN, AWR3 Jonathan Wright, USN, AWR3 Dylan Ultreras, USN, and AWR3 Chase Edmonston, USN

Congratulations to the New Aircrew of HSC-3
December 8, 2023

AWS3 Michael Case, USN, AWS3 Clark Broderick, USN, AWS3 Zachary Garcia, USN, AWS3 Kody Nichols, USN, and AWS3 Marcus Yliniemi, USN.

Congratulations to the New Aircrew of HSM-40
December 6, 2023

Congratulations to the New Aircrew of HSM-40
November 1, 2023

CROSSWORD SOLUTION

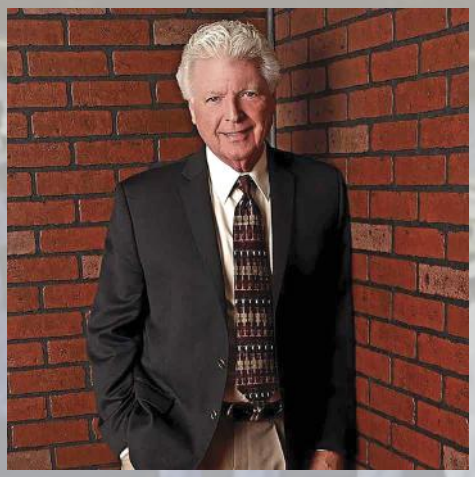
Answer	Clue	Puzzle #
Fix	__, Fly, Flight!	21 across
ATAF	Signed after a maintenance action to ensure no FOD hazard	3 down
Turnaround	Inspection good for 24 hours	12 across
Franchetti	Current CNO	2 across
Ordnance	230 Branch	13 down
FODWALKDOWN	First flight event of the day?	5 down
White	Color of a safety supervisor's float coat?	15 down
CDQAR	Supplement to QA Div, abbr.	16 down
Hydraulic	Type of lubrication with a red hue	10 down
PullChocks	Get the wheels turning	17 across
Asheet	Sign before you fly	19 down
TFO	Airborne maintainer?	4 down
Captain	Plane ___; NAMP Qualification	20 across
MAF	Discrepancy logged in NALCOMIS	23 down
Protective	Personal _____ Equipment	11 down
Nonskid	Helps to keep your footing; on the flight deck and aircraft	7 across
Special	Type of inspection based on calendar time or flight hours	14 down
Ferry	Flying an aircraft to deliver it to storage	8 across
Technical	___Directive; Directs 1-time inspections or modifications	1 down
Cobra	Airframe with tandem cockpit and a "Super" variant	6 across
Diagnose	Identify the problem; from the Greek words for "apart" and "recognize"	18 across
MESM	Helps determine the U/P/D status per TMS	22 across
BUNO	No. associated with each individual airframe	9 across

Signal Charlie

CAPT Dick Catone, USN (Ret.) following a memorial service for a fellow helicopter pilot, is credited with the following statement: "I guess we are all in the starboard delta waiting for Signal Charlie." Starboard Delta is the holding pattern for the airborne Search and Rescue helicopters on the starboard (right) side of the aircraft carrier. They fly at a low altitude so as not to interfere with the fixed-wing aircraft recovery pattern, and only land when the last fixed-wing aircraft is safe on board. When tower calls the helicopter to pass "Charlie" to a landing spot, the crew knows the fixed-wing recovery is complete, all is well, and it is time to come back. Hence, the statement appears appropriate that someday we will receive our own "Signal Charlie" and will be called home for a final landing.

Signal Charlie has been created to inform our membership and honor the passing of fellow unrestricted aviators. It is only as good as the information we receive. If you have an obituary or other information that you would like to provide concerning the passing of a shipmate, co-worker, or friend of the community, please contact the NHA National Office at signalcharlie@navalhelicopterassn.org and we will get the word out.

John Hunter Schmitt



John Hunter Schmitt of Scottsdale, Arizona passed away peacefully at the age of 79 on Saturday, December 23, 2023 at home in Phoenix, Arizona. He was born July 10, 1945 in Seattle Washington. John is survived by his wife of 11 years, Penny Schmitt, his sister Nancy Owen (Keith), his brother Alec Schmitt (Stephanie), his daughters; Carmen Schmitt (Merv Sheffet), Kirsten Schmitt (Aaron Stanton), and Jennifer Lafrenz (Grayson Lafrenz), and nephew Micah Schmitt.

His beloved grandchildren Bridgette Keigwin, (Kevin), Jessica Suarez (Lucas), Emery Schmitt, Daisy Schmitt, Ryder Lafrenz, and Archie Lafrenz will all cherish the memories of their Grampa. John was blessed and did get to meet his precious great grandchildren, Levi Keigwin, and Ozzy Suarez.

John also had step children through Penny; Justin Beazley (Joy), Heather Bantz (Andrew), Jenni Bridgers (Harry), and Christi Kirkland (Dan); step-grandchildren Taygen Bantz, Bo Bantz, Mikey Beazley, Adrienne Beazley, Alexis Beazley, Isaiah Burt, and Maiya Kirkland and great grandchildren Neiko, Luna, and Kya, Maliyah and Anthony.

"Old pilots don't die, they just fly higher!"

John loved flying. He began his career in the air as a Lieutenant in the U.S. Navy. He was in HS-6 during the Vietnam War before becoming a Captain of 747s for United Airlines. John became an Aviation Safety Inspector at the Federal Aviation Administration, Chief Check Pilot at U.S. Park Police, and a Flight Instructor at Simcom International before finally retiring.

For years, John has sponsored a child through Compassion International. In lieu of flowers, please consider continuing his legacy by making a donation to Compassion International. John will be greatly missed by his friends and family.

Services were at Christ's Church of the Valley on Monday, January 22, 2024 in Scottsdale, AZ, followed by a military funeral honors ceremony at National Memorial Cemetery in Phoenix, Arizona.

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