

DEEP DIVE

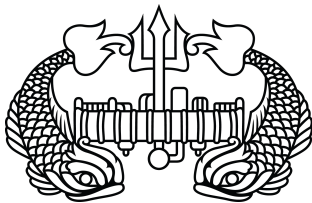


THE NEWSLETTER OF THE DEEP SUBMERGENCE GROUP ASSOCIATION

SUMMER 2026

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A special thanks to Mike Arons, Ron Charest, Fred DeMag, and Gary Spang for sharing their photos, memorabilia, and stories about USS Dolphin with *Deep Dive*!

USS DOLPHIN (AGSS-555):

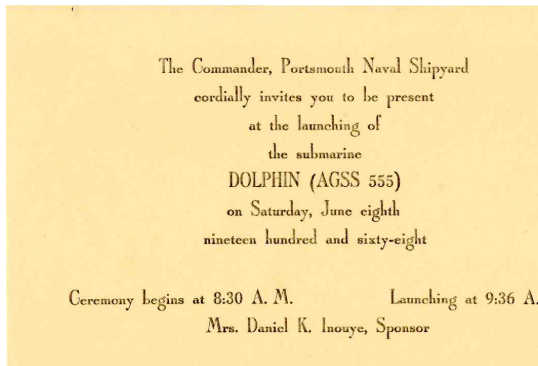
“Everyone was the Cook”

In each *Deep Dive*, we either spotlight a member of our very special Deep Submergence Community or focus on a specific deep submergence unit. In this issue, we feature photos, memorabilia, and stories shared by DSGA members who served on USS Dolphin (AGSS-555).



Dolphin was unique among submarines. She was the last diesel boat built by the Navy and the last to be in service. DBF! Most notably, Dolphin was the deepest diving conventionally powered submarine around with an unclassified test depth of 3,000 feet! Hence her honored place in our deep submergence family! Finally, her unique capabilities and configuration made Dolphin a valuable testbed for many innovative technologies.

The 555's story began on the ways of the Portsmouth Naval Shipyard in Kittery, Maine. Her keel was laid on 9 November 1962 and she was launched on 8 June 1968. Commissioning followed on 17 August of 1968 with Lieutenant Commander J.R. McDonnell in command.



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SUMMER 2026

This newsletter is published quarterly by the Deep Submergence Group Association (DSGA).

Mission of the DSGA

Perpetuate the memory, and provide social and recreational activities for former members, their spouses, widows and first degree relatives, of all deep submergence assets including but not limited to the following: Trieste I, Trieste II DSV-1, Alvin DSV-2, Turtle DSV-3, Sea Cliff DSV-4, Mystic DSRV-1, Avalon DSRV-2, USS Dolphin AGSS-555, NR-1, Unmanned Vehicles Detachment, Submarine Rescue Unit and its successor units, and all who served aboard each unit, as well as those who would otherwise be eligible to wear the U.S. Navy Deep Submergence Insignia per MILPERSMAN 1200 020.

To exchange mementos and memories of each vessel's missions, events and service member's tours of duty.

DSGA Leadership

Chairman. Mark Van der Voort

Vice-Chairman: Eddie Luchs

Secretary: Stan Reinhold

Treasurer: Paul Hitchcock

Membership & Comms – Merle Vogel
Reunions & Newsletter: Will Longman

Further Information

WWW.DeepSubmergenceGrp.org

Facebook: Submersibles Group

From the Chairman....



There are some very special people receiving this newsletter. Pioneers, innovators, can-do technicians and engineers, operators, and even some divers. Brave and resourceful men who challenged nature and the elements to perform a mission, explore unknown areas of the world and further our knowledge. And not just the knowledge of the world - we learned about deep sea operations, the effect on materials, communications, planning, life support, energy production and energy conservation (darn those silver-zinc batteries).

Give yourself a little time to remember who you are and what you have contributed. We all made an effort. We all got to do some work, enjoy it, suffer from it, be surprised, be proud, and experience failures. It is ours to remember.

In less than six months, we gather again, this time near the submarine capital of the world from September 17th to the 20th. The Deep Submergence Group Association (DSGA) will hold a reunion based at the Foxwoods Resort and Casino in Ledyard with events at the Sub Base, the USSVI club house in Groton, the Naval Submarine Museum and Library, and the USS Nautilus.

More information about reunion is in this newsletter and on the DSGA website, where you can find a tab for the registration form for the reunion. www.deepsubmergencegrp.org. I hope to see you there and hear about your adventures, trials and victories.

Pensate Profunde,

Mark Van der Voort
Chairman

Deep Dive Feedback & Submissions

We're soliciting the following from you, our members:

- Feedback on newsletter content selection and quality
- DSGA members have fascinating backgrounds and experience. Please nominate members for a bio write-up! Editor will be happy to interview and author – or write your own!
- Sea stories and photos. Just email the editor!

Editor Will Longman: email will@deepsubmergencegrp.org
SMS text (206)963-1808



2026 Reunion – Now’s the Time to Register!!

Deadline: 7/1/2026! 10 Hotel Rooms Left!

The 2026 DSGA Reunion will be held from **Thursday September 17 – Sunday September 20 in Groton and Mashantucket, Connecticut. With the graying of our community, this could be the last one, shipmates!!**

Reserving Your Hotel Room: Hotel registration is now open! The [Foxwoods Resort and Casino](#) has been selected to host this event. Hotel Registration is on-line only. Please use only this dedicated website to book or manage your reunion hotel room reservations:

<https://book.passkey.com/go/DeepSubmergenceRoomBlock>

Registering For the Reunion: The Reunion Registration fee is \$175 per person. Please write a check for the full amount made out to "**Deep Submergence Association**". Download and print the [online reunion registration form](#). Fill out the form then mail it with the check to: Deep Submergence Association C/O Paul Hitchcock 441 Lowell St., La Mesa, CA 91942

Here are the 2026 Reunion Activities included in your registration fee:

- Welcome Aboard Drinks ‘n Pupus at the USSVI Clubhouse in Groton Thursday evening (shuttles to/from hotel available)
- Breakfast every morning (Friday, Saturday, Sunday) at the Foxwoods Resort venue of your choice
- “Back to Sub Base” Friday. Sub Force briefing by Base PAO, windshield tour of upper & lower base by bus, tour of 1-2 trainers (DC, Fire, or Escape), possible SSN tour, and pizza and beverages at the on base Reunions Pub.
- NR-1 and DSRV Avalon/Mystic private gatherings in two breakout rooms at Foxwoods Friday night.
- Tour of USS Nautilus and on deck Memorial Service for Our Departed Shipmates (Saturday)
- All Hands Banquet with speakers (Marty Klein and Dick Taylor) Saturday evening at Foxwoods

And, [check out these additional activities available at Foxwoods!](#)

Questions? Contact DSGA Reunion Coordinator Will Longman reunioncoordinator@DeepSubmergenceGrp.org.



DSGA TREASURER’S REPORT

Paul Hitchcock reports that the DSGA account balance as of MAR 2026 has grown to \$5,801.73.

U.S. Navy SRDRS Certified for Use!

After successful completion of two dives by its Pressurized Rescue Module (PRM) off San Diego on March 9, 2026, the Navy has certified the [Submarine Rescue Diving and Recompression System \(SRDRS\)](#) as ready for operational use! The PRM is a tethered, remotely operated vehicle that can rescue up to 16 personnel at a time from a distressed submarine. For its two final certification dives, the PRM first dove unmanned to a depth of 2,000 feet. It then surfaced, underwent a review process, and submerged again, this time with passengers, to dive down to the Deep Seat mating fixture (who many will remember was an integral part of DSRV and DSV operational training!).

With this certification, the Navy’s [Undersea Rescue Command \(URC\)](#) is now authorized to support submarine rescue missions globally and join an international network of experts ready to respond when needed. URC is comprised of active and reserve component Sailors as well as civilian contractors.



USS Dolphin (continued from page 1)



COMMANDING OFFICER
Lieutenant Commander
John R. McDonnell

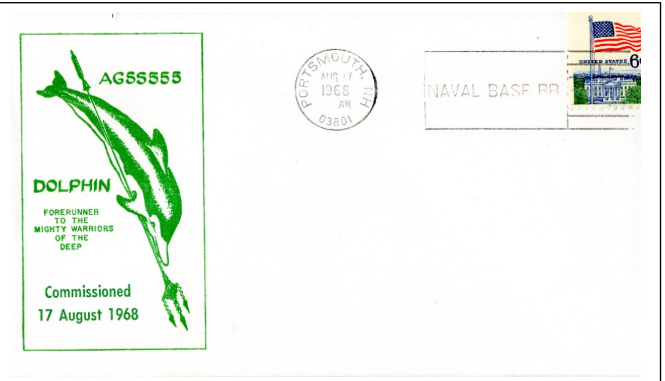
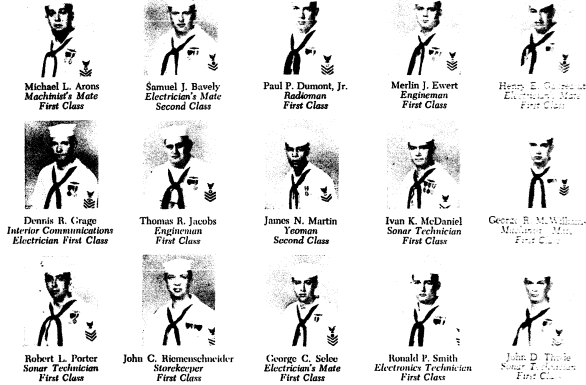
A 1955 graduate of the United States Naval Academy, Lieutenant Commander McDonnell served in USS FREMONT (APA-44) and USS KLEINSMITH (APD-134) before attending Submarine School in 1958. He served in the Pacific Regulus Missile submarines BARBERO (SSG-317) and CROWLER (SSG-577), also in GREENFISH (SS-351), and as Executive Officer of BLUEBACK (SS-581).

He was awarded a Master of Science Degree (Physical Oceanography) at the U. S. Naval Post Graduate School, Monterey, California, and made a member of the Society of SIGMA XI.

Left – upper and lower. The commissioning crew as shown in the USS Dolphin (AGSS-555) Commissioning Pamphlet.

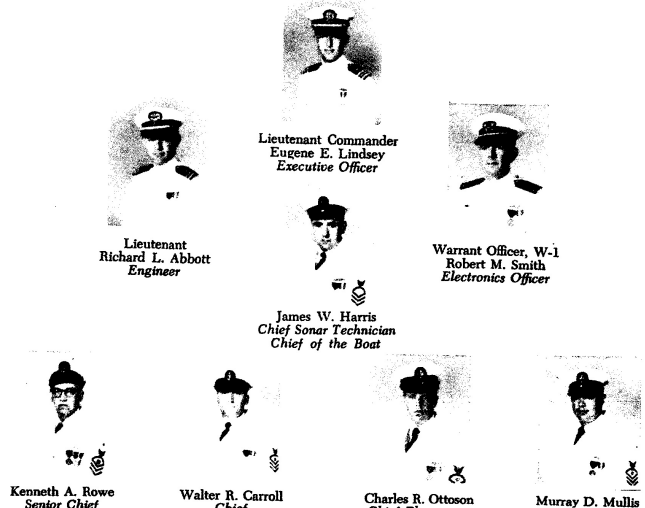
Below – top. Commemorative envelope from Dolphin commissioning.

Below – bottom. Commissioning crewmembers work with Annapolis personnel to test the new boat’s air compressor. Left to right, first three are civilians, then EN1(SS) Tom Jacobs (arms folded), MM1(SS) Michael Arons, MM1(SS) George McWilliams, EN1(SS) John Ewertt, and LT Richard Abbott (Engineer).



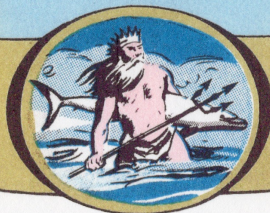
Mike Arons remembers, “The commissioning crew, you’ll notice, had no doctor, cook, or torpedoman. [Yet] we did have a torpedo tube and two torpedoes. The enginemen (John and Tom) took the torpedoman positions. Everyone was the cook.”

Arons went on to receive a Letter of Commendation from CO Dolphin for “alert and timely actions” as Engineman of the Watch on 6 NOV 1968 in “locating and diagnosing a casualty within DOLPHIN’s main motor bearing resulting in saving the ship from a catastrophic failure within the main propulsion system.” (Continued on page 5)



USS Dolphin (continued from page 4)

DEEP DIVE



CERTIFICATE

All ye surface sailors, aviators, fossil-fuelers, landlubbers, and other innocents. Know ye and mark ye that on November 24, 1968 the inner depths of my subaqueous realm were visited by a very large denizen. On careful examination by my mermaids this great black fish was identified as the deep diving experimental submarine.

USS DOLPHIN
AGSS 555

I am informed that among the distinguished on board at that time was

MICHAEL L. ARONS

By this my decree, he is awarded and he shall bear in perpetuity the honored title of Deep Diver and ye shall accord to him all the perquisites and privileges that befit his exalted status.



Victor Davy Jones
Commander
JOSEY Jr.
Commander
United States Navy
Officer

DECREED for Neptune's Rex
John R. McDonnell
John R. MC DONNELL
Lieutenant Commander
United States Navy
Commanding Officer



Left, Quarters on the Pier, NUC, San Diego, possibly 1973. Gary Spang doesn't remember all the names but has this priceless story, "I remember an occasion during morning Quarters on the pier at NUC. Having gotten the days orders, Onorati was about to secure the formation when suddenly a seagull came swooping down the pier from the east, out of the morning sun. He barreled low, staying below the radar, and as this sky-rat reached the line of CPO's, he pulled out of his dive and released his deadly load. The attack was devastating, catching every Chief, all head shots! We all desperately choked back a belly laugh, knowing that would place us squarely in Hell! However, throughout the day, when relating the story again, later on, away from earshot of the CPO's, we had a great time of it."

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USS Dolphin (continued from page 5)



The Laser Communications Project

Ron Charest remembers, "In early 1981, *Dolphin* was the water-side test bed for laser communications between a high-altitude aircraft and a submerged submarine. We were fitted out with the white optical receiver topside (shown in photo to left), and the electronic equipment was loaded onboard and hooked up in the equipment racks in the forward part of the boat. We got underway and transited out to our home test range off San Clemente Island.

"At the preset time, we dove down to the depth specified in the test plans. We were told there was an aircraft circling above us at 40,000 feet altitude. The aircraft started sending modulated laser signals in the blue-green spectrum at our submerged location. And, we were able to receive and successfully decode the signals.

"As we started receiving signals, the scientists running the experiment went wild. Cheering as if they just made a touchdown...Which, to be honest, in their world they just did. This experiment was the first time a submarine ever received a message at our depth.

"We performed several more days of testing, all of which were successful. But, we also discovered the blue-green light spectrum we were using was the same spectrum as bioluminescence – plankton and other sea creatures who generated their own lighting. The scientists called this "background noise", and the next step in our experiments was to gain a feel for mapping this background noise. We came back into port and reconfigured the equipment slightly. Then we headed out for what was for *Dolphin* an extended deployment of about six weeks to Eureka, California, and experiments off Monterey Point.

"Monterey Point actually extends out into the ocean as a deepwater ridge. On the north side, the underwater portion of ridge is a steep drop-off, while on the south side, the ridge tapers down relatively gently back into deep water. This creates "upwellings" of nutrient-rich cold water from the deep ocean currents and supports a feeding ground of plankton and other sea life. Which collectively create underwater blue-green light. We nicknamed this sea life "critters" and spent a couple of weeks in the area measuring the background levels of "critter lights". One of the technicians from the original laser experiments rode with us to operate the equipment and record test data. We later made him an honorary member of our crew.

"Our experiments were considered groundbreaking in submarine communications technology. We subsequently received two news stories in technical magazines on our experiments (see excerpts below)."

Use of Blue-Green Laser Nears For Strategic Communications

Washington—Successful testing of a blue-green laser transmitting messages from an aircraft to a submerged submarine, and development of ground-based xenon-fluoride single pulsed excimer laser is rapidly moving the U.S. toward using blue-green lasers for strategic communications.

Congress and Defense Dept. are giving attention to strategic command, control and communications systems shortcomings, and the Senate added \$20 million to the Fiscal 1982 Defense authorization bill for the blue-green laser technology program to support an expanded research and development effort. This will bring the total in the coming fiscal year to \$42 million. If the House-Senate conference committee agrees and if the money is appropriated.

The additional funding will permit laser research to continue for blue-green laser communications systems in space-basing and ground-basing with in-orbit reflectors. An airborne basing scheme also will be pursued.

Three successful tests have been accomplished in the Defense Advanced Research

Projects Agency blue-green strategic laser communications demonstration off the coast of California (wast May 18, p. 15). Information was successfully transmitted in flight with a blue-green laser beam that was propagated from a Rockwell International T-39 Sabreliner.

The receiver for the blue-green laser, which has the capability to penetrate the ocean for reception by submarines, is mounted on the USS *Dolphin*. In the tests, a GTE Sylvania receiver with a Lockheed filter was used to obtain messages from the GTE Sylvania 1-w. pulsed laser, which uses a double neodymium YAG illuminator at 0.53 micron. A crystal is used to obtain high efficiency when passing the laser beam from infrared wavelength to blue-green conversion.

The blue-green laser development program is entangled in the Navy's effort to halt the ELF (extremely low frequency) strategic communications system deployment and to procure instead a number of ECX aircraft—modified Boeing KC-135s—to replace Lockheed C-130 Tacamo aircraft used to com-

municate with submerged ballistic missile submarines.

The blue-green laser that has been successfully demonstrated in transmissions to the submerged submarine is not optimized for high data rates. It operates in the demonstration program at moderate data rates over limited areas of the ocean, according to Pentagon officials.

DARPA has Avco Everett Research Laboratory under contract to develop a xenon-fluoride rare gas halogen excimer laser. The ultraviolet beam from the xenon-fluoride laser will be Raman-shifted to the blue-green wavelength, with beam propagation occurring next year. This is the first step in a ground-based blue-green system designed to transmit its beam to a space-based relay mirror to communicate with submarines on the other side of the world.

The Avco xenon-fluoride laser is pumped by electron beams on opposing sides of the laser cavity. A pulse-forming network powers the electron beams. The Avco excimer laser already has exceeded design goals by 20% in the past few weeks, according to DARPA officials. The ultraviolet device produces about 10 times the energy required

Lasergram

It sounds like a Buck Rogers fantasy. But the Pentagon is seriously working on a way to communicate with the Navy's nuclear-armed submarines using laser beams from space.

Because water is notoriously opaque to electromagnetic signals, contacting submarines has always been difficult. Today's subs must surface, or rise close to the surface, to communicate with land-based commanders. But two portions of the electromagnetic spectrum can penetrate water: extremely low frequency radio waves and the blue-green rays of visible light.

For more than a decade, the Navy has been trying to develop a radio wave system using a gigantic broadcast antenna. One plan would have buried 6,000 miles of antenna wire through 40 percent of the state of Wisconsin. Citizens and local officials there, and in other states that the Navy has considered, have successfully stalled the project. Now the Reagan administration is pushing a much smaller version.

The Pentagon, however, is interested in space-based laser communications. Douglas H. Tanimoto of the Defense

Advanced Research Project Agency envisions satellites orbiting 22,300 miles above the Earth, beaming laser light down through air and seawater. Laser pulses would carry coded messages just as pulses of radio waves transmit Morse code. Light from the sun and even bioluminescent sea creatures may interfere with blue-green signals from space. But by finely tuning transmitters and receivers to 4,700 angstroms, the blue-green wavelength that best cuts through water, the static can be reduced. Its proponents say that laser communications will need relatively little power. "A strong searchlight," says Tanimoto, "that's the kind of power we're talking about."

The defense research agency is considering two basic designs. In one, the laser would be carried on the satellite itself. Its beam, diffused by mirrors and lenses, would cover thousands of square miles so an enemy couldn't locate the submarines. In the second, a ground-based beam would be bounced off a satellite-borne mirror and reflected down to the sea.

Last spring, the Navy successfully

Far left. Aviation Week and Space and Technology May 1981.

Near left. Science Magazine October 1981.

62 Aviation Week & Space Technology, May 25, 1981

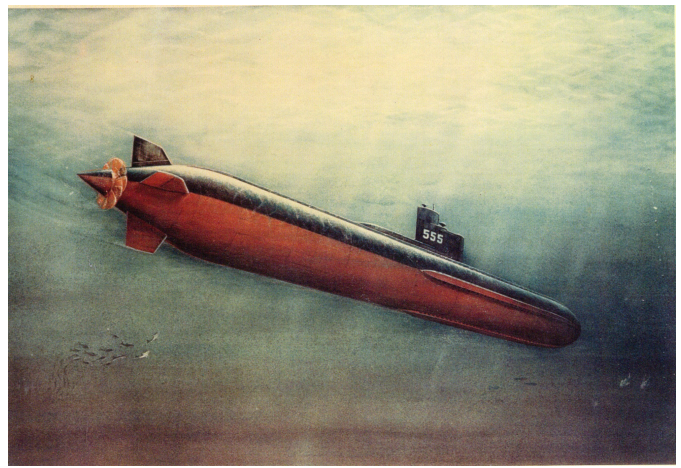
(Continued on page 7)



USS Dolphin (continued from page 6)

Ron Spang recalls, "It was 1972, I think, we were operating with the airdales during the day, charging batteries at night, off San Fran. A violent storm blew in. I was on lookout with CPO Dexter Haight. Dolphin was plunging into massive waves that would envelope the sail for several long seconds, as we held our breath and counted on our safety straps to keep us secure. The hatch was shut, so we were on our own up there. We obviously were soaked and what could we do? Laugh! We laughed until our jaws hurt. I will always remember that night.

"One time, I don't remember exactly when, maybe 1972 or 1973, while entering San Fran, we dove the boat while transiting under the Golden Gate Bridge. Just a quick pop the cork and right back up!"



Left. Dolphin Goat Locker and Boot Chiefs, 1987. COB STCM(SS) Wayne Stelges, 2nd row and 2nd in from right. STSC(SS) Greg Foster to his left. Also, HMC(SS) Larry Doc Bailey, QMC(SS) Joe Reed, ICCS(SS) Pete Petersen. Boot Chiefs in front: Fred DeMag, EMC (SS) Russ Magnuss, MSC(SS/DV) Mark Martin and one other.



End of the Line. Former crewmen at decommissioning on 15 JAN 2007: (Back L to R) Charles Ottoson, George Selee. (Front L to R): Mike Arons, Henry Gadreault, Ronald Smith, and Richard Abbott.

