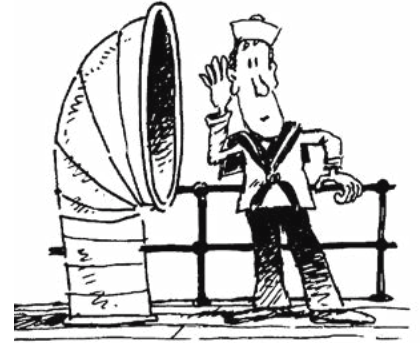


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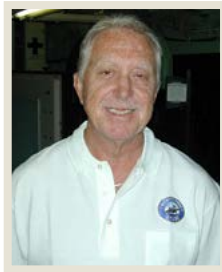


Voice of the Patriots Point Volunteers



USMC Sergeant/Corporal of the Guard Office & Marine Sentry Post 1 (Tour 5)

by Dave Sowers and Monti Montillo



Detachments of US Marines have served aboard Navy ships from 1775 through the 1990s. The purpose of these detachments included security (for individuals, spaces, and equipment), a ready reaction landing force, ceremonial presence, and (on the *Yorktown*) manning the 5-inch gun on the starboard side forward of the island at General Quarters. If you haven't toured the detachment spaces on tour 5, please do so. You'll get a sense of day-to-day life for the 70-80 Marines aboard.

The commanding officer of the detachment was a captain, assisted by an executive officer (XO), who was a first lieutenant, and a first sergeant. There were usually two sergeants and four to six corporals in the detachments. The detachment was divided into two



USMC Cont.



Entrance to ASW



Post 1 graphic



Wall graphic

sections, port and starboard, and rotated day to day.

Central to the organized security was the post of Sergeant/ Corporal of the Guard. Here the responsibility of assigning, posting, and relieving the various watches lay. Sergeant of the Guard was THE head of Marine security on board, with the Corporal of the Guard responsible for the smooth running of a process that assigned the individual Marines to their various posts, and made sure they were squared away (appearance, uniform, equipment and attitude). Each section was organized so that the Sergeant of the Guard was 24 hours on-duty and 24 hours off-duty, and the Corporal of the Guard was four hours on-duty and eight hours off-duty, rotating through the three corporals in each section. Serving as Sergeant or Corporal of the Guard was a responsibility not taken lightly. Mistakes here could be “career defining” in a negative way!

The posts and positions supervised by the Sergeant/Corporal of the Guard included the following:

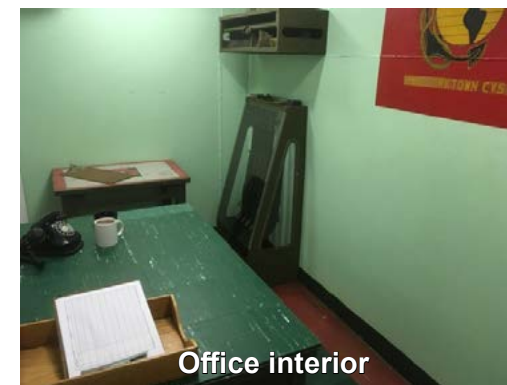
- Aircraft Special Weapons (Nuclear) - Referred to as Post 1. Two sentries, one at the entrance to Aircraft Special Weapons and one in anti-submarine warfare. These posts required Marines with Top Secret clearance. They stood four hours on and eight hours off.
- Brig Turnkey - required corrections training. Stood four hours on and eight hours off.
- Supernumerary - runner. Stood four hours on and eight hours off.
- Forward Brow - when in port.
- Captain’s Orderly - non roster duty. Two per day, as needed.
- The Sergeant of the Guard was also responsible for inspecting the Marine Detachment (MarDet) spaces, raising and lowering of colors and scrambling the detachment in case of emergency.

The idea for this project originated with a visit to the *Yorktown* by a prior XO of the detachment. In the course of his being shown around the ship, we passed by the office and, for the first time, I noticed the sign above the cage door: “SGT/CPL of the Guard.” Except for a desk, table, and USMC emblem on one wall, the cage was empty.

Fast forward a few months and another visit, this time by a former enlisted Marine, where a tour past the same guard office triggered his memories of duty at “Post 1” in the early 1960s. Intrigued by the stories, Monti and I began a search of *Yorktown* cruise books to learn more about the guard office and duty at Post 1. We found two pictures of the area - a start but hardly what we needed for a quality project.

The *Yorktown* reunion that year didn’t yield any MarDet Marines but a conversation with former crewman and Association “sleuth” George Brubaker at the reunion brought forth the MarDet roster for every Marine who had served aboard the ship from 1943 to 1970! From that we were able to garner email contact information for twelve Marines who served on board during the time period we were interested in (mid-1960s). An explanatory email was sent describing our intent and soliciting information, followed by positive responses from the majority. Now we had a project!

USMC Cont.



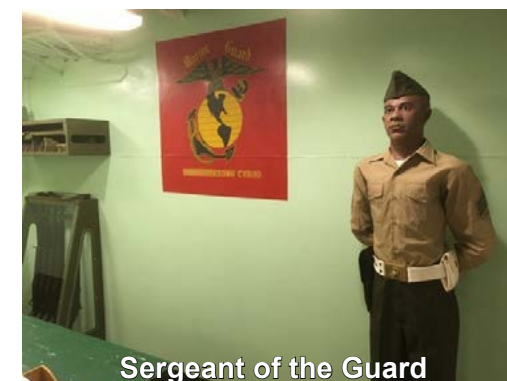
Office interior



.45-caliber pistols in rack



M1 rifles



Sergeant of the Guard

Based on the information received, we began brainstorming the layout and came up with a list of equipment needed to fill out the office as well as tell the story of what went on there and at Post 1.

This has been a rather “smooth” project, relatively speaking, because the area was in good shape. It consisted mainly of finding equipment and adapting it for display. We are indebted to Patriots Point staff for the encouragement, supplies and assistance they provided. Especially important were Brian Parsons and his crew for painting the cage, “re engineering” the rifle rack, mounting the heavy stuff and assisting in mounting the graphics; Jim Vickers for the graphics work; and Melissa Buchanan for the mannequin and uniform.

And a special memory - the Marine Sergeant of the Guard in the cage is wearing a white duty belt with brass USMC NCO waist plate. The belt and plate were donated by our own volunteer, John Flinn, prior to his passing.



John Flinn



Office exterior

A Salute to our Yorktown Volunteers

BAT BOMB

by Chip Biernbaum

This was an experimental weapon proposed by a Pennsylvania dentist to President Roosevelt in January, 1942. Almost immediately after the 1941 Pearl Harbor attack, the dentist had visited Carlsbad Caverns, NM, where he was fascinated by the bats that emerged each evening to feed. *“Couldn’t those millions of bats be fitted with incendiary bombs and dropped from planes? What could be more devastating than such a firebomb attack?”* he recalled in a 1948 interview. The dentist became convinced that bats could be used as bombers. In January, 1942, he sent a letter to the White House proposing that the government investigate this possibility. His suggestion was considered, along with hundreds of others from well-meaning citizens with war-winning ideas, but his was one of the few that reached the desk of the commander in chief. President Franklin D. Roosevelt forwarded a memo to Colonel William J. Donovan, then coordinator of information, with a cryptic notation: *“This man is not a nut. It sounds like a perfectly wild idea, but is worth looking into.”* In fact, the dentist had already made a name for himself as an inventor. In the 1920s and ’30s he launched a 15-year campaign to perfect an airmail pickup system.

The approved weapon consisted of a bomb-shaped casing with over a thousand compartments, each containing a prechilled, hibernating Mexican free-tailed bat with a small, timed incendiary bomb attached. Because female bats carried their own young, it was believed they could handle the added weight. Capturing the bats was not difficult. Team members passed nets on long poles back and forth over the cave entrance as the bats emerged from their lairs. As many as 100 were captured in two or three passes, after which they were placed in a refrigerated truck. Adams took some to the Chemical Warfare Service headquarters at Aberdeen, MD, and released them to show Army officials how they could each carry a dummy bomb. Load-carrying tests were conducted in the dirigible hanger at Naval Air Station, Moffett Field, Sunnyvale, CA. To attach the bomb to a bat, technicians clipped the case to the loose skin on the bat’s chest with a surgical clip and a piece of string. The bats were dropped from a plane in a cardboard container that would open in midair at about 1,000 feet. According to one CWS report, the bats were then expected “to fly into hiding in dwellings or other structures, gnaw through the string, and leave the bombs behind.” Dropped from a bomber at dawn, the casings would deploy a parachute in mid-flight and open to release the bats, which would then roost in eaves and attics in a 20-40 mile radius. The timed incendiaries would start fires



Bat bomb canister used to hold hibernating bats



Dr. Lytle S. Adams



A Mexican free-tailed bat

A Salute to our Yorktown Volunteers

in the largely wood and paper construction of the Japanese cities that were the weapon’s intended target.

By March, 1943, a suitable species had been selected (four caves in New Mexico are each occupied by several million individuals). The project was considered serious enough that Louis Fieser, the inventor of military napalm, designed 0.6-ounce and one-ounce incendiary devices to be carried by the bats. A bat carrier similar to a bomb casing was designed that included 26 stacked trays, each containing compartments for 40 bats. The carriers would be dropped from 5,000 feet. Then the trays would separate, but remain connected to a parachute that would deploy at 1,000 feet. It was envisioned that ten B-24 bombers flying from Alaska, each carrying a hundred shells packed with bomb-carrying bats, could release 1,040,000 bat bombs over the target of the industrial cities of Osaka Bay.

A series of tests to answer various operational questions were conducted. In one incident the Carlsbad Army Auxiliary Air Base near Carlsbad, NM, was set on fire when armed bats were accidentally released. The bats incinerated the test range and roosted under a fuel tank.

Following this setback, the project was relegated to the Navy in August, 1943, who renamed it Project X-Ray, and then passed it to the Marine Corps that December. The Marine Corps moved operations to the Marine Corps Air Station at El Centro, CA. After several experiments and operational adjustments, the definitive test was carried out on the “Japanese Village,” a mockup of a Japanese city built by the Chemical Warfare Service at their Dugway Proving Grounds test site in Utah.

Observers at this test produced optimistic accounts. The chief of incendiary testing at Dugway wrote, *“A reasonable number of destructive fires can be started in spite of the extremely small size of the units. The main advantage of the units would seem to be their placement within the enemy structures without the knowledge of the householder or fire watchers, thus allowing the fire to establish itself before being discovered.”* The National Defense Research Committee (NDRC) observer stated: *“It was concluded that X-Ray is an effective weapon.”* One scientist stated that on a weight basis X-Ray was more effective than the standard incendiary bombs in use at the time. *“Expressed in another way, the regular bombs would give probably 167 to 400 fires per bomb load where X-Ray would give 3,625 to 4,748 fires.”*

More tests were scheduled for the summer of 1944, but the program was cancelled by Fleet Admiral Ernest King when he heard that it would likely not be combat ready until mid-1945. By that time it was estimated that \$2 million had been spent on the project. It is thought that development of the bat bomb was moving too slowly, and was overtaken in the race for a quick end to the war by the atomic bomb project.

The infamous “Invasion by Bats” project was afterwards referred to by Dr. Stanley Lovell, director of research and development for the Office of Strategic Services (OSS), as “Die Fledermaus Farce”. Lovell also mentioned that bats during testing were dropping to the ground like stones.

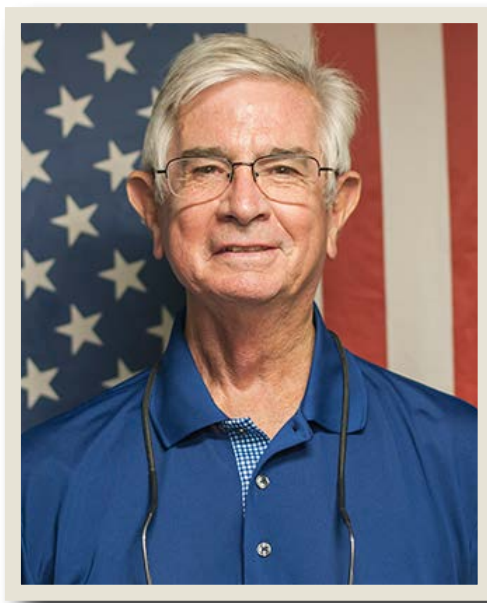


Errant bats from the experimental bat bomb set fire to the Carlsbad Army Auxiliary Air Base in New Mexico.

A Salute to our Yorktown Volunteers

Thom Ford Takes Over as Coordinator of the Patriots Point Volunteers

by Chip Biernbaum



Born in 1950 in Ft. Worth, TX, Thom grew up in Hagerstown, MD, and traveled quite a bit when young (his dad, who had flown B-25s in China, was a test pilot). He received his BA from Wake Forest University in 1972 and an MA at the Naval Postgraduate School in 1982. He was also a Federal Executive Fellow at the Brookings Institution in 1993.

Thom served in the US Navy from 1972 to 2002, retiring as a Captain. He shares the following: *“I was accepted for Aviation Officer Candidate School in Pensacola in June, 1972, just ahead of the Draft Board (I had already passed the induction physical). On the day I received my wings in Corpus Christi, TX, the Blue Angels conducted an air show for Navy Relief. It was a great day.”* He was a naval flight officer during his time in the Navy, responsible for sensors, weapons and tactics, primarily in the S-3A and S-3B Viking aircraft. The S-3A was an anti-submarine plane, while the S-3B had a variety of missions, including anti-surface warfare and aerial refueling.



He had several interesting assignments and activities during his career. They included transport navigator in the C-130 and C-118 aircraft in WESTPAC, home-based at Barbers Point, Hawaii, 1973-1976; Battle Group Staff Officer during the Lebanon crisis embarked in USS *John F. Kennedy* (CV-67), 1983-1984; Sixth Fleet Liaison Officer to US Air Force (48th Tactical Fighter Wing) for Eldorado Canyon – joint strike against Libya; Freedom of Navigation operations in Gulf of Sidra embarking on the USS *America* (CV-66), 1986; Commanding Officer, Sea Strike Squadron Thirty (VS-30) embarked in USS *Saratoga* (CV-60) for Desert Shield and Desert Storm, 1990-1991; Air and Strike Operations Officer for US Naval Forces Central Command Forward embarked in USS *La Salle* (AGF-3), Bahrain, 1991-1992; Director

Navy Element, US Army Command and General Staff College, Ft. Leavenworth, KS, 1993-1995; representative for Command Naval Striking and Support Forces Southern Region to Command Land Southeast, Izmir, Turkey, 1995-1998; and Deputy Director Field Command, Defense Threat Reduction Agency, Kirkland Air Force Base, Albuquerque, NM, 1998-2002.

He was also a defense contractor as an analyst for national defense and homeland security programs from

Thom Ford Cont.

2002 to 2010. One interesting assignment was a post-9/11 Threat and Vulnerability Assessment for the Statue of Liberty National Monument. He worked for the federal government as a GS-15 equivalent from 2010 to 2016. He was a Requirements Officer, Office of the Secretary of Defense, Undersecretary of Defense for Acquisition, Technology and Logistics and supported the Joint Chiefs’ Joint Requirements Oversight Council and Joint Capabilities Integration and Development System.

Thom recalled two stories from his career. *“We were operating during the Ocean Safari exercise on a carrier in a large Norwegian fjord. One night we were the only aircraft that was airborne with the Northern Lights seemingly right above us. We were so impressed that we tried to fly among them! During Desert Storm, our routine mission was to pick up Saratoga’s air task order for the next day in Riyadh, Saudi Arabia. Inbound, as we flew over western Saudi during the day, it looked like the moon — totally desolate. When we returned that night, the ground was covered in points of light. Apparently, the Bedouins had turned on their gas-generator-powered lights.”*

Thom is married to Diane, whom he met in 2003 in Virginia Beach when he was doing defense contracts, and the two of them moved to Alexandria, VA, while he got a job in the Pentagon. They moved to Summerville from Alexandria in 2015. They have four children between them: Catherine Muller (she and her husband are both diplomats in Dubai); Allison Killilea, with three children; Lindsay Huebler, with two children; and Marshall Beach, with two children.

Thom became a Patriots Point volunteer on July 7, 2017. He has a final comment: *“It is a tremendous honor to have the opportunity to coordinate the activities of the Volunteers. I look forward to working with this talented and diverse group in fulfilling Patriots Point’s mission of education and enlightenment, and honoring the nation’s heroes, past and present. And I am dedicated to making the volunteer experience rewarding and fulfilling for all who so freely give their time and energy.”*



Charleston Cont.

More About the USS Charleston (LCS-18)

by Chip Biernbaum

As most of you know, on March 2nd the USS *Charleston* (LCS-18), built by Austal USA in Mobile, AL, was commissioned at Berth One, Columbus Street Terminal in Charleston. This was a little less than one month after the USS *Tulsa* (LCS-16) was commissioned in San Francisco. Both of these vessels belong to the narrow-bowed Freedom-class of Littoral Combat Ships, which will be berthed in San

Diego, CA. The wide-bowed Independence-class Littoral Combat Ships are berthed in Mayport,

FL. Both classes of LCS are intended to fight in enclosed or coastal contested waters, with a mission that includes one of several embarked mission modules and personnel: anti-mine, anti-submarine and anti-surface warfare (the USS *Charleston* will focus on anti-mine missions in the Pacific).

The 421-foot-long USS *Charleston* (displacement of 3,200 tons) is commanded by Cmdr Christopher Brusca. She has 40 core crew members (8 officers, 32 enlisted) plus up to 35 mission crew. The trimaran ship has alternating Blue and Gold crews (like the Navy's subs), has a draft of 15 feet, and is propelled by four waterjets (rather than the usual propellers), reaching speeds in excess of 40 knots (47 knots when "sprinting"). The sponsor of the *Charleston* is Mrs. Charlotte Riley, wife of former mayor Joe Riley.

Armament aboard the vessel includes a single 57-mm gun on the bow (an Mk 110), a RIM-116 SeaRAM defense system (a small, lightweight, 11-cell, infrared-homing, surface-to-air missile used primarily as a point-defense weapon against antiship cruise missiles) and four .50-caliber machine guns. She also has four chaff launchers. Aircraft assigned to the vessel include two choppers (Sikorsky MH-60R/S Seahawks) and a single Northrop Grumman MQ-8B Fire Scout (an unmanned helicopter).

There has been an ongoing debate within the Navy as to whether the Littoral Combat Ships should be reclassified

as frigates. The last nine of 51 Oliver Hazard Perry-class guided-missile frigates (displacement of 4,200 tons and 408 ft in length) were decommissioned and stricken for disposal in 2015. The new LCS/FFG(X) vessel would be a frigate-sized vessel designated as a Small Surface Combatant that would be based on a modified LCS design. The Navy plans to build 34 LCSs before shifting to its surface combatant priority, the future frigate program. The Navy still has one LCS contract to award.

The new frigate (FFG[X]) would have at least 32 Mark 41 Vertical Launch System cells that could field Standard missiles or SeaSparrow missiles and a planned vertically launched anti-submarine warfare weapon; a Combat Management System based on the Aegis Combat System; a datalink that would allow the frigate to share targeting information with other ships and aircraft; space, weight and cooling for 8 to 16 over-the-horizon anti-ship cruise missiles; and space,



Secretary of the Navy Richard Spencer delivers his remarks during the commissioning ceremony of USS *Charleston* (LCS-18) on March 2, 2019.



Artist's Rendering of the Austal-designed FFG(X)



Artist's rendering of the Navantia/Bath-designed FFG(X)

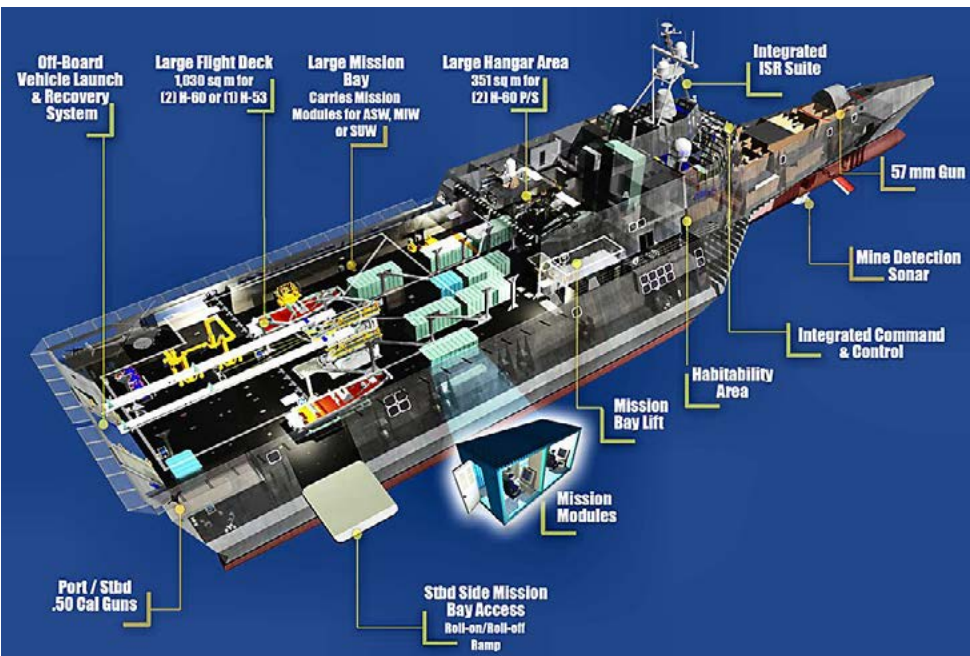
weight and cooling for a 150-kilowatt laser. While the Navy hasn't been explicit about the connection, the inclusion of the high-bandwidth datalinks on FFG(X) hint at an important role for the class to provide command and control and targeting information to the Navy's emerging family of unmanned surface vehicles. The Navy has selected five shipbuilders to evolve their designs into a prospective design for the proposed twenty FFG(X) guided-missile frigates.

The USS *Charleston* (LCS-18) is the sixth vessel with that name. USS *Charleston* (1798) was a "row galley," occasionally using sails, used to defend the coast of South Carolina during the Quasi-War with France, in commission from 1798 to 1802 (seen in the center of the current USS *Charleston*'s crest); USS *Charleston* (C-2) was a cruiser that received the surrender of Guam during the Spanish-American War, commissioned in 1889 and wrecked in 1899; USS *Charleston*

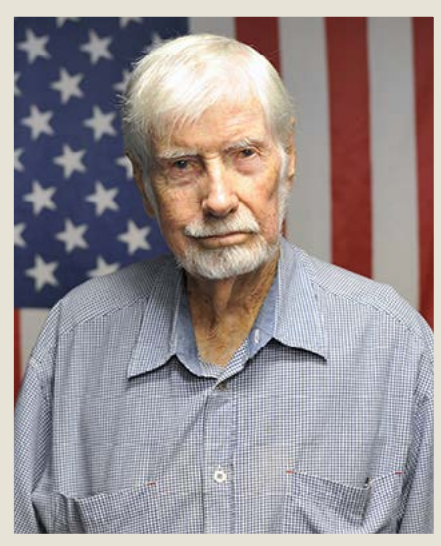
(C-22) was a cruiser that performed escort and troop-transport duties during World War I, in commission from 1905 to 1923; USS *Charleston* (PG-51) was an Erie-class patrol gunboat in commission from 1936 to 1946 (it served in the North Pacific and earned a battle star during World War II); USS *Charleston* (LKA-113) was an amphibious cargo ship that participated in the Vietnam War, in commission from 1968 to 1992.



USS *Charleston* (LCS-18)



A Salute to our Yorktown Volunteers



Dick Morgan

by Dick Morgan

I was born in 1928, raised in San Diego and, after family moves, attended high school in Modesto, CA. My early years were tempered by the impact of the Great Depression. Through the course of those years, I made many friends from the mid-west (Okies and others) whose families were displaced by the “Dust Bowl.” John Steinbeck’s book, *The Grapes of Wrath*, describes the abject poverty they endured. I witnessed their grit and determination in restoring their dignity while pulling themselves from those beginnings, a life’s lesson I’ll never forget.

As a kid, I was interested in anything to do with flying. I spent hours building rubber-band-powered model airplanes. I read every issue of *G-8 and his Battle Aces* that I could get my hands on (I still have a few copies). And my favorite movie, especially since there were no women in it to “gush” it up, was *Dawn Patrol*. I keep a DVD copy of it in my safe. I might mention that I eventually found having a few girls around wasn’t so bad after all.

I was just short of 17 years old and living in the San Fernando Valley, CA, when WWII in Europe ended. I was disappointed since I was waiting for the time when I could go over and single-handedly wipe out the Luftwaffe. After that, while hanging out at a local airport (Whiteman) in my spare time, I met some young pilots recently returned from active duty, who were giving flight instruction in order to keep their flight status current. They taught me how to fly and, even though they were pretty “rude” at times, they drummed some lessons into my thick skull that I never forgot, lessons that saved my rear end more than once. I finally earned my private pilot license in 1948.

After the Korean War started, I enlisted in the California National Guard. While my Division (the 49th) was waiting to be called up for active duty in Korea, we participated in field exercises. I was trained to operate an M-209 Cipher Machine. Our Division was never called (the 40th Division in Southern California was called instead). So, anxious to get into the action, I decided to leave the National Guard and, on February 21, 1952, I enlisted in the U.S. Air Force.

After basic training at Lackland Air Force Base (AFB), San Antonio, TX (where I encountered some more “rude guys,” like Drill Instructors), I was sent to Lowry AFB, Denver, CO. I first received electronics fundamentals training (with periods of learning the art of potato peeling, dishwashing and deck scrubbing in the world’s biggest chow hall). Next I went to the K-4 Bomb Navigation System school. Variants of the K-4 System were used in B-36 and B-47 aircraft. It consisted of several components, including a bombing computer, a navigation computer, a radar system and an optical system, altogether a bit more complex than the Norden Bombsight which it replaced and quite a bit more expensive than the “20-cent” bombsight that the Doolittle Raiders used, like the one we have in our B-25.

The K-System computers were comprised of many electromechanical devices used in conjunction with radar and optics to solve bombing and navigation problems. Later systems were designed using electronic computers. I was sent to Douglas Aircraft Long Beach for training on the maintenance and operation of one of those, the K-5 system, which was being installed in Douglas’s B-66 bombers (the B-66 was a fixed-wing version of the Navy’s A-3 Skywarrior). The K-5 system included a “moving target” radar feature which provided enhanced air-to-ground combat capability. I returned to Lowry and helped develop a course for K-5 system maintenance technicians. I was honorably discharged from the USAF in 1956 as a staff sergeant.

I was able to capitalize on the electronics experience I gained in the Air Force, spending most of my career

A Salute to our Yorktown Volunteers

Dick Morgan Cont.

working in the aerospace industry, including the Ryan Aeronautical Company, Litton Industries and a few government agencies. I had some very interesting jobs, which included research, development and flight testing of military avionics systems; technical training and maintenance support for fleet aviation personnel; and logistics support for Atlantic Fleet Naval and Marine shore-and-sea maintenance activities.

While working in the Electronics Division at Ryan Aeronautical Company, I was sent to Lockheed Aircraft Burbank in support of the installation and flight testing of Ryan’s An/APN-122 Doppler Radar System in Lockheed’s P2V antisubmarine warfare (ASW) aircraft. I flew on test flights with a guy by the name of Sammy Mason, who was famous for his aerobatic flying at air shows where he flew a biplane (similar to the one suspended in hangar bay 1) with his name painted on the side of the fuselage, so when he flew inverted in front of bystanders, you knew who he was!

The real plus for me while at Lockheed was the day I found a Ryan PT-22 Recruit for sale at the Burbank Airport. The plane, built in 1941, was used by the Army Air Force to train cadets, sold war surplus, inspected and registered #N47620. PT-22s are low, single-wing, dual-cockpit tail draggers powered by a Kinner 160 HP five-cylinder radial engine. The instruments consist of a tachometer, an airspeed indicator, an altimeter, a magnetic compass and a manual starter (me!). It had no radios, but it did have an intercom called a “Gosport” system, whereby the pilot in the rear cockpit could speak into a funnel connected via a rubber tube to the helmet of the pilot (or student) in the front cockpit. It worked fine as long as the funnel wasn’t mistaken for the relief tube! I met a pilot who taught me some aerobatics in the Ryan which would do about anything except prolonged inverted flight. Because fuel in the fuselage tank was supplied to the engine via gravity flow, it simply ran out of gas when upside down! You just had to roll out, put the nose down a little and let the prop windmill until the engine fired up again.



Ryan PT-22 Recruit

I once flew the Ryan from Burbank across the Pacific Ocean and I had a certificate to prove it, issued by the guys in the tower on Catalina Island. On the return flight, I saw a sub sailing down the channel near Long Beach. Suddenly, I was surrounded by a couple of S2Fs flying cover over their sub. I guess when they got close enough they could see I was no threat and let me go. That episode did cost me a little extra flight time, though. I had started my trip with a full tank of gas (24 gallons) and by the time I landed back at Burbank, I had just two gallons remaining. Dumb luck!

In the early 1960s I went to work for Litton Industries, Guidance & Control Systems Division. I worked there several years in research and development, qualification testing and flight testing of airborne inertial guidance systems installed in P3C patrol aircraft. One of the projects I worked on was flight testing a prototype Loran C damped inertial navigation system. We borrowed a B-17 from Aero Service Corporation, a subsidiary of Litton, to use as a test vehicle. After installing our equipment in the B-17 at the North Philadelphia airport, we headed south toward the Bahamas for over-water testing. We made a refueling stop at Shaw AFB in Sumter, SC, and took some former WW-II B-17 pilots, then in the twilight of their careers at Shaw, for a local flight. Talk about nostalgia!

In the early 1970s I was back with Teledyne Ryan and was sent to Mayport, FL, where I went aboard the USS

A Salute to our Yorktown Volunteers

Dick Morgan Cont.

Saratoga (CV-60) to provide technical training and maintenance support during sea trials for Ryan’s APN-182 Doppler Radar System installed in HS-7’s SH-3D ASW helicopters. After that, I was sent to Quonset Point, RI, where I provided similar support for HS-5 personnel aboard the USS *Wasp* (CVS-18). As *Wasp* was returning to Quonset Point, she was diverted to the North Atlantic on a rescue mission in heavy weather, suffered major damage to her hull and was subsequently decommissioned.

In my last assignment with Ryan, I was sent to the Naval Air Development Center (NADC), Warminster, PA, to support the integration of Ryan’s APN-217 Doppler Navigation System proposed for the Navy’s new Sikorsky SH-60B Lamps MkIII Seahawk helicopters. Prototype systems were installed in Kaman H-2 helicopters at NADC and then taken to Andros Island, Bahamas, for testing with project submarines in exercises at the Navy’s Atlantic Undersea Test and Evaluation Center (the Navy’s “Area 51”). During the period at NADC, prior to the deployment to Andros, I joined the Navy Flying Club at Naval Air Station Willow Grove, where, at the ripe young age of 50 and after flying “blind” for many years, I finally earned my instrument rating! My flight instructor was a LADY who at times “firmly” asserted herself (versus being “rude,” as my guy instructors were) when I did something stupid. Not only that, she was a mathematician during her day job and also a member of the “Ninety-Nines” (established in 1929 by 99 pilots, it is the International Association of Women Pilots — the first president was Amelia Earhart). Some girls really are smart, aren’t they!

At the end of my career in the aerospace industry, I was employed as a technical representative with the Naval Aviation Engineering Service Unit at Naval Air Station (NAS), Norfolk, VA, ultimately working in the Avionics Division of the office of the Commander of the Naval Air Forces, Atlantic Fleet (AIRLANT), providing logistics and technical support to fleet activities. I participated in the design and outfitting of the Aircraft Intermediate Maintenance Department during the initial standup of SH-60 Lamps MkIII squadron operations at NAS Mayport, FL. Vice Admiral Richard Dunleavy served as Commander, Naval Air Force Atlantic, from 1986 to 1989. He was highly respected and very popular with all who served under him, military and civilian alike. Unfortunately, he became involved in the Tailhook Scandal and, though he was not directly involved, he was senior in command at the convention and accepted responsibility for it, costing him a reduction in rank at retirement.

I retired in 1988 and moved from Norfolk to Charleston in order for my wife to be close to her son and grandchildren. She passed away in 1992. I spent some time as a volunteer at the Charleston Municipal Golf

A Salute to our Yorktown Volunteers

Dick Morgan Cont.

Course and as a property manager at Folly Beach. I was introduced to my present wife, Margaret, by a friend at the James Island Yacht Club. She had lost her spouse, Gene Johnson, also in 1992. Gene worked in the avionics shop at Hawthorne Aviation. His boss was Bevo Howard, another aerobatic pilot who, like Sammy Mason, also had his name painted on the side of his plane. Bevo crashed and died performing at an airshow in 1971. Anyhow, in 1997, before she discovered what a male chauvinist I was, we were married. Since then, we have been able to enjoy our twilight years together camping, traveling and mixing with friends and family.

I was crawling through the *Clamagore* on my first visit to Patriots Point a few years ago when I came across a display (since replaced) of several plaques commemorating submarines “On Eternal Patrol.” One of the plaques was the USS *Perch* (SS-176), on which was listed the names of the crew; one of those crew members was Edward Van Horn, EM1, a friend of mine (now deceased). The *Perch* was badly damaged by Japanese Naval forces in 1942. She was scuttled and the crew ordered to abandon ship, whereupon they were picked up by the Japanese and held prisoner working the Ashio mines until the end of the war. All but six of the crew of 59 survived imprisonment. I met “Van” when I was working at Ryan. He never talked much about his imprisonment and he held no animosity toward the Japanese (except for one who left some scars on him). His philosophy was that he was a “soldier” and he just lost that battle! Van was working on Ryan’s landing radar, which was installed on the Apollo-11 Eagle lunar lander. Can you imagine a young electrician surviving a sinking sub and being held prisoner of war for 1,297 days, then one day, many years later, assisting Armstrong and Aldrin in the first landing on the moon. Quite a life!

My golfing buddy, Bob Mailly (former Navy seaplane driver and current National Cribbage Champion), and I were trading flying stories one day when he suggested that I become a volunteer at Patriots Point. He hooked me up with Dick West, who interviewed me, handed me a Volunteer Manual and told me to report back at noon the following Thursday for duty at the Info desk. Danged if I didn’t feel like I had just re-enlisted. Dick told me that if I had any questions about the museum to just ask any volunteer. Lo and behold, the first volunteer I met was Rich Livingston. Rich happily proceeded to give me a very thorough indoctrination of the *Yorktown*, taking me places well off the normal tours, places I doubt I could ever find again, all the while explaining how all the ship’s systems worked. Later, he gave me the same sort of detailed orientation aboard the *Laffey*. Rich greeted visitors with respect and truly enhanced their experience at Patriots Point. All who knew him were saddened at his passing, just a few days before Dick West; we will miss them both.

I have enjoyed my experience at Patriots Point, the camaraderie working with volunteers and staff members, greeting visitors both at the Info Desk on the *Yorktown* and while driving the shuttle. And I have enjoyed the numerous perks, such as the bus rides to visit museums in Georgia and Washington, DC, the annual dinner cruises and the 1st Annual Golf Tournament (I’m certain our team would have won if Tom, Chauncey and Mac hadn’t had to hit the ball and carry me after each shot!).

I am mindful of our slogan, “WALK IN THE STEPS OF HEROES,” and I feel that emotion every time I’m on board at Patriots Point. Further, I recall a saying by Will Rogers which is, “We can’t all be heroes because somebody has to sit on the curb and applaud when they go by.” I have the good fortune to meet REAL heroes at Patriots Point and I applaud them all!



Robert Newman, Dick Morgan and Geoff Bertkau



Great way to stay informed!



PatriotsPoint.org ★ Facebook.com/PatriotsPoint.org

A Salute to our Yorktown Volunteers



John Common

by John Common

I was born July 22, 1941, in Wellsville, New York, and lived in Andover, NY, a small town 100 miles south of Rochester. My wife, Linda, and I went to Andover Central School and I graduated in 1959. My father and grandfather were the town dentists, which seeded my future career change. There were 19 in my class and a whopping 32 in Linda's. I started college majoring in ceramic engineering at Alfred University, where I played basketball. I transferred to the Naval Academy, where I was on the basketball and crew teams, Chapel choir, and glee club. The day after graduation, Linda and I were married at the Naval Academy Chapel on June 4, 1964. We were high school sweethearts and are best friends forever.

We have three daughters. Kristen is a special ed teacher, taught for 28 years in Beaufort, SC, and presently is the education director at St Luke's Early Childhood School in Summerville. Megan Croghan was a dental hygienist and is now a Charleston County school teacher. Megan and her husband, Danny, have two children. Cari and husband, Jon, live in Fairview, NC, and have a combined family of five children.

After interviews with Admiral Rickover and graduation, I had 18 months of Submarine School and Nuclear Power School. My first duty was Supply Officer on the USS *Blenny* (SS-324). The *Blenny* didn't spend a lot of time in New London. A 4-5 month deployment in the Mediterranean started Linda's and my love of Italy. Linda and two other wives came over and followed the ship to San Remo, Palma and Monaco. The highlight was Christmas Eve dinner with Prince Rainier, Princess Grace and Jacques Cousteau at the Palace. The next adventure was a two-month special ops in the Barents Sea. The *Blenny*, *Clamagore* (SS-343), *Halfbeak* (SS-352) and *Cobbler* (SS-344) (Guppy III's) formed a listening barrier to track the Russian ships. The *Clamagore* wardroom has the photo of the subs in formation leaving New London. The seventy-plus sub sailors were pretty smelly when we pulled into Portsmouth, England. Summer of 1967 brought four months of Weapons School in Dam Neck, VA, and arrival in Charleston to become Weapons Officer on the USS *Von Steuben* (SSBN-632).

After four patrols, I made the decision to become a dentist. I left active duty as a Lieutenant, stayed in the ready reserves and took the necessary chemistry and biology courses at The Citadel to qualify for dental school. I was hired at the Nuclear Division at the Charleston Naval Shipyard working for the Chief Test Engineer overhauling the USS *George Washington* (SSBN-598). I worked the swing shift (4-12), writing test procedures and testing flow charts.

Dental School at MUSC started in September 1970. I continued to work part time at the Charleston Naval



Lead sub: USS *Halfbeak* (SS-352); side subs: USS *Clamagore* (SS-343) & USS *Cobbler* (SS-344); rear sub: USS *Blenny* (SS-324). John Common was OOD on the *Blenny* when this photo was taken.

A Salute to our Yorktown Volunteers

John Common Cont.

Shipyard until I went back on active duty as an ensign in the Dental Corps. I said, "Some people are hard learners spending two times as an ensign." An interesting incident happened during the dental/part-time shipyard era. A lot of the *George Washington* machinery was so old parts couldn't be replaced. One of the primary coolant pump valve's internal parts needed to be duplicated. I suited-up and entered the reactor compartment with dental impression material and pretended it was a tooth and the worn part was duplicated and valve repaired.

Dental School graduation was December 1973, and my first duty station was the old Naval Dental Clinic Charleston. Since I had the submarine *Dolphin* and *Polaris* Patrol pins, I spent most of the time at the clinic treating the submarine crews. I also trained all the sub corpsmen on how to treat dental emergencies. My next duty station in 1976 was as a dental officer on the USS *Sierra* (AD-18), home-ported in Charleston. The highlight was a six-month Med deployment with a majority of time in Italy. Linda became a "Seagull" again. She took our two older daughters (8 and 11) out of school and followed the ship around from May through August, with time in mainland Italy, Sicily and Spain. I was selected for Periodontal Residency training in the fall of 1978 and spent two years at the University of North Carolina at Chapel Hill. Our third daughter



Lieutenant John Common, 1973



USS *Holland* (AS-32) and sub

was born in Chapel Hill. After completion of training, I was sent to (you guessed it) Naval Regional Dental Center Charleston in July 1980. My last tour of duty in 1984 was Senior Dental Officer on the USS *Holland* (AS-32) stationed at the Naval Weapons Station Charleston. I was Acting Executive Officer when the Executive Officer (XO) was on leave and received lots of scared looks at XO Mast, when crew members were written up for missing dental appointments. I retired in December 1986 after 22-plus years of service. One of our *Yorktown* volunteers, Dr. Carl Herscher, relieved me as Senior Dental Officer on the USS *Holland*. I joined the Navy to see the world, but our family has lived in Charleston 50 of the last 52 years.

After retirement as a Commander in 1986, I opened a periodontal private practice in Summerville, SC. I retired from dentistry in 2012. I have been a member of the Summerville and Daniel Island Rotary Clubs for over 30 years. I am a member of St. Clare of Assisi Catholic Church and was one of the pioneers moving to Daniel Island 20 years ago. Linda and I love to travel and have been to France, Spain, England, Scotland, Germany, Ireland and five times to Italy. We are now concentrating on our National Parks. Early adulthood fitness included running 10k's and marathons. Now it's golf and Rock Steady Boxing 3-4 times a week (a specialized fitness program for Parkinson Patients). I love volunteering at the *Yorktown* and hang out on the *Clamagore* telling sea stories about diesel subs. "DBF" Diesel Boats Forever!



John Common, 1980

FLOTSAM & JETSAM

Compiled by Chip Biernbaum

★ When chasing its fish prey, a seal can use its whiskers to assess its target's bearing, size and velocity. How it does this is by using its whiskers. An object moving through water, such as a fish or school of fish, leaves a series of miniature whirlpools in its wake. Seals use their whiskers to follow this trail. They can do this even when blindfolded and wearing earmuffs (so it's not due to echolocation). But if you cover their whiskers, they are incapacitated. Seals' whiskers have an unusual geometry; in contrast to what we might expect, they are oval in cross section, creating an undulating geometry. As is the case with mooring lines for offshore gas rigs, these whiskers do not vibrate when in straight-flowing currents. But when they encounter the vortices created by a passing fish, they vibrate. Bigger moving objects create bigger vortices, so the amplitude of this vibration changes with the size of the object being followed. The frequency of the vibration changes with the object's speed. In 2016, a scientist attached an artificial whisker to a membrane that, when distorted, generated a pulse of electricity. This scientist's purpose is to design a whisker-based sensor for underwater robots that could detect the wakes of such objects as surface ships and submarines. Some of this research has been supported by the Office of Naval Research. They hope that this approach will aid the US in spotting submarines, which are getting ever quieter and harder to find with sonar. A submarine leaves a very large trail that can persist for hours, even days.



★ The Army is changing its uniforms! World War II-style uniforms are being returned to the U.S. Army. They will be initiated in the summer of 2020 and the entire Army will be wearing them by 2028. The long transition period is designed to accommodate soldiers nearing retirement. Women will have the option of wearing versions with pants or skirts.



★ Russia and China are developing hypersonic weapons that are far too fast for current US Navy air defense weapons to handle. China is leading the world in hypersonic technology due to Beijing setting a clear investment strategy to its industrial base, a panel of national security experts said in March. These missiles can achieve speeds ranging from Mach 5 to a theoretical upper limit of Mach 25, or 317 miles per minute. Furthermore, these missiles are capable of flight profiles below traditional radar horizons and may arrive on target by following unpredictable flight paths. Hypersonic glide weapons can hold at risk carriers and bases in an attempt to change US behavior in places like the South China Sea. Roger Zakheim, a member of the National Defense Strategy Commission added, "it is the [hypersonic missile] capability that will keep us out" of the Indo-Pacific [and] render [aircraft carriers] useless." It must be emphasized that there is no defensive system on any US Navy ship class

Flotsam & Jetsam Cont.

capable of engaging a hypersonic weapon. Fortunately, however, there may be a shape of a solution on the horizon, the Surface Navy Laser Weapon System (SNLWS). The first of these laser systems, HELIOS (High-Energy Laser with Integrated Optical dazzler and Surveillance) already is being developed and tested in the fleet. Though HELIOS is limited to short-range, defensive missions, it does describe a path forward. Unfortunately, no ship class, including the Zumwalt-class destroyer, possesses all of the characteristics necessary to support this kind of anti-hypersonic laser, including room for the weapon or the power-generation necessary. Like it or not, a race is on, and hypersonic weapons will give total ascendancy to the offense in a sea fight.



★ In 1972 the Navy deployed 11,000 sea mines at major North Vietnamese ports and waterways to disrupt the flow of military supplies coming from China and the Soviet Union. Three months later, an American aircrew flying over waters near an island off the North Vietnamese coast observed about two dozen mines exploded within 30 seconds, with no ships nearby. Many of the mines were designed to detonate when they detected changes in the magnetic field that would occur whenever the metal hulls of ships passed over them. It turns out that there was a major solar storm that flung magnetized gas at Earth at about the same time that the mines were seen to explode. One of the solar flares was gigantic and pummeled the Earth's magnetic field, disrupting power grids and communications systems. As published in the scientific journal *Space Weather*, a team from the University of Colorado has concluded that it was this solar storm that caused the explosions of these mines.



A Salute to our Yorktown Volunteers



Mark Diamond and fellow Vietnam Vet during our Vietnam Veterans day celebration at the Vietnam Experience



New Volunteer Kevin Nolan chats with fellow Vietnam Vet at the Vietnam Veteran pinning station.

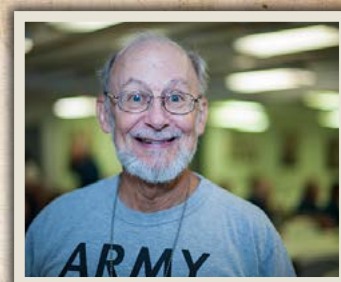


Woody Caine talking with Vietnam Vets and their families in the mess hall at the Vietnam Experience

A Volunteer Remembers . . .

Do you have a humorous, frightening or touching story from years ago?

If so, please send it to me at cbbaum1@bellsouth.net



A Salute to our Yorktown Volunteers

Paul Watters (background) photo bombs Stoney Bates and fellow Vietnam Veteran during Patriots Point's Vietnam Veterans Day



L-R
Paul Watters
Thom Ford
Claude Rountree
Mac Burdette
Stoney Bates

L-R
Claude Rountree, Paul Watters,
Woody Caine and Stoney Bates
at the CH-46 dedication on
Vietnam Veterans Day



PATRIOTS POINT
Home of the USS YORKTOWN (CV-10)
Volunteer Department

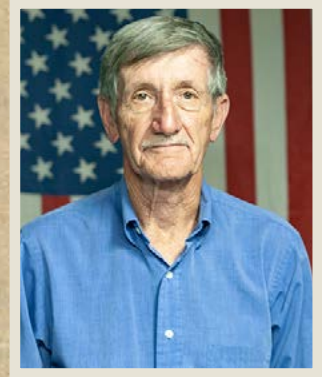
***** WELCOME NEW VOLUNTEERS *****



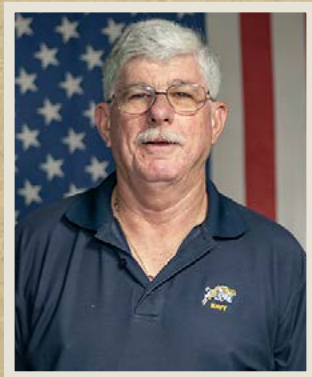
Bill Caldwell



Gerry Maggard



Rich Barnett



Kevin Nolan



Patrick Faver



Russell Dee



Diane Russell



Bernard Magdelain



Frank Humbles

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