H-Gram 033: *Yanagi* Missions, "Red" Ramage, Port Chicago, Tinian, Apollo 11

19 July 2019

This H-gram covers:

- The Japanese-German *Yanagi* strategic submarine supply missions during World War II and interdiction by U.S. submarines in the Pacific and by U.S. hunter-killer groups in the Atlantic
- The attack by U.S. submarine *Parche* on a Japanese convoy on 31 July 1944, resulting in a Medal of Honor for Commander Lawson "Red" Ramage and a Presidential Unit Citation for the boat
- The catastrophic accidental explosion at the ammunition-handling pier at Port Chicago, California, on 17 July 1944 that killed 320 people, most of them U.S. Navy African-American stevedores, and the resulting action that became known as the "Port Chicago Mutiny"
- The successful U.S. landings on Tinian on 24 July 1944 and the most effective Japanese shore-battery fire of the war against the battleship *Colorado* and destroyer *Norman Scott*
- The Apollo II moon landing on 20 July 1969 and Neil Armstrong's U.S. Navy service
- The sinking of the U.S. minesweeper *Richard Bulkeley* on 12 July 1919 during the dangerous clean-up of the North Sea mine barrage

Recovery of the Apollo 11 astronauts (in raft) and space capsule by USS Hornet (CVS-12), 24 July 1969. Note the decontamination suits and masks (UA 44.02.01).

Back issues of H-grams may be found here {https://www.history.navy.mil/about-us/leadership/director/directors-corner/h-grams.html}. As always, you are welcome and encouraged to share H-grams so that our Navy personnel can better understand the legacy of honor, sacrifice, and valor that they are charged to uphold.

75th Anniversary of World War II

Yanagi *Missions and Atrocities, 26 July 1944*

Based on a Japanese message that was intercepted and decoded by Fleet Radio Unit Pacific (FRUPAC), a U.S. Navy wolf pack of three submarines ("Wilkins' Wildcats") was vectored to intercept Japanese submarine I-29 *as she transited the Luzon Strait between the Philippines and Formosa, heading toward Japan. On the evening of 26 July 1944, the USS* Sawfish *(SS-276), commanded by Commander Alan B. Banister, sighted* I-29 *on the surface, and fired four torpedoes. Commander Takakazu Kinashi desperately tried to maneuver* I-29 *to avoid the torpedoes, but it was too late. Three of the torpedoes struck home, sinking* I-29 *almost instantly; only one of the 106 crew and passengers survived.*

Kinashi would receive the rare honor of a double posthumous promotion to rear admiral, as he was Japan's greatest submarine hero. On 15 September 1942, while in command of I-19, *Kinashi had fired a spread of six torpedoes that sank the carrier USS* Wasp *(CV-7), put the new fast battleship* North Carolina *(BB-55) out of action for several months, and damaged the destroyer* O'Brien *(DD-415) such that she sank a month later. Kinashi had only recently received the German Iron Cross 2nd Class from Adolph Hitler in Berlin (for sinking the* Wasp*), having taken* I-29 *all the way to Lorient in German-occupied France. Kinashi was attempting to become only the second Japanese submarine to complete a round-trip* Yanagi *("Willow") mission to transfer high technology from Germany to Japan.* I-29 *went down with a cargo that included an HWK 509A rocket motor (used to power the German Me-163 Komet rocket-powered interceptor fighter) and a Jumo 004B jet engine (used to power the German Me-262 jet fighter). The loss of these set back Japanese efforts to produce their own rocket- and jet-powered aircraft such that only a few test flights took place before the war ended.*

The only Japanese submarine (of five) to complete a round-trip Yanagi *mission was the* I-8 *in April 1943. On 2 July 1944, while conducting a standard patrol in the Indian Ocean, the* I-8 *sank the unescorted U.S. Liberty ship SS* Jean Nicolet*, during which the captain and crew of* I-8 *committed possibly the worst atrocity against U.S. Sailors (merchant seamen, U.S. Navy armed guard, and U.S. Army and Navy passengers) of the entire war. One hundred survivors of* Jean Nicolet *were forced aboard* I-8*, where they were beaten with iron bars, tortured, and murdered one by one by bayonet until a plane was detected and* I-8 *submerged with U.S. crewmen still tied together on deck. Twenty-three Americans somehow managed to survive; three others had been taken below as prisoners, one of whom survived the war in a Japanese prison, unbeknownst to anyone else. Having been presumed dead, Francis J. O'Gara would be the only living person to have a Liberty ship named after him.*

Two Japanese submarines on Yanagi *and related missions were actually sunk in the Atlantic, both of them (RO-501 and I-52) by the USS* Bogue *(CVE-9) hunter-killer task group (TG 22.2) in May and June 1944. For more on the* Yanagi *missions and* I-8*'s atrocity, please see attachment H-033-1.*

USS Parche *and Commander "Red' Ramage's Medal of Honor, 31 July 1944*

Commander Lawson P. "Red" Ramage would be the first submarine officer in World War II to be awarded a Medal of Honor that wasn't posthumous, for a legendary night surface attack on a Japanese convoy while in command of USS *Parche* (SS-384) on 31 July 1944. Following presentation of the Medal of Honor, Ramage created a certificate for his crew that stated, "The Captain wishes to emphasize the fact that the Medal of Honor was accepted from the President of the United States as the Nation's tribute to a fighting ship and her courageous crew. He feels that every officer and man whose loyal cooperation and able assistance contributed to the success of the *Parche* has an equal share in this award, which he holds in trust for you. With great pride and respect, Sincerely L. P. Ramage." That was the kind of leader "Red" Ramage was. In a wild nighttime *close-quarters melee in the midst of a Japanese*

convoy, Parche *sank and damaged several ships, including sending the troopship* Yoshino Maru *to the bottom with the loss of 2,495 troops and crew. This, in turn, contributed to the devastating losses of troops suffered by the Japanese in 1944 due to U.S. submarine attacks that would ultimately virtually paralyze the Japanese army. For more on Parche's heroic action, please see attachment H-033-2.*

Damage resulting from the 17 July 1944 ammunition explosion at Port Chicago Naval Magazine, California. This view looks north toward Suisun Bay, showing the wreckage of Building A-7 (Joiner Shop) in the center and the munitions pier beyond. Note bulldoze and damaged automobiles in the foreground, railway crane at left, and scattered pilings (NH 96823).

Port Chicago Disaster and Mutiny, 17 July 1944

On 17 July 1944, a massive explosion on Pier No. 1 at the U.S. Naval Magazine, Port Chicago, California (on Suisun Bay, northeast of San Francisco Bay), obliterated the cargo ship SS E. A. Bryan *(which had about 4,600 tons of explosives on board) at the pier, tore apart and sank the SS* Quinault Victory *on the other side of the pier, and destroyed a U.S. Coast Guard fire barge. The huge blast killed 320 people and injured 390. The dead included 241 Navy personnel, one Marine, five Coast Guardsmen (on the fire barge), and 73 civilians. Most of the Navy personnel killed were enlisted African-American stevedores (202), as were 233 of the wounded.*

The Navy board of inquiry was unable to determine a cause of the blast, yet exonerated the white officers of any blame (there were no black officers then), implying that somehow the accident was the fault of the black enlisted stevedores. With the cause unknown, and no new safety procedures implemented, the black stevedores were ordered to resume ammunition loading. Several hundred (initially 328, then 258) of them balked in what came to be known as the "Port Chicago Mutiny," and eventually 50 of the black Sailors were convicted of incitement to mutiny at court-martial (initially receiving sentences of 15 years hard labor, which were significantly reduced on appeal and with the end of the war). Serious questions about the fairness of the trial were raised at the time (some by NAACP lawyer Thurgood Marshall, who went on to become the first black U.S. Supreme Court Justice) and the entire proceeding remains controversial to this day.

The Port Chicago disaster did spur U.S. Navy leadership (led by CNO Admiral Earnest J. King) to accelerate the integration of blacks into more and more jobs in the Navy, including as officers, and, along with the Pearl Harbor West Loch disaster in May 1944, it resulted in massive overhaul of procedures and training for ammunition handling. For more on the Port Chicago disaster and mutiny, please see "The Port Chicago Disaster, 17 July 1944: Leadership Lessons Learned" by NHHC historian Dr. Regina Akers and the NHHC "Port Chicago Naval Magazine Explosion" overview.

Tinian, 24 July 1944. Marines wade ashore on a landing beach (USMC 87236).

Operation Forager, Part 2: The Invasion of Tinian, 24 July 1944

Marine Lieutenant General Holland M. "Howling Mad" Smith, commander of V Amphibious Corps, described the U.S. landings on Tinian as "the perfect amphibious operation in the Pacific War." Close, but not quite: A Japanese shore battery hit the battleship USS Colorado *(BB-45) with 22 6-inch rounds in a few minutes, killing 50 men and wounding almost 200, while also hitting the destroyer* Norman Scott *(DD-690) six times, killing 22 (including the commanding officer) and wounding 50. No Japanese shore battery inflicted greater casualties in the entire war. Yet* Norman Scott *continued to fire on targets.* Colorado *stood firm and took out the offending shore battery, with assistance from other U.S. ships that attacked rather than retreated in the face of the enemy fire. This occurred during a deception effort to keep the Japanese from shifting forces to where the actual audacious high-risk landings were taking place on confined beaches on 24 July 1944. In the assault and subsequent operations, 41,000 Marines wiped out the 8,000 Japanese defenders almost to the last man, at a cost of 326 killed and about 1,600 wounded. Even before the island was declared secure on 1 August 1944, 15,000 U.S. Navy Seabees were already turning it into a massive airfield with six 6,900-foot runways from which B-29 Superfortress bombers would commence bombing Japan in November 1944. Hundreds of thousands of Japanese civilians would pay with their lives for their government's folly. For more on the landings on Tinian, please see attachment H-033-3.*

50th Anniversary of the First Moon Landing

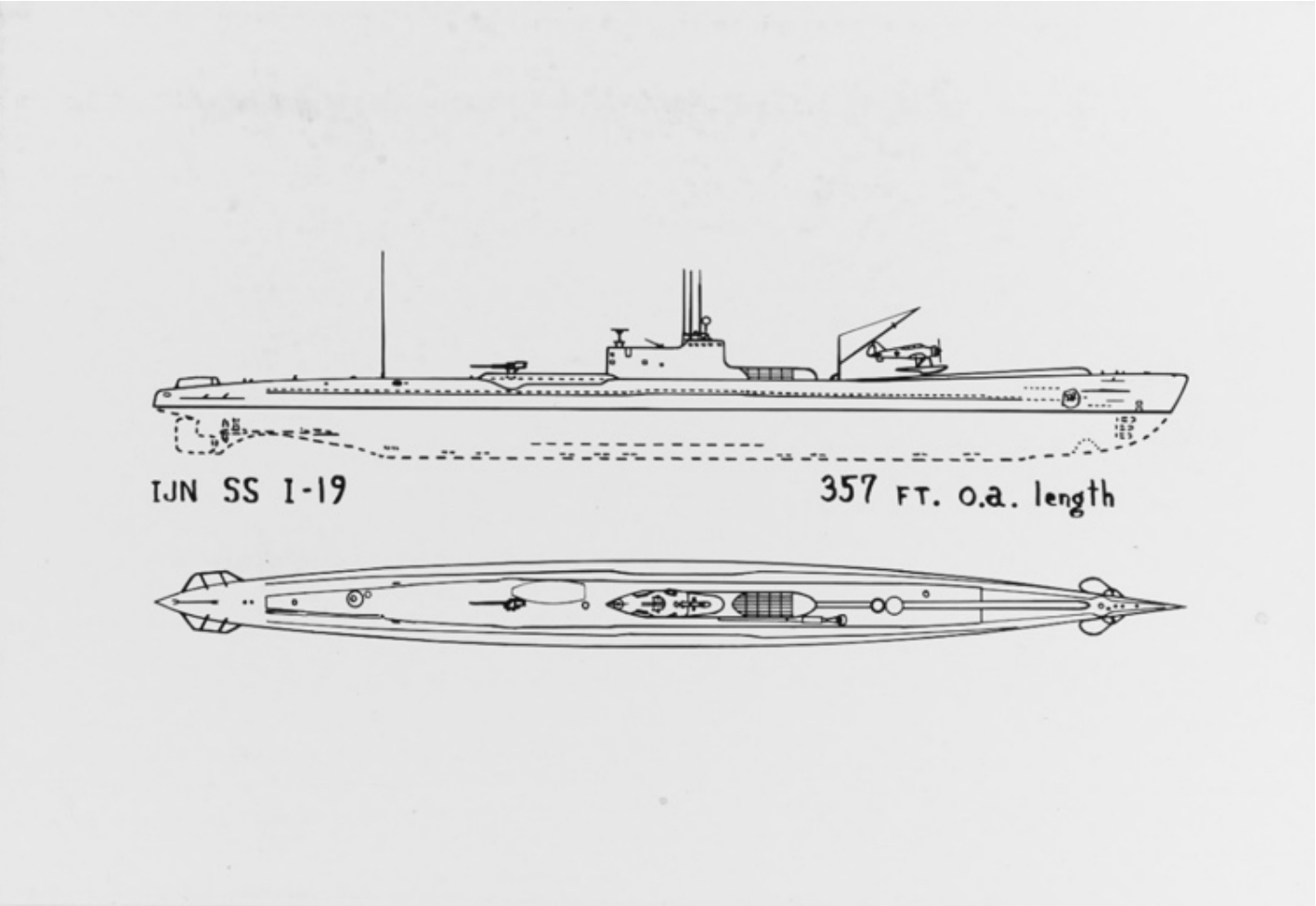
"We came in peace, for all mankind," 20 July 1969

On 5 September 1951, Navy pilot Ensign Neil Armstrong was flying an armed reconnaissance mission west of Wonson, North Korea, when his F9F-2 Panther probably hit a cable strung between hilltops as an aerial "booby trap," shearing off six feet of his right wing. Although Armstrong was able to nurse the plane back over water, he was forced to eject, and the wind blew his parachute back over land, fortunately in territory held by U.S. forces, where he was rescued and returned to the carrier USS Essex (CVA-9). Seventeen years later on 20 July 1968, Neil Armstrong, as mission commander of Apollo II, would become the first man to set foot on the moon, with the immortal (and possibly garbled) words, "That's one small step for [a] man, one giant leap for mankind." On 24 July, Apollo 11 splashed down in the Pacific and Armstrong, "Buzz" Aldrin, and Michael Collins were recovered by Essex's sister, USS Hornet *(CVS-12). For more on Neil Armstrong's U.S. Navy service and the important role of the U.S. Navy in America's manned space flight program, please see attachment* H-033-4.

100th Anniversary of World War I

Forgotten Valor: USS Richard Bulkeley, *12 July 1919*

The mines didn't know the war was over. On 12 July 1919, the minesweeper USS Richard Bulkeley *was sweeping one of the over 56,000 mines laid by the U.S. Navy in the North Sea mine barrage in 1918, when one of the Mark 6 mines caught in her sweep gear exploded. The commanding officer of Richard Bulkeley, Commander Frank Ragan King, would be awarded a posthumous Navy Distinguished Service Medal (the second highest award for valor at the time) for his heroic actions in trying to save his crew in the seven minutes it took the ship to sink, including giving away his own life preserver to a stunned junior Sailor. Six other crewmen were lost with the ship and twelve were rescued. For more on the North Sea mine barrage and the sinking of Richard Bulkeley, please see attachment H-033-5.*



World War II U.S. Navy schematic of Japanese I-15 *(Type B1) class submarine. Most of the Japanese* Yanagi *missions were undertaken by floatplane-equipped Type B1 boats (NH 111756).*

H-033-1: Yanagi Missions and Submarine Atrocities

H-Gram 033, Attachment 1

Samuel J. Cox, Director NHHC

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During World War II, Japan was allied with Nazi Germany and Fascist Italy under the Tripartite Pact (also known as the Berlin Pact) signed on 27 September 1940. It was technically a "defensive" alliance, which was one reason the Japanese didn't declare war on the Soviet Union after Hitler invaded in June 1941. (The other was that the Japanese had been decisively defeated and suffered thousands of casualties in a series of clashes with Soviet troops along the border between Japanese-occupied Manchuria and Soviet-allied Mongolia in an undeclared war in 1939.)

As a later revision of the pact, there was agreement among the signatories to share technologies. However, the Germans viewed this provision as mostly a one-way street (although even they were surprised by Japanese torpedo technology). In addition, the Germans charged the Japanese exorbitant sums of money (tons of gold) for German technology and, for the most part, the Japanese had to come get it. Transfer of technology (along with strategic material) via surface ship quickly became a non-starter. The result was a series of submarine missions from Japan to German-occupied France intended to return to Japan with advanced German technology. Only one round trip was successful.

A significant factor in the failure of the so-called *Yanagi* ("Willow") missions was that much of the

coordination was conducted via German and Japanese diplomatic communications, which U.S. and British intelligence were reading almost as fast as the Germans and Japanese. As a result of this and extensive Allied radio intelligence, the *Yanagi* missions were compromised to the point that the Allies strived to not overplay their hand and give away the knowledge that the Japanese and German codes were being broken.

First Yanagi *Mission:* I-30

On 9 February 1943, the German submarine *U-180* (a Type IXD1 cargo-configured combat submarine) departed Kiel, Germany, with a cargo that included the leader of the anti-British Indian National Army, Netaji Subhas Chandra Bose, and his aide. Chandra Bose had become disillusioned that Germany would be of much use in gaining Indian independence from the British and hoped to gain better support from the Japanese.

After sinking a British tanker off the coast of South Africa, *U-180* rendezvoused with the Japanese submarine *I-29*in the Mozambique Channel on 26 April 1943. In a difficult rough sea operation over two days using rubber boats and open torpedo tubes (the skipper of *I-29* described it as "a dive bomber's dream come true"), *I-29* transferred 11 tons of cargo to *U-180,* including two tons of gold as payment for previous transfer of German technology, plus four torpedoes, blueprints for the carrier *Akagi* (to assist the Germans with the *Graf Zeppelin*, their carrier under construction), and plans for the Type A midget submarine (used at Pearl Harbor). *U-180* transferred blueprints for the Type IXC/40 submarine, quinine samples (to assist the Japanese with anti-malaria drugs), various other weapon and radar technology, as well as the two Indians. This is believed to be the only transfer of civilians between submarines of two different navies during the war.

U-180 successfully returned to Germany. *I-29* gave British intelligence the slip and dropped the two Indians off at Sabang, Sumatra, instead of the planned drop-off at Penang. The Indians were flown to Tokyo and met with Japanese Prime Minster Hideki Tojo and Emperor Hirohito. Bose would lead the Indian National Army (composed mostly of Indian troops of the British Indian Army who had been captured by the Japanese and then sided with their captors) in action against British forces in India in 1944, but would be decisively defeated. He subsequently died as a result of burns in a plane crash on Formosa.

U-511*'s Mission*

On May 1943, the German submarine *U-511* "Marco Polo I" departed Lorient with a cargo that included the German ambassador to the Japanese puppet-government in China, the Japanese representative to the Tripartite Commission (Vice Admiral Naokuni Nomura), and German scientists and engineers bound for Japan. While en route, *U-511* sank two unescorted U.S. Liberty ships in the Indian Ocean, the SS *Sebastion Cermeno* on 27 June 1943 and SS *Samuel Heintzelman* (carrying ammunition) on 9 July 1943. None of *Heintzelman*'s crew of 75 survived when the ship blew up. On 16 July 1943, *U-511* reached Penang, Malaysia, the first of a number of German U-boats (designated the "*Monsun Gruppe*") that would operate from Penang in 1944 and 1945 with grudging support from the Japanese (I'll cover this in a future H-gram, as two of them were sunk by U.S. submarines).

Despite being accidentally fired upon by a Japanese convoy escort, *U-511* reached Kure, Japan, on 7 August 1943 and was turned over to Japan on 16 September, and re-designated *RO-500*. The Japanese conducted trials with *RO-500* but were unimpressed by what they evaluated as low underwater speed, unreliable diesel engines, inadequate ventilation and cooling, and limited range. Some elements of the design were incorporated into new Japanese submarines. (Upon the surrender of Japan in August 1945, *RO-500* sided with a rebel faction and sortied with the intent to continue fighting the Soviets. However, a Japanese floatplane tracked her down and convinced her crew to return to Japan and surrender on 18 August. She was handed over to the United States in September 1945 and

deliberately scuttled off Japan in April 1946 to prevent technology from falling into Soviet hands).

The Italian Connection

Italy was allied with Nazi Germany during the first years of World War II. Upon the fall of France in June 1940 after the German *Blitzkrieg* offensive, the Italian navy established a submarine base at Bordeaux on the Atlantic coast of France so that Italian submarines could assist the Germans in attacking Allied shipping in the North Atlantic. Known by the acronym BETASOM, the Italians initially based 28 submarines at Bordeaux beginning in September 1940. These were augmented by four more in May 1941 that had previously been based in Italian East Africa (Ethiopia, Somalia) that came around the Cape of Good Hope after the British defeated the Italians in East Africa. The Italian submarines operating from Bordeaux were not especially effective, sinking 109 Allied ships for a loss of 16. However, the Italian submarines were larger than German submarines and had greater endurance, which made them attractive (to the Germans) for conversion into long-range cargo submarines, better suited for missions to transport strategic material to and from the Far East. As a result, the Italian navy converted seven of the BETASOM submarines to a transport configuration, with deck guns removed and torpedo tubes converted to fuel tanks.

The first Italian mission to the Far East commenced on 11 May 1943, when *Commandante Cappellini* departed Bordeaux with a cargo of 160 tons of mercury, aluminum, bombsights, tank blueprints, bomb prototypes, and other small advanced military equipment. Although battered by heavy seas around the Cape of Good Hope, the boat reached Sabang, Sumatra, on 9 July 1943, and then Singapore on 13 July, where her cargo was unloaded and she took on a cargo of tin, rubber, quinine, opium, and spices for the return voyage.

However, on 9 September 1943, Italy surrendered to the Allies. *Capellini* attempted to escape, but the Japanese prevented it, although the Italian skipper threatened to blow up the sub if the Japanese attempted to board. After negotiation, some of the Italian crew was interned by the Japanese while others agreed to continue to fight on the side of the Axis. *Capellini* was re-commissioned in the German navy as *UIT-24* and, on 8 February, departed Penang, Malaysia, with her original cargo and a mixed German and Italian crew. However, the German oiler/supply ship in the Indian Ocean, *Brake*, was scuttled after being attacked by a British destroyer, forcing *UIT-24* to return to Penang due to insufficient fuel. A second return attempt was also aborted. When the Germans surrendered in May 1945, the Japanese took control of the submarine and re-designated her as *I-503*, becoming one of two submarines to sail under the flag of all three Axis nations. She was surrendered to the United States at the end of the war and scuttled in 1946.

Giuliani departed Bordeaux on 16 May 1943 and reached Singapore on 1 August 1943. The submarine was taken over by the Germans, redesignated *UIT-23,* and commenced a return trip on 15 February 1944, only to be torpedoed and sunk by British submarine HMS *Tally-Ho* several days later. The next attempts by the Italians didn't go well. *Tazzoli* departed Bordeaux on 21 May 1943 and was almost immediately sunk in the Bay of Biscay by Allied aircraft. *Barbarigo* departed on 17 June 1943 and was also sunk by Allied aircraft before getting very far in the Bay of Biscay. However, *Torelli* sailed on 18 June 1943 and reached Penang on 27 August. *Torelli* was also taken over by the Germans and re-designated *UIT-25*. When the Germans surrendered, the Japanese took her over as *I-504*, sailing with a mixed Italian, German, and Japanese crew. *I-504* is believed to have shot down the last U.S. aircraft during the war, a B-25 bomber, technically after the Japanese had surrendered. *Ammiraglio Cagni* departed Bordeaux in early July 1943, but surrendered to the Allies at Durban, South Africa, when the Italian armistice was announced. *Cagni* was the last Italian submarine to make the attempt to reach the Far East.

Second Yanagi *Mission: I-8*

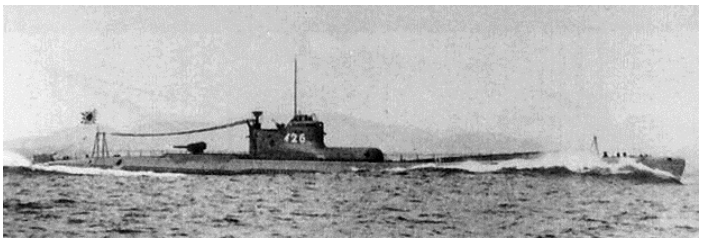
On 1 June 1943, the Japanese submarine *I-8* departed Kure on the second *Yanagi* mission. *I-8* would be the only Japanese submarine to complete a round trip. The boat carried 160 personnel including a second 49-man crew intended to man the German Type IXC/40 submarine *U-1224* "Marco Polo II" upon arrival in Germany. On 27 June, *I-8* departed Penang with a cargo of tungsten, rubber, tin, quinine, probably medicinal opium, and blueprints for the Type 95 torpedo. Upon rounding the Cape of Good Hope, *I-8* was battered by severe storms, which damaged her aircraft hangar. In August, *I-8* rendezvoused with *U-161* south of the Azores and took on a new German radar detector as well as a German officer and two petty officer radiomen to assist with the entry to German-occupied France, arriving there on 31 August. *U-161* was subsequently lost, with the three Germans on *I-8* being the only survivors of *U-161*'s last patrol.

On 5 October 1943, *I-8* departed Brest, France, with a cargo that included a *Schnellboot* (E-boat) engine, radars, sonar equipment, aircraft guns and anti-aircraft guns, bombsights, electric torpedoes, and naval chronometers. Passengers included a Japanese rear admiral and a captain (former naval attachés to Germany and France), three other German naval officers, one German army officer, several radar and hydrophone technicians, and four civilians. After crossing the equator, *I-8* transmitted a report that was fixed by Allied high-frequency direction finding (HFDF), resulting in an aircraft attack that was unsuccessful. *I-8* arrived in Penang on 2 December 1943 and Kure on 21 December 1943 after an otherwise uneventful transit. On 21 February 1944, under a new commanding officer, Commander Tatsunosuke Ariizumi, *I-8* departed Kure en route the Indian Ocean to raid Allied commerce.

Third Yanagi *Mission: I-34*

On 13 October 1943, Japanese submarine *I-34* departed Kure on the third *Yanagi* mission. Diplomatic traffic between Germany and Japan about her mission was intercepted and decoded. *I-34* arrived in Singapore to pick up a cargo of tin, tungsten, raw rubber, and medicinal opium, along with Rear Admiral Hideo Kojima (naval attaché–designate to Germany) and several other passengers. The cargo load upset *I-34*'s trim, preventing her from being able to crash dive. With *I-34*'s departure delayed in order to fix the problem, Kojima opted to take the train to Penang and wait for *I-34* there. However, waiting for *I-34* outside Penang, alerted by sanitized Ultra intelligence message, was British submarine HMS *Taurus*.

On 13 November 1943, *Taurus* sighted *I-34* outside Penang, and fired six torpedoes, one of which hit *I-34* just below the conning tower, sinking her, and killing 84 of her crew. Twenty Japanese sailors survived trapped in the forward compartment and were able to escape the sunken submarine; 14 were ultimately rescued. *I-34* was the first Japanese submarine to be sunk by a British submarine. The next day, Japanese sub chaser *CH-20* attacked *Taurus*, causing *Taurus* to hit bottom and stick in the mud. However, *CH-20*'s depth-charge attack dislodged *Taurus* from the mud, whereupon the submarine surfaced and engaged *CH-20* with her deck gun, severely damaging the vessel before a Japanese plane drove *Taurus* back under.



Imperial Japanese Navy Type B1 submarine (here, I-26*) underway. Note floatplane hangar in front of the island and the launching catapult ramp on the foredeck (former Imperial Japanese Navy photo).*

Fourth Yanagi *Mission:* I-29

On 10 October 1943, Commander Takakazu Kinashi assumed command of *I-29* in preparation for the fourth *Yanagi* mission. Kinashi had previously served as commanding officer of *I-19* and had sunk the U.S. carrier *Wasp*(CV-7) southeast of Guadalcanal on 15 September 1942. With the same spread of torpedoes, Kinashi had damaged the battleship *North Carolina* (BB-55), forcing her to return to Pearl Harbor for several months of repair, and had also damaged the destroyer *O'Brien* (DD-415), which

broke apart and sank a month later while attempting to reach Pearl Harbor for repair.

On 5 November 1943, *I-29* departed Kure for Singapore, where she embarked a cargo of rubber, tin, tungsten, zinc, quinine, opium, and coffee. While *I-29* was in Singapore, *I-8* arrived from her successful transit from Brest, France, and transferred the German radar detector to *I-29*. *I-29* also embarked 16 passengers, including Rear Admiral Kojima, who by quirk of fate had avoided going down with *I-34*. *I-29* departed Singapore on 16 December 1943 and refueled from a small German supply ship in the Indian Ocean on 23 December. Allied codebreakers were able to determine *I-29*'s location several times, but no assets were able to intercept.

On 16 February 1944, *I-29* rendezvoused with *U-518*, taking aboard three German technicians and two new kinds of radar detector. On 4 March 1944, *I-29* was unsuccessfully attacked at night by a patrol plane off Cape Finisterre, Spain. On 10 March, *I-29* picked up an escort of two German destroyers and two torpedo boast, along with air cover provided by five twin-engine Ju-88C-6 fighter-bombers. Tipped off by intelligence, the Royal Air Force attacked with two specially configured Mosquito fighter-bombers (armed with 57-mm cannon in the nose), escorted by four other Mosquitos, which engaged the German air escorts. One Ju-88 was shot down and the British claimed to have damaged *I-29*. Later in the day, ten more British aircraft attacked, including Beaufighter flak-suppressors and B-24 Liberator bombers, but all bombs missed *I-29*.

On 11 March 1944, *I-29* safely arrived in Lorient. While the submarine remained in Lorient, Kinashi was invited to Berlin, where Adolf Hitler presented him with the German Iron Cross 2nd Class for sinking *Wasp*. (*U-518* would be sunk in April 1945 on her tenth war patrol by hedgehogs from destroyer escorts USS *Carter* (DE-112) and *Neal A. Scott* (DE-769).

On 16 April 1944, *I-29* departed Lorient, after her Japanese anti-aircraft guns had been replaced by German guns. *I-29*'s cargo included an HWK-509A-1 rocket motor (used on the Me-163 *Komet* rocket-powered fighter interceptor) and a Jumo 004B jet engine (used on the Me-262 *Schwalbe* jet fighter). In addition, *I-29* carried drawings of a torpedo boat engine, a V-1 "buzz bomb" fuselage, TMC acoustic mines, bauxite, mercury-radium amalgam, and possibly uranium-235 "yellowcake." *I-29* also embarked 14 Japanese and 4 German passengers. In June 1942 in the South Atlantic, *I-29* passed *I-52* (the fifth *Yanagi* mission) heading the opposite direction, although the two did not communicate with each other.

On 14 July, *I-29* arrived at Singapore and debarked her passengers, who took the blueprints and drawings ashore, but most of the cargo remained on board. On 15 July, Allied codebreakers intercepted a message that indicated *I-29* had arrived in Singapore the day prior. Additional messages were intercepted that detailed *I-29*'s special cargo. On 20

German navy Type IXC/40 submarine U-1224 *is commissioned as the Imperial Japanese Navy's RO-501, Kiel, Germany, 28 February 1944. At left is* RO-501*'s commanding officer, Lieutenant Commander Sadatoshi Norita (former German navy photo).*

July, *I-29* transmitted a message with her detailed schedule for transit to Japan. The signal was intercepted and decoded by Fleet Radio Unit Pacific (FRUPAC) in Hawaii (successor organization to Commander Joe Rochefort's Station Hypo of Midway fame), which alerted Commander, Submarine Forces Pacific (COMSUBPAC). COMSUBPAC sent an Ultra message to Commander D. W. Wilkins, commodore of a wolfpack ("Wilkins' Wildcats"), which included submarines *Tilefish* (SS-307), *Rock* (SS-274), and *Sawfish* (SS-276), to intercept *I-29* in the Luzon Strait.

Before departing Singapore on 22 July, *I-29* embarked ten cadets from the submarine and navigation school. On 25 July, *I-29* sighted a U.S. submarine, but continued en route Japan. On the evening of 26 July, at the entrance to Luzon Strait, *I-29* was spotted running on the surface at 17 knots by *Sawfish,* under the command of Commander Alan A. Banister, on her seventh war patrol and his second war patrol in command. *Sawfish* fired four torpedoes at *I-29*, which were spotted by Japanese lookouts, but too late for Kinashi to take effective countermeasures. *I-26*was struck by three torpedoes (which worked) and sank almost immediately. Three Japanese crewmen were blown overboard, but only one survived to reach a small Philippine island; 105 crew and passengers were lost with *I-29*.

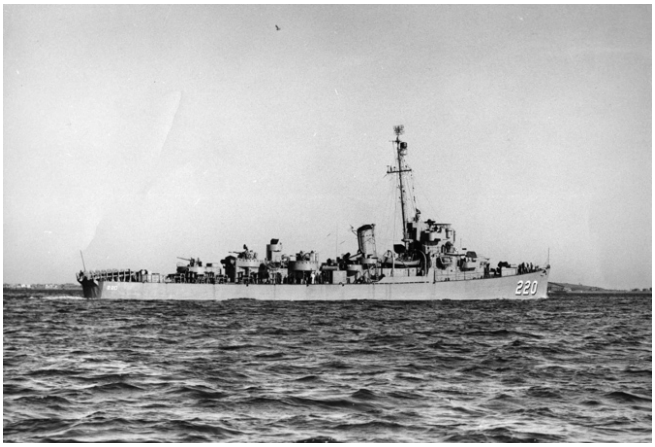
USS Bogue *(CVE-9) underway in the Puget Sound, Washington, 3 November 1942 (NH 106563).*

The loss of the rocket motor and jet engine on *I-29* set back Japanese programs for rocket and jet aircraft, which included the Mitsubishi J8MI *Shusui* "Sword Stroke" (Me-163–inspired) and the Nakajima *Kikka* "Orange Blossom" (Me-262–inspired). The blueprints did make it to Japan, but neither aircraft conducted test flights until July and August of 1945, when it was too late. (Like Hitler and the Me-262, the Japanese wanted to use the *Kikka* as a jet bomber instead of a fighter, even as the Me-262 used as a fighter was having devastating effect on Allied bombers in Europe, but too little, too late). Japanese navy policy was to advance an officer killed in battle one grade, but Kinashi was accorded the rare honor of being posthumously advanced two grades, to rear admiral. Commander Banister was awarded the first of two Navy Crosses.

RO-501 *"Marco Polo II" Mission*

When *I-8* arrived at Brest on 31 August 1943, Lieutenant Commander Sadatoshi Norita disembarked with a 48-man crew and travelled to the Baltic Sea to train at the German U-boat training school facilities, and then to man and work up a new Type IXC/40 submarine, *U-1224*, which was formally transferred to the Imperial Japanese Navy during a ceremony at Kiel on 15 February 1944. The submarine was then commissioned into the Japanese navy on 28 February 1944 and redesignated *RO-501* "Marco Polo II."

On 30 March 1944, *RO-501* departed Kiel with a cargo of mercury, lead, steel, uncut optical glass,



USS Francis M. Robinson *(DE-220) (L45-102.03.03).*

aluminum and drawings, models and blueprints necessary to construct a Type IXC/40 submarine. In addition, *RO-501*carried a full set of Me-163 rocket-powered interceptor blueprints. Also embarked was

Captain Testsushiro Emi, who had made the at-sea transfer from *I-29* to *U-180* in the Mozambique Channel in April 1943, as well as a German radar operator and a German pilot. The next day, *RO-501* arrived in Norway to embark fuel and supplies, departing on 1 April 1944 in company with *U-859*. On 11 May 1944, Norita sent a coded signal indicating *RO-501* had been chased for two days. This signal was fixed by the Allied HFDF network and was the last one *RO-501* would send.

On 13 May 1944, the USS *Bogue* (CVE-9) hunter-killer task group (TG 22.2) was operating in the vicinity of *I-52*'s track (not by accident) 500 nautical miles west of the Cape Verde Islands. Under the command of Captain Aurelius B. Vosseler, TG 22.2 consisted of the escort carrier *Bogue* and five destroyer escorts of Escort Division 51. At 1900, *Francis M. Robinson* (DE-220), having just joined TG 22.2 on 2 May, detected a submarine sonar contact at a range of 825 yards, causing *Bogue* to immediately turn away and *Robinson* to stream a "Foxer" noisemaker to decoy any German acoustic torpedoes that might have been fired. *Robinson* then fired a salvo of 24 hedgehog projectiles ahead of the ship and fired five salvos of new Mark 8 magnetic influence depth charges (which proved to be unreliable and were not used operationally in great numbers). The result was four underwater explosions, presumed to be destruction of a German submarine, which actually proved to be *RO-501*, lost with all aboard. However, as late as 22 June 1944, U.S. intelligence did not know that *RO-501* had actually been sunk.

U-859, which departed in company with *RO-501*, transited to the Indian Ocean en route Penang to join with the German *Monsun Gruppe*. Along the way, she sank three ships, including the unescorted U.S. Liberty ship SS *John Barry*, which was transporting a cargo of three million silver coins (minted in America) from Aden to Ras Tanura, Saudi Arabia, as part of a U.S. agreement with the Saudi royal family to pay workers at the new ARAMCO oil refinery. Two crewmen were killed on board. Rumors quickly spread that she was carrying an even greater cargo of silver bullion, making her one of the most famous "lost treasure ships" of the 20th century, and a large effort in 1994 did succeed in recovering 1.3 million of the coins.

U-859 met a worse fate. Tipped off by intercepted and decoded communications, British submarine HMS *Trenchant* was awaiting *U-859*'s arrival off Penang, and hit her with one torpedo. *U-859* sank in 160 feet of water with the loss of 48 of her crew including her skipper. Twenty crewmen survived trapped on the submarine, but made it to the surface; eleven were rescued by *Trenchant* and the other nine by the Japanese the next day.

Fifth Yanagi *Mission: I-52*

As *I-29* arrived in Lorient, *I-52* commenced the fifth Yanagi mission on 10 March 1944, departing Kure with two tons of gold and 14 Japanese engineers and technicians en route to Germany. Arriving in Singapore on 21 March, *I-52* took on additional cargo of tin, tungsten, raw rubber, molybdenum, quinine, opium, and caffeine, and departed on 23 March. After passing the Cape of Good Hope on 15 May, the skipper of *I-52* transmitted his first message to the Germans, which was intercepted and decoded by the F-211 "Secret Room" of U.S. Tenth Fleet and shared with the F-21 Submarine Tracking Room.

On 22 May, German submarine *U-530* departed Lorient to rendezvous with *I-52*. On 2 June, the USS *Bogue*hunter-killer group departed Casablanca, French Morocco, earlier than originally planned. On 6 June 1944, the Japanese naval attaché in Berlin, Rear Admiral Kojima (who had arrived on *I-29*) signaled Tokyo and *I-52* that the Allies had landed in Normandy, and that *I-52* should prepare to divert to Norway should Lorient fall before she arrived. He also passed a date and location for *I-52* to rendezvous with *U-530*. This message was intercepted and decoded as well. Another message from the Japanese embassy in Berlin was intercepted and decoded by the Fleet Radio Unit (FRUMEL) in Melbourne, Australia, which included time of the rendezvous. On 15 June, the *Bogue* group was ordered to intercept and destroy the *I-52* and *U-530* at the planned rendezvous location.

At 2115 on 23 June, exactly as planned, *I-52* and

U-530 rendezvoused 850 nautical miles west of the Cape Verde Islands. A German officer and two German radio operators transferred to *I-52*. The transfer of a radar detector went awry when it fell into the sea, but a Japanese sailor jumped in and saved it before it sank. At 2339, a TBF-1C Avenger of Composite Squadron 9 (VC-9) embarked on *Bogue* gained radar contact on *I-29* running on the surface. Pilot Lieutenant Commander Jesse D. Taylor dropped flares to illuminate the target, followed by two Mark 54 (354-pound) depth bombs, which *I-52* evaded and then submerged. Taylor then dropped a field of new secret sonobuoys and tracked the submarine before dropping a Mark 24 "mine," which was a secret cover term for the new top secret "Fido" acoustic-homing torpedo, which resulted in a loud explosion.

A second Avenger arrived on scene and dropped more sonobuoys, detected the sound of screws, and dropped a second Fido, and the submarine was heard breaking up. However, in an unexplained anomaly, a German radio station received a garbled report on 30 June indicating *I-52* was 48 hours from arrival, and German minesweeper escorts were dispatched to meet her. However, *I-52* never arrived, and was lost with all 95 crew, 14 passengers, and three German navy personnel. The wreck of *I-52* was found by American researchers in 1995 in the general location (off by "tens of miles") of the aircraft attacks. Later analysis of the acoustic data suggested that the first Fido sank *I-52* and what the second Avenger heard were *U-530*'s screws at some significant distance. *I-52* was the last Japanese attempt to reach Europe by submarine.

Bogue, along with her escorts, was the first and the most successful of the U.S. anti-submarine hunter-killer task groups, accounting for 13 enemy submarines sunk in the Atlantic, two of them Japanese. The *Bogue* group would be awarded a Presidential Unit Citation and Captain Voseller would receive a second Legion of Merit.

U-530 returned to port, concluding her sixth war patrol. On her seventh war patrol, which coincided with the German surrender in May 1945, the submarine did not surrender as ordered, and showed up in Argentina on 10 July 1945. Although the Argentine naval ministry issued an official communiqué stating that no high-level Nazis were on board, that did not stop decades of conspiratorial speculation that Adolf Hitler and Eva Braun had escaped in disguise to Argentina along with other high ranking Nazis. This was fueled by anomalies in the voyage such as the missing submarine's log, lack of crew identification, and the facts that the deck gun had been jettisoned and it had taken the boat two months to get to Argentina.

I-8 *Atrocities*

On 19 March 1944, Japanese submarine *I-8*, the only submarine to successfully complete a round-trip *Yanagi*mission, departed Panang and commenced an Indian Ocean patrol under the command of Commander Tatsunosuka Ariizumi. On 26 March 1944, *I-8* torpedoed and sank the Dutch freighter *Tjisalak* 600 nautical miles southwest of Columbo, Ceylon (now Sri Lanka). The survivors were taken aboard *I-8*, where 98 crew and passengers were massacred by swords and clubbing with wrenches and sledgehammers before being shot and thrown in the water. Japanese crewmen machine-gunned anyone who managed to jump overboard. Only five men managed to survive to be rescued by an American freighter.

On 31 March 1944, the E9W1 "Slim" floatplane from *I-8* spotted the British armed merchant *City Of Adelaide* and vectored the submarine to intercept. After dark, I-8 hit *City Of Adelaide* with one torpedo. The ship sent a distress signal and was abandoned, but refused to sink. *I-8* surfaced and sank the ship with gunfire, but could not find any of the lifeboats in the darkness, and the survivors were rescued a couple days later.

On 11 April, *I-8* attacked the U.S. 10,400 ton T-2 tanker SS *Yamhill*, transiting from Bahrain to Freemantle alone with a cargo of oil intended for U.S. submarines. *I-8* fired four torpedoes at *Yamhill* in succession at four-minute intervals, but two passed down her starboard side and two down her port side, giving *Yamhill* time to radio a distress signal. Finally, *I-8* surfaced about 11,000 yards from the tanker and commenced what turned into a 12-

hour chase as *Yamhill* made a run for it. Although *I-8*'s deck gun was larger (5.5-inch) than *Yamhill*'s bow-mounted, Navy-manned 5-inch gun, the higher mounting gave *Yamhill* a slight range advantage that helped keep *I-8* at bay, with the submarine firing 20 rounds and *Yamhill* firing 38 rounds. Finally, a Royal Air Force PBY Catalina from the Maldive Islands showed up, forcing *I-8* to submerge and enabling *Yamhill* to escape during the night.

On 29 June, *I-8* hit the British armed passenger-cargo liner *Nellore* with two torpedoes as the vessel was en route from Bombay to Sydney with 174 passengers. *I-8* surfaced to sink *Nellore* with gunfire and took one gunner and 10 passengers prisoner (fates unknown). Of those on board *Nellore*, 79 were lost, including 35 sailors, 5 gunners, and 39 passengers. Ten of the survivors sailed a lifeboat 2,500 nautical miles to Madagascar, while 112 survivors were rescued by a Royal Navy frigate.
On 2 July, the unescorted U.S. Liberty ship SS *Jean Nicolet* was transiting from Bombay to Sydney, when she was hit by two torpedoes from *I-8* about 700 nautical miles south of Ceylon. *I-8* then surfaced and sank the ship with gunfire, forcing the 99 survivors onto the deck of the submarine, where they were bound in pairs. Commander Ariizumi then ordered the master, the radio operator (who had gotten off a distress call), and one civilian be taken below. Then, with the encouragement and participation by Ariizumi, the survivors were systematically made to run a gauntlet of crewmen with knives and pipes to be severely beaten, stabbed, and ultimately murdered, while *I-8* was destroying the lifeboats with gunfire.

When *I-8*'s radar detected an inbound aircraft, possibly responding to the distress call, the submarine submerged, leaving the bound survivors who hadn't been killed yet on deck to drown. Somehow, 23 survived to make it to a life raft to be rescued 30 hours later by HMS *Hoxa*. Of the three prisoners, the civilian Francis J. O'Gara was discovered alive in a prison camp in Japan at the end of the war; the others did not survive. O'Gara had been moved from Hiroshima only one month before the atomic bomb was dropped on the city. In the interim, a new Liberty ship was named *Francis O'Gara*, becoming the only Liberty ship to be named after a living person, albeit unknowingly. Of the 24 survivors, 10 were Merchant Marine seamen, 10 were U.S. Navy Armed Guard, and 4 (including O'Gara) were civilian. Of the 76 who died, 31 were Merchant Marine, 18 were U.S. Navy Armed Guard, 17 were U.S. Army passengers, 7 were U.S. Navy passengers, and 3 were civilians.

I-8 concluded her gruesome patrol on 14 August 1944. Although not an excuse for war crimes, thousands of Japanese sailors and soldiers were dying at the time as a result of U.S. submarine attacks. Four days before the atrocity on *I-8*, the U.S. submarine *Sturgeon* (SS-187) sank the Japanese troopship *Toyama Maru* off the Ryukyu Islands. Of 6,000 Japanese troops of the 44th Independent Mixed Brigade on board, over 5,400 died, the highest death toll of any ship sunk by a U.S. submarine (and the fourth highest of any ship sunk by a submarine of any nation. The two highest tolls were German ships packed with thousands of civilian refugees sunk by Soviet submarines, and the third highest was a Japanese "hell ship" crammed with thousands of Allied prisoners of war and native forced laborers unknowingly sunk by a British submarine).

I-8, under a new commander, was subsequently converted to carry four *Kaiten* manned suicide submarines, but never embarked any. On 31 March 1945 near Okinawa, the destroyer USS *Stockton* (DD-646) conducted seven depth charge attacks over four hours on *I-8*, expending all her depth charges, but failing to sink her. The destroyer *Morrison* (DD-560) arrived just as *I-8* surfaced, forcing her back under and then dropping a pattern of 11 depth charges that forced *I-8* back to the surface. There, for 30 minutes at a range of 900 yards, *I-8* fought with her deck gun before being sunk by *Morrison*. One unconscious gunner from *I-8* was rescued by *Morrison*.

Following his "successful" war patrol on *I-8*, Commander Ariizumi was promoted to captain and given command of Submarine Division 1. Arriizumi embarked on the *I-401*. The *I-400* class, of which three were completed before the end of the war, were the largest submarines in the world until the construction of ballistic missile submarines in the

1960s. Each I-400 could carry and launch (via catapult) three Aichi M6A *Seiran* high-speed torpedo-bomber floatplanes (which could drop the floats for even more speed, which, however, would preclude a recovery at sea). Allied intelligence was unaware of this aircraft until the war ended.

The Japanese planned to use the *I-400*s to mount a surprise attack on the Panama Canal, but this plan was scrapped in favor of one to use the planes to drop biological weapons on San Diego (Operation Cherry Blossoms at Night) in retaliation for the fire-bombing of Japanese cities. This operation was scheduled to be executed on 22 September 1945. In mid-1945, the Japanese became aware that a large U.S. naval force of over 15 carriers was gathering at Ulithi Atoll in the western Caroline Islands in preparation for the invasion of Japan. They devised a plan to conduct a surprise attack on the atoll, using the floatplanes of the *I-400*s and other Japanese submarines, disguised with American markings. The Japanese pilots objected to this deception as disgraceful, but were overruled. However, Japan surrendered before the Ulithi plan could be executed. Before surrendering, the Japanese submarines fired all their torpedoes and catapulted all the planes into the sea to destroy them.

I-401, with Ariizumi embarked, surrendered to the U.S. submarine *Segundo* (SS-398) on 29 August 1945 outside Tokyo Bay. *Segundo* put a five-man "prize crew" on board. The Japanese commander claimed that Ariizumi had committed suicide and his body had been put over the side through a hatch, although the prize crew never saw Ariizumi alive or dead, nor did they see any sign of a burial at sea, surreptitious or otherwise. This led to years of speculation that somehow Ariizumi had made it ashore and escaped justice and trial as a war criminal. Only three of the crewmen on *I-8* at the time of the atrocities survived the war. One was an English-speaking American Japanese who had been trapped in Japan when the war broke out and pressed into the Japanese navy. He was given immunity to testify against the others and was allowed to return to the United States. The other two were convicted of war crimes, but, since they had been very junior sailors, their sentences were commuted by the Japanese government in 1955.

U-180*'s Second Mission*

On 20 August 1944, *U-180* departed from Bordeaux, France, en route to Japan. She didn't get very far and is believed to have been sunk by a mine in the Bay of Biscay on 23 August. However, there is speculation that trouble with her own snorkel was the cause of her loss with all 56 hands.

U-864*'s Mission*

On 5 December 1944, the new Type IXD1 (cargo-configured combat submarine) *U-864* departed Kiel on a mission to carry cargo to Japan, code-named Operation Caesar. *U-864*'s cargo included Messerschmitt jet engine parts, V-2 ballistic missile guidance systems, and 65 tons of mercury. *U-864* subsequently grounded, damaging her hull, on the way to Bergen, Norway. The submarine pens at Bergen were then bombed by British aircraft, delaying repairs. By this time, British codebreakers had sufficient time to crack some of the messages and were by then well aware of *U-864*'s mission. The British submarine HMS *Venturer* was vectored to intercept.

On 6 February 1945, *U-864* was having engine and snorkel trouble, which caused the submarine to make a lot of noise. The skipper radioed that he would have to return to Bergen. *Venturer* detected *U-864* on sonar, began to track her, and then spotted her snorkel. Hoping that *U-864* would surface and enable a better shot, *Venturer*continued to trail *U-864* until the U-boat counter-detected her and began to take evasive zig-zag action. *Venturer* still managed to maintain trail of the submerged submarine for three hours before finally firing a spread of four torpedoes at the target. *U-864* counter-detected the torpedoes and maneuvered to avoid three of them, but was hit and sunk by the fourth, with the loss of all 73 aboard. This is the only known instance of one submerged submarine sinking another submerged submarine.

U-234*'s Mission*

On 25 March 1945, *U-234* made the last attempt by a German submarine to reach Japan. Originally built as a Type XB minelaying submarine, she was damaged during construction and completed as a long-range cargo submarine, with only two stern torpedo tubes. *U-234*'s cargo included a crated Me-262 jet fighter, an Hs-293 radio-controlled glide bomb, the newest German electric torpedoes, numerous technical drawings, and 1,210 pounds of uranium oxide. Passengers included a German general, four German naval officers, civilian engineers and scientists, and two Japanese naval officers, one of whom was Commander Hideo Tomonaga, one of the two Japanese officers transferred from *I-29* to *U-180* in April 1943 in the Mozambique Channel. After repairs due to a collision with another German submarine, *U-234* finally departed Kristiansand, Norway, on 15 April 1945.

On 10 May 1945, *U-234* received German Admiral Doenitz's order to surface and surrender. The skipper of *U-234*radioed that he would surrender in Halifax, Nova Scotia, and then set a course for Hampton Roads, intending to surrender to the Americans and destroying all his sensitive gear along the way. Upon learning of the intent to surrender, Tomonaga and the other Japanese officer committed suicide and were buried at sea. The destroyer escort USS *Sutton* (DE-771) intercepted and took command of *U-234* and brought her into Portsmouth Naval Shipyard. The exact purpose of the 1,210 pounds of uranium oxide remains unknown, as is what exactly happened to it, and its existence remained classified well into the Cold War. However, Japan did have cyclotrons and an atomic bomb project.

Sources include: NHHC *Dictionary of American Fighting Ships* (DANFS) for U.S. ships; combinedfleet.com for Japanese ships; uboat.net for German submarines; "Japanese Atrocities, SS JEAN NICOLET" at armedguard.com; and *Axis Blockade Runners of World War II* by Martin Brice, Naval Institute Press, 1981.

H-033-2: USS *Parche* and Commander "Red" Ramage's Medal of Honor

H-Gram 033, Attachment 2

Samuel J. Cox, Director NHHC

July 2019

Commander Lawson P. "Red" Ramage, USN, commanding officer of USS Parche *(SS-384), is awarded the Medal of Honor by President Franklin D. Roosevelt, 10 January 1945 (U.S. Navy).*

By mid-1944, U.S. submarines were taking an appalling toll on Japanese merchant shipping as well as sinking Japanese warships with regularity. This included deliberately targeting escorting destroyers, of which the Japanese were becoming critically short. By this time, the U.S. submarine forces had found fixes and work-arounds to the deficiencies in U.S. torpedoes that had resulted in numerous missed opportunities to sink aircraft carriers and numerous ships in the first years of the war, and had even resulted in losses of U.S. submarines due to failure of torpedoes to work as designed. In addition, many of the overly cautious skippers in the initial years had been replaced by a new breed of younger, more aggressive commanding officers and, as a result, effectiveness went up, but also so did losses (52 U.S. submarines would be lost in World War II). Just as important, however, was the steady stream of intelligence derived from breaking Japanese navy and merchant codes, and by radio traffic analysis. By 1944, the provision of timely "sanitized" Ultra intelligence had significantly solved the "big ocean, little periscope" problem. U.S. submarines, often operating in wolf packs of three or more submarines, were regularly in the right place at the right time thanks to the intelligence they were receiving.

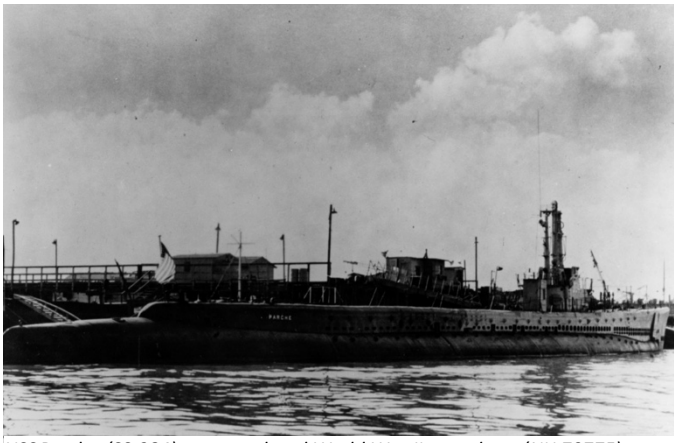
For Japan, the improvement in U.S. submarine effectiveness in 1944 was catastrophic, particularly for troopship convoys, which were high priority to attack. The loss of so many troopships had a severe effect on Japanese morale, despite extensive efforts to conceal the losses, and further poisoned the already severely dysfunctional relationship between the Japanese navy and Japanese army, which blamed the navy (rightly) with failing to protect the troopships from attack.

Among the most devastating losses in 1944 was the attack on 8 February by *Snook* (SS-279) that sank the troopship *Lima Maru*, with the loss of 2,765 troops and crew. Others followed. On 24 February, *Rasher* (SS-269) sank *Ryusei Maru* (4,998 killed). The same day, *Rasher* sank *Tango Maru*, which unfortunately was carrying 3,500 Javanese laborers and several hundred Allied prisoners of war, with 3,000 mostly Javanese lost. On 1 March, *Trout* (SS-202) sank *Sakito Maru* (2,475 lost). On 16 March, *Tautog* (SS-199) sank *Nichiren Maru* (1,934 lost). On 26 April, *Jack* (SS-259) sank *Yoshida Maru No. 1* (2,649 lost). On 29 June, *Sturgeon* (SS-187) sank *Toyama Maru* (5,400 killed, the greatest loss of life in a ship sunk by a U.S. submarine). On 30 June, *Tang* (SS-306) sank the troopship *Nikkin Maru* (3,219 killed). On 19 August, *Spadefish* (SS-411) sank *Tamatsu Maru* (as many as 4,755 killed). The same day, *Rasher* sank *Teia Maru* (2,655 killed). On 18 November, *Picuda* (SS-382) sank *Mayasan Maru* (3,546 killed). Troopship losses dropped off toward the end of 1944 as the Japanese simply gave up trying to move troops by sea, meaning that islands under attack had no hope of reinforcement.

The *Balao*-class fleet submarine USS *Parche* (SS-384) was commissioned on 20 November 1943 with Commander Lawson P. "Red" Ramage as her first skipper. The *Balao* class was the most numerous U.S. submarine in World War II (120 commissioned, 62 cancelled) first entering service in mid-1943. (The 77 submarines of the preceding *Gato* class first entered service right as the war broke out). The *Balao* class was very similar to the *Gato*, with the biggest difference being higher-yield strength steel that increased test depth to 400 feet from 300 feet. Both classes were armed with ten torpedo tubes (six forward and four aft) and normally carried 24 torpedoes, usually the Mark 14, which were notoriously unreliable in the first years of the war (see H-Gram 008/H-008-3 for more on U.S. submarine torpedoes in World War II). The *Balao*-class boats were armed (some were re-armed) with a larger 5-inch/25-caliber deck gun and usually had one single Bofors 40-mm mount and a twin Oerlikon 20-mm mount for anti-aircraft protection (which was *Parche*'s configuration). The *Gato*-class submarines were initially armed with a 3-inch deck gun, and early *Balao*-class boats had a 4-inch deck gun. However, due to constant modifications and upgrades to radars, sensors, and guns, pretty much no two *Balao*'s looked alike. The normal complement was 10 officers and 70–71 enlisted men.

Lawson P. Ramage (known as "Red" due to his red hair) graduated from the U.S. Naval Academy in 1931 (almost all U.S. submarine commanders in World War II were USNA graduates). Unable to pass the submarine physical due to an eye injury incurred while wrestling at Annapolis, Ramage resorted to memorizing the eye chart, finally entering the submarine service and reporting to *S-29* (SS-134) in 1936. He was at Pearl Harbor on the staff of Commander, Submarines Pacific during the attack on 7 December 1941. On his first war patrol as navigator of *Grenadier* (SS-210), Ramage was awarded a Silver Star.

Ramage assumed command of *Trout* (SS-202) in June 1942, conducting four war patrols. On his first war patrol on *Trout*, Ramage became the first U.S. submarine commander to score a hit on a Japanese carrier, the escort carrier *Taiyo* near Truk on 22 September 1942, which survived being hit by one torpedo of five fired. On his next patrol, on 12 November, Ramage would fire five torpedoes at the battleship *Kirishima*, which was on her way to bombard U.S. Marines on Guadalcanal. However, all five torpedoes either failed to hit or to detonate. Had they worked, the outcome of the bloody night battles off Guadalcanal on 12–13 and 14–15 November might have been very different, or might not have happened. Although Ramage sank three other ships and was awarded a Navy Cross, his



USS Parche *(SS-384) on an undated World War II–era photo (NH 79775).*

patrols on *Trout* were plagued by dud torpedoes and he became one of the most vocal critics of the defective Mark 14.
In May 1943, Commander Ramage assumed command of the new construction *Parche* (SS-384). *Parche*'s first war patrol was in March–May 1944 south of Formosa as part of a three-submarine wolf pack, which included *Bang* (SS-385) and Tinosa (SS-283), and sank seven ships, with *Parche* credited with two of them (*Taiyoku Maru*and *Shoryu Maru*).

Parche's second war patrol commenced 17 June 1944 and was also part of a wolf pack that included *Hammerhead* (SS-364) and *Steelhead* (SS-280) again operating south of Formosa. *Parche* sank a patrol boat and celebrated 4 July by being fired upon and depth-charged by a Japanese cruiser and destroyer. On 29 July, *Hammerhead* sighted a Japanese convoy and pursued, but failed, to score any hits, and her contact report was garbled, causing confusion and delay on *Parche* and *Steelhead*, which spent the next day searching while being repeatedly forced under by aircraft.

On the night of 30–31 July, *Parche* commenced a coordinated attack with *Steelhead*, commanded by Commander Dave Whelchel, with *Steelhead* attacking first. In a 46-minute pre-dawn melee that followed, Ramage became a legend, taking *Parche* right into the middle of the convoy for a night surface attack during which *Parche* fired 19 torpedoes. At one point, Japanese defensive fire became so intense that Ramage ordered all his topside crew to go below, except for one stern lookout (most accounts say Ramage remained on the bridge alone, but his own account said he kept the lookout with him). At one point, Ramage narrowly avoided being rammed by a Japanese ship that was making a deliberate attempt to do so, missing by only 50 feet.

Coordinating with *Steelhead*, Ramage sank the *Manko Maru*, the 10,000-ton tanker *Koei Maru*, and the 8,990-ton troopship *Yoshino Maru*, which went down with massive loss of life. Of 5,063 soldiers on board, 2,442 were lost, along with 35 crewmen, 18 gunners, and a large quantity of ammunition. Meanwhile, *Steelhead* sank another transport and a cargo vessel. Between the two submarines, another tanker and a cargo ship were damaged. Both submarines escaped without damage. Whelchel would be awarded a Silver Star. Ramage would be awarded the Medal of Honor and the *Parche* was awarded a Presidential Unit Citation for two war patrols that included the attack.

Ramage's Medal of Honor citation follows:

> "For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as commanding officer of the USS PARCHE in a pre-dawn attack on a Japanese convoy, 31 July 1944. Boldly penetrating the screen of a heavily escorted convoy, CDR Ramage launched a perilous surface attack by delivering a crippling stern shot into a freighter and quickly followed up with a series of bow and stern torpedoes to sink the leading tanker and damage a second one. Exposed by the light of bursting flares and bravely defiant of terrific shellfire passing close overhead, he struck again, sinking a transport by two forward reloads. In the mounting fury of fire from the damaged and sinking tanker, he calmly ordered his men below, remaining on the bridge to fight it out with an enemy now disorganized and confused. Swift to act as a transport closed to ram, CDR Ramage daringly swung the stern of the speeding PARCHE as she crossed the bow of the onrushing ship, clearing by less than 50 feet but placing his submarined in a deadly crossfire from escorts on all sides and with the transport dead ahead. Undaunted, he sent three smashing "down the throat" bow shots to stop the target, then scored a killing hit as a climax to 46 minutes of violent action with the PARCHE and her valiant fighting company retiring victorious and unscathed."

Parche would go on to complete six war patrols and earn five battle stars, and Ramage would be awarded another Navy Cross and a Bronze Star. Ramage would rank 50th among U.S. submarine commanders in terms of tonnage sunk, credited with sinking 10 ships of 77,200 tons, which was revised by post-war analysis to 7.5 ships of 36,700 tons. *Parche* would be used as a target for the atomic bomb tests at Bikini Atoll in July 1946, surviving both blasts relatively undamaged. She was

decontaminated and served as a reserve training boat until being scrapped in 1970. Her superstructure is preserved as a memorial at the Pearl Harbor submarine base.

Ramage continued to serve after the war, and was promoted to rear admiral in 1956. As deputy commander of Submarine Forces Atlantic Fleet, he led the search for the lost nuclear submarine USS *Thresher* (SSN-593) in 1963. Promoted to vice admiral, he served as the Deputy Chief of Naval Operations for Operations and Readiness, commander of the First Fleet, and commander of the Military Sea Transportation Service before retiring in 1969. The *Arleigh Burke*–class destroyer USS *Ramage* (DDG-61), commissioned in 1995, is named in his honor.

Sources include: NHHC *Dictionary of American Fighting Ships* (DANFS) for U.S. vessels; combinedfleet.com for Japanese vessels; and "Lawson P. 'Red' Ramage" by Dr. Edward Whitman at ussnautilus.org, website of the NHHC Submarine Force Museum and Library Foundation.

Tinian,"J-day," 24 July 1944: Marines dismount from an LVT at an invasion beach. Rocky coral prevented this LVT from going up on the beach (USMC 88112).

H-033-3: Operation Forager, Part 2: The Invasion of Tinian

H-Gram 033, Attachment 3

Samuel J. Cox, Director NHHC

July 2019

(See H-Gram 032 for the background of Operation Forager, the invasion of the Marianas)

The U.S. landings on the island of Tinian were planned as a follow-on to the landings on Saipan, using the same forces, but were delayed due to the intense Japanese resistance on Saipan, as well as the sortie of the Japanese Combined Fleet resulting in the Battle of the Philippine Sea (see H-Gram 032). Following the defeat of the massive Japanese *banzai* suicide charge on Saipan on 7 July (the largest of the entire war), U.S. forces gained effective control of the island by 9 July, although mopping up pockets of resistance took until September and, even then, some die-hards refused to give up. The 2nd and 4th Marine Divisions on Saipan regrouped and prepared to assault Tinian, which was only a few miles away (the northern end of Tinian was within artillery range of Saipan).

There were about 8,000 Japanese defenders on Tinian, most belonging to the 50th Infantry Regiment under the command of a colonel. Vice Admiral Kakuji Kakuta, commander of the 1st Air Fleet, was the senior Japanese officer on the island, having been there on an inspection visit and stuck when the U.S. invasion of the Marianas commenced, but he was not responsible for the defense (and probably committed suicide when the landings on Tinian commenced, although his body was never found). Tinian was substantially smaller than Saipan and much less hilly (ideal for large airfields), although it was ringed most of the way around by 15-foot cliffs, with few decent landing beaches. There were about 15,700 civilians on the island, mostly Japanese, but some ethnic Koreans. As on Saipan, many of the civilians (4,000) would commit suicide.

The best, but most obvious, beaches, were on the southwestern side of Tinian, near Tinian Town, which was where the Japanese expected the attack to occur. There were small beaches on the northwestern and northeastern side of the island, which would severely constrain the size of the initial landing waves, and force follow-on waves through a funnel, and would require considerable ingenuity to get sizable forces ashore in a timely manner. The initial assault wave at Saipan was about 96 landing craft abreast, whereas the beaches at Tinian could only support about 8 abreast, or up to 16 with specially built ramps. What the northern beaches did have was the advantage of surprise. After reconnaissance by underwater demolition teams, the northwestern (White) beaches were selected.

Naval shore bombardment of Tinian commenced on 16 July, by 3 battleships, 5 cruisers and 16 destroyers, much of it focused on the southwestern side as a deception in order to reinforce the Japanese perception that the assault would take place there. The island was also worked over by long-range land-based bombers, Navy aircraft from the escort carriers, and U.S. Army Air Force P-47 Thunderbolt fighters, delivered to Saipan by escort carrier, flying from the former Japanese Aslito airfield, and also introducing a new weapon—napalm bombs.

The initial landings by the 4th Marine Division on the White beaches on 24 July 1944 went very well, supported by naval bombardment and Army artillery firing across the strait from Saipan. However, the shore bombardment supporting the deception operation on the southwest side suffered the most serious casualties from Japanese shore batteries of any such operation during the war. Three 6-inch guns (taken by the Japanese from British defenses of Singapore) were well hidden in caves, and escaped destruction by the shore bombardment. At 0740, these guns found the range on the battleship *Colorado* (BB-45), which was bombarding the island from 3,000 yards offshore.

USS Colorado *(BB-45), here bombarding Tarawa on 20 November 1943. Colorado is painted in Camouflage Measure 32, Design 3D (80-G-56232).*

The destroyer *Norman Scott* (DD-690), 1,800 yards offshore, maneuvered to draw fire away from *Colorado* and was hit six times by 6-inch shells in 15 minutes. One shell was a direct hit on the bridge, which killed the commanding officer, Commander Seymore D. Owens, the officer of the deck, and the rest of the bridge team. The shells killed 22 men and wounded 50 more, including seriously wounding the executive officer. The hits also knocked out one 5-inch gun, one 40-mm mount, and caused extensive damage throughout the ship. Ammunition aboard the ship exploded over the course of several hours.

Command of *Norman Scott* fell temporarily to Lieutenant Junior Grade Will C. Jumper, who

conned the ship, steering with engines, while *Norman Scott*'s four remaining 5-inch guns continued to fire on targets ashore in local control. Owens was awarded a posthumous Navy Cross for his actions. The *Gearing*-class destroyer USS *Seymour D. Owens* (DD-767) was named in his honor; however, that ship was never completed. (I could not find if Jumper received an award, but he wrote poetry and became a professor emeritus of literature and one of his students became poet laureate of the United States.)

Colorado (BB-45), 3,000 yards offshore, fared worse: She was hit 22 times in quick succession by 6-inch shells from the hidden Japanese battery. Although the 6-inch guns were unable to penetrate *Colorado*'s armored vitals, the effects topside were severe among the anti-aircraft guns, with 43 crewmen killed and 198 wounded (97 requiring hospitalization) and seven anti-aircraft guns were knocked out. In December 1941, *Colorado* had been in Bremerton undergoing overhaul and had missed the Japanese attack on Pearl Harbor. As a result, she had not received as much of the modernization and upgrades as her sisters that had been sunk, damaged, raised, and repaired following Pearl Harbor, and she still had open-mount 5-inch guns in her secondary battery. Shrapnel from the shells and *Colorado*'s own anti-aircraft ammunition sprayed shrapnel everywhere. Rear Admiral Theodore Ruddock and Captain William Granat were lightly wounded, but far worse was the sheer carnage on her topside decks. Many Sailors and some Marines were so badly mangled they could not be identified.

Despite the grievous, yet essentially superficial, damage, *Colorado* identified the offending battery and fired on it, along with light cruiser *Cleveland* (CL-55) (with her rapid-fire 6-inch guns) and the destroyer *Remey* (DD-688), and silenced it. However, the battery was not completely put out of action until 28 July, when Pearl Harbor survivor battleship *Tennessee* (BB-43) worked it over with 70 14-inch and 150 5-inch shells.

Despite the damage, the deception effort worked, and the landings on the northwest coast of Tinian went well. Naval gunfire support was consistently rated as excellent, as 41,000 Marines took the island from the 8,000 Japanese defenders, of which only about 250 would be taken alive. In the nine days it took to capture the island, the Marine Corps and U.S. Navy suffered 389 killed and just over 1,800 wounded. Seabees quickly upgraded the existing Japanese airfields and built new ones, and then waited for the B-29 Superfortresses to show up. Tinian would become the busiest bomber base in the Pacific war, and would be the point of departure for the B-29s that dropped the two atomic bombs on Japan in August 1945.

Although *Colorado* had a stroke of luck in missing the Japanese attack on Pearl Harbor, she would pay for it during the war, suffering the most battle damage amongst the pre-war U.S. battleships (not counting Pearl Harbor). Only the new battleship *South Dakota* (BB-57) suffered comparable damage, much more than any other new U.S. battleship in the war, several of which made it through the conflict with no casualties at all. *Colorado*earned seven battle stars during the war. In addition to the 43 killed and 198 wounded at Tinian, *Colorado* would be hit by two *kamikaze* aircraft off Leyte (19 killed, 72 wounded) and, at Lingayen Gulf, she was hit by "friendly fire" (18 killed, 51 wounded).

By comparison, *South Dakota*, which earned 13 battle stars, was hit by a bomb and strafed by fighters at the Battle of Santa Cruz. These attacks did little damage, but killed 2 and wounded 60, including the commanding officer. At the Battle of Guadalcanal on 14–15 November 1942, *South Dakota* was hit by 27 shells, with 40 killed and 180 wounded. The battleship later had one man washed overboard and another killed by friendly fire before she was hit by another bomb at the Battle of the Philippine Sea, which killed 26 and wounded 27 (by far the worst bomb hit of the battle). In late 1945, *South Dakota* suffered an accidental explosion while loading ammunition, necessitating the flooding of a magazine to prevent a catastrophic event. This resulted in the deaths of 11 and injury to 24. Why the *South Dakota* and *Colorado* suffered more than any other battleships after Pearl Harbor was purely a matter of chance.

USS Norman Scott *(DD-690) after repair and refit following the Tinian operation, October 1944 (NH 83198).*

Sources include: *The Fleet at Flood Tide: America at Total War in the Pacific, 1944–1945* by James D. Hornfischer, Bantam Books, 2016; *History of United States Naval Operations in World War II, Vol VII: New Guinea and the Marianas* by Samuel Eliot Morison, Little, Brown and Co., 1953; NHHC Dictionary of American Fighting Ships(DANFS).

"Recovered Apollo 11 Module, USS Hornet*," painting, oil on board, by Cliff Young, 1969 (88-163-AM).*

H-033-4: 50th Anniversary of the First Moon Landing

H-Gram 033, Attachment 4

Samuel J. Cox, Director NHHC

July 2019

I expect there will be numerous articles in the press regarding the 50th anniversary of the landing on the moon by Neil Armstrong and Edwin "Buzz" Aldrin in the "Eagle" lunar excursion module (LEM) of Apollo 11. So, this H-gram will focus on the Navy service of Neil Armstrong and the Navy's role in the recovery of U.S. manned space flight missions.

Beginning in 1947, Neil Armstrong began studying aeronautical engineering at Purdue University, with his tuition paid for by the U.S. Navy under what was known as the "Holloway plan." Under the terms of the plan, which was created in 1946, selected students in the aviation program would study for two years, then take two years of U.S. Navy flight training, followed by one year of naval service, and then would go back to college to finish their degree, followed by a three-year commitment in the Navy Reserve. The program was separate from the Naval Reserve Officer Training Corps (NROTC) program, but would evolve into the modern NROTC program.

The Holloway plan was named after its founder, Admiral (then Rear Admiral) James Lemuel Holloway, Jr. (father of CNO James L. Holloway III). The Holloway Plan was quite controversial, especially among U.S. Naval Academy graduates, who generally viewed it with disdain, with the mantra, "Did you get your commission the hard way or the Holloway?" Nevertheless, the program proved highly popular, and Holloway (USNA '18) would get a last laugh when he became the 35th superintendent of the U.S. Naval Academy in 1947.

In January 1949, Armstrong commenced flight training at Pensacola, with the rank of midshipman; his flight grades were about average. He soloed on 9 September 1949 and made his first carrier landing on the training carrier *Cabot* (AVT-3, formerly CVL-28) on 2 March 1950. He then received training at Corpus Christi in the Grumman F8F Bearcat fighter with a recovery on USS *Wright* (CVL-49) and was qualified as a naval aviator on 23 August 1950 (the Korean War broke out in June 1950) Armstrong's initial assignment was Fleet Aircraft Service Squadron 7 (FASRON 7) at Naval Air Station San Diego (now North Island). On 27 November 1950, he was assigned to Fighter Squadron 51 (VF-51) flying the F9F Panther straight-wing jet fighter. Armstrong was the youngest pilot in the squadron. He was promoted to ensign on 5 June 1951.

On 28 June 1951, the carrier USS *Essex* (CVA-9) commenced a deployment to Korea for combat operations. VF-51 flew ahead to NAS Barbers Point for ground-attack training before embarking on *Essex* in July 1951. On 29 August 1951, Armstrong flew his first combat mission as an escort for a photo-reconnaissance plane to Songjin, North Korea.

On 5 September 1951, Armstrong was flying an armed reconnaissance mission in an F9F-3 (BuNo. 125122) over transportation and storage facilities west of Wonson, North Korea. There are several versions of what happened on this mission. Armstrong would later relate that he was conducting a low-altitude bombing pass when six feet of his right wing was torn off when he struck a cable strung between the hilltops. According to Armstrong, there was heavy anti-aircraft fire in the area, but he was

not hit. However, the initial report to the

Then-Ensign Neil Armstrong (right), on a photo apparently taken on 3 September 1951, when his F9F-3 Panther was shot down after a reconnaissance mission over the primary transportation and storage facilities west of Wonsan, Korea (U.S. Navy).

commanding officer of *Essex* stated the plane was hit by anti-aircraft fire, and while trying to regain control, Armstrong hit a pole. Other accounts differ on how low Armstrong was flying and how much of his wing was torn off. Armstrong flew his crippled plane (missing an aileron) out over water so that when he ejected he could be picked up by helicopter from U.S. ships. However, after he ejected, the wind blew his parachute back over land, in friendly territory, where he was recovered.

Armstrong flew 78 missions over Korea, most in January 1952, with his last mission on 5 March 1952. He was awarded three Air Medals. During this deployment, *Essex* lost 26 pilots and aircrew (out of 492 U.S. Navy personnel killed during the war). While still aboard *Essex*, Armstrong's regular commission terminated and he became an ensign in the Navy Reserve. When *Essex* returned from deployment in May 1952, Armstrong was reassigned to transport squadron 52 (VR-52) until he was released from active duty on 23 August 1952.

Armstrong returned to his studies at Purdue, graduating in 1955, but he remained active in the Navy Reserve, flying with Fighter Squadron 724 at NAS Glenview, Illinois. He was promoted to Lieutenant (Junior Grade) on 9 May 1953. After graduating, Armstrong moved to California and flew

with Fighter Squadron 773 at NAS Los Alamitos until he resigned his commission on 21 October 1960. By this time, he was already a test pilot for the National Advisory Committee for Aeronautics (precursor to NASA) High-Speed Flight Station at Edwards Air Force Base, California. During his time in the Navy, Armstrong logged 2,600 flight hours, including 1,100 in jet aircraft.

Gemini VIII

Armstrong was the command pilot of Gemini VIII, with David Scott as pilot, launched on 16 March 1966. Since Armstrong had resigned his Navy commission, he thus became the first American civilian to fly in space. The mission successfully conducted the first docking of two spacecraft in orbit (with an unmanned Agena target vehicle), but then suffered a critical system failure that required an immediate abort, the first time such a failure threatened the lives of U.S. astronauts in space. Although planned to splashdown in the Atlantic, the re-entry had to be altered due to the emergency and the splashdown point was shifted to an alternate site 430 nautical miles east of Okinawa on 17 March 1966. Three para-rescuers jumped from a C-54 aircraft and attached a floatation collar until the USS *Leonard F. Mason* (DD-852), which had been fitted with quarantine capability, reached the scene three hours later. The destroyer then returned to gunfire-support duty off Vietnam after disembarking the astronauts and para-rescuers in Okinawa.

Apollo 11

Armstrong was the mission commander for Apollo 11. Edwin "Buzz" Aldrin was the lunar excursion module ("Eagle") pilot, and Michael Collins was the command module ("Columbia") pilot. Aldrin and Collins were both U.S. Air Force officers. Apollo 11 was launched from the Kennedy Space Center, Florida atop a massive Saturn V rocket on 16 July 1969. The lunar excursion module, with Armstrong and Aldrin aboard and Collins orbiting overhead, touched down on the lunar surface at 1517 Eastern Standard Time on 20 July 1969 at a point technically designated "Eagle Base" in the "Sea of Tranquility." However, after completing the post-landing checklist, Armstrong announced "Houston, Tranquility Base here. The Eagle has landed."

At 2356 (Eastern) on 20 July 1969, Neal Armstrong first set foot on the moon. (I watched it with a crowd of people gathered around some guy who had the foresight to bring a portable TV to Big Meadows campground in Shenandoah National Park that just barely got reception.) Neal Armstrong's words would result in decades of debate as to whether he forgot to say "a" before "man" or whether the "a" was garbled by static. What everyone heard was, "That's one small step for man. One giant leap for mankind." The official transcript has it as "That's one small step for [a] man. One giant leap for mankind." Regardless, the mission was far more dangerous than it appeared, and had more close calls than were publicized at the time, so I'm not about to quibble over an "a." The man was a hero.

On 5 June 1969, the aircraft carrier USS *Hornet* (CVS-12), under the command of Captain Carl J. Seiberlich, was selected as the primary recovery ship. Arriving at Pearl Harbor from Alameda on 5 July, *Hornet* embarked HS-4 SH-3 Sea King helicopters that specialized in Apollo recovery missions, specialized divers of UDT Detachment Apollo, a NASA recovery team (35 men), and about 120 press and TV personnel, as well as a "practice" Apollo command module. Most of *Hornet*'s air wing was put ashore to make room.

On 12 July 1969, *Hornet* sailed from Pearl Harbor and headed for the planned splashdown site about 1,100 miles southwest of Oahu. President Nixon and an entourage that included Secretary of State William P. Rogers and National Security Advisor Henry Kissinger flew on Air Force One to Johnston Atoll, and then on Marine One to the command ship USS *Arlington* (AGMR-2, a converted light carrier). The next day, the party took the helicopter to *Hornet* to be greeted by the commander in chief, Pacific Command (CINCPAC) Admiral John S. McCain, Jr.

The location of the recovery was subsequently moved 215 nautical miles northeast of the planned point based on imagery from top secret intelligence

satellites that indicated a weather front was moving in, which would significantly affect the planned recovery point. (There were only a handful of weather satellites at that time). This change necessitated an alteration to the reentry flight parameters, subjecting the astronauts to greater than planned g-force deceleration. Compounding the problem, the ship suffered a casualty with her navigation equipment forcing a reliance on celestial navigation, which with the overcast was problematic. The upshot was that *Hornet* knew she was in the general area of the planned splashdown, but did not know precisely where she was.

Prior to sunrise in 24 June, *Hornet* launched four Sea King helicopters and three Grumman E-1 Tracer airborne early warning aircraft of VAW-111. Two of the E-1s provided radar coverage and the third provided airborne communications relay. One of the E-1s had a radar problem and the communications relay aircraft had to assume that task. Two of the SH-3s carried recovery equipment and divers. The third SH-3 carried photo and movie cameras, and the fourth carried a special decontamination diver and a flight surgeon.

At 0544 local time, the helicopters spotted Columbia's drogue parachutes deploy only 1,000 feet from the E-1, which had to turn away to avoid the capsule. Seven minutes later, Columbia hit the water 13 nautical miles from *Hornet* and flipped upside down, but was righted when the astronauts deployed the flotation bags. The divers from the SH-3s quickly attached a sea anchor and additional flotation collars, and deployed rafts. The divers provided biological isolation garments to the astronauts and helped them into a life raft. The astronauts were rubbed down with a chemical solution intended to remove any lunar dust and then were hoisted aboard the recovery helicopter. The "contaminated" raft was deliberately sunk.

The SH-3 then flew the astronauts to *Hornet*, touched down, and was lowered into the hangar bay, where the astronauts were then put into the mobile quarantine facility (MQF) for 21 days in the remote chance they'd picked up any pathogens on the moon. President Nixon welcomed the astronauts back through the window of the quarantine facility and then wasted no time getting off the ship.
The *Hornet* then hoisted the Columbia command module onto the ship using the ship's crane after which the Columbia was attached to the mobile quarantine facility with a flexible tunnel. Upon return to Pearl Harbor, the MQF (with the astronauts still inside) and Columbia were offloaded from *Hornet*, and flown separately to the NASA Manned Spacecraft Center in Houston, Texas.
The recovery of Apollo 11 was the most complex of all, as it was the first lunar mission and due to the protocols dictated by the "extra-terrestrial exposure law" intended to prevent any possible pathogens from being returned to Earth. Nevertheless, all 31 U.S. manned space missions before 1975 (and advent of the space shuttle) were recovered by U.S. Navy ships. Although the Soviet Union recovered their astronauts on land using a retrograde rocket system, the United States determined that landing at sea was safer, although that required considerably more coordination.

The first U.S. manned space launch was a sub-orbital flight by Mercury 3 (Freedom 7) on 5 May 1961, with Commander Alan Shepard, Jr. (naval aviator) on board, which splashed down 3.5 miles from the recovery ship, the aircraft carrier USS *Lake Champlain* (CVS-39). Between 1961 and 1975, 17 U.S. Navy ships would act as recovery vessels for Mercury, Gemini, Apollo, and Skylab manned space missions. USS *Wasp* (CVS-18) has the record with five recoveries (Gemini 4, Gemini 7, Gemini 6A, Gemini 9A, and Gemini 12). USS *New Orleans* (LPH-11) made four recoveries (Apollo 14, Skylab 3, Skylab 4, and the Apollo-Soyuz joint U.S.–Soviet space mission, which, on 24 July 1975, was also the last U.S. ship recovery). USS *Ticonderoga* (CVS-14) made three recoveries (Apollo 16, Apollo 17, and Skylab 2) and USS *Hornet* recovered the second lunar landing mission, Apollo 12, on 24 November 1969. USS *Iwo Jima* (LPH-2) recovered the almost-disastrous Apollo 13 mission on 17 April 1970 (Apollo 13 was commanded by naval aviator Captain James Lovell, who had also been on Apollo 8, the first manned spacecraft to orbit the Moon, in December 1968).

The manned spacecraft recoveries were initially in the Atlantic, although the Apollo lunar missions (8,

10, 12, 13, 14, 15, 16, 17), the three Skylab missions (2, 3, 4), and the Apollo-Soyuz mission all splashed down in the Pacific as intended. The first spacecraft to splash down in the Pacific was Mercury 8/Sigma 7 flown by Commander Walter Schirra, Jr. (a naval aviator), which hit the water only half a mile from the recovery ship USS *Kearsarge* (CVS-33). Schirra joked that he was on course to recover on *Kearsarge*'s "number three elevator." The next (and last) Mercury mission (Mercury 9/Faith 7) flown by Gordon Cooper, also recovered in the Pacific after experiencing a number of technical problems that necessitated Cooper making a manual reentry. Cooper splashed down only four miles from *Kearsarge*, which was actually the most accurate landing of the Mercury program, since Schirra wasn't supposed to splash down as close to *Kearsarge* as he did.

The biggest "miss" of any of the recoveries was Mercury 7/Aurora 7, flown by Lieutenant Commander Scott Carpenter (a naval aviator), which splashed down 250 miles off-course on 24 May 1962. After a search, Carpenter was located by land-based aircraft and then picked up by helicopter from USS *Intrepid* (CVS-11). (This search is actually one of my very earliest childhood memories, watching it on TV with Walter Cronkite being very concerned, which scared us kids). The USS *John R. Pierce* (DD-753) steamed 206 nautical miles off-station at flank speed to recover the capsule. The only failed recovery was Mercury 4/Liberty Bell 7, flown by Virgil I. "Gus" Grissom. Although Grissom splashed down only 5.8 miles from the recovery ship, USS *Randolph* (CVS-15), the hatch blew prematurely and the capsule took on water. One helicopter rescued Grissom, while a second tried to keep the capsule from sinking, but was unable to safely do so and cut it loose in 16,000 feet of water (it was recovered in 1999). Years of controversy ensued as Grissom was suspected of accidentally blowing the hatch himself, although this does not appear to be the case.

Lastly, on 27 January 1967, during a simulated countdown, a fire in the Apollo 1 command module killed Lieutenant Commander Roger B. Chafee, USN, along with Gus Grissom and Ed White.

Commemorative "Hornet Plus Three" button. The phrase echoes the sign placed above the entryway of the Apollo 11 astronauts' mobile quarantine facility (MQF) (69-452-L)

Sources include; NHHC's "Chronology of Space Missions Involving U.S. Navy and Marine Corps Crew Members, 1961–April 1981"; NHHC *Dictionary of American Naval Fighting Ships* (DANFS); Neil Armstrong's training log book at the National Naval Aviation Museum in Pensacola, Florida; *First Man: The Life of Neil A. Armstrong* by James R. Hansen, Simon and Schuster, New York, 2005; "The Near Miss of Apollo 11" by Captain Forrest Zetterberg, USNR (Ret.), and Carol Zetterberg, U.S. Naval Institute *Proceedings*, July 2019. Although I generally use great caution with Wikipedia entries, those for U.S. space missions are quite thorough and well-documented.

H-033-5: The North Sea Mine Barrage and the Sinking of the USS *Richard Bulkeley*

H-Gram 033, Attachment 5

Samuel J. Cox, Director NHHC

July 2019

The USS *Richard Bulkeley* was a wooden minesweeping trawler, leased from the Royal Navy on 31 May 1919, acquired for the purpose of sweeping mines that had been laid by the U.S. Navy and the Royal Navy across the northern end of the North Sea during the war in 1918. It served as the flagship of a division of four minesweepers operating from Kirkwall, Scotland. Commander Frank King assumed command of *Richard Bulkeley* on 7 July 1919. King was a 1907 graduate of the U.S. Naval Academy, and had served on battleships and armored cruisers before attaining the rank of commander just before the war ended on 21 September 1918.

By July 1919, the vast majority of U.S. Sailors and Soldiers who had deployed to the European theater during World War I had returned stateside. However, U.S. and British minesweepers continued to work to clear the over 70,000 mines that had been laid across the northern end of the North Sea in 1918 in an attempt to bottle up German U-boats.

The North Sea mine barrage was a massive minefield laid across the 200–nautical mile gap between the Orkney Islands, just north of Scotland, and Norway. The field was first proposed by a British admiral in 1916 in order to impede U-boat access to the Atlantic via the North Sea. However, it met with little enthusiasm, partly due to the challenging depth of water (900 feet, when minefields to that point had only been laid in water up to about 300 feet). Worse, it was calculated that it would take 400,000 mines to create an effective barrier, which would require an extraordinary (and actually insurmountable) expenditure of resources. Additionally, there would be risk to British (and neutral) ships as well. When the United States entered the war, the senior U.S. naval officer in the European theater, Vice Admiral William S. Sims, did not support the idea, believing it would be an ineffective squandering of resources and, when U.S. Navy leaders in Washington proposed it, the British rejected the idea.

It was the U.S. development of the Mark 6 "antennae mine," led by Rear Admiral Ralph Earle, the genius who was the chief of the Bureau of Ordnance before and during World War I, responsible for many innovations, including the naval railway gun (see H-Gram 021), that made the mine barrage feasible. The Mark 6 was similar to a standard moored contact mine in that when laid, an anchor would moor it to the bottom, the mine itself would float at a pre-determined depth below the surface, and would be activated when a ship hit one of its "horns," which would cause a chemical reaction and an electric charge that would detonate the mine. The innovation was that the Mark 6 also deployed copper wire antennae attached to a float that would extend above the mine within the lethal radius of the mine explosive. If a submarine hull touched the antennae, it would detonate the mine and sink the submarine. As a result, it took far fewer mines to make an effective barrier, so only 100,000 would be needed to cover the entrance to the North Sea. This, however, was still an immense expenditure of resources, but, as the tide of the U-boat war had not yet turned, the Allies were increasingly desperate to do anything to stop the U-boats. The Assistant Secretary of the Navy, Franklin Roosevelt, convinced President Woodrow Wilson to overrule Sims's objections and approve the North Sea barrage.

In October 1917, the U.S. Navy ordered 80,000 Mark 6 mines. Two older "protected cruisers," already converted to minelayers before the war, and eight civilian steamships converted to minelayers during the war deployed to Scotland, and another 24 steamships were configured as mine-carrying freighters to transport the mine components across the Atlantic, where they were assembled in Scotland. One of the converted minelayers was *Shawmut*, which would be sunk at Pearl Harbor

under a different name: *Oglala* (CM-4). The hasty transport and assembly of the mines and explosives was a disaster waiting to happen that fortunately did not.

The British laid mines off the Orkneys and just outside neutral Norwegian territorial waters, while the U.S. force laid mines across the central part of the gap. The U.S. North Sea Mine Force was commanded by Rear Admiral Joseph Strauss, embarked on his flagship, the destroyer tender USS *Black Hawk* (AD-9). Commencing in June 1918 until the war ended, the U.S. force would lay 56,571 of the total 70,177 mines in the barrage, which still had some gaps when the war ended. About 3 to 5 percent of the mines prematurely detonated as soon as they went into water, and on some operations as many as 14 to 19 percent prematurely detonated, which caused great anxiety among the crews of the minelayers. The minelaying operations were escorted by Royal Navy destroyers, and covered by a force of battleships (including on several occasions U.S. battleships) to prevent the German navy from interfering.

Sweeping the North Sea mine barrage: After a mine's mooring cable was cut and the mine reached the surface, it was usually detonated by rifle- or gunfire (NH 2506).

The effectiveness of the mine barrage was hotly debated, particularly given the immense cost. The barrage is believed to have had a significant adverse morale effect on the German submarine force, although even that is debated. Four U-boats are believed to have been destroyed by the barrage (including U-156, which laid the mines that sank the armored cruiser *San Diego*–ACR-6–off Fire Island in July 1918, the largest U.S. Navy warship lost in the war). Two other U-boats are presumed to have been lost in the barrage, and another two were possibly lost. Five U-boats disappeared for unknown reason and might also have been lost due to the barrage. These figures are out of a total of 217 U-boats lost to all causes during World War I. Eight U-boats were damaged by the mines.

The operation to sweep the mines was even more challenging than laying the mines because a process to sweep the antennae "influence" mines had not been invented. It took most of the winter of 1918–19 to develop an electrical protective device for the steel-hulled minesweepers. The concept was devised by Ensign Dudley A. Nichols. Although his idea didn't pan out, the study of it resulted in one that did, which was developed further by Navy engineers.

The general principal for sweeping the mines was to tow a serrated wire between two ships on parallel course, with the wire held down at depth by "kites."

A complete Mark 6 mine recovered during the sweeping operations (NH 2507).

The wire would cut the mine cable, causing the mine to float to the surface to be destroyed by gunfire. The wooden-hulled trawlers would sweep the mines closest to the surface, while the steel-hulled sweeps would follow behind for the deeper mines (so there would be no chance of the steel hull hitting the antennae wire).

The U.S. sweep operation was also commanded by Rear Admiral Strauss and initially consisted of 12 steel-hulled *Lapwing*-class minesweepers (named after birds) and 18 wooden-hulled sub chasers. This was quickly deemed inadequate and the vessels were augmented by 16 more *Lapwing*s, and 20 trawlers, leased from the British, with American crews (including *Richard Bulkeley*). Tangled and lost sweeping gear were common problems, which caused mines to detonate prematurely. Ultimately, one third of the ships involved would be damaged by exploding mines and several men were killed in sweeping accidents.

On 7 July 1919, the U.S. flotilla of 43 minesweepers and supporting vessels departed Kirkwall, Scotland, to commence the fourth of seven minesweeping operations that would take place between April and September of 1919. The flotilla included *Lapwing* minesweepers, and submarine chasers and wooden-hulled minesweepers, which included *Richard Bulkeley*. Between 7 and 17 July, nine of these vessels would be damaged by exploding mines and the *Richard Bulkeley* would be sunk.

The *Lapwing*-class minesweeper *Pelican* (AM-27) would also have been sunk had it not been for the daring efforts of other minesweepers in the group, which rallied around her even after she had caused the detonation of six mines in her vicinity in quick succession, bursting seams and causing her to begin to sink. *Auk* (AM-38) and *Eider* (AM-17) tied up along each side of *Pelican* to keep her afloat, and *Teal* (AM-23) took all three ships in tow.

Richard Bulkeley was the flagship for one of the five divisions of trawlers and was sweeping in concert with another trawler, probably *George Clark*. Just prior to sunset on 12 July, a mine fouled in the kite of her sweep gear was hauled up as the gear was being retrieved at the end of the day. Despite an attempt to pay out the line quickly, the mine exploded close aboard. The ship sank before any ships could reach her, but *George Clark* was able to rescue 12 survivors from the water.

The flagship of Trawler Division 4, *William Johnson*, also joined the search. The division commander, Commander Ellis Lando, USN, jumped in the cold water to rescue unconscious Ship's Cook First Class Antino Perfido, who, however, succumbed to his injuries and hypothermia. Lando was awarded a Distinguished Service Medal for his heroic act. All told, seven of *Richard Bulkeley*'s crew were lost, including Commander Frank King and six Sailors. Of note, as the war was over, King is not listed on the "killed in action" panel in Memorial Hall at the U.S. Naval Academy. One of the Sailors, Seaman Second Class John V. Mallon, remained at his post on the bridge as a signalman and went down with the ship. He was also awarded a Navy Distinguished Service Medal, although details of the citation are unknown.

The citation for Commander Kings's Navy Distinguished Service Medal follows:

> "For exceptional meritorious service in a duty of great responsibility as commander of a division of trawlers, engaged in the difficult and hazardous operation of sweeping for and removing mines in the North Sea Barrage; and especially for his heroic actions on the destruction by mine explosion of his flagship, the RICHARD BULKELEY, of which he was the commanding officer. Although stunned by the explosion, he made every effort to save the lives of and to rescue men trapped by steam in the fire-room. The rapid sinking of the vessel prevented his success in the undertaking. Finding the ship about to sink, he proceeded to the bridge, where he took his station, and went down with the ship."

The destroyer USS *King* (DD-242) was named in his honor and participated in the North Atlantic neutrality patrol (undeclared war with Nazi Germany) and performed ASW patrol duties during the war on the U.S. West Coast and in the Aleutian Islands, participating in the bombardment of Kiska in August 1942.

Following the loss of *Richard Bulkely*, Rear Admiral Strauss decided that the hulls of the wooden trawlers were too weak to withstand close mine explosions. Excepting six retained for supply purposes, he returned them to the British. On 30 September 1919, Strauss declared the sweeping operation complete, although exactly how many of

the mines were actually swept is unknown, since many had already sunk or broken free. Probably only about 40 percent of the mines were actually swept. Mines continued to be a danger in the North Sea for many years, and several merchant ships lost in the 1920s were probably sunk by leftover mines.

Sources include: "Attacking the U-Boat: The North Sea Mine Barrage" by NHHC historian Dr. Dennis Conrad, 2018; "The Northern Barrage: Taking Up the Mines" by NHHC historian Chris Martin, 2017; *America's Sailors in the Great War: Seas, Skies and Submarines* by Lisle A. Rose, University of Missouri Press, 2017; "A Dark Day" at davidbruhn.com.

Survivors of USS Richard Bulkeley *(NH 121110).*