



Vol. 14 No. 5

May 2018

Newsletter of Charleston Base, United States Submarine Veterans, Inc.

Base Meeting:

BOD: May 3, 1800
 Membership: May 10, 1900

Location:

FRA Branch 269
 Low Country Home
 99 Wisteria Rd.
 Goose Creek, SC



Base Commander	Ralph Rohrssen	843.670.2135	Chief of the Boat	Joe Lunn	843.747.5368
Base Vice Commander	Mike Ciesielko	843.324.0011	Veterans Affairs	Ken Curtis	843.797.1268
Secretary	Mike Ciesielko	843.324.0011	Membership	Larry Knutson	843.860.1155
Treasurer	Gordon Williams	843.553.3015	Scholarship	George Scharf	843.873.3318
			Storekeeper	Ken Hutchison	843.553.0935
			Historian	George Scharf	843.873.3318
			Public Affairs	Rick Wise	843.875.5559 (H) 843.276.0899 (C)
			Chaplain	Nick Nichols	843.452.3189
			Holland Club	Bill Freligh	843.553.1115
			Newsletter	Rick Wise	843.875.5559 (H) 843.276.0899 (C)
			Webmaster	Nick Nichols	843.452.3189
			Kaps for Kids	Bill Kennedy	843.875.3109



Submarines Lose During the Month of May

USS LAGARTO (SS-371)	May 3, 1945 – 2 nd War patrol	Lost with All Hands – 86 Souls
USS SCORPION (SSN-589)	May 22, 1968 – returning from deployment	Lost with All Hands – 99 Souls
USS SQUALUS (SS-192)	May 23, 1939 – during test dive	33 survivors – 26 Souls Lost
USS STICKLEBACK (SS-415)	May 30, 1958 – under tow off Hawaii	NO LOSS OF LIFE

FOUR Boats and 211 Men Lost

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Upcoming Charleston Base Events

Board of Directors Meeting	Thursday, June 7	1800	FRA Branch 268, Goose Creek
Base Meeting	Thursday, June 14	1800	FRA Branch 269, Goose Creek
Kaps4Kids	Tuesday, June 12	1000	Shriner's Hospital, Greenville, SC
Victory House Visit	Tuesday, June 19	1000	Carpool from VFW Bellwright Rd.

FROM THE BASE COMMANDER

Nothing this month.

From the Editor

First, I wish to offer my congratulations and thanks for Mike Ciesielko for running and being elected Charleston Base Vice Commander by acclamation. Mike has served ably as Base Secretary for the last 3 years. Because no one ran for Base Secretary he has volunteered to do double duty for up to the next 2 months.

Base Secretary is an important job and takes a little more time than most other positions. Putting together the minutes takes up to 2 to 3 hours a month of sitting and listening to the tape and the typing out the minutes. This can be done over several days so it is not that limiting. The rest is just sending out e-mails and making changes to base documents, if needed. Almost any member of the base could do this job. Please offer to fill this position!

Charleston Base CAN die if no one wants help run it!

From USSVI National

Normal message traffic from USSVI will be published each month in the newsletter. If the message is of immediate interest to the membership it will be sent out by the Base Secretary. Messages are arranged in the order received

SubVets News #2018-28: American Submariner Magazine 2nd quarter now on line. The hard copy will start shipping soon.

Submitted by: William C. Andrea on 5/15/2018

Shipmates:

The current electronic issue of American Submariner is now online. We had to make a temporary change in its location due to data transfer from the old website to the new one. The magazine can be accessed by going to our old website, www.ussvi.org <<http://www.ussvi.org>> and signing in. then click on the green "Documents" button. Next click on the blue "Organization" button. the current magazine is the fourth posting from the top.

SubVets News #2018-29: 2018 USSVI REVISED CONSTITUTION AND BYLAWS

THE REVISED CONSTITUTION AND BYLAWS TO BE VOTED ON IN THE 2018 USSVI NATIONAL-line is now On. THEY ARE NOW POSTED ON THE NATIONAL WEBSITE (www.ussvi.org <<http://www.ussvi.org>>). Click on "DOCUMENTS" then followed by "ORGANIZATION".

PLEASE REVIEW PRIOR TO VOTING! THE VOTING PERIOD OPENS ON AUGUST 1, 2018.

SubVets News #2018-30: Revised Constitution and Bylaws clarification
Submitted by: William C. Andrea on 5/18/2018

Please Read - Explanation for Combining of Constitution & Bylaw Documents

The Constitution or the Bylaws, or both, are the documents that contain the basic rules and guidelines relating to an organization, as opposed to the parliamentary procedure that it follows.

It is now the recommended practice by most government and taxing authorities that these documents be combined into a single instrument.

Our Constitution and Bylaws Committee in cooperation with the Board of Directors have spent the last two years diligently working on this combining process. It was authored under the guidelines of:

- Robert's Rules of Order, RONR (11th ed.) p 14 11.6-9
- The State of Connecticut
- The IRS

The intentions were to merge the documents to:

- eliminate redundancy
- wordiness that exist in the two current documents
- antiquated language and gender specific wording such as was found in the Auxiliary Article
- incorporate all previous amendments and revisions
- do so without changing the intent of the Articles.

In maintaining the original intent of both documents, we eliminated the need to highlight wording changes.

Shipmates, this combination has resulted in a simplified, smoother, and easier to understand document that we can use to govern USSVI.

We are asking for your approval.

USSVI Charleston Base Meeting Minutes

10 May 2018

The attendance for the May 2018 meeting was 80 members.

Opening Ceremonies: The meeting was called to order by Base Commander Ralph Rhorsen . A quorum was present and the meeting started at 1900 .Following the Pledge of Allegiance, the Invocation and the Tolling of the Boats lost in April was given by Base Chaplain Nick Nichols. The USSVI Creed was read by Base Vice Commander Mike Knaub. Ralph welcomed the members and guests to the meeting.

Introductions: The following introduced themselves at the meeting: MMCM (SS) Robert a. Sellars, Qual Boat: USS John Adams (SSBN620). ET1 (SS) Kenneth Lembrich, Qual Boat: USS John Adams (SSBN620). MMC (SS) John W McDaniel, Qual Boat: USS John Adams (SSBN 620)

Secretary: The Minutes have been published and promulgated, Mike Ciesielko made a revision to include the question asked by Jim Lewis about receiving receipts for paying for membership dues by PAY PAL. There were no additions or deletions. The minutes were approved.

Treasurer: The treasurers report is published and promulgated, there were no additions or deletions. The minutes were approved.

Chaplain: May Report

Highlighted boat of the month:

USS Scorpion (SSN-589) was returning to Norfolk, VA from a Mediterranean deployment. On May 22, 1968 she reported her position to be about 50 miles south of the Azores. Scorpion was never heard from again. The exact cause of her loss has never been determined.

- **Tom Lawson** was able to go home yesterday. He was taken to Trident with pneumonia and during a test they found a mass in his upper left lung. The radiologist determined that it was not a mass but inflammation from the pneumonia. He states that prayers do work and wants the base members to know that he really appreciate all of their thoughts and prayers.
- **Thom Beach** is home and feeling better. Thom had a blood infection and will be taking at home IV's for a few days. The doctors did rule out liver rejection and kidney issues.
- **John Lookabill's** 94 year old brother, Joe, passed away the morning of 3 May in Aiken SC. His service is probably on Monday. He was a WWII Navy Vet, FC2.
- **WWII SUBVET LTJG(SS) John Coming Ball Jr.**, 95, departed on Eternal Patrol on 4.26.18. He qualified in USS BLACKFIN SS322. He passed at Bishop Gadsen in Charleston. He was a WWII submariner that we knew nothing about.
- **Luke Murphy** is at home in good spirits and doing better. The lift is working great. He would really like some visitors. Before visiting please call Judy's cell (843.560.0431) to make sure they are home and not at the doctor's office. The address is: 180 Chubb Ln, Dorchester SC 29437
- **Larry Cox** has been diagnosed with pancreatic cancer and has started with chemo treatments. He is taking time off of the treatments to go to family graduations.
- **Ed Stank** has visited the Mayo Clinic in Jacksonville and will be going there again in June. They believe the neuropathy in his legs may be stemming from problems with his back.
- **Charles Wood** is still recovering from his major heart surgery in December. He is doing well with his PT.
- **Ken Curtis** has been diagnosed with Macular Degeneration.

I still need page 2s from a lot of you.

If you have a change of mailing address, phone number, email address please let the base leadership know about it. We need to make sure all of our records are updated so we can make contact with you if we need to.

WEBMASTER NOTES:

- Ken Curtis is constantly giving me updates for the VA section. Website is constantly updated.

Make use of the EVENTS page on the Charleston Base website. All events that are put out to the membership via email will be listed and updated on the events page.

New Business: Rick Wise made a proposal to move old and new business to before the board members make their reports and after the introduction of new attendees. Nick Nichols made the motion to accept the proposal as written. Roger Gibson seconded. The base voted and it was approved.

Joe Hayes made a motion to give milage expenses for Kaps 4 Kids drivers. Ed Stank seconded. The motion was handed

to the base with discussion and was voted down.

Ralph Rhorssen asked the base about electing a Base Vice Commander and Base Secretary. Ken Hutchison nominated Michael Ciesielko as new Base Vice Commander. The Base voted and Mike won by acclamation.

There were no nominations for base secretary Michael will keep both chairs for a short period of time.

Old Business: None.

Victory House: Ed Stank reported that BJ Tackett was inducted into the Holland club at the last visit. The next visit will be 15 May. Ed also gave us a report about our base storage facility and hopefully they will leave a key for us with the Base Master Chief.

Membership: Larry Knutson reported that there are 285 Members. Larry answered Jim Lewis question from last month

Kaps for Kids: Bill reported that the next Kaps for Kids visit is May 15th up in Florence. June 12th will be visiting Greenville. Three Greenville Chapter Subvets will be attending as well.

Veterans Affairs: Ken Curtis had no report

FRA: No Report.

Special Events: Rick Reccomended that we not have a Subvets picnic due to the FRA Picnic being Free.

Submarine Veterans of World War II: Stacy Powers was present tonight. The WWII Luncheon is Thursday 17 May.

Scholarship: George Scharf reported that 2 of the 4 applicants had incomplete packages. The four current members for the scholarship committee are resigning.

NPS Awards: Ray Sparks had no report.

CRAMA: No Report.

Little David: Rick Wise is asking for working party Volunteers in June. Email or call him. All we are going to do this year is paint.

Public Affairs: No Report

Storekeeper: No Report

Chief of the Boat: Joe Lunn acknowledged the John Adams guests. The Memorial day service is Monday 28 May. Uniform is Blue shirt and Vest. Muster at 10am.

Base Commander: Ralph reported that we are the second largest base in Subvets. We are trying to get awards from National. Don Ort is our new awards coordinator. The Author of Poopie suits and Cowboy Boots Captain Byrne will be our guest speaker in June.

Good of the Order:

The After Battery: Bhudda thanked everyone for making the Hog Roast a success. The New England Subvets donated a replica of the USS Ethan Allen. Bhudda also thanked Don Pardo for his tireless efforts in making the Hog Roast what it was.

Nuclear Historian: Rick Carlson

I would like to offer you a couple of simple truths.

1. Lovers help each undress before sex. However after sex they dress on their own. Simple Truth: "in Life no one helps you once you are screwed.

When a Lady is Pregnant all her friends touch her stomach and say congratulations but no one touches the mans penis and says "Good Job" Simple Truth: Some members of the team are never appreciated.

Last a story about a Vet sending money home to his mom

One Sunday, in counting the money in the weekly offering, the Pastor of a small church found a pink envelope containing \$1,000.00. It happened again the next week.

The following Sunday, he watched as the offering was collected and saw an elderly woman put the distinctive pink envelope on the plate. This went on for weeks until the pastor, overcome by curiosity approached her. "Ma'am, I couldn't help but notice that you put \$1,000.00 a week in the collection plate", he stated.

"Why yes", she replied, "Every week my son sends me money and I give some to the church."

The Pastor replied, "That's wonderful but a \$1,000.00 dollars is a lot, are you sure you can afford this?"

How much does he send you? The elderly woman answered, "10,000.00 a week." The pastor was amazed. "Your son is very successful; what does he do for a living?" "He is a veterinarian" She answered.

"That's an Honorable profession, but I had no Idea they made that much money" the pastor said. "Where does he practice?" The woman answered proudly "In Nevada..... He has two cat houses, One in Vegas and one in Reno."

Gun Club: Mike Ciesielko Gun shoot after the May Meeting

The Red FRA ticket was won by Ron Lazor

The depth charge was won by Tom Clark. Tom Donated 245 dollars to the Scholarship fund.

Benediction: Chaplain Nick Nichols gave the benediction.

Meeting Adjourned: Following the benediction by Nick Nichols, the Base Vice Commander adjourned the meeting at 2010.

2018 Submarine Birthday Ball

On Saturday, April 7, about a dozen members of Charleston Base as well as two members of Palmetto Base and National Commander John Markiewicz attended the 2018 Submarine Birthday Ball at Trident Technical College Culinary Institute, North Charleston, SC. Most members wore the Vest Uniform consisting of the SubVets vest, light blue shirt with tie and khaki trousers. We were all warmly greeted and acknowledged during the evening.

As the oldest qualified submariner Charleston Base member and World War II veteran Stacy Power was honored with the cake cutting ceremony.

The speaker was RADM Jeffrey Jablon who served under Base member CAPT Rusty Pickett on the L. Mendel Rivers SSN 686 and Rusty as well as several members of that crew had their own table.



From left to right: Jo Ann and Ralph Rohrsen, John Markiewicz, Nick and Linda Nichols and Stacy Power.



The cakes

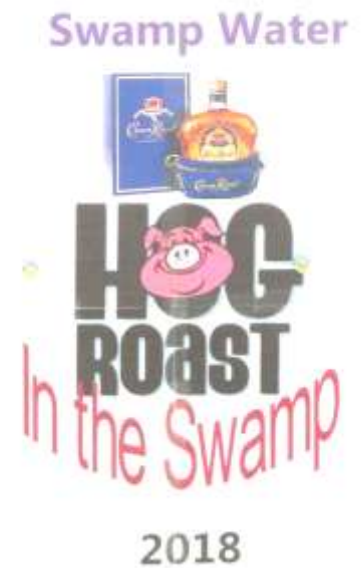


Oldest and newest qualified submariners cut the cake. Following the ceremony Stacy, always the professional advised RADM Jablon on proper food handling procedures.

The 2018 After Battery Hog Roast

The annual Hog Roast in the South, this year titled Hog Roast in the Swamp was held in Dorchester, SC on April 21. People began arriving on Sunday, April 15. Submarine sailor from all over the country attended. As always ALL SUBMARINERS ARE WELCOME! There is no admission and food and drink are free but donations are encouraged.

Look for information on the 2019 Hog Roast starting in January.



Charleston Base Presents Submariners' Legacy Awards to Nuclear Power School Class 1801



Charleston Base PAO Rick Wise presents Submariners' Legacy award to ENS Conner Silveria (GPA 3.78) and ETN3 Steven Duncan (GPA 3.90)

New 'blue water veterans' deal could mean benefits for 90,000 Vietnam War troops

By: [Leo Shane III](#)

WASHINGTON — Nearly 90,000 veterans who served in ships off the Vietnam coastline during that war may become eligible for disability benefits under [a new congressional agreement unveiled Friday](#).

Members of the House Veterans' Affairs Committee will vote next week on a plan to cover benefits for so-called "[blue water Navy veterans](#)" from the war with a new fee on home loans through the Department of Veterans Affairs.

Committee Chairman Rep. Phil Roe, R-Tenn., called the deal [long overdue](#).

"We owe it to the brave veterans who served in the Vietnam War to provide benefits for conditions they may have developed because of exposure to Agent Orange," he said in a statement.

The announcement comes the same day as a court hearing on the issue that could eventually force VA to award disability payouts to the veterans, many of whom have felt unfairly slighted by a policy change 16 years ago which stripped them of thousands of dollars a month.

They are approaching the congressional news with cautious optimism.

“While it’s been rumored we are going to get this legislation passed in a Memorial Day package, we have been told before we were close to victory, only to have our legislation held up as a political pawn,” said Mike Little, national executive director of the Blue Water Navy Vietnam Veterans Association.

“This kills the spirits of my members. This time, we have tried the best we can to make sure we have all the facts before we go let them down again.”

At issue is VA’s process regarding presumptive status for exposure to Agent Orange and other dangerous war-time chemicals.

Under current department rules, troops who served on the ground in Vietnam or patrolled inland rivers are assumed to have been working with or near the chemical defoliant, and are given special status when filing disability benefits claims to speed up the process.

But the blue water veterans — who served on ships off the coast of the country — still must prove they were directly exposed to Agent Orange for their illnesses to be labeled as service-connected. In many cases, collecting scientific evidence of the presence of the chemical on or near the ships is impossible, given the decades that have passed.

Lawmakers in recent years have called the distinction an unfortunate oversight, but have also struggled with how to pay for the cost of extending presumptive status to the excluded veterans.

The new home loan fee — which has the backing of Little’s group and other veterans organizations — will cost the typical veteran homeowner about \$350 over 10 years, and will generate about \$1.1 billion over the same span to offset the extension costs.

However, only about 60 percent of borrowers will pay that new fee. Most veterans with a disability rating who use the home loan program will be exempt.

Committee ranking member Tim Walz, D-Minn., said he will support the plan, calling it “yet another example of the good we can accomplish when we work together on a bipartisan basis with veterans service organizations and reach across the aisle.”

Committee members are expected to vote on the proposal next Tuesday. A ruling from the pending lawsuit is expected to take several more months.

Little noted that many of the veterans who would benefit from the policy change are elderly or infirm, making every delay more upsetting.

“Congress can’t put this off anymore,” he said.

Home Depot Discount Policy Updated*

By Brittany Dilworth May 17, 2018

We still honor the veterans discount within our stores, but recently made changes to the policy. I have listed the current information on how to obtain a military/veteran discount.

Effective May 1, 2017 we will offer, when asked, a 10% discount, up to a \$500 maximum, to all active, reserve, retired or disabled veterans and their family members with a valid military or veteran ID. All other military veterans will qualify for a 10% discount during normal holiday events (e.g., Memorial Day, Veterans Day and Independence Day).

This philosophy is consistent with our long standing price match guarantee. Please note that The Home Depot will offer a 10% Military discount up to \$500.00 maximum. The Military discount cannot be combined with any other promotions.

Within our stores we are only accepting the identification listed below:

·Active Duty Military ID card with a picture (green background)

* A retired Military ID card with a picture (blue background)

* VA Card (Department of Veterans Affairs) - Must have the words Service.

- * Connected under picture. We will not accept any other VA Cards.
- * Active Military and Retired Military ID card for spouse/dependents (yellow/beige background)
- * Valid federal Veteran ID Card.
- * In some cases a Military/veteran ID from military/veteran organizations.

A retired veteran must have qualified and gone through retirement with the Military. Disabled Veterans should have a Veteran's Identification Card (VIC) that should read "Service Connected" that is given to them from the Department of Veterans Affairs (VA). The VIC and their Driver's License should be sufficient identification to get the everyday Military Discount.

The Home Depot is dedicated to supporting and honoring our men and women in uniform through our business practices, recruitment efforts and corporate contributions. We offer this discount to thank them for their outstanding service to this nation and to help make their homes more comfortable and safe.

Sincerely,

Brittany Dilworth

Home Depot Customer Care

1-800-654-0688, ext. 76153

P.S. "We apologize for any confusion regarding our two-tiered policy. We match our competitor's policy, offering a 10 percent discount to all veterans and active duty military on major patriotic holidays, including Memorial Day. We're also one of only a few retailers that provide an everyday discount to active duty, as well as retired and service-connected disabled service members, and their spouses."

These Are the 5 Most Terrifying Submarine Disasters of All Time

[Dave Majumdar](#)



March 27, 2018

Kursk's wreckage was eventually recovered and the accident was ultimately traced to the Type-65-76A torpedo. Though the weapon is powerful enough to destroy an aircraft carrier with a single hit, the Soviet Union inexplicably designed the torpedo to run on hydrogen peroxide fuel, which is highly volatile

and requires careful handling. Unfortunately for *Kursk's* crew, they apparently had neither the training nor the experience to handle those weapons. After the *Kursk* disaster, the Russian Navy removed hydrogen peroxide-fuelled torpedoes from service.

Since the Second World War, the United States, Russia and China—and a host of other nations—have lost vessels and their crews to accidents. Operating submarines is a risky business under the best of circumstances—and will likely remain so. Even the highest technology nuclear submarines can end up on the ocean floor if the crew isn't careful or the technology fails.

Here are some of the worst [submarine disasters](#) of the past several decades.

Kursk, 2000

Perhaps the worst submarine disaster in recent memory was Russia's loss of K-141 *Kursk*, which was a Project 949A Antey-class (Oscar II) nuclear-powered guided missile submarine. The massive 16,000-ton submarine was destroyed in a massive explosion on August 12, 2000—which killed all 118 members of its crew.

Kursk's wreckage was eventually recovered and the accident was ultimately traced to the [Type-65-76A torpedo](#). Though the weapon is powerful enough to destroy an aircraft carrier with a single hit, the Soviet Union inexplicably designed the torpedo to run on hydrogen peroxide fuel, which is highly volatile and requires careful handling. Unfortunately for *Kursk's* crew, they apparently had neither the training nor the experience to handle those weapons.

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Komsomolets, 1989

K-278 *Komsomolets* was the only boat of the Project 685 *Plavnik*-class (NATO: Mike) ever completed. Designed primarily as a test-bed for new technologies, the 8,000-ton [Komsomolets](#) was one of the highest performance submarines ever built—it had an operating depth greater than 3000ft. Like the *Papa*-class, Project 685 *Plavnik* was designed to test automation technologies and perfect the Soviet Union's ability to built titanium pressure hulls.

The submarine sank on April 7, 1989, after a fire broke out onboard. The fire set off a chain of events that ultimately caused the boat to sink. Despite the heroic efforts of the crew, 42 of the 69 crewmembers were killed during the accident. However, only four people died as a direct result of the fire—the rest died from exposure. More of the crew might have been saved if the Soviet navy had acted more quickly to mount a rescue operation.

Meanwhile, *Komsomolets's* nuclear reactor and its two nuclear warheads remain onboard the stricken hull under 5,500ft of water in the Barents Sea—a disaster waiting to happen again.

K-8, 1970

K-8 was a Project 627A *Kit*-class (NATO: November) nuclear-powered attack submarine that sank after a fire in April 12, 1970. (K-8 didn't have a name, the Soviet Union only rarely named its submarines)

The submarine had originally caught fire on April 8, 1970, during an exercise in two separate compartments. The fire apparently started as a result of oil coming into contact with the air regeneration system. After the fire spread throughout the boat via the air conditioning system—and the reactors shut down—the captain ordered the crew to abandon ship. The crew boarded the submarine again after a rescue vessel arrived. But eventually the submarine sank in heavy seas while undertow—with 52 members of its crew.

The Russians have had multiple incidents with fire onboard their submarines. Indeed, Russia's first nuclear-powered attack submarine—K-3 *Leninsky Komsomol*—was nearly destroyed due to fire caused by a jury-rigged repair in September, 1967. “A non-standard gasket from. . . a beer bottle was installed in the ballast tank,” a former crewmember told [Pravda last year](#). “Naturally it was displaced, the hydraulic fluid leaked under the pressure of 100 atmospheres and got sprayed onto the lamp, which had a broken protective cap. Inflammation occurred immediately.”

USS Scorpion (SSN-589), 1969

While Russia and the Soviet Union have had their fair share of submarine disasters, the United States Navy has lost submarines too. On May 22, 1969, the *USS Scorpion*, a *Skipjack*-class attack submarine. was lost with all hands [400 miles southwest](#) of the Azores islands. There were 99 sailors onboard.

It is still a mystery as to what exactly happened to *Scorpion*—the boat simply failed to return to port on May 27 that year. The Navy launched a search, but eventually declared it lost on June 5. Eventually, *Scorpion* was located under 10,000ft of water by a Navy research ship later that year.

U.S. Navy source tell me they have a good idea about what probably happened to *Scorpion*—but didn't provide any details. Most public sources, suggest that the most likely cause was an inadvertent activation of the battery of a [Mark 37 torpedos or a torpedo explosion](#).

USS Thresher (SSN-593), 1963

USS Thresher sank on April 10, 1963, with 129 sailors onboard. It was the first nuclear submarine disaster, and to this day, has the highest death toll. Unlike with *Scorpion*, the U.S. Navy has reported exactly what caused *Thresher* to sink—poor quality control.

The submarine sank while it was conducting a dive to its test depth of about 1,300ft. Five minutes prior to losing contact with the vessel, the submarine rescue ship *Skylark* received a garbled UQC transmission (an underwater radio of sorts) that said *Thresher* was having some minor technical difficult. *Skylark* continued to receive garbled messages until the sonar picked up the sound of *Thresher* imploding.

A Navy court of inquiry [found that a piping failure probably caused](#) the accident.

As the boat's engine room flooded as a result, salt-water spray shut down the nuclear reactor. Subsequently, Thresher's main ballast tank failed to blow after ice formed in its piping. The crew was unable to access the equipment needed to stop the flooding.

As a direct result of the *Thresher* disaster, the Navy instituted the [SUBSAFE](#) program to ensure that there is a thoroughly documented system of checks and re-checks on all critical components of a nuclear sub.

Submarines are increasingly lurking in seas around the world, and the US Navy's high-tech Poseidon is there to hunt them

Christopher Woody, *Business Insider.com*, May 14

The US Navy announced this month that it was restarting the 2nd Fleet to oversee the western Atlantic Ocean, including the North Atlantic and the US East Coast.

The decision comes after several years of tensions between NATO members and Russia — and several warnings from Western officials about growing Russian naval activity, including more sophisticated and more active submarines.

NATO has responded in kind, with a special focus on antisubmarine warfare — a capability that has waned among Western navies since the end of the Cold War.

For NATO members and other countries, augmenting antisubmarine abilities means not only adding ships but also advanced maritime-patrol aircraft to scour the sea. A number of aircraft on the market fill this role, but the US-made P-8A Poseidon is among the most sophisticated.

"What it can do from the air, and tracking submarines, is almost like Steven Spielberg," Michael Fabey, author of the 2017 book "Crashback," about China-US tensions in the Pacific, told Business Insider earlier this year.

"I went up on a training flight," he said, "and basically ... they could read the insignia on a sailor's hat from thousands of feet above."

"It's not the aircraft itself of course," he added, but "all the goodies they put in there."

In 2004, the US Navy picked the P-8A Poseidon to succeed the P-3 Orion, which had been in operation since the 1960s. The first Poseidon entered service in 2013, and more than 60 are in service now.

The jet-powered P-8A is based on Boeing's 737 airliner, but it is specialized to withstand more strain, with aluminum skin that is 50% thicker than a commercial 737. Every surface is equipped for de-icing.

A commercial 737 can be built in two weeks, but a P-8A takes roughly two months.

It has a ceiling of 41,000 feet, and, unlike the P-3, is designed to do most of its work at high altitude, where it has better fuel efficiency and its sensors are more effective. The Poseidon's top speed of 564 mph is also 200 mph faster than the older Orion, allowing it to get to its station faster and reposition more quickly.

Among its sensors is the APY-10 radar, which can detect and identify ships on the surface and even pick up submarine periscopes. It can also provide long-distance imagery of ports or cities and perform surveillance along coasts or on land.

An electro-optical/infrared turret on the bottom of the plane offers a shorter-range search option and can carry up to seven sensors, including an image intensifier, a laser rangefinder, and infrared, which can detect heat from subs or from fires.

The Poseidon's ALQ-240 Electronic Support Measure acts as an electromagnetic sensor and can track radar emitters. Its Advanced Airborne Sensor can do 360-degree scans on land and water. Other electronic surveillance measures allow it to passively monitor a wide area without detection.

The original P-8A design did not include the Magnetic Anomaly Detector that the P-3 carried to detect the metal in sub's hulls. The MAD's exclusion was controversial, but the P-8A can deploy sonar buoys to track subs, and recent upgrades allow it to use new buoys that last longer and have a broader search range.

It also carries an acoustic sensor and a hydrocarbon sensor designed to pick up fuel vapor from subs. The P-8A's cabin can have up to seven operator consoles, and onboard computers compile data for those operators and then distribute it to friendly forces.

The P-8A carries its own armaments, including Harpoon anti-ship missiles, depth charges, MK-54 torpedoes, and naval mines. It can also deploy defensive countermeasures, including a laser and metallic chaff to confuse incoming missiles.

A dry-bay fire system uses sensors to detect fires on board and extinguish them, a P-8A pilot told The War Zone in early 2017.

"The P-8 is the best ASW localize/track platform in the fleet, one of the best maritime [Intelligence, Surveillance, Reconnaissance] assets in the world, with the ability to identify and track hundreds of contacts, and complete the kill chain for both surface and subsurface contacts if necessary," the pilot said.

Russia's submarine fleet is a fraction of its Cold War size, but its subs are more sophisticated and have been deployed as US and NATO attention has shifted away from antisubmarine efforts.

"We have found in the last two years we are very short of high-end antisubmarine-warfare hunters," Royal Navy Vice Adm. Clive CC Johnstone, commander of NATO's Allied Maritime Command, said in January.

Along with interest in buying subs, "you see an increased focus on other types of antisubmarine, submarine-hunter platforms, so frigates and maritime-patrol aircraft and stuff like that," Magnus Nordenman, director of the Transatlantic Security Initiative at the Atlantic Council, told Business Insider earlier this year.

In 2016, the UK announced it would buy nine P-8As. In 2017, Norway announced it was buying five.

Those purchases are part of efforts by the US, UK, and Norway to reinvigorate the Cold War maritime-surveillance network covering the sea between Greenland, Iceland, and the UK, known as the GIUK gap, through which Russian subs are traveling more frequently between their Northern Fleet base and the Atlantic.

In June 2017, defense ministers from France, Germany, Greece, Italy, Spain, and Turkey agreed to cooperate on "multinational maritime multi-mission aircraft capabilities." The US Navy has increased its antisubmarine activities in Europe, leading with the P-8A.

The US's 2018 defense budget included \$14 million to refurbish hangers at Naval Air Station Keflavik in Iceland, where antisubmarine forces hunted German U-boats during World War II and patrols scoured northern latitudes during the Cold War.

The US Navy decided to leave Keflavik in 2006, but recent modifications would allow P-8As to be stationed there, though the Navy has said it doesn't currently plan to reestablish a permanent presence.

Poseidons operate over the Black Sea to track the growing number of Russian subs there. P-8As based at Naval Air Station Sigonella in Italy have reportedly helped hunt Russian subs lurking near NATO warships and taken part in antisubmarine-warfare exercises around the Mediterranean.

These operations around Europe have also put Poseidons in close — sometimes dangerous — proximity to Russian aircraft.

"The Poseidon is becoming the next front-line, high-end maritime-patrol aircraft," Nordenman said. "Not only for the US, but increasingly for our allies in Europe, too."

"I wouldn't be surprised if we see more US rotations to Keflavik and deeper cooperation between the US, the UK, and Norway on maritime-patrol-aircraft operations in the Atlantic," he added. "I would say this is just a first step."

Like Russia, China has been investing in submarines, and its neighbors have growing interest in submarines and antisubmarine-warfare assets — including the P-8A.

India made its first purchase of the P-8I Neptune variant in 2009, buying eight that deployed in 2013. New Delhi bought four additional planes in 2016, and India's navy chief said in January that the service was looking to buy more.

In early 2014, Australia agreed to buy eight P-8As for \$3.6 billion. They are expected to arrive by 2021, and Canberra has the option to buy four more.

India and Australia are the only buyers in Asia so far, but others, including Indonesia, Malaysia, and Vietnam, are interested. South Korea said in February it would buy maritime-patrol aircraft from a foreign buyer — Boeing and Saab are reportedly competing for a contract worth \$1.75 billion.

"There is a requirement need out here in the Asian region for P-8s," Matt Carreon, Boeing's head of sales for the P-8A, said in February, pointing to the high volume of shipping, threat of piracy, and the "current political climate" as reasons for interest.

But overall sales have been underwhelming, likely in part because the Poseidon and its variants are relatively expensive, and their specialized features require a lengthy procurement process.

US Navy P-8As have also been more active around Asia, where their crews work with non-US military personnel, take part in search-and-rescue operations, and perform maritime surveillance over disputed areas, like the South China Sea, where they have monitored Chinese activity.

As in Europe, this can lead to dicey situations.

In August 2014, a P-8A operating 130 miles east of China's Hainan Island had a close encounter with a Chinese J-11 fighter jet, which brought one of its wings within 20 feet of the P-8A and did a barrel roll over the patrol plane's nose.

The jet also flew by the P-8A with its belly visible, "to make a point of showing its weapons," the Pentagon said.

While naval competition is heating up in the waters around Europe, some believe the Asia-Pacific region — home to five of the world's 10 most powerful militaries — will drive demand for assets like the Poseidon.

"I think the maritime mission is going to be as big as the land mission in the future, driven by Asian customers like Australia, India, Japan, Korea, and ... other countries will certainly play a role," Joseph Song, vice president for international strategic development at General Atomics Aeronautical, told Reuters earlier this year.

China and USA in race to submarine sonar stealth

Brian Wang, Nextbigfuture.com, May 10

Penn State University researchers have made progress on shielding large objects from sound. Chinese researchers have also published substantial progress on cloaking from sound. Both might lead to submarine sonar stealth.

Chinese researchers presented the design, architecture and detailed performance of a three-dimensional (3D) underwater acoustic carpet cloak (UACC). The proposed system of the 3D UACC is an octahedral pyramid which is composed of periodi-

cal steel strips. This underwater acoustic device, placed over the target to hide, is able to manipulate the scattered wave front to mimic a reflecting plane. The effectiveness of the prototype is experimentally demonstrated in an anechoic tank. The measured acoustic pressure distributions show that the 3D UACC can work in all directions in a wide frequency range. This experimental verification of 3D device paves the way for guidelines on future practical applications.

They created realize a 3D UACC which can mimic a reflecting plane and hide the information of the 3D target. The required parameters, which contain anisotropic mass densities and isotropic bulk modulus, are obtained through steel strips array surrounded by water. The subwavelength steel-water unit cell can be regarded as fluid in long wavelength regime. Meanwhile, it ensures the carpet cloak as a broadband device. Then the performance of the carpet cloak is assessed experimentally by measuring the acoustic pressure fields in an anechoic tank. The results confirm the expected behavior and demonstrate the effectiveness and omnidirectionality of the designed 3D UACC. They believe that the verification of 3D UACC gives more direct guidance on the future practical applications of acoustic metamaterials.

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