

**NEW LOCATION  
for Our April Meeting!**  
(Please See Page 5)

**Bob Koplin  
Departs on Eternal Patrol**  
(Please See Page 15)

# THE PERISCOPE

A monthly publication of the Los Angeles/Pasadena Base • United States Submarine Veterans



Volume 19, Number 4 • April 2023



PRIDE RUNS DEEP



*"To perpetuate the memory of our shipmates who gave their lives in the pursuit of duties while serving their country. That their dedication, deeds and supreme sacrifice be a constant source of motivation toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution."*

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## Editor's Corner

Goodness! Been busy with this here publication, plus *The SubCommittee Report* (published 3x a year) and *American Submariner* magazine (published 4x a year), plus building and running r/c model submarines (my 1:72 scale, highly accurate USS *Harder* [SS-257] will soon be making an appearance in these pages). Submarines are everywhere!

Meanwhile, still here in the Yeoman's Shack if anyone needs me.—Jeff

## How a British Submarine Spent Hours Under a Russian Aircraft Carrier

**A Cold War British nuclear sub sneaked into a Soviet naval exercise and took closeup underwater pictures of Russia's new aircraft carrier**

(From The War Zone website - published January 11, 2023.)

by Matus Smutny



*HMS Swiftsure and her reconnaissance photos. Crown Copyright via author. (RN photo.)*

In 1977, with the Cold War in full swing, the U.K. Royal Navy's nuclear-powered attack submarine *HMS Swiftsure* (S-126) slipped right into the heart of a large-scale Soviet Northern Fleet exercise in the Barents Sea. The British submarine penetrated undetected through the layered escort screens of destroyers and frigates and meticulously approached the Russian aircraft carrier NATO-designated "Kiev." The submarine recorded extremely valuable acoustic signatures and took incredible underwater periscope pictures of the Soviet carrier's hull and propellers. As an example of a perfect covert operation, the Soviet Navy had absolutely no idea about the presence of the NATO attack submarine and the amount of valuable data it was able to collect.

## The Hunter

The origins of the *Swiftsure* class of nuclear submarine can be traced back to the mid-1960s. At the time, the Royal Navy was facing the growing threat of nuclear-powered and nuclear-armed Soviet submarines routinely operating in the Atlantic Ocean. To counter these, the *Swiftsure* included improvements based on the lessons learned from previous all-British-

(continued on page 12)



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## From the Wardroom...



Dave Vanderveen,  
Base Commander

Shipmates and Ladies,

By now, you've heard about our difficulty in obtaining space for meetings and storage of equipment on the Weapons Station. For a while, we have been meeting in commercial spaces and it has worked reasonably well although it gets a little noisy occasionally.

Our shipmate, Ron Jones, is also a member of VFW Post 3173 in Anaheim and has arranged with leadership there for us to meet in their facility! I joined Ron there on a recent Saturday so I could meet folks and look at what is available. It will meet our needs regarding access (level surfaces, ADA compliant), restrooms, parking, kitchen & eating areas, and good WiFi connectivity for Zoom. Best of all, it is centrally located in the Los Angeles basin so it will be less of a chore for members in Southern California to attend meetings. Bravo Zulu, Ron!

Our April 15th meeting will be held at the VFW Hall at 805 East Sycamore St. in Anaheim 92805. You'll find an announcement with more details deeper in this issue (*see pg. 5—ed.*), but please be aware that parking is behind the building. The bar and food service will be closed that day, so we will hold a Pot Luck. We expect 15-20 attendees, so please bring a dish to share, your own beverages, and eating utensils.

We have a possible location for storage of our equipment and memorabilia! Greg Paulson and I will explore that possibility soon and I will let you know what we learn.

Our membership continues to grow and we now have 102 members with two more prospects considering "enlistment."

Preparation for our annual Memorial Day ceremony has progressed well, and we have Field Days scheduled for May 20th (tune-up) and 27th (install traffic noise barriers). Tentatively, our May meeting will be at the Submarine Memorial; more information to come.

Western Region Roundup is coming at the end of April in Sacramento, and the National Convention comes up at the end of August in Tucson.

The specter of COVID continues to diminish, but it is worthwhile to remember most of us are part of the "at risk" demographic which would be more severely affected by the virus. So, please consider your health and continue to protect yourselves!

*Dave*

*Dave Vanderveen, Commander*  
Los Angeles-Pasadena Base



## Minutes of March 18, 2023 General Meeting

Base Commander Dave Vanderveen called the General Meeting of the L.A.-Pasadena Base to order at the Glory Days Restaurant in Seal Beach, CA at 1125 hours. A moment of silence was then requested and given for our departed shipmates.

Dave then indicated the previous month's meeting Minutes and Treasurer's Report had been approved by the E-Board.

### Treasurer's Report:

Mike Swanson then read the report as of 3/17/2023. (*The Treasurer's Report appears in the E-Board Meeting Minutes elsewhere in this issue as usual.—ed.*)

### Memorial Update:

Dennis Bott has added our Poet Laureate, David Rosenfeld, to our Memorial ceremony program this year; he has done readings for us in past ceremonies. Dennis has also scheduled the hedge trimming and porta-toilet delivery—the latter to be billed to the USSVI Charitable Foundation, as are other charges attributed to the Memorial.

A discussion of required flowers led Dennis to look for last year's invoice from A Secret Garden in Huntington Beach (the last source to supply them). Overall, the site looks good. We'll finalize details in April regarding speakers and others; the bugler, piper and singer are all confirmed.

Dave indicated that the Eagle Scout candidate has submitted his plans for the trellis to the council, and is awaiting the go-ahead. Now needed is the okay from the Navy.

### Membership Update:

Dave explained Marilyn Senior's accident, which will put her out of commission for some time. Our membership stands at 102, with one recent addition and two candidates in progress. Then he described our base as very healthy in terms of numbers, financials and membership involvement.

### Navy Update:

Referring to the recent e-mail sent to him on the subject, Dave indicated the news from the Navy was pretty much bad—and then worse. Capt. O'Brien's superiors have decided the trellis will be considered a "gift to the Navy," and an independent ethical review must be conducted about it before it can be installed. Dave had earlier met with the NWSSB staff and explained our strong feelings about the sanctity of the Memorial, and our heartfelt commitment to the 3600+ lost men who are revered and honored through the presence and upkeep of the site. While the NWSSB command acknowledges that commitment and stewardship, it still deems independent reviews necessary before any activity is held or work is conducted at the site. Regarding the long-delayed installation of our Memorial bricks, Capt. O'Brien has been in touch with San Diego and Bremerton commands about the bricks already installed on *their* grounds, and is sympathetic to our desire to finally honor our brick program commitment. But again, a formal review will be required first.

The Memo of Understanding between the L.A.-Pasadena Base and the Lions Club is now null and void. The Navy has made it clear that any activity, alterations, or other work at the Memorial shall occur only after their review and approval. Dave will arrange to meet with the Lions Club Board to discuss and agree on any future activity, emphasizing our commitment to the sacred legacy of the site, and to our duty to preserve it for future generations.

Regarding the once-promised space for storage of our Memorial materials and memorabilia, that has changed now too. We've been told no space is available, and that even if it were, the Navy would be obligated to charge us the going rate of local public storage facilities in the area to store it. (For more information, see the options Dave presented in the E-Board minutes.)

*(concluded on next page)*



## March General Mtg. Sailing List

Ramon Aguilar  
Ed Barwick  
Bonnie Barwick  
Dennis Bott  
Ken Dorn  
Bill Moak  
Greg Paulson  
Jeff Porteous  
Chuck Senior  
Harold Staggs  
Mike Swanson  
Ray Teare  
Dave Vanderveen  
Gary Wing





**Ad Still Here by  
Popular Demand!**



## Just the Place for Killer MidRats!

Hey, know anyone on boats out of New London? Or, planning a visit to Groton yourself? Drop anchor at this local dive: **Wings'n'Pies** at 924 Route 12, just down the road from the Base's Main Gate. Your editor enjoys firsthand knowledge that the pizzas here are some of the tastiest and sloppiest around. Forget those extra napkins—just wipe your greasy fingers on your shirt and they'll think you've been hanging out with the A-Gang!



## General Meeting Minutes...

(concluded from previous page)

The notion of whether a volunteer might be tapped to store these materials at his/her home or business (in a garage, for instance) was brought up, as was the idea that the base might pay for the expense of buying a home tool shed in which to store the materials if only someone would volunteer space for it on their property. No one stepped forward at the meeting, but it still seems like a good idea to pursue further.

All the strict rules and regulations now in effect have most likely come about as the result of a Navy scandal originating in the Far East, Dave explained. Apparently, bribery of naval personnel there to direct Navy business to a particular entity eventually raised a red flag, ultimately bringing about the stiff new rules we must adhere to with regard to NWSSB.

### April Meeting:

Ron Jones and Dave are planning to attend the next VFW meeting at their hall in Anaheim to discuss the viability of L.A.-Pasadena meeting in the same location. Results of that meeting will be published in the *Periscope*, perhaps in time to hold our April meeting there. If not agreed upon, an alternative April meeting location elsewhere will be duly noted, e-mailed and published.

May's meeting will be conducted at the Memorial site (porta-toilets will be present), and we're working on a location for our June Steak Fest. The Leroy Stone Memorial Picnic in July will be held at Yorba Regional Park in East Anaheim. Jeff mentioned that his group of radio-controlled model submarine enthusiasts regularly run their boats in a pond there, so he hopes to coordinate a meet on the same day as our picnic so r/c sub demonstrations can be held for any interested picnickers.

### Western Regional Roundup and National Convention:

Dave encouraged those hoping to attend to make their reservations now. He also indicated many interesting attractions surrounding the WRR, and that an L.A.-Pasadena member, George Wallace, along with Rear Admiral Jerry Ellis, will be speakers.

While our base has already donated funds to support the Roundup, Dave inquired as to whether we ought to do the same for our the upcoming National Convention in Tucson. Since we donated \$50 for an ad in the WRR program, Bill Moak made a motion to spend \$100 for an ad in support of the national event. Ed Barwick seconded the motion, and it was passed by a majority vote.

Our 50-50 raffle raised \$55, the drawing was conducted, and Ken Dorn's name was drawn as the winner. Ken donated his winnings back to the base's general fund. (As usual.) Thank you, Ken!

### The Good of the Order:

Bill asked to read a text from member Larry Lovett, who'd requested that we toll the bell for his uncle and the rest of crew of the USS *Tullibee*, lost on March 26, 1944. A moment of silence was observed in their honor.

Ken Dorn showed us attractive plaques he'd brought along commemorating the USS *Los Angeles* (SSN-688) and the Submarine Base New London, indicating he was now donating them to the base for fundraising. The former had been signed on the back by a number of crew members, and the latter is of notable historic value. Ray Teare asked that the New London plaque be immediately put up for auction, and opened with a bid of \$100. Ray and Ed went back and forth until Ray finally won the day with a \$200 bid—which of course goes directly into the base treasury. Thank you, Ray!

There being no further business, Ray Teare motioned for adjournment; this was seconded by Mike Swanson and approved by all present, adjourning the meeting at 1210 hours.

Respectfully submitted,

*Bill Moak*

Secretary, L.A.-Pasadena Base, USSVI

**Anaheim VFW Hall  
for Our April Meeting**

**April Meeting**

**Date:** April 15, 2023

*This month we're trying a new location—the Anaheim VFW Hall! And we're back to a potluck format, so please bring your own plates and utensils, plus your own beverage and a dish to share (see below). **Note:** parking is behind the building.*

**Location:**

**VFW Post 3173, Anaheim  
805 East Sycamore Street  
Anaheim, CA 92805**

**Times:**

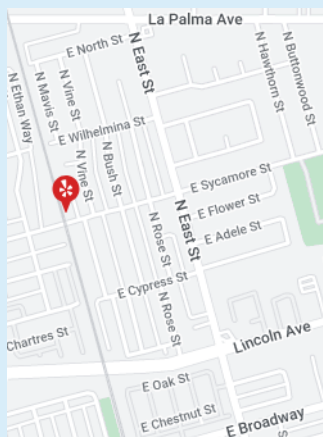
- E-Board Meets: 10:00-11:00
- Social Time/Lunch Setup: 11:00-11:30
- Lunch: 11:30-Noon
- General Mtg.: Noon-1:00 (must vacate premises at 1:00)

**Lunch:** Potluck. Assignments by last name as follows. Remember to bring needed serving utensil(s).

**A-H — Dessert**

**I-R — Salad or Vegetable**

**S-Z — Main Dish**



**April Birthdays**

We hereby extend the happiest of wishes to all our L.A.-Pasadena Base birthday celebrants!

- Gary Krudwig.....4/1
- Tom Peratt.....4/7
- Ken Chunn.....4/13
- Bob Conboy.....4/15
- Ed Barwick.....4/28



**This month we remember the tragic loss of the USS Thresher (SSN-593) on April 10, 1963.**

**LOS ANGELES - PASADENA BASE**

**2023 FLOWER FUND and BOOSTER CLUB**

A special thank you to the following folks whose generous contributions this year have helped make our base activities and charitable functions possible:

- Angus McCall • Joe Dow • Dennis Bott • Ed Barwick  
Darin Detwiler • Karen Silverman**



*Booster Club and Flower Fund donations are welcome in any amount and are often also popular with 50/50 Drawing winners at our base meetings. Contributions can be made in cash or by check payable to L.A.-Pasadena Base of USSVI. Checks may also be sent to Mike Swanson at 1149 W. Santa Cruz Street, San Pedro, CA 90731. To ensure proper credit, be sure to indicate Booster Club or Flower Fund on your check.*

# UNITED STATES SUBMARINE FORCE LOSSES ON ETERNAL PATROL

“I can assure you that they went down fighting and that their brothers who survived them took a grim toll of our savage enemy to avenge their deaths.”

— Vice Admiral Charles A. Lockwood, USN

## APRIL TOLLING OF THE BOATS



### USS PICKEREL (SS-177)

Lost on April 3, 1943 *Pickerel* went down off Honshu on her seventh war patrol. The exact cause of her loss has never been determined, but her OP area was known to contain numerous minefields. Seventy-four officers and men were lost aboard *Pickerel*.



### USS SNOOK (SS-279)

Lost on April 8, 1945 *Snook* ranks tenth among American submarines in total Japanese tonnage destroyed and is tied for ninth in number of enemy ships sunk. She was lost near Hainan Island, probably at the hands of a Japanese submarine. Eighty-four officers and men went down with her.



### USS THRESHER (SSN-593)

Lost April 10, 1963 *Thresher* was America's first nuclear submarine casualty and an especially tragic loss given that seventeen civilian technicians went down along with her crew of 112—the largest number ever lost aboard a single U.S. submarine. *Thresher*, a brand new boat, had been participating in deep-dive exercises. Fifteen minutes after reaching test depth, she informed USS *Skylark* she was having problems. *Skylark* heard noises like “air rushing into an air tank”—then silence. Rescue ship *Recovery* (ARS-43) subsequently recovered bits of debris, including gloves and internal insulation. Photos later provided by *Trieste* proved *Thresher* had broken up, taking all hands to their deaths at 1,400 fathoms some 220 miles east of Boston. A combination of design flaws and poor workmanship were determined to have caused the disaster, errors fully corrected in all subsequent U.S. submarines in a program called SUBSAFE.



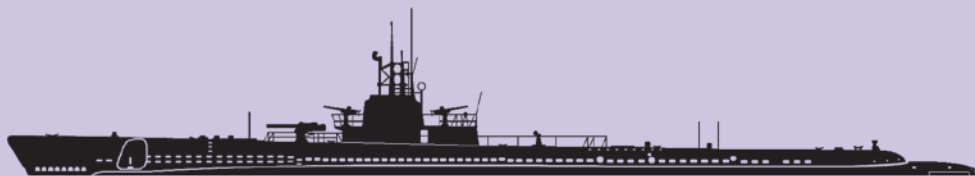
### USS GUDGEON (SS-211)

Probably lost on April 18, 1944 southeast of Iwo Jima—but possibly lost instead on May 18, 1944, in a different attack on an unidentified boat heard by other American submarines in the area—USS *Gudgeon* went down with seventy-nine men aboard. A recipient of five Presidential Unit Citations, she was on her twelfth war patrol when she failed to return. *Gudgeon* was the first American submarine to sail out on a war patrol from Pearl Harbor after the Japanese attack. During that first patrol, she also became the first U.S. submarine to sink an enemy warship, picking off the Japanese submarine, *I-173*.



### USS GRENADIER (SS-210)

Lost on April 22, 1943 near Penang, with no immediate loss of life, *Grenadier* had been stalking a convoy during her sixth war patrol when she was spotted by a plane and dove. Passing 130 feet, she suffered severe damage from a bomb. Now stuck on the bottom at 270 feet, her crew spent hours fighting fires and flooding. *Grenadier* later struggled to the surface, but was without propulsion and soon attacked by another plane, which she managed to shoot down. Once enemy ships arrived though, the CO was forced to abandon ship and scuttle the boat. Of *Grenadier*'s seventy-six crew members taken prisoner, seventy-two survived the war.



WE REMEMBER For those who gave their lives in defense of our country WE REMEMBER

# This 3D-Printed Sub Could Be the Future of Undersea Warfare

## The DIVE-LD submarine is leading a quiet revolution

(Reproduced from the Popular Mechanics website - published December 20, 2020.)

by David Hambling



Dive Technologies' DIVE-LD. The LD stands for large displacement.

**A**t a passing glance, this robot submarine looks like any other.

It stretches a few feet longer and can putz around the ocean a bit farther, but its bulbous torpedo-shaped design is familiar to the first robotic subs that've plied the waters for decades. But a closer look at Dive Technologies' new sub reveals a quiet revolution—from how it works to how it's made.

This unassuming sub is a new breed of Autonomous Underwater Vehicles, or AUVs, future subs that are bigger, smarter, and can travel farther than ever before. They are rewriting the rules for underwater military, commercial, and scientific operations, and instead of building these water-delving behemoths in a traditional shipyard, ship makers are 3D printing them.

"Large AUVs will change everything," says Sam Russo, COO of Dive Technologies. "They bring an enormous payload capability and energy capacity that allows the vehicles to operate on their own in the ocean for days on end."

But Dive isn't using your run-of-the-mill MakerBot. Using large-scale 3D printers, the Boston-based startup can slash costs, speed-up production, and create any submarine imaginable in just a few weeks—from idea to fully-functioning prototype.

### What Makes an AUV?

Existing unmanned underwater vehicles, known commonly as UUVs, are small, torpedo-like craft with sonar, cameras, and other sensors. Operators lower them over the side of a ship to carry out survey missions with sonar, cameras, and other sensors, and recover them hours later. Most remain tethered to the mothership with a control cable so the operator can work them remotely, but AUVs can roam freely on pre-programmed missions.

Industrial UUVs routinely map the seabed and inspect underwater infrastructure for the oil and gas industry. Archeologists use them to map out underwater remains, and commercial UUVs locate and salvage wrecked ships and downed planes. Environmental scientists explore reefs, map currents, and track wildlife.

But like many areas of tech, AI is changing everything. With underwater robots becoming smarter and more capable, AI opens up the possibility of scaling them up so they can roam freely and carry out much longer operations measured in weeks rather than hours. In the case of the U.S. Navy's *Orca* XLUUV, it's three months.

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## 3D-Printed Sub of the Future

(continued from page 7)

Typical missions for large commercial AUVs will be seafloor surveys for oil and gas or deep sea mining, site inspection for offshore wind farms, and search and salvage—not so very different to existing jobs, except that the larger AUVs will work for far longer and cover larger areas. The submarine will travel up and down a swath of ocean in a lawn mowing pattern, using sonar to image the seafloor. It can avoid obstacles thanks to its onboard intelligence, and re-scan areas it might have missed, or closely investigate potential areas of interest.

But the biggest difference from existing small AUVs will be how operations are carried out. Rather than needing a manned surface vessel to take the robot to the right area, drop it off, and recover it, a long-range AUV can be launched from a harbor and find its own way. Big AUVs can even carry out surveys in weather too rough for surface vessels.

### U.S. Robot Subs: A Brief History

The U.S. Navy is a leader in unmanned underwater systems, but these are mainly small UUVs for hunting and disposing of underwater mines, or for mapping the littoral area around a coastline prior to amphibious operations. Now the Navy is pushing ahead with a slew of larger uncrewed vessels to take on missions traditionally carried out by manned submarines.

The charge is led by the *Orca* Extra-Large UUV currently being built by Boeing and scheduled to be in service for 2022, and the smaller *Snakehead* Large Diameter UUV in 2023. The details are classified, but *Orca* is believed to be even larger than Boeing's *Echo Voyager* prototype which is 51 feet long and weighs 50 tons.

Submarines are used for all sorts of clandestine missions, from sneaking a peek at activity in foreign ports and photographing ships from underneath, to placing sensors and tapping underwater communications cables. They may also seek or locate and

trail enemy submarines. In wartime they can lay mines—the Navy is producing a new range of mines for covert delivery by unmanned submarines.

Unmanned subs can also act as “offboard sensors,” a remote set of eyes and ears for a manned submarine. A larger robot submarine may act as a mothership for a fleet of smaller unmanned vessels, whether for intelligence gathering, neutralizing minefields or other tasks. They may even launch drones into the air for reconnaissance or strike missions.

And while the latest generation of manned submarines cost billions each and require a carefully-selected, highly-trained crew of over a hundred sailors, the four *Orcas* on order cost just \$10m each. With 3D printing, the cost may be driven even lower, allowing the Navy to acquire a massive ghost fleet of underwater robots, carrying out routine tasks and freeing up the larger manned vessels for missions which require human skill.

### An AUV That's Fit to Print

This emerging field of super-sized robot subs is dominated by Boeing and Lockheed Martin, building on their long history of delivering manned subs to the Navy.

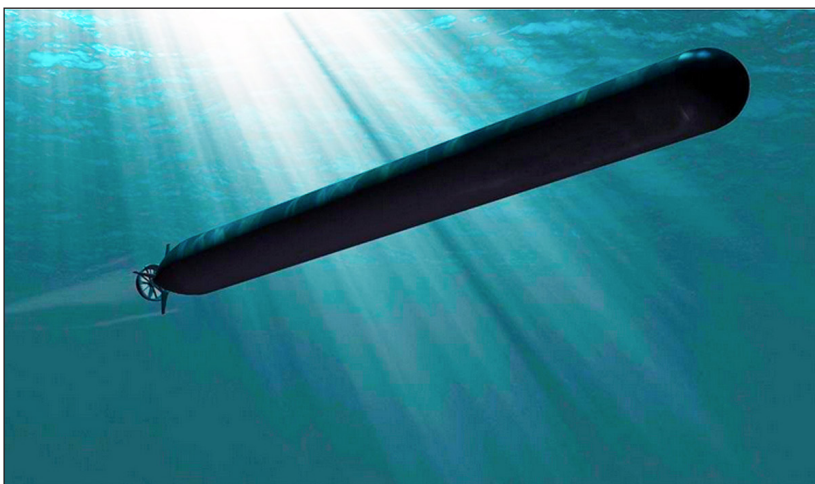
But Dive Technologies say they can make large underwater robots better, faster, and cheaper—thanks to 3D printing. It's already built its first sub, the DIVE-LD, and with cooperation from the U.S. Naval Undersea Warfare Center (NUWC) and two contracts with DARPA, it's safe to say that the Pentagon is interested in the new approach.

And that approach is truly radical.

Traditional submarine construction starts with the pressure vessel, an inner airtight hull strong enough to withstand the crushing weight of water at depth. Curved steel plates at least two inches thick are held in place with scaffolding and manually welded together, then strengthened with welded ribs.

“At the scale of Dive's AUVs, it would not be prudent to envision manufacturing the way it has always been done, which often involves large, expensive pressure vessels,” says Dive CTO Bill Lebo. “We had to completely rethink manufacturing.”

Strangely, Dive's greatest design asset is that it didn't have to worry about one important ingredient—a human crew. Without sailors and their needs for essential life-giving gases like nitrogen and oxygen, AUVs can be free-flooded, meaning water enters the body of the vehicle to equalize pressure instead of



An illustration of Lockheed Martin's Orca XLUUV.

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## 3D-Printed Sub of the Future

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being kept outside an airtight hull.

So instead of a hard outer shell, DIVE-LD is built around an internal skeleton. The sub keeps its electronic brains and motors protected in small pressure vessels. The skeleton provides the load-bearing structure, and the outer skin provides a smooth, hydrodynamic surface. It's a lot like how a traditional house places weight on its outer walls, while a modern skyscraper's visible "skin" is draped over an extremely rigid skeleton.

Dive Technologies didn't start in 2018 with the manufacturing process in mind. Instead, it naturally coalesced in order to meet an aggressive development schedule from idea to prototype.

Normally, a sub maker would set up machine tooling to produce a particular hull size. This can be extremely expensive, design-limiting, and time-consuming. A UUV design can take months until it's finally in the water, or five years in the case of the *Orca XLUUV*. Dive Technologies didn't have the time (or money) to wait around. The startup also had another problem—the sub design wasn't even final. Dive needed flexible manufacturing: enter 3D printing.

For the last six years, companies have turned to large-format 3D printing to churn out items like self-driving cars and furniture, but fully autonomous submarines would be a first for the technology. Dive also created a "AUV Kit" that would ensure all the necessary pieces from various suppliers could be easily assembled for the finished product, sort of like an IKEA sofa. The kit includes propulsion, power distribution, energy, communications, navigation, and computing—essentially everything that makes a sub go.

Additive Engineering Solutions in Akron, Ohio, printed the submarine's skin in sections up to four feet across and four feet long. Each section can be printed in less than 36 hours. Nine large prints make up the sub's body with another 85 3D printed parts in the interior.

The sub is made of different grades of ABS, the same material that makes up computer keyboards and LEGO bricks. However, in this case the ABS has composite reinforcement making it far stronger (like the glass fiber that gives fiberglass its strength).

These sections were fitted over the vehicle structure, the skeleton to which the engine, controls, and other systems are all attached. The skin was then finished for hydrodynamic smoothness and painted to complete the exterior.

"We went from an inventory of parts to a fully integrated AUV in three days, complete with a low-drag 3D printed skin," says Tim Raymond, director of R&D. "Seeing the DIVE-LD come together so quickly and cleanly without any major speed bumps gave us an unexpected 'ah-ha!' moment."

Detailed design took place in 2019, with the electronics build completed August, 2020. After the DIVE-LD was assembled in four days, sea testing of the vehicle was completed in October.

### A Submarine for Every Need

With the flexibility and speed of the AUV Kit and 3D printing, Dive Technologies could theoretically build any submarine imaginable—for whatever purpose and at whatever size. All it would take are a few design tweaks, a day-and-a-half of 3D printing, and an AUV Kit to make any submarine possible.

"It didn't matter what the vehicle actually looked like; we had the manufacturing process and architecture to rapidly create AUVs to meet any mission," says Raymond.

The current engine is a 6-kW electric direct-drive thruster with a magnetic coupling to the propeller. Top speed is 6 knots/7 mph, similar to other AUVs, but different engines could be installed if required.

The initial DIVE-LD is 48 inches in diameter and 19 feet long, but the company says that can be easily scaled up to seven feet in diameter and really any length required. Even seven feet is not an absolute limit—but Dive Technology would need to upgrade their logistics to handle larger vehicles.

If you need to shrink things down a bit, designs can also be scaled down to about twenty inches diameter. And all of it—from initial design to first test dives—only takes a few weeks.

While Dive Technologies AUVs looks like an average sub on the outside, the inside is anything but.

Traditional submarines rely on their pressure hulls with additional welded T-shaped ribs for strength. In WWII, U-boats had a "collapse depth" of less than 1,000 feet. The depth ratings of current submarines are classified, but the current U.S. Navy *Seawolf* is said to be able to reach 2,000 feet.

The DIVE-LD with its internal pressure vessels can withstand a bone-crushing 20,000 feet, and it takes highly specialized skills to ensure everything is able to cope with the pressure and other factors and still function reliably.

"There's really only a small portion of the engineering population that truly understands how to build equipment that can operate in the harsh ocean environment," says Lebo.

While traditional AUVs operate for short periods and follow pre-programmed routes, larger AUVs need onboard intelligence. The DIVE-LD has ten-day endurance and a range of more than 600 miles. While it can surface to communicate if needed, it needs to react to the unexpected and re-plan its route

(concluded on page 10)

## 3D-Printed Sub of the Future

(concluded from page 9)

if it runs into obstacles.

Dive Technologies partnered with Metron to provide the necessary brains. Metron has provided autonomy software to the U.S. Navy and DARPA for avoiding other vessels, detecting underwater obstacles and planning a path around them, and efficient route planning. Metron's software carries out dynamic mission re-tasking, meaning it can respond to changing circumstances as they occur.

Metron's software includes "look-ahead methods" where the vehicle plays out possible future scenarios in internal simulations, then chooses the path that best fits its mission. The control system also monitors faults and provides the sub's "get home capability," according to DIVE's CEO Jerry Sgobbo.

"This capability enhances mission reliability for our customers and overall survivability of the DIVE-LD platform, particularly when you consider the long range and endurance."

### A Robotic Future

Lebo says future DIVE-LD variants will have robotic arms and a

"hovering" capability for maintenance and repair jobs on underwater infrastructure like pipelines. He also anticipates hardware for recharging and data downloads at sea, so the AUV will be able to stay out indefinitely.

In the military, large AUVs will extend the existing mine countermeasures capabilities to fully autonomous mine-hunting and destruction missions. One day, they might even be armed with torpedoes or other weapons, the underwater equivalent of the USAF's *Loyal Wingman* drones, though the Pentagon current rules mean a human must always decide when to fire.

The DIVE-LD is currently being fitted with sonar sensors and carrying out offshore demonstrations, and is now available as a "robot-as-a-service model"—where customers hire out an AUV for a particular task.

For more than a century, the underwater world has been ruled by crewed submarines. But the future is robotic—filled with autonomous subs going about their missions unseen, unheard, and uncrewed.



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USS <i>Connecticut</i> (SSN-22)	USS <i>North Dakota</i> (SSN-784)
USS <i>Delaware</i> (SSN-791)	USS <i>Kentucky Blue</i> (SSBN-737)
USS <i>Greeneville</i> (SSN-772)	USS <i>Kentucky Gold</i> (SSBN-737)
USS <i>Helena</i> (SSN-725)	USS <i>Maine Blue</i> (SSBN-741)
USS <i>Hyman G. Rickover</i> (SSN-795)	

### Questions?

Jack Messersmith  
(928) 227-7753  
or e-mail  
MesserJ109@gmail.com

# “Super Glue” Apparently Used During Brit Nuke Sub Maintenance

(Reproduced from the BBC News website - published January 31, 2023.)



News report: “The Royal Navy has ordered an urgent investigation after workers on a nuclear-armed submarine fixed broken bolts on its vital cooling pipes using super glue.” Here’s the first article I saw about the scandal.—ed.

HMS Vanguard went in for maintenance in 2015 and had been due to leave in 2020.

**H**MS Vanguard was found to have a defect “from work done in the past” when the vessel was in drydock, the Ministry of Defence (MoD) said. It added the work was “promptly reported and fixed.”

The Ministry of Defence said there were “no nuclear safety implications associated with the issue identified.”

The 492-ft.-long (150m) HMS Vanguard arrived at Devonport for maintenance in 2015 and had been due to leave in 2020.

The MoD, responding to a story in *The Sun*, said the work was nearing completion and it was during a “routine inspection as part of the final stages of the project’s test and commissioning that this issue was identified.”

Preparations for final testing of the submarine’s onboard system could “safely continue without any impact on the programme.”

The MoD said Defence Secretary Ben Wallace had spoken to contractor Babcock “to seek assurances about future work.”

A Babcock spokesperson said: “Any quality-related issue is a huge disappointment, but our own robust inspection processes discovered the issue and we have taken immediate action to resolve it. Safety remains our most important priority and we can confirm there was no safety or operational impact from the work. We will continue to work closely with our customer as

we have throughout this most complex and critical of programmes.”

Luke Pollard, Labour MP for Plymouth, Sutton and Devonport, said in a statement: “News reports today of serious safety defects with work done to a nuclear submarine in Devonport are very concerning. Nuclear safety isn’t an optional extra—it’s non-negotiable.”

“Devonport is world class at refitting nuclear submarines, so **reports that super glue was used to botch repairs** is not only disturbing, it is insulting to the skilled engineers who take time to do the job right,” he added. “After speaking to Babcock, I am glad to hear that they found, reported and fixed this defect, but it should never have happened in the first place.”

Babcock said when the submarine arrived, it was in for a “deep maintenance, refuel and life-extension programme.”

The programme included the replacement of obsolete systems, new equipment installation and upgrades to the communication and weapons systems.

HMS Vanguard is the lead boat of four Vanguard-class submarines that carry up to sixteen Trident ballistic missiles, each holding multiple nuclear warheads.

One of the four Vanguard submarines is always at sea while another is kept at high readiness.

## Brit Boat Plays Tag with Russian Carrier

(continued from page 1)

designed classes, allowing for deeper diving, higher speeds, and lower radiated noise.

Powered by a single PWR Mk 1 nuclear reactor and an auxiliary Paxman Ventura diesel generator, submarines of this class were armed with five 533mm torpedo tubes capable of launching Mk 24 Mod 2 Tigerfish and later Spearfish heavyweight torpedoes, and Stonefish/Sea Urchin naval mines. UGM-84 Harpoon anti-ship missiles and UGM-109E Tomahawk Land Attack Missiles (TLAM-E) Block IV were subsequently added to the armory.

The previous British *Valiant* and *Churchill* classes of SSN had included raft-mounted machinery to isolate mechanical and electrical sources of noise and vibrations from the hull and reduce the overall radiated noise of the submarine. Three different propulsion modes—High, Moderate, and Low—meant that the rafts were locked at high speeds (evasion maneuvers, target interception, etc.) with no noise reduction, but at low and moderate speeds the rafts isolated the machinery (turbines, generators, pumps, etc.) from the hull. For very low, or “creep” speeds, an electric motor was used and there was also a small retractable motor used in case of main propulsion loss. The design changes utilized on the *Swiftsure* class included rafts that were further improved, with the high-speed locking mechanism no longer required.

Another exotic feature of the class was the introduction of pump-jet propulsion. This type of propulsion, back then relatively new but now common across almost all new submarine classes, offers several advantages over the standard propeller in many naval combat scenarios. The benefits include quieter propulsion at the same speed as opposed to a standard propeller, plus increased efficiency in some areas of the submarine’s performance envelope. On the other hand, the pump-jet assembly is relatively heavy, and complicated, and may increase a submarine’s drag. However, the lead boat of the class and the protagonist of this story, HMS *Swiftsure*, was equipped with a standard unshrouded propeller.

In total, six *Swiftsure* class hulls were completed: HMS *Swiftsure* (S-126), HMS *Sovereign* (S-108), HMS *Superb* (S-109), HMS *Sceptre* (S-104), HMS *Spartan* (S-105), and HMS *Splendid* (S-106). *Swiftsure* was commissioned in 1973, and *Sceptre*, the last boat of the class in service, was decommissioned in 2010.

### The Hunted

Kiev was the lead ship of its class, known in the Soviet Union as Project 1143 *Krechet* (gyrfalcon), which, as noted, received the NATO code “Kiev” class. This warship’s keel was laid on January 21, 1970, at the Black Sea Shipyard in Nikolayev on the southern tip of the Mykolaiv peninsula, in the Ukrainian SSR. The nearly completed ship was launched on December 26, 1972, for outfit-

ting and was officially commissioned on December 28, 1975.

The design of the Kiev class was a surprise to many Western observers. A hybrid between a vertical takeoff and landing (VTOL)/helicopter carrier and a guided missile cruiser, the most recognizable features were its angled flight deck on the port side, a massive island on the starboard side, and a dedicated space on the bow with four huge twin launchers for the enormous P-500 *Bazalt* (SS-N-12 “Sandbox”) anti-ship missile; eight missile reloads were also provided. For anti-aircraft defense, there were two twin launchers for M-11 *Shtorm* (SA-N-3 “Goblet”) surface-to-air missiles and another two twin launchers for the point-defense *Osa-M* (SA-N-4 “Gecko”) missiles. For sub-surface threats, Kiev carried two launchers for RPK-1 *Vikhr* (SUW-N-1/FRAS-1) anti-submarine missiles and two RBU-6000 *Smerch-2* rocket launchers. With no catapult, Kiev operated only VTOL-capable Yak-38 “Forger” fighter jets and Ka-25 “Hormone” helicopters. Two elevators moved aircraft between the hangar and the flight deck.

From the vast number of electronic systems installed in Kiev, the sonar suite is the most relevant to our story. It comprised a hull-mounted MG-342 *Orion* (“Horse Jaw”) low-frequency (LF) sonar, MG-335 *Platina* (“Bull Nose”) medium-frequency (MF) sonar, and a towed MG-325 *Vega* (“Mare Tail”) variable-depth sonar (VDS).

Kiev’s sister ships were *Minsk* and *Novorossiysk*, while the *Baku* (later *Admiral Gorshkov*) was built to an improved design and constituted a separate subclass.

### Operational Details

During the Cold War, the Soviet Navy regularly honed its skills and its command-chain efficiency during large-scale naval exercises, often in cooperation with submarines and aircraft. The exercise SEVER-77 (North-1977) lasted from April 14-22, 1977. The lead and commanding ship for the exercise was Kiev, which was still considered to be a new vessel, having been commissioned just two years prior; the crew was still mastering all the complex systems aboard.

The carrier’s powerful inner and outer escort screens were made up of the Project 1134A *Berkut-A* (“Kresta II”)-class guided missile cruisers *Admiral Nakhimov*, *Marshal Timoshenko*, and *Admiral Isakov* and the Project 61 (*Kashin*) class destroyer *Smyshlenny*.

The major part of the exercise took part in the Northern Fleet’s “home waters” of the Barents Sea, and the fleet, accompanied by the Project 1559V *Morskoy* proctor (*Boris Chilkov*)-class replenishment oiler *Genrikh Gasanov*, also made a trip to the Lofoten archipelago in the Norwegian Sea to practice replenishment-at-sea (RAS) procedures in very rough weather conditions off the

(concluded on page 13)

## Brit Boat Plays Tag with Russian Carrier

(concluded from page 12)

Norwegian coast.

Shortly after discovering the Soviet surface ships active in the exercise, *Swiftsure*, commanded by Capt. John Speller, was ordered to record Kiev's acoustic signature and to collect other intelligence. As each ship has its own specific sound signature that can be recognized by a trained sonar operator, the signature of Kiev was a very important piece of information that would allow the Royal Navy and its allies to recognize the carrier much faster and more reliably in the future.

The captain ordered *Swiftsure* to approach Kiev slowly and carefully from astern, hiding in its massive wake and taking full advantage of the blind spot of the carrier's sonar systems. The blind spot—also called the “baffles”—is an area extending behind the ship where the bow-mounted sonar has no coverage. Submarines and surface vessels often use towed sonar arrays (TSA) and variable-depth sonar (VDS) to cover this blind spot and listen for enemy vessels approaching them from astern. Kiev was equipped with VDS but compared to a more complex TSA it was essentially just one towed sensor allowing the sonar operators to listen for suspicious sounds below the thermocline—the transition layer between the warmer mixed water at the surface and the cooler, deeper water below. A TSA contains a series of hydrophones extending, if needed, through multiple thermoclines, thus giving much better situational awareness.

*Swiftsure*'s captain took his time to carefully plan the approach, matching the sub's speed to the carrier, all the while remaining undetected by Kiev and its powerful escorts. Getting this close to the enemy's massive carrier required nerves of steel, coordination, and the concentration of every single man aboard the *Swiftsure*. The approach phase took several exhausting hours and had to be carried out without a mistake—the discovery of a Royal Navy submarine in such close proximity to a Soviet capital ship would most certainly trigger a major incident.

After spending hours lurking in the depths and carefully correcting its position relative to the carrier above, *Swiftsure* slowly began the ascent with her periscope raised to monitor the procedure. Finally, the crew was able to see the carrier's massive propellers churning the water—the periscope was now just a few feet from the ocean surface and only 10-12 feet from Kiev's hull.

Being this close to a moving capital ship displacing around 42,000 tons with a submarine displacing 4,500 tons was extremely dangerous. A sudden course change by the carrier might have caused a collision or exposed the nearly surfaced submarine to the patrolling ASW helicopters or aircraft. *Swiftsure*, however, remained undetected and began recording the acoustic data. Apart from this intel, the sub was also able to take close-up photographs of Kiev's hull shape, rudder, and propellers—invaluable

pieces of data enabling Royal Navy and Western experts to better analyze the performance of the carrier. After all the important recordings and photos were collected, *Swiftsure* began to slowly sink back into the depths, leaving the Northern Fleet's capital ship and its feared escorts unaware that they had just been masterfully and covertly spied upon.

*Swiftsure* returned home on the 70th day of the deployment. The submarine's captain, John Speller, later received a small model of Kiev's propellers to commemorate this incredible mission and its results.

### Differing Legacies

Designed with a hull life of at least twenty-five years, HMS *Swiftsure* was prematurely decommissioned and de-fueled in 1992 when, during a refit, several dangerous cracks were found in the reactor piping. The rest of the *Swiftsure*-class boats were decommissioned in the mid-to-late 2000s. Their more capable successor was the *Trafalgar* class, essentially a modified *Swiftsure* with several major upgrades, including the use of anechoic tiles and other advanced noise-reduction features.

Kiev went through an overhaul and modernization in the 1980s but was decommissioned in 1993, just two years after the collapse of the Soviet Union. On June 30, 1993, the carrier was sold to China to become a theme park in Tianjin. After nearly two decades, it was turned into a luxurious hotel.

The other Kiev-class vessels had unusual histories in the post-Soviet period. “Minsk” was also sold to China to become a naval museum in Jiangsu, while *Novorossiysk* was broken up by a ship-breaker in Pohang, South Korea in 1997. *Admiral Gorshkov* was sold to the Indian Navy in 2004 and renamed INS *Vikramaditya* (R-33). In 2013, this now heavily modified vessel was officially recommissioned at Severodvinsk in Russia and began a twenty-six-day journey to its new homeport at INS Kadamba. Here it was inducted into the Indian Navy, with which it continues to serve. In 2016 *Vikramaditya* received a drydock overhaul, expected to provide a service life of thirty-forty years.

The story of *Swiftsure* and Kiev in SEVER-77 is just one of many similar covert operations conducted by both Western and Soviet navies. Today, of course, naval powers around the world continue to covertly collect highly sensitive intelligence using their latest and most capable assets, but these events will likely remain classified for many years to come.

*About the author: Matus Smutny is a Senior Lead Engineer in the automotive industry and has a lifelong passion for post-war naval history and technology. He maintains a digital gallery containing more than 137,000 photos and can be found on Twitter as @Saturnax1.*

# The Wigwam

by Bob "Dex" Armstrong

In 1959, Marylanders were wading knee-deep in slot machines. If you took Highway 301 north from Virginia, you hit "Slot Machine Alley" once you crossed the Potomac. From LaPlata to a place called Waldorf lay the neon-illuminated yellow brick road of catered sin and marginal activity. In twenty to thirty miles you could lose your money, your virginity, get your car painted, your fancy tattooed, be photographed with women your mother wouldn't approve of, buy every type of illegal fireworks, plus firearms, booze and plaster lawn ornaments, meet motorcycle bad guys, and use restrooms a self-respecting pier rat wouldn't enter.

The capital and Mecca of this vast strip of depraved living was Waldorf. And the palace of painted women with "I Love a Sailor" ankle bracelets was "The Wigwam."

Whenever anyone on the boat came down with something our corpsman had difficulty diagnosing or identifying, he would say, "I have no gahdam idea what you've picked up—but if you got it at the Wigwam, you're gonna die."

The Wigwam's core activity was one-armed bandits. When anyone in the car you were in said, "You guys want to stop at the Wigwam and grab a cold one?" a smart sailor would take out a five and stuff the rest of his money in his shoe. Money in pockets evaporated.

Two signs in the men's room: "DO NOT THROW CIGARETTES IN WASTEBASKET" and "RUBBER MACHINE MAKES CHANGE." For some reason, I remember that.

All the gals who hung out at the Wigwam wore clam-digger pants two sizes too small, so the seat of them was like Spam in a snare drum. They also had pop-up bras—you know, those pointy jobs they advertised in the *True Love* magazines. These were exotic women. They would smile, wink, and say, "Hey sailor, what are *we* drinking?"

"Don't know about *we*, but I'm having a draft."

"Well, how 'bout a couple of quarters for the slots, honey?"

I always wondered how much of the Norfolk area Navy payroll never made it north of Waldorf. Some idiots actually believed that if the stars and planets were in proper alignment, a sailor could make a fortune at the Wigwam. From all my visits, I came to the conclusion that all you could do at the Wigwam was get drunk, get broke, get rolled, get pestered by painted ladies, and get back change

from the rubber machine. And best of all, get rides north.

They had gas stations selling brands of gas nobody ever heard of: "Zingo Gas," "Cargo Gas," "Zapco," "Whammo Supreme"... not to mention all major oil firms, with grades of gas whose contents were only known to God and the guy getting rich unloading the stuff.

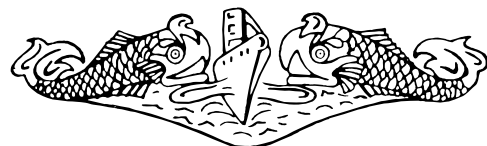
The people of this area sat up nights thinking of new ways to separate John Q. Bluejacket from his money. It would have simplified life considerably and saved a helluva lot of time if someone had invented a machine that could have grabbed a sailor, turned him upside down and shaken all the money out of his pockets.

Signs would read, "NOW APPEARING...LIVE...ON STAGE, "BOOM BOOM LATURE"...DIRECT FROM NEW YORK...FOR A LIMITED ENGAGEMENT." Limited engagement meant until stretch marks, varicose veins and saggy boobs failed to draw sailors to the designated flypaper.

It's all gone now. Somewhere in the ensuing interval, religion took hold in the region—and the Wigwam was born again as a bakery. But somewhere embedded in the parking lot asphalt has to be one of those "I Love a Sailor" ankle bracelets with the fake rubies.

Keep a zero bubble...

Dex.



## New Members

We proudly welcome aboard:

### Scott Hultner

(MM1-SS E6; Petty Officer, 1st)  
Spouse: Geri  
5341 Vanguard Avenue  
Garden Grove, CA 92845-1512  
cell: 714-325-7321  
shultner@yahoo.com  
(Qualified in 1974 on *John Adams*, SSBN-620; aboard till '78)

### Larry T. Lovett

(Associate; Retired Pharmacist)  
Wife: Robin  
6632 Beachview Drive  
Huntington Beach, CA  
92648-2666  
cell: 714-856-3508  
rx4art@gmail.com  
(Uncle lost on *Tullibee*, SS-284.)

### Arthur B. Schwartz, Jr.

(HM2-SS E5; Petty Officer 2nd.)  
Wife: Reta L.  
13812 Reva Street  
Cerritos, CA 90703-9062  
cell: 562-972-7865  
abschwartzjr@gmail.com  
Qualified in 1975 on the  
USS *George Bancroft* (SSBN-643)

### David Detwiler

(Associate Member)  
Wife: Mary Ellen  
738 Madrid Street  
San Francisco, CA 94112-3547  
phone: 415-672-2294  
dmdetwiler@att.net  
Qualified in Life and  
now enjoying retirement ;-)

### Craig Ignatowitz

(IC2-SS E5; P.O.2c; '86-'92)  
Partner: Anna Marie Lesh  
6323 Capetown Street  
Lakewood, CA 90713-1703  
cell: 562-965-7710  
Texasiggy@gmail.com  
Qualified in 1988 on the  
USS *Henry L. Stimson* (SSBN-655)

### Charles R. Hinman

(Associate Member)  
Wife: Keiko  
2015 Lime Street, Apt. #904  
Honolulu, Hawaii 96826-3930  
cell: 808-561-2869  
charles.hinman@gmail.com  
Phone number at *Bowfin*  
Museum: 808-423-1341



**"Get'cher Chapter News Here  
— Read All About It! —"**

*When News Breaks, We Pick Up the Pieces...*

## Eternal Patrol Notice

**Robert Clair Koplín**  
**01/29/2023**

Bob, one of our last four remaining WW2 submarine veterans, was a well known and much beloved member of our base for many years. He departed on Eternal Patrol on January 29th. Bob had been living in Boulder City, NV in recent years, and was 97 years old. His daughter, Janet Reindl, sent us this photo, taken about sixteen years ago.

He had been a plankowner (and the last surviving one) on USS *Torsk* (SS-423), serving from '43 to '46...when he left the Navy as a TM1(SS). He was a long-standing member of L.A.-Pasadena Base and USSVI.

Sailor, Rest Your Oar.





**L.A.-Pasadena  
Base 50-Year  
Holland Club**

*(75-year members noted with \*)*

- Ronald R. Jones ..... 2023
- Gerard A. Krudwig..... 2022
- Gregory M. Paulson ..... 2022
- Michael J. Swanson ..... 2022
- Ralph J. Hansen ..... 2021
- Robert F. Schive, Sr. .... 2021
- Larry D. Long ..... 2021
- G. Judson "Jud" Scott, Jr.... 2021
- Edward E. Kushins ..... 2020
- Bruce Evan Neighbors ..... 2020
- David H. Vanderveen ..... 2019
- Philip J. Jaskoviak..... 2019
- Dennis Bott ..... 2018
- Robert "Mike" Cailor ..... 2018
- Robert Miller ..... 2018
- John A. Anderson ..... 2017
- Roger C. Dunham, MD.... 2017
- Richard McPherson ..... 2017
- Harry "Bill" Moak ..... 2017
- Louis A. Myerson ..... 2017
- Elliot Rada ..... 2017
- Ronald G. Wagner ..... 2017
- Dennis J. Walsh..... 2017
- Michael Kish..... 2016
- Gary Wheaton ..... 2016
- Lawrence R. Butler ..... 2015
- Samuel T. Higa ..... 2015
- Harry P. Ross ..... 2015
- Stephen C. Rowe ..... 2015
- Charles H. Senior ..... 2015

*(concluded next page)*



**Los Angeles-Pasadena Base  
2023 Calendar of Upcoming Events**

- January 21: Monthly Meeting - Glory Days Beachside Grill
- February 18: Monthly Meeting - Glory Days Beachside Grill
- March 18 Monthly Meeting - Glory Days Beachside Grill
- April 15 **Monthly Meeting - Anaheim VFW Hall (pg. 5)  
Call for Memorial Day Prep Volunteers**
- May 20 Field Day at the Memorial Site - 0900  
Monthly Meeting - at the Memorial Site  
Nominating Committee Appointed  
Call for participants in the  
Huntington Beach 4th of July Parade
- May 27 Tarp Prep at the Memorial Site - 0900
- May 29 Memorial Day Service - 1100  
Submarine Memorial, West
- June 17 Monthly Meeting - Annual "Steakfest"  
Location TBA - Nominees for 2024 Base Officers
- July 4 116th Annual...  
Huntington Beach 4th of July Parade
- July 15 LeRoy Stone Memorial Picnic  
Yorba Regional Park, East Anaheim
- August 19 Monthly Meeting - Location TBA  
2024 Base Officer Candidates Announced
- September 16 ANNUAL BUSINESS MEETING  
Election of Officers - Location TBA
- October 21 Monthly Meeting - Location TBA  
Annual Officer Installation Luncheon
- November 18 Monthly Meeting - Location TBA
- December 9 Annual Christmas Luncheon  
at the Los Alamitos Golf Course



Larry E. Smith ..... 2015  
 Sam Aboulafia ..... 2014  
 David Palagyi..... 2014  
 Earl Thomas Peratt, Jr. .... 2014  
 David D. Semrau, DDS .... 2014  
 Ray Tracy Teare..... 2014  
 Milton Harry Boudov ..... 2013  
 Kenneth Jon Dorn..... 2013  
 M. Mark Hoffer ..... 2013  
 Michael P. Klein..... 2013  
 Ronald L. Levenson..... 2013  
 Edward L. Arnold..... 2012  
 T. Michael Bircumshaw.... 2012  
 Raymond Cheesebrough . 2012  
 Bobby O. Mahaffey..... 2012  
 John V. Mahan..... 2012  
 Lee Melody ..... 2012  
 Clyde Matthew Turner..... 2012  
 George R. Walrath..... 2012  
 John L. Weisenberger ..... 2012  
 Edward A. Barwick..... 2011  
 Joseph W. Koch, Jr. .... 2011  
 Stephen D. Diumentti ..... 2009  
 David Whittlesey..... 2009  
 Dennis A. Yure..... 2009  
 Armen Bagdasarian..... 2008  
 Paul A. Riggs..... 2008  
 Rex L. Shields..... 2008  
 John L. Von Ulmen ..... 2008  
 Francis R. Traser..... 2006  
 Ronald K. Thompson..... 2004  
 Robert L. Conboy..... 2003  
 James Rogers ..... 2003  
 John E. Savela, Jr..... 2003  
 Berry S. Yolken ..... 2002  
 James E. Carter ..... 1999  
 William F. Long ..... 1999  
 \*Herbert J. "Bo" Bolton.... 1998  
 \*Kenneth E. Chunn..... 1998  
 \*Royal Harrison, Jr..... 1995  
 \*William J. Dillon..... 1993  
 \*Harold Staggs..... 1992



## E-Board Meeting Minutes of March 18, 2023

The Los Angeles-Pasadena Base, United States Submarine Veterans, Inc., Executive Board Meeting was conducted on the morning of Saturday, March 18, 2023.

### In attendance:

- Dave Vanderveen, Base Commander
- Bill Moak, Secretary
- Mike Swanson, Treasurer
- Dennis Bott, Memorial Director
- Ken Dorn, Director
- Chuck Senior, Director
- Ray Teare, COB
- Jeff Porteous, *Periscope* Editor
- Harold Staggs, Member

Base Commander Dave Vanderveen called the meeting at Glory Days Beachside Grill in Seal Beach to order at 1000 hours with a quorum present. Minutes of the February meeting were reviewed with no revisions requested. Ray Teare moved to accept the Minutes; this was seconded by Mike Swanson and approved by voice vote.

### Treasurer’s Financial Report: Mike Swanson

The Treasurer’s Report as of March 17, 2023 was read into the Minutes by Base Treasurer Mike Swanson:

Checking	\$21,023.55
Cash On Hand	\$50.00
Uncleared Checks:	\$249.00
<b>Total</b>	<b>\$20,824.55</b>

All vendors have been paid up-to-date.

Income:	\$310.00
Expenses:	\$224.00

### Flower/Booster Club Additions:

Ken Dorn	\$200.00
----------	----------

### Inkind Donations:

\$00.00

Again, there were no questions or corrections. Bill Moak moved to accept the Treasurer’s Report; this was seconded by Ray Teare and approved by voice vote.

### Memorial Site and Ceremony Report:

Dennis reported that the site is “Looking good.” He then asked for authorization to invite David Rosenfeld, our base’s Poet Laureate, to be part of the upcoming Memorial ceremony. David had been involved in previous ceremonies, but has been away quite some time. It was suggested he might simply read submarine poetry he’d read in the past. Dennis went on to discuss flowers, which most recently have been provided by A Secret Garden in Huntington Beach, arranged by Paul Riggs, so Dennis will contact Paul. The cost related to these flowers is to be billed through Ken Earls at USSVI’s Charitable Foundation. Dave mentioned that Capt. O’Brien will deliver the opening speech, and contacts have been made with Pt. Loma for a sub commander to give the keynote speech. Ann Grennen is committed, and we’re still working on getting Rudy Hedgren for the benediction. The Eagle Scout candidate has

## No Sub Damage or Injuries in Shipyard Equipment Fracture at EB

(Reproduced from the Stars and Stripes website; published February 7, 2023.)

by Brian Hallenbeck

GROTON, Conn. (Tribune News Service) — Shipyard equipment used in lowering submarines into the water at Electric Boat broke Feb. 4, 2023, postponing a launching that had been planned the next week, an EB spokesman confirmed Tuesday morning.

No damage to the submarine occurred and there were no reported injuries, Dan McFadden, EB's director of communications and public affairs, wrote in an email.

“At about 4 a.m. Sat. morning, shipyard workers on Graving Dock 3 heard a loud noise from the launch pontoon—a platform that lowers the submarine into the water,” McFadden wrote. “Subsequent investigation revealed a fracture in the deck of the pontoon.”

According to McFadden, PCU *Iowa* (SSN-797), a *Virginia*-class attack submarine, had been rolled out of an assembly building and onto the graving dock area next to the pontoon in preparation for the upcoming launch. The submarine had completed the move to the end of the dock and was stationary at the time of the discovery.

“The submarine was never on the pontoon, and it was rolled back into the building, where construction and testing will continue,” McFadden wrote.

He indicated a full assessment of the damage and a repair plan for the pontoon is being developed in consultation with the Navy. The impact to the sub's construction schedule is being evaluated.

## E-Board Meeting Minutes...

(concluded from previous page)

submitted his work proposal to the Board, and as yet no feedback concerning the bleachers and covers has been received from the Navy. As such, putting up soundproofing tarps along the fence by the street remains unresolved as well.

### Membership Update:

Dave mentioned Marilyn Senior's absence due to a fall and subsequent hospitalization, surgery and rehab. Hers will likely be a long recovery since her injuries were severe. One new member has been added, and two potential members are in the process of approval. We're now 102 members strong, and Dave mentioned we're one of the most sound USSVI bases in terms of membership, financial health and participation by members in meetings, activities and projects. The latter is due in large part to the character of our members. Congrats all around!

### Future Meetings:

Dave mentioned the ongoing consideration of future alternative meeting sites. One possibility: Ron Jones will attend the VFW's next meeting at their Anaheim hall and has invited Dave to also attend to check on whether L.A.-Pasadena might potentially meet at the site too.

Our May meeting will be conducted at the Memorial site, and we've confirmed the presence of porta-toilets there at that time.

### Navy Update:

Dave cited his comprehensive e-mail describing recent developments in our base's involvement with the NWSSB. There was little good news, and much bad.

The majority of restrictions are being implemented due to a bribery case in the Far East. As a result, many rules have been established which must be adhered to by our base. Many of these developments aren't easily understood. For starters, our replacement of the worn-out trellis at the Memorial site must now be considered a “gift to the Navy.” Also, our recently ratified Memo of Understanding with the Lions Club has just been declared null and void, since the Weapons Station's command has indicated they are the *only* authority over any activity to be held—or work performed—at the Memorial site. Dave now plans to meet with Lions Club officials to make clear our position on the Memorial, and our interest in preserving its sanctity.

As for the ongoing saga of our Memorial Brick program, Dave has again made our position clear to the NWSSB, and has noted previous such (identical) activity permitted and performed at the Pt. Loma and Bremerton bases. Capt. O'Brien herself is receptive and has checked in with these commands, but apparently a formal review must still be conducted.

While the Weapons Station initially showed support toward eventually finding us space to store our Memorial site paraphernalia and Bldg. 6 memorabilia, they now insist no space is or will be available, and even if it were, they'd be obligated to charge us the going rate as determined by an analysis of local storage facilities. This being the case, Dave has determined three possibilities: 1) Continue the status quo at our current storage facility. 2) Seek alternative location(s), such as the warehouse where Bonefish Base stores their float (though distance would be a problem there). 3) Divest ourselves of most of the memorabilia in storage, perhaps to other bases, or to places like the museum in Kings Bay or the WWII museum in New Orleans.

### Good of the Order:

Ed Barwick has located a business to prepare new member name tags, and circulated a new sample badge along with an old one for comparison. Chuck stated that our previous vendor can still make the badges, but the text must now be created differently. He and Ed will converse further on this. Dave mentioned our base patch quantities are low, and wondered if anyone had knowledge of how and where the last order was fulfilled. This will receive further attention.

There being no further business, Bill Moak motioned the meeting be adjourned; Ray Teare seconded and it was passed by all present, ending the meeting at 1100 hours.

Respectfully submitted,

*Bill Moak*

Secretary, L.A.-Pasadena Base, USSVI

# U.S., U.K., Australia Forge Submarine Pact

*Aims to offset Chinese efforts to control access to trade and passage in Indo-Pacific region*

*(Reproduced from the Los Angeles Times - published March 14, 2023.)*

*By Gary Robbins and Deborah Sullivan Brennan*



*President Biden with Australian Prime Minister and British Prime Minister. (Photo: K.C. Alfred / S.D. Union-Tribune)*

At a historic meeting in San Diego, President Biden and the prime ministers of the United Kingdom and Australia announced Monday that they're accelerating plans to provide Australia with nuclear-powered submarines to help the nations counter a military buildup by China in the Indo-Pacific.

Australia will initially buy three U.S. *Virginia*-class submarines that will be armed with conventional weapons but no nuclear missiles. Contracts for two more multibillion-dollar subs can be added at a later date.

The three countries will also collaborate on the design of a new submarine built with components from each nation that will require the U.S. to share highly sensitive technology with the U.K. and Australia, which are long-standing NATO allies. The U.S. hasn't made this kind of deal since it helped the U.K. with nuclear submarine development in 1958.

The first of the new subs will be constructed in the U.K. with others to follow in Australia. Construction will begin in the early 2030s because the U.K. needs to expand its industrial capacity and Australia needs to create the ability to build vessels of this magnitude.

Monday's agreement stems from the so-called Australia-United Kingdom-United States, or AUKUS, partnership, which was formed in late 2021 with the goal of collectively finding ways to maintain peace and stability in the Indo-Pacific, a huge continental portion of Southeast Asia.

Biden praised the partnership as he stood between British Prime Minister Rishi Sunak and Australian Prime Minister Anthony Albanese on a pier at Naval Base San Diego on Point Loma in a very rare and public joint address. He called AUKUS "a powerful entity" and noted how much progress it has made in such a short period of time.

"Australia and the United Kingdom are two of America's most stalwart and capable allies," Biden said to the crowd of about 150 dignitaries, naval officials and members of Congress. "AUKUS has one overriding goal: to enhance stability in the Indo-Pacific amid rapidly shifting dynamics," he added.

The pact is propelled by concerns that China could, at some point, invade Taiwan, sparking a global military crisis. The allies also say that the military bases China is building on artificial islands in the South China Sea could be used to thwart trade and the movement of ships and aircraft in that part of the world.

"This is a very, very big deal," said Tai Ming Cheung, a China expert at UC San Diego.

"The U.S. has primarily—as we've seen with NATO—engaged with militaries in alliances but has not historically been willing to engage in industrial partnerships and sharing the most sensitive, technological secrets."

He added that, "The U.S. has to have a more global footprint. It needs a lot more allies to help them in the Indo-Pacific."

The U.S. currently has 71 submarines. China is rapidly building its own vessels and is expected to surpass the U.S. in the total number of subs by the end of this decade.

The deal "is being undertaken to help our closet allies [be] more powerful and capable of convincing Beijing that it's no longer operating in a permissive security environment," Charles Edel, a senior advisor for the Center for Strategic and International Studies in Washington, D.C., said at a news briefing.

The new security pact will be carried out in three phrases. The first is just getting underway as the U.S. begins to have American submarines visit bases in Australia. The U.K. will do the same. Australian sailors will embed with the navies of both countries and study at schools specializing in nuclear-powered subs, the Biden administration said. In 2027, the U.S. and U.K. will begin placing their own subs at Australian ports on a rotating basis.

Australia has six *Collins*-class diesel submarines, which do not come close to matching the offensive and defensive capabilities of America's various types of nuclear "boats," including the four *Los Angeles*-class vessels homeported in San Diego.

The U.S. builds submarines in Virginia and Connecticut, which are at or near capacity, defense analysts say. First Lady Jill Biden is a sponsor of a *Virginia*-class sub, the USS Delaware, the president noted Monday, "and she never lets me forget it."

## A Letter from Pete Juhos, Western Region Director      Feb. 22, 2023

Shipmates,

As winter's chill tries to slow us down, the planning and preparations for the 2023 Western Region Roundup are well underway with Gold Country Base as the Host Base. If you have never attended a WRR event, I strongly encourage you to come and share in the camaraderie by supporting your shipmates; register for the event at <https://wrroundup.com>. You can further show your support with an individual (or Base, or Vendor) sponsorship to help defray some of the costs incurred by executing this time-honored annual event. At \$50, it equates to a tank of gas and maybe a bit left over for some geedunk. I look forward to attending a packed house of submariners—your participation and engagement will be an EPIC event!

I spoke with Tim Carlisle, who serves us in multiple capacities including USSVI Chief Technology Officer and District Commander (WD5). If you were unaware, he suffered a traumatic injury at work a few weeks ago in a fall. After being rushed by ambulance to the Zuckerberg General Hospital in San Francisco, doctors performed surgery on his cervical spine to relieve pressure from his spinal cord, adding some hardware to maintain alignment. He was discharged on Friday, Feb 17th to the Sutter Alta Bates Acute Rehabilitation Center in Oakland, CA. He'll likely be there for the next several weeks or months working with both occupational and physical therapists to regain all degrees of motor function, flexibility, and dexterity. During our call, he was very cheerful and reported making a 150-foot transit down the hall unassisted, took a break, then made the return leg to his room. He is very confident he'll make a complete recovery. He welcomes your calls of encouragement and in-person visits but requests you call ahead to ensure there are no interruptions. He's mindful of the upcoming WRR and is using the event as a carrot to further his recovery journey: he plans to attend! Please keep him in your thoughts and prayers.

The 2023 USSVI National Awards window opened on February 1st. The most recent edition of the USSVI National Awards Manual has been approved and published. You can find it by visiting and logging in to the National website: [www.ussvi.org](http://www.ussvi.org). From the tab marked "Members," select "Manuals" on the drop-down menu. It's the fourth item on list. There are individuals who contribute to the success of YOUR BASE and across the organization for the benefit our shipmates. Take the time to write and submit a nomination for Silver Anchor, Golden Anchor, Meritorious-Individual, Meritorious-Base, Ben Bastura, or Robert Link National Commanders Commendation. Encourage your Newsletter Editor to submit the labor of their dedication for recognition as Newsletter of the Year.

The USSVI National Awards nomination window closes on April 30th. Be sure to have your voice heard: your nomination read and voted upon. In the 2022 USSVI National Awards cycle, I served as Selection Committee Chair for the Golden Anchor and Silver Anchor awards. These awards are read and voted upon by the 23 District Commanders. Out of the 178 Bases in USSVI, there are 40 bases in the Western Region. ONLY TWO Bases were nominated for Golden Anchor. There are more than 2,000 Shipmates (Regular and Associate), ONLY EIGHT shipmates were nominated for Silver Anchor Awards. Additionally, TWO BASES were nominated for the Meritorious Base Award, and Twelve Shipmates nominated for Meritorious-Individual Awards. Both Silver Anchor and Meritorious-Individual Awards are open to Associate Members. Let's remember that our Associate Members often step up and contribute to the successful operation and care of our base and our shipmates. Let's give them the recognition they so deeply deserve!

Don't let 2023 slip away without your nominations reaching the respective selection committees. Do so in accordance with the USSVI National Awards Manual.

*Pride Runs Deep!*

*Pete*

Western Region Director



Most of you know by now that Marilyn Senior, our Membership Chairwoman, suffered a bad fall recently, breaking a hip and requiring surgery. She's now receiving treatment in a rehab facility in the South Bay and making good progress toward her recovery. Since many have been asking for details, here's her report on the fall and her current status. Of course, we all wish Marilyn quick healing and send along our very best.—ed.

## A Note from Marilyn

Sunday, March 26, 2023

Hello to all my great Submarine Veteran friends!

I did a really stupid thing. I was using a three-step step stool in our washroom, trying to get down some rubbing alcohol from a high shelf. I'd climbed up, grabbed the alcohol and made it back down to the stool's bottom rung when I lost my footing. That's when I fell on my left side and broke my hip.

I so appreciate all the great thoughts and prayers my submarine guys have given me. I came through the surgical ordeal with flying colors. Before that hip surgery they put in an IV filter to catch any stray blood clots. It was installed near the top of my abdomen through the large vein in my neck. It opens up like an umbrella to catch any loose clots that might be transported to my lungs, heart, or brain. They inserted this on February 19 and my hip surgery was the next day.

I have a titanium rod from my hip to just above my knee; it corrects two of my breaks and another has been left to heal on its own. All I can do is hope everything is going as planned.

While at the hospital my hemoglobin took a dive and my blood pressure was unstable, so I needed five blood transfusions to get all that where it needed to be. I was in the hospital for ten days total.

A very nice young man at the hospital found me a great rehab center in Long Beach. When my hospital stay ended I was taken by ambulance to that rehab facility to receive physical and occupational therapy. I started my therapy at one session per day and have now increased it to two—progress!



I just found out yesterday they're looking to remove the IV filter on May 3rd—essentially another surgery so I'll be back in the hospital for at least a day. Not sure of the details yet, but I do know that our base's Sunshine Girl, Marlene Mahan, is scheduled to have her latest surgery on the same day as mine (at a different hospital).

I have two weddings to attend this year—one in June and one in July. I fully intend to be dancing at both of them. The wonderful thoughts and prayers coming in from my family and my Submarine Veterans have kept my spirits high. Chuck has been helping out so much during my ordeal—visiting twice a day and bringing me his own personal brand of barista coffee. I'm not sure when I'll be leaving this rehab facility, but I really need to get back to my Membership duties, and greatly look forward to it.

Please keep your Sunshine Gal, Marlene, and your Membership Gal in your thoughts and prayers for our upcoming surgeries. Your kind words of encouragement have meant the world to me.

Signing off for now,

*Marilyn*





USS Tennessee (SSBN-734) underway. This is your editor's old buddy Tom Kisler's boat. (U.S. Navy photo.)

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*In memory  
of the  
fifty-two  
submarines  
lost in  
World War II*

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SEALION  
S-36  
S-26  
SHARK I  
PERCH  
S-27  
GRUNION  
S-39  
ARGONAUT  
AMBERJACK  
GRAMPUS  
TRITON  
PICKEREL  
GRENADIER  
RUNNER  
R-12  
GRAYLING  
POMPANO  
CISCO  
S-44  
DORADO  
WAHOO

CORVINA  
SCULPIN  
CAPELIN  
SCORPION  
GRAYBACK  
TROUT  
TULLIBEE  
GUDGEON  
HERRING  
GOLET  
S-28  
ROBALO  
FLIER  
HARDER  
SEAWOLF  
DARTER  
SHARK II  
TANG  
ESCOLAR  
ALBACORE  
GROWLER

SCAMP  
SWORDFISH  
BARBEL  
KETE  
TRIGGER  
SNOOK  
LAGARTO  
BONEFISH  
BULLHEAD

