VOL. 2021 #6

JUNE 6TH

JUNE 2021

USS HENRY L. STIMSON ASSOCIATION SSBN655 NEWSLETTER

Association Officers & Board of Directors 2018 - 2021

PRESIDENT	VICE PRESIDENT	SECRETARY	TREASURER	OUTGOING PRESIDENT
Tom [Marie] Krauser	Steve [Terry] Novic	Nick [Linda] Nichols	Ken [Diane] Meigs	Ray [Rita] Kreul

Other Positions 2018 - 2021

HISTORIAN / CUSTODIAN	WEBMASTER / NEWSLETTER	CHAPLAIN	STOREKEEPER / SHIPS STORE
Larry [Linda] Knutson	Nick [Linda] Nichols	Jake Morris	Jim [Suzie] Weaver

REUNION CONTROL CENTER
2021 Stimson Reunion
October 13-17, 2021
Hotel: Holiday Inn
1717 Airport Exchange Blvd.
Erlanger, KY 41018

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From the Reunion Chairman - Dick Young, SN (SS) G 70-71, USSVI Cincinnati Base, Assoc. Life Member:

Shipmates,

As we approach the summertime it's time to seriously think about our reunion in October. All of the health restrictions in Ohio, Kentucky and Indiana have been lifted. The earlier you make your registration will go a long way in helping our planning. All the plans are set, or have been for the last year and a half but there is still logistical planning for the number of participants for our various functions.

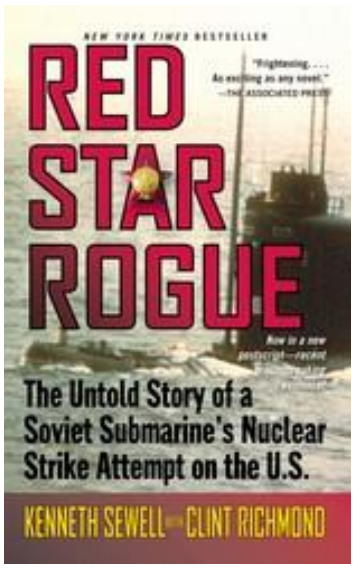
The guest speaker for our Saturday night banquet is Ken Sewell, his bio is attached but I can personally tell you he is one interesting speaker, especially on submarines in the Cold War era. Thanks to all for your early responses. We look forward to a great time in October.

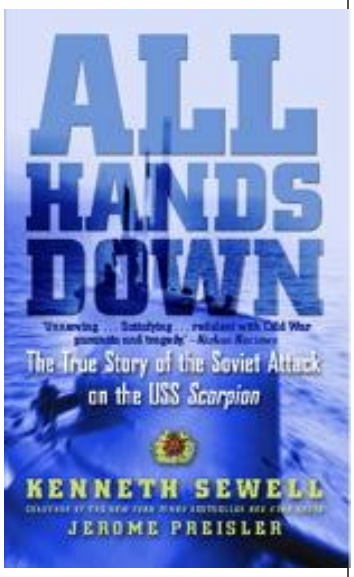
As of this writing we have 64 registrants, check the web site for the sailing list. Questions? Please feel free to email me using my Reunion email address. //Regards, Dick
stimson655reunion2020@aol.com

Kenneth Sewell

Kenneth R. Sewell is a nuclear engineer and a US Navy veteran who spent five years aboard the USS *Parche*, a fast attack submarine that was the Navy's most decorated ship. The USS *Parche* conducted a number of special operations. In addition to *All Hands Down,* he is the author of the *New York Times* bestseller *Red Star Rogue,* and *Blind Man's Bluff.* He lives in Columbus, Ohio.

Books by Kenneth Sewell





From the Association President - Tom Krauser, MM1(SS) B 72-74:

Shipmates,

Please think about where the 2023 reunion could be and if you would like to explore the possibility of chairing it.

If you have any questions or concerns for the board, please feel free to contact us so we can address them.

From the Association Historian/Memorabilia Custodian - Larry Knutson, MMCS(SS) B 79-81 USSVI-Charleston Base:

We still have the box of Gold Crew check-in cards that were from the time of Bob Weeks CO tour. If you were on the Gold Crew during any time when Bob Weeks was the CO you completed a check-in card for him. The box of cards is now held by our base secretary. If you would like a copy of your card sent to you please contact our Secretary at **655webmaster@ssbn655.org**.

From The Editor

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From: St Marys Submarine Museum Executive Director
Sent: May 14, 2021 12:12 PM
Subject: The St Marys Submarine Museum has RE-OPENED!

Welcome!

I am pleased to announce the Re-Opening of the St. Marys Submarine Museum. Please pay us a visit in person or visit our **website** for more information. Please spread the word!

Sign up to receive periodic notices from the St.

Submarines Lost During the Month of June

USS HERRING (SS-233)	June 1, 1944 – 8th war patrol	LOST WITH ALL HANDS - 83 SOULS
USS R-12 (SS-89)	June 12, 1943 – practice torpedo approach near Key West FL	LOST WITH 42 SOULS - 21 SURVIVORS
USS GOLET (SS-361)	June 14, 1944 – 2nd war patrol	LOST WITH ALL HANDS - 82 SOULS
USS BONEFISH (SS-223)	June 18, 1945 – 8th war patrol	LOST WITH ALL HANDS - 85 SOULS
USS S-27 (SS-132)	June 19, 1942 – grounded off Amchitka Island Alaska	NO LOSS OF LIFE
USS O-9 (SS-70)	June 20, 1941 – foundered off Isle of Shoals NH	LOST WITH ALL HANDS - 34 SOULS
USS RUNNER (SS-275)	June 30, 1943 – 3rd war patrol	LOST WITH ALL HANDS - 78 SOULS

SEVEN Boats and 404 Men Lost

Marys Submarine Museum by **clicking here**.

Keith Post, Executive Director
executivedirector@stmaryssubmuseum.com
Director, St. Marys Submarine Museum
102 St. Marys Street West
St. Marys, GA 31558-5640

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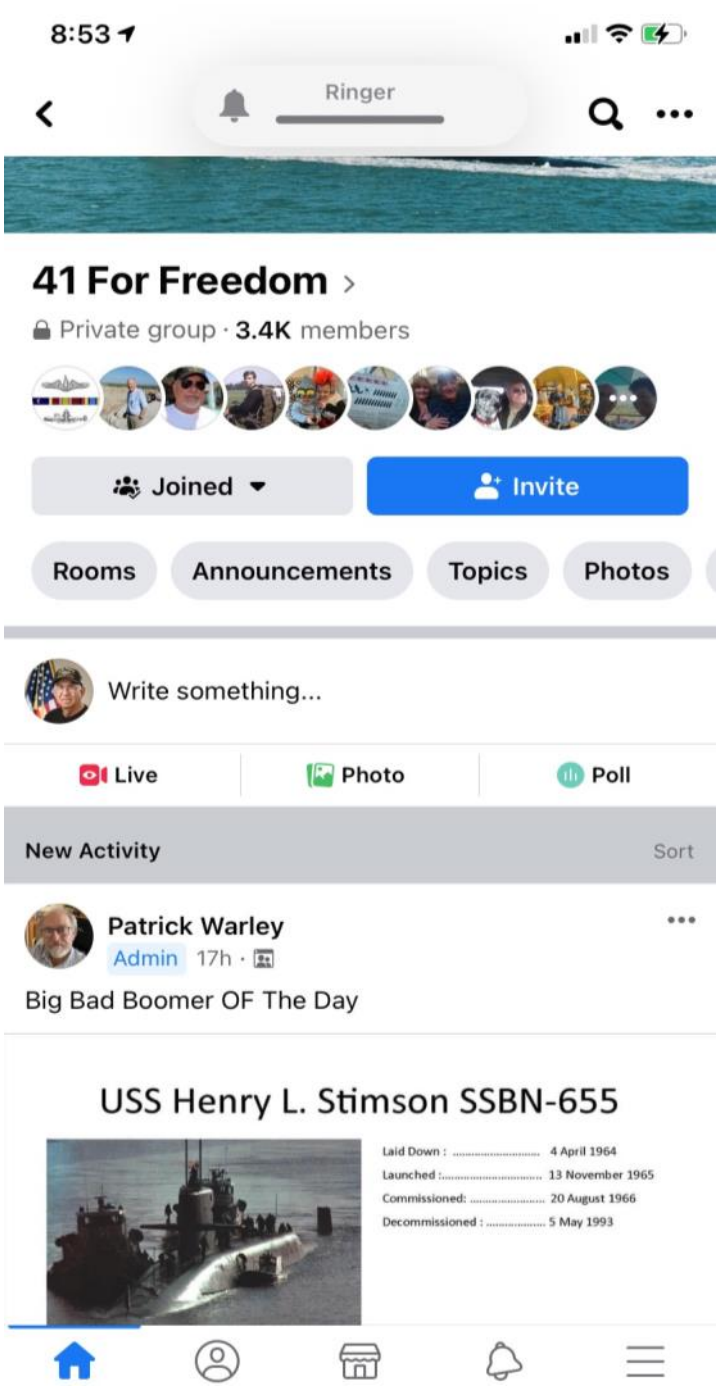
I received a note from Dick Young that our boat, HENRY L. STIMSON, was recently featured on the FaceBook site "41 For Freedom" as the Big Bad Boomer of the Day.



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This past month I was in an email conversation with one of our shipmates, Dan Rhodes, MM1(SS) B 79-83, Assoc. Life Member. He made a statement I think is worthy to be read by each member of the Stimson Association. Thank you Dan for putting this reunion thing in the right perspective.
He stated: "**Thanks again for helping to lay the foundation for a much desired reunion of what I've come to realize, "Real men with substantial similar background and experiences."**

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Sharing Pictures with Shipmates:

If anyone has pictures you would like to share with your shipmates please either email them to me or contact me and I will send you directions to upload to our Stimson Dropbox file.
655webmaster@ssbn655.org

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The Lean Submariner

Here's the latest posts on the blog. Still going strong. The link to his blog is

https://theleansubmariner.com/

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How fast will that thing go? The USS Skipjack Story - by Mister Mac
Originally posted on **theleansubmariner**:

How fast can you go on a submarine? Along with how deep, how fast is often one of the most asked questions once someone knows you were on board a submarine. The standard answer that was…
Read more of this post

*****

The Skipjack Class – Unleashing a New Kind of Sea Monster - by Mister Mac Originally posted on **theleansubmariner**:

There she blows!–there she blows! A hump like a snow-hill! It is Moby Dick! "Some of the subtlest secrets of the seas seemed divulged to us in this enchanted pond. We saw young Leviathan amours in…
Read more of this post

*****

Scorpion Lives Mattered - by Mister Mac
Originally posted on **theleansubmariner:**

On May 22, 1968, the USS Scorpion SSN 589 was lost at sea with all hands. **http://**

www.oneternalpatrol.com/uss-scorpion-589.htm This is a constant reminder to all submariners that there truly are no routine days at sea. God…
Read more of this post

The following Stimson Shipmates have departed on Eternal Patrol.

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MT1(SS) Richard 'Dick' Weiss G 65-70
Plank Owner
Departed on Eternal Patrol - 29 March 2021

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The direct link to the Association Eternal Patrol page is: **http://ssbn655.org/eternal-patrol/eternal-patrol.html**

WELCOME ABOARD: Found & Updated Shipmates

(Shipmate has contacted us to be added or have info updated on our Sailing List. Please check the online Sailing List for shipmates contact info.)

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ET1(SS) Gene Thaden B 72-75
(info updated per shipmate request)

BINNACLE LIST UPDATES: So that I don't continue printing the same information in the binnacle list, beginning this edition if I have not received an update on a shipmate, I will only note that fact. If you see that note please refer to a prior newsletter to see what the health issue is.

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James 'Jim' McDonald, MM2/MM1(SS) G/G 74-76; 77-79
Cards to: 2721 Early St., Norfolk VA 23513-3915
4.1.2021: Email from Jim: I ask an interest in your prayers as I rehab from a stroke I suffered a month ago. Rehab is going good. I should be released on the 9th to go home and from there do out patient rehab.

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Andrew 'Andy' Mckay, TMC G 85-88
Cards to: 2207 FM 1729, Lubbock TX 79403
4.1.2021: Email from Andy: I was found to have lung cancer in 2007. I had surgery to remove half of my right lung. I did 4 months of chemo. I now have final stage COPD. I am on full time supplemental oxygen

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William 'Sandy' Hastie, CAPT B CO 80 (Oct-Dec)
Cards to: 75 Lambeth Drive, Asheville, NC 28803
4.19.2021: Email from Sandy: I am doing well. The every six week immunotherapy continues to work as documented by a PET/CT every three months. God is good!
12.20.2020: I continue to receive my Keytruda infusions and they continue to control my cancer. My oncologist suggested changing the 3-week infusion schedule to every six weeks. This is a new method and it has worked for me as it better protects the integrity of my veins with fewer needle sticks. Also, it provides a better ability to schedule some family visits (when this again becomes possible). I still get a PET and CT scan every three months. As long as the Keytruda continues to control the cancer, I will be in good shape so thank the Lord it has been working! Sandy

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GREAT LINKS TO SPEND TIME WITH
(all links from "The Draft" will be on the website)

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655 Association Website
www.ssbn655.org

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Submitted by George Birmingham, ET1(SS) G 69-74, Assoc. LM, USSVI Holland Club / Carolina Piedmont Base

New Chinese Malware Targeted Russia's Largest Nuclear Submarine Designer
May 03, 2021 Ravie Lakshmanan

A threat actor believed to be working on behalf of Chinese state-sponsored interests was recently observed targeting a Russia-based defense contractor involved in designing nuclear submarines for the naval arm of the Russian

Armed Forces.

The phishing attack, which singled out a general director working at the Rubin Design Bureau, leveraged the infamous "Royal Road" Rich Text Format (RTF) weaponizer to deliver a previously undocumented Windows backdoor dubbed "PortDoor," according to Cybereason's Nocturnus threat intelligence team.

READ MORE HERE

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You have an extra year to get your REAL ID-compliant driver's license

BY KOMANDO STAFF, KOMANDO.COM
APRIL 30, 2021

Updated 04/29/2020 *– Due to the coronavirus, REAL ID enforcement is being delayed. Here is a statement from DHS:*

"Secretary of Homeland Security Alejandro N. Mayorkas announced the Department of Homeland Security (DHS) is extending the REAL ID full enforcement date by 19 months, from October 1, 2021, to May 3, 2023, due to circumstances resulting from the ongoing COVID-19 pandemic. The pandemic has significantly impacted states' ability to issue REAL ID-compliant driver's licenses and identification cards, with many driver's licensing agencies still operating at limited capacity. DHS will publish an interim final rule in the coming days to effectuate this enforcement date change."

Do you remember exactly what you were doing when you first heard about the horrific terrorist attacks on September 11, 2001? It's one of those catastrophic "where were you when" moments that will stick in your mind for the rest of time.

READ MORE HERE

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Get a copy of your or a loved one's military records

If your parents are no longer alive, probably not a day goes by that you don't miss them. If you want to know more about the service of a loved one, an amazing site offers many resources about our country's heroes. If you haven't explored this tremendous resource, take a moment now.

This amazing database can help you request Service Records Online, by Mail, or by Fax; Request Medical and Health Records; Check the Status of an Existing Request and more.

https://www.archives.gov/veterans

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Easy way to delete junk in Google Photos as time runs out on unlimited storage

Millions of people have been using Google Photos to store holiday pics for free. But with unlimited storage being canceled, you might want to create some space by removing blurry photos or screenshots. We'll show you the best ways to get the most out of Google Photos.

READ MORE HERE

VETERANS AFFAIRS - RETIREE INFO - AARP
https://www.va.gov/
And FLEET RESERVE
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7 Early Warning Signs of Dementia You Shouldn't Ignore

by Patrick J. Kiger, **AARP**, Updated May 4, 2021

How to spot early indicators that your loved one may have Alzheimer's or dementia

From age 50 on, it's not unusual to have occasional trouble finding the right word or remembering where you put things.

But persistent difficulty with memory, cognition and ability to perform everyday tasks might be signs that something more serious is happening to a loved one's brain.

Dementia isn't actually a disease, according to the Mayo Clinic. It's a catch-all term for changes in the brain that cause a loss of functioning that interferes with daily life. Dementia can diminish focus, the ability to pay attention, language skills, problem-solving and visual perception. It also can make it difficult for a person to control his or her emotions and lead to personality changes.

More than 6 million Americans are living with Alzheimer's dementia, according to a 2021 report by the Alzheimer's Association. Alzheimer's disease is the leading cause of dementia, accounting for 60 percent to 70 percent of cases, but a range of brain illnesses can lead to the condition

A loved one showing symptoms of dementia needs to see a medical expert who can conduct tests and come up with a diagnosis. If a loved one has dementia, you'll want to plan how you will manage that care, especially as the condition progresses.

But it's also important to rule out other medical conditions with dementia-like symptoms that may disappear with treatment such as infections and side effects of medications.

What to watch for

Here are some of the warning signs identified by dementia experts and mental health organizations:

- **Difficulty with everyday tasks.**
- **Repetition.**
- **Communication problems.**
- **Getting lost.**
- **Personality changes.**
- **Confusion about time and place.**
- **Troubling behavior.**

READ MORE HERE

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How Long Do You Have to Keep Tax Records?

by Nancy Dunham, AARP, Updated May 12, 2021 | Comments: 32

For many financial documents, just 3 years — for others, practically forever

If you've finished filing your federal income taxes and staring at your pile of receipts, forms and worksheets, you may be wondering how long you have to keep them. Naturally, the answer is, "It depends."

- **Try to stay tidy**
- **What to keep**
- **How long to keep it**
- **Property records can be forever**

READ MORE HERE

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The Lies We Tell Our Doctor

by Stacey Colino, AARP, February 19, 2021 | Comments: 20

Fibbed about your drinking? Forgot to mention a certain herbal supplement? Why it's important to your health to come clean

You're filling out forms at the doctor's office, and you check the box indicating you've never smoked or that you don't suffer from depression — belying your pack-a-day habit of 30 years ago and the antidepressant you took this morning. Or your physician asks about daily alcohol intake, and you subtract a goblet or two of wine. And are you taking all your medications as directed? Yes, you answer, choosing not to mention you normally skip that hypertension horse pill because, honestly, you feel pretty good.

- **Undercounting your cocktails**
- **Skipping right over supplements**
- **Editing your health history**
- **Pretending you take all your medications as directed**
- **Failing to mention a face lift (or tummy tuck, or other cosmetic surgery)**
- **Toward more candid communication with your doctor**

READ MORE HERE

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7 Things to Do After 50 for a Healthier Brain

by Michele G. Sullivan, AARP, May 18, 2021

Researchers are racing to find a treatment for dementia, but everyday habits can lower your risk

The search for effective treatments, not to

mention a cure, for Alzheimer's disease and other memory disorders has been a frustrating path of disappointment. Thirty-three investigational drugs have made it to the final stage of experimental testing, and every one has failed. In fact, doctors are still treating the symptoms of Alzheimer's with the same medications they've had since 2003.

But as treatment research struggles, data on prevention continue to soar. Multiple lines of evidence from all around the world show that it is possible to reduce the risk of dementia as we age — just not with drugs.

"We would all like to just take a pill to solve challenging medical problems," says Kirk R. Daffner, M.D., chief of cognitive and behavioral neurology at Boston's Brigham and Women's Hospital and a professor of neurology at Harvard Medical School. "And a one-and-done approach is certainly attractive. But that is probably not going to happen with Alzheimer's disease."

What does seem to work, however, is a healthy lifestyle. Here are seven habits that can boost your brain health in your 50s and beyond.

- **Keep your blood pressure under control**
- **Get regular exercise**
- **Eat a heart-healthy diet**
- **Manage your weight**
- **Learn new things**
- **Get good sleep**
- **Manage stress**

READ MORE HERE

SOMETHING FROM OUR SHIPMATES: SEA STORIES, COMMENTS, JOKES, ETC.

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Submitted by Tom Krauser, MM1(SS) B 72-74, Assoc. Life Member

I knew the MTS-635 was going to be replaced as a Moored Training Ship (MTS) by a 688 class submarine the La Jolla (MTS-701) as it has been planned for many years but I still had an emotional response to seeing it being towed away for final disposal.

I worked for Knolls Atomic Power Laboratory (KAPL) in Schenectady NY from November 1987 until June 2010 when I retired. I was in the Naval Nuclear Operations Training Department and conducted many training audits of the Moored Training Ships as part of my duties over the years.

Bettis Atomic Power Laboratory (BAPL) in Pittsburg PA originally developed a software program called the Training Information System (TIS) using barcode scanners to track the qualification signatures and produce training reports at the Moored Training Ships in Charleston SC and the prototypes in Idaho. Bettis sent KAPL a copy of the TIS software and I was given the task of modifying the TIS software to track the qualification signatures and produce training reports at the KAPL training prototypes at West Milton NY and Windsor CT. I developed and implemented the KAPL version of the TIS software at the KAPL prototypes in about 1989. Around 1990 the staff personnel at MTS and Naval Reactors asked me to come to MTS and demonstrate the KAPL version of the TIS software because there were issues with the BAPL version. After demonstrating the KAPL version of the TIS software for a couple of days, MTS and Naval Reactors asked me to convert the BAPL version of the TIS software to the KAPL version. I spent the next couple of weeks at MTS converting their existing data into the KAPL version. From that point forward I became the NR program software lead for TIS and responsible for TIS at all prototypes in the NR program until I retired in 2010 when TIS was taken over by my replacement. I made many trips to the MTS site and the Nuclear Power School for training audits and TIS improvements between 1990 and 2010.

Also, while I was in the Nuclear Operations Training Department, one of my duties was to obtain training aids for the NR prototypes from the "strip ship" program at Puget Sound Washington. Prototypes could request equipment as training aids from submarines being dismantled. If approved by NR I would arrange for those parts to be removed and shipped to the requesting prototype. I remember when the notification that the Stimson was being dismantled and available for training aids came across my desk in 1994.
//Tom

=====

Submitted by Wayne Fourniquet, ETN2(SS) B 72-76

I didn't plan on "shopping on this day" but we had a "semi-emergency" ... our local Lowe's showed some corporate respect for our fallen heroes, I just wish this photo was a better representation of what they did, in one of the "veteran's reserved parking spots"

The Computer Corner
By: George Birmingham, ET1(SS), Gold 69-74, USSVI Carolina Piedmont Base, Holland Club, Association Life Member
Windows 10 Calculator Features

Windows, in its various versions, has provided an easy to use calculator for those times when we needed to do simple math calculations. The early calculators were pretty simple, old-school versions. Windows 10 has enhanced the calculator with new features that make it very handy. I keep mine pinned to the Task Bar for easy access.

So what are some of these cool features you might ask? Here's an article that explains it all in simple terms:
https://www.makeuseof.com/tag/9-neglected-windows-calculator-features-save-day-money/

As you read the article, you will find this paragraph down near the end:
"While the Windows 10 Calculator is great, it lacks some features of the old Windows 7 calculator. Notably, it doesn't have a statistics mode or support for worksheets (such as mortgage calculations). If you want to get the old experience back, you can download the classic Windows calculator free from **Winaero**. " *(the URL for download is: **https://winaero.com/download.php?view.1795**)*

I did go to that site and download the old-style calculator. My anti-virus found no issues with the downloaded file. I then installed it with no problems on my Windows 10 Laptop and it runs just fine.
I pinned it to my task bar alongside the current Windows 10 Calculator for easy access.

And finally, here is an article that provides a variety of screenshots of the Windows 10 calculator modes that you may find interesting.
https://www.howtogeek.com/392134/how-to-use-the-windows-10-calculator/

Perhaps this information this will eliminate those searches for on-line conversion calculators we often find ourselves engaged in – myself included.

While this article is targeted to the Windows 10 Calculator, The Microsoft Store also has a wide variety of calculator apps that you may find attractive if you have specific needs.

Happy calculating!!!

As always, shipmates, comments and suggestions for future topics are welcomed. I am in need of topics for future articles, so please send your ideas along to me. Contact me at **subvet_ssbn@bellsouth.net**.

And if you have a difficult computer or network problem you need help with, contact me. I'm always glad to help out if I can.

NOTE: In the June 2019 Stimson Draft, the

Computer Corner article was about pictures sharing too much information when posting to social media sites. The following article, two years later reinforces that information and why it was important. See, we did our shipmates a good service...! It's always those little details that come back and bite you...

Peloton and Echelon profile photo metadata exposed riders' real-world locations

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Quick tip of the day

Google Maps uses the GPS location on your phone to determine where in the world you are. That's obvious. But did you know every time you search for something, look up an address or find directions, it stores your current location to your profile?

That might not seem so bad — but **that stored location data is almost never deleted** from your account. Don't worry, though. Your full location history can be found in the Activity Controls section of your Google account, and I'll walk you through how to turn it off.

- Open the **Google Maps app**, then click on your **profile picture** to open your Google account.
- Click on **Manage your account**.
- On the left, click on **Data & Personalization.**
- Under **Activity Controls**, click on **Location History**.

Toggle the blue switch to turn it **off**.

Quick tip of the day

Is your computer up to date? Are you *sure*? Today's tip is a basic one, but you can't skip it. There's a good chance you shut off automatic updates one day, so I'll help you out.

On a PC running Windows 10:

- Tap the **Start button** (the Windows key), then select **Settings**.
- Choose **Update & Security**, then **Windows Update**.
- On the next page, you'll see if your machine is up to date. Hit the **Check for updates** button to be sure.

On a Mac:

- Choose the **Apple menu**, then go to **System Preferences**.
- Click **Software Update**. If any updates are available, click the **Update Now** button.
- Return to the **Apple menu**, click **App Store** and choose **Updates**.
- Click **Update** next to an app to update only that app, or click **Update All**.

Quick tip of the day

Ever tried to email some pictures only to find they're too big for the email? When you've got huge files you want to share, it can be a pain to compress the files or figure out how to send small batches.

No longer do you have to worry about forcing your files to fit. You've got five easy ways to send large files of digital photos through email.

Tap or click here to take the headache out of emailing big files.

Quick tip of the day

Computer taking forever to start? In most cases, you can blame long computer startup times on apps you don't need and those essential to your PC's wake-up process. All of that is customizable.

Here's how to see (and change) which apps load during Windows startup:

- Click on the **Start menu**.
- Select **Settings** (cog icon) and click on **Apps**.
- In the left menu, click on **Startup**. It should be the last option.
- From here, toggle apps on or off.

Pro tip: For an easier view, filter the list by apps by impact. This way, you can quickly see which ones have a high impact on your PC's performance and adjust those accordingly.

Quick tip of the day

Your phone is packed with junk. I say that confidently because mine is, too. If you have an Android phone, here's an easy way to clear up some space. You'll actually be able to see the photos you care about. Imagine that!

- Open up the **Files** app. Don't remember installing it? It's a Google app you might not realize is on your phone.
- At the bottom, you'll see **Clean**. Tap that to see a list of junk clogging up your phone — old

screenshots, downloaded files and lots more.

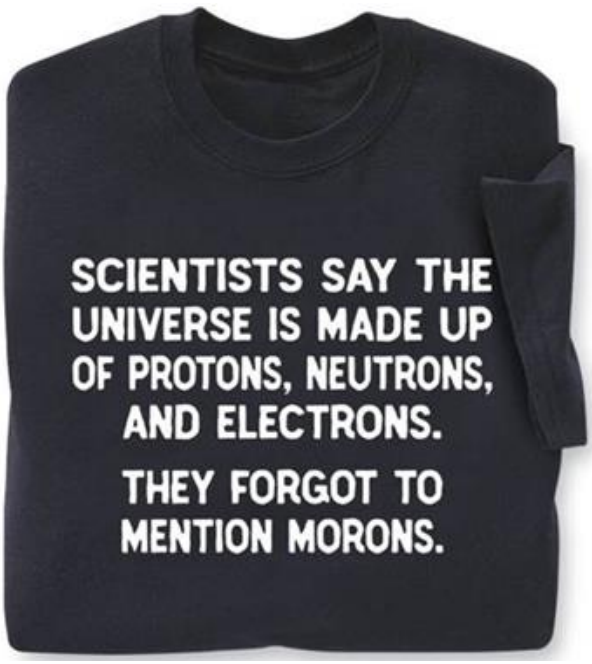
- Choose a category, then hit **Select files**.
- Tap **All items**, then **Delete**.
- Click **Confirm** to finish the job.

Chrome is crashing on Windows 10 – Here's how to fix it

If you use Google Chrome, beware. A recent update has caused the popular browser to crash for no particular reason. Fortunately, there is a simple fix. We'll explain how this annoying issue came about and how to fix it.

Tap or click here for step-by-step instructions to fix Chrome's crashing problem.

Is this a shirt for the nuclear trained personnel?



Why the US Navy's next attack submarine could really be a game-changer

Caleb Larson, Business Insider, May 14

The United States Navy's Virginia-class fast-attack submarines are among the youngest in the Navy.

They're nuclear powered and armed to the teeth with four torpedo tubes as well as Tomahawk cruise missiles and Harpoon anti-ship missiles. The Virginias incorporate a number of new technologies and are among the stealthiest submarines in the world.

The Navy designed the Virginias from the outset with a number of features not previously seen in other submarines, such as a fiber optic fly-by-wire control system which replaced the mechanical control system seen in previous submarines, as well as a secretive electromagnetic signature reduction system that helps keep the submarine undetected.

Although the Virginia-class is arguably one of the most advanced nuclear-powered submarine designs in existence, the Navy is already planning for their eventual replacement by the SSN(X) or Improved Virginia-class.

The Navy Sub [UK] Commanded By Artificial Intelligence

(BBC 21 MAY 21) ... Michael Dempsey

On 20 April, the Royal Navy's latest nuclear-powered hunter-killer submarine, HMS Anson, emerged from a vast construction hall at Barrow-in-Furness, travelled down a slipway and entered the water. All 7,400 tonnes of it.

Around 260 miles away in Plymouth, another submarine made its debut that same day. A minnow compared to HMS Anson, this secretive nine-tonne craft may have greater implications for the future of the navy than the £1.3bn nuclear boat.

MSubs of Plymouth, a specialist in autonomous underwater vehicles, won a £2.5m Ministry of Defence contract to build and test an Extra-Large Unmanned Underwater Vehicle (XLUUV) that should be able to operate up to 3,000 miles from home for three months.

The big innovation here is the autonomy. The submarine's movements and actions will be governed entirely by Artificial Intelligence (AI).

Ollie Thompson is a recent graduate who is studying for a master's degree in robotics at Plymouth University. He also works for MarineAI, the MSubs arm that is fitting out the XLUUV's brain.

Mr Thompson has no doubts about the challenge he and his colleagues face: "We know a lot of people don't have confidence in AI. So we work with elements we can test, we separate things into boxes."

He divides the AI problem into components - and mission management is the toughest. This attempts to simulate the presence of a trained captain in the little submarine's programming. This is AI working in total isolation from human contact, not least because maintaining strict radio silence is critical to a submarine's covert role. The technical principle here is machine learning, showing an AI program examples of how a task should be performed until it has embedded the right actions in its own repertoire.

To do this, MarineAI is using a huge IBM AC922 supercomputer, "a monster, one of the biggest in the South-West of England" Mr Thompson boasts. In contrast the on-board brain of the submarine resides in a 15cm square box and relies on an Nvidia chip often found driving computer games.

"We built it off the back of the Nvidia chip because it's highly energy efficient," says Mr Thompson. Just like a tiny but powerful Raspberry Pi device used to teach schoolchildren basic programming tasks this approach takes up very little power. And keeping power consumption to the bare minimum is critical to making the submarine's battery last.

It's clear that the Ministry of Defence is paying very close attention to battery technology for this project. So far MarineAI is relying on existing technology derived from car batteries. But it notes that research in this field is leaping forward.

The AI content of the computer should prioritise tasks. The project envisages a boat that can travel to an area of the sea-bed to search for mines or plant a sophisticated electronic intelligence-gathering package or stay in place and scour its environment for information on a hostile navy.

So MarineAI is creating a decision-making capacity for the submarine's brain. It will know how much battery life is left and how to weigh that against prevailing weather conditions and sea states, reaching a logical decision on whether to sail on or return home in the face of strong tides. The project has oceans left to cross. For instance, how can the submarine detect small objects on the surface such as jet-skis?

All of these dilemmas are small beer for human submarine captains. Commander Ryan Ramsey captained the hunter-killer HMS Turbulent and taught on the Perisher, a five-month-long course the navy uses to push prospective submarine skippers to the limit.

This decides if they are fit to command 100 or more submariners working punishing watches consisting of six hours on, six hours off for the duration of a long patrol.

Cdr Ramsey worked in AI after leaving the navy and can see where smart software and human instinct might not produce the same response.

"AI will struggle to match human decision-making skills. There are lots of submariners skills you can transfer to it, but you have to accept that the first generation will not be perfect."

He cites how he would study opposing Nato submarine commanders he went up against in exercises, learning how far each individual was prepared to push a vessel. "The reality is that if you don't know how a guy operates he will find your submarine before you find him. You can't replicate that emotional input in AI."

If the XLUUV is ever to be armed that might create serious problems. The decision to fire a torpedo rests on a huge reserve of each officer's instincts and experience. "If you leave that to a rules-based system you might escalate things. There is just so much to learn about the underwater battlespace."

In the future Cdr Ramsey believes submarines will be equipped with the ability to launch their own autonomous vessels. The next generation of surface warships entering service are already planned to feature mission-bays for launching uncrewed vessels. And autonomous submarines can be deployed by transport aircraft, giving the batteries a rest and the XLUUV a global reach.

The longer-term prospect for AI-controlled submarines is rosy, says Cdr Ramsey. "I can see a way to do a Perisher for AI. Get the right people to recreate their experiences in a simulator and let the AI learn from that, including human decisions that might be wrong. Give it ten years' worth of data and it will be able to build its own rules."

This simulator-based course for computer code promises another big benefit. "The AI can test out its own rules without any risk. My worry with

autonomous submarines is the political impact if the vessel does something wrong or gets caught in hostile waters," he says.

Plymouth's trial submarine is based on an MSubs design known as the S201. And across the Atlantic, Boeing is building a series of large uncrewed submersibles as the US Navy works out how these vessels can be used.

Former submariners talk about the degree of teamwork and close comradeship required to perform their missions. AI cannot replicate this, but it does not need to if all it is doing is saving sailors from exhausting and repetitive tasks better allocated to a drone.

The Royal Navy is coy about its plans for this technology and is committed to a next generation of crewed nuclear submarines. Yet the work of Plymouth's AI pioneers may see their most perilous missions delegated to an AI program that never goes off watch.

https://www.bbc.com/news/business-56993035

Rivals Newport News Shipbuilding, General Dynamics Electric Boat Working On New Subs

(DAILY PRESS 22 MAY 21) ... Dave Ress

(Tribune News Service) — In the stern section of the submarine pressure hull under construction at Newport News Shipbuilding are signs of a new kind of relationship in American business.

Two shipyards — Newport News Shipbuilding and General Dynamics Electric Boat — that were once competitors in building submarines are now collaborating with the Navy in design and engineering work for the nuclear fleet.

"It's grown over time ... we each bring our strengths to this," said Charles Southall, Newport News' vice president of Columbia-class Submarine Construction.

Newport News and Electric Boat teamed up for construction of Electric Boat-designed Virginia class submarines two decades ago. Each builds set portions of those submarines — Newport News makes the bows, sterns and sails — and they take turns on the final assembly.

But when Newport News began design and engineering work on the aircraft carrier Gerald R. Ford years later, engineers and designers from Electric Boat joined in. They had worked on the challenges of keeping fluids flowing through piping as the bows of Virginia class boats plowed through the ocean. The answers they found became part of the Ford's design and engineering.

And when the Navy began thinking about a new ballistic missile submarine some 25% larger than its four-decade old Ohio-class boats, Electric Boat turned to Newport News to design and solve the engineering challenge of making and assembling complexly curved steel into bows and sterns and sails.

"When you think about our shipbuilders, the craftswomen and craftsmen in the North yard who work with those digital tools, cutting and shaping heavy steel to make those curves — there are entire nations that would give everything to have what we can do in Newport News today," Southall said.

The yard's designers and engineers have to determine how many pieces of what shape are needed and how to bend them along multiple axes so they can be welded into the dome-like bow and the curved conical shape of the stern.

They do that for the pressure hull and for the tanks that can either keep a sub at the surface or in the depths when filled with air or water, as well as the outer skin of the boat and its diving planes.

Shipyard engineers developed tools and processes for making the biggest subs in the American fleet, including the giant fixtures in the JMAF that can lift and flip up to 900 tons, while automatically moving work stations into place.

At the moment, shipbuilders are working on the stern pressure hull for the first Columbia-class submarine.

When the pressure hull, tanks, outer hull and equipment are all assembled, the stern — the first module of six the shipyard is building for the first two subs under a $2.2 billion contract, will be shipped to Electric Boat. The date for that is November 2022.

Shipbuilders already are working on the lead boat's bow and last week made the first cut of steel for the second boat's stern. They'll deliver the lead boat's down in 2025 and the last of the modules for the first two Columbia class submarines by January 2028.

Electric Boat, meanwhile, is to deliver the first Columbia submarine in 2027.

"Electric Boat is on an extremely tight timeline to deliver this asset for national defense — we understand that, and so delivering on time is as important to us as if we were doing final assembly," Southall said.

Unlike the Virginia class teaming arrangement, under which Newport News and Electric Boat had been alternating final assembly work, Columbia class boats will be assembled at Electric Boat. Newport News will handle about 22% of the work on Columbia class boats, but is picking up a larger share of work on Virginia-class submarines.

The Columbia contract marks a return to working on submarines that carry missiles with nuclear warheads. Newport News did not work on Ohio-class boats; the last ballistic submarine it build was the USS George Washington Carver, which was commissioned in 1966 and scrapped in 1994.

The Columbia class will replace the fleet of Ohio-class ballistic missile submarines.

The Navy has said it expects the 12 submarines will cost $109 billion.

https://www.dailypress.com/business/shipyards/dp-nw-columbia-work-20210521-ibek4wt3fjbzznsqrxunu625vu-story.html

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The US Navy Used This Deadly Submarine Disaster To Help Train Responders To Save A Sinking Sub

(BUSINESS INSIDER 27 MAY 21) ... Ryan Pickrell

The US Navy recently conducted a search-and-rescue exercise testing its ability to respond to a sinking submarine. Such situations are rare, but they do happen and can be deadly. Delays and inaction can cost lives, so every second counts.

The exercise, SMASHEX, was broken down into two scenarios: a missed meeting where the fictitious USS Neversail is a no-show for an expected port visit and an emergency transmission for a submarine in distress, Submarine Forces told Insider.

The first tested the ability to recognize a problem and mobilize assets to begin the search-and-rescue phase. The second tested the ability to respond to a definitive submarine emergency.

Lt. Cmdr. Ben Moran, a UK Royal Navy exchange officer assigned to the US Navy's Submarine Force Atlantic, said in a press statement that "if a submarine has an emergency, which leads to the submarine sinking, the window of time to rescue submariners could be short and require quick, decisive actions to achieve a rescue."

The Navy press statement on the exercise said that it "utilized real events from history."

A Submarine Forces spokesperson told Insider that "although submarine disasters are rare in proportion to the number of nations operating submarines, there are many examples from history to draw from."

The recent US Navy exercise "used elements from the sinking of HMS Truculent," the spokesperson said, referring to an accident in which a British submarine was involved in a disastrous collision with a merchant vessel and 64 people died.

On January 12, 1950, HMS Truculent, a battle-tested British Royal Navy submarine that sank both German and Japanese vessels during World War II, crashed into the Swedish oil tanker Divina in the Thames Estuary.

Much of the sub's crew managed to survive the initial crash and escape the distressed submarine, but many who made it out died in the freezing cold.

Only 15 people survived the tragic accident, which one naval historian, who interviewed the last living survivor of the Truculent, characterized as a "stupid mistake" in 2019.

The US Navy exercise, which was held last week at Naval Support Activity Hampton Roads in Norfolk, Virginia, also used "experiences of emergency transmissions from submarines in distress" as tools for training, SUBFOR said, without offering specifics.

There have been a number of horrible submarine accidents throughout history, the most recent of which was the loss of the Indonesian submarine KRI Nanggala-402 last month with 53 people on board.

For the US Navy, one of the worst submarine disasters was the sinking of the USS Thresher in the Atlantic on April 10, 1963, with 129 sailors on board.

In the aftermath of that deadly accident, the Navy created the SUBSAFE program, a quality assurance effort that aims to ensure that that a distressed submarine can surface after an accident.

Since the Navy's SUBSAFE program was created just two months after the USS Thresher disaster, the US Navy has only lost one submarine, the USS Scorpion in 1968 with 99 sailors aboard, but it had not actually been SUBSAFE certified.

The Navy also has two important submarine rescue capabilities. These include the Submarine Rescue Chamber Flyaway System for rescues down to 850 feet and the Submarine Rescue Diving Recompression System for rescues as deep as 2,000 feet.

These critical capabilities are overseen by Undersea Rescue Command at North Island Naval Air Station in Coronado, California, and can be flown out to almost anywhere in the world in 72 to 96 hours.

Most US Navy submarines have around 7 to 10 days of life support available, Submarine Forces said, but "it is still a race to ensure rescue systems get to the submarine before survivability time runs out."

Although they are available, these support assets were not mobilized during the recent training event, which was the latest iteration of the annual command-and-control tabletop exercise.

The US is also works with foreign partners, such as NATO's International Submarine Escape and Rescue Liaison Office. It was established in 2003 to support any country with submarines regardless of membership in the alliance.

"As submariners, we operate in an inherently high-risk environment, making it vital to act quickly and efficiently both as part of a submarine crew or ashore as the support element," Vice Adm. Daryl Caudle, the Submarine Force commander, said in a release.

"We train so that we are decisive, proficient, and ready in any scenario, because bringing our undersea warriors home after every underway is a no fail mission," Caudle added.

https://www.businessinsider.com/us-navy-history-deadly-disaster-training-distressed-sinking-submarine-2021-5

Ocean Explorer Discovers 5 Sunken WWII Subs, Giving Closure To Hundreds Of Families *(NBC NEWS 27 MAY 21) ...* Anna Schecter and Rich Schapiro

Since she was a young girl, Helen Cashell Baldwin had been haunted by the mystery of what happened to the doomed Navy submarine USS R-12.

Baldwin's father, Fredrick Edward Cashell, and 41 other men died in June 1943 when the submarine sank off the Florida Keys during a World War II training exercise. The R-12 could not be found, and as Baldwin went from an 8-year-old girl to a 75-year-old woman, she all but lost hope that it would ever be discovered.

"As a teenager, I found myself looking for him, because there was never a funeral," Baldwin said. "There was never a memorial service. ... There was nothing."

But in 2011, a relative forwarded her a website claiming that the submarine had been found. Ocean explorer Tim Taylor, who set up the site, wanted to get in touch with relatives of the victims.

Within months of speaking with Taylor, Baldwin and her two siblings boarded a boat and headed out into the Atlantic with Taylor and his wife and fellow explorer, Christine Dennison. About 11 miles off Key West, Taylor took out his computer and pulled up drone images of the long-lost vessel — a sight that Baldwin said took her breath away.

Then they held a memorial service for her father and the other men who died aboard the R-12, tossing 42 roses into the water directly above where the submarine lay at the bottom of the ocean.

"That was a completion of 70 years of waiting," said Baldwin, now 86, weeping as she spoke. "It was a life-changing experience."

Taylor's team has found a total of seven Navy submarines — five of which disappeared during

World War II — bringing a measure of closure to hundreds of family members like Helen Baldwin.

Taylor was honored this week with the Navy's highest civilian award, the Navy Distinguished Public Service Award. His team is credited with having discovered the final resting places of 288 men, all locked inside what had become sunken tombs.

"Every one of these lost submarines, along with our other ships, to the U.S. Navy is a hallowed site," Sam Cox, a retired rear admiral who is director of Naval History and Heritage Command, said at the ceremony at the Navy Yard in Washington, D.C.

"It's a last resting place of sailors who made the ultimate sacrifice in the service of our country, and in effect, it's the Arlington National Cemetery for the Navy," he said.

In an interview just before the ceremony, Taylor said he is motivated by a desire to bring comfort and closure to family members denied the chance to fully mourn their loved ones.

"It's not about finding wrecks. It's not about finding ships," Taylor said. "The loss of someone even 78 years ago, and not knowing where they are, leaves a hole in families. The importance of our work is to connect families and bring some type of closure and peace even generations later."

The son of a Navy veteran who fought in World War II, Taylor has spent his life exploring the ocean's uncharted waters.

He began his career focused on scientific explorations, leading to his discovery of numerous reefs around the world. He participated in shark research projects and underwater archaeological missions, and he hosted several National Geographic expeditions.

Around 2010, Taylor became interested in finding historic military shipwrecks.

"I knew I had the technology and the skills and the background to find these things," Taylor said. He began researching lost submarines. Then he started plotting them out using the same navigational programs he turned to for other exploration projects.

Technological breakthroughs changed the way exploration could be done. Gone were the days of lowering hundreds of feet of cable and dragging imaging devices through the waters.

Now he had access to autonomous robots that use sonar to detect objects in the dark depths of the seas and the oceans.

"These autonomous vehicles, we just throw them in the water," said Taylor, who said they have been programmed for the task.

Taylor likened the robots to the rovers used to explore Mars.

A needle in a haystack

Built in 1918, the R-12 was the oldest submarine used in World War II. It was recommissioned as a training vessel in 1940.

On June 12, 1943, the R-12 headed out from Key West to practice launching torpedoes. But as the boat prepared to dive, the forward battery compartment began to flood, and the sub sank in 15 seconds, according to a Navy Court of Inquiry.

The hunt for the R-12 came at a unique time in Taylor's life. He was set to be married two months later to Dennison, a polar ocean explorer who became an integral part of the expedition.
They put up $750,000 of their own money to fund the search. And in October 2010, Taylor ventured out into the waters off Key West and detected a large object about 600 feet below the surface. He knew almost immediately that he had discovered the R-12.

"It's like looking for a needle in a haystack, and when you realize you have found it, the magnitude of the moment hits home," Taylor said.

As Dennison put it: "It wasn't just locating that submarine, but it was locating a crew of heroes that had been in their final resting place."

Taylor and Dennison returned to the site a year later with a new underwater vehicle equipped with a high-definition camera. They returned to land with high-resolution images of the R-12.

The discovery became a turning point for the intrepid newlyweds. They launched the Lost 52 Project dedicated to locating the 52 U.S. submarines that disappeared during World War II.

"It was not like any other discovery I had ever made," Taylor said of finding the R-12. "There were 42 souls on board that vessel. And submarines contain and keep water out. They keep bodies and souls in. And it became a

responsibility for us to connect those lost sailors with their families."

They set out to raise money to expand their operations. And in the last 10 years, Taylor's team has found six more submarines off Hawaii, Alaska, Panama, the Philippines and Japan.

Taylor and Dennison continue to search for more World War II-era Navy vessels that never returned to shore. They believe it is essential for private explorers — and the philanthropists who fund them — to take up the challenge of scouring the seas and oceans for lost military vessels.

"This is a daunting task," Taylor said after he accepted his award from the Navy. "We strive to set an example that others will follow."
https://www.nbcnews.com/news/military/ocean-explorer-hailed-finding-5-navy-submarines-sank-world-war-n1268674

U.S. Navy Outlines The Next-Generation Attack Submarine SSN(X) Program
(NAVALNEWS.COM 25 MAY 21) ... Peter Ong and Xavier Vavasseur

The Congressional Research Service (CRS) provided a document on May 10, 2021 with outline details on the U.S. Navy's Next-Generation Attack Submarine, dubbed SSN(X). According to the CRS SSN(X) report:

"Under the Navy's FY2020 30-year (FY2020-FY2049) shipbuilding plan, the first SSN(X) would be procured in FY2031, along with a single Virginia-class boat. In FY2032 and FY2033, the final four Virginia-class boats would be procured, at a rate of two per year. Procurement of follow-on SSN(X)s, at a rate of two per year, would then begin in FY2034. The 30-year plan's sustained procurement rate of two SSNs per year would achieve a force of 66 SSNs—the Navy's current SSN force-level goal—in FY2048. Navy Next-Generation Attack Submarine (SSN[X]) Program: Background and Issues for Congress https://crsreports.congress.gov

A subsequent 30-year Navy shipbuilding document that the Trump Administration released on December 9, 2020—a document that can be viewed as the Trump Administration's final published vision for future Navy force structure and/or a draft version of the FY2022 30-year shipbuilding plan—proposed a new SSN force-level goal of 72 to 78 boats. To meet this goal by the latter 2040s, it projected an SSN procurement rate of three boats per year during the period FY2035-FY2041, and two and two-thirds boats per year (in annual quantities of 2-3-3) during the period FY2042-FY2050."

The new SSN(X) design places (renewed) emphasis on Anti-submarine Warfare (ASW) by increasing the SSN(X)'s transit speed and stealth features and characteristics over the current Virginia-class nuclear attack sub. Furthermore, the SSN(X) will also carry more weapons and a more diverse payload than the Virginia subs in order to deal with more advanced enemy submarines, unmanned underwater vessels (UUVs), and coordinate with allied warships and forces.

The CRS SSN(X) report stated that, "The Navy is examining three broad design options for the SSN(X)—a design based on the Virginia-class SSN design, a design based on the Columbia-class SSBN design, and a brand new design.

"An industry official stated that the SSN(X) might have a beam (i.e., hull diameter) greater than that of the Virginia-class design (34 feet), and closer to that of the Navy's Seawolf-class SSN design and Columbia-class SSBN design (40 and 43 feet, respectively).

"An April 2021 CBO report on the December 9, 2020, 30-year Navy shipbuilding document states that in constant FY2021 dollars, the SSN(X)'s average unit procurement cost is estimated at $5.8 billion by the Navy and $6.2 billion by CBO."
https://www.navalnews.com/naval-news/2021/05/u-s-navy-outlines-the-next-generation-attack-submarine-ssnx-program/

Poopie Suits & Cowboy Boots
1htSepSonsore

In honor of Memorial Day, we republish this complete chapter from our book "More Sub Tales". We can never hope to properly put such losses in full perspective, but we can make sure that we never forget the sacrifices of so many submarine sailors for the benefit of all of us reading this today.

The Sailors' Chapel

Numerology is an interesting pursuit. Various numbers may have familiar significance in a variety of situations. Let's consider the instance of the number "52". There are 52 playing cards in a deck. A piano has 52 white keys. The element tellurium has an atomic number of 52. There were 52 American hostages during the Iran hostage crisis of 1979. The number "52" is the international dialing prefix for Mexico. And so on.

For the clergy and worshipers of the Submarine Memorial Chapel at Naval Submarine Base New London, the number "52" carries a very special and poignant meaning. Every week during Sunday services, the deceased sailors from a chosen World War II submarine lost in action are commemorated. There are 52 weeks in a year, and by coincidence, history informs us that precisely 52 U.S. submarines were lost during World War II. In other words, each of the fallen submarines is honored once a year, every year. It is a somber reminder of the sacrifices made for the defense of our freedoms by the 3,131 enlisted men and 375 officers who gave their very lives during the war. And there could be no more appropriate place to engage in such remembering.

Located in Groton, Connecticut, Naval Submarine Base New London is the largest submarine installation on the East Coast and the home of the Submarine School that virtually every officer and enlisted man must attend during initial training. The Submarine Chapel is a familiar landmark on the large and busy base. Officially known as The Chapel on the Thames, this rectangular red brick and concrete structure stands on a small wooded lot next to popular Dealey Center, the home of the base post office, bowling alley, movie theater, and recreation lounge, among other functions. The chapel is poised on a slight hill overlooking the Thames River and, most appropriately, the submarine piers. In other words, the chapel is visible from the place where submarines routinely come and go, and its silent presence on the bluff is a reassuring spiritual symbol for those returning and departing sailors in harm's way.

The chapel celebrates the Catholic Mass at 1100 and 1800 every Sunday and at 1130 every Wednesday. The traditional Protestant service is held every Sunday at 0900. Its capacity is about 400, with seating provided in the conventional arrangement—two sets of 23 wooden pews separated by a central aisle. On the side of each pew is an engraved plate bearing the name of one of the lost submarines. These plaques bring home in stark beauty the depth of the collective loss felt by the Submarine Force during World War II. Of the 16,000 or so submarine sailors who participated in the war, more than 20% did not return. This figure grimly illustrates the extreme danger of such service, and it accounts for a related and unenviable statistic: No service branch of the Armed Forces suffered a greater fatality rate during World War II than the Submarine Force.

Even before the war had concluded, but while submarine casualties were steadily mounting—nearly exclusively in the Pacific Theater—the Navy clergymen at Groton recognized the need to memorialize the colossal loss of life. They were dealing first-hand with the grieving wives, children and other family members of the sailors who had gone onto eternal patrol, and they foresaw the importance of a place of worship where such losses would never be forgotten. In November 1943, Chaplain Allan Jones announced a funding request from the federal government for the construction of a chapel on the New London base grounds. This application was quickly approved by the Bureau of Yards and Docks the following year, and a total of $45,000 was appropriated for construction, which got underway in early 1944.

Because of the necessary diversion of many usual consumer goods to support the war effort, lumber was not generally available for such non-essential projects. Wood materials were needed to sustain America's fighting stance on multiple continents simultaneously, so the building crew turned to another tried-and-true method: brick and cement-block construction. This framework had the added benefit of great durability, such that the chapel today features the same distinctive red-brick masonry. Construction was completed in November 1944, and The Chapel on the Thames was dedicated "to the glory of God as a memorial

to our lost submarines” on 03 December 1944, according to the program leaflet for that day.

The simple rectangular design of the chapel belies its interior beauty. There are ten sets of stained-glass windows, although only four pairs were originally completed at the time of the chapel’s dedication in 1944; these are the two pairs on either side of the nave nearest the front entrance and the two pairs on either side within the chancel at the rear of the church. A fundraising effort, conducted largely within the collective submarine family, was successful in gaining the funds necessary to complete the stained-glass project by 1954. All ten pairs of stained-glass windows were designed and built by the famed Boston firm of Charles Connick. Known as the preeminent stained-glass craftsman of his era, Connick personally oversaw the creation of the first four pairs of windows. Tragically, this was Connick's last project before passing away in 1945. However, over the next decade, talented protégés at his Boston studio completed the work, much of which is based upon the religious themes found within the 148th Psalm (“Praise to the Lord from Creation”). Close scrutiny of the windows reveals the subtle inclusion of secular symbols related to both the Submarine Force and the Navy, including a lighthouse, the dolphins insignia, a naval officers' crest, a profile of a topside watchstander, and the celestial constellations that any good sailor would rely upon for navigation at sea.

Rear Admiral Freeland A. Daubin, former ComSubLant, deserves much of the credit for spearheading the campaign to subsidize the cost of the original four windows. At a special ceremony held at the chapel on 11 November 1945, only two months after the conclusion of the war, Admiral Daubin dedicated the stained-glass windows “to the submarine officers and men who lost their lives in the service of their country and to their mothers, wives, and families.” The fundraising drive was then taken over by Rear Admiral Stuart S. Murray in 1951, who saw the project through to its completion. On 09 May 1954 the finished memorial windows were once again formally dedicated to "the memory of submariners who gave their last full measure of devotion to the nation they served and of which they so proudly were a part" (as stated in the program leaflet).

Affixed to the concrete block foundation of the chapel is a bronze commemorative plaque dedicated in 1946. At the top are the Dolphins representing the symbol of submarine qualification. Immediately below this insignia is the phrase “Out of the Depth Have I Cried Unto Thee”. Continuing down the plaque, in large typeset are the words, “Dedicated to the Memory of Submarine Personnel Lost Both in Peace and War”, followed by the chronology of lost boats beginning with F-4 in 1913 and continuing through the many submarine casualties of World War II between 1942 and 1945.

Upon passing through the front doors of The Chapel of the Thames into the vestibule, one immediately spies an ambo to the left side. Mounted on this stand is an illuminated oak repository containing a large and ornately-bound book under protective glass. Instead of the Holy Bible opened to a particular passage, upon closer inspection one realizes that this tome contains the names of all the boats that have been lost and all submariners who have died in the line of duty. Beautifully rendered in calligraphy, this solemn register—known simply as the Book of Remembrance— powerfully conveys the enormous human toll suffered by the Submarine Force in the defense of our country.

The book was unveiled in 1947, and its protective repository was completed in 1953. While the names initially found on these pages arise from the sea battles of the 1940s, additional entries have been subsequently made for losses before and after, among which include the F-4, Thresher, and Scorpion. The contents are arranged chronologically in the order of loss. Each name represents a perished sailor—a husband, father, son, or friend— who served on one of the submarines considered “overdue from patrol”. The total number of names approaches 4,000.

There are five copies of the Book of Remembrance. In addition to the one at The Chapel on the Thames, copies may also be found at the Submarine School (elsewhere on the same base), the Submarine Memorial Chapel at Pearl Harbor, the library of the United States Navy

Academy, and the Submarine Library of the Electric Boat Division of General Dynamics in Groton. Each book is inscribed with the following quote: “In memory of gallant men who went down to the sea in ships.”

The engraved brass plates at the aisle end of each pew, denoting individual submarines lost, bespeak the collective sacrifices made by these brave men. To those familiar with military history, many of these names produce immediate and visceral reactions of sadness and admiration: Grayback. Shark. Tang. Snook. As the 52 boats of World War II are commemorated on a rotating week-by-week basis, a single wreath is placed at the end of the bench to denote the particular boat being highlighted during Sunday services. (Care is also taken to open the Book of Remembrance to the section for that boat as well.) The prie-dieu also has a single plate, accounting for the odd number of total plates (47).

The labels on these plates include all 45 boats lost as a result of enemy action. (Presumably, space restrictions account for the omission of those boats lost during World War II but outside the battle theater, including R-12, S-26, S-27, S-28, S-36, S-39, and Tullibee.) The other two plates are dedicated to the S-37 and the Thresher. At the time of this writing, I have not been able to determine why the S-37 has been so honored; the inclusion of the Thresher (SSN-593) as the only nuclear boat to be so memorialized is an indication of how profoundly her tragic loss was received by the Submarine Force in 1963.

The wooden altar was made more than 20 years after the chapel first opened. It was handmade by recovering addicts at the nearby St. Edmund’s Center on Enders Island, just off Mystic in the Long Island Sound. Behind the altar is suspended a beautiful wooden crucifix carved from a single section of oak by a talented enlisted sailor stationed at New London; regrettably, his identity has been lost in history. The crucifix is hung for the Catholic ceremonies, and in its place is a large Celtic cross for the Protestant services. The original maroon carpet runner for the center aisle, long since replaced, was donated by the wartime civil service employees of the base.

“The Sailors’ Chapel”, as it is often known colloquially, remains a cherished sanctuary that seems immune to the march of progress. While the surrounding buildings on base are replaced and renovated over the years, The Chapel on the Thames serves as a timeless edifice that oversees each new class of Submarine School seamen arriving at New London. It ranks high on every submariner’s list of important places to visit, both to reflect on both the rich heritage of the Submarine Force and to ponder the sheer enormity of the losses sustained by those who came before. With their sacrifices, not only did they help to preserve our precious liberties but they also ushered in the modern era of sea warfare, where the submarine is an indispensable component of our national security.

In processing the many emotions that are stirred by a visit to these hallowed grounds, one is reminded of the phrase so vividly expressed at the Korean War Memorial on the National Mall in Washington, D.C.: “Freedom is not free.” The Chapel on the Thames—with its stunning stained-glass windows, commemorated pews, Book of Remembrance, and other tangible tributes to those who did not return from patrol—reminds guests of the very high price of such freedom incurred by the United States Submarine Force.

Acknowledgment: Many thanks to Patrick Urello, veteran submariner and Groton area resident, who greatly assisted with the factual and photographic details. This essay could not have been written without his help.

To order the book, "More Sub Tales": **https://www.amazon.com/More.../dp/B08PJPWLHY/ref=sr_1_1...**

Submitted by Sandy Hastie, CAPT B CO 80 (1 patrol-Oct-Dec)

A Thought for Memorial Day

Reflections of a Blackshoe

By VADM Harold Koenig, USN (m).

I like the Navy. I like standing on the bridge wing at sunrise with Salt spray in my face and clean ocean winds whipping in from the four quarters of the globe - the ship beneath me feeling like a living
thing as her engines drive her through the sea.

I like the sounds of the Navy - the piercing trill of the boatswains pipe, the syncopated clangor of the ship's bell on the quarterdeck, the harsh squawk of the 1MC and the strong language and laughter of sailors at work.

I like Navy vessels - nervous darting destroyers, plodding fleet auxiliaries, sleek submarines and steady solid carriers. I like the proud names of Navy ships: Midway, Lexington, Saratoga, Coral Sea -memorials of great battles won. I like the lean angular names of Navy 'tin-cans': Barney, Dahlgren, Mullinix, McCloy - mementos of heroes who went before us.

I like the tempo of a Navy band blaring through the topside speakers as we pull away from the oiler after refueling at sea. I like liberty call and the spicy scent of a foreign port. I even like all hands Working parties as my ship fills herself with the multitude of supplies both mundane and exotic which she needs to cut her ties to the land and carry out her mission anywhere on the globe where there is water to float her.

I like sailors, men from all parts of the land, farms of the Midwest, small towns of New England, from the cities, the mountains and the prairies, from all walks of life. I trust and depend on them as they trust and depend on me - for professional competence, for comradeship, for courage. In a word, they are "shipmates."

I like the surge of adventure in my heart when the word is passed "Now station the special sea and anchor detail - all hands to quarters for leaving port", and I like the infectious thrill of sighting home again, with the waving hands of welcome from family and friends waiting pierside.

The work is hard and dangerous, the going rough at times, the parting from loved ones painful, but the companionship of robust Navy laughter, the 'all for one and one for all' philosophy of the sea is
ever present.

I like the serenity of the sea after a day of hard ship's work, as flying fish flit across the wave tops and sunset gives way to night.

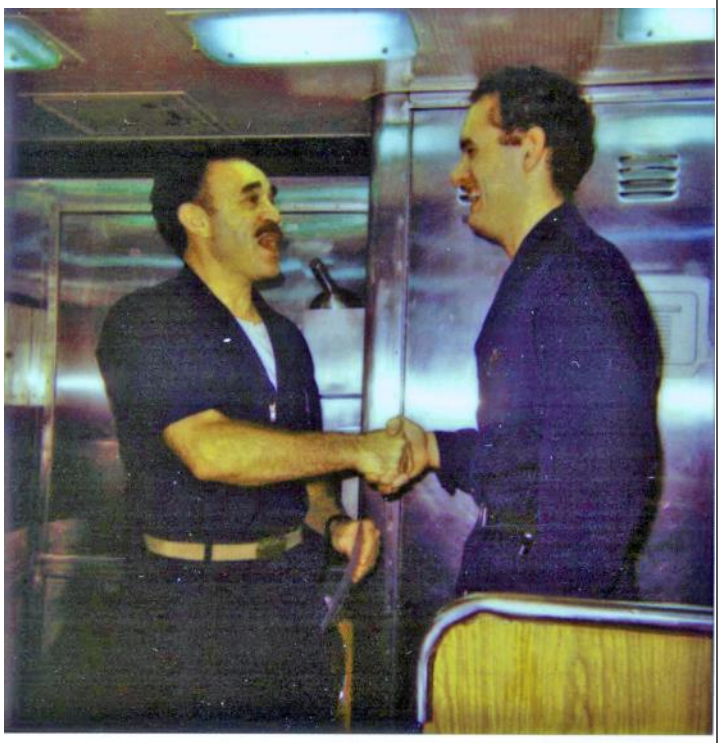
I like the feel of the Navy in darkness - the masthead lights, the red and green navigation lights and stern light, the pulsating phosphorescence of radar repeaters - they cut through the dusk and join with the mirror of stars overhead. And I like drifting off to sleep lulled by the myriad noises large and small that tell me that my ship is alive and well, and that my shipmates on watch will keep me safe.

I like quiet midwatches with the aroma of strong coffee – the lifeblood of the Navy - permeating everywhere. And I like hectic watches when the exacting minuet of haze-gray shapes racing at flank
Speed keeps all hands on a razor edge of alertness I like the sudden electricity of "General quarters, general quarters, all hands man your battle stations", followed by the hurried clamor of running feet on ladders and the resounding thump of watertight doors as the ship transforms herself in a few brief seconds from a peaceful workplace to a weapon of war - ready for anything. And I like the sight of space-age equipment manned by youngsters clad in dungarees and sound-powered phones that their Grandfathers would still recognize.

I like the traditions of the Navy and the men and women who made them. I like the proud names of Navy heroes: Halsey, Nimitz, Perry, Farragut, John Paul Jones. A sailor can find much in the Navy,
comrades-in-arms, pride in self and country, mastery of the seaman's trade. An adolescent can find adulthood.

In years to come, when sailors are home from the sea, they will still remember with fondness and respect the ocean in all its moods – the impossible shimmering mirror calm and the storm-tossed green water surging over the bow. And then there will come again a faint whiff of stack gas, a faint echo of engine and rudder orders, a vision of the bright bunting of signal flags snapping at the yardarm, a refrain of hearty laughter in the wardroom and chief's quarters and messdecks. Gone ashore for good they will grow wistful about their Navy days, when the seas belonged to them and a new port of call was ever over the horizon. Remembering this, they will stand taller and say,
"I WAS A SAILOR ONCE.
I WAS PART OF THE NAVY;
THE NAVY WILL ALWAYS BE PART OF ME."

SUBMITTED BY KENT YOUNG, ET1(SS) B 83-90



Kent receiving an award from CDR Keefe, CO

The RC Div photo was taken in the summer of 1984 before the crews were split - front row, l-r: Dan Hooper (G), Toby Schroeder (B), Brian West (G), next row, Corky Kirkpatrick (G), Rich Rennie (G), Chief Mark "Randy" Lively (G - LPO); back row: [behind Corky] Don Parks (B), Mike Henderson (B), Mike Wilcox (B - LPO), Jasper Webber (B), Kent Young (B) and Jerry Kirkwood (G). The watch was FA Mick. The only member of RC Div not there was Chris Ingram (G) - probably on watch then

SUBMITTED BY ROBERT ROUSH, RM1(SS) B/G 80-84

Here is a picture taken between 1980 & 84. Sorry, can't narrow it down any better than that. Taken in Radio...the 655's call sign was NTOR or as we called it Never trust our Radiomen...Standing L to R, RM2 Keith (Jimmy) Hendrix, RM2 Brian Williams, then me RM2 Bob Roush, RMSN Randy Chapman and RM3 Gordon Long with the phones.

SUBMITTED BY LARRY LONG, FTG2(SS) G 71-74

Lost52Project

Honoring the men their memory and their mission

Dear Friends,

Our current newsletter highlights some of our discoveries and work related to them. The last year has been difficult for everyone and with travel restrictions lifting, we are anxious to get back to searching for more lost US Submarines. In the meantime, we continue to fulfill our mission of helping to tell the story of the Lost 52. We have included press links to our first discovery, the USS R-12 whose family members and servicemen remain in our hearts.

Our suggested reading for this issue is the wonderful book "Slide Trail - USS Grunion on Eternal Patrol at Kiska" by Susan D. Abele. Susan, her husband Bruce, and John Abele are great friends and supporters of the "Lost 52 Project". Captain Mannert Lincoln Abele (father to John and Bruce) was Captain of the USS Grunion, his story of courage and heroism is remarkable as is the story of his family's quest to find their father's final resting place with his entombed crew.

We have also included a link to my recent article which appeared in the April issue of Ocean News & Technology magazine titled "Bringing History Back to Life".
Thank you for your continued support,

Sincerely,

Tim Taylor
Founder, Ocean Outreach/Lost 52 Project
www.lost52project.org

You can stay informed about our work by going to our websites www.lost52project.org or www.oceanoutreach.org and please share our newsletter subscription page and youtube channel with others. Our aim is to honor the men, their memory, and their mission and share with the younger generations the stories and bravery of our great servicemen of WWII.

Donate

FEATURE

THE LOST 52 PROJECT: BRINGING HISTORY BACK TO LIFE

By Tim Taylor,
President & Founder,
Tiburon Subsea Research / Lost 52 Project

The suggestion that we know more about the lunar surface than what lies beneath our oceans is something of a cliché these days. It is also somewhat of an unfair assertion. Throughout history, civilizations have gazed upon the moon in wonderment and curiosity, mesmerized by its phases and colored appearance. When attentions turned to the oceans, however, people were mostly presented with a featureless expanse of waves and weather—a place where seattle dwelled and monsters laid in wait. The small glimpses our ancestors had into the unknown depths became a rich source of legend and myth.

Today, this is no longer the case because over time our collective imagination became piqued by what really was beneath the waterline. This imagination has led us to successfully engineer highly advanced subsea technology, and within the next few decades we and various stakeholders from the ocean industries will be able to map the oceans that, unlike the moon, have eluded past generations.

IN SEARCH OF HISTORY

The Lost 52 Project is one such initiative that is already charting previously unexplored areas of the planet's seabed. Utilizing advanced deep-water autonomous underwater vehicles (AUVs), the Project has set out in search of archeological knowledge and understanding. World War II, although only 75 years ago, is accountable for more underwater historical wreck sites than any other time in human history, and the Lost 52 Project has set its goal to discover and document the 52 US submarines lost in battle.

To date, we have made numerous discoveries. These sites are the final resting place of 288 sailors. This is a monumental task and a search that, admittedly, may never be fully accomplished. That said, the search is the key. The ability to cover ground and put in the time is often a thankless task. Typically, when conducting commercial underwater surveys, the goal is to collect detailed coverage of an area; in our case, we are looking for relics of warfare.

AUV DEPLOYMENT

For this project, we are deploying AUV systems equipped with synthetic aperture sonar and magnetometers enabling us to efficiently and effectively collect high-quality scans with 100% coverage. Generally speaking, collecting data is a simple process of filling in the designated search boxes in a consistent and methodical process and dealing with mechanical, equipment, and environmental obstacles as part of the process. The Lost 52 expeditions operate under the same process but more often than not, based on our research and 75-year-old data sets, we are tasked with searching a large area with insufficient time to cover the entire site. This creates a new dynamic for our entire team.

In preparation, our research is compiled into a master book that is printed and distributed to the team of archeologists, AUV technicians, and merchant marines. Each day we add new survey set data as the crew negotiate the local conditions, currents, weather that the fallen sailors experienced 75 years ago. This in situ connection with the past is an intangible but very real part of our exploration. Every day presents the challenge of selecting our next search area, knowing full well that our time and coverage may be limited. There is always the chance we may miss our target by a mere 50 meters, like we almost did when we discovered the USS Grayback, off Okinawa.

CREATING 4D REALITIES

Filming our discoveries is an obvious next step. The project aims to do more than just capture an image; we want to generate the most comprehensive image scan possible to enable us to create a 4D immersive experience. From the start, it was not enough to just locate these lost submarines; we had to document and share their story with the world. It was important to apply the latest technology, but we still had to deal with budgets, lead times, and priorities. Access to the latest technology is often cost prohibitive, and in our case, LiDAR was not a viable option. This led us to seek out and deploy the developing technology of underwater photogrammetry.

With navigation, accuracy is always an issue, and the collection of underwater data for 4D image creation has it challenges. It should be noted 3D data is what we are collecting using our sonar and multibeam payloads. Creating images using authentic video, as well as still images, allows us to add the 4th element of true in situ color, unlocking a truly 4-dimensional representation of the wreck that can be manipulated, studied, and explored. The added ability of utilizing our current ROV HD cameras with no additional equipment requirements is a game-changer.

Reconstructing virtual 4D images of these submarine sites as they sit today, provides us with stunning and detailed data sets to virtually explore these sites for years to come.

The bow section of the USS Grunion, 1/4 mile up the sloping from the main wreckage. (Image credit: Lost 52 Project)

The stern section of the USS Grunion—starboard view. (Image credit: Lost 52 Project)

To learn more about Tiburon Subsea Research, visit: www.tiburonsubsea.com / For more information about t

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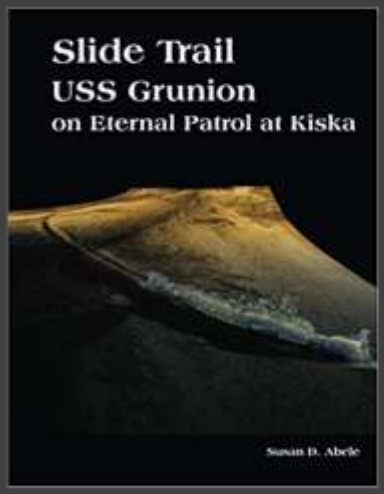
[Download a PDF of the article here]

Ocean News& Technology

Learn more about 4D Modeling and how it is "Bringing History back to Life"

Video coverage by Tom Llamas on our first discovery of the USS R-12. Last November was visited by a joint task force from Brazil and United States Navy who held a memorial over the site.



Recommended Reading

Add this to your library of must have submarine books!

USS Grunion, On Eternal Patrol at Kiska, is a true story detailing the life and naval career of Lieutenant Commander Mannert L. “Jim” Abele and the first war patrol of the USS Grunion lost on July 30, 1942. This is a story of families in times of war, of one man who joined the Navy and qualified for submarines, of a woman who never forgot, and of sons who set out to find their father. It is

also a story of collaboration, of the petals of a flower from Kiska, and the unexpected opportunity for international reconciliation and healing. The odyssey set in motion by a chance post on the Internet was transformational and bridging the chasm of war reached around the globe to solve a sixty-year-old mystery. The Grunion's story began with 14-year-old Jim Abele, who wrote to his uncle in poetry, "When 1922 doth come, I go to Annapolis by gum...." It comes full circle with the discovery of a wreck on the seafloor near the island of Kiska, where USS Grunion (SS-216), lost no longer, will remain forever on eternal patrol. Buy here

Lost 52 Store

Show your support

Hats
Shirts
Coffee Cups
Bags
Masks
Hoodies

Ocean Outreach

www.oceanoutreach.org | www.lost52project.org

Print a copy, complete and mail with your check to the address below:

Event Registration 655 Reunion #11

13-17 October 2021
Holiday Inn Cincinnati Airport
1717 Airport Exchange Blvd.
Erlanger, KY 41018
888.294.5067
www.holidayinn.com/cvg-airport
Call the hotel number above or reserve on their website.
Reserve Group Rates using either:
Henry L. Stimson 655 Reunion OR Block Code USS
Hotel Reservation Deadline SEPT 8, 2021
Hotel Reservation is the responsibility of the individual.
Reunion Registration Deadline SEPT 8, 2021
http://ssbn655.org/reunions/2020_Reunion11

Please complete (print legibly), print the form and return along with a check payable to: **Henry L. Stimson Reunion**
Mail to: Dick Young, 7209 Austin Woods Ln., Cincinnati OH 45247 **Email**: **stimson655reunion2020@aol.com**

Shipmate Name: _____ Guest Name: _____
Relationship: ___ Spouse ___ Significant Other ___ Family ___ Friend
Street Address: _____ City: _____ State: _____ Zip: _____
Phone: Home: _____ Cell: _____ Work: _____
E-mail: Home: _____ Work: _____
Number who will be attending this event in your group: _____
Patrols on STIMSON: _____ Total # Patrols on all boats: _____

Dates Onboard	Rate	Crew	Dates Onboard	Rate	Crew
_____	_____	_____	_____	_____	_____

Special Needs: _____

(**Event attendance will be through advance payment only.**)

I am registering for the following per person (Association Member and all guests):

Registration Fee: (required for all)	$45.00 ea	Number: _____	= _____
Saturday Banquet: (if attending)	$35.00 ea	Number: _____	= _____
Wright Patterson AFB Tour (if attending)	$30.00 ea	Number: _____	= _____
Ohio River Cruise/Meal (if attending)	$75.00 ea	Number: _____	= _____
		Total Enclosed	_____

REUNION USE ONLY

Check # _____

Date Rcvd _____

Registration # _____

Hotel Resv: _____

Two are two scheduled events. Please indicate your interest. **Include fees with your check for the reunion.**

1. **Thursday**: Wright Patterson AFB Museum Tour in Dayton OH. This is a 70 mile trip (just over an hour) and we will go by coach bus/s. Cost for the tour/transportation is $30.00 per person.
   (Include the fee in your check for registration.)

2. **Friday**: Ohio River Cruise and Meal. The cruise departure is less than a 30 minutes from the hotel and we will go by coach bus/s. Cost for the Cruise/Meal and transportation is $75.00 per person.
   (Include the fee in your check for registration.)

The Association has established a refund policy for reunion registrations and it is located within our Bylaws in Article V.g. You can view this policy at:
http://ssbn655.org/association/bylaws/1610%20655BylawRev.pdf or on the back of this form.

g. Cancellation of reunion registration and the refund of monies paid will be based on the timing of the cancellation. Registration cancelled prior to the reunion registration cutoff date will result in refund of monies paid minus the registration/office fee. For cancellation after the registration cutoff date, there will be no refund of monies paid.

Cincinnati is located in Southwest Ohio and just across the Ohio River is Northern Kentucky where the reunion will be held. It's only 10 miles from Indiana. There are 3 Interstates that lead to Cincinnati: I-74, I-75 and I-71. We are located a day's drive (8-10 hours) from most of the East Coast. There will be plenty of **free parking at the hotel for cars and RV's**.

If you are flying there are 7 major airlines that service Cincinnati (CVG) and several are discount airlines. They include Air Canada, Allegiant, American, Delta, Frontier, Southwest and United. A free shuttle service from the airport (1.5 miles) is provided by the hotel.

Along with the planned activities here are a few activities that you can do on your own if you arrive early or stay late or don't plan on going to the Wright Patterson AFB Museum on Thursday.

The baseball season will be over but the Reds have one of the best Museums in the Professional Baseball and it's located next to the Great American Ball Park. The Museum is free to veterans.
 https://www.mlb.com/reds/hall-of-fame

Our Zoo and Botanical Gardens are second to none with a White Tiger display and Baby Fiona, a hippo raised from birth at the zoo.
 http://cincinnatizoo.org/

Tthe Creation Museum is about 7 miles from the hotel. It's a state of the art Adventure through biblical history with stunning exhibits, botanical gardens, planetarium, zoo, zip lining …and dinosaurs. In the Bible??? For real??? You gotta see it to believe it.
 https://creationmuseum.org/

The Ark Encounter is 20 miles south and has a real wooden Ark based on the size described in the bible; it is huge.
 https://arkencounter.com/

Kentucky Horse Park is about 45 miles away near Lexington Kentucky.
 https://kyhorsepark.com/

The Cincinnati Museum Center is near the downtown area and housed in the old Art-Deco Union Terminal Train Station. It has a natural history museum and the Cincinnati History Museum. You can also tour the old railroad control station housed on the top floor. It also features an IMAX theater.
 https://www.cincymuseum.org/

The Hofbrauhaus in Newport, KY features the best German food outside of Munich.
 https://www.hofbrauhausnewport.com/

You may want to check out the restaurant on the top of the Radisson Hotel located in Covington, Ky (5 miles from the hotel) on the Ohio River. It sits on the 18th floor of the hotel and revolves once every 45 minutes, giving a great view of the downtown area, and the food is delicious.
 https://www.restaurantcovingtonky.com/