

American Submariners Inc.
4370 Twain Ave.
San Diego, CA 92120-3404



The Silent Sentinel

February 2016



Our Creed and Purpose

To perpetuate the memory of our shipmates who gave their lives in the pursuit of their 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.

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be strengthened by camaraderie. We support a strong U.S. Submarine Force.

The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.



USS Louisiana SSBN743

U.S. Submarine Veterans San Diego Base

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Chaplain
Position is Open

The Silent Sentinel via Email

To all of my Shipmates and families who currently receive our Great newsletter via the mail who would like it sent via email or continue to receive it via mail, please fill out the form and mail it to the base or myself. We are trying to cut the cost of the newsletter down from \$3700 to about \$1900 a year. By receiving the Silent Sentinel via email will cut down the printing and mailing cost. The other plus to receiving it via email is you can save it on your computer and not have the paper lying around the house.

A subscription to the Silent Sentinel newsletter will be available to surviving family members via internet email, at no charge, upon notification of the Membership Chairman. If a printed hard-copy is preferred, via US Post Office delivery, an annual donation of \$5.00 will be requested to cover costs.

NAME: _____

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Would like the SILENT SENTINEL emailed: YES _____ NO _____

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DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN ONE WEEK AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE

February 2016 MEETING

Our monthly meeting is held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next meeting will be on February 9th. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

*Check us out on the World Wide Web
www.ussvisandiego.org*

BINNACLE LIST

Benny Williams

Submarine Losses in February

Originally Compiled by C J Glassford



USS Barbel (SS-316) Lost on Feb 4, 1945 with the loss of 81 officers and men on her 4th war patrol. Based on Japanese records, she was bombed near the southern entrance to the Palawan Passage. The day before, she reported she survived 3 depth charge attacks.

USS Shark I (SS-174) Lost on Feb 11, 1942 with the loss of 59 officers and men on her 1st war patrol. Shark was the 1st US submarine sunk by enemy surface craft in the Pacific. She was most likely sunk by depth charges.

USS Amberjack (SS-219) Lost on Feb 16, 1943 with the loss of 72 officers and men on her 3rd war patrol. Off Rabaul, she was attacked by a Japanese patrol plane, attacked by a torpedo boat and then depth charged by a subchaser. One additional man was killed earlier on the last patrol.

USS Grayback (SS-208) Lost on Feb 26, 1944 with the loss of 80 officers and men on her 10th war patrol. She appears to have been caught on the surface in the East China Sea by a Japanese carrier plane whose bombs made a direct hit. During this patrol she sank 4 ships totaling 21,594 tons and was tied for 11th in the number of ships sunk.

USS Trout (SS-202) Lost on Feb 29, 1944 with the loss of 81 officers and men on her 11th war patrol. She was sunk by escorts in the middle of the Philippines Basin after sinking a passenger-cargoman and damaging another in a convoy. She carried out several notable special missions, including carrying over two tons of gold bullion out of Corregidor in February 1942.



San Diego Base, United States Submarine Veterans Inc.

Minutes of Meeting - 12 January 2016

1900 - Base Commander Bob Bissonnette called the meeting to order

Conducted Opening Exercises - Pledge of Allegiance lead by Chief of the Boat Fred Fomby.

Base Commander Bob Bissonnette lead the prayer

Base Treasurer David Ball conducted Tolling of the Boats for boats lost in the month of January.

Base Commander Bob Bissonnette recognized Past Commanders, dignitaries and guests.

Secretary Jack Kane announced 23 members present.

Treasurer David Ball gave his report. Checking Balance is \$5197.66, Savings Balance is \$15,243.83. A copy of the Treasurer's Report will be filed with these minutes.

The minutes of the 8 December 2015 meeting were approved as published in the Sentinel. The Muster list for 8 December has been located and the list will be filed with those minutes.

Base Commander Called For Committee Reports

Base Commander Bob Bissonnette reported the following on the Binnacle List: Benny Williams, Phill Richeson and Jack Ferguson.

Parade Chair Joel Eikam reported Parades scheduled for January or February. The proposed 2016 Parade schedule will be presented at the February meeting.

Membership Chair Ray Febrache announced 277 members. One membership cards is sent to a member first joins and a yearly sticker is provided for annual members. The National website should up and running in February. The new website will accept credit card payments for National Dues.

Scholarship Chairman Paul Hitchcock reminded everyone that Scholarship applications are due by 15 April 2016. Applications can be downloaded from the USSVI San Diego website. Paul announced that the Navy Commissary has new scholarship program. A link to the Commissary Scholarship program will be added to the San Diego Base Website.

In Phil's absence, Fred Fomby will have Calendars for sale at the break.

Base Vice Commander Warren Branges announced the next Breakfast is 31 January 2016. Volunteers are need to help cook and serve. If you don't have a Food Handlers Certificate see the Base Commander about the class scheduled for 0900, Saturday, 16 January 2016.

Base Vice Commander Warren Branges announced the next ALL FLAGS Day will be Monday, April 11th. One monument suffered a casualty and is out for repair.

Float Committee reported the float is in hibernation until spring.

Base Commander Bob Bissonnette reported that we have recognized over 40 Eagle Scouts since program inception. Due to Trademark infringements the SUBVET Eagle Scout Certificate and patch are being re-designed. We will present Eagle Scouts a Certificate and miniature dolphins until new patches are available.

1920 - Base Commander called for a break.

1931 - Base Commander called the meeting back to order. 50/50 drawing was held. \$55 was raised for the Base

1958 - Unfinished Business

Base Commander Bob Bissonnette reported that the Christmas Party was a success again this year. Attendance was slightly lower than previous years. The food was outstanding. Everyone in attendance received a door-prize.

Base Commander reminded everyone that dues were due on 31 December. If you haven't paid for 2015 please see Ray and pay up.

Base Treasurer David Ball reported the budget would be ready for presentation and to be put to a vote at the February meeting.

A Food Handling Class will be held at 0900, Saturday, 16 January 2016, at the VFW Hall, on Twain Avenue in San Diego. See the Base Commander if you want to attend.

Base Commander Bob Bissonnette reported that talks with Scamp Base concerning Memorial Day Observance at the Roncador Memorial are ongoing. Base Vice Commander Warren Branges will finalize the particulars with Scamp Base. Some volunteers may be needed to help with the ceremony.

Shipmate David Kauppinen reported that we have proceeds of \$200 from sale of memorabilia. Some of the memorabilia was donated by the family of Grant Humphries and some was plaques, etc. that formerly hung on the wall at San Diego VFW. David made a motion that 50% to the funds from sale of memorabilia donated by Grant Humphries family be earmarked for the Scholarship Fund. The motion passed. David will advise Grant's daughter of the distribution of these proceeds.

Shipmate Mike Hyman and Treasurer David Ball reported that we have setup both E-Bay and PayPal accounts to be able to sell memorabilia.

Base Commander Bob Bissonnette is still looking for a volunteer to fill the Vacant Chaplain's Post. Base Treasurer David Ball will act as Chaplain in the interim.

The issue of sponsoring two WWII (+1) at the Submarine Birthday Ball was tabled until next meeting. Base Commander will talk with Subron Eleven about a reduced rate for the individuals we sponsor.

2004 - New Business

No New Business

2005 – Good of the Order

Submarine History on the back table.

Flyer for Roundup in Laughlin and National Convention in Reno on back table

Following events are coming up - Old Timers Luncheon

Submarine Birthday Ball (\$65 per ticket), WWII SUBVET George Kinnison will be Guest of Honor

Treasurer David Ball announced that Captain MacVean will be giving a presentation at Point Loma Assembly. 3035 Talbot Street, San Diego, CA from 1730 til 1900 on 14 January. RSVP to their website. Admission is \$10 at the door.

COB Fred Fomby told a couple groaners.

Shipmate David Kauppinen gave a short presentation on "Burial at Sea" procedures.

Shipmate Ray Febrache asked if anyone knew a vendor or business that could refurbish a shadow box.

Shipmate Tom Polen relayed JJ Lynch's greetings to the group. JJ could not be at the meeting as is in Chico CA today.

Shipmate Ed Farley told a story of FA Ernie Plantz' time on USS Perch, his time as a POW and his subsequent Navy Service.

Shipmate Mike Hyman reported that Shipmate Joe Torske has an electric scooter available for donation to a Submarine Veteran. If you know someone who needs this type of transportation let Mike know.

The Meeting was adjourned at 2020

Jack Kane, Secretary

/s/ Jack E. Kane

Sailing List for 12 January 2016

*Fred Fomby
Joel Eikam
Bob Bissonnette
David Ball
David Kaupinnen
Rocky Rockers
Ed Welch
Tom Polen
Matt Baumann
Mert Weltzien
Chris Stafford
Warren Branges
Mike Hyman
Peter Lary
Jim Potts
Bob Farrell
Dennis McCreight
Paul Hitchcock
Dennis Mortensen
James Pope
Ray Febrache
Ron Gorence
Ed Farley
Bud Rollison
Jack Kane*

Current News

*“Plataginet, I will; and like thee, Nero,
Play on the lute, beholding the towns burn” (Henry VI, Shakespeare)*

Guarded From Terrorists By Royal Navy Sub And 50 Commandos...The UK Ghost Ships With Enough Nuclear Fuel For 80 Missiles

Mark Nicol, Daily Mail [UK], Feb 6

Two top secret British ‘ghost ships’ carrying enough plutonium for a huge nuclear arsenal wend their way through the world’s oceans –guarded against terrorists by 50 commandos.

It may sound like a tantalising target for a villain in a James Bond film, but what is potentially the most dangerous secret mission in history is deadly reality.

Two vast container ships – the Pacific Heron and the Pacific Egret – left Barrow-in-Furness, Cumbria, last month on the first leg of their incredible journey.

Their mission is to sail to Japan to collect 331kg of plutonium – enough to make 80 nuclear warheads – which was leased by the UK to a Japanese research facility.

The ships are almost certainly shadowed by a Royal Navy submarine and surface vessels and are heavily armed with 20mm cannon.

They are sailing across the Atlantic before passing through the Panama Canal and into the Pacific on their way to Japan.

Their ultimate destination is a US nuclear storage facility in South Carolina, and the return journey to the American eastern seaboard from East Asia would normally again be made via the Panama Canal.

But this would leave the vessels vulnerable to attack – and their terrifying radioactive cargo could in theory devastate much of Central America.

So instead, they are likely to take the long and dangerous journey around the storm-lashed Cape Horn at the tip of South America, one of the most hazardous shipping routes in the world.

The Heron and the Egret, which each weigh about 6,700 tons when fully loaded, belong to the UK’s Nuclear Decommissioning Authority (NDA). It is expected that each ship will be guarded by as many as 25 commandos.

Nuclear expert John Large told The Mail on Sunday last night: ‘The cargo is invaluable and part of a secret trade in fissile materials between the likes of the UK and US. The biggest risk is a fire or an external missile strike.

‘This is bomb-grade nuclear material and a terror group or rogue state would want to intercept it.’

The ships are operated by International Nuclear Services, an NDA subsidiary. A spokesman said: ‘I can confirm that the specialist nuclear cargo vessels are currently taking part in a voyage but, in accordance with normal procedures, I can’t disclose any operational details for security reasons.

‘The transportation of nuclear materials is a tried and tested practice that’s been in place for decades without any major incidents. The UK is a world leader in this area.’

Report: Russian Sub Activity Returns To Cold War Levels

Thomas Gibbons-Neff, CHECKPOINT WASHINGTON POST, Feb 4

The Russian submarine fleet has returned to the North Atlantic with such gusto that NATO sub commanders are reporting “more activity from Russian submarines than we’ve seen since the days of the Cold War,” according to a top NATO admiral.

Royal Navy Vice Adm. Clive Johnstone, speaking aboard a Spanish frigate at the end of last month, told the defense analysis group IHS Janes that the alliance is also seeing “a level of Russian capability that we haven’t seen before.”

Russia's submarine program froze as funds dried up following the collapse of the Soviet Union. Recently, however, Russia has commissioned two new types of subs, including a nuclear-powered attack variant and a nuclear-powered ballistic missile class. According to Janes, they have also started modernizing older submarines as well.

Johnstone said that with these upgrades and newer boats, Russia is "freer to operate" beneath the waves, as the new technology and an increase in spending has greatly increased Russia's capabilities. Johnstone also added that Russian submarine crews are more professional in years past, something that has also raised concern within the alliance.

While Russia's revamped sub fleet is certainly a concern for the west, what worries Johnstone is the lack of openness about Russia's strategic and operational objectives. The admiral added that the Russians have yet to invite a NATO representative to one of their exercises in the last two years – something that NATO does regularly.

"I'm not saying we want to be part of everything and I'm not saying that Russians are the 'Great Bear' or that they're the enemy, but what we've got to do in this very complicated maritime environment is take out the uncertainty and reinforce the certainty," Johnstone said.

The admiral added that while Russian activity off NATO ports and in NATO water space was confounding, "it's hard not to draw a certain set of conclusions."

Recently, the United States has monitored Russian submarines and surface ships patrolling around under sea fiber optic cables. While the Russians' intentions are unclear, tapping underwater communication lines is an old Cold War tactic revolutionized by the U.S. Navy in a series of spy missions that began in 1970. In November, the United Kingdom had to request additional support from France to help detect what they thought was a Russian submarine spying off the coast of Scotland on one of England's new nuclear missile systems.

Russia's renewed sub activity has altered how NATO now approaches its maritime capabilities, according to Johnstone.

"You're starting to see nations who in the past have prioritized to have submarines in the Gulf or the eastern Mediterranean now looking to reinvest back into capability in the Atlantic," Johnstone said.

Even though Russia sub activity has skyrocketed, Russia has only just started introducing new boats into its fleet and most NATO countries are operating their fleets at half of what they were during the Cold War. The U.S. Navy operates a number of sub variants, including the newer nuclear-powered fast-attack Virginia Class.

Navy Should Consider Second Carrier, More Subs for Western Pacific, Analyst Says

Richard R. Burgess, *Seapower*, Feb 3

ARLINGTON, Va. — A defense analyst told the Senate Armed Services Committee (SASC) the nation could put more teeth into its rebalance to the Asia-Pacific by considering stationing a second carrier strike group in the region and increasing the number of attack submarines forward deployed in the area.

Dr. Michael J. Green, senior vice president for Asia and Japan Chair at the Center for Strategic and International Studies, a Washington think tank, agreed with SASC Chairman Sen. John McCain, R-Ariz., who said that "we should take a hard look at the tradeoffs of stationing a second carrier in the [Western] Pacific."

Testifying Feb. 3 before the SASC, Green said the Navy should study deployment of a second carrier and suggested that the commissioning of the next carrier, Gerald R. Ford, might be an opportunity to add it to the forward-deployed naval forces in Japan. He pointed out there would need to be additional basing for a second carrier air wing, and that possibly Marine Corps Air Station Iwakuni, Japan, could be expanded to accommodate it.

Green said that when the Navy first stationed a nuclear-powered aircraft carrier — USS George Washington — in Japan "there was not a lot of pushback in the Japanese press."

He also recommended that the Navy station additional attack submarines in the Western Pacific, a move seconded by retired Marine Lt. Gen. Thomas L. Conant, former deputy commander, U.S. Pacific Command, who testified along with Green.

"We just don't need to restrict ourselves to Japan," Conant said of basing a second carrier. "We could look at putting it someplace else," listing Guam and Australia as possibilities.

"That submarine force is very capable and if I had a dollar I would spend it on the submarine force," Conant said. "Nobody can match our submarine crews."

Conant specifically noted value of the “special collection missions” performed by the submarines.

“For a credible deterrent, submarines are at the top of the list,” Green said.

Green opened his remarks with the assertion that the rebalance toward Asia and the Pacific needed more intense strategic conceptualization and resourcing.

He said defense budget constraints, a growing anti-access/area denial threat, the increasing Chinese tolerance for risk and the agitations by North Korea as the main elements of instability in the Asia-Pacific region.

Green recommended that the United States align its Asian military strategy with other allies and partners, including moving to a federated defense; expanding regional presence; creating a new joint task force for the Western Pacific with a standing command-and-control structure with allies; and putting more innovative technologies in the region, such as the electromagnetic railgun, for ballistic missile defense.

Green also said the “friction we have in the South China Sea is not going away, whether the Chinese economy slows down or not.”

Opening the hearing, McCain noted that the Chinese were “not done with their land reclamation efforts in the South China Sea,” with 3,200 acres built up into usable land. However, he said the United States would continue to “fly, sail and operate wherever international law allows.”

“We need more of these freedom-of-navigation operations,” Green said.

Russia's Submarine Rescue Vehicle Enters Service

Staff, The Maritime Executive, Feb 2

Bester-1, Russia’s deepwater search and rescue vehicle, has been put into service in the Russian Navy’s Pacific Fleet.

The vehicle can operate at depths of 700 meters and is fitted with unique control systems and cameras that enable it to couple to the rescue exit of a submarine. It has a docking chamber which allows link-up with submarines that are heeling up to 45 degrees.

The Bester-1 has been delivered on board the ship Alagez, reinforcing the 79th rescue detachment of the Pacific Fleet. Its crew consists of six, specially-trained members.

The Bester-1 was built by Admiralty Shipyards in St. Petersburg, and it underwent trials last year.

'Mini Red Octobers: 'Russia to Push on With Stealth Submarine Program

Franz-Stefan Gady, The Diplomat, Feb 2

The Russian Navy will not stop the construction of Project 677 Lada-class diesel-electric attack submarines, the Russian Navy Deputy Commander-in-Chief, Vice-Admiral Alexander Fedotenkov, told TASS in January.

“Following the results of the operational testing of the Kronstadt and Velikiye Luki submarines, the Navy will determine its further quantitative need for the Project 677 Lada. The termination of these submarines’ construction is not being considered at present,” the vice-admiral said.

He denied media reports that the Russian Navy will focus on the fifth-generation diesel-electric attack submarine Kalina project at the expense of the Lada-class.

The Russian Navy initially planned to field three Lada-class submarines by 2018. However, delays in the program have so far only lead to the service entry of the lead vessel of the class, the St. Petersburg in 2010, which has been undergoing operational evaluation ever since.

The St. Petersburg was already laid down in 1997 at the Admiralty Shipyard in St. Petersburg. Construction of its sister ships, the Kronstadt and Velikiy Luki began in 2005 and 2006 respectively, yet production of the two Lada-class subs was put on halt for some time and then restarted in 2013.

Russian Navy sources recently interviewed by IHS Jane's Defense Weekly have said that the likely induction date will be 2019 "due account taken of the shortcomings revealed during the Northern Fleet's operation of the Project 677 lead ship, St Petersburg."

Initially, the new attack subs were slated to receive an air-independent propulsion system (AIP), but the Rubin Design Bureau, the main developer of submarines in Russia, has been struggling with the technology.

According to the head of the Russian Navy's shipbuilding department, Captain (1st Rank) Vladimir Tryapichnikov, a new AIP system will not be ready until the early 2020s:

We presume that an AIP will be developed in the near future, and the Rubin Design Bureau has started such work recently. They have laid a good foundation ... Rubin's designers keep on working hard [to develop the AIP], and we believe it will be developed in 2021-2022.

As I report in this month's The Diplomat Magazine, Delays in the construction of Lada-class submarines, recently led to the recent announcement that six Improved Kilo-class submarines will be built for the Pacific Fleet. These new vessels will most likely be fitted with Klub (Kalibr) submarine-launched anti-ship and land attack cruise missiles.

The Lada-class purportedly has a very low acoustic signature due a special anti-sonar coating called "Molniya" ("Lightning") with some defense analysts referring to it as the 'Mini-Red October class.' (The sub displaces 2,700 metric tons when submerged and only needs a crew of 38 sailors to operate.)

The submarine is also equipped with an advanced sonar system, and features six torpedo tubes and specialized vertical missile silos for anti-ship and land attack cruise missiles. Its principal mission will be coastal defense against enemy submarines and surface vessels, surveillance and reconnaissance as well as intelligence gathering missions.

Navy Successfully Tests Common Control System on Unmanned Underwater Vehicle

Megan Eckstein, U.S. NAVAL INSTITUTE NEWS, Jan 29

WASHINGTON, D.C. – The director of unmanned warfare systems (OPNAV N99) will keep a particularly close eye on the Common Control System as it continues through development, after a demonstration last month proved that the system that was first tested on an unmanned air vehicle could also control an underwater vehicle, the director said Friday.

Rear Adm. Robert Girrier said at an event co-hosted by the U.S. Naval Institute and Center for Strategic and International Studies that the Common Control System will be important to the Navy's future portfolio of unmanned vehicles – in addition to avoiding the cost of developing unique command and control capabilities for each new unmanned system that comes along, CCS will provide a common user interface and the ability to match up new combinations of unmanned vehicles and payloads.

N99's role for most unmanned technologies will be to take requirements from around the fleet, find technologies to guide through the precarious advanced development and prototyping phase, and then turn the successful technologies over to resource sponsors – the the surface warfare directorate or air warfare directorate, for example – to buy and field.

With the Common Control System, however, Girrier will keep the system under N99 control.

"Of all the systems that are out there and programs that I'll be interested in getting involved in ... the traditional resource sponsors will have those – with the exception of the Common Control System," Girrier said.

"That one we're going to keep because it is pervasive to unmanned systems writ large and it's that important. So we will carefully hold that and pay attention to that and ensure that it's populated with undersea, surface and air" unmanned systems.

The Common Control System is a software and user interface system that would provide the brains behind future Navy unmanned vehicles, regardless of the domain the vehicle operates in or the payloads it carries to accomplish its mission. Once fielded, it will provide common vehicle management, mission planning and mission management capabilities for all the vehicles in the Navy's unmanned portfolio.

The Navy tested the system on a surrogate large diameter unmanned underwater vehicle (LDUUV) last month at the Naval Undersea Warfare Center (NUWC) Keyport in Puget Sound, Wash. The Dec. 7-11 test showed that operators could use the control system to plan and execute several surveillance and intelligence preparation missions, according to a news release from Naval Air Systems Command.

The control system sent pre-planned missions to the LDUUV's autonomous controller via a radio link and displayed actual vehicle status information to the operators during the test, according to the NAVAIR statement. The vehicle was able to maneuver to the target areas and collect imagery.

"These tests proved that operators could use CCS from a single global operations center to plan, command, and monitor UUVs on missions located anywhere in the world," Capt. Ralph Lee, who oversees the Navy's CCS program at Patuxent River, Md., said in the statement.

"This event also showed us that CCS is adaptable from the [unmanned aerial vehicle] to [unmanned undersea vehicle] missions."

The NAVAIR statement notes that CCS will first be deployed on air vehicles and will reduce risk and cost as the Navy develops additional unmanned vehicles in the future.

Girrier said Friday that it was important to keep in mind how the Navy's unmanned vehicles will ultimately be used. Though some may serve a Navy-only purpose – sending a UUV out for surveillance or mapping ahead of an attack submarine, for example – other systems may need to be interoperable with Marine Corps systems during blue-green operations. And some unmanned systems may need to interface with Army or Air Force assets, with foreign partners' systems or even with equipment from civilian government agencies. As CCS development moves forward, Girrier said he will put an emphasis on making the system open and interoperable to support any kind of mission, in any domain, with any potential partner.

German Submarine Lost In Action Over A Century Ago Found In The North Sea

Alexandru Micu, ZME Science, Jan 25

A North Sea wreck has been identified as a German world war one U-boat, announced ScottishPower Renewables. The vessel found its resting place 90 kilometers (56 miles) off the Norfolk Coast.

SPR workers first detected the wreck while surveying the area for a windfarm development back in 2012, submerged under 30m (98 ft) of water.

A team of Dutch Navy divers was sent to investigate the site, as it was believed the wreck might be Netherland's last missing submarine from world war two, lost in 1940. However, after several dives it was eventually found to be a much earlier German submarine. A Lamlash North Sea Diving team managed to get some clear footage of the U-boat, allowing accurate identification as U-31.

The Imperial German Navy commissioned 11 Type U-31 submarines between 1912 and 1915. U-31 was the first of 11 Type U-31 submarines (the first one named U-31 all through to U-41) to be commissioned by the Imperial German Navy between 1912 and 1915. Three of them surrendered and eight of them sunk by the end of the war.

But up to now no one knew where two of the ships were, including U-31, said marine archaeologists Mark Dunkley.

U-31 left port from Wilhelmshaven and last transmitted on the 13th of January 1915. It's believed the ship hit a mine and sank with all four officers and 31-man crew. And although scans in the last two years have found more than 60 wrecks in this area, this submarine was "entirely unexpected", an SPR spokesperson said.

"After being on the seabed for over a century, the submarine appears to be in a remarkable condition with the conning tower present and the bows partially buried," Mr Dunkley said.

"The discovery serves as a poignant reminder of all those lost at sea, on land and in the air during the first world war," he added.

As an official military maritime grave, the wreck of U-31 will remain in its final resting place. SPR has given assurances that if the development of the area goes through, U-31 will remain undisturbed.

"It's heartening to know that the discovery will provide closure to relatives and descendants of the submariners lost who may have always wondered what had happened to their loved ones," Jordan concluded.

Russia Vs. America: The Race For Underwater Spy Drones

Dave Majumdar, The National Interest, Jan 21

Russia is developing a family of unmanned surface and underwater vehicles, a high-ranking official in that country's navy said this week. While the U.S. Navy has been developing naval drones for more than a decade, this is the first indication that Moscow is working on similar capabilities.

"Work will be continued in 2016 to develop unmanned boats that can be based both on ships and on the shore," Vice Adm. Alexander Fedotenkov, deputy commander-in-chief of the Russian Navy told the TASS news agency on Jan. 21.

The Russian developments include autonomous long-range reconnaissance vehicles. But it's not clear if the Russian navy is developing an autonomous underwater vehicle or a surface vessel. It is possible that the Russians are developing both – but a long endurance unmanned underwater vehicle would make more sense from a military standpoint for its ability to avoid detection. Fedotenkov said that Russia is also working on developing tethered unmanned underwater vehicles (UUV) that could undertake complex operations at great depths.

While both the U.S. Navy and Russia are developing naval drones, the technology is in its infancy. The U.S. Navy is relying on commercially available drones until the technology matures. USS North Dakota (SSN-784) – a Virginia-class nuclear attack submarine – launched and recovered a Norwegian-built Remus 600 while submerged for the first time during the summer of 2015. "This was something they thought we could go do. We went out, and we proved that," North Dakota's commanding officer, Capt. Douglas Gordon, said at the time.

While the technology is still in the early years, UUVs show great promise for the future. A few months ago I asked naval expert Bryan Clarke, a senior fellow at the Center for Strategic and Budgetary Assessments, what the potential applications are for such systems might be. This what he e-mailed me:

"The Department of Defense (DoD) has pursued a large variety of UUVs during the past decade, mostly for mine clearing and ocean surveillance and launched from surface ships or shore. These applications did not require particular sizes of UUVs. As UUVs become more integrated with submarines as part of a family of systems, the Navy should focus on UUVs that can use the submarine's ocean interfaces and conduct the most likely UUV missions. Specifically, the Navy should pursue the following UUV types as part of its undersea family of systems:

"Micro UUVs (about 6" or less in diameter) are inexpensive and improving in their endurance and on-board power. They could be procured and deployed in large numbers or swarms as weapons, to survey the ocean floor, or interfere with enemy ASW operations.

"Small UUVs (about 12" in diameter) are commonly used today for surveys and minehunting, such as the Navy's Mk-18 UUV. They will be able to take on other surveillance or attack missions as part of the Fleet Modular Autonomous Undersea Vehicle (FMAUV) program and operate from submarines as well as surface ships and aircraft.

"Medium UUVs (about 21" in diameter) are the size of the Navy's Mk-48 submarine-launched torpedo. And while the Navy is not operating UUVs of this size today, the Modular Heavyweight Undersea Vehicle (MHUV) program plans to make the torpedo of the future able to be configured to conduct a range of missions, from mining and long-range attack to electronic warfare.

"Large UUVs (about 80" in diameter) such as the Navy's Large Displacement UUV (LDUUV) are designed to use the planned Virginia Payload Module (VPM) tubes in Block V Virginia-class submarines. The LDUUV will provide a way for submarines to increase their sensor reach, expand their payload capacity, or deliver payloads into areas that are too risky or constrained for the submarine to reach.

"Extra-Large UUVs (More than 80" in diameter) would be designed to launch from shore or very large ships with well decks or "moon pools." They could be used for long-endurance surveillance missions or primarily as "trucks" to deliver other payloads and UUVs. Experience with LDUUV will help inform concepts for using XLUUV."

Essentially – once perfected – unmanned underwater vehicles could revolutionize naval warfare. But only time will tell.

