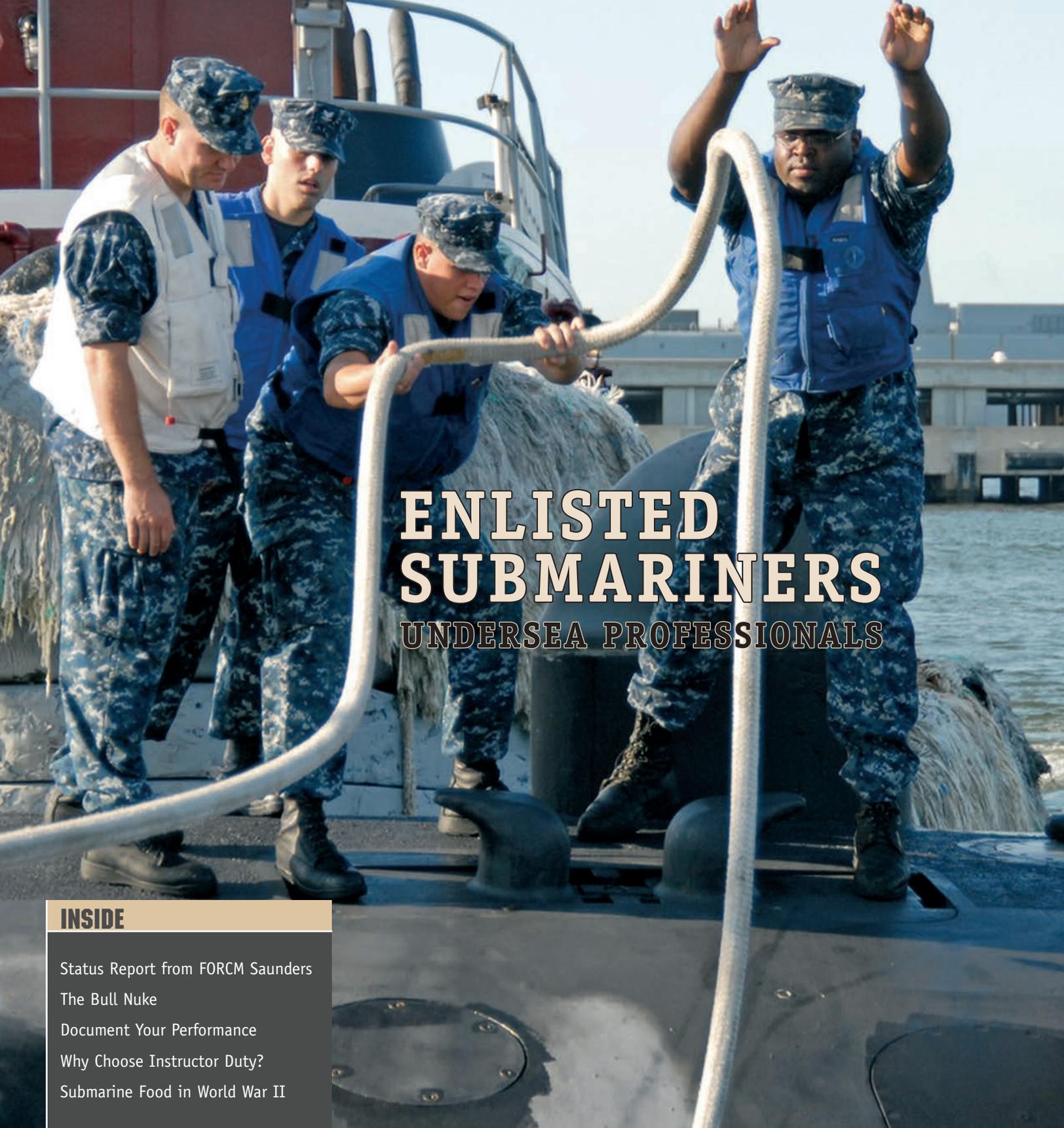




# UNDERSEAWARFARE

U. S. S U B M A R I N E S... B E C A U S E S T E A L T H M A T T E R S



## ENLISTED SUBMARINERS UNDERSEA PROFESSIONALS

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Sailors cast away mooring lines as their attack submarine prepares to sortie from Naval Station Norfolk ahead of Hurricane Irene in late August.

Photo by Petty Officer 1st Class Todd A. Schaffer

# UNDERSEAWARFARE

THE OFFICIAL MAGAZINE OF THE U.S. SUBMARINE FORCE

## ENLISTED SUBMARINERS

UNDERSEA PROFESSIONALS

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## FORCE COMMANDER'S CORNER

"I want to join the other writers in this edition in praising our enlisted Sailors and their families. ... Our every effort must be focused on supporting them and making them more effective, so that our allies can hope for no better friend, and our enemies will have no worse nightmare, than the Sailors of the U.S. Submarine Force."

Vice Adm. John Richardson, USN,  
Commander, Submarine Forces



Team,

This edition of UNDERSEA WARFARE Magazine focuses on the enlisted Submariner. That's a perfect topic! There is no doubt that our undersea force depends on dedicated, technically-skilled and engaged warriors. Our people will always be our most effective weapon.

What we do is dangerous. We go to sea in steel boats of several thousand tons, loaded with weapons and systems with tremendous kinetic and potential energy. We submerge those boats and drive them around the globe, into harm's way, for months at a time. As recent events have shown, we must be ready to use those weapons to destroy an enemy. And we must always strive with all our strength to bring everybody safely home. Our history has shown us that no matter how advanced and robust our boats become, no matter how elegant and efficient our designs and procedures are, submarining is fundamentally a human endeavor. No technology alone can make us safe and effective. It is only possible because of dedicated Submariners, with deep expertise and a deeper sense of integrity, who feel that they "own" this challenge—it is theirs.

In many ways, today's Submariners are a lot like their predecessors from 100 years ago—much has stayed the same. We come from all walks of life and from every part of the nation. Today's 16,000 enlisted Submariners (only about 6 percent of the Navy) are well-educated and are among the best and brightest serving our nation. Faced with the challenges of operating advanced technologies and some of the most complex systems in the world, and working in extremely demanding environments, our Sailors always come through and inspire.

And it isn't just our Submarine warriors who dive the ocean's depths that deserve recognition. It's also the warriors who serve our country above the sea. I get calls all the time, from leaders around the world, praising our Sailors who have perhaps been sent to a job outside our community—a Submariner is always treasured and a critical member of the team because they bring with them our culture of innovation, integrity and fortitude.

Our families also deserve praise and recognition for their service! While those of us privileged to wear the nation's cloth are working hard and going to sea, they serve to provide stability at home, often in situations just as difficult as any we encounter underway. Our mothers, fathers, sisters, brothers, spouses, and children are right alongside us, sacrificing with us, and making their contribution to freedom.

I want to join the other writers in this edition in praising our enlisted Sailors and their families. They remain ever vigilant. They make the real difference in the Submarine Force—to build, maintain, train and man our boats. They are making their contributions at home with their families and communities. Our every effort must be focused on supporting them and making them more effective, so that our allies can hope for no better friend, and our enemies will have no worse nightmare, than the Sailors of the U.S. Submarine Force.

Semper Prociuctum.

A handwritten signature in black ink, appearing to read "J. Richardson". The signature is fluid and cursive, with a long horizontal flourish extending to the right.



## DIVISION DIRECTOR'S CORNER

“Our enlisted professionals allow us to get underway on time, train for and put ordnance on target, reload and prepare for the next event — or battle. They are at the very heart of what our submarine program is all about, and they are the best there is — period.”

Rear Adm. Barry Bruner, USN,  
Director, Submarine Warfare

I am honored to be working with the professionals at N87. I know many of them from previous tours, and after 44 days (as of 4 October) as the Director, Submarine Warfare, I am very impressed with their performance—across the board. So, as I introduce myself in this edition of UNDERSEA WARFARE, please know that the team at N87 is working hard on your behalf. Also, know that those of us here in the Pentagon greatly appreciate your hard work in the fleet and in fleet support.

This edition focuses on our enlisted undersea warriors. Some of you may know that the man I admire most was a sergeant in the Army. My Dad, L.V. Bruner, was in the 101st Airborne Division during World War II. If you had the opportunity to see “Band of Brothers,” you would have seen the men he served with. That movie was focused on Easy Company, and my Dad was in Company D. I grew up listening to stories of some of the battles he fought in during that war—and I always wanted to be like him. But, for a myriad of different reasons, I ended up being a nuclear-trained ensign—and submariner (heck of a long way from being an enlisted paratrooper!).

My first LPO was MMC Jim Ryan. I was the MPA and CRA on USS *Pollack* (SSN 603), and I would not have survived my first tour without his guidance and mentorship. We became good friends. To this day, when confronted with tough leadership decisions, I often think of Jim and what he would do in the same circumstance. After *Pollack*, I served with many great enlisted men, men like QMCM Eddie VanMeter (then QMSN!), CDR Terry Chauncey (then YNC), MMCM Bill Steele, CSCS Ed Allen and QMCM Chris Shannon, just to name a few. Each of these great Americans directly contributed to the success of their shipmates and was responsible for the successful defense of our Nation and its way of life. I have

infinite respect for each of these men. They made the operations of our submarines successful through their actions. They passed on the lessons that will make our Force successful in the future.

As submariners, we operate complex machinery in a very demanding and routinely unforgiving environment. We are often tasked to do what many would consider to be the “undoable.” Our enlisted professionals allow us to get underway on time, train for and put ordnance on target, reload and prepare for the next event—or battle. They are at the very heart of what our submarine program is all about, and they are the best there is—period. It was no surprise when one of our own—Master Chief Rick West—was selected to be the current Master Chief Petty Officer of the Navy. Today, he represents all Sailors, all warfare communities and every rate—but he grew up in the demanding world of submarine warfare, and I can’t help but think that his experiences there helped groom him into the superb leader he is today.

Lastly, our Sailors are not the only important part of the Force. Their families and the support they provide are just as critical to our success. They sacrifice continually so that their loved ones can serve—and we must never tire of thanking them for that sacrifice.

I visited USS *Alexandria* (SSN 757) last week. The picture above shows the Chief of the Boat (MMCS James Mersereau), the CO (CDR Todd Weeks) and me on the pier. COB Mersereau and Captain Weeks, thanks again for showing me your boat—and congrats on a fantastic crew!

# UNDERSEAWARFARE

The Official Magazine of the U.S. Submarine Force

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Commander, Submarine Force, Atlantic

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## Charter

**UNDERSEA WARFARE** is the professional magazine of the undersea warfare community. Its purpose is to educate its readers on undersea warfare missions and programs, with a particular focus on U.S. submarines. This journal will also draw upon the Submarine Force's rich historical legacy to instill a sense of pride and professionalism among community members and to enhance reader awareness of the increasing relevance of undersea warfare for our nation's defense.

The opinions and assertions herein are the personal views of the authors and do not necessarily reflect the official views of the U.S. Government, the Department of Defense, or the Department of the Navy.

## Contributions and Feedback Welcome

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CHINFO Merit Award Winner



Silver Inkwell Award Winner

## LETTERS TO THE EDITOR

In keeping with **UNDERSEA WARFARE** Magazine's charter as the Official Magazine of the U.S. Submarine Force, we welcome letters to the editor, questions relating to articles that have appeared in previous issues, and insights and "lessons learned" from the fleet.

**UNDERSEA WARFARE** Magazine reserves the right to edit submissions for length, clarity, and accuracy. All submissions become the property of **UNDERSEA WARFARE** Magazine and may be published in all media. Please include pertinent contact information with submissions.

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## FROM THE EDITOR,

Did you know the Submarine Force has an official blog? In the following excerpt from the first entry, "Pride Runs Deep," Vice Adm. Richardson lays out his vision for the blog:

"Welcome to the U.S. Submarine Force's new command blog! This is something I've been thinking about since my first day in command. I'm entering the "blogosphere" because I see it as a meaningful way to have a conversation amongst all of us who care about making the Submarine Force better. It's a super way for leaders to discuss topics that we feel are important. It's also a way for leadership—me—to understand what's important to you. But it will only be effective as long as we are both committed. I intend to be active. I'll ask others to participate by contributing. This is a forum for all of us Submariners and I look forward to the voyage."

I have personally seen that Vice Adm. Richardson takes readers' comments into consideration and, when possible, will respond in his next post. Take a moment to check out the blog at <http://comsubfor-usn.blogspot.com>, and become part of the conversation.

Lt. Cmdr. John Gonser  
Military Editor,  
**UNDERSEA WARFARE** Magazine

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## SAILORS FIRST



Petty Officer 2nd Class Warren Jack holds his daughter for the first time after returning from a seven-month deployment aboard USS *Scranton* (SSN 756) Aug. 17.

Photo by Petty Officer 1st Class Todd A. Schaffer



# Submarine Force Status

## ... from the Force Master Chief's Deckplate Perspective

Since I assumed my duties as force master chief of the Atlantic Submarine Force on July 30, 2010, I have given speeches at a number of venues, with varying degrees of impact. One of the most significant of these speaking engagements was the opportunity I had to talk to the Naval Submarine League's Annual Symposium in early October 2010 about my thoughts as the Submarine Force's most senior enlisted leader on where we stood at the beginning of fiscal year (FY) 2011.

Now, on the cusp of FY 2012, I would like to update that status report. Most of what I said then continues to hold true, both in terms of the challenges we face and how we're meeting those challenges while maintaining our proud heritage as enlisted submariners. As always, my priority remains the personal and professional development of our Sailors. My thoughts therefore center on what's affecting them and the Submarine Force at the deckplate level.

(Opposite) Force Master Chief Saunders shares coffee with enlisted Sailors aboard USS *Memphis* (SSN 691) in January 2011. (Photo by Petty Officer 1st Class Virginia K. Schaefer)

## Good Deckplate Leadership

Our Chief Petty Officer Mission, Vision and Guiding Principles describing deckplate leadership has not changed:

“Chiefs are visible leaders who set the tone. We know the mission, know our Sailors, and develop them beyond their expectations as a team and as individuals.”

I'd like to highlight a couple examples of this type of senior enlisted leadership within our Force:

In the blue crew of USS *Wyoming* (SSBN 742), Chief of the Boat (COB) Hayle Bell is the driving force behind his command's many accomplishments and continued successes. His passion for his job, his dedication to his crew, and his dedication to mission accomplishment make all those around him better Sailors. His leadership and mentorship has resulted in *Wyoming's* successfully completing every major examination since he reported aboard. His infectious enthusiasm, coupled with his trademark “Cowboy Up” attitude, has spread throughout the crew and is directly responsible for its widely recognized superb morale.

Similarly, in the blue crew of USS *Alaska* (SSBN 732), COB Eddie Vanmeter is extremely effective in leading the Chief's Quarters and crew through every aspect of the ship's operations. He continually develops unique and motivating methods to accomplish the command's mission. His drive, talent, and vision make him the ideal chief of the boat and a superb representative of our Submarine Force chief petty officers.

There are many more examples of this type of performance and positive impact from our senior enlisted leadership within the Force. These leaders and others like them ensure that the future of our Submarine Force remains bright.

## Reducing the Negative Factors

Sound policies and programs can help our senior enlisted leaders reduce negative factors that affect Sailor's performance and advancement.

One of our biggest challenges continues to be keeping a sufficient number of qualified Sailors in critical ratings on our submarines, and one of the contributors to this challenge remains off-duty mishaps and motorcycle

accidents. We had 25 motorcycle mishaps in FY 10, with half resulting in lost work days and two resulting in fatalities. We're seeing a slightly better trend in FY 11, with 15 motorcycle mishaps at the end of the third quarter, including one fatality.

SUBFOR has aggressively taken motorcycle safety awareness to the fleet. Our efforts continue to track every Sailor riding a motorcycle, ensuring that all riders have successfully completed the proper formal safety course and tracking the dividends of this training. Although motorcycle mishaps will never be completely eliminated, the current measures certainly reduce the likelihood of accidents occurring.

Another challenge is the use of illicit drugs. We remain committed to random testing requirements of a minimum of four testing days per month, with a minimum of 15 percent of the crews being tested monthly. Although this has proven to be a credible deterrent, we are up against a new enemy that is unfortunately easy for Sailors to come by. The use of “designer” drugs is becoming more prevalent throughout the uniformed services, and the Submarine Force is no exception. These drugs, which go by names such as “spice,” “K2,” “dreams,” “blaze,” and now “bath salts,” can be purchased in many smoke shops and novelty stores throughout the country.

The effects of smoking these substances are very similar to those of smoking marijuana, but their presence is not detectable by urinalysis. These drugs have the same negative effect on safety, operational readiness, and good order and discipline as any other mainstream drug out there. Navy Regions are therefore working with their Armed Services Disciplinary Control Boards to influence local establishments to stop selling these products. Additionally, an aggressive campaign is underway to educate every Sailor and ensure they understand the adverse implications of using such products.

A longstanding challenge not only in the Submarine Force, but throughout the Navy, has been alcohol-related incidents and offenses. FY 10 saw a 45 percent reduction compared to FY 09 in the number of alcohol-related incidents and driving-under-the-influence (DUI) offenses across the Force. This very significant reduction resulted from the initiatives of Submarine Force leadership and our chief petty officers and the emphasis they placed on this problem. We succeeded in maintaining this lower rate of DUIs through the first three quarters of FY 11, and we may

even see a slight additional decline in the rate at the end of FY 11.

The campaign against the irresponsible use of alcohol began with the Force Commander producing a video that was viewed by every submarine Sailor outlining the adverse effects of irresponsible use and highlighting the necessity for making good decisions and solid plans before drinking occurred. This was followed up with the chief petty officers getting out in front and leading the charge in reducing occurrences of these events through education, mentoring and some good, old-fashioned intrusive leadership. We then incorporated the use of breathalyzers and alcohol detection wands into the equation as a means to educate Sailors on the negative effects of irresponsible alcohol consumption and to deter irresponsible use.

In parallel, many commands initiated the formation of DUI prevention teams led by second class petty officers. The DUI prevention teams have a charter to increase awareness of the negative effects of irresponsible alcohol consumption and to promote alternatives, as well as offering alternatives to drinking and driving. These teams have the ear of the command teams, and as the reduction in DUIs clearly shows, they have been very effective. Additionally, a Navy-wide program called CSADD (Coalition of Sailors Against Destructive Decision-making) is performing functions similar to those of our DUI prevention teams. There are some very active teams out there that have made huge differences in reducing the number of incidents associated with the irresponsible use of alcohol.

Submarine Group Two has a program called “The Right Spirit” award. Commands that go one year without a DUI are presented a pennant to be flown in recognition of their outstanding achievement. Last fall, five submarines under Group Two's responsibility were flying this pennant; as of the end of June 2011, 12 submarines had exceeded a year without a DUI. Force-wide, 31 submarine crews had gone more than one year without a DUI. One of those crews—USS *Rhode Island* (SSBN 740) (Blue)—had not had a DUI for more than three years.

## Developing Our CPOs

The investment of time and resources in developing our chief petty officers for successful assignments in key leadership positions is producing great results. The leadership



**Our Sailors are incredible, and they're doing well, and it is our chief petty officers that continue to lead the charge and make the positive difference throughout the Force ... we remain focused on our number one resource—a resource that has been the single most important factor in the successful history of our great Submarine Force—our Sailors.**

Mission success depends on the dedicated professionalism of enlisted Sailors. Here, Sailors of the Blue crew of USS *Michigan* (SSGN 727) attach her hull number and awards in June after a 13-month deployment.

continuum developed to enhance the success chances of our nuclear leading chief petty officers (LCPOs) and engineering department master chiefs (EDMCs) have proven to be extremely effective.

In fact, starting in 2010 and continuing into 2011, we took portions of that course curriculum and folded it into the formal CPO selectee training given during the induction process for our new chief petty officers. This curriculum is designed to get down to the nuts and bolts of what these leaders need in their tool bag to run their work centers on our submarines. The course was designed to mitigate the lower level of experience that many nuclear-trained CPOs are bringing to their first tour as LCPOs because the average age of Sailors making chief has declined. Across the entire Force, this training will help provide the additional technical, managerial, and leadership tools needed for success during the first LCPO tour.

### **Addressing Personnel Shortfalls in Key Areas**

We've been working hard to correct some rating-specific and position-specific inventory

concerns in the Force. One area of concern has been EDMCs. As a lever to produce more Sailors qualified as EDMCs, it became mandatory, beginning with the most recent senior chief selection board, for nuclear-trained Sailors to complete this qualification in order to promote to senior chief petty officer. We also authorized sea-duty incentive pay (SDIP) for currently serving or qualified EDMCs as an incentive for them to continue doing this essential job at sea.

Another personnel concern was our submarine independent-duty corpsmen (IDC) community. The specialized skills provided by these Sailors at sea are extremely critical, but availabilities of Sailors possessing the requisite skills and training are in short supply. Consequently, we have had to extend the rotation dates for some corpsmen serving at sea. However, we are now providing SDIP to IDCs who have been involuntarily extended beyond their projected sea rotation date. Meanwhile, the Bureau of Medicine is working diligently to alleviate the problem by increasing recruitment of IDCs.

The Force also faced shortages of sea-returnee navigation and communication electronics technicians (ETs). This shortage has sometimes resulted in everyone in the division except the chief being

first-term Sailors—and the chief himself often the only division member with any maintainer experience whatsoever. To counter the shortage of maintainers in the Force, we recently started sending a portion of the graduating "A" school classes directly to "C" school to become maintainers before reporting to their first submarine.

The leadership and effort applied to retaining the talent we have in the Force is paying off. We remained above the Chief of Naval Operations (CNO)'s benchmark for re-enlistments in Zone A (1-6 years of naval service), Zone B (6-10 years of naval service), and Zone C (10-14 years of naval service) in FY 10. At the end of the third quarter, FY 11 retention numbers in all zones remained well above CNO goals.

One area we've worked particularly hard on is our non-nuclear electronics ratings (ET, ST, FT). We need to keep as many of these Sailors as we can, as these ratings were under-accessed for several years, leading to the shortfalls we're experiencing today. We achieved some success in this area with the help of increased reenlistment bonuses and targeted recruitment by the recruiting command. We have given retaining these Sailors the same priority as retaining our nuclear-trained operators.

## Reinforcing Our Culture of Success

We continue to hold Submarine Cultural Workshops throughout the Force. These workshops are designed to help commanding officers achieve operational excellence by giving them an in-depth look at the foundation of communication within their ship, both up and down the chain of command, as well as integrity and trust among their crew. We have gathered valuable les-

the Basics.” Execution of these basic programs is essential to ensure our Sailors don’t make bad decisions in both their personal and professional lives that lead them beyond the point of no return.

Submarine Force leadership has paid careful attention to ensuring that efforts from sponsorship and indoctrination programs to career development boards, mentorship, active ombudsman involve-

initial indoctrination process for all newly reporting first-term Sailors. “Sea Power” is a program for Zone B and C Sailors that increases their awareness of the leadership skills needed to create a positive work environment and reinforces their leadership fundamentals. “Sea Leader,” our newest program, is targeted at reinforcing leadership fundamentals within the command teams and senior leadership.



Photo by Petty Officer 1st Class Todd A. Schaffer



U.S. Navy photo

(Left) Safety and effectiveness require deep expertise and integrity on the deckplate. The torpedo room weapon team of USS Albany (SSN 753) prepares to receive a torpedo Aug. 10. (Right) The undersea force relies on skilled and engaged warriors: a Sailor stands topside watch in September on USS Newport News (SSN 750).

sons learned from these visits, and we share these lessons with our Submarine Officer Advanced Course (SOAC) students, prospective commanding officers and prospective squadron commanders (commodores) to increase their awareness as they enter their new leadership positions.

Each year, our Force experiences unplanned losses of talented personnel. In fact, in FY 10 alone, we lost over 450 Sailors from the Force prior to their expected transfer date. Much time and money had been invested in these Sailors, whose training, knowledge and capabilities made them valued members of our team. We therefore put a great deal of emphasis on preventing unplanned losses in FY 11, but as we entered the fourth quarter, the numbers were unfortunately only slightly lower than those we saw at the same point in FY 10.

While many of these losses were not preventable, other losses are. The programs we have in place to assist the Sailor in transitioning to his first submarine, integrating into the crew and the submarine lifestyle, and perceiving a clear path for success and advancement are referred to as “Brilliant on

ment, and recognition programs are all being properly administered. Our goal is to make sure that each and every Sailor knows we want them to succeed and we value their talent, skill and dedication. We are committed to continuing our efforts to ensure the well-being, professional success and family support of our submariners. By doing so, we will get more of these shipmates and their families to make the choice to “Stay Navy.”

Chaplain programs have become a large part of our effort to prevent unplanned losses. These programs are designed to prevent poor decisions by our Sailors and to better educate our mid-level and senior leadership in how to deal with and lead today’s Sailors.

Three programs are currently in use. The “Sea Legs” program is a resiliency-building effort that emphasizes, among other principles, “growing through adversity” and “embracing challenges.” This program speaks the language of our Sailors and provides the necessary principles for growth and development during their initial sea tour. It has become a standard part of the

## Achieving Excellence in Every Endeavor

I’m proud to say that our Sailors are not only doing great work day in and day out on the deckplates of our submarines, but are also performing vital roles on the ground in hotspots around the world. Submariners are in places like Iraq, Afghanistan, Bahrain, Kuwait, and Guantanamo Bay. As we entered the last quarter of FY 11, we had 196 Force submariners with boots on the ground throughout these locations, 85 from Atlantic Fleet and 111 from Pacific Fleet. Of these Sailors, 85 percent volunteered for their assignment. In fact, one of our young submariners, from Naval Submarine Support Facility New London, has already done two individual augmentee tours in his short Navy career.

Our Sailors are incredible, and they’re doing well, and it is our chief petty officers that continue to lead the charge and make the positive difference throughout the Force. As we continue to leverage advances in technology and look toward the future of our Force, we remain focused on our number one resource—a resource that has been the single most important factor in the successful history of our great Submarine Force—our Sailors.

# The BULL NUKE



Photo by Petty Officer 2nd Class Ronald Gutridge

Unlike GOPLOB—the mythical “Ghost of PLO Bay” that old hands sometimes use to scare young Sailors new to submarines—the Bull Nuke, as he is commonly called, is quite real. His official title is engineering department master chief, or EDMC for short. The Bull Nuke is the senior nuclear-trained chief petty officer (CPO) on a submarine and the boat’s only billeted department leading CPO. As a rule, he is a senior chief or master chief.

Submariners who graduate to this level are the best and brightest the Naval Nuclear Propulsion Program and the Submarine Force have to offer. A candidate for selection to EDMC must have a proven record of sustained superior performance throughout his career. However, he cannot become an EDMC simply by advancing to senior chief or master chief—a considerable achievement in and of itself. He must complete the challenging EDMC qualification process.

A candidate for EDMC must be recommended by his commanding officer and “checked out” by serving Bull Nukes on approximately 40 topics specific to the job. He must then pass a final qualification board administered by a served Bull Nuke and submarine engineer. Finally, he must

submit a request to Naval Reactors and the Nuclear Enlisted Community Managers to be considered for assignment to a submarine as an EDMC. Not until he is approved for assignment and his orders are written can a new Bull Nuke begin one of the most rewarding assignments any professional, military or civilian, can hope to fill.

The official title of a “Bull Nuke” has not always been “EDMC.” Originally, the title of the senior nuclear-trained chief petty officer was engineering department enlisted advisor (EDEA). The first EDEA was Master Chief John “JC” Kerr, the Bull Nuke in the commissioning crew of USS *Nautilus* (SSN 571). The function and duties of the Bull Nuke steadily evolved over the decades since the world’s first nuclear submarine. Recognizing that evolution, the Navy defined the position more precisely in the late 1990s and changed the designation to EDMC.

The primary responsibility of the Bull Nuke is to establish and maintain the highest of standards for the safe operation and maintenance of a submarine’s nuclear propulsion plant. The successful day-to-day performance of the 40 to 50 personnel assigned to an engineering department depends to a great extent on the character and work ethic of

the typical Bull Nuke. As the senior enlisted nuclear-trained operator and the department’s most senior chief, he is directly responsible for training and mentoring not only the other engineering CPOs but also the department’s junior officers. It is primarily through the mentoring, supervision, and training of supervisory personnel that the Bull Nuke transmits his expectations and standards to the deck plate of a submarine’s engine room.

From the first day a young “Nuke” reports to his first submarine, his understanding of how he is to go about performing his operational and technical duties comes as a direct result of his interactions with his division CPOs and the Bull Nuke. In addition, the Bull Nuke serves as one of the main mentors and enforcers of standards under the chief of the boat (COB). In this capacity, his influence extends beyond the engineering department and is felt from bow to screw.

One of the Bull Nuke’s most important roles as a trainer responsible for establishing high standards is serving as the engineering department head’s principal assistant for the execution and administration of the department training program. As one might expect, the training requirements for the personnel who operate a nuclear propulsion plant are extensive and require significant effort to track and maintain. It is absolutely essential that all nuclear-trained personnel, i.e., all ship’s officers and enlisted men assigned to a nuclear division, receive thorough training in every aspect of the propulsion plant, regardless of their rate or specialty.

The department training program encompasses classroom lectures on more than 100 topics pertaining to the safe operation and maintenance of the propulsion plant, a comprehensive drill and evolution program designed to ensure proper watchstander response to submarine and propulsion plant casualties, and a monthly exam program to validate the effectiveness of the training provided. A typical week in port or at sea includes anywhere from ten to 20 hours of classroom training, with multiple sessions to ensure that all personnel are able to attend. When underway, the average week also includes two to three drill periods, plus round-the-clock watch-to-watch evolutions in the propulsion plant to maintain and enhance the proficiency of the engine room watchstanders.

Of course, nothing is ever considered completed aboard a submarine until it is properly documented. Nowhere is this more important

than in the training of nuclear operators and technicians. Every element of the training program must be thoroughly documented and subjected to a performance analysis process to ensure the program's effectiveness. A Bull Nuke can expect to devote approximately 20 to 30 hours of his workweek to the supervision and maintenance of the typical engineering department training program.

This is over and above the time that he must commit to his other responsibilities, such as maintaining his presence on the deckplate to ensure the engine room is being properly cleaned and preserved, assisting the COB in developing and executing the ship's weekly plan, attending to any number of personnel issues that occur daily, and attending to the many general administrative tasks that come with being the leading CPO of a department on a submarine—performance evaluations, awards, counseling etc. The average workweek of a Bull Nuke in port can range from 50 to 80 hours and can easily reach 100 hours if major propulsion plant evolutions are in progress.

Currently, there are a total of 91 Bull Nuke positions in the entire Submarine Force. Most of the Sailors who fill these positions are senior chiefs and master chiefs who are at or beyond their 20-year point in the Navy. Following a shore tour, only about 10 percent of the served Bull Nukes will return for a second EDMC tour. This, and a constant pull by the private sector on these highly trained and experienced nuclear leaders, has increased the average length of the EDMC sea tour beyond the normal three years. Most Bull Nukes now serve 39 to 42 months in the position before being relieved.

The Navy has long since recognized the arduous nature of the position and the value of retaining the type of leadership it requires, and it remains committed to programs designed to improve retention. One example is "sea duty incentive pay." Serving Bull Nukes who agree to extend their current sea tours are eligible for an additional \$750.00 per month for every month that they extend past their projected rotation date. This payment is good for six-month to 24-month extensions and is paid up front.

Like me, most Bull Nukes made the decision early in our careers to aggressively pursue advancement and assignment to an EDMC position on a submarine. For me, this was largely due to having been trained and mentored by some of the best Bull Nukes and chief petty officers ever to serve

My Bull Nukes weren't afraid to stick it out with their departments whatever the situation, and they were constantly on the deckplate training and mentoring. I always knew that they were there to support me; whether that support came as a result of good or bad performance on my part, I could always count on it. This made all the difference in the world.



*(Opposite)* The successful day-to-day performance of an engineering department depends to a great extent on the character and work ethic of the typical Bull Nuke. In the photo, EDMC Senior Chief Petty Officer Thomas Matney and Engineer Office Lt. Cmdr. Chimi Vacot accept USS *Hawaii's* 2009 Engineering Excellence Award from Submarine Squadron One Commander Capt. Stanley Robertson.

*(Above)* Most Bull Nukes make the decision early in their careers to aggressively pursue advancement. Here, Master Chief Jerry Pittman (center), the featured speaker at a 2011 Nuclear Power School graduation, and Gamal Coles, command master chief of the Naval Nuclear Propulsion Training Center (NNPTC), share the podium with NNPTC Commanding Officer Capt. Thomas Bailey.

in the Submarine Force. Those deckplate leaders were engaged in the professional and personal lives of every Sailor that served in their departments, and they were overwhelmingly influential on our quality of life and service.

Under these very talented men, I learned that good leadership is an extremely comforting thing to have. My Bull Nukes weren't afraid to stick it out with their departments whatever the situation, and they were constantly on the deckplate training and mentoring. I always knew that they were there to support me; whether that support came as

a result of good or bad performance on my part, I could always count on it. This made all the difference in the world.

The potential to have such a dramatic positive affect on the lives of men who do one of the toughest jobs in the world was all the motivation I needed to work as hard as I possibly could to become a Bull Nuke—and to do the very best I could once I was lucky enough to get the job.

Master Chief Grant is currently the Force EDMC on the staff of Commander, Submarine Force, Pacific Fleet.



# SUPERIOR PERFORMANCE — WELL DOCUMENTED

With reenlistment rates extraordinarily high and attrition historically low, Navy leaders are counseling Sailors to take a more active role in their careers. Submarine Sailors have always known that a successful career requires superior performance over the long term, but in today's competitive Navy, it is also important for Sailors to take an active role in making sure their performance is well documented.

"Sustained superior performance—it's almost a proverb, but it is true now more than ever," said Master Chief Kevin Sullivan, a fleet counselor for U.S. Fleet Forces Command. "[There are] more Sailors wanting to remain on active duty than the Navy has billets for. Documenting positive performance, whether on a performance evaluation or by specific recognition will enhance a Sailor's ability to stand out from his or her peer group when requesting rating designation, rating conversion, a Perform to Serve (PTS) quota, or calculating an advancement examination final multiple score."

The need for competitive performance now begins the day a Sailor enters the Navy. "Every action has a consequence," Sullivan noted, "some positive and some negative." Performance is something an individual Sailor has a lot of control over. Sailors can increase their chances for good evaluations by focusing on doing their best and improving their skills.

## Two Keys to Staying Competitive in Today's Navy

"Perform your job as if everything depended on it—for your shipmates, it might; for you, it does," said Sullivan. "Gone are the days when a Sailor can get by with marginally satisfactory performance and expect to make the decision to reenlist three days before the end of active obligated service (EAOS). PTS requires first-term Sailors to make long-term, often life-changing decisions earlier than ever before while just getting started into their Navy career."

Jim Price, director of the Performance Evaluation Division at Navy Personnel Command (NPC), adds that high performance alone is not enough. It is just as important for Sailors to make sure that their performance is correctly documented. "The Sailors must realize that they are responsible for the accuracy of their official record," Price said. "They must get in the habit of periodically checking their record and not waiting until just prior to a selection or promotion board."

Sailors with Command Access Card (CAC) access can check their record at any

time on BUPERS Online (BOL) at <https://www.bol.navy.mil>. On BOL, they can review three key records:

- The Performance Evaluation Continuity Report: Sailors can access their individual continuity report to see the continuity of all performance evaluations submitted on them going back to January 1996. The Performance Evaluation Continuity Report also identifies breaks in continuity, rejected reports and selection board convening dates.
- The Official Military Personnel File (OMPF): Sailors can access their OMPF to view the documents a selection board would review.
- The Performance Summary Record (PSR): Sailors can also access their PSR, which summarizes their professional and performance history. Selection boards use the PSR along with the OMPF.

Sailors without CAC access can still go to BOL on the Internet and use it to order these records on CD.

Of course, the increasing need for Sailors to review their own records doesn't mean that supervisors have less impact on a Sailor's career. The role of supervisors remains as critical as ever. They continue to be responsible for understanding the

process and making sure it remains fair and effective.

“The supervisor is the link between the Sailor and the rest of the command,” said Master Chief Sullivan. “Perception is not always reality, but if the supervisor perceives that a Sailor is a sub-par performer, the Sailor will have a difficult time convincing the command otherwise. Supervisors need to be fair and consistent, show no preference based on anything other than performance.”

“Deckplate supervisors need to be well-versed on the PTS business rules. Leaders definitely need to understand the evaluation ranking business,” said Master Chief Laura Paquian, a career counselor for the Naval Surface Force. “Is your last ‘must promote’ really as good as your first one? Are Sailors truly of the same quality? Are we grading them on long-term potential for continued service or just trying to increase our advancement numbers? Grade the Sailors on what they earn!”

More broadly, supervisors are responsible for mentoring Sailors in setting and achieving career goals that will enable them to realize their full potential. For example, the Navy encourages Sailors to take advantage of education services and courses such as those available through Navy Knowledge Online at <https://www.nko.navy.mil>. “It is imperative as leaders that we [command teams] are staying fully engaged in our Sailors’ futures,” wrote Master Chief Petty Officer of the Navy Rick D. West in a recent edition of his “Bottom Line: Up Front” newsletter (available at <http://www.navy.mil/mcpon>).

Navy career counselors support both Sailors and supervisors in career development. “Our responsibility is to ensure that every Sailor is ‘brought to the table,’” said Master Chief Sullivan. “This means providing proper sponsorship to get the new Sailor off on the right foot, conducting a thorough command indoctrination to establish expectations, performing career development boards (CDB) on schedule to ensure our Sailors have the latest career information and are moving in the right direction, entering our Sailors into PTS on time to ensure that they receive maximum ‘looks,’ and conducting proper pre-separation counseling for any Sailor electing to separate or being directed to do so.”

CDBs let Sailors know how they are doing, where they can improve and what leadership expects from them. They also provide an opportunity for supervisors and



(Opposite) Covers and certificates await new chief petty officers at a pinning ceremony. (Above) Cmdr. Thomas “T.R.” Buchanan, commanding officer of USS *Albany* (SSN 753), congratulates Chief Petty Officer Robert J. Mueller after presenting him the Defense Meritorious Service Medal.

Sailors to map out long-term objectives.

“CDBs are more critical now than they’ve ever been in the past,” wrote West. “It is our responsibility as leaders to ensure we are conducting CDBs and providing our Sailors with all available information and options in order to keep them on a successful naval career path. It is also the responsibility of our Sailors to ensure they’ve weighed all their options when making their career decisions.”

A Sailor’s career history should demonstrate his or her job scope, leadership and a trend of increased responsibility and performance. Sailors should begin looking toward the future as soon as they sign on.

“A promotion recommendation of ‘Progressing’ or ‘Significant Problems’ midway through an initial four-year hitch may eliminate any chance of receiving a PTS quota for reenlistment,” said Sullivan. “With the PTS window opening 12 months prior to EAOS, and the two previous regular periodic evaluations being used to determine a Sailor’s PTS eligibility, a ‘Progressing’ evaluation one-and-a-half years into a first hitch may still be with the Sailor at the time of PTS application.”

But as essential as advancement is, it is not the only thing a Sailor needs to build a good career history. A clean record is also

important. “From the E-1 to the O-10, we are being held accountable for our actions,” said Chief Petty Officer Jayne Epaloose, an immediate superior-in-command career counselor based in San Diego. “One non-judicial punishment (NJP), no matter how minor the infraction, can end a Sailor’s career before it starts.”

“Get a mentor that will be brutally honest with you,” she counsels Sailors. “Your mentor is there to make you a better Sailor, not coddle you.”

At the other end of the behavior spectrum, awards and qualifications are also important in building a career. Supervisors need to keep in mind the emphasis Navy leadership puts on recognizing a Sailor’s accomplishments as quickly as possible. “Recognition in anything other than a timely manner cheapens the act, whether it is a simple, ‘Nice job, shipmate,’ or an award that counts as points toward an advancement exam,” said Sullivan. “Delivery on time can make the difference between Sailors knowing that their efforts are appreciated or deciding that ‘this Navy thing’ just isn’t for them. An award delivered late can adversely affect selection for advancement, with the resulting impact on morale, PTS selection and, ultimately, retention.”

However, it is the Sailors themselves who must make sure their award information is accurate and up-to-date. The Navy has a couple of websites to help them do that. To make sure that their award data is complete, they can visit the Navy Department’s “U.S. Navy Awards” Web page at <https://awards.navy.mil>. To reconcile and update awards, they can visit the Naval Personnel Command (NPC)’s “Awards/Decorations/Medals” Web page at <http://www.npc.navy.mil/CareerInfo/RecordsManagement/AwdDecorMedal.htm>.

The challenge of building careers in today’s competitive Navy demands close collaboration among Sailors, supervisors, and career counselors, but the ultimate responsibility lies with each Sailor. In the end, it is the Sailor who must demonstrate the will to excel, the wisdom to make good plans, the self-discipline to avoid pitfalls—and diligence in making sure the official record reflects the resulting achievements.

For more information about performance, visit the NPC website at [www.npc.navy.mil](http://www.npc.navy.mil).

Wm. Cullen James is a writer and editor with Navy Personnel Command’s public affairs office.

# Submarine Instructor Duty

## A Chance to Shape the Next Generation

William Butler Yeats wrote,  
“Education is not the filling of  
a pail, but the lighting of a fire.”

The best instructors are those who like what they do, know how important their skills are, work hard to keep those skills up to date, and enjoy applying them. Students taught by people like that don't just learn a specialty; they learn to take pleasure and pride in their abilities, and they eventually pass their enthusiasm on to others.

Good instructors have never been more important for the Submarine Force. Not only is there more for students to learn in the first place, there's more for everyone to relearn as technology evolves at an increasing rate across the fleet, making current knowledge obsolete faster.

Even how we learn is changing—onboard, online, and in the classroom. The deployment of computer-based training, the rise of distance learning and the emergence of blended learning solutions have altered the role of the instructor and expanded the instructor's responsibilities. The skill set needed to shape the professional and personal development of today's submarine Sailor has never been greater, and it will continue to grow as training techniques and submarine systems keep advancing.

So why should a highly skilled Sailor assigned to a submarine seek instructor duty as the next shore assignment? There are many reasons, personal as well as professional, but among the best are self-improvement and professional advancement.

Chief Petty Officer Bryan Miller, a missile technician assigned to the Trident Training Facility in Bangor, Wash., is the leading chief petty officer (LCPO) for the Strategic Systems Training Department. Chief Miller was the Naval Personnel Development Command's 2005 Instructor of the Year and the Submarine Learning Center (SLC)'s senior enlisted instructor for 2009. But his original motivation for becoming an instructor was a desire to better himself.

“I originally chose instructor duty for the opportunity to qualify as a master training specialist and to improve my chances for advancement to chief petty officer,” Miller explains. “Also, the set schedule at a training command allowed me to pursue my bachelor's degree through evening and weekend classes.”

More than half a decade later, Miller recalls learning something important about himself

as well—how much he enjoyed teaching other Sailors. “I discovered a genuine affection for instructing that surprised me. It can be very challenging, but the opportunity to set a Sailor on the right path is something I would encourage anyone looking at shore duty options to consider.”

Petty Officer First Class Scott Dean, a sonar instructor at the Naval Submarine School in Groton, Conn., looked forward to an eventual schoolhouse assignment during his five years aboard USS *Connecticut* (SSN 22).

“I knew from the time I was a student in sonar apprentice training that I wanted to be an instructor,” Dean says with a smile. “I've always thought about the possibility of being a teacher. The most challenging aspect is working with students and their pre/post-Navy issues, but the most satisfying part is seeing a student's life or situation bettered because of my influence.”

Miller opted to become a missile technician when he entered the Submarine Force, a choice he's never regretted during 20 years of active duty. He welcomed the opportunities that come with instructor duty, even when opportunities mount up to the point that they seem more like challenges and might, he concedes, be called by other names as well.

“The most challenging aspect of a training command is the ever-changing needs of the fleet,” he says. “Instructors are required to perform so many more functions than during my first assignment, and the fleet needs every ounce we can give [the students]. Keeping ahead of their requirements and ensuring we prepare them before their deployments presents some difficult challenges at times.”

Miller adds that the challenges aren't confined to the classroom. “Manning and individual augmentee (IA) assignments are also concerns. As a supervisor, I am always looking to improve the quality of life for my Sailors, and this is the foundation for meeting that desire. We not only need to meet the required manning levels, we need the right Sailors for instructor duty as well. We set the standard.”

Glen A. Kline, the command master chief at the Naval Submarine School, the largest fleet functional school in the Navy, helps manage a staff that delivers instruction ranging from the training of Sailors in Basic Enlisted Submarine School through complex advanced tactical training—not to mention 24/7 support for emerging

waterfront exigencies. Kline knows that the demands on an instructor are heavy, but that they are balanced by opportunities for personal growth and professional development.

“The greatest benefit to our [instructors] is the opportunity to improve their skills as a trainer and Sailor mentor,” he says. “When a Sailor returns to sea duty following his first shore tour, he is charged with training junior Sailors in his division, department and ship. What better place to perfect those training skills than at a submarine training command such as Naval Submarine School?”

“The instructor also gains invaluable ‘Sailorization’ skills as he assists junior Sailors in solving everyday, and sometimes complex, life problems,” Kline adds. “And the Submarine Force benefits by taking a Sailor with fresh skills in operation and maintenance of the latest equipment, technology and tactics in the Fleet and putting him in a position to transfer that knowledge to those Sailors who are relieving his peers.”

Dean, the sonar instructor in Groton, appreciates instructor duty as a learning experience: “I’ve learned a lot about teaching and mentoring, but still feel like I’ve just started—I still make a lot of mistakes. So much goes into being a successful teacher/mentor/instructor, with the most important thing being to always remember to put the student first. I have to constantly remind myself of this. I hope to become better at this every day.”

Miller, the Bangor-based LCPO, shares this ambition, adding, “I’m on my way to where I’d like to be. Instructor duty has definitely provided me with career and personal milestones but I continually find something that amazes me or humbles me and makes me realize that there’s always something more out there that I should be striving for. My tours as an instructor provided me with the confidence in my ability to one day reach my destination.”

Command Master Chief Kline sees a career continuum that joins, rather than separates, sea and shore duty when a Sailor serves as an instructor. “Sea and shore duties are obviously different, but the common bond between them in a career is the necessity to maintain sustained superior performance in all you do. Like sea duty, qualifications are also an integral part of instructor duty.”



Missile Technician (Submarines) Chief Petty Officer Bryan Miller works up-close and personal to explain his training topic.

“At Naval Submarine School, for instance, each of our Sailors assigned to an instructor billet is actively completing master training specialist qualifications just like their counterparts at sea are completing senior in-rate and ship qualifications. The biggest difference between the duty types is that shore duty provides a more stable schedule to complete other life goals like earning an associate, bachelor’s or higher degree; volunteering in the community; or simply spending more time with family and loved ones.”

Dean sees another parallel as well: “Having a solid team of instructors and chiefs behind you as you teach is huge. Just like on the boat, you cannot do it yourself—it’s too much. You need good people within your command to help you carry the load and get the job done.”

“The overriding concern is always how prepared Sailors are when they rotate,” Miller adds. “What a Sailor accomplishes on sea duty prior to rotation to shore is essential to his career preparation, while shore duty accomplishments complement a Sailor’s preparation for his return to sea duty. The ‘grind’ is different, but no less stressful on a Sailor, regardless of assignment.”

Kline suggests that instructor duty, like the training it supports, has cycles and rhythms,

but neither a start nor a finish. “Operations and fleet requirements drive training. Of course, when there is a new piece of equipment introduced in the fleet, we develop and teach the applicable operator, tactics and maintenance courses.”

“The [SLC] schoolhouses are constantly reviewing their courses for accuracy and relevance and making recommendations for curriculum changes as well as listening to our [fleet] customer to identify broad and specific areas of improvement.”

The instructor is the critical component in the continuous improvement of knowledge and execution from the classroom to the wardroom. Good instructors move the fleet forward not just by training their students, but by “lighting a fire,” as Yeats put it—instilling Submarine Sailors with the spirit and drive to achieve outstanding results.

As Miller notes, “My assignments as an instructor have provided me with a strong desire to improve Fleet training and to look forward to future assignments that will afford me the platform to do just that!”

William Kenny is the public affairs officer of the Submarine Learning Center.

# 13<sup>th</sup> Annual **UNDERSEAWARFARE** Photo Contest Winners



## 1st Place

Chris Oxley

This year's first prize goes to a photographer in the Communications Department of Newport News Shipbuilding who heard of the photo contest for the first time this spring and submitted this night shot of *USS Newport News (SSN 750)* as she came out of dry dock at the shipyard.



Each year, the Naval Submarine League (NSL) and UNDERSEA WARFARE Magazine team up to sponsor a photo contest. The spring 2011 issue of UNDERSEA WARFARE announced NSL's 13th Annual Photo Contest with the time-honored submarine slogan: "Any time. Anywhere. Always ready. Always there." No words more fittingly describe the Submarine Force's many achievements over the past year.

To name just a few, Submariners partnered with other U.S. and Allied forces to prevent Libyan dictator Moammar Gadhafi from massacring his people. They braved the unforgiving cold and ice of the Arctic in ICEX 2011, ensuring our ability to operate in that increasingly important region. And eight Sailors took voluntary leave to give a helping hand in Joplin, Mo., assisting residents in recovering from a devastating tornado. Building on this ongoing record of achievement, Submarine Force leadership unveiled the *Design for Undersea Warfare* to refine how U.S. undersea forces operate in today's environments, stay prepared for warfighting at short notice, and maintain the nation's dominance in the undersea domain for the long haul.



The photo contest winners are not only outstanding examples of the photographer's art; they bring to mind some of the things that keep our Submarine Force looking good in every respect. The dramatically lighted study of an attack submarine coming out of dry dock symbolizes the dedication of all the people who support the Force in government and industry facilities ashore. The charming portrait of an officer amused by female spectators' custom of kissing uniformed marchers in the Savannah, Ga., St. Patrick's Day parade highlights Americans' appreciation for what Submariners do. The picture of men seeing off an aircraft in an empty expanse of pale blue sky and snow-covered ice evokes both the adventure and the isolation of a Submariner's world. Finally, the image of a little girl waving a colored streamer at a blurred submarine sail reminds us what it's all about—keeping America safe for future generations.

Kudos to this year's winners, and to all those whose achievements they represent!

## 2nd Place

**Petty Officer 1st Class James Kimber**

Lt. j.g. Kerry McCauley, a supply officer in the USS *Alaska* (SSBN 732) Gold crew, smiles after receiving a kiss during the 2011 St. Patrick's Day Parade in Savannah, Ga., where it is traditional for female spectators to kiss uniformed participants.





## 3rd Place

Chief Petty Officer (ret.) Hector Castillo

The USS *Connecticut* (SSN 22) bridge team and members of a field party from the Navy Arctic Submarine Lab's Ice Camp observe a U.S. Coast Guard C-130 flyover during ICEX 2011.

## Other Notable Entries

Petty Officer 1st Class Ted Marsh, Trident Refit Facility mooring supervisor, directs line handlers mooring USS *Alaska* (SSBN 732) at Naval Submarine Base Kings Bay, Ga.

Photo by Petty Officer 1st Class James Kimber.





## Honorable Mention

**Petty Officer 2nd Class Danna M. Morris**

A child greets her father's boat, *USS Albany* (SSN 753), returning to Norfolk, Va., at the end of a six-month deployment.



Lt. Paul Galatro, first to disembark when *USS Pasadena* (SSN 752) returned to Pearl Harbor after a six-month deployment, meets his baby daughter for the first time.  
**Photo by Petty Officer 2nd Class Ronald Gutridge.**



Air Force Gen. C. Robert Kehler, commander, U.S. Strategic Command, addresses the blue and gold crews of *USS Rhode Island* (SSBN 740) at a ceremony where *Rhode Island* received the Omaha Submarine Ballistic Missile Trophy, recognizing her as the best Trident submarine of 2010.  
**Photo by Petty Officer 1st Class James Kimber.**



Photo by Olivia Logan

It's Monday morning, June 27th, inside the David Taylor Model Basin at the Naval Surface Warfare Center's Carderock Division, in Bethesda, Md. The water of the Deep Water Basin is calm, but the environment is chaotic. People hustle by in a blur of wetsuits, air tanks and life jackets. Several submarines bob in the staging area anticipating their chance at a moment of glory. Jim Corry, responsible for controlling the race course start line, climbs up to his perch over the basin and announces, "Sublime: Lock and load!" And with that, the 11th International Submarine Races are officially underway.

The submarine races are a biennial week-long competition that challenges students and independent enthusiasts to design and build a one- or two-person, human-powered submersible and race it on a 100-meter underwater course. This year's event featured 28 submarines from 16 colleges, five high schools, and three independent teams. Over 600 contestants, staff and volunteers came from the United States, Mexico, Oman, France, Canada, Venezuela, and the United Kingdom. Over the course of five days, 282 races took place, working out to an average of one race every five minutes.

Throughout the competition, participants had the opportunity to apply their technical knowledge to practical reality, giving them a better understanding of underwater vehicle hydrodynamic, propulsion and life support systems. The event also helps increase public awareness of the challenges of working in and exploring the underwater world.

"At Carderock, as we like to say, "This is where the fleet begins," said Capt.

# Learning through Competition



# The Eleventh International Submarine Races



Photo by Olivia Logan

(Opposite, left) Flags of the seven countries that sent teams to the sub races hung above the model basin. (Not shown are the flags of Venezuela and Britain.) (Opposite, right) Members of the Naval Academy team work on their entry at the Academy before taking it to Carderock for the submarine races. (Above) Teams prepare their submarines in the staging area, referred to as “the beach.”

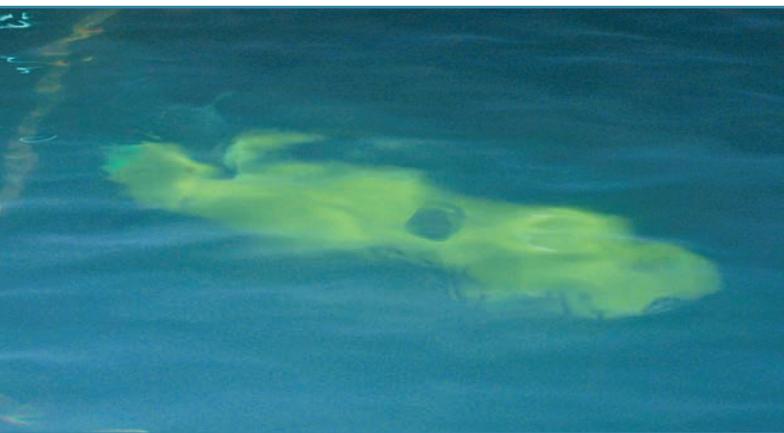
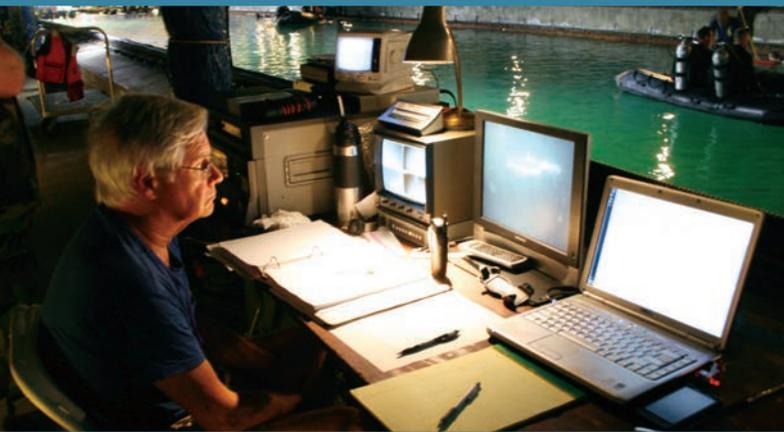
Heidemarie Stefanyshyn-Piper, Carderock’s commander. “Part of hosting these submarine races is that we can get these students interested in math and science, see[ing] a real practical application to what they’re learning in the classroom and putting it to actual use building a piece of hardware—and not just building it, but getting it to complete a goal.” Several Carderock staff members were once contestants in prior sub races, including Dan Dozier, Carderock’s

head liaison for the event, who served as a team mentor and contestant from 1991 to 2007.

“We really want to foster education and growth for our country,” said Jerry Rovner, director of race operations and a former Navy diver. “It may seem simple to build a human-powered machine that goes in a straight line, but...a lot of them don’t do that.” He said students often come to the sub races and learn more in a week than they

did in three years of school. “They see the theoretical, and now they have to make it practical.” One mother wrote an appreciative letter to sub race organizers telling them that her high school-age son “is so excited he now has a career path. He knows exactly what he wants to do.”

Several sub race alums plan to pursue careers in engineering and perhaps even join the Navy. “I can’t think of a better motivating or recruiting event than this one,” said



(Clockwise from top, left) Frank Lang, head timer for the races, uses a bank of television and computer screens to monitor subs on the course; Jim Corry gives instructions to teams from his perch above the deep-water basin; *The Yellow Rose of Texas* team members work on their submarine; An underwater shot of SSH-11, *Mighty Mid*, as it travels down the course. (Photos by Olivia Logan)

Christopher Land, a former nuclear-trained officer on USS *Henry M. Jackson* (SSBN 730) (Gold), who is the advisor for the team from Sussex County Technical School in New Jersey. Land noted that about 85 percent of his students seek engineering degrees, and about 95 percent of them keep their major. Tom Price, a civilian model maker for the U.S. Naval Academy, said being involved in the sub races does transfer to a naval career, although no one from this year's academy team is going into submarines.

Michael D'Alessio, the "pilot," or driver, of the Sussex County Tech sub, is entering Ramapo College of New Jersey this fall to study engineering physics. D'Alessio believes the sub race experience has helped prepare him for higher education. "If we can do this, college kinda seems like a walk in the park."

Preparing for the sub races was certainly no walk in the park. Teams started planning many months before. Land assembled his Suffolk County Tech team in early September 2010. "The process takes between two and three weeks," he said. "I've got a number of exercises I make them go through, and I try to make sure they truly, as much

as they could know, want to follow through on this thing that is not a normal project." Seventeen kids signed on for the long journey to the sub races.

Teams are eligible for nine awards: overall performance, innovation, absolute speed, fastest speed by category (the categories being one-person or two-person, propeller or non-propeller, academic or independent), best use of composites, best design outline, "smooth operator," persistence and resourcefulness, and "best spirit of the races." Awards are given by a group of judges, with the exception of the "best spirit of the races award," which is voted by the submarine teams.

The Sussex County Tech team began the conceptual design process with a tradeoff between innovation and speed. Was it worth more to have a fresh design or a faster sub? "When you really try to mix the two, you have a tough time meeting your goals," Land said. The team chose innovation and decided to model some aspects of their sub on a fish. They consulted Dr. Frank Fish, a biology professor at West Chester University, who advised them to model their sub on

a bluefin tuna because of its short, stout body shape, which would provide room for the pilot to sit in a recumbent position. The students plugged their design concepts into a CAD program and went to work building *Umptysquatch V*, a one-person, non-propeller-driven submarine.

D'Alessio said the team's chemistry was a great help in construction efficiency. "In the morning [teammates] could design something, hand it over to us in the afternoon, and we would start machining it, almost like an assembly line."

The team did not have a chance to test *Umptysquatch V* in the water before the races, so the students said that when it came time to race, it was an accomplishment just to get the sub going. "We're not going very far [down the course]," said Dean Romanelli, who is both the support diver, assisting the sub while on the course, and *Umptysquatch V*'s head designer. "But it's working, which is really cool." Land said the students' faces lit up at the sight of the fishtail motion working for the first time. "They know that, 'Wait a minute...every gear tooth, every pinion, every chain, every shaft, every piece

“They know that, ‘Wait a minute ... every gear tooth, every pinion, every chain, every shaft, every piece of fiberglass, was designed and built by us,’ and it’s only moving forward because of their understanding of physics and engineering.”

— Christopher Land,  
Advisor, Sussex County Technical School



of fiberglass, was designed and built by us,’ and it’s only moving forward because of their understanding of physics and engineering.”

*The Yellow Rose of Texas*, from Arlington, Texas, was another sub that did not get tested in the water beforehand. In fact, the team still had quite a bit of unfinished business to attend to upon arrival at Carderock. At first sight, the sub’s permeable hull (also referred to as a “screen door on a submarine”) seemed to be part of that unfinished business, but that was not the case. “Everybody else that has a solid hull has to carry all the water that’s in that sub with them. It’s like a car loaded down with a lot of luggage,” explained the team’s leader, Keith Blaylock. “What we’re trying to do is not carry any water with us. Therefore we’re lighter in the water and, hopefully, we’ll be able to utilize the pilot’s power more to moving the sub than just moving the water in the sub.” This novel approach didn’t actually work out as well as the team hoped, but they did earn an honorable mention for innovation.

*Sea Wolf*, from Springstead High School, in Spring Hill, Fla., also received an honorable mention for innovation. According to Zachary Gooch, one of the team’s support divers and pilots, they already had an “excellent sub” with *Sublime*, which was

propeller-driven, so they made *Sea Wolf* to race in the separate, non-propeller-driven category.

But *Sea Wolf* wasn’t living up to her predecessor. “It’s still not entirely in working order,” said Gooch. “We have some buoyancy issues, the chain slips ... there are still some kinks to work out.” Christopher Sarabalis, a Springstead High graduate who came back to assist the team, said that because *Sublime* had always performed so well, the team regarded *Sea Wolf* as somewhat of a “step child.” Yet by the end of the week, *Sea Wolf* made her team proud. She received second place for fastest speed (1.169 knots) in the category of one-person, non-propeller, academic (from a high school or college).

The big winner of the competition was *Talon 1*, a one-person, propeller-driven sub from Florida Atlantic University, in Boca Raton, Fla. *Talon 1* posted the fastest speed from all of the design categories, at 8.614 knots. The team also got the “smooth operator” award in recognition of its efficiency in staging for the race course, racing the course, troubleshooting as necessary, and otherwise preparing for the next run. The team received second place for overall performance.

Not far behind *Talon 1* was SSH-11, *Mighty Mid*, from the U.S. Naval Academy.

(Top) *Umptysquatch V* rests on its trailer outside of the David Taylor Model Basin. (Bottom) Team members bring *Umptysquatch V* to the starting line. (Photos courtesy of Marilyn D’Alessio)

This was the Academy’s first appearance since the races’ inception in 1989. Despite the 22-year hiatus, the team achieved first place in overall performance. *Mighty Mid* also won first place for speed (6.100 knots) in the category of two-person, non-propeller, academic, breaking the previous world record of 5.133 knots held by the École de Technologie Supérieure, of Montreal, Canada. The other submarine teams also selected the Naval Academy to receive the “best spirit of the races” award, which is given to the team that displays “the best gusto, fortitude, support to other teams and overall best spirit.”

While not every sub made it past the finish line and not every team went home with an award, participants said the whole sub race experience was worthwhile. “This is the best ... it couldn’t get better,” said Brian Dubord, a member of the *Umptysquatch V* team. “It’s a learning experience, it’s a life experience, it’s a competition. It’s everything all in one.”

Olivia Logan is managing editor of UNDERSEA WARFARE magazine.

# Dig Boats, Fleet Boats & Mystery Meat

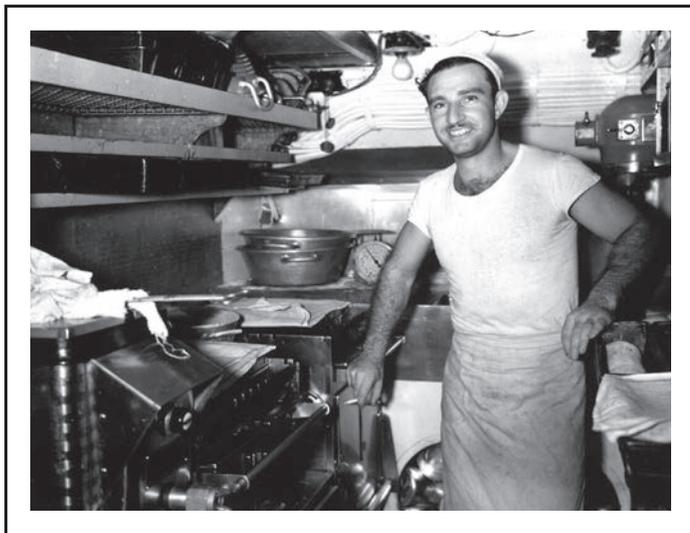
## U.S. Submarine Food 1941-1945

Comparing the quality of life aboard the World War II submarines of different countries, British naval historian Richard Compton-Hall, who served in Royal Navy subs after the war, asserts—perhaps with just a hint of holier-than-thou, “we-can-take-it,” British stiff-upper-lippedness—that American submariners “had the best of everything and would never have tolerated substandard conditions.” One can understand the envy. U.S. fleet-type submarines, outfitted with Kleinschmidt compression water distillers and Freon air conditioners (among other marvels), were indeed more

technologically advanced and less distressingly squalid than their contemporaries. They were also significantly larger, which not only improved the overall level of comfort for the servicemen, but also went far to enhance the caliber and the variety of the food they received, at least when circumstances were favorable.

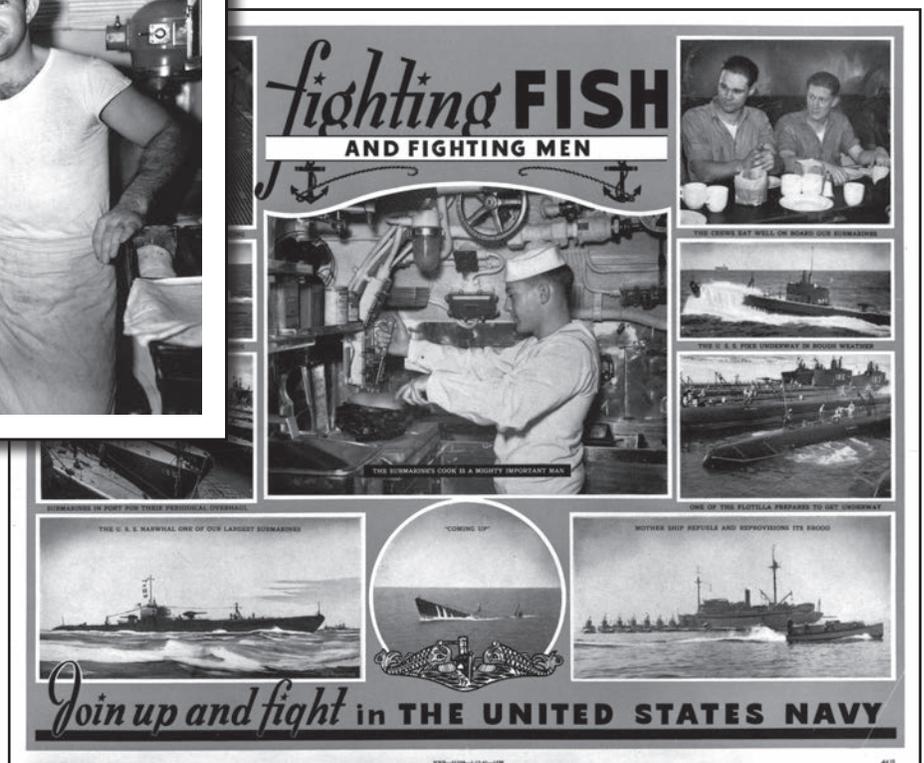
Fleet subs of the *Gato* (SS 212) and *Balao* (SS 285) classes boasted sizable freezer and refrigerator compartments, and their galleys, though diminutive, were well-equipped, generally with two griddles, a deep-fat fryer, two electric ovens, a hefty electric mixer, and

a two-gallon coffee urn. Fleet boats usually boasted an ice cream maker as well, even when lack of space in the galley or crew mess made it necessary to install the machine among the bunks in the crew’s berthing space. To no small degree, the output of submarines’ microscopic kitchens determined the collective spirit of the men. “Next to resting in the sack, eating is the greatest pastime,” wrote Martin Sheridan, of the *Boston Globe*, the only war correspondent allowed to accompany an American submarine crew on a war patrol. “Maybe eating is the more important,” he continued. “Anyway, fill-



(Right) So high was the reputation of submarine food that this 1941 recruiting poster featured a well-dressed cook in the galley and eager crewmen in the mess. The caption at center reads: “The submarine’s cook is a mighty important man.” (U.S. Navy photo)

(Above) Real World War II galley attire: T-shirt and apron over dungarees. This June 1945 snapshot is of George Sacco, a cook and baker in USS *Cod* (SS 224). (Courtesy of the USS *Cod* Submarine Memorial)



ing a man's stomach to the contentment level with palatable food will go a long way toward keeping morale at a high level, just as the sages declare the way to a man's heart is through his stomach."

Submarine food was widely believed to be the best in the Navy, and Navy food was reputedly the best in the military, so sub food was presumably the finest the U.S. armed forces had to offer. The excellence of the rations—or at least the effort to make them as good as possible—was essentially "hardship pay," compensation for claustrophobic working conditions, for the dearth of sunlight, for little in the way of external stimuli, and for the obvious lack of foraging possibilities. But the actual quality of the food on fleet boats during World War II in the Pacific depended on a number of factors. The difference between first-class chow and unpalatable slop lay in the creativity of the cook, the skill of the baker, the imagination of the commissary officer, and the quality of government-issued provisions.

Good sub food could also depend on the luck of the draw. The worst losers were those assigned to the primitive, World War I-era S-boats, which were generally called "pig-boats," and were also affectionately termed "sewer pipes." Many of these old boats were based at Manila when the Japanese attacked Pearl Harbor and soon transferred to Australia as Japanese forces closed in on the Philippines. "An S-boat was a great leveling agent," notes one historian, "all suffered equally." With no air conditioning, poor ventilation, and few provisions for personal hygiene, the pig boats were woefully unsuited for tropical conditions. The onboard ecosystem was fecund. Within the overall miasma of diesel, bilge odor, battery acid, unwashed bodies, garbage, and "something indefinable but sickly sweet" grew mold and mildew of various shades, as well as "finger-length stud cockroaches" that could be "stunned but never decimated by fumigation."

Fresh food could not long endure such an environment. Moreover, refrigerator and freezer space was minimal, and the

Australian-supplied meats stuffed into it—usually mutton, goat, and whole rabbits, none of which appealed to Americans—tended to congeal into one solid pinkish-gray block. Even this was chipped away to virtually nil after only two weeks at sea. From there on out, it was canned and powdered rations, and some boats came close to exhausting these before returning to port. On *S-39*, the primary fare at one point was either canned corned beef or the infamous dried chipped beef, which was, of course, served creamed and on toast. Most submariners called the chipped beef "S.O.S.," short for a well-known scatological expression, but the crew of *S-39* came up with an even less

printable name for it, much to the aggravation of Walter "Rocky" Schoenrock, the boat's somewhat delicate cook.

Unfamiliar provisions acquired in foreign ports faced strong prejudice on the part of American crews. Australian rabbit and mutton was too gamey for their taste. Australian soft drinks, called "Bitter Lemon" or "Bitter Orange," were less than popular, with some U.S. submariners theorizing that the bitterness must stem from squeezing the entire tree during processing. The take on Dutch supplies, obtained at Surabaya until the Japanese occupied Java in early March 1942, was ambivalent at best. American crewmen found Dutch



(Top) The wardroom of *Cod*, a *Gato*-class sub built by Electric Boat. Three stewards, one for each watch, served the wardroom. (Bottom) The wardroom pantry, showing officers' dishes stored in the open cabinet. (Photos by Paul Farace, courtesy of USS *Cod* Submarine Memorial)



A view inside the galley of the Portsmouth-built, *Balao*-class submarine USS *Pampanito* (SS 383). The arrangement of shelving and equipment could vary between classes and even between boats within a class. But, the all-important coffee maker was always in the same handy location just inside the galley on the aft side. (Courtesy of the USS *Pampanito*/San Francisco Maritime National Park Association)

canned fruit satisfactory, and most were certainly fond of Heineken. (One member of *S-39*'s crew smuggled aboard 26 quarts and hid them directly above the officers' wardroom.) But the hash, sausage, sauerkraut, and assorted stew compounds, all canned, were reviled. Corwin Mendenhall, the junior ensign on USS *Sculpin* (SS 191), later wrote that when dwindling U.S. stocks at last forced the chief cook, Duncan Hughes, to add Dutch items to the *carte du jour*, "a few people became downright nasty," and "the displeasure was not particularly soothed by assurances that better things would soon be available." The cook fell back on an old stand-by, but it didn't help matters. "Duncan brought out

Spam and powdered eggs, which stirred up [another] hornet's nest."

Whatever the source, storing food demanded considerable forethought. Storage space was restricted, as was room for culinary maneuver. Sixty days at sea—the standard war patrol for a fleet boat—meant that the cooks and commissary officers had to think 60 days ahead. "Unless care was exercised," observed Vice Adm. Charles "Uncle Charlie" Lockwood, who assumed command of American submarine forces in the Pacific in February 1943, "a crew might find itself condemned to eat through a wall of string beans or chicken soup or Spam before some variety could be introduced into its diet."

As cooks burrowed into their stores, they sometimes encountered unpleasant surprises. Well into a 1943 patrol, the mess crew of USS *Rasher* (SS 269) discovered that its cache of frozen beef—fully 600 pounds—was in an advanced state of decomposition, having evidently undergone several rounds of thawing and freezing on its long journey from the U.S. to Australian depots. After

cleaning out the entire freezer—no simple task while in enemy waters—the cooks loaded the stinking rotten biohazard into twelve gunny sacks, weighted it down with burnt valves, broken cylinder head studs, tin cans and assorted detritus, and later threw it overboard under cover of darkness. That night the sharks fed well. The only uncanned meat left for the men was chicken. "Nobody blamed the cooks," the chronicler of this incident notes, "but chicken was chicken, not steak."

Submarine life was lived largely under cover of darkness. At the beginning of the war, submarines sailing from Pearl Harbor had orders to avoid air attack by remaining submerged on battery all day whenever they were within 500 miles of a potential Japanese airfield. Only when darkness prevented enemy aircraft from scanning the ocean surface would submarines come up to charge batteries and take advantage of their much higher surfaced speed. Similar caution prevailed among submarines based in the Far East. It quickly became clear that



keeping submarines down all day needlessly lengthened transit time and made it harder to find targets, so the high command relented and let each boat's commanding officer decide when to operate on the surface. Still, night remained the safest time for surface operations. It also became prime time for hunting starting in the summer of 1942, when fleet boats began to receive reliable surface-search radar. This gave them a great nighttime advantage over Japanese convoy escorts, which had neither radar nor radar detection gear until much later in the war.

Much of a submariner's limited physical activity consequently took place after dark. Some crews still adhered to the standard meal schedule for a U.S. warship at sea, but others turned night into day, adapting meal times to their upside-down shipboard routine. The crews called this "going into reversa." Breakfast was served at nightfall. Lunch was dished out at midnight. And dinner, the heaviest meal, came at dawn. The "reversa" timetable was particularly suited to the oppressive conditions on the

antiquated S-boats, with their lack of air conditioning. Cool night air entering the surfaced submarine not only reinvigorated the sweating, oxygen-deprived crewmen but helped counter the additional heat of a busy galley.

Even on air conditioned fleet subs, some kitchen crews chose to do heavy cooking at night, when the submarine would not be buttoned up and the ventilation system could whisk cooking smoke along with other foul odors right out of the boat. Having the boat open to the atmosphere was particularly helpful for dissipating the intense heat of baking. USS *Gudgeon* (SS 211), which conducted the first submarine war patrol out of Pearl Harbor, continued to serve meals at standard Navy hours throughout the patrol, but her galley crew put off baking until after dark. A bold submarine commander might keep his boat on the surface for all or part of the day, but the galley crew could never count on that, and a boat exposed on the surface in daylight was more likely to make a crash dive

A World War II re-enactor demonstrates baking in the galley of USS *Cod*. His outfit is authentic down to the Neolite heels of his shoes—and the cigarette. A fleet boat like *Cod* had one head cook and two assistant cooks. The galley layout differs from *Pampanito's*, with the mixer, for example, at the opposite end. (Photo by Paul Farace, courtesy of USS *Cod* Submarine Memorial)

at any moment, not an ideal situation for anyone trying to do something complicated in the galley.

Good cooks were held in high esteem. They were sensitive to the dietary needs and desires of the crew and could create what Lockwood called "taste, sight, and nose appeal—three essential factors to submariners whose tastes often became jaded toward the end of long and tiring patrols." The age-old risk of scurvy remained, and lack of sunlight was also a threat to the men's well-being. Accomplished cooks usually held these dangers in check with varied and balanced menus, which included fresh fruit and vegetables for as long as they lasted and plenty of fruit and vegetable juices thereafter.



(Top) *Pampanito's* crew mess, looking forward toward the galley. (Courtesy of the USS *Pampanito*/San Francisco Maritime National Park Association)

(Bottom) A reenactment of a mess attendant serving soup in *Cod's* crew mess. Unrated Sailors from the crew served as mess attendants. (Photo by Paul Farace, courtesy of USS *Cod* Submarine Memorial)



Dougherty, of USS *Barb* (SS 220). Their specialty was huge victory slabs portraying the latest kill. One, described by *Barb's* renowned commanding officer, Eugene Fluckey, was “three feet square and six inches high ... The multicolored frosting depicted a submarine firing torpedoes at two merchant ships flying the Japanese flag. One of the ships was broken in the middle like a “V” for victory as she sank. The other was sinking bow first. I was amazed they could concoct such a cake.”

Unfortunately, not all submarine cooks were masters of their craft. Among the notorious was Ship's Cook 3rd Class Mosley, known as “Old Man Mose,” a New Mexico native who left the desert to join the crew of USS *Halibut* (SS 232) in 1942. “Stocky, homely in appearance, as slow speaking and thinking as he was lumbering in motion,” Mosley was, according to *Halibut* Commanding Officer Ignatius “Pete” Galantin, “impervious to insult, indifferent to compliment.” The crew unanimously hated his cooking, and he did not care. One of the *Halibut's* fire controlmen declared that “the trouble with Mose's cooking is he thinks that when it's burning it's cooking, and when it's burnt, it's cooked.” Confronting a remarkably devastated piece of fried ham at breakfast, another submariner “called out in a hurt tone, ‘M-i-s-t-e-r Mosley, down in Arkinsaw, where I come from, no self-respectin' hawg'd let hisself get in this condition. Great balls o' fire! What'd you do to this meat?’” Mosley's response is unrecorded. It seems likely there was none.

Bad cooks could certainly decimate a potential meal. Battle could do the same. Whenever Bullhead's deck guns fired, Piatt's muffins and cakes invariably collapsed into lifeless deflation. A maritime cooking disaster occurred on USS *Harder* (SS 257) in 1942 when torpedomen flooded the forward tubes with far too much water. Result: an unexpected nosedive of many fathoms. The crew quickly regained control, and the boat leveled off. A safety inspection revealed

But vitamin deficiency could still take its toll. By the end of the fifth patrol of USS *Saury* (SS 189), in late 1942, the majority of the crew was tormented by loose teeth and painful bleeding gums, classic symptoms of scurvy. Gastrointestinal matters were also a concern. After weeks at sea, appetites tended to wane due to lack of exercise. Indeed, the average weight loss for submariners early in the war was 15 pounds per man per patrol. With this came another plague of underwater existence, constipation. An attentive cook stepped up to the plate with a diet designed to minimize mass irregularity.

A skilled baker was especially prized. The historical sources reveal several temporary

food fads on World War II submarines. On USS *Pampanito* (SS 383) alone, a tuna fish sandwich obsession struck, then chocolate and condensed milk mania, soon followed by a fresh-cut french fry craze. But the craving for homemade bread, pies, cakes and pastries was universal and enduring. Carl Piatt, a former steel worker turned baker in the crew of USS *Bullhead* (SS 332) (lost with all hands in August 1945), was a magician with cinnamon buns, chocolate cream puffs, and corn bread. Corwin Mendenhall recalled fondly the pecan waffles and strawberry shortcake prepared by a Filipino steward on *Pintado* (SS 387). But the greatest aces of cake were perhaps James Vogelei and Charles

no injuries or damage—until it got to the galley. There stood Ship's Cook and Acting Commissary Steward Thomason, "ankle-deep in mashed potatoes garnished with a glittering sea of what had been steaks, gravy and fried eggs." In all probability, the meal that eventually got served was a mixture of tinned ham, sugar, salt, water, and modified potato starch, with a little dash of sodium nitrate to preserve its rosy color.

The consequences of combat were sometimes felt long after engagement with the enemy. Depth-charged near Rabaul on Sept. 28, 1942, *Sculpin* took on water, which was dumped into the canned-goods storeroom as a stopgap measure. Labels and cans soon parted ways, leaving a substantial collection of Dutch-supplied mystery meat for the submariners' enjoyment. "For some weeks afterwards," Mendenhall recalled, "the crew insisted that Chief Cook Duncan Hughes would send a mess cook for an armload of cans, open them, and thus determine the menu for the meal." But surprisingly enough, an encounter with the Japanese could actually improve a dish. Aboard *Halibut*, all attempts at French onion soup had ended in thin and watery failure. At last, one of the cooks got it right. Galantin, *Halibut's* CO, speculated that this small triumph was essentially the upshot of "prolonged simmering under depth charging."

Victories at sea were usually followed by a feast—and often by after-dinner cordials. "Post combat meals were a submarine tradition," Admiral Lockwood noted, "and they were about the only spoils the victors won." Steak and eggs was the classic post-combat meal, one of the few Australian meals Americans came to appreciate. After the feast, congenial sub commanders would pass out shots of whiskey. Though this was a violation of U.S. Navy regulations, even a number of senior officers, notably including Adm. William "Bull" Halsey, would stow away bottles of hard liquor to distribute for "medicinal purposes." But a commander had to be vigilant. Eugene Fluckey wrote that when his men lined up for their whiskey, "each one had to check his name off on a muster list—submariners are, by nature, sneaky."

Submariner sneakiness naturally extended into the murky waters of onboard moonshining. "When sailors got their hands on rice or raisins," historian Gregory Michno claims, "they didn't think of rice pudding, but rather a powerful homemade



The coffee carafe from *Cod's* wardroom (Photo by Paul Farace, courtesy of USS *Cod* Submarine Memorial)

whiskey called 'tuba.'" Another booze source was always close at hand: torpedo fuel. This denatured alcohol bio-fuel was not potable as-is, but it could be distilled into what submariners called "torpedo juice." The engine room crew of *Pampanito* worked in shifts tending a still made from a Silex hotplate, a coffee maker, and a length of 3/8-inch copper tubing spiraled through a tin can filled with water. The end-product was a nearly 200-proof concoction known as "pink lady," named, Michno says, for its "faint hue caused by denaturing agents added for the express purpose of making it undrinkable." He adds that "it was extremely harsh without enough fruit juice to dilute it, but it worked just fine." On *Barb*, commander-approved whiskey regularly accompanied Vogelei's and Dougherty's celebration cakes. These became larger and more elaborate as time passed. The bakers outdid themselves on the last New Year's Day of the war. The monster cake showed "the *Barb* shooting maraschino cherries, with whole strawberries for hits." The victim "was depicted sinking stern first, with crisp bacon colored with saffron for the flames."

Resourceful, inventive and sometimes highly artistic, WW II submarine cooks were cherished members of the crew, the occasional hack like "Old Man Mose" perhaps excepted, though it seems even he was cher-

ished, in a way, for his boundless ineptitude. The dining compartment was the very center of life on the boats, and there the cooks and their creations were on display. The cook, as Galantin emphasized, "can't be a sensitive soul ... he literally stands behind his product in his tiny, hot galley, only an arm's length from the shipmates seated at the mess tables in the after battery room."

Cooks and mess crews had to contend on a daily basis—at least three times daily—with a wide range of diverse and often idiosyncratic personalities and their often idiosyncratic tastes, all within a decidedly intimate, elbow-to-elbow working environment. This took guts, a great deal of patience, and plenty of ingenuity. Compton-Hall recounts the story of one submarine commander who insisted that every cup of coffee served to him on the bridge be full to the brim. Only one crewman, a steward, could make the long, difficult climb up the conning tower ladder without spilling a drop. Eventually, with the boat about to be decommissioned, the executive officer asked the steward his secret. With a broad grin, he confessed that he took a good mouthful of coffee at the bottom and spit it back in just as he reached the top. Compton-Hall calls this "a good example of sound submarine common sense!"

A good example, coupled with a good joke, explains why this entertaining but undoubtedly apocryphal story remains in circulation to this day. In reality, little if any coffee was drunk on the bridge during a war patrol, when no distraction of any sort could be tolerated, and everyone had to be ready to scramble below in a matter of seconds. The skipper may perhaps have treated himself to a hot cup of java after returning safely to home waters, but if so, the steward could fill his cup to the brim right there on the bridge—from the vacuum coffee carafe that was standard equipment in U.S. submarines. But the tale of the resourceful steward persists, testifying to the sneaking admiration and affection World War II submariners felt for crewmates who manned the galley, the mess, and the wardroom on U.S. submarines.

Phillip T. Rutherford is an associate professor of modern European history at Marshall University, in Huntington, W.Va. This article is drawn from his research for an upcoming book, tentatively entitled *Fighting Fare: American Servicemen and the Taste of War, 1941-1945*.

## Norfolk Wins Atlantic Fleet Arleigh Burke Trophy

The Chief of Naval Operations (CNO) announced July 29 that USS *Norfolk* (SSN 714) was the 2010 winner of the Atlantic Fleet's Arleigh Burke Trophy. The trophy, named for the famous World War II destroyer squadron commander and later CNO (1955-1961) Adm. Arleigh A. Burke, is presented annually to the ship or aviation squadron in both the Atlantic and Pacific Fleets that has achieved the greatest improvement during the previous year based on the Battle Efficiency Competition.

The CNO noted that *Norfolk's* crew "performed flawlessly during a uniquely challenging six-month deployment and registered significant improvement on a recent engineering examination." *Norfolk* returned from her deployment to the U.S. European Command and U.S. Central Command on Sept. 6, 2010.

"*Norfolk's* mission performance during 2010 improved in every area," said Commander, Submarine Force Atlantic, Vice Adm. John M. Richardson. "Earning this award is only possible by virtue of the hard work by everybody in the crew. Everybody took a strain here as a team. It's clear to me that *Norfolk* has put the submariner first in their priorities and that the team responded by exceeding expectations in every area."



Photo by Petty Officer 1st Class Todd A. Schaffer

Cmdr. Douglas Jordan, *Norfolk's* commanding officer, salutes as the ship returns to Naval Station Norfolk at the end of her six-month deployment in 2010.

### Changes of Command

- COMSUBGRU TWO  
Rear Adm. Richard Breckenridge relieved  
Rear Adm. Michael McLaughlin
- COMSUBGRU SEVEN  
Rear Adm. Phillip G. Sawyer relieved  
Rear Adm. Robert L. Thomas
- COMSUBGRU TEN  
Rear Adm. Joseph Tofalo relieved  
Rear Adm. Barry Bruner
- COMSUBRON SIXTEEN  
Capt. Stephen Gillespie relieved  
Capt. Tracy Howard
- USS City of Corpus Christi (SSN 705)  
Cmdr. Chris Buziak relieved  
Cmdr. Robert Gaucher
- USS San Francisco (SSN 711)  
Cmdr. Eric L. Severseike relieved  
Cmdr. Nathan H. Martin
- USS Michigan (SSGN 727)  
Capt. James E. Horten relieved  
Capt. Charles J. Logan
- USS Maryland (SSBN 738) (B)  
Cmdr. Gregory Kercher relieved  
Cmdr. John Newton
- USS Pasadena (SSN 752)  
Cmdr. Luis E. Molina relieved  
Cmdr. Andrew B. St John
- USS Toledo (SSN 769)  
Cmdr. Sam Geiger relieved  
Cmdr. Douglas Reckamp
- USS Connecticut (SSN 22)  
Capt. Benjamin Pearson relieved  
Cmdr. Michael Varney

- USS Frank Cable (AS 40)  
Capt. Nelson P. Hildreth relieved  
Capt. Thomas P. Stanley

### Qualified for Command

- Lt. Cmdr. Nicholas Borman  
USS Alaska (SSBN 732) (B)
- Lt. Cmdr. Allen Deckers  
USS Rhode Island (SSBN 740) (B)
- Lt. Cmdr. Jason M. Deichler  
COMSUBGRU TWO
- Lt. Cmdr. David Fassel  
USS Columbus (SSN 762)
- Lt. Cmdr. Michael D. Fisher  
U.S. Fleet Forces Command
- Lt. Cmdr. Christopher Hedrick  
USS Charlotte (SSN 766)
- Lt. Cmdr. Juan Hines  
COMSUBRON SEVENTEEN
- Lt. Cmdr. Roderick Hodges  
USS Columbia (SSN 771)
- Lt. Cmdr. Corey Johnson  
COMSUBDEVRON FIVE
- Lt. Cmdr. Kristopher A. Lancaster  
USS Toledo (SSN 769)
- Lt. Cmdr. Thomas Niebel  
COMSUBRON SEVEN
- Lt. Cmdr. Charles Phillips III  
USS Nevada (SSBN 733) (G)
- Lt. Cmdr. Michael Poplawski  
USS San Juan (SSN 751)
- Lt. Cmdr. Brian O. Souder  
USS Norfolk (SSN 714)

- Lt. Cmdr. Jeffrey J. St. George  
Naval Sea Systems Command
- Lt. Cmdr. Jason Valdespino  
COMSUBRON SEVENTEEN
- Lt. Cmdr. Robert Webster  
USS Boise (SSN 764)
- Lt. Cmdr. Timothy J. Yanik  
COMSUBRON SIX
- Lt. Eric Astle  
COMSUBRON ONE
- Lt. David Backer  
USS Wyoming (SSBN 742) (B)
- Lt. Joseph Bainer  
USS Greenville (SSN 772)
- Lt. Kevin D. Chesnut  
USS Providence (SSN 719)
- Lt. Charles Hirsch  
USS Ohio (SSGN 726) (G)
- Lt. Vincent Kahnke  
COMSUBRON SEVENTEEN
- Lt. Linwood Lewis  
COMSUBRON SEVEN
- Lt. Philip Sylvia  
COMSUBRON ELEVEN
- Qualified Nuclear Engineer Officer**
- Lt. Charles Allen  
USS Oklahoma City (SSN 723)
- Lt. Craig Dobson  
USS Asheville (SSN 758)

- Lt. Jonathan Martin  
USS Texas (SSN 775)
- Lt. Daniel Misch  
USS Pennsylvania (SSBN 735) (B)
- Lt. Steven Schmitt  
USS Louisiana (SSBN 743) (G)
- Lt. j.g. Anthony Ardito  
USS Columbus (SSN 762)
- Lt. j.g. John Baber  
USS Tucson (SSN 770)
- Lt. j.g. David Camp  
USS Key West (SSN 722)
- Lt. j.g. Matthew Chung  
USS Nevada (SSBN 733) (G)
- Lt. j.g. Christopher Dibble  
USS Kentucky (SSBN 737) (B)
- Lt. j.g. Luis Estrada  
USS Henry M. Jackson (SSBN 730) (B)
- Lt. j.g. Matthew Fisher  
USS Ohio (SSGN 726) (B)
- Lt. j.g. Jason Frederick  
USS City of Corpus Christi (SSN 705)
- Lt. j.g. Kyle Haubold  
USS Jacksonville (SSN 699)
- Lt. j.g. Ryan Hilger  
USS Maine (SSBN 741) (G)
- Lt. j.g. David Jordan  
USS Jacksonville (SSN 699)
- Lt. j.g. Eric Lardizabal  
USS Nebraska (SSBN 739) (B)

Lt. j.g. Andrew Lawrence  
USS San Francisco (SSN 711)

Lt. j.g. Christopher Lindahl  
USS Greenville (SSN 772)

Lt. j.g. Joshua Ludwig  
USS Hawaii (SSN 776)

Lt. j.g. Timothy Marshall  
USS Seawolf (SSN 21)

Lt. j.g. Eric Marx  
USS Asheville (SSN 758)

Lt. j.g. Vincent McCall  
USS Oklahoma City (SSN 723)

Lt. j.g. Luke Ozeck  
USS Buffalo (SSN 715)

Lt. j.g. Gregory Pappianou  
USS Albuquerque (SSN 706)

Lt. j.g. Andrew Regalado  
USS Greenville (SSN 772)

Lt. j.g. Benjamin Rosenbaum  
USS Jefferson City (SSN 759)

Lt. j.g. Christopher Schmitt  
USS Chicago (SSN 721)

Lt. j.g. Evan Seyfried  
USS Greenville (SSN 772)

Lt. j.g. Daniel Sherman  
USS Michigan (SSGN 727) (B)

Lt. j.g. Brian Sisk  
USS Asheville (SSN 758)

Lt. j.g. Derek Sutton  
USS Louisiana (SSBN 743) (G)

Lt. j.g. Brendan Tower  
USS Hawaii (SSN 776)

Lt. j.g. Nathan Tyler  
USS Ohio (SSGN 726) (B)

Lt. j.g. Mark Waite  
USS North Carolina (SSN 777)

Lt. j.g. Damien Wall  
USS Henry M. Jackson (SSBN 730) (B)

**Line Officer Qualified  
in Submarines**

Lt. Matthew T. Allen  
USS Newport News (SSN 750)

Lt. Matthew W. Austin  
USS Springfield (SSN 761)

Lt. John Doherty  
USS Boise (SSN 764)

Lt. Michael J. Dowell  
USS Boise (SSN 764)

Lt. Jacob P. Platfoot  
USS Newport News (SSN 750)

Lt. Andrew J. Townsend  
USS Scranton (SSN 756)

Lt. Matthew J. Williams  
USS Norfolk (SSN 714)

Lt. j.g. Travis Albright  
USS North Carolina (SSN 777)

Lt. j.g. Jeffrey Aldrich  
USS Charlotte (SSN 766)

Lt. j.g. Andre Barber  
USS Charlotte (SSN 766)

Lt. j.g. Samuel Beck  
USS Louisiana (SSBN 743) (G)

Lt. j.g. John Beinert  
USS Maryland (SSBN 738) (B)

Lt. j.g. Matthew Boehm  
USS Connecticut (SSN 22)

Lt. j.g. Patrick J. Bray  
USS Dallas (SSN 700)

Lt. j.g. Gerald K. Brooks  
USS Springfield (SSN 761)

Lt. j.g. Derek A. Burney  
USS Memphis (SSN 691)

Lt. j.g. Bryan J. Carlson  
USS Dallas (SSN 700)

Lt. j.g. Frank Carnaby  
USS Michigan (SSGN 727)

Lt. j.g. Erik Chamberlain  
USS Kentucky (SSBN 737) (B)

Lt. j.g. James Christensen  
USS Charlotte (SSN 766)

Lt. j.g. Bruce A. Chucoski II  
USS Albany (SSN 753)

Lt. j.g. Paul Colwell  
USS Topeka (SSN 754)

Lt. j.g. Russell J. Cook  
USS Albany (SSN 753)

Lt. j.g. Paul Cronk  
USS Houston (SSN 713)

Lt. j.g. James Deupree  
USS Michigan (SSGN 727)

Lt. j.g. Troy Ditoro  
USS Albuquerque (SSN 706)

Lt. j.g. Haley Dodson  
USS Columbus (SSN 762)

Lt. j.g. Travis Dziubla  
USS La Jolla (SSN 701)

**Submarine Team One Earns Value Engineering Award**

In June, the Naval Sea System Command (NAVSEA)'s Submarine Team One (ST1) received a 2010 DoD Value Engineering Award for an extensive analysis that promises to extend the time between major maintenance availability periods for some *Los Angeles* (SSN 688)-class submarines from 48 to 72 months. This could enable naval shipyards to avoid an estimated 900,000 man-days of work, valued at about \$529 million, in fiscal years 2012-2015. It could also increase submarine operational availability to the fleet by more than 60 months.

ST1 is an interdisciplinary team that brings together personnel from several NAVSEA engineering, procurement, and logistic specialties. The photo below shows (left to right) team members Tim Bassett, Scott Williams, John Kennedy, Lee Ryzewic, Fredric Rancourt, Nancy Calvert, George Chervenec, Frank Tesoriero, Brian Edwards, and Zachary Lemnios at the award ceremony with NAVSEA Deputy Commander, Undersea Warfare, Rear Adm. (sel.) David Duryea; Capt. Jerry Reid, representing the Deputy Assistant Secretary of the Navy (Expeditionary Programs and Logistics Management); and NAVSEA Vice Commander Rear Adm. Clarke Orzalli.



U.S. Navy photo

Lt. j.g. David Faherty  
USS Memphis (SSN 691)

Lt. j.g. John Fahy  
USS Albuquerque (SSN 706)

Lt. j.g. Jose Fernandez  
USS Hampton (SSN 767)

Lt. j.g. Gregory Foley  
USS Hampton (SSN 767)

Lt. j.g. Andrew Foor  
USS Bremerton (SSN 698)

Lt. j.g. Andrew Forisha  
USS Maine (SSBN 741) (B)

Lt. j.g. Ryan A. Foster  
USS San Juan (SSN 751)

Lt. j.g. Andrew J. Gacek  
USS Virginia (SSN 774)

Lt. j.g. Jacob M. Gerlach  
USS New Hampshire (SSN 778)

Lt. j.g. Michael Gillette  
USS Tucson (SSN 770)

Lt. j.g. Robert C. Goodwin  
USS Scranton (SSN 756)

Lt. j.g. Andrew Gordon  
USS Alabama (SSBN 731) (B)

Lt. j.g. Allan Hale  
USS Michigan (SSGN 727)

Lt. j.g. Austin Helm  
USS Pennsylvania (SSBN 735)

Lt. j.g. Scott Hodgson  
USS Louisiana (SSBN 743) (G)

Lt. j.g. Joshua Hogan  
USS Cheyenne (SSN 773)

Lt. j.g. Jason Hovey  
USS Connecticut (SSN 22)

Lt. j.g. Darryl A. Isaacs  
USS Missouri (SSN 780)

Lt. j.g. Christopher Jones  
USS Topeka (SSN 754)

Lt. j.g. John M. Joyce  
USS Scranton (SSN 756)

Lt. j.g. John Kha  
USS Santa Fe (SSN 763)

Lt. j.g. Eric Kiewel  
USS Louisiana (SSBN 743) (G)

Lt. j.g. Joseph Kimock  
USS Hawaii (SSN 776)

Lt. j.g. Simon Kwak  
USS Albuquerque (SSN 706)

Lt. j.g. Tony Le  
USS Santa Fe (SSN 763)

Lt. j.g. Dustin League  
USS North Carolina (SSN 777)

Lt. j.g. Joseph W. Leavitt  
USS Dallas (SSN 700)

Lt. j.g. Jeremy D. Leazer  
USS Memphis (SSN 691)

Lt. j.g. William Lee  
USS Bremerton (SSN 698)

Lt. j.g. David B. Litz  
USS Scranton (SSN 756)

Lt. j.g. Dirk R. Lundgren  
USS Dallas (SSN 700)

Lt. j.g. Daniel Lvov  
USS Providence (SSN 719)

Lt. j.g. Joshua J. Maciejewski  
USS Hartford (SSN 768)

Lt. j.g. Jordan Mack  
USS Rhode Island (SSBN 740) (B)

Lt. j.g. Anthony Malon  
USS Henry M. Jackson (SSBN 730) (B)

Lt. j.g. Timothy D. Markley  
USS Scranton (SSN 756)

Lt. j.g. Brian Maxfield  
USS Buffalo (SSN 715)

Lt. j.g. Michael B. McCord  
USS Albany (SSN 753)

Lt. j.g. Douglas McKenzie  
USS North Carolina (SSN 777)

Lt. j.g. Lonny J. McLeod  
USS Scranton (SSN 756)

Lt. j.g. Joshua Meek  
USS San Francisco (SSN 711)

Lt. j.g. Christopher Miller  
USS Asheville (SSN 758)

Lt. j.g. Adam R. Parkinson  
USS Virginia (SSN 774)

Lt. j.g. Nicholas T. Possley  
USS Newport News (SSN 750)

Lt. j.g. Erik A. Roberson  
USS Albany (SSN 753)

Lt. j.g. Jason D. Ross  
USS Scranton (SSN 756)

Lt. j.g. John Russell  
USS Cheyenne (SSN 773)

Lt. j.g. Cosmas Samaritis  
USS Texas (SSN 775)

Lt. j.g. Gregory Schmidt  
USS Kentucky (SSBN 737) (B)

Lt. j.g. Daniel Shevenell  
USS Houston (SSN 713)

Lt. j.g. Benjamin Smith  
USS La Jolla (SSN 701)

Lt. j.g. Austin Spina  
USS Chicago (SSN 721)

Lt. j.g. Joseph L. Stockhausen  
USS Providence (SSN 719)

Lt. j.g. Shawn Stolsig  
USS Maine (SSBN 741) (G)

Lt. j.g. Mark Waite  
USS North Carolina (SSN 777)

Lt. j.g. William W. Wang  
USS New Hampshire (SSN 778)

## Reservists Help Maintain *Florida*

Twenty-one naval reservists temporarily assigned to Submarine Group 10 completed maintenance tasks on the dry-docked USS *Florida* (SSGN 728) Aug. 12. The grinding, scraping and painting work was requested by the Trident Refit Facility (TRF).

“This is the largest effort of the Navy Reserve in many years directly supporting TRF, and it has exceeded all of our expectations,” said Capt. John McClure, commanding officer of Naval Reserve Expeditionary Maintenance Detachment K.

Among the reservists were boatswain’s mates and engineers from reserve centers as distant as Knoxville, Tenn., and Miami, Fla., some with years of experience doing similar jobs on surface ships. However, the group also included a master-at-arms, an information systems technician and an aviation electronics technician.

“As soon as they received the training, were shown exactly how to do the job and told what was expected, my guys performed flawlessly,” said Lt. Waldemar Rosario, officer-in-charge of the reserve component. “TRF came in to do the inspections, and the work had been done as well as their own demanding expectations dictate.”

Petty Officer 1st Class Johnathon Plemons works inside *Florida*’s superstructure.

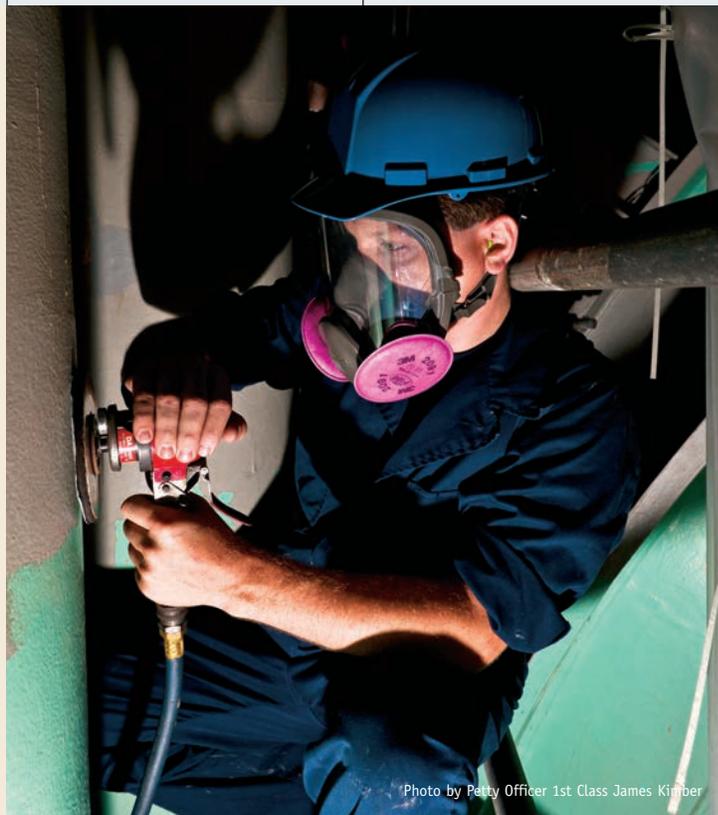


Photo by Petty Officer 1st Class James Kimber

Lt. j.g. Christopher Whitley  
USS Alabama (SSBN 731) (B)

Lt. j.g. Samuel Winder  
USS Hampton (SSN 767)

Ensign Joshua Bond  
USS La Jolla (SSN 701)

**Limited Duty  
Officer Qualified in  
Submarines**

Lt. Kemuel Clark  
USS Maryland (SSBN 738) (B)

Lt. Anthony Hutton  
USS Pennsylvania (SSBN 735)

Lt. Eugene Mendez  
USS Rhode Island (SSBN 740) (B)

Ensign Aaron Stroeh  
USS Alabama (SSBN 731) (G)

**Supply Officer  
Qualified in  
Submarines**

Lt. j.g. Anton Adam  
USS North Carolina (SSN 777)

Lt. j.g. Justin Gay  
USS Hampton (SSN 767)

Lt. j.g. Jay Hughes  
USS Hawaii (SSN 776)

**Qualified as Engineering  
Department Master Chief**

MMCS Robert W. Shipp III  
COMSUBRON THREE

ETC James P. Anderson  
COMSUBDEVRON TWELVE

MMC Aaron K. Bailey  
USS Alexandria (SSN 757)

MMC Thomas J. Baldwin  
USS New Hampshire (SSN 778)

MMC Robert E. Black  
USS Wyoming (SSBN 742) (G)

MMC Ross J. Bruneau  
COMSUBPAC Shipyard  
Representative, Puget Sound

MMC Joseph L. Buehring  
USS Jimmy Carter (SSN 23)

EMC Eric N. Carter  
Nuclear Power Training Unit,  
Charleston

ETC Louis C. Carter, Jr.  
USS Asheville (SSN 758)

MMC Ronald T. Cervone  
USS Dallas (SSN 700)

EMC Johnny Dawes  
USS Tucson (SSN 770)

**California Delivered  
Eight Months Early**

Huntington Ingalls Industries–Newport News Shipbuilding formally delivered Pre-Commissioning Unit *California* (SSN 781) to the Navy Aug. 7, more than eight months earlier than the scheduled contract delivery date. The submarine, which took 65 months to build, successfully completed Alpha and Bravo sea trials in July. The picture shows her returning to Newport News, Va., July 2 with a broom at the mast to signify a “clean sweep” of her Alpha trials.

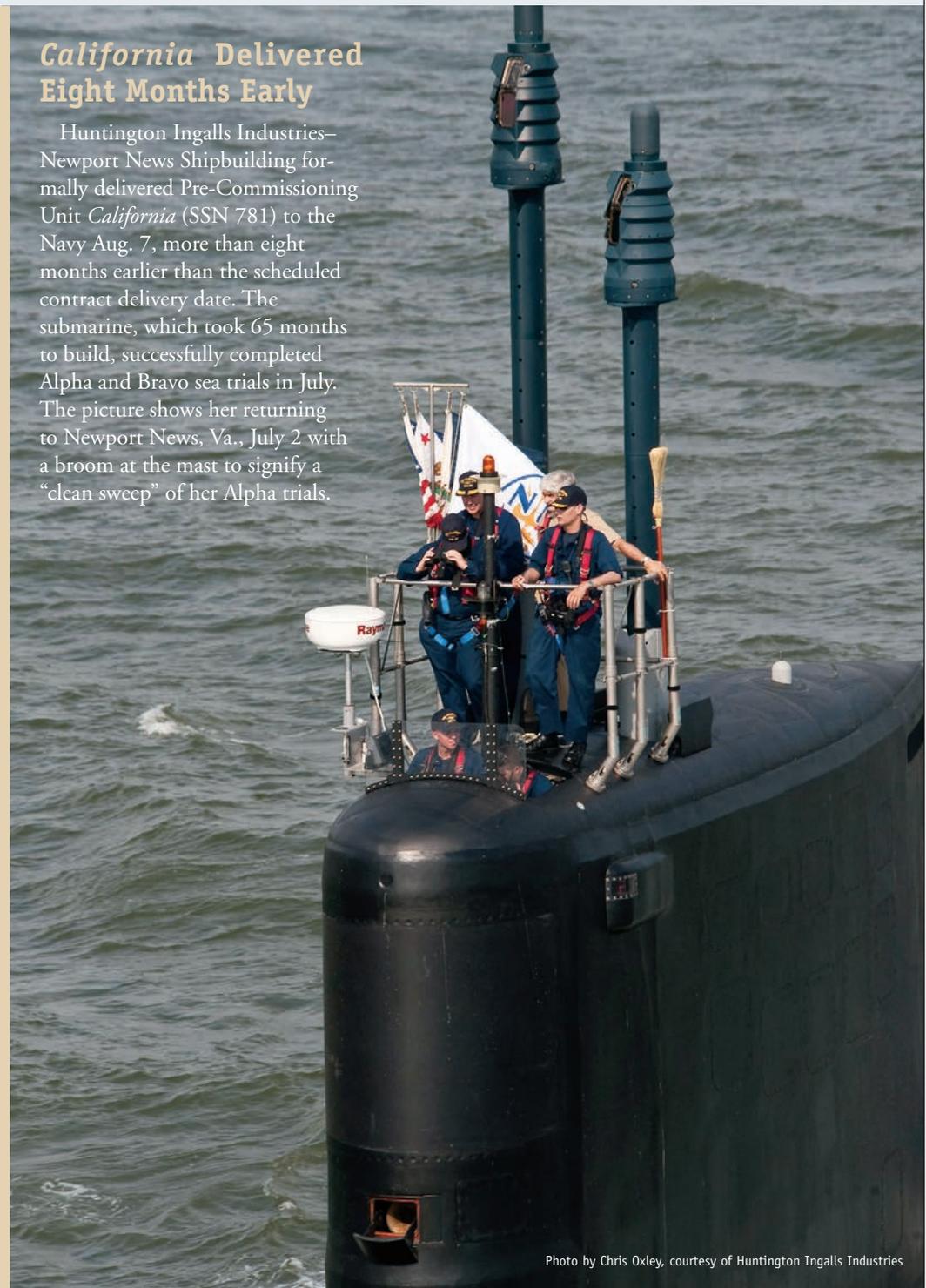


Photo by Chris Oxley, courtesy of Huntington Ingalls Industries

MMC Jason W. Dill  
USS Maine (SSBN 741) (G)

ETC Hunter L. Dyer  
USS Rhode Island (SSBN 740) (G)

ETC Craig M. Garner  
USS Alaska (SSBN 732) (B)

MMC Philip E. Gorin  
USS Mississippi (SSN 782)

EMC Jonathan L. Green  
USS Henry M. Jackson (SSBN 730) (G)

EMC Cody C. Harris  
USS Missouri (SSN 780)

ETC Corey R. Haselerhansen  
COMSUBRON THREE

MMC William W. Haussler  
USS Virginia (SSN 774)

EMC Craig A. Heinzeroth  
USS Mississippi (SSN 782)

EMC Richard R. Henderson  
USS Chicago (SSN 721)

MMC Justin T. Hubbs  
Nuclear Regional Maintenance  
Department, Point Loma

MMC Jesse D. Jelinek  
COMSUBRON TWENTY

ETC Charles P. Johnson, Jr.  
USS Jimmy Carter (SSN 23)

MMC Charles W. Johnson  
USS Greenville (SSN 772)

## Alexandria Receives SECNAV Safety Excellence Award

Secretary of the Navy Ray Mabus presented USS *Alexandria* (SSN 757) with the 2011 SECNAV Safety Excellence Award in the submarine category in Washington, D.C., July 7. *Alexandria* will fly the SECNAV safety flag in fitting recognition of an entire year with zero mishaps, zero man-hours lost, and no significant safety discrepancies.

“What you have accomplished in the last year,” Mabus said as he presented the award, “is proof-positive of your mission-first, safety-always command culture and your commitment to each other, to safety excellence, to the nation, and to the advent of the Department of the Navy as a world-class safety organization.”

Safety Excellence Award presentation: (left to right) Assistant Secretary of the Navy for Energy, Installations and Environment Jackalyne Pfannenstiel; Secretary of the Navy Ray Mabus; *Alexandria* Commanding Officer Cmdr. Todd Weeks, Lt. Josue Alvarez, *Alexandria*'s safety officer; and Vice Adm. Michael Vitale, commander, Navy Installations Command.



Photo by Petty Officer 2nd Class Kevin S. O'Brien

EMC Paul A. Karow  
USS Maryland (SSBN 738) (B)

ETC Joshua Knauer  
USS West Virginia (SSBN 736) (B)

MMC Michael S. Kuchinick, Jr.  
USS Bremerton (SSN 698)

EMC Shannon P. Robb  
Performance Management Team,  
Kings Bay

EMC James F. Robinson  
Naval Submarine Support Center,  
Kings Bay

ETC Richard D. Rogers  
USS Ohio (SSGN 726) (G)

MMC Michael S. Rossow  
Naval Submarine Support Facility,  
New London

ETC Justin M. Ryman  
USS Alaska (SSBN 732) (G)

MMC Jason B. Sanders  
USS Olympia (SSN 717)

EMC Thomas R. Schultz II  
USS Philadelphia (SSN 690)

EMC Steven A. Schulz, Jr.  
USS La Jolla (SSN 701)

MMC John S. Segalle  
USS Michigan (SSGN 727) (G)

EMC Benjamin L. Smith, Jr.  
USS Louisville (SSN 724)

MMC Joseph W. Smith  
USS Houston (SSN 713)

EMC John J. Sneed  
Trident Refit Facility, Kings Bay

MMC Alan W. Spencer  
USS Henry M. Jackson (SSBN 730) (B)

MMC Aaron M. Stein  
Submarine Training Facility, Norfolk

ETC Roger L. Story, Jr.  
Nuclear Field A School, Charleston

EMC Robert A. Stough  
USS Maine (SSBN 741) (G)

EMC Shane W. Takacs  
Naval Intermediate Maintenance  
Facility, Pacific Northwest

EMC Daniel C. Tischler  
Naval Submarine Training Center,  
Pacific

EMC Christopher M. Warren  
USS Olympia (SSN 717)

ETC Christopher J. Welch  
USS Dallas (SSN 700)

EMC David A. Welch  
USS Newport News (SSN 750)

ETC Todd J. Welch  
Naval Nuclear Power Training  
Command, Charleston

### Special Recognition: FY 12 Federal Executive Fellowship Program

Cmdr. John D. Spencer  
COMSUBRON EIGHT



Photo by Chief Petty Officer Marlowe Dix

### A New Dog in Town at COMSUBFOR Headquarters

Lt. j.g. Christopher Martin demonstrates a hand command he and his family use in their volunteer work training dogs for the Guiding Eyes for the Blind organization. Once a week, Martin brings whichever dog his family is currently training to his office at Commander, Submarine Forces, so it can get accustomed to a workplace environment.

# HISTORIC SUBMARINE UPRIGHT AFTER 147 YEARS

The world's first successful combat submarine, *H.L. Hunley*, was set upright in late June, only the second time the Confederate submarine has been moved since she mysteriously vanished in February 1864 after sinking the Union warship USS *Housatonic*. In 1995, the National Underwater Marine Agency found *Hunley* resting on the seabed at a 45-degree angle. In 2000, a team of conservators, archaeologists and engineers raised the sub and carefully placed her in a conservation tank in Charleston, S.C., where she continued to rest at the same 45-degree angle on the slings used to raise her.

The team spent two years planning the rotation to an upright position, using a 3-D model

to simulate the move. The operation began with two cranes raising the roughly 10-ton, 40-foot submarine three feet above the bottom of the drained conservation tank. With sensors rigged to detect any uneven weight distribution or major structural stress, workers then adjusted the slings to rotate *Hunley* a few millimeters at a time over three days, until her keel was in position to rest on adjustable support blocks placed underneath it.

The *Hunley* team will now begin comprehensive conservation of the sub, including removing the layer of shell, sediment and rust that has covered her iron structure for nearly a century and a half.



(Top left) Staff members at Clemson University's Warren Lasch Conservation Center rotate the Civil War submarine *H.L. Hunley* by releasing tension on chain hoists. (Top, right) Conservator Chris Watters operates one of the chain hoists used to slowly rotate the *Hunley* submarine into an upright position. (Bottom) Mike Drews, lab manager at Clemson University's Warren Lasch Conservation Center, inspects *Hunley* after the successful rotation of the Civil War submarine. (Photos by Friends of the *Hunley*/Cramer Gallimore)



## Submarine Museums and Memorials



Photo courtesy of the St. Marys Submarine Museum



Photo courtesy of the St. Marys Submarine Museum

## The St. Marys Submarine Museum

St. Marys, Georgia

Nestled amongst historic homes and oak trees in downtown St. Marys, Ga., the St. Marys Submarine Museum celebrates its 15th anniversary this year. Over 160,000 visitors have passed through the museum's doors since it opened on March 30, 1996, with WWII submarine hero Eugene Fluckey as the featured speaker. The historic, city-owned Arthur Lucas, Jr. Memorial Building, which houses the museum, celebrates its 100th anniversary this year.

The St. Marys Submarine Museum is the largest of its kind in the southeastern United States. Submarine artifacts, photographs, ship plaques, and shipboard equipment are just a few of the items on display. Visitors can use a Type IIF attack periscope to look out across the beautiful St. Marys River to the Florida shore in the distance. The Type IIF was standard equipment in the original "41 for freedom" ballistic missile submarines and other nuclear boats of the Cold War era.

Many donors have contributed to the museum's offerings. The Submarine Veterans of Ohio donated a world map showing locations where U.S. submarines were lost at sea. In 2003, the museum acquired one of the largest privately-held submarine collections in the country when Ben

Bastura, of Middleton, Conn., bequeathed numerous WWII artifacts that fill a dozen display cases.

The Jack Schiff Memorial Library, dedicated in 1998 in memory of one of the museum's greatest benefactors, is located on the building's second deck. There, visitors can explore hundreds of submarine-related books, files, records and photographs. History comes alive in the largest collection of original WWII submarine war patrol reports, typed nearly 70 years ago on old manual typewriters by dedicated Yeomen. Many back issues of *Polaris*, the magazine of the U.S. Submarine Veterans of World War II, supplement the official reports with crewmembers' personal reminiscences of what it was like to man boats waging unrestricted submarine warfare deep in enemy waters.

The museum has several new initiatives underway to upgrade displays and enhance the visitor's experience. For example, the map donated by the Ohio Sub Vets will be linked to a computer that will display photos of the boat, crew and related material for each location. Meanwhile, the museum's Board of Directors has initiated a capital campaign to finance a larger, more modern facility closer to Naval Submarine Base Kings Bay, a move that is sorely needed to house an ever-expanding collection.

[stmaryssubmuseum.com](http://stmaryssubmuseum.com)