



VP ASSOCIATION NEWSLETTER

AN ASSOCIATION OF VETERANS WHO SERVED WITH THE NAVAL AIR RESERVE PATROL SQUADRONS BASED AT NAS SQUANTUM MA, NAS SOUTH WEYMOUTH MA, AND NAS BRUNSWICK ME.

NOTE, CURRENT AND FORMER MEMBERS OF ANY U.S. NAVY PATROL SQUADRON ARE WELCOME TO JOIN US!

ISSUE 80

[HTTP://WWW.VPASSOCIATION.ORG](http://www.vpassociation.org)

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Welcome to another edition of the VP Association newsletter. Until further notice please direct all VP Association-related inquiries or correspondence to Marc Frattasio, PO Box 30, Pembroke MA 02339, 781-294-4491, marc_frattasio@yahoo.com.

RECCO:



ABOVE: P2V-5F and P2V-6Ms at NAS South Weymouth in 1958. These were the first Neptunes assigned to the reserve aircraft pool on the base and were flown by VP-911, VP-912, VP-913, and VP-914. Got something similar to share? Contact Marc Frattasio at marc_frattasio@yahoo.com.

FINAL FLIGHTS:

We lost four VP-92 shipmates recently. Russ Monaghan and Chip Rowan were AMEs, Paul "Lumpy" Lancaster was an AW, and Rex Johnson was a YN. We also lost Emil Holland, who was in VP-911.

THE ADMIN FUND:

The VP Association has no dues but contributions are welcome to help defray the cost of web site hosting, postage, and other expenses. We'd like to thank Tom O'Connor for his recent contribution.

SPEAKING OF THE COST OF PRINTING AND MAILING NEWSLETTERS...

If you have an e-mail address and get your newsletter in the mail please contact George Driscoll at gnddriscoll@gmail.com ASAP so we can send it to you via e-mail. Remember, we do not charge

dues and operate on a shoestring thanks to volunteer labor, memorabilia sales, and donations. If you have an e-mail address and get a paper newsletter it would be better for us to send it via e-mail.

LOST CONTACT:

Be sure to inform George Driscoll at gnddriscoll@gmail.com about home or e-mail address changes.

LEO MURPHY DONATES SQUADRON PLAQUE:



Leo Murphy, an NFO in VP-92 back in the late 1970s and early 1980s, recently donated an old squadron plaque to the Shea Naval Aviation Museum. Leo said that having little else to do during the “Wuhan Flu” lockdown, his wife and he decided to clean up their home. She told him to “throw the plaque away”, but he thoughtfully donated it to the museum instead. The Shea Naval Aviation Museum, operated by the Association of Naval Aviation’s Boston chapter (the ANA Patriot Squadron), is dedicated to preserving the history of NAS South Weymouth and NAS Squantum. Though closed at this time, the museum’s collection is stored waiting for the new master developer to provide a new facility. If you have similar items that you no longer want, please consider donating to the Shea Naval Aviation Museum or Brunswick Naval Museum. See www.anapatriotsquadron or bnamuseum.org for details.

MARC FRATTASIO IN PROCEEDINGS MAGAZINE - AGAIN:

Your newsletter editor had an article published in the “Nobody Asked Me But...” section of the April issue of the Naval Institute’s “Proceedings” magazine. The article, which was entitled “Get Your Own Jacket”, was in reaction to the Navy’s recent decision to issue leather jackets that closely resemble the traditional flyer’s G-1 flight jacket to surface warfare officers. The full text of the article follows:

In November 1997, Proceedings published my Nobody Asked Me, But... entitled “Leave Our Flight Jackets Alone!” I wrote it in reaction to a change in the uniform regulations that prohibited flight jackets from being decorated with anything other than a nametag, a U.S. flag, and a single squadron insignia patch.

I received some criticism in response to my article back then, all of it from surface warfare officers who appeared to be offended by flight jackets. At some point in his or her career every pilot, naval flight officer, or aircrewman experiences some degree of hostility to flight jackets worn while on naval bases that are primarily home to ships and submarines. I certainly have. I’ve always suspected the root cause is envy, and it appears that I’ve finally been proved right.

I just heard the Navy is going to begin issuing leather jackets to surface warfare officers starting in June. The jackets are described in official Navy communications as being “similar to the aviation bomber jacket”. They sure are, so much so that they would not look out of place if they turned up in the remake of Top Gun that, coincidentally, also is scheduled to be released in June. The only visual distinctions between the new surface warfare officer’s jacket and the traditional Navy G-1 flight jacket is that it is black instead of brown and its collar is leather instead of imitation wool.

This really bothers me. My leather flight jacket means so much to me. It is one of my most cherished possessions. I retired from the Navy many years ago, but I am so proud of my service as a naval

aircrewman that I still wear my old leather flight jacket on a regular basis. Strangers often approach me and say, "I love your jacket", and I always respond, "Thank you, I worked very hard to earn it".

Yes, I worked hard to earn that jacket and the gold naval aircrewman wings that it signifies, and that is the point of this diatribe. The leather jacket is, and always has been, closely associated with aviation. Part of the reason I decided to fly for the Navy rather than the Air Force is that, when I enlisted in 1979, the guys who flew for the Navy still wore traditional leather flight jackets while the Air Force guys did not. I'm sure that I am not the only one for whom this was part of the decision-making process.

Why can't the black shoes come up with their own distinctive jacket, something that won't cause them to be mistaken for aviation personnel? Until the 1960s, the Navy had something called a deck jacket or deck coat that was closely associated with ships. These are fashionable enough that they are still being made for the civilian market. What about the old pea coat? Why "culturally appropriate" the traditional jacket of aviation personnel --- and by so doing diminish its significance and obscure its meaning? It is bad enough that the current green camouflage working uniform makes everybody in the Navy look like they are in the Army. Now you want all surface warfare officers to look like they are pilots or naval flight officers?

What this comes down to, I think, is that aviation has always been perceived as "cool", and the surface warfare community wants to grab some of that coolness for itself. I'm OK with this in principal, except that in this case the "grab" comes at the expense of aviation.

Isn't trying to look like a flyer when you aren't one skirting dangerously close to the edges of "stolen valor"? My advice to the surface warfare community is, if you really want to look like a flyer, then do what I did and earn yourself wings.

Please note that the edited version that was presented in the magazine was somewhat toned down from what was originally submitted, which included this deleted passage: *As far as I'm concerned, the new surface warfare jacket is nothing more than a participation trophy. To be blunt about it, these are flight jackets for people who aren't qualified to fly.*

VP ASSOCIATION ANNUAL REUNION - CANCELLED:

Normally we've got nearly everything lined up for the VP Association's annual reunion by this time, but due to the panic over the Wuhan Coronavirus, which has basically shut down Massachusetts since early March, we've been unable to organize anything. Since the situation remains so uncertain in the state as of this writing, we have decided not to try to have a reunion this year. We will have one next year if there is sufficient interest. Details will be provided in future issues of the newsletter.

THE NAS BRUNSWICK REUNION:

The NAS Brunswick people say that the reunion event they have planned on and around that old base over the weekend of August 14-15-16 is still a "go". Unlike Massachusetts, Maine is actually starting to "reopen" as of this writing. This event is sponsored by the Brunswick Naval Museum. For more information contact president@bnamuseum.org.

IRANIAN NAVY HITS OWN WARSHIP WITH MISSILE (Forbes 5/11):

The Iranian Navy has confirmed that 19 people died when one of its warships was hit by a missile during a training exercise. Fifteen more are reported to have been injured. The mishap took place off the Iranian port of Jask in the Sea of Oman on May 10. Jask is strategically located outside the Straits of Hormuz, and is regularly used by Iranian warships and submarines. Rescuers rushed to the

scene close to the coast near Jask and Chabahar but the boat's superstructure was completely destroyed and the hull began to sink. It appears that they were able to tow it back to port.

Training with live missiles is inherently dangerous and accidents can occur in any Navy. The missiles can lock on to the wrong target. Strict procedures and effective command normally mitigate the risks, however, so such incidents are rare. This one stands out in terms of scale and misfortune. In July 2016 a Taiwanese warship accidentally fired an anti-ship missile which homed in on a fishing vessel, killing its captain and injuring the crew.

The sunk warship, Kenarak (A-1403), was a Hendijan-class auxiliary support vessel. She can be armed with 20mm cannon and anti-ship missiles but is used as a general purpose vessel. Her core crew is only 15 people, many fewer than the reported dead and injured.

The missile was reportedly fired from the frigate Jamaran. It has not yet been confirmed which type of weapon was involved, but the 1,500-ton warship is armed with C-802 Noor anti-ship missiles. These are an Iranian development of a Chinese weapon, and are broadly equivalent to the U.S. Navy's Harpoon missile. The frigate, termed a destroyer in Iranian parlance, is also armed with radar guided anti-aircraft missiles that can also be used against ships. These are derived from the U.S. Navy's legacy Standard SM-1 type. They have a smaller warhead than the Noor missile.

Jamaran is the first Moudge class ship and entered service in 2010. Three Moudge Class ships have been built and more are under construction. This is not the first accident involving this class of ship. Her sister-ship Damavand was sunk in a navigation error on January 10 2018.

Iran regularly exercises its forces to attack ships in the Straits of Hormuz as well as the Persian Gulf and Sea of Oman. Jamaran is one of its newer and most capable warships, but there are reports that it is building even larger destroyers, and even large submarines.

Forbes article by H. I. Sutton

TRITON DEPLOYS AT LAST (Seapower 4/29):

In January, the U.S. Navy's newest surveillance aircraft, the Northrop Grumman-built MQ-4C Triton, a high-altitude, long-endurance unmanned aerial vehicle (UAV), embarked on its first deployment, a move to demonstrate what the Navy calls early operational capability. Two MQ-4Cs assigned to Unmanned Patrol Squadron 19 (VUP-19), the first Triton squadron, deployed to Andersen Air Force Base on Guam and were in place by Jan. 26 to fly missions in support of the U.S. 7th Fleet.

"VUP-19 is operating Triton to further develop the concept of operations and fleet learning associated with operating a high-altitude, long-endurance system in the maritime domain," Capt. Dan Mackin, the Navy's Triton program manager, said in response to a query from Seapower. "The squadron plans to conduct multiple flights per month in support of Commander Task Force 72, 7th Fleet and Indo-Pacific Command."

"The fielding of the Navy's premier unmanned aircraft system and its additive, persistent, multisensor data collection and real-time dissemination capability will revolutionize the way maritime intelligence, surveillance and reconnaissance [ISR] is performed," Mackin said in a Jan. 26 Navy release. "While developing the concept of operations, the MQ-4C Triton is actively conducting missions that are complementing the P-8A Poseidon," said Cmdr. Kim DaCosta-Azar, commanding officer of VUP-19, in an email response to Seapower. "This complement brings increased persistence, capability and capacity through its multisensor mission payload."

The MQ-4C's mission payload includes a Northrop Grumman-built ZPY-3 Multifunction Active Sensor, an X-band radar with modes that include maritime surface search, spot synthetic aperture radar (SAR), strip SAR, inverse SAR snapshot and inverse SAR high-resolution. The radar's 360-degree scan enables the Triton to cover 2.7 million square miles during a mission.

The Triton's suite also includes a Sierra Nevada-built ZLQ-1 electronic surveillance measures sensor equipped with specific emitter identification and with an automatic identification system. A Raytheon-built MTS-B multispectral electro/optical/infrared sensor with a laser designator/pointer/range-finder capability also is installed. The Triton can transmit its data to a ground station, including video live-streaming. It also can be an alternative communications relay to space-based satellites.

"The MQ-4C Triton will provide 7th Fleet with a round-the-clock ISR capability, as the aircraft have capability to fly more than 24 hours during each mission," DaCosta-Azar said. "The VUP-19 detachment has the ability to pilot the MQ-4C from Guam or from Jacksonville, Florida, mission-control station. The majority of the VUP-19 crew operates from Naval Air Station Jacksonville." VUP-19 is headquartered at Naval Air Station Jacksonville, but its Tritons are home-based at Naval Air Station Point Mugu, California.

"The introduction of MQ-4C Triton to the 7th Fleet area of operations expands the reach of the U.S. Navy's maritime patrol and reconnaissance force in the Western Pacific," said Capt. Matt Rutherford, Task Force 72's commander. "Coupling the capabilities of the MQ-4C with the proven performance of P-8, P-3 and EP-3 will enable improved maritime domain awareness in support of regional and national security objectives."

Chief of Naval Operations Adm. Michael Gilday praised the Triton during March 11 testimony before the Senate Appropriations Committee's Defense subcommittee. "The capabilities that the MQ-4 brings are game-changing in terms of long-range ISR at altitude, with sensors that we haven't had supporting the fleet before," he said. "We're still committed" to the Triton. Mackin said the Navy's program of record remains at 68 UAVs, despite a gap of two years — 2021 and 2022 — proposed in the Navy's 2021 budget proposal. The total does not include the two Navy-owned and one Northrop Grumman-owned test aircraft.

The Navy has ordered 20 Tritons to date and has accepted delivery of seven: three flyable test aircraft (including one owned by Northrop Grumman), one fatigue test article and three production aircraft, the latter three delivered to VUP-19. One of the VUP-19 Tritons was involved in a flight mishap during a landing at NAS Point Mugu on Sept. 13, 2018. "The Triton aircraft damaged during the gear-up landing at Point Mugu has been stricken from inventory although some components were salvaged for use on training devices," Mackin said.

He said the two MQ-4Cs deployed to Guam are in the Triton's baseline configuration known as IFC 3 (Integrated Functional Capability 3). The Navy is working on deploying the Triton with IFC 4, which gives the UAV a signals intelligence capability and will put it on the path to replace the Navy's EP-3E electronic reconnaissance aircraft. IFC 4, also called the multi-int (multi-intelligence) capability, is planned for fiscal 2022. Multi-int capability deployed in four Tritons at a single site to establish a 24/7 orbit over the Western Pacific area of operations also will mark the achievement of initial operational capability for the Triton.

The Northrop Grumman-owned MQ-4C in the test program is being used to advance the Triton's capabilities. "We are ... integrating and testing IFC-4 upgrades to meet the U.S. Navy's and Australia's multi-intelligence requirement, which will ultimately enable the U.S. Navy to retire the

EP-3,” said Doug Shaffer, vice president and program manager, Triton program, Northrop Grumman, in response to a query from Seapower. Mackin said there “is a plan for upgrading older aircraft to the multi-int configuration with some [aircraft] already” in the works.

VUP-19 eventually will operate 12 MQ-4Cs operated and maintained by 500 personnel. The Navy plans to establish a second Triton squadron, VUP-11, at Naval Air Station Whidbey Island, Washington. The two squadrons together eventually will field 20 Tritons at five sites to sustain five around-the-clock orbits. The remaining 48 Tritons would be used for training, attrition and the maintenance pipeline over the service life of the UAV.

The groundwork for the MQ-4C, based on the U.S. Air Force Block 20 RQ-4A Global Hawk, was laid more than a decade ago with the Broad-Area Maritime Surveillance Demonstration (BAMS-D) program, in which the Navy acquired from the Air Force two Block 10 RQ-4As and their integrated sensors that included an electro-optical sensor, SAR with a ground moving target indicator and wide-area search modes. The Navy added an LR-100 electronic surveillance measures sensor, the automatic identification system, inverse SAR capability, and maritime moving target and maritime search sensing.

The Navy in 2011 received three more RQ-4As from the Air Force for the BAMS-D. Since then, one RQ-4A was lost in a mishap in eastern Maryland in 2012 and another was shot down by Iranian forces last June. A third was damaged in a takeoff mishap in November. Mackin said repair is underway on the damaged RQ-4A.

The Navy deployed the RQ-4A to the U.S. Central Command area of responsibility in early 2009 for a planned six-month deployment. Now, more than 11 years later, after continuous deployment, the Navy still values the BAMS-D program as it awaits more deployments of the MQ-4C Triton.

According to the 2021 budget proposal, the Navy plans to phase out the BAMS-D, beginning in fiscal 2023, to allow the sea service to fund the whole MQ-4C program. “The MQ-4C will assume the signal intelligence mission from the EP-3E in [fiscal] 2022, which will require aircraft and control station modifications and calibrations to keep pace with emerging signals of interest at greater sensitivity thresholds.”

Two allied nations are on track to operate the Triton. Australia signed a memorandum of understanding for up to six Tritons in June 2019, with delivery of the first scheduled for 2023. Germany also has announced its intention to procure three Tritons. Foreign procurement may be key in sustaining a steady Triton production line if the Navy gaps the procurement in 2021 and 2022.

“A two-year gap in production would have significant negative effects on the production line and the supplier base,” Shaffer said. “A pause would mean we lose the lessons learned that have enabled our suppliers and Northrop Grumman to achieve production efficiencies and get to this mature point of the program, which would then add more risks and costs to the program. “We estimate that stopping and restarting the line alone will cost roughly \$100 million to \$150 million and then each aircraft likely costs about \$20 million more. We are working closely with the Navy on multiple options [that] could keep the production line open and potentially result in cost savings for both the Navy and Australia.

“We have had multiple discussions with the U.S. Navy and Australia about options to fill the [fiscal] ’21 and ’22 production lines with Australian aircraft,” he said. “An acceleration of the Australian program would result in significant savings to Australia and ensure cost savings to the U.S. Navy by preventing a pause in Triton production. While any decision to accelerate the Australian program is

between the U.S. Navy and Australia, we are prepared to provide the necessary support to an accelerated Australian program.”

Seapower article by Richard Burgess

DOD WANTS TO KNOW IF P-8 CAN TRACK SUBS (Military.Com 4/17):

The Defense Department's top watchdog wants to analyze whether the Navy's newest fleet of maritime surveillance aircraft is fully ready to hunt and track submarines near Europe, nearly seven years after achieving operational readiness in 2013. In a letter sent to the service as well as U.S. European Command, the Inspector General's Office this week said it will begin a fact-finding investigation to determine "whether the readiness of U.S. Navy's P-8 Poseidon aircraft fleet meets the anti-submarine warfare requirements of [EUCOM]."

Officials said they will look to gather information from crews at Naval Air Systems Command, Patuxent River, Maryland; Commander Patrol and Reconnaissance Group, Norfolk, Virginia; Patrol and Reconnaissance Wing 10, Naval Air Station Whidbey Island, Washington; Patrol and Reconnaissance Wing 11, Naval Air Station Jacksonville, Florida; U.S. European Command, Stuttgart, Germany; and U.S. Naval Forces Europe-Naval Forces Africa, Naples, Italy, according to the letter.

The news comes as the Navy investigates whether it can retrofit the P-8 to hold more ammunition at a time when adversary submarine activity -- particularly from the Russian navy -- is surging. The main mission of the P-8A, which replaced the Navy's P-3C Orion, is to track submarines by dropping buoys that ping, listen and detect. The intelligence-gathering aircraft is a Boeing-made adaptation of its 737 commercial aircraft. The plane's 120 buoys are transported within cylindrical cases in the rear of the aircraft.

The on-board crew decides which it will drop based on weather and altitude, and they then monitor the data they collect. The aircraft also uses a mix of sophisticated GPS systems, radios, electronic warfare tools, communication nodes, infrared imaging and high-tech radars to detect things happening on or below the water's surface. Its lightweight AN/APY-10 radar, nestled within its "snoopy nose," can detect and classify threats at long ranges. The aircraft can also strike: Crews can zero in on submarines to lob an MK-54 torpedo or AGM-84D Harpoon missile. The plane carries the missiles on its external wing pylons or in the weapons bay on the underside of the aircraft.

But it may be able to carry more. According to a presolicitation notice posted in January, the service wants to incorporate the AGM-158C Long Range Anti-Ship Missile (LRASM) onto the P-8, which has a greater-than-200 nautical mile standoff range, according to the weapon's maker, Lockheed Martin Corp. The precision-guided, anti-ship standoff missile first achieved early operational capability on the B-1B Lancer bomber in 2018. LRASM will be able to autonomously sensor-locate and track targets while avoiding friendly forces, Lockheed officials have said.

The potential expansion would boost the variety of the P-8's weapons stock as the Navy plans to cut back the size of the fleet. The Navy's 2021 fiscal budget request does not fund any more Poseidon patrol aircraft, capping out the total fleet to 117 aircraft instead of 138, according to Forbes. Yet the spy aircraft has a vital mission, especially as hotspots around the world continue flaring up. Specifically in Europe, submarines coming from the Barents Sea -- where Russia has a submarine hub near the Kola Peninsula -- tend to slip through the Greenland, Iceland, U.K. waterways, nicknamed "the GIUK," and into the Atlantic Ocean.

Speaking to reporters in February, Air Force General Tod Wolters, the head of U.S. European Command who also serves as NATO's Supreme Allied Commander-Europe, said officials have observed "a 50% increase in the number of resources Russia committed to the undersea" activity between 2018 and 2019. Allies and partners continue to acquire the aircraft. Boeing delivered the first submarine-hunting and anti-surface warfare aircraft to the United Kingdom last fall. Australia already flies long-range aircraft, and the Indian Navy flies the P-8I variant. Norway has also bought into the program.

Military.com article by Oriana Pawlyk

RUSSIAN JET FLIES WITHIN 25 FEET OF US SPY PLANE (CBS News 4/16):

A U.S. surveillance aircraft flying in international airspace over the Mediterranean Sea was intercepted by a Russian fighter jet on Wednesday, the Navy said in a statement. The 6th Fleet said the Russian SU-35 flew within 25 feet of the U.S. P-8A Poseidon plane in an "unsafe" high-speed, inverted maneuver, putting the American "pilots and crew at risk."

"While the Russian aircraft was operating in international airspace, this interaction was irresponsible," the statement said. "We expect them to behave within international standards set to ensure safety and to prevent incidents." The Navy said the incident lasted approximately 42 minutes and the crew of the U.S. P-8A aircraft reported wake turbulence following the interaction.

Citing the 1972 Agreement for the Prevention of Incidents On and Over the High Seas, the Navy said "unsafe actions" increase the risk of miscalculation and potential for midair collisions." Last June, another U.S. aircraft flying over the Mediterranean Sea was intercepted three times by a Russian fighter jet.

CBS News article by CBS staff

ARSON SUSPECTED IN FIRE AT FORMER NAS SOUTH WEYMOUTH (Patriot Ledger 3/27):

Investigators are trying to determine whether someone intentionally set a massive fire in an abandoned military building at the former South Weymouth Naval Air Station. Firefighters on Friday morning continued to put out hot spots that could re-ignite in the abandoned buildings at 223 Shea Memorial Drive at Union Point. Jennifer Mieth, public information officer for the state Department of Fire Services, said Weymouth firefighters and police and state troopers assigned to the Office of the State Fire Marshal are investigating the fire, which is considered "suspicious."

The first alarm was sounded at 8:20 p.m. as flames engulfed a large building and traveled quickly through nearby buildings. The roof of one of the buildings collapsed, according to reports from the scene, forcing Shea Memorial Drive at Route 18 to be closed, as well as Memorial Grove Avenue at the Union Point Sports Complex. A deputy fire chief told WCVB the flames spread quickly from building to building. Firefighters were facing difficult wind conditions and had problems getting enough water to the fire. The closest homes are about 1,000 feet from the buildings and were not in danger, according to the deputy chief.

Firefighters from several nearby communities were at the scene assisting Weymouth firefighters. Mayor Robert Hedlund said Friday that the very large wooden building was like "a tinderbox." "I wasn't surprised by the flames," he said.

The Weymouth Historical Society on Friday shared a photo of the building, known as the bachelor officers' quarters, from 1945. The society said the building had not been maintained for many years and was to be torn down, paving the way for new development. On Friday, William Bracken, of

Scituate, photographed the remnants of the abandoned barracks. He said his grandfather worked at the former military base and slept in the building.

Patriot Ledger Article by Patriot Ledger Staff

RUSSIAN SUBS GETTING COUNTERMEASURES TO JAM SONOBUOYS (The War Zone 3/13):

Russia is reportedly working to equip certain classes of submarines, especially ballistic missile-armed types that form the core of its second-strike nuclear deterrent capabilities, with new expendable electronic warfare jammers. These are primarily meant to help protect the boats from sonobuoys by preventing them from transmitting data to maritime patrol aircraft and anti-submarine helicopters flying above. This development comes as the United States, as well as its NATO allies, have been stepping up anti-submarine operations amid a notable uptick in Russian submarine activity.

Russian newspaper Izvestia first reported these developments on Mar. 12, 2020. It's unclear from their story whether the Russian Navy has begun taking delivery of these countermeasures, known as the Burak-M, already, or if they are still in development. Typically, in Russia's weapon naming conventions, an "M" at the end stands for the Russian word for "modernized," which could imply that there was an earlier Burak design that may already be in service.

Izvestia said that Burak-M functions by floating the surface and then automatically activating its jamming system, which blocks sonobuoys from transmitting information gathered from their onboard acoustic sensors. It's unclear how submarines launch them in the first place, but the most likely method is via tubes that military submarines have in order to launch other countermeasures, such as acoustic decoys meant to counter homing torpedoes.

The report also did not give any approximate range far-reaching the Burak-M's jamming capabilities might be and whether it might be capable of scrambling other systems beyond sonobuoys' communications and data links. Izvestia did indicate that the system was intended to provide sufficient room to maneuver for the launching submarine so that it could slink away from its pursuers.

Even if Burak-M's capabilities were limited to blocking the ability of these floating sensors to communicate with their launching aircraft and helicopters, it would still be a valuable addition to the overall countermeasures suite available to Russian submarines. Though anti-submarine warfare has evolved considerably since the end of World War II, sonobuoys remain a key tool for maritime patrol aircraft and anti-submarine helicopters. The U.S. Navy's latest P-8A Poseidon maritime patrol planes actually lack a magnetic anomaly detector (MAD), something that used to be a default for anti-submarine aircraft, in favor of an improved acoustic sensor system that includes sonobuoys.

During regular anti-submarine warfare operations, aircraft and helicopters will drop large sonobuoy arrays in order to fix the position of an opposing submarine and monitor its movements, something you can read about in more detail in a past War Zone piece. During an actual conflict, this might then allow the aircraft or helicopter orbiting above to directly engage the threat, or to feed that information to other assets, including ships and submarines in the area.

It is certainly possible for submarines to escape a sonobuoy net, especially nuclear-powered types or diesel-electric boats with advanced air-independent propulsion (AIP) systems, which can remain submerged for weeks or even months at a time. Improved designs with features to reduce their acoustic signature are difficult to detect in the first place. However, none of this completely eliminates the chances of being spotted and Burak-M would offer an additional option for a submarine looking to rapidly disengage from hostile aircraft or helicopters attempting to pin it down.

It's perhaps not surprising then that Izvestia said that the first submarines set to receive Burak-M would be the Russian Navy's ballistic missile boats, including the new Project 955 Borei and future Project 955A Borei-A classes, as well as the Project 677BDRM Delfin class, also known as the Delta IV class. It is critical to Russia's nuclear deterrent posture that these submarines remain as hidden as possible while on patrol to ensure their ability to launch nuclear retaliatory strikes, if necessary.

Project 636.3 Varshavyanka class attack submarines, also known as Improved Kilo class boats, as well as examples of the Project 677 Lada class, of which there is only one built so far, could also receive Burak-M. These are both diesel-electric types. The Project 636.3s notably lack an AIP system, meaning that persistent harassment from sonobuoys could potentially force them to surface, where they would be especially vulnerable, depending on how well charged their batteries are and the state of their oxygen supply during an engagement. One of these submarines caught snorkeling, or even recharging on the surface, could have to quickly dive and try to escape in a limited amount of time before having to resurface again.

Burak-M is also just another example of the growing importance of electronic warfare to military forces around the world, especially in the maritime domain. Russia, in particular, has invested significant resources in developing advanced electronic warfare capabilities, but primarily for land-based applications. The development of this new electronic warfare countermeasure comes as the United States, together with its NATO allies, have significantly stepped up anti-submarine operations in recent years. This has been in response to increased Russian submarine patrols, especially in the Atlantic Ocean and Arctic region.

Maritime patrol planes dropping sonobuoys have been a core part of those efforts to monitor Russia's submarine activities. This is reflected particularly well in U.S. Navy budget requests, the latest of which, for the 2021 Fiscal Year, asks for nearly \$238 million to buy tens of thousands of sonobuoys. The service is also looking to get almost \$26.2 million more for sonobuoys in the supplemental Overseas Contingency Operations budget for this upcoming fiscal cycle.

This is less money than the Navy received for these air-dropped anti-submarine warfare sensors in the 2020 Fiscal Year budget, but still more than it got in the 2019 Fiscal Year budget. The service expects to continue buying sonobuoys every year at approximately the same rate through at least Fiscal Year 2025. The United States, in particular, does not look like it will be scaling back its anti-submarine activities any time soon. The news about Burak-M may only be the start of more reports of Russia deploying other new countermeasures in response.

The War Zone article by Joseph Trevithick

DRONE FLEETS COULD BE KEY TO FUTURE SUBMARINE WARFARE (USNI 03/09):

The future of anti-submarine warfare for countries who can't afford to invest in top-of-the-line submarines and maritime patrol aircraft could be a netted fleet of unmanned platforms that can create "passive acoustic barriers" at chokepoints or drag towed arrays through a country's territorial waters. NATO's Centre for Maritime Research and Experimentation is showcasing these ideas at NATO exercises such as the ongoing Dynamic Manta annual ASW exercise, showing off novel operations that could one day be commonplace if navies and their industrial bases decide to invest.

CMRE Director Catherine Warner said the organization has been working with autonomous vehicles in the undersea warfare area for the past 20 years to understand how they can contribute to perhaps the most complex type of naval warfare. "The big idea in this whole realm of unmanned systems is figuring out the right systems with the right sensors and the right scenario that's going to be cost and operationally effective," she told USNI News after the kickoff of Dynamic Manta. She said ASW is

“high-end asset-intensive” and that, while unmanned vessels can’t do everything a manned sub or plane can, they can perform some specific missions that would be cost-prohibitive to do with manned vehicles.

One prime example is the passive acoustic barrier. Noting that CMRE puts passive sensors on all the autonomous vehicles, buoys and seabed devices the organization puts in the water, Warner said CMRE used all its sensors to demonstrate a passive acoustic barrier off the coast of Sicily in the days leading up to the start of Dynamic Manta. While in this demonstration they tracked the flow of commercial ships across the “barrier,” the ultimate idea would be to track the movement of submarines at chokepoints such as the Greenland-Iceland-United Kingdom (GIUK) Gap. The specifics of the unmanned vehicle wouldn’t matter as much as the quality of the sensor and the ability to differentiate the clutter from the sounds of submarines.

On the more active side of sub-hunting, CMRE has been particularly focused on the idea of multi-nation multistatic ASW, where an active sonar source would create pings for dozens or hundreds of passive sensors listening for those sound waves to bounce off of enemy submarines. The more sensors that are in the water, the better they can detect pings and recognize what kind of submarine is moving through the water and in what direction.

During Dynamic Manta, CMRE operated alongside manned warships to join in the hunt for submarines, using its “network”: NATO research vessel NRV Alliance, two Ocean Explorer 21-inch diameter autonomous underwater vehicles named Harpo and Groucho, and a fleet of Liquid Robotics’ Wave Gliders that serve as communication nodes between the ship and the AUVs. Harpo and Groucho have a towed array to listen for pings, and more recently CMRE developed a towed array for the Wave Gliders as well to put more ears in the water.

“Having that extra set of sensors makes a huge difference” in multistatic ASW, Warner said, because when an active sonar source like the variable depth sonar on Alliance or a warship like Italian frigate ITS Carabiniere (F 581) sends out energy, they want as many passive sensors in the water as possible to listen for pings. “When you do multistatic, there’s so many more advantages because of the geometry and the extra chances for reflections. So we can do it with ourselves, but if we could do it with all the nations – and that is something that we strive to do with our interaction with the nations. Then everybody, wherever they are, that has a sensor, being able to know the sound source and sync to it and coordinate on the reflections – it is very power to be able to do that.”

The key to multi-nation multistatic ASW is information-sharing: they’d all have to know where exactly the active sonar source is, so they could correctly calculate what the pings they pick up mean, and then they’d have to share what they’re hearing with all the other nations involved, too, so they could all adjust their positions as needed to get the best chance at hearing the target submarine and help track it through the water. Information-sharing can be a hurdle with something as sensitive as ASW, with nations often not wanting others to know the exact nature of their capabilities, but Warner said the scale to which NATO could track submarines under the water would be powerful if everyone could find a way to come together.

Today, Harpo and Groucho talk to each other while looking for subs, and if one picks up a sound they will coordinate amongst themselves to get into the best positions for the best geometries to hear sonar pings. The more AUVs in the water collaborating, the better. “We’ve done it. We’ve already shown that multistatic ASW works. That’s our system: we’ve been doing it since 2012 in Dynamic Manta, we’ve demonstrated it operationally, and we just keep adding things onto it. So it can be done. So, whether other nations want to do it with us, that’s up to them,” Warner said.

Warner said Harpo and Groucho are 21-inch diameter AUVs that were built by Florida Atlantic University. The vehicles themselves are 18 years old, but the batteries and sensors are constantly being upgraded, meaning the vehicle that originally had four hours of battery life can now operate for 72 hours without intervention.

CMRE's Dan Hutt told USNI News that the next step would be to scale up these operations. To conduct multistatic ASW in the GIUK Gap, for example, would require hundreds of AUVs from participating NATO nations. The idea, though, would be to "flood the ocean with lots of cheap assets – they all have sensors, potentially different kinds of sensors, they can all talk to each other over a vast network – that's a really powerful concept for ASW. We only have a handful of these, so we want to scale up and work with the nations to do a bigger demonstration."

While several NATO countries are upgrading their fleets of "high-end submarines and frigates," many cannot afford such exquisite systems, Warner said. "But they certainly can afford a fleet of unmanned vehicles with towed arrays. And if they were all using the same standard, they could all buy from their own countries' industry – that's what we're about, we're not competing with industry, we're developing standards," she continued. "Every nation's industry would benefit from building these vehicles and the towed arrays, and then they could all operate together."

CMRE has already done a machine learning effort to support the back end of this effort – researchers collected 52 days worth of sonar echoes from diesel-electric submarines (SSKs) and created algorithms to help the unmanned vehicles recognize SSK sounds and ignore the clutter. This could be shared with the NATO members who want to join in this effort. Warner said Norway, Belgium and the Netherlands are taking steps to incorporate AUVs into their ASW efforts, but she's hoping to see more.

A final technology CMRE is showing off at Dynamic Manta is an undersea communication network. NATO nations had previously agreed to use the JANUS as the digital underwater communications standard, but CMRE is still hard at work developing waveforms that will be cyber-secure and low-probability of intercept, as well as developing concepts of operations for its usage.

Ahead of Dynamic Manta, CMRE demonstrated they could use JANUS to send submarines the surface picture with Automatic Identification System (AIS) tracks – so the submarines could know how to safely surface – by sending the message from a ship, through the Wave Gliders as comms nodes, and to the submarine underwater. Warner said they call this setup "WetsApp" – a nod to the WhatsApp digital communication app on cellphones – and said it's a vast improvement over the voice communication tools they previously used to send messages to submarines, which could easily get garbled or lost altogether.

"Before, when they were submerged, submarines could only use something called an underwater telephone, which is very difficult to use, it's distorted, hard to understand," she said. "But we can actually text them – we have a little program, we call it WetsApp, sort of WhatsApp, and we can send them for example the surface picture – if they were going to come to the surface, they would know where all the ships are on the surface. So that's very important technology that we've already helped insert into the industrial base."

USNI News article by Megan Eckstein

CHINESE WARSHIP TARGETS US PLANE WITH LASER (Breitbart News 2/28):

The U.S. Navy disclosed on Friday that a Chinese destroyer in the western Pacific targeted an American plane flying over international waters with a laser. The U.S. Pacific Fleet denounced

China's action as an "unsafe and unprofessional" provocation that violated both international maritime codes and agreements reached between America and China.

The U.S. Navy said the incident occurred on Monday, February 17, and involved a P-8A Poseidon patrol aircraft. The American plane was flying through international airspace about 380 miles west of Guam when a Chinese destroyer aimed a laser at it. The laser, which was not visible to the naked eye, was captured by a sensor onboard the P-8A. Weapons-grade lasers could potentially cause serious harm to aircrew and mariners, as well as ship and aircraft systems.

The Navy said the Chinese vessel's "unsafe and unprofessional" action violated the international Code for Unplanned Encounters at Sea, which "specifically addresses the use of lasers that could cause harm to personnel or damage to equipment," and was also "inconsistent" with an understanding reached between the American and Chinese militaries on safe conduct during aerial and maritime encounters.

Research fellow Collin Koh of the S. Rajaratnam School of International Studies in Singapore went even further, describing the laser incident as a "serious provocation" in an interview with the South China Morning Post (SCMP): "Use of lasers is as dangerous as manoeuvring one's aerial or naval asset too close to another to cause the potential of collision – the lasers can pose a serious navigational hazard," Koh said. "While both [the Chinese and US navies] have the legitimate right to carry out their activities on the high seas out there in the western Pacific – including the use of these platforms to monitor each other – the use of lasers to endanger navigation in fact represents a serious provocation," he said. "The US Navy P-8A might have flown lower for closer observation, but I don't think it went to the point of risking a collision with the [Chinese] warship."

Conversely, Hong Kong military pundit Song Zhongping dismissed the U.S. Navy's complaint as "unhappy" grumbling about Chinese ships coming so close to Guam, telling the SCMP it was "normal for a naval fleet and aircraft to send warnings to each other," a point that is difficult to sustain when the Chinese ship used an invisible and dangerous laser to deliver its "warning."

A Pacific Fleet spokeswoman told the Navy Times on Friday that the P-8A aircraft was forward-deployed from Patrol Squadron 45 in Jacksonville, Florida, to the Kadena Air Force Base in Okinawa, Japan. The aircraft returned to Kadena after the incident and is "currently undergoing a damage assessment." "U.S Navy aircraft routinely fly in the Philippine Sea and have done so for many years. U.S. Navy aircraft and ships will continue to fly, sail, and operate wherever international law allows," the Navy stated.

Breitbart News article by John Hayward

BRUNSWICK NAVAL MUSEUM HONORS 1978 CRASH VICTIMS (Forecaster News 2/25):

Ten minutes after a U.S. Navy patrol airplane left Brunswick Naval Air Station on Sept. 22, 1978, a mishap caused the vessel to disintegrate, killing its eight-man crew and dispersing debris in Poland, about 40 miles from the base. The circumstances behind the tragedy of that Patrol Squadron Eight (VP-8)-flown plane remained couched in speculation, but it is believed the aircraft's No. 1 engine likely broke off, taking out all the vessel's hydraulics and fuel lines, said Nick Nichols, a VP-8 alumni who joined in 1980.

Forty-two years after that incident, the crew of the LC-85 is being honored by restyling a similar vessel permanently parked at the former airbase – now Brunswick Landing – to look exactly like the lost vessel. A plaque that commemorates the tragedy and lists the eight crewmen will stand in front

of the airplane's nose. A dedication ceremony is slated for 4 p.m. Aug. 14, after the Great State of Maine Airshow holds its practice day.

Nichols, a member of both the Brunswick Naval Aviation Museum and the Midcoast Regional Redevelopment Authority board that oversees Brunswick Landing, led the fundraising effort to repaint and refurbish the aircraft – a 1970s-built P-3C, a newer model than the P-3B that crashed. The P-3C needed a lot of work after years of exposure to the elements, Nichols said. The “P” stands for “patrol.” “We’re basically putting all the designations on a P-3C, but commemorating an aircraft that was a P-3B,” Nichols said. “... We’re going to match the livery ... as accurately as we can,” referring to the vessel’s insignias and paint scheme. That aircraft was known as LC-85. The Navy’s patrol planes had the alphabetical designation “L,” and “you would go from LA, to LB, to LC,” depending on the squadron, Nichols explained. “... Part of that was to be able to talk on the radio. If I said ‘Lima Charlie,’ you knew that I was VP-8. If I said ‘Lima Bravo,’ you knew that I was VP-MAU.”

Of the roughly \$35,000 cost for the refurbishing project, the museum only had to raise about \$20,000, much of which was contributed from VP-8 veterans involved with the project, Nichols said. The balance came via discounts and in-kind work from several companies. Moore Painting “stripped, sand-blasted, hand-sanded, and even re-riveted portions of the aircraft before applying the multiple coats of primer and paint,” a museum news release stated. “The beauty of it was, they got into it to the extent where they enjoyed doing it,” Nichols said. “... They got emotionally involved.” “It was for the families,” said Dan Miller, Moore Painting’s vice president. “I found out that the P-3 community is a big family.” Sherwin-Williams donated most of the paint. Sunbelt Rentals contributed no-charge use of a man-lift for painting and decal work. Most painting is complete, and touch-up paint and decals – including insignia from all seven P-3 squadrons ever based at the station – will be added in warmer and drier conditions. Carrot Signs is installing the decals.

Brunswick Landing has two static display aircraft: the P-3, located next to Memorial Park, and an earlier-built P-2. The Midcoast Regional Redevelopment Authority accepted both planes as static display aircraft on loan from the Navy after the airbase closed in 2011. The museum has looked into moving the P-2 closer to the P-3 and repainting it as well. P-3s were the most prevalent vessels at the base during flight operations there from 1944 to 2009, said John Briley, the museum’s executive director. “The P-2s started out for a couple years in the beginning, but then it was all P-3 up until the time (the base) closed,” he said. “It’s really the signature aircraft for the Naval Air Station, so it’s an integral part of the story we have to tell.”

Forecaster News article by Alex Lear

INDIAN NAVY COULD GET ADVANCED TECH EARLIER DENIED (LiveFist 2/18):

The Indian Navy’s Boeing P-8I long range maritime reconnaissance & anti-submarine aircraft could be fitted with a list of crucial U.S. technologies that had earlier been held back by the United States owing to the absence of a necessary bilateral agreement. Well, theoretically. It all depends on whether the Indian Navy wants it.

First, some background. The Indian Navy contracted for eight P-8I jets in January 2009, at which time India wasn’t yet a signatory to the Communications Compatibility and Security Agreement (COMCASA), resulting in a large list of sensitive proprietary systems being held off the Indian planes. Four additional P-8I jets ordered by the Indian Navy in 2016, which begin delivery in April this year, will similarly be without the U.S. proprietary tech. In 2018, after over a decade in discussion, India and the United States finally signed the COMCASA, for the first time paving the way for U.S. high-end secured/encrypted communication equipment on American platforms supplied.

A year after the facilitation framework of the COMCASA kicked into action, the Indian MoD in November last year cleared the Indian Navy to contract for six more P-8Is. This new deal, currently being negotiated between India and the U.S. Government, will be the first U.S.-India aircraft contract under the new COMCASA regime. LiveFist can confirm that while certain software changes have been asked for on the new jets, the Indian Navy hasn't taken a decision yet on whether it wishes to consider the items held back by the US Government earlier. The Indian MoD is also keen to keep cost contours on par with the previous P-8I deals, and that could slow progress towards a contract.

If India manages to negotiate a 6 P-8I contract that includes U.S. equipment held back on the first 12 P-8Is, it would be reasonable to assume that India will be looking to get the earlier aircraft retrofitted with the said systems to maintain commonality. As things stand, the Indian Navy will likely be looking to contract the P-8Is without the said U.S. equipment — and staying with the Indian equipment earlier contracted in replacement. The original 8 P-8Is, as LiveFist first detailed here, were integrated with Indian-made replacement systems for encrypted voice, IFF and advanced secret communication equipment. This diagram provides a clear picture of the kinds of systems held off the pre-COMCASA P-8Is and per force replaced with Indian systems.

What's crucial is that the items earlier held back are now available in case the Indian Navy wants to get them — the U.S. Government has also conveyed that such equipment would go a way towards true communications interoperability. Should that situation arise, the Indian Navy will be looking to choose from a list of 5 pieces of equipment that includes (or similar to) the AN/ARC-222 Single Channel Ground and Airborne Radio System (SINCGARS) manufactured by Magnovox and administered by the US Air Force, KV-119 IFF Digital Transponder (Mode 4 Crypto Applique) manufactured by Raytheon, TACTERM/ANDVT Secure Voice (HF) Terminal, VINSON KY-58 Secure Voice (UHF/VHF) Module and the Rockwell-Collins AN/ARC-210(V) SATCOM Transceiver's COMSEC/DAMA embedded RT.

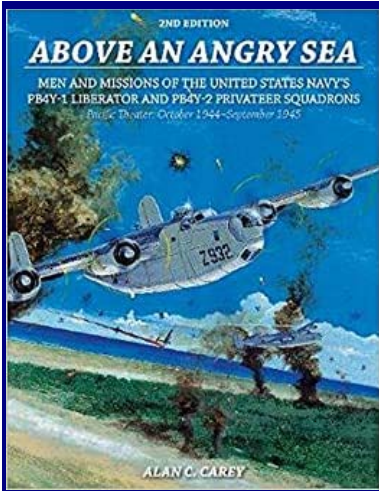
The SINCGARS, for instance, is a combat net radio deployed by the US military for encrypted voice and data communications. The KV-119 is a highly evolved Identify Friend/Foe transponder. The ANDVT is a secure voice terminal for low bandwidth secure voice communications in use throughout the US military. The VINSON KY-58 is a secure voice module that involves encrypted communication to and from military aircraft and other vehicles. The AN/ARC-210 is a family of radios for military aircraft that provides two-way voice and data communications across modes. These or pieces of equipment similar to these were also held off the Indian Air Force's C-130J Super Hercules transport aircraft.

Barring any additions and software tweaks, the new P-8Is being negotiated will be identical to the ones in service with the Indian Navy, sporting the Raytheon AN/APY-10 primary radar and L-3 Communications Wescam MX-20HD digital electro-optical and infrared (EO/IR) multispectral sensor turret, and two sensors absent on the US Navy's P-8As that were specifically asked for by the Indian Navy — the Telephonics APS-143 OceanEye aft radar and CAE AN/ASQ 508A magnetic anomaly detector.

The Indian Navy's ninth P-8I will be delivered in April this year, with three more to arrive next year. While home base will remain Arakkonam on India's east coast, work has begun to give the Indian Navy the flexibility to base the aircraft in Goa and Port Blair. The deal for six more aircraft could be signed by the end of this year, though it could take longer.

LiveFist article by Shiv Aroor

RECOMMENDED READING:



Here is a book that's worth reading – “Above An Angry Sea”, by Alan Carey, which is about the Navy’s P4Y-1 Liberator and P4Y-2 Privateer squadrons in the Pacific during the Second World War. Privateers were flown by VP-911, VP-912, and VP-913 at NAS South Weymouth between 1954 and 1957. Check it out! You can purchase this book in Kindle and paperback version from www.amazon.com.

ON THE INTERNET:

There are some terrific ASW related sound recordings on <https://www.hnsa.org/manuals-documents/historic-naval-sound-and-video/> that you should check out. Especially interesting are the wire recordings of the actual attack on the Japanese submarine I-52 in 1944. These recordings were taken by wire recorders that were connected to the ICS and sonobuoy receivers on board the TBMs that found, attacked, and sunk this submarine.

PARTING SHOT:



ABOVE: Michael Kearney (front row far right) sent this photo of his VP-MAU crew at Thule AFB in Greenland during ICEX90 in the summer of 1990. Got something similar to share? Contact Marc Frattasio at marc_frattasio@yahoo.com.



Until Next Time, Lose Not Thy Speed In Flight Lest The Earth Rise Up And Smite Thee – “Frat”.

