H-Gram 066: "At Dawn We Slept"

7 February 2021

Overview

This H-gram covers the Japanese attack on Pearl Harbor and is a significantly updated and revised version of my H-Gram 001 from 2016, with one additional portion drawn from H-Gram 025 from 2019. It also includes some history of the Naval History and Heritage Command.

Sailors in a motor launch rescue a survivor from the water alongside the sunken USS *West Virginia* (BB-48) during or shortly after the Japanese air raid on Pearl Harbor. USS *Tennessee* (BB-43) is inboard of the sunken battleship. Note extensive distortion of *West Virginia*'s lower midships superstructure, caused by torpedoes that exploded below that location. Also note 5-inch/25-caliber gun, still partially covered with canvas, boat crane swung outboard and empty boat cradles near the smokestacks, and base of radar antenna atop *West Virginia*'s foremast (80-G-19930).

80th Anniversary of the Japanese Attack on Pearl Harbor, 7 December 1941

At Dawn We Slept *was the title of one of the most influential books about the disastrous Japanese surprise attack on Pearl Harbor on the morning of 7 December 1941, "a date which will live in infamy" as President Franklin Roosevelt called it in his declaration of war speech. However, I respectfully disagree with the premise of the title, as it gives the impression that the U.S. Navy was lying around the beach drinking chilled cocktails and was totally unprepared for the outbreak of war. The reality is somewhat different.*

To the extent that anyone in the Navy in Hawaii was asleep on the morning of 7 December, it was a sleep of exhaustion from months of intensive exercises and preparations for a war that everyone in a position of senior leadership knew was imminent, particularly the commander-in-chief of the U.S. Fleet and Pacific Fleet, Admiral Husband Kimmel. The story of Pearl Harbor as it is now usually told in popular culture—that the United States was not expecting to be attacked—has led to a sense of complacency today, a sense that we could

never be so stupid or unaware as we were back then.

The reality is that the story of Pearl Harbor actually represents the razor-thin line between defeat and victory against a highly capable adversary. It is a story of an extremely intense effort to get ready by some very smart people, with decisions that were made with great deliberation and purpose, some of which proved incorrect, but were not due to complacency. It is a story of an incredible readiness effort that was heartbreakingly close to success, but that still failed. And it should also be noted that virtually every carrier-based strike in World War II—U.S., Japanese, and British—achieved tactical surprise, as did the multiple carrier strike exercises conducted on Pearl Harbor in the interwar years.

*Fleet Admiral Chester Nimitz would write years after the war: "I have been correctly quoted in saying that it was God's divine will that Kimmel did not have his fleet at sea to intercept the Japanese Carrier Task Force that attacked Pearl Harbor on 7 December 1941." Nimitz went on to explain that had the fleet been at sea, it would have suffered catastrophic losses to the superior Japanese carrier force, with ships sunk in deep water with the loss of far more of their crew. "As bad as our losses were…, they could have been devastating worse," Nimitz wrote. As it was, only two of the eight battleships present never fought again (*Arizona *[BB-39] and* Oklahoma *[BB-37]). Of the other six,* West Virginia *(BB-48),* California *(BB-44), and beached* Nevada *(BB-36) were all raised, modernized, and rejoined the war. The relatively minor damage to* Pennsylvania *(BB-38),* Tennessee *(BB-43), and* Maryland *(BB-46) was quickly repaired. With the exception of obsolete target battleship* Utah *(AG-16), all other ships were repaired and returned to service. Had these ships been sunk in deep water, the death toll would have been vastly higher.*

*Admiral Kimmel's fundamental dilemma was whether to keep the fleet at sea with no air cover, or bring the fleet into port with what was known to be inadequate air cover. Both carriers (*Lexington *[CV-2] and* Enterprise *[CV-6]) were away on national -directed missions to take fighters, stripped from Pearl Harbor's inadequate defenses, to Midway and Wake Island. Based on intelligence, Kimmel correctly assessed that the fleet faced an imminent major submarine threat, and was well aware of the possibility of air attack (there were about a dozen major air attack drills between March and November 1941). Admiral Nimitz, at least, believed that Kimmel made the correct decision.*

Unfortunately, the "communication" piece of the command, control, and communication (C^3) architecture on Oahu (which had worked reasonably well in multiple exercises) in both the Navy and Army failed the test of wartime operations on 7 December 1941. Kimmel would take the fall for the disaster, while many others equally or more responsible in Washington survived the massive CYA operation afterward. The real person responsible for the defeat at Pearl Harbor was Admiral Isoroku Yamamoto and his really good (albeit not perfect) plan. (Please see the revised attachment H-001-1 for more info related to U.S. Navy preparations for war.)

Readiness

The ship whose duty it was to be on alert that morning, was on alert, and performed her duty in an extraordinarily effective and

efficient manner. The elderly Ward *(DD-139) sank a Japanese midget submarine (probably launched from mother submarine* I-20*) attempting to gain access to the harbor a little over an hour before the air raid commenced (but 45 minutes after the Japanese strike had already launched). In doing so,* Ward *fired the first shot of the battle, the first U.S. shot of World War II in the Pacific, and with her second shot achieved the first kill. Unfortunately, in the high-stakes "telephone tag" that followed, precious warning time was lost, although in actuality it was already too late to have made much of a difference.*

In an ironic twist of fate, the commanding officer of Ward *on 7 December 1941, Lieutenant William Outerbridge, would later have the sad task, as commanding officer of* O'Brien *(DD-725), of scuttling the crippled* Ward*, hit by a kamikaze, with gunfire in Ormoc Bay, Philippines, on 7 December 1944. (Please see the revised attachment H-001-2 for more on* Ward*, the warning process, and the Japanese midget sub operations.)*

Valor

Although Pearl Harbor was a devastating tactical defeat resulting in 2,335 U.S. military and 68 U.S. civilian deaths, the vast majority of Navy sailors responded immediately and in many cases with extraordinary acts of bravery, many of which were unrecorded due to the deaths of so many witnesses. Even so, Navy personnel were awarded 15 Medals of Honor (10 posthumously), 51 Navy Crosses, and four Navy-Marine Corps Medals. These were the most Medals of Honor awarded for bravery under fire for a one-day action in U.S. naval history.

Medal of Honor recipients included: Rear Admiral Isaac Kidd and Captain Franklin Van Valkenburgh, killed at their post on the bridge of Arizona *when she exploded; Captain Mervyn Bennion, skipper of the battleship* West Virginia*, who attempted to continue to fight his ship even after being mortally wounded by shrapnel; Commander Cassin Young, skipper of the repair ship* Vestal *(AR-4) moored alongside* Arizona*, blown clear off the bridge of his ship into the water, who nevertheless climbed back on board and got his sinking ship underway and beached her so she would not be an obstruction.*

Other Medal of Honor recipients included Chief Warrant Officer (Boatswain) Edwin Hill of Nevada*, the only battleship to get underway during the attack. He crossed to the mooring pier, cast off the lines, swam back to ship and got on board, and was leading actions on the forecastle in preparation to beach the ship, which had attracted numerous Japanese dive bombers, when he was killed by strafing and bomb explosions.*

Among the Navy Cross recipients was Ensign Joe Taussig, Jr. (son of Commander, and later vice admiral, Joe Taussig of World War I "We are ready now" fame), who continued to direct Nevada*'s anti-air defenses even with a leg-amputating wound. Another Navy Cross was awarded to Mess Attendant Second Class Doris Miller for aiding the dying Captain Mervyn Bennion on* West Virginia *under fire, before manning a .50-caliber machine gun, on which he had not been trained, and assisting in downing possibly one or more Japanese aircraft. Miller was the first African American sailor to receive the Navy Cross. Of note, Miller's actual battle station, in the ammunition-handling room for the port-side 5-inch guns, was destroyed by one of the first*

torpedoes to hit West Virginia*, which is why he ended up on the bridge. (See the revised attachment H-001-3 for more on valor at Pearl Harbor. See the revised attachment H-025-1 for more on Doris Miller.)*

50th Anniversary of the Establishment of the Naval Historical Center

Naval History and Heritage Command was established as an Echelon II Navy command in 2008. However, parts of the command date all the way to 1800 with the establishment of the Navy Department Library by order of President John Adams, which is still part of the command today. Over the centuries, the Navy's history enterprise has gone through multiple incarnations, sometimes within the Office of the Secretary of the Navy, sometimes as part of the OPNAV staff, and for long periods of time under the Chief of Naval Intelligence. A significant development in the evolution of NHHC was the establishment of the Naval Historical Center (NHC) 50 years ago on 1 December 1971 under Vice Admiral Edwin B. Hooper. NHC formed the nucleus of the much broader capability of NHHC today. (For more on the evolution of NHHC and a better sense of our mission today, please see attachment H-066-1.)

The forward magazines of USS *Arizona* (BB-39) explode after she was hit by a Japanese bomb, 7 December 1941. Frame clipped from a color motion picture taken from on board USS *Solace* (AH-5) (80-G-K-13513).

H-Gram 001-1: Pearl Harbor, 7 December 1941

H-Gram 001, Attachment 1
Samuel J. Cox, Director NHHC
17 November 2016, ***revised*** *7 December 2021*

The following is not intended to be a comprehensive account of the Pearl Harbor attack, nor to whitewash the numerous errors of judgment and failures of process that occurred on all levels of the U.S. chain of command from the President to the tactical level. Over time, the lessons of history tend to get distilled to a "bumper sticker" level, when the reality is far more complex and nuanced . . . and many times the conventional-wisdom bumper sticker is just plain wrong.

There is no question that the United States and the Navy were not prepared for war, despite the fact that Navy leaders well understood that U.S. diplomacy and economic embargos were pushing the Japanese toward initiating hostilities. Navy leaders kept arguing for U.S. diplomats to back off in order to buy more time. The commanders at Pearl Harbor were anticipating war far more than they were ever

given credit for. Hopefully, this will stimulate you and your sailors to want to know more.

Things You Might Not Have Heard About Pearl Harbor:

Vice Admiral Nagumo's (commander of the Japanese Carrier Strike Force, the *Kido Butai*) post-attack report stated that after the first five minutes U.S. antiaircraft fire became so intense that it effectively negated the effect of surprise. The fact that more Japanese planes weren't shot down (9 on the first wave, 20 on the second wave) had more to do with the ineffectiveness of the weapons being used than due to surprise. The .50-caliber machine guns had too short a range, the number of jam-prone 1.1-inch quad antiaircraft guns was insufficient, and the 5-inch guns couldn't elevate enough to counter dive-bombers. There were also large numbers of dud rounds. The number of Japanese aircraft lost is always cited in accounts (to demonstrate the lopsided nature of the battle). Less commonly cited is that 111 additional aircraft of the total of 350 were hit by antiaircraft fire, but were not brought down, although over 20 of the damaged aircraft that returned to the carriers were dumped over the side. This also points to the inadequacy of the weapons more than the readiness and training of U.S. gunners.

Japanese sources reported astonishment at the volume of fire put up by U.S. ships at Pearl Harbor, and the increasing intensity and accuracy were a major factor in Nagumo's decision not to send a third wave (although there were many other factors as well). The U.S. shipboard 5-inch guns, which became active mostly after the first sections of torpedo bombers had already dropped their weapons, fired over 3,100 rounds, which actually accounted for the majority of U.S. civilian deaths (all the damage in Honolulu was from U.S. antiaircraft shell fragments returning to earth).

The deficiencies of antiaircraft guns were well known to Navy leaders in Washington, demonstrated in exercises at sea, but were uncorrected until late 1942 with the introduction of Bofors 40-mm, Oerlikon 20-mm, and 5-inch shells with proximity fuses. Due to the pre-war budget-driven paucity of live-fire training, the large number of defective rounds came as a very unpleasant surprise to the defenders at Pearl Harbor. The Japanese torpedo planes that attacked Battleship Row (all in the first wave) also rolled in five minutes before planned, and even so, five of the last nine were shot down; had they been on schedule, their losses to U.S. antiaircraft fire would have been even greater.

The known antiaircraft deficiency of the U.S. ships (based on exercise experience) was a principle factor in why the battleships were in port rather than at sea ("Sunday" had little to do with it). The two U.S. carriers (*Lexington* [CV-2] and *Enterprise* [CV-6]) in the mid-Pacific were away on higher-priority national tasking to deliver U.S. Marine aircraft (stripped from Pearl Harbor defenses) to Midway and Wake Island. These were to support the transit of B-17 bombers to the Philippines in a hastily conceived change of national strategy to use bombers to deter a Japanese attack against the Philippines. The original orders called for the carriers to carry and launch U.S. Army Air Forces fighters (also stripped from Hawaii), but Admiral Kimmel succeeded in convincing Washington otherwise. Without carrier air cover, the battleships at sea were considered to be highly vulnerable to both air and submarine attack, and the lack of carrier air cover was the

principle reason Kimmel brought the fleet in. In the event the ships were sunk, they wouldn't be lost in deep water with most of their crews.

In Pearl Harbor, the responsibility for air defense was with the Army (the Navy was responsible for long-range reconnaissance). The Army's capability to defend Pearl Harbor against air attack was a known serious deficiency, one that the Army commander in Hawaii, Lieutenant General Short, had lobbied hard to correct. However, he had been overridden by Washington due to higher priority elsewhere. Despite knowing this, Kimmel reasoned that having the ships in port with some air cover was better than being at sea with no air cover (which disabuses the notion that "battleship admirals" just didn't get it).

Because of the known deficiency in Army air defense (minimal antiaircraft artillery and many obsolete aircraft), Kimmel directed the ships in port maintain a higher status in aintiair readiness than they would normally have. Although the stories of ammunition being "locked up" (which was true for ships in repair status) have become common lore, a quarter of the fleet's .50-caliber antiaircraft guns were manned and ready, and reacted almost immediately. The 5-inch guns came on line quickly, but too late to counter the torpedo bombers that led the first wave (which were most vulnerable to fire from the 5-inchers) and largely ineffective against the dive- and high-level bombers.

For every story of naval personnel being dumbfounded that they were are under attack, there are more in which naval personnel instantly grasped what was happening. The signal for air attack was being hoisted as the first bomb was falling on Ford Island, and most ships began responding almost immediately with the capability they had (although the gun crews were actually well-trained and drilled, the .50-caliber guns were just not particularly effective). The ships were more fully manned than they normally would have been: 70 percent of the officers and almost all enlisted were aboard ships in operational status. (Thanksgiving leave and liberty had been cancelled; Kimmel's staff had been at work late Saturday—the fleet was not in "holiday routine.") Of note, after Admiral Nimitz assumed command, he carefully reviewed Admiral Kimmel's in-port air defense plan and chose not to change any of it, reasoning that it was as well-thought-out as could be given the system limitations.

Admiral Kimmel and his predecessor, Admiral James O. Richardson, were well aware that Pearl Harbor was vulnerable to air attack (contrary to popular lore). In at least four major fleet battle problems in the 1920s and 1930s (and numerous smaller exercises), U.S. carriers had "attacked" Pearl Harbor and had achieved surprise every time. Admiral Richardson was fired by President Roosevelt for vociferously arguing that putting the Pacific Fleet in Pearl Harbor was a provocation and a vulnerability rather than a deterrent to the Japanese, and that the base also lacked the support/supply infrastructure of the Pacific Fleet's previous home ports of San Pedro and Long Beach in California.

The Pacific Fleet had deployed to Hawaii as part of an exercise in early 1940 and had been ordered by President Roosevelt to stay (imagine three carriers going out on RIMPAC and being directed to stay in Hawaii indefinitely, with no families or preparation and insufficient support infrastructure). When

Kimmel assumed command, he lobbied continuously and vigorously for more long-range reconnaissance, more air-defense capability, and even barrage balloons and torpedo nets (although he eventually concurred that torpedo nets would be more trouble than they were worth). Almost none of what Kimmel requested was forthcoming due to the higher priority of the Atlantic or because the U.S. Navy didn't have the respective capability yet.

The critical thing that Admiral Kimmel did not know (and no American knew) was that only at the 11th hour in late October had the Japanese figured out, through extensive trial and error, a torpedo fin configuration that would enable torpedoes to be launched from aircraft in water as shallow as Pearl Harbor. Kimmel anticipated a bomb threat that, barring a lucky hit like the one on *Arizona*, could damage a battleship, but wasn't considered near as lethal as a torpedo. Kimmel also was not anticipating an attack of the scale of the one that actually occurred. In fact, the first time the Japanese ever launched a six-carrier strike was 7 December 1941—even they hadn't practiced it.

Kimmel, along with everyone else in the U.S. Navy at the time, "mirror-imaged" Japanese capability in believing that their carriers would operate as ours, in single-carrier task groups. Many others woefully underestimated Japanese capability, e.g., since our torpedoes couldn't be dropped in such shallow water, how could the Japanese with their "inferior" technology possibly do it?

Also contrary to lore, Kimmel and most other senior Navy leaders were very cognizant of the threat posed by carrier aviation. As early as 1916, the Navy General Board (the group of senior Navy admirals that advised the Secretary of the Navy—eventually supplanted by the OPNAV staff) stated that whoever controlled the air at sea had a decisive advantage.

During exercises in the 1930s, however, the carriers were always "sunk," because they were highly vulnerable to the aircraft from the opposing carrier. The carriers were essentially viewed as a boxer with a knockout punch and a glass jaw, hence the continued focus on what the Navy viewed as a "balanced" fleet. Even the Japanese still viewed their battleships as the decisive force, even after the attack. Admiral Nagumo had a long list of reasons for not launching a third wave, but the primary one was that he did not know where the American carriers were and he assumed (erroneously) that we knew where he was, which made him feel acutely vulnerable to surprise attack by the American carriers.

The location of the Japanese carriers, particularly of the big fleet carriers, was the highest priority for U.S. naval intelligence in the Pacific in the year leading up to Pearl Harbor, and the organization had gone to 24/7/365 manning (normal now, but unheard of then) months before the attack in response to rising tensions. In the weeks before the attack, U.S. naval intelligence knew that we had lost track of the carriers, a fact of great concern, but something that had happened several times before for up to three weeks in the preceding year.

Although Japanese operations security (OPSEC) was not perfect, they did not make themselves an easy target to track—ever. Kimmel was so concerned about that lack of locating data on the carriers that he

personally visited the basement location of Station Hypo (under the command of Commander Joe Rochefort, who worked for OP-20G in naval communications in Washington, not for Kimmel), which was also unheard of, to understand exactly which codes were being read, and how the traffic analysis process worked.

At the morning staff meeting on 2 December 1941, Kimmel said to Lieutenant Commander Edwin Layton, his fleet intelligence officer, words to the effect, "Do you mean to tell me the Japanese carriers could be rounding Diamond Head now and we wouldn't know it?" Layton responded with, "Yes, but I would have hoped they would have been spotted by now."

Two weeks prior the attack on Pearl Harbor, in response to rising tensions and even before the 27 November "War Warning" message, Kimmel directed the Pacific Fleet in Exercise 191. The exercise plan called for *Lexington* (acting as "Black Force") to proceed 200 miles north of Oahu and launch a strike against "White Base" (Pearl Harbor) to test air defense reaction, and also to be on the lookout in case the Japanese might be in the area. The exercise was cut short by directive from Washington to avoid any actions that might be interpreted by the Japanese as provocative, as Washington had belatedly come to the conclusion that "buying time" was necessary. The air attack exercise scheduled for 29 November was cancelled.

Sources are in dispute as to whether Kimmel considered the north to be the primary threat sector, but this exercise (and the fact that previous exercise "surprise strikes" originated from the north due to the far less dense shipping traffic) suggests that he did. There is certainly strong evidence that the war planners on Kimmel's staff viewed the north-northeast as the primary threat axis for a carrier air attack. As it turned out, the Japanese carrier force launched their strike from the same position as *Lexington* had been operating from only a couple of weeks earlier.

The United States had broken the primary Japanese diplomatic code ("Purple") and some lesser diplomatic codes and was in the process of breaking the Japanese general naval operating code (then referred to as the "5 Num" code, and later retroactively as the JN-25 series). Sources conflict as to how much of the naval code the United States was reading before Pearl Harbor, but at best it wasn't much. The real point is that neither Kimmel nor Layton had access to Purple (also known as "Magic") intelligence, other diplomatic intercepts, or any JN-25 intelligence that might have existed.

Some of the "conspiracy" books about Pearl Harbor postulate that some sort of sinister intent on the part of Roosevelt was the reason Kimmel did not have access to this critical intelligence, but the reality appears to be pure bureaucratic buffoonery. Kimmel and Layton sensed that there was intelligence they were not getting (and General MacArthur and Admiral Hart in the Philippines were), especially after they got a couple Purple-derived messages by accident in July, and kept requesting to receive such intelligence. Admiral Stark, the CNO (and others of the very few who were cleared) assumed that Kimmel was getting Purple traffic, or was told erroneously that he was, and no one followed up to be sure. The Purple traffic was so tightly compartmented that no one actually had the big picture; the few senior leaders with access

each sifted through hundreds of raw decoded intercepts, with no overall assessment.

Within the Purple traffic, and in the lesser diplomatic codes that were being decrypted very time-late, were plenty of indications that would have alerted Kimmel and Layton that Pearl Harbor was a target. They did not receive any of it. Prior to the attack on Pearl Harbor, there was a mountain of intelligence indicating that hostilities were imminent in the Far East between Japan and Britain, and probably the United States. In no message from Washington that Kimmel received, including the 27 November "War Warning," was Pearl Harbor ever explicitly mentioned as a possible target. The fact that Washington was also directing that fighters be stripped from Hawaii, over Kimmel's and Short's protests, strongly suggested to Kimmel that Washington was not concerned about an attack on Pearl Harbor.

After the attack, the traditional American search for someone to blame (besides the Japanese) commenced in earnest. Secretary of the Navy Frank Knox arrived soon after the attack to investigate. The Army relieved General Short first, and in the spirit of "jointness" the Navy followed suit with Kimmel on 17 December 1941. Kimmel expected to be relieved and revert to his "permanent" rank of two-star rear admiral. (It was fairly common for three- and four-stars to accept follow-on positions at two-star rank. Rear Admiral Claude Bloch, the commander of the 14th Naval District [Hawaii] at the time of the attack, and who worked for both Kimmel and CNO Stark, had previously been the four-star commander-in-chief of the U.S. Fleet in 1938–40). Kimmel expected to be offered a follow-on job in which he could contribute to the war effort, but that never happened and he eventually reluctantly resigned.

The 1942 Roberts Commission, which was the first of numerous investigations of the Pearl Harbor attack, was conducted with none of the rules of evidence or rights of the accused (e.g., right to review evidence against them, etc.) of a court-martial. Nonetheless, it concluded that Kimmel and Short were guilty of "dereliction of duty," resulting in a feeding frenzy by the press, public, and politicians. With no opportunity to appeal, Kimmel was accused of failure to conduct adequate long-range reconnaissance. This despite the fact that with acute shortages of aircraft, trained crews, and especially spare parts, Kimmel could only sustain a fraction of the coverage required. Moreover, the weather would have almost certainly prevented discovery of the Japanese anyway, even if Kimmel had been prescient enough to launch his few aircraft to the north on that particular morning.

On 7 December, there were 69 Navy long-range patrol aircraft (PBY-3 and PBY-5) on Oahu. Of these, only 15 had been on the island longer than six weeks. This number of patrol aircraft was nowhere near enough to provide 24-hour/360-degree coverage of Oahu. It was the position of the Roberts Commission (and many other historians later) that the inability to provide full coverage was no excuse for not searching the primary threat axis (north-northeast) and that there were enough aircraft to do so. This analysis generally fails to take into account the acute shortage of aircrew, the even more acute shortage of adequately trained aircrew, and a debilitating spare parts shortage—or weather.

PBY aircraft were on training flights out to 600 nautical miles north and west of Pearl Harbor

on 4 and 5 December, but the weather on 6 December was not conducive to finding anything. In addition, fully aware of the likelihood of imminent war, neither Kimmel (nor Bloch) wanted to wear out his inadequate numbers of aircraft before the war started. If anything, Kimmel was guilty of being focused on executing the approved war plan (the latest in the Orange/Rainbow series), which was offensively oriented, upon the outbreak of hostilities.

Kimmel repeatedly requested a court-martial in order to defend himself, but was denied. The primary reason was that a trial would have risked exposing the code-breaking effort, which was considered (and really was) of paramount importance in winning the war. Another unstated reason is that a trial would have risked the reputations of many senior military and government officials in Washington, who were far more culpable of the failures that led to surprise at Pearl Harbor than Kimmel was.

If by this point you think that Admiral Kimmel was treated unfairly, you are in the company of admirals Zumwalt, Stockdale, Crowe, Hayward, Turner, Holloway, McKee, Lawrence, and 28 other three- or four-stars who signed a petition in 1991 to posthumously promote Rear Admiral Kimmel to Admiral. So far, it hasn't happened.

Writing years after the war in 1965, Fleet Admiral Nimitz stated on a number of occasions that it was "God's divine will" that Admiral Kimmel did not have the fleet at sea. Otherwise, "we could have lost ALL of our trained men . . . there would have been few trained men to form the nucleus of the crews for the new ships nearing completion."

Of eight battleships at Pearl Harbor, only two were never returned to service:

- *Arizona* (BB-39), sunk by magazine explosion, 1,177 killed (over 900 still aboard)

- *Oklahoma* (BB-37), capsized (429 dead), raised, sold for scrap, lost at sea under tow

Three battleships were sunk, raised, and returned to the fleet:

- *California* (BB-44) (100 dead), returned to the fleet in May 1944

- *West Virginia* (BB-48) (106 dead), returned to the fleet in July 1944

- *Nevada* (BB-36) (60 dead), beached, settled, raised, returned to the fleet in December 1942

Three battleships were damaged and repaired, and returned to the fleet:

- *Pennsylvania* (BB-38) (9 dead), March 1942

- *Tennessee* (BB-43) (5 dead), March 1942

- *Maryland* (BB-46) (4 dead), February 1942

West Virginia, Maryland, Tennessee, California, and *Pennsylvania* (plus *Mississippi*—BB-41), defeated a Japanese force at the Battle of Surigao Strait (part of the Battle of Leyte Gulf) on the night of 24–25 October 1944. *Nevada* shelled enemy shore defenses

at Normandy (D-Day), in Southern France, and on Iwo Jima and Okinawa.

Of six light cruisers present, *Raleigh* (CL-7) and *Helena* (CL-50) were badly damaged. *Helena* returned to service in June 1942 and *Raleigh* that July. *Honolulu* (CL-48) was damaged and repaired by January 1942.

Of 30 destroyers, *Cassin* (DD-372), *Downes* (DD-375), and *Shaw* (DD-373) were heavily damaged, and *Helm* (DD-388) lightly damaged. For *Cassin* and *Downes*, machinery was salvaged, new hulls built, and they returned to service February 1944 and May 1943 respectively. *Shaw* was repaired by June 1942 and *Helm* by that January.

Other vessels:

- Minelayer *Oglala* (CM-4) was sunk, raised, and repaired by February 1944
- Target ship *Utah* (AG-16, ex-BB-31) capsized (64 dead); attempt to right failed
- Repair ship *Vestal* (AR-4) was heavily damaged, beached, raised, and repaired by February 1942
- Seaplane tender *Curtiss* (AV-4) was damaged and repaired by January 1942
- Yard tug *Sotoyomo* (YT-9) was sunk, raised, and repaired by August 1942
- Floating drydock *YFD-2* was sunk, raised, and repaired by May 1942

I am not going to attempt to address the numerous conspiracy theories about Pearl Harbor (it is very much a cottage industry) other than to say that the vast majority are based on little to no actual evidence, usually taken out of context, and contain much speculation. What can be said is that U.S. political and military leaders knew full well that the economic sanctions were backing the Japanese into a corner and would almost certainly result in an outbreak of war, and that the outbreak was imminent. No one expected an attack on a scale as devastating as that at Pearl Harbor. Everyone grossly underestimated Japanese capability and resolve, assuming that when the expected war came, we would easily clean their clock.

It should also be noted that the Japanese made numerous errors of judgment as well and, but for some lucky breaks, the battle could have gone very differently. The accuracy of Japanese bombing was actually pretty abysmal, especially during the second attack wave when smoke, increased cloud cover, and antiaircraft fire prevented the dive-bombers from being able to conduct doctrinal dive-bombing (i.e., the dive-bombers couldn't see the target from the altitude at which they would normally commence the dive, resulting in numerous misses. In fact, the very first bomb dropped in the first wave not only missed the seaplanes on the ramp at Ford Island, it also missed Ford Island, exploding in the mud off shore). Even among the 49 high-altitude bombers, which were relatively unmolested early in the battle, only about seven or eight bombs hit their targets on Battle Ship Row, with relatively little damage to the armored battleships except the one catastrophic hit on *Arizona*. In fact, it was the first dozen or so torpedo bombers that did the real killing, and

the rest of the torpedoes were just overkill on *Oklahoma* and *West Virginia*.

One of the myths of Pearl Harbor is that the Japanese aviators were all battle-hardened veterans of the Sino-Japanese War. There were certainly some, but the reality is that the great majority of them were young green kids who, although exhaustively trained, were in combat for the first time. Comparing the number of aircraft involved to the number of hits actually achieved, the lack of combat experience shows. There is no substitute.

The many Japanese mistakes included the strike leader, Commander Mitsuo Fuchida, botching the signal to the strike force as to whether surprise had been achieved or not, and which plan (surprise or no surprise) to execute, which significantly affected timing and targets. Most important, the Japanese apparently had no plan to take out the repair facilities, submarine base, and fuel-storage facilities (all of which would play a critical role in their defeat) because most Japanese leaders believed the war would be too short for those to have an impact, and smoke from burning oil storage would just foul the range anyway. The Japanese, too, grossly underestimated their enemy.

Japanese losses were 29 aircraft with 55 personnel killed, and 5 midget submarines with 9 men killed and 1 captured.

Sources include: *Air Raid: Pearl Harbor! Recollections of a Day of Infamy* edited by Paul Stilwell, Naval Institute Press, 1981; *Raising the Fleet: The Pearl Harbor Salvage Operation, 1941–1944* by Ernest Arroyo and Stan Cohen, Pictoral Histories, 2018; *Pearl Harbor: Why, How, Fleet Salvage and Final Appraisal* by Vice Admiral Homer N. Wallin, USN (Ret.), Naval History Division, 1968; *Pearl Harbor: Warning and Decision* by Roberta Wohlstetter, Stanford University Press, 1962; *History of United States Naval Operations in World War II, Vol. III– Rising Sun in the Pacific* by Rear Admiral Samuel Eliot Morison, USNR, Little Brown and Co., 1958; *And I Was There: Pearl Harbor and Midway–Breaking the Secrets* by Rear Admiral Edwin T. Layton, USN (Ret)., with Captain Roger Pineau, USNR (Ret). and John Costello, Konecky and Konecky, 1985; *Sunday in Hell: Pearl Harbor Minute by Minute*, by Bill McWilliams, Open Road Integrated Media, 2011; *Pearl Harbor* by H. P. Wilmott, Cassell & Co., 2001; *Day of Deceit: The Truth About FDR and Pearl Harbor* by Robert Stinnett, The Free Press, 2000; *At Dawn We Slept: The Untold Story of Pearl Harbor*, by Gordon Prange, Penguin Books, 1991.

H-Gram 001-3: Navy Valor at Pearl Harbor

H-Gram 001, Attachment 3
Samuel J. Cox, Director NHHC
*17 November 2016/**revised** 7 December 2022*

This revision to my original H-Gram 001 corrects errors in the rank of several awardees, provides some additional context, and adds a brief synopsis of ships named in honor of the awardees.

Fifteen Medals of Honor were awarded to U.S. Navy personnel for valorous action during the 7 December 1941 Japanese attack on Pearl Harbor; 10 of the awards were posthumous.

Captain Mervyn S. Bennion, USN—posthumous. *West Virginia* (BB-48), Commanding Officer. Despite being mortally wounded, showed no concern except to continue fighting and save his ship. *Fletcher*-class destroyer *Bennion* (DD-662) was named in his honor (in service 1942–46, 10 Battle Stars).

Aviation Chief Ordnanceman John W. Finn, USN. Naval Air Station Kaneohe Bay. Despite numerous painful wounds, he continued to man a .50-caliber machine gun in the open, continuously firing at Japanese aircraft despite intense strafing. *Arleigh Burke*-class destroyer *John Finn* (DDG-113) was named in his honor (in service 2017 to present).
Ensign Francis C. Flaherty, USNR—posthumous. *Oklahoma* (BB-37). Sacrificed his life to ensure that the remainder of his turret crew could escape. *Edsall*-class destroyer escort *Flaherty* (DE-135) named in his honor (in service 1943–46, Presidential Unit Citation and four Battle Stars).

Chief Aviation Ordnanceman John W. Finn, USN (NH 95448).

Lieutenant Commander Samuel G. Fuqua, USN. *Arizona* (BB-39). As senior surviving officer after the explosion that destroyed *Arizona*, he remained on board directing damage control, firefighting, and rescue efforts. Retired as a rear admiral, died in 1987. No ship named in his honor.
Chief Warrant Officer (Boatswain) Edwin J. Hill, USN—posthumous. *Nevada* (BB-36). Swam back to the ship after casting off her lines. Subsequently, after directing his men to take shelter, he was killed by bomb explosions and strafing in an exposed position on the forecastle as he attempted to let go the anchors when the *Nevada* was beached. *Edsall*-class destroyer escort *Hill*

(DE-141) named in his honor (in service 1943–46, one Battle Star).

Ensign Herbert C. Jones, USNR—posthumous. *California* (BB-44). Despite fatal wounds, he organized and led a party supplying ammunition to antiaircraft batteries. *Edsall*-class destroyer escort *Herbert C. Jones* (DE-137) was named in his honor (in service 1943–46, Navy Unit Commendation and three Battle Stars).

Rear Admiral C. Isaac Kidd, USN—posthumous. *Arizona* (BB-39). As commander of Battleship Division ONE, he discharged his duties as Senior Officer Present Afloat (SOPA) until *Arizona* blew up. Three destroyers have been named in his honor: *Fletcher*-class DD-661 (1943–64, eight World War II Battle Stars and four for Korea), *Kidd*-class DDG-993 (1981–98), *Arleigh Burke*-cass DDG-100 (2007 to present).

Warrant Officer (Gunner) Jackson C. Pharris, USN. *California* (BB-44). Despite severe wounds, on his own initiative, he set up a hand supply line for the antiaircraft guns and repeatedly risked his life to save other shipmates. *Knox*-class frigate *Pharris* (FF-1094) named in his honor (in service 1974–92).

Warrant Officer (Radio Electrician) Thomas J. Reeves, USN—posthumous. *California* (BB-44). Until overcome by smoke and fire, passed ammunition by hand in a burning passageway to antiaircraft guns after mechanized hoists were put out of action. *Buckley*-class destroyer escort *Reeves* (DE-156/APD-52) named in his honor (in service 1943–46, one Battle Star).

Warrant Officer (Machinist) Donald K. Ross, USN. *Nevada* (BB-36). Despite being blinded, single-handedly kept the forward dynamo room operating after ordering his men to leave due to smoke, steam, and heat. *Arleigh Burke*–class destroyer *Ross* (DDG-71) named in his honor (in service 1997 to present).
Machinist's Mate 1st Class Robert R. Scott, USN—posthumous. *California* (BB-44).

Remained at his post at an air compressor as it flooded to ensure the antiaircraft guns had air as long as possible. *Buckley*-class destroyer escort *Scott* (DE-214) named in his honor (in service 1943–47).

Chief Water Tender Peter Tomich, USN—posthumous. *Utah* (AG-16, ex-BB-31). Remained at his post in the engineering plant of *Utah* as she capsized, securing boilers and ensuring the escape of all fireroom personnel. *Edsall*-class destroyer escort *Tomich* (DE-242) named in his honor (in service 1943–46, one Battle Star).

Captain Franklin Van Valkenburgh, USN—posthumous. *Arizona* (BB-39). As commanding officer, valiantly fought his ship until killed in the magazine explosion. *Fletcher*-class destroyer *Van Valkenburgh* (DD-656) named in his honor (in service 1943–54, Navy Unit Commendation, three World War II Battle Stars, one for the Korean War).

Seaman 1st Class James R. Ward, USN—posthumous. *Oklahoma* (BB-37). Sacrificed his life so that others in his turret crew could escape. *Edsall*-class destroyer escort *J. Richard Ward* (DE-243) named in his honor (in service 1943–46, one Battle Star).

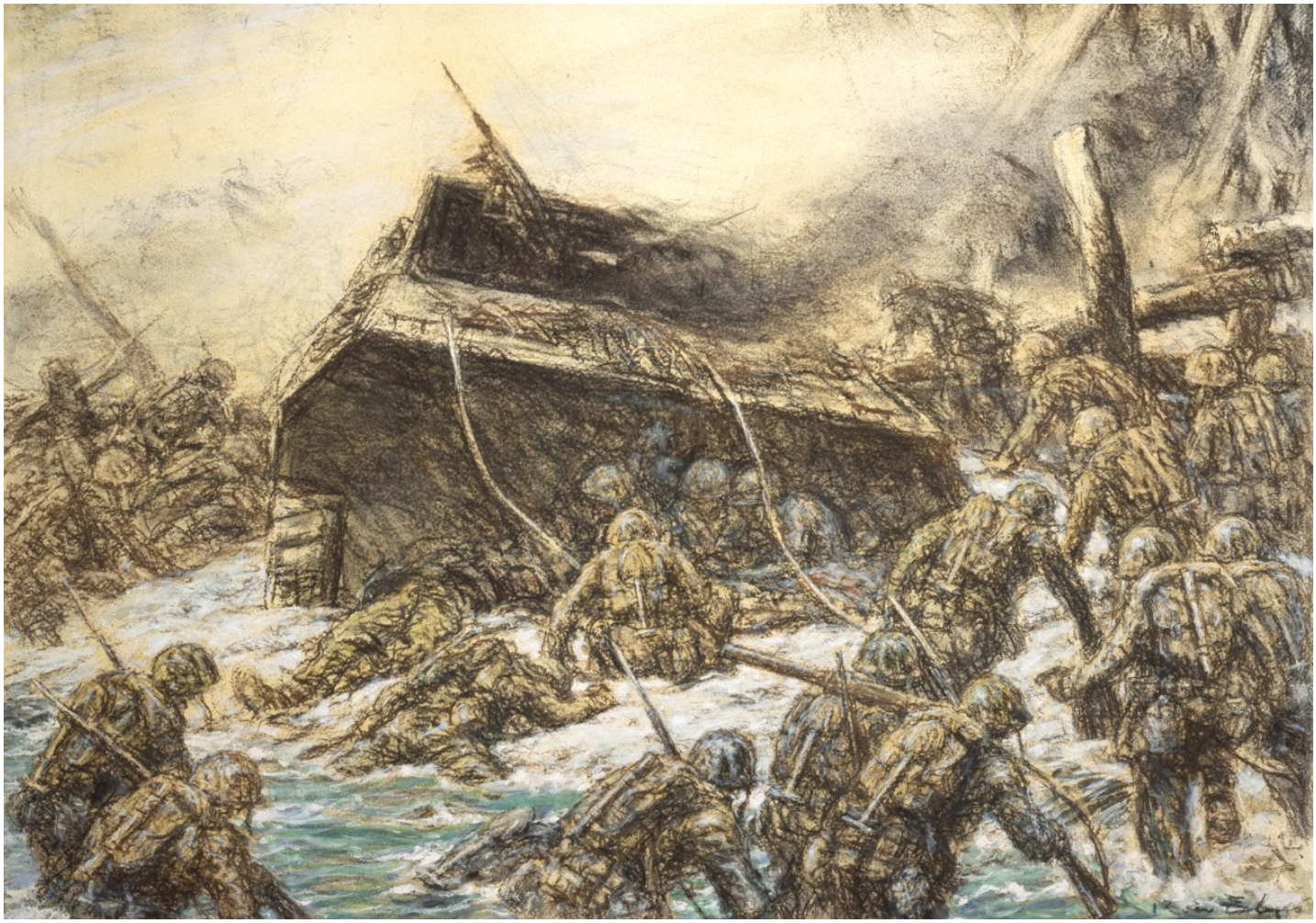
Commander Cassin Young, USN. *Vestal* (AR-4). As commanding officer of *Vestal*, was blown overboard by the force of the *Arizona* blast, but returned to his ship and despite two more bomb hits, got his sinking vessel underway and moved it to where it would not be an obstruction. Awarded posthumous Navy Cross in command of heavy cruiser *San Francisco* (CA-38) in Battle of Guadalcanal 13 November 1942. *Fletcher*-class destroyer *Cassin Young* (DD-793) named in his honor (in service 1943–46, 1951–60, Navy Unit Commendation, hit twice by kamikazes, four Battle Stars).

Various accounts will give different totals of Medals of Honor depending on when they were written. The original Fleet Awards Board recommendation only recommended 12 men for the Medal of Honor. However, that included First Lieutenant George Cannon, USMC (posthumous) for action during the shelling of Midway Island by two Japanese destroyers on the night of 7 December 1941. Chief Finn was subsequently added to the list several months after that attack. Warrant Officer Pharris was originally awarded a Navy Cross that was upgraded to a Medal of Honor in 1948. Rear Admiral Kidd and Captain Van Valkenburgh were not originally recommended for any award on grounds that what they did was not significantly different (i.e., their duty) than what the other 1,176 men who were killed were occupied with when *Arizona* blew up. They were put on the list by order of Secretary of the Navy Frank Knox.

As for other awards, the numbers vary from source to source as well, and have actually changed over time due to a few upgrades. Reasonably solid is the number of Navy Crosses awarded (51). At the time, the Navy Cross was the second-highest award for valor in the Navy after the Medal of Honor, but third in precedence after the Navy Distinguished Service Medal (this order was reversed by act of Congress in August 1942). Most accounts lump other awards together, so it is not easy to determine how many were awarded to Navy versus Army personnel, except the Silver Star was an Army-only award at the time and the Bronze Star didn't yet exist.

The Navy Cross awarded to then–Mess Attendant 2nd Class Doris Miller was controversial at the time as it was the first to an African American. He was not initially recommended for an award at all, partially due to the institutional racism at the time (to include the attitude of Secretary of the Navy Frank Knox), but also because his actions, which were indeed heroic, were not all that distinguishable from the heroic actions of many others that day who received no award. The Navy was forced to give Miller an award as a result of outside political pressure, not because the Navy suddenly became enlightened. Miller's actions were heroic; however, the number of planes he shot down, if any, has been embellished in successive accounts over the years. Antiaircraft fire was actually so heavy that there was no way to confirm who (or even which ship) shot down which planes. A more complete account of Doris Miller's naval career can be found in H-025-1.

By far the most definitive account of Medals of Honor awarded for Pearl Harbor that I have seen is *Pearl Harbor's Hidden Heroes: The 18 Medals of Honor Awarded for Bravery in the Hawaiian Isands: 1941, 1942 and 1945* by Colonel Charles A. Jones, USMCR (Ret.) (self-published, 2017).



"Beachhead Scene, Marines at Tarawa," drawing, charcoal and pastel on paper, Kerr Eby 1944 (88-159-DG).

Gram 025-1: Operation Galvanic—Tarawa and Makin Islands, November 1943

H-Gram 025, Attachment 1
Samuel J. Cox, Director NHHC
*31 January 2019/**revised** 7 December 2021*

Operation Galvanic Background

Following the Japanese victory in the Russo-Japanese War in 1904–1905, and a "war scare" with Japan in 1906–1908 (provoked by discriminatory anti-Japanese immigration policy in the U.S.), the U.S. Navy began preparing for the possibility of war with that country. This effort would result in the development of War Plan Orange (and the subsequent "Rainbow" series of war plans). Although modified over the years, the basic outline of War Plan Orange would remain intact during the inter-war years. War Plan Orange assumed that the Philippines (then an American territory and later Commonwealth) would probably be lost, or at best besieged/blockaded by the Japanese, and that the U.S. Navy would have to fight its way across the Central Pacific to a climactic Mahanian battle of battleship fleets near Japan. The Japanese developed their own plan, in which they demonstrated an understanding of the U.S. plan: Japanese

forces would counter it, attriting the U.S. Navy advance by using asymmetric means (aircraft carriers, submarines, massed torpedo attack, and night battle), but with the same end result of a climatic battleship battle near Japan that would decide the war.

A key part of both the U.S. and Japanese war plans involved the possession of the Marshall Islands, an archipelago of coral atolls hundreds of miles across, including Kwajalein Atoll (with the world's largest lagoon) located roughly 2,100 miles west southwest of Pearl Harbor and 1,000 miles east southeast of the Marianas Islands (which included Guam, Saipan, and Tinian). Possession of the Marshalls would be critical for the U.S. Navy to establish logistics facilities with which to sustain an advance across the Pacific. Although the United States had acquired Guam from Spain as a result of the Spanish-American War, Guam did not have an adequate harbor, nor did any of the other Marianas, nor islands such as Wake Island (also a U.S. possession).

However, during World War I, Japan was allied with the United Kingdom and captured the Marshall Islands from the Germans, who had bought them from Spain after the Spanish defeat in the Spanish-American War. After the end of World War I, the newly formed League of Nations awarded Japan a "mandate" to continue possession of the Marshall Islands, and other island chains that the Japanese had taken from the Germans, including the Caroline Islands with the magnificent lagoon and harbor of Truk Island. Article 22 of the League of Nations Covenant forbade Japan (or any other nation) from fortifying or using mandated territories for military purposes. The terms of the Washington Naval Treaty also precluded the United States from fortifying islands in the Central Pacific, such as Guam and Wake, which was a precondition for the Japanese to agree to a lower ship ratio, the famous 5-5-3 (U.S.-UK-Japan) ratio for battleships. For most of the interwar period Japan adhered to the terms of the League of Nations' mandate, but as tensions began to rise, Japan turned administration of the islands over to the Imperial Japanese Navy in 1937 and clamped a tight lid of secrecy over its activities in the Marshalls. This provoked a significant U.S. Navy intelligence collection effort (which would result in persistent rumors that Amelia Earhart's fatal around-the-world flight in 1937 was some sort of covert intelligence collection effort).

By 1940, the Japanese (and most of the rest of the world) were ignoring anything the League of Nations said, along with ignoring the Washington and London Naval Treaties and arms control agreements (particularly the Kellogg-Briand Pact of 1928, which "outlawed" war). The Japanese rapidly peppered the Marshal Islands with airfields, seaplane facilities, submarine facilities, and fortifications. The U.S. Pacific Fleet was fixated on the Marshall Islands as the primary threat vector to Pearl Harbor, and, in fact, the force of over 25 Japanese submarines in Hawaiian waters on 7 December 1941 sailed from Kwajalein in the Marshalls (the Japanese carriers, however, did not, and attacked Pearl Harbor from the north).

Upon the outbreak of war, the Japanese quickly moved (10 December 1942) to occupy a chain of similar coral atolls to the south-southeast of the Marshalls, called the Gilbert Islands, then under British administration (and now the nation of

Kiribati). The United States responded with a carrier raid on the Marshall and Gilbert Islands on 1 February 1942, one of the very first U.S. offensive actions of the war. Task Force 8, under the command of Rear Admiral William F. Halsey, Jr., embarked on USS *Enterprise* (CV-6), attacked Japanese facilities and shipping in the Marshall Islands of Kwajalein, Wotje, and Maloelap (Taroa.) Task Force 17, commanded by Rear Admiral Frank Jack Fletcher, embarked on USS *Yorktown* (CV-5), attacked the Marshall Islands of Jaluit and Mili, and the Gilbert Island of Makin. U.S. cruisers and destroyers also bombarded Wotje and Taroa. The U.S. aircraft losses in the raids were not insignificant, results were limited, and the heavy cruiser USS *Chester* (CA-27) was hit and lightly damaged in a Japanese counter-airstrike, but the raids did provide vitally needed combat experience for the U.S. Navy carriers and aircraft, as well as being a big boost to morale in the Fleet and in the United States, still reeling from the disaster at Pearl Harbor.

Marines and Sailors on board USS *Nautilus* (SS-168) as she entered Pearl Harbor after the Makin raid, 25 August 1942. One of the men, in second row, left center, is holding a Japanese rifle captured on Makin (80-G-11729).

On 17–18 August 1942 the 2nd Marine Raider Battalion, under the command of Lieutenant Colonel Evans Carlson, was inserted onto Makin Island in the Gilberts by submarines USS *Nautilus* (SS-168) and USS *Argonaut* (SS-166). The raid was moderately successful, although the extraction proved very harrowing, and nine Marines were inadvertently left behind, captured and executed by the Japanese, in addition to 30 other Marines killed or missing. Marine General Holland M. "Howling Mad" Smith would later describe the raid as a "piece of folly," in that it stimulated the Japanese to significantly increase the fortifications on Tarawa and Makin Islands, and, by July 1943, the defenses on Tarawa were quite formidable.

During the period when General MacArthur was still bogged down in New Guinea and Vice Admiral Halsey was meeting stiff Japanese resistance in the central Solomon Islands, the Allied Combined Chiefs of Staff approved making the Marshalls a priority target, and, in June 1943, Admiral Nimitz was directed to plan to take the Gilberts—as a stepping stone—and then the Marshall Islands by the end of 1943. Tarawa, as the only island in the northern Gilberts with an airfield, was identified as necessary to take first in order to bring the Marshalls in range of bombers and aerial photo-reconnaissance, as detailed intelligence of the Marshalls was lacking, although some had been obtained by submarine reconnaissance missions. The island of Nauru, about 380 miles west of the Gilberts, was originally identified as a target for invasion as well due to its potential to provide air support to Japanese forces in the Gilberts, but was later dropped when terrain and threat analysis determined it to be "too hard," and Makin Island in the Gilberts was substituted as it was suitable for building an airfield.

Because the Marshalls and the Gilberts were literally in the middle of nowhere, as a preliminary step to eventually capturing the Marshalls, on 2 October 1942 the United States had established a bomber base and fleet anchorage at Funafuti Atoll in the Ellice Islands (under British administration,) 700 miles southeast of Tarawa, which was the closest the Allies could get with a land-based airfield. This resulted in some of the longest bombing missions of the war to that point, mostly by the United States against the Gilberts, and a handful of return strikes by Japanese bombers against Funafuti. By the end of August 1943, the Combined Chiefs of Staff had approved Nimitz' plan to take the Gilberts and Marshalls.

The New and Improved U.S. Navy

Although the Allied "Defeat Germany First" grand strategy placed significant limitations on the resources that could be allocated to the Pacific, by late 1943 those resources were considerable. The industrial might of the United States, which the late Admiral Isoroku Yamamoto had feared and warned the military leadership in Tokyo about in vain, was already coming to bear. Between the Pearl Harbor attack and the end of 1943, the U.S. navy commissioned seven *Essex*-class fleet carriers (with another 17 on the way) and nine *Independence*-class light carriers, quickly built on light cruiser hulls. The Japanese would only be able to commission one new fleet carrier (in mid-1944, just in time to be sunk by a submarine in the Battle of the Philippine Sea), and only three conversions to light carriers. (It should be noted that the *Essex* carriers completed in 1943 had actually been ordered, and several laid down, prior to Pearl Harbor in anticipation of the outbreak of war). Although the Japanese commissioned two new super-battleships (*Yamato* and *Musashi*) after Pearl Harbor, by the end of 1943, the U.S. Navy commissioned six modern battleships, with two more on the way (not counting the cancelled *Montana* class), plus two that had been commissioned just before Pearl Harbor. By the end of that same year, the Navy also commissioned four heavy cruisers to none for the Japanese, plus 14 light cruisers to only a couple for the Japanese.

Not only were the Japanese about to be overwhelmed by the sheer numbers of U.S. ships and aircraft: The superior U.S. technical and qualitative advantages would quickly become apparent. Although the Japanese were able to equip a handful of ships with radar (and the occasional surprise, such as radar counter-detection gear), by the end of 1943, U.S. ships were festooned with constantly improving air search, surface search and fire control radars, networked into new combat information centers, enabling U.S. commanders to make much better use of their radar advantage, particularly for radar fighter direction and fleet air defense. New U.S. ships, and older ones that had been refitted, were crammed with the new Bofors 40-mm (replacing the jam-prone 1.1-inch guns) and Oerlikon 20-mm anti-aircraft guns (replacing the completely inadequate .50- and .30-caliber machine guns), along with 5-inch/38-caliber dual-purpose guns using radar-proximity ("VT") fused shells that were deadly to attacking aircraft beyond weapons-release range. (The variable timed—"VT"—nomenclature was actually a cover to hide the carefully guarded secret that the shells were really triggered by miniature radars when in lethal proximity to the target.) Numerous other U.S. innovations included identification

friend or foe (IFF) gear, aircraft equipped with 5-inch rockets for ground and ship attack, drag rings to improve aerial torpedo reliability, fog nozzles for fire-fighting hoses, fire-fighting schools for the entire crew, more intricate compartmentation, greatly improved damage control organization and techniques, use of screening vessels as "fire boats," and many more.

Perhaps most important of all were the new U.S. Navy aircraft, particularly the Grumman F6F Hellcat fighter. Although the Hellcat had the same six .50-caliber machine guns as the older (later model) F4F Wildcat, the Hellcat was 100 to 150 miles per hour faster than the Wildcat, more maneuverable, even tougher, and superior in every way. More importantly, it was superior to anything the Japanese had. In many respects the F4U Corsair was even better than the Hellcat (it was even faster, for example), but initial difficulties with earlier models in landing on a carrier resulted in it being limited to a land-based role until much later in the war. The new SB2U Helldiver dive bomber was an improvement over the SBD Dauntless (20 miles per hour faster), but not as great a leap forward as the Hellcat was to the Wildcat (which was actually because the Dauntless was a darn good plane). The new Grumman TBF (and later General Motors TBM) Avenger torpedo bomber was a great improvement over the TBD Devastator, most of which had been shot down anyway. Nevertheless, it wasn't until fixes were finally implemented to the unreliable U.S. aerial torpedoes in 1944 that the Avenger began to reach its full potential.

In late 1943, the U.S. Navy's biggest problem was probably lack of experience. Due to the dramatic expansion of the fleet, the Annapolis graduates who had made up the great preponderance of the officer corps and pilots at the start of the war, and almost exclusively at the senior ranks (and who paid a very high price to hold the line in the dark early days of the war), were now spread thin across the fleet. In the aircraft squadrons, attrition of the early cadre of U.S. pilots had been very high, from both enemy and operational causes, such that by late 1943 the great majority of naval aviators lacked combat experience. By late 1943, almost 75 percent of officers on even veteran ships were reservists or from new commissioning sources other than Annapolis (though these officers would acquit themselves with distinction). As much as 50 percent or more of enlisted manning was by crewmen who had never been to sea before.

However, unlike the Japanese, who kept their best pilots and shipboard officers in the front line until they died, the U.S. Navy rotated the best combat-experienced officers and enlisted back to the States to train others and pass their experience on. As a result, a whole new generation of naval aviators, very few of them Annapolis graduates, would rise to greatness in the latter years of the war, with a similar phenomenon aboard ships. The senior commanders, though, were virtually all Annapolis men to the end. To deal with the experience problem, Admiral Nimitz sent his fast carrier task forces on a series of raids in the fall of 1943, on the principle that the only way to gain combat experience was in combat.

USS *Essex* (CV-9): Scene on the flight deck, looking aft from the carrier's island during her shakedown cruise, 20 March 1943. Planes parked on deck are F6F-3 Hellcat fighters (in foreground, with wings folded) and SBD-4 Dauntless scout/dive bombers (80-G-K-698).

Fast Carrier Strikes, August–October 1943

On 1 September 1943, aircraft from the new *Essex*-class (27K tons, 90 aircraft) carriers *Yorktown* (CV-10) and *Essex* (CV-9), and the new *Independence*-class (11,000 tons, 45 aircraft) light carrier *Independence* (CVL-22) under the command of Rear Admiral Charles A. Pownall, struck Marcus Island, which is about 1,500 miles from Midway Island and 1,000 miles from Tokyo. Surprise was achieved and in six strikes of 275 sorties, several Japanese Betty twin-engine bombers were destroyed on the ground, along with other facilities, for the loss of three Hellcat fighters and one Avenger torpedo bomber. This was the first combat use of the new F6F Hellcat fighter.

On 18–19 September, Pownall led a different task group made up the new *Essex*-class carrier *Lexington* (CV-16) and new *Independence*-class light carriers *Princeton* (CVL-23) and *Belleau Wood* (CVL-24) in a series of raids on Tarawa and Makin Islands. Incorporating lessons from the Marcus strikes, these attacks were significantly more destructive to shore installations, destroying on the ground nine of the 18 Japanese planes on Tarawa and inflicting substantial casualties on Japanese troops for the loss of four U.S. aircraft. Extremely valuable photo intelligence was also obtained that informed the planning for the Tarawa and Makin landings.

On 5 and 6 October 1943, Rear Admiral Alfred E. Montgomery led *Essex* (CV-9), *Yorktown* (CV-10), *Lexington* (CV-16), *Cowpens* (CVL-25), *Independence* (CVL-22), and *Belleau Wood* (CVL-24) in two days of strikes on Japanese-occupied Wake Island, inflicting substantial damage in six strikes of 738 sorties, although 12 U.S. aircraft were shot down and 14 lost to accidents. Wake was also shelled by U.S. cruisers and destroyers. Twenty-two Japanese planes were destroyed, leaving only 12 left to reinforce the Marshalls. An unintended consequence of the Wake raids was that the Japanese, fearing a landing was imminent, executed all 98 U.S. civilians who had been detained as forced labor on the island when it fell to the Japanese in December 1941. Rear Admiral Sakaibara was tried and hanged after the war for the execution of the civilians.

U.S. carriers *Saratoga* (CV-3), *Princeton* (CVL-23), *Bunker Hill* (CV-17), *Essex* (CV-9), and *Independence* (CVL-22) participated in raids on Rabaul in Admiral Halsey's area on 5 and 11 November 1943, in support of the Bougainville landings (see H-Gram 024 for details.)

One of the innovations of the carrier strikes in the central Pacific, which became standard practice, was to station submarines in "lifeguard" patrols off islands being struck in order to rescue downed aircrew. At the request of Rear Admiral Pownall, the commander of U.S. submarines in the Pacific,

Vice Admiral Charles Lockwood, ordered USS *Skate* (SS-305) to conduct the first such patrol during the Wake Island strikes (rescuing 6 or 7 air crewmen.) Lieutenant j.g. (and future President) George H. W. Bush would have his life saved by just such a lifeguard submarine rescue later in 1944. This practice was a big morale boost to U.S. naval aviators.

Operation Galvanic Forces

On 15 March 1943, the Central Pacific Force was re-designated as the Fifth Fleet, and Vice Admiral Raymond A. Spruance, previously Admiral Nimitz' Chief of Staff after the Battle of Midway, assumed command on 5 August, 1943. Spruance was generally embarked on the heavy cruiser USS *Indianapolis* (CA-35). Spruance chose Rear Admiral Richmond Kelly Turner to be the commander of V Amphibious Force (and Rear Admiral Theodore Wilkinson replaced Turner as Commander III Amphibious Force in the Northern Solomon Islands campaign). For Operation Galvanic, Turner flew his flag on the Pearl Harbor–veteran battleship *Pennsylvania* (BB-34). Major General Holland M. "Howling Mad" Smith, USMC, commanded V Amphibious Corps, in charge of Marine (2nd Marine Division) and Army (165th Regimental Combat Team) operations ashore. Turner divided V Amphibious Force in two. Turner retained overall command, and command of the Northern Attack Force (TF 52), charged with taking Makin Island, as Makin was closer to the major Japanese base at Truk, presumed to be the axis of greatest threat. Spruance, in *Indianapolis*, operated with the Northern Attack Force for the same reason. Rear Admiral Harry W. Hill was assigned to command the Southern Attack Force (TF 53), with the mission to take Tarawa.

The armada that was about descend on the Gilbert Islands included 191 warships in four task forces: four *Essex*-class carriers, four *Independence*-class light carriers, seven smaller escort carriers, thirteen battleships, eight heavy cruisers, over a dozen light cruisers and 70 destroyers and destroyer escorts. The transports and cargo ships were carrying 27,600 assault troops, 7,600 garrison troops, 6,000 vehicles (including the Marine's new LVT "amphtracs," later shortened to "amtracs") and 117,000 tons of cargo, sustained by 13 fleet oilers and 9 merchant oilers, and the ships of another new innovation, the mobile logistics base.

Covering the whole operation was the Fast Carrier Force Pacific Fleet (Task Force 50) commanded by Rear Admiral Pownall, broken down into four Task Groups. TG 50.1, the carrier interceptor group, under Pownall's direct command, embarked in the carrier *Yorktown* (CV-10), with *Lexington* (CV-16), and the light carrier *Cowpens* (CVL-25), would pound Japanese airfields in the Marshalls commencing 23 November. It was also positioned to intercept any Japanese aircraft from the Marshalls trying to reach Makin or Tarawa, shooting down 17 of 20 that made the attempt the first day, and repeating the performance the next.

Meanwhile, TG 50.4, the relief carrier group, under the command of Rear Admiral Frederick C. Sherman, embarked in the carrier *Saratoga* with the light carrier *Princeton* attacked Nauru Island 380 miles west of the Gilberts on 19 Nov, to ensure no Japanese aircraft on Nauru could intervene in the invasion of the Gilberts. TG 50.2 and TG 50.3 provided direct cover to the northern and southern attack groups.

Additional land-based air support was provided by TF 57, commanded by Rear Admiral John H. Hoover, embarked on the seaplane tender *Curtiss* (AV-4) at Funafuti lagoon, Ellice Islands. Including attached Seventh Army Air Force aircraft, over 100 B-24 Liberator four-engine bombers, 24 PBY Catalina amphibians, and 24 Ventura twin-engine bombers provided pre-invasion bombardment and other support. In September, the USS *Ashland* (LSD-1), the first of a completely new type of amphibious support ship, landed forces to occupy the uninhabited Baker Island (a U.S. possession), which was 100 miles closer to Tarawa than Funafuti, in order to establish a base to operate eight Navy Liberators of Fleet Air Photographic Squadron Three (VD-3). The squadron was to conduct extensive photo reconnaissance of the Gilberts, and, when Tarawa was captured, stage there to do the same over the Marshalls. In addition to the photo reconnaissance, the submarine *Nautilus* had conducted 18 days of intelligence collection in late September/early October.

Captain John P. Cromwell, USN, circa 1943 (NH 51733).

Lieutenant Commander Fred Connaway, USN, circa 1942 (NH 50661).

Loss of Submarines USS Corvina *(SS-226) and USS* Sculpin *(SS-191)*

The U.S. deployed ten submarines to support Operation Galvanic, with several stationed in the Marshalls and several stationed off Truk, specifically to report and attack any attempt by the Japanese Combined Fleet to react to the U.S. landings in the Gilberts. Two of these submarines, USS *Corvina* (SS-226) and USS *Sculpin* (SS-191) were lost to Japanese action.

On 16 Nov 1943, *Corvina*, commanded by Commander Roderick Rooney, on her first war patrol, was sighted on the surface 85

miles southwest of Truk by Japanese submarine *I-176*. *I-176* fired three torpedoes at *Corvina*, two of which hit and exploded, sinking *Corvina* with her entire crew of 82. *Corvina* was the only U.S. submarine known to have been sunk by a Japanese submarine. According to one account (*Wikipedia*), *Corvina* had previously hit *I-176* with a torpedo that failed to detonate, but I have been unable to verify that. *I-176* had previously hit and seriously damaged the heavy cruiser *Chester* near Guadalcanal in October 1942, and would later be sunk with all 103 hands on 16 May 1944 off Bougainville by the combined efforts of the destroyers *Franks* (DD-554), *Haggard* (DD-555), and *Johnston* (DD-557). *Johnston* and her skipper, Commander Ernest Evans, would go on to immortality at the Battle of Leyte Gulf in October 1944.

On 18 November, the submarine *Sculpin*, on her ninth war patrol, and under the command of Lieutenant Commander Fred Connaway (his first war patrol as commanding officer), patrolling north of Truk, was depth-charged, forced to the surface and sunk by gunfire from the Japanese destroyer *Yamagumo*. Captain John Philip Cromwell (USNA '24), on board to coordinate a subsequent U.S. submarine wolfpack attack, chose to go down with the submarine rather than risk revealing to the Japanese under torture his knowledge of the impending Tarawa/Makin operations and his knowledge of "Ultra" code-breaking intelligence. Cromwell would be awarded a posthumous Medal of Honor, the most senior submarine officer to be so recognized, and one of three submarine officers to receive the award posthumously.

In May of 1939, *Sculpin* had been on her shakedown cruise when she was diverted to search for the lost submarine *Squalus* (SS-192), and was the first to sight the sunken submarine's bow still above water. *Sculpin* establish communications via underwater telephone (until the cable parted) and then via Morse code tapping on *Squalus*' hull, thereby determining that survivors were still alive inside the submarine. *Sculpin* further assisted divers in the rescue operations that saved 33 of *Squalus'* crew of 59.

On *Sculpin*'s second war patrol, on 4 February 1942, she fired three torpedoes at the Japanese destroyer *Suzukaze* off Sulawesi in the Dutch East Indies (now Indonesia). Two of the torpedoes hit resulting in heavy damage and the ship being beached to prevent sinking, in one of the first U.S. submarine successes of the war. *Suzukaze* was salvaged and repaired, but was later torpedoed and sunk by submarine *Skipjack* (SS-184) on 25 January 1944, while escorting a convoy from Truk to Eniwetok in the Marshall Islands. (*Skipjack* would be sunk in the second atomic bomb test at Bikini Atoll, in the Marshalls, then raised and sunk again as target for conventional weapons.)

On *Sculpin*'s fifth war patrol, she reported hitting the Japanese light cruiser *Yura* with minor damage on 15 October 1942 and being driven off by the *Yura*'s gunfire; however, postwar analysis indicated *Yura* was not hit and suffered no damage. *Yura* was hit by a torpedo from *Grampus* (SS-207) on 18 October 1942, which failed to explode and only put a dent in *Yura*. U.S. aircraft from Guadalcanal finally did the job on *Yura* on 25 October 1942. *Grampus* was lost with all hands in March 1943.

On the night of 18-19 November, on her ninth war patrol, with new commanding officer

Fred Connaway, *Sculpin* gained radar contact on a large high-speed convoy (which included the light cruiser *Kashima* and submarine tender *Chogei*) and made a fast end run to set up a surface attack in the early morning hours just before dawn. However, *Sculpin* was forced to dive when she was sighted, and the convoy zigged directly towards her. *Sculpin* surfaced after the convoy passed; however, the convoy commander had left the destroyer *Yamagumo* behind in anticipation of *Sculpin* doing just that, and *Sculpin* surfaced within 600 yards of the destroyer and was immediately sighted. *Sculpin* dove while *Yamagumo* conducted two depth-charge attacks, which inflicted damage and knocked out *Sculpin*'s depth gauge.

Running low on battery, *Sculpin* attempted to surface at 1200 in a rain squall, but due to the broken depth gauge, the boat broached and was immediately detected by *Yamagumo*. *Sculpin* dived again, but *Yamagumo* laid a damaging 18 depth-charge pattern, which knocked out *Sculpin*'s sonar and caused *Sculpin* to lose depth control and go below safe depth, springing so many leaks and taking on so much water that she had to run at high speed to maintain depth, making her easy for *Yamagumo* to track.

As it became apparent the boat would probably sink, Connaway opted to surface and attempt to fight it out there. As *Sculpin*'s crew manned the deck guns, *Yamagumo*'s first salvo hit the conning tower, killing Connaway, the executive officer, the gunnery officer, the rest of the bridge watch and cutting down the gun crew with shrapnel. At this point, the senior surviving *Sculpin* officer, Lieutenant George Brown, informed Captain Cromwell he intended to abandon and scuttle the boat. Cromwell concurred, but chose to remain aboard the boat; he and 11 others went down with the *Sculpin*, while nine were killed topside.

The *Yamagumo* picked up 42 survivors, but threw one badly wounded Sailor back in the water. The survivors were taken to Truk and interrogated for ten days before being split into two groups to be taken to Japan, 21 aboard the escort carrier *Chuyo* and 20 aboard the escort carrier *Unyo*. (*Chuyo* was one of the carriers that *Tunny*—SS-282—attacked on 9 April 1943, but got away due to defective torpedoes; see H-Gram 018.)

Chuyo's luck ran out just after midnight on 4 December 1943, when she was hit by a torpedo from *Sailfish* (which was actually the *Squalus* refloated, repaired, and renamed), which blew off her bow and collapsed the forward flight deck. While steaming backwards toward Yokosuka, *Chuyo* was hit again six hours later in the port engine room by two torpedoes from *Sailfish*. *Chuyo* still refused to sink and at 0842, *Sailfish* boldly attacked yet again, with a Japanese cruiser and destroyer alongside *Chuyo*, and hit *Chuyo* with one or two more torpedoes in the port side. This time *Chuyo* capsized and sank in six minutes, taking 737 passengers and 513 crew to the bottom, along with 20 of the 21 survivors of *Sculpin* on board. Only George Rocek survived by grabbing the ladder of a passing destroyer and hauling himself on board. The 20 *Sculpin* survivors on *Unyo* would finish the war as forced labor in a copper mine. All told, 63 men aboard *Sculpin* were lost.

Although *Chuyo* was primarily used as an aircraft ferry, she was technically the first Japanese aircraft carrier sunk by a U.S.

submarine in the war, and *Sailfish* would receive the Presidential Unit Citation and survive all twelve of her war patrols. *Yamagumo* would be sunk by torpedoes from the destroyer *McDermutt* (DD-677) on the night of 24–25 October during the Battle of Surigao Strait (and her wreck would be located by the research vessel *Petrel* in 2017.)

Captain John Philip Cromwell's Medal of Honor citation:

"For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Commander of a Submarine Coordinated Attack Group with Flag in U.S.S. SCULPIN, during the Ninth War Patrol of that vessel in enemy controlled waters off Truk Island, November 19, 1943. Undertaking this patrol prior to the launching of our first large scale offensive in the Pacific, Captain Cromwell, alone of the entire Task Group, possessed secret intelligence information of our submarine strategy and tactics, scheduled fleet movements and specific attack plans. Constantly vigilant and precise in carrying out his secret orders, he moved his undersea flotilla forward despite savage opposition and established a line of submarines to southeastward of the main Japanese stronghold at Truk. Cool and undaunted as the submarine, rocked and battered by Japanese depth charges, sustained terrific battle damage and sank to excessive depth, he authorized SCULPIN to surface and engage the enemy in a gun fight, thereby providing an opportunity for the crew to abandon ship. Determined to sacrifice himself rather than risk capture and subsequent danger of revealing plans under Japanese torture or use of drugs, he stoically remained aboard the mortally wounded vessel as she plunged to her death. Preserving the security of his mission at the cost of his own life, he had served his country as he had served the Navy, with deep integrity and an uncompromising devotion to duty. His great moral courage in the face of certain death adds new luster to the traditions of the United States Naval Service. He gallantly gave his life for his country."

(In 1954, the *Dealey*-class destroyer escort USS *Cromwell*—DE-1014—would be named in his honor, serving until decommissioned in July 1972.)

The amphibious task force en route to Tarawa, just before the invasion (NH 92617).

D-Day, Tarawa, 20 November 1943

Before dawn on 20 November 1943, the Southern Attack Force (TF 53) commanded by Rear Admiral Harry W. Hill, flying his flag on the Pearl Harbor–veteran battleship USS *Maryland* (BB-46), arrived off Tarawa. TF 53 included three battleships, five escort carriers, five cruisers, 21 destroyers, an LSD and 16 transports, with Major General Julian C. Smith's 2nd Marine Division embarked. TF 53 was covered by the Southern Carrier Group (TG 50.3), commanded by Rear Admiral Alfred E. Montgomery, embarked in the carrier *Essex*, with the carrier *Bunker Hill* and light carrier *Independence*, back from their 11

November strike on Rabaul. TF 50.3 commenced bombing Tarawa on 18 November. These air raids did considerable damage to Japanese positions, but probably, and more importantly, caused the Japanese to expend a prodigious amount of ammunition, so that when the U.S. assault came, the Japanese were already husbanding scarce ammunition.

Tarawa Atoll was defended by over 4,500 Japanese troops, primarily on the main island of Betio (with the airfield), commanded by Rear Admiral Keiji Shibasaki. The defensive positions on Tarawa were described as "skillfully planned, amply manned and bravely defended." The intelligence estimate was actually very good: Guns and defensive positions had been accurately plotted by extensive photo reconnaissance from air and submarine, and the troop estimate was accurate to within a hundred. The best enemy troops were the 1,497 naval Infantry of the Sasebo 7th Special Naval Landing Force. The 1,112 troops of the 3rd Special Base Force were also very combat-capable. There were 1,247 troops of the 111th Pioneers (somewhat like Seabees) and an additional 970 in the 4th Fleet Construction Unit, of which half were Korean. These troops were expected and prepared to fight to the death (except the Koreans), and, when the battle was over, only one officer, 16 enlisted personnel, and 129 Koreans had been taken alive.

The biggest factor that would cause things to go so badly on the first day of the landings was that there were no accurate tide tables for Tarawa, as it was prone to unpredictable "dodging tides," an irregular neap tide that ebbs and flows several times per day at unpredictable intervals and can maintain constant lower levels for many hours. Admiral Turner was aware that on the day of the landing there was significant risk of a low dodging tide that would prevent landing craft from getting over the reef. Much has been made of this; however, based on both weather forecast and climatology, there was also significant risk that conditions for the landing would be even worse had he chosen to delay. Turner knowingly gambled, and in this case the dodging tide won.

At 0430, before dawn on 20 November, the U.S. transports completed lowering boats. At 0441, a red star cluster flare went up from the island, suggesting the Japanese were aware the landing was about to occur. (The Japanese certainly knew that something was up, because the LSTs carrying the LVT amphtracs had to sail ahead of the main invasion force due to their slow speed of 8 knots. These LSTs were discovered and attacked by Japanese aircraft on 18 and 19 November, which were fortunately beaten off by stout anti-aircraft defense.)

At 0505, the destroyer *Meade* (DD-602) laid a smoke screen on the shore side of the flagship, *Maryland*, to conceal the flash from a catapult launch of a scout aircraft. The screen apparently failed, as two minutes later Japanese shore batteries opened fire on *Maryland*, commencing the battle. The *Maryland* responded and silenced the shore batteries, and continued shelling the island until 0542, in anticipation of the carrier aircraft commencing strikes at 0545. However, due to some foul up, the aircraft weren't planning to bomb until later, and *Maryland*'s first salvo had knocked out her own radios, resulting in a coordination challenge. The aircraft did not commence bombing until 0610. In the interim, Japanese batteries resumed firing,

straddling the transports *Zeilin* (APA-3) and *Heywood* (APA-6) as they were loading Marines into boats 11,000 yards from the beach. Rear Admiral Hill was forced to order the transports to back off, injecting more delay and confusion.

Once the air strikes ended at 0622, the assembled warships (three battleships, four cruisers, and several destroyers) commenced a general bombardment of the island for 80 minutes, which would prove to be not nearly enough. Despite 3,000 tons of projectiles, the flat trajectory of the close-in ships proved to be ineffective against many of the Japanese bunkers, although the shelling did kill large numbers of Japanese troops, destroy guns and positions, and, in particular, knocked out Japanese communications, preventing them from coordinating resistance. However, there was almost a 30-minute gap between the time the bombardment ceased and the time the Marines first hit the beach at the 0830 H-hour. As a result, those Japanese who survived the bombardment were able to re-man their positions and inflict many casualties on the Marines, and would prove particularly lethal to those in the boats that grounded on the reef, making them vulnerable to Japanese fire, and forcing many Marines to wade (and some to drown) several hundred yards to the shore under intense Japanese fire. (Somewhere in this horror was a young Marine named Charles Chalk, my first wife's father, who would go on to survive Peleliu and Okinawa, too.)

Although the LVT amphtracs were able to make it over the reef (and more than proved their worth during the battle), even their losses were steep, with 90 amphtracs destroyed—35 in deep water as a result Japanese gunfire, and 26 destroyed while crossing the reef, with the loss of over 300 men in the amphtracs.

During the naval bombardment, the minesweepers *Pursuit* (AM-108) and *Requisite* (AM-109) swept the channel into the lagoon, and the destroyers *Ringgold* (DD-500) and *Dashiell* (DD-659) entered the lagoon to provide fire support to *Ashland* (LSD-1) and the LSTs (disembarking the LVT amphtracs) and the main Marine landings on the lagoon side of Betio. *Ringgold* was hit by dud Japanese shells while entering the lagoon, but otherwise the destroyers were able to lay down effective fire without interference. When the two destroyers ran low on ammunition they were relieved by the destroyers *Frazier* (DD-607) and *Anderson* (DD-411.)

The battle on Betio was exceptionally bloody. By the end of the first day, of 5,000 Marines that had gotten ashore, 1,500 were dead or wounded. At times the issue was very much in doubt. The commander of the Marines ashore, Colonel David M. Shoup, distinguished himself by rallying attacks under intense fire, for which he would be awarded a Medal of Honor. (Shoup would go on to a distinguished career in World War II and Korea, would become the 22nd Commandant of the Marine Corps during the Kennedy Administration, and, after retiremen,t would emerge as a vocal critic of the Vietnam War and of the strategy being used to attempt to win it.)

Ferocious fighting continued on the second day on Betio as it became obvious that every Japanese intended to fight to the death and the Marines did their best to oblige them. In one incident on 21 November, a rising tide was threatening to drown wounded Marines

who had been trapped on the reef. Two Navy salvage crews from the transport *Sheridan* (APA-51) began a rescue effort. One LCVP landing craft coxswain (who remains unknown to history) displayed extraordinary boat-handling skills, while simultaneously silencing a Japanese machine gun and taking out a sniper. The coxswain rescued 13 wounded Marines, but 35 Marines on the reef who had lost their weapons refused to get on the craft, imploring the coxswain to bring back weapons to fight with.

The original plan for Tarawa assumed that 18,600 assault troops would be able to quickly overrun the island, but it took four days of heavy fighting that cost the lives of 980 Marines and 29 Sailors, with 2,101 wounded, for an island of only a few acres. Recriminations began quickly and lasted decades, as many questioned the purpose and cost for such a small piece of real estate far from everywhere, and the press sensationalized the negative aspects of the operation. Admiral Nimitz would receive mail from bereaved relatives with the theme, "You killed my son on Tarawa for nothing." Even General Holland M. Smith in an article in the *Saturday Evening Post* in 1948, and in his book *Coral and Brass*, claimed that the cost was not worth it and that the U.S. should have leapfrogged directly to Kwajalein in the Marshalls. Nevertheless, extensive lessons were learned on Tarawa: If they had been not learned there, they would have had to be learned the hard way somewhere else. A strong case can be made that a direct assault on Kwajalein, without incorporating the lessons of Tarawa, would have been thrown back into the sea, at least initially.

Admiral Nimitz' planning officer, Captain James Steel, compiled a document entitled "A Hundred Mistakes Made on Tarawa." Among these was that the naval bombardment was not long, heavy, or accurate enough (this would be rectified in future landings, but would require radical and rapid innovation in forward ammunition supply). The naval air support of Marines on the ground was also badly flawed. (This would be significantly improved in later operations; however, in addition, General Smith would urge that Marine Corps air wings be formed to operate off of escort carriers, and, later in the war, Marine aircraft would fly from carriers.) The number of amphtracs was far too low, and those deployed had significant operational deficiencies. By the landings at Kwajalein in January 1944, new and redesigned LVT amphtracs would be used. Radios were deficient, especially those on landing craft and ashore (and the ones on battleships didn't work so well after a broadside either). This would also lead to rapid innovation and improvement. The document also discussed Admiral Turner's "bad guess" regarding the tides (which only serves to highlight the importance of our Navy's METOC community today). Although the Intelligence was actually considered good, a lesson of Tarawa was the need for last minute eyes-on pre-landing reconnaissance of tide and beach conditions, and identifying and clearing obstacles, leading to the significant enhancement, mission adjustment, and reallocation of the Navy's new Underwater Demolition Teams (UDT), which would eventually lead to creation of the Navy SEALS. As a result of the improvements derived from the lessons of Tarawa, Navy historian Rear Admiral Samuel Eliot Morison judged that, "Every man there [Tarawa], lost or maimed, saved at least ten of his countrymen." Even today, though, the debate continues.

Marine throwing a grenade during the fight for Betio Island, circa 20–23 November 1943. Note sand hill at far right, possibly a Japanese defensive position, and fixed bayonet on M-1 rifle (USMC-63658).

D-Day, Makin Island, 20 November 1943

Before dawn on 20 November, Rear Admiral Turner's Northern Attack Force (TF 52) and Vice Admiral Spruance in heavy cruiser *Indianapolis* arrived off Makin Island. TF 52 included the battleships *New Mexico* (BB-40), *Mississippi* (BB-41), *Idaho* (BB-42), and *Pennsylvania* (BB-34, flagship), three escort carriers, four heavy cruisers, 14 destroyers, and six transports carrying the U.S. Army's 165th Regimental Combat Team (of the 27th Infantry Division), along with an LSD and three LST's. TF 52 was covered by the Northern Carrier Group (TG 50.2) commanded by Rear Admiral Arthur W. Radford, embarked in the carrier *Enterprise* (CV-6), with the light carriers *Belleau Wood* (CVL-24) and *Monterey* (CVL-26). TG 50.2 commenced strikes on Makin on 19 November. Of note, Rear Admiral Radford would go on to be four-star VCNO, CINCPACFLT and the second Chairman of the Joint Chiefs of Staff (1953–57). Also on board *Monterey* as assistant navigator, anti-aircraft battery director, and athletic officer was future President of the United States Gerald R. Ford.

The battleship bombardment of Makin Island got off to a bad start with an explosion in the Number 2 14-inch turret on board *Mississippi* that killed all 43 men in the turret and wounded 19 more. *Mississippi* had won the gunnery Battle E numerous times and had a reputation as the fastest-firing battleship in the fleet. She would be back in action within two months. However, this was actually the second fatal explosion in *Mississippi*'s Number 2 turret. The first occurred on 12 June 1924 during gunnery practice off San Pedro, California, when incompletely ejected hot gas in a gun that had just fired ignited powder that caused a flash fire in the turret and asphyxiated all 44 members of the turret crew (and observers). When *Mississippi* was back in the roadstead, and the turret was entered to remove the dead, one of the other guns was accidentally fired, with the shell narrowly missing the passenger ship *Yale*, killing four of the response team, and maiming several others.

(The turret captain in the 1924 accident, Lieutenant Junior Grade Thomas E. Zellars, USNA '21, was found with his hand on the flood-control lever, having closed the doors to the ammunition hoist and flooding the magazine, and saving the ship from a catastrophic explosion with his last act. A plaque in Dahlgren Hall at the Naval Academy, emplaced by his classmates, states, "Flaming death was not as swift as his sense of duty and his will to save his comrades at any cost to himself. His was the spirit that makes the service live." The *Sumner*-class destroyer *Zellars* (DD-777) was named in his honor, earned five battle stars in World War II and Korea, survived a kamikaze hit off Okinawa, and was transferred to the Iranian Navy as *Babr* in 1973. The original memorial marker to the explosion, which had fallen into

disrepair in San Pedro, is now preserved aboard the museum ship *Iowa*, next to *Iowa*'s Number 2 turret, in which 47 crewmen were killed in an explosion in April 1989.)

After the morning bombardment, two U.S. destroyers, an LSD, and an LST moved into the lagoon, and commenced a late morning landing from a direction the Japanese had not considered the primary threat. The main landing beaches at Makin were on Butaritari Island, the largest in the atoll. Butaritari was defended by less than 800 Japanese troops under the command of Lieutenant Kurokawa. The best Japanese troops were 284 Special Naval Landing Force (Japanese "marines") and the rest were mostly aviation and construction troops, including 200 Korean laborers (who generally had no interest in dying for the Japanese if they could help it). Despite being bombed and strafed from the air, and bombarded by battleships, cruisers, and destroyers, and overwhelmed by 6,472 assault troops, the few surviving Japanese troops put up a surprisingly spirited resistance that delayed the Army advance, especially after U.S. and Japanese positions became so intermingled that naval gunfire support was not feasible. A close support strike by *Enterprise* aircraft resulted in fratricide that killed three soldiers.

Nevertheless, the U.S. Army troops prevailed, and, compared to the bloodbath at Tarawa, U.S. Army casualties were relatively light with 64 killed and 150 wounded. The Navy, however, would pay a much higher price for the capture of Makin Island. The capture of Makin would soon put U.S. land-based aircraft within 250 miles of Jaluit and 200 miles of Mili, both Japanese airfields on the southern Marshalls.

Capture of Abemama Island

An adjunct to the landings at Tarawa and Makin was to land Marine Raiders on the small Japanese-occupied island of Abemama in order to conduct reconnaissance in preparation for a follow-on landing. The submarine *Nautilus* embarked 68 Marines of the 5th Amphibious Reconnaissance Company and ten bomb-disposal engineers. The mission started off badly when the destroyer *Ringgold* (DD-500) mistook the *Nautilus* for a Japanese submarine when she was on the surface. With her first salvo, *Ringgold* hit *Nautilus* at the base of her conning tower with a 5-inch round. The skipper of the *Nautilus*, Commander William D. Irvin, immediately took her down deep, but for about two hours was in "dire circumstances," until her crew was able to get things under control with superb damage control. *Nautilus* continued on with the mission. After landing on the island, the Marines succeeded in cornering the small Japanese garrison. Instead of attacking, the Marines called in fire support from *Nautilus*. The next morning, 21 November, the Marines discovered that *Nautilus* guns had killed 14 Japanese and that the rest had committed suicide, leaving the island in Marine hands without need for the larger landing. Commander Irvin was awarded a Navy Cross for this action.

Japanese Reaction to Operation Galvanic

The simultaneous Allied offensives in New Guinea, Bougainville and the Gilberts, along with the carrier raids, whipsawed the Japanese. The commander in chief of the Japanese Combined Fleet, Admiral Mineichi Koga, was eager to engage in a fleet action with the United States because, like Admiral

Yamamoto before him, Koga understood that every day that went by meant that the odds would be increasingly stacked against him with the flood of new U.S. warships and aircraft. What he didn't understand was that by late 1943, it was already far too late.

Reacting to the U.S. carrier strikes on Wake Island on 5–6 October, and thinking it signaled an invasion attempt, Koga deployed a significant portion of the Combined Fleet from its normal anchorage at Truk Island to Eniwetok Atoll at the western end of the Marshall Islands, only to sit for several weeks with nothing happening, after burning large amounts of increasingly scarce fuel (thanks to U.S. submarines sinking Japanese tankers). Learning from mistakes at Midway (lack of reconnaissance), a Japanese submarine, capable of carrying a float plane, was ordered to launch an aerial reconnaissance mission to Pearl Harbor, which, in fact, reported on 17 October that most U.S. ships were missing (both plane and sub got away). However, it wasn't until the 19th and 20th (D-day) that the Japanese figured out that the Gilberts were the objective. By then, the Japanese force, including the super-battleships *Yamato* and *Musashi* (9 x 18-inch guns), the battleships *Nagato, Fuso, Kongo,* and *Haruna*, four heavy cruisers, five light cruisers, three destroyer squadrons and 18 submarines were back at Truk. Worse, the Japanese had stripped 27 aircraft from the Marshalls on 12 November to participate in Operation *Ro* in the northern Solomons, leaving only 46 planes in the Gilberts and Marshalls to defend against the U.S. fast carrier task groups.

The first Japanese air counterattack to the landings at Tarawa and Makin happened quickly. On the evening of 20 November, 16 torpedo bombers from the Marshalls attacked Rear Admiral Montgomery's carriers (TG 50.3), which were operating about 30 miles west of Tarawa. Nine of the bombers got through the fighters and split into three groups of three. Three attacked the carrier *Bunker Hill* (CV-17) and were all shot down by anti-aircraft fire. However, the other two groups boxed in the light carrier *Independence* (CVL-22) and launched five torpedoes. Despite evasive maneuvering, *Independence* was hit by one torpedo, resulting in flooding of the after engine room, fireroom, and magazine, with 17 crew killed and 43 wounded; she would be out of action until July 1944. All but one of the Japanese planes was shot down.

The Japanese deployed nine submarines in an attempt to counter the landings at Tarawa and Makin. Two of the submarines, *RO-38* and *I-40*, departed Truk and were never heard from again; the causes of their loss are still unknown. On 22 November, the destroyer *Meade* (DD-602) detected Japanese submarine *I-35* on sonar near Tarawa. *Meade* made a depth charge attack, but lost contact. Destroyer *Frazier* (DD-607) regained contact, and made two depth charge attacks. *Meade* rolled back in and depth-charged the sub, which was forced to the surface broadside to *Frazier*. Both destroyers opened up on the sub with 5-inch and 40-mm guns, and *Frazier* rammed her just aft of her conning tower. *I-35*'s crew attempted to man her deck guns, but small-arms fire from *Frazier* prevented them. When *Frazier* backed off, the submarine sank stern first, and aircraft dropped more depth charges on her for good measure. *Frazier* then put a whaleboat in the water to attempt rescue of four survivors, one of which fired on the rescuers and was killed. While the whaleboat was returning to *Frazier* with the

three Japanese, a U.S. aircraft from the escort carrier *Suwannee* (CVE-27) misidentified the boat and bombed it. Somewhat miraculously it survived a very near miss. *Frazier,* in turn, fired on the U.S. plane, hitting it twice, but fortunately not shooting it down.

Japanese attempts to strike the landing forces by air continued, but all daylight attempts were beaten back by aircraft from carrier *Lexington* (CV-16) and light carrier *Cowpens* (CVL-25). During the course of the landings, no Japanese aircraft were able to attack U.S. forces on Makin Island, and only two minor strikes got through to Tarawa, on 23 November. The Japanese belatedly reinforced the Marshall Islands with carrier aircraft that had just been withdrawn from Rabaul due to high losses in Operation *Ro*, along with additional bomber aircraft from Truk.

Loss of USS Liscome Bay *(CVE-65), 24 November 1943*

On 24 November 1943, the escort carrier *Liscome Bay* was operating about 20 nautical miles southwest of Makin Island. *Liscome Bay* was the flagship of Rear Admiral Henry Mullinnix, commander of Task Group 52.3, a force of three escort carriers. *Liscome Bay*, *Coral Sea* (CVE-57, later renamed *Anzio*), and *Corregidor* (CVE-58) were tasked with providing air support to ground operations on Makin and anti-submarine support to U.S. ships in the area. The three escort carriers were operating within a temporary task group, designated TG 52.13, commanded by Rear Admiral Robert M. Griffin, embarked in the battleship *New Mexico* (BB-40). *Liscome Bay* was a *Casablanca*-class escort carrier, a class of 50 commissioned during the war that were the first escort carriers designed and built from the keel up for the role. (Older classes had been built on converted merchant ship hulls.) The class was designed and built rapidly, and had significant survivability design flaws; five of the class would be lost during the war. *Liscome Bay* was new, having been commissioned in August 1943, and was under the command of Captain Irving Day Wiltse, who had been the navigator on the carrier *Yorktown* (CV-5) when she was sunk at the Battle of Midway in June 1942. The ship embarked Composite Squadron 39 (VC-39), initially with 12 FM2 Wildcat fighters (trained for ground attack) and 16 TBM-1C Avenger torpedo bombers (trained for bombing and anti-submarine warfare) under the command of Lieutenant Commander Marshall U. Beebe.

VC-39 was a case study in how dangerous carrier operations were even without the enemy. After leaving Pearl Harbor, one Wildcat crashed, killing the pilot. During the Makin landings, one Avenger crashed in the water and another was lost in an emergency landing. One Wildcat was so badly damaged in a barrier crash that it was cannibalized for parts. On 23 November, five Wildcats got lost and had to make night recoveries; three recovered safely on carrier *Lexington* (CV-16) and two recovered safely on *Yorktown* (CV-10,) but the fifth crashed into parked aircraft on *Yorktown*. The pilot survived but five of *Yorktown*'s crew did not.

Before dawn, TG 52.13 was steaming in a circular formation with *Liscome Bay* in the center. The old battleships *New Mexico* and *Mississippi,* and the new heavy cruiser *Baltimore* (CA-68) were to the left, and *Coral Sea* and *Corregidor* to the right, with an outer circular screen of five destroyers. At 0400, the

destroyer *Hull* (DD-350) was detached for operations at Makin, and at 0435 the destroyer *Franks* (DD-554) was dispatched to investigate a dim light (a fading flare dropped by a Japanese aircraft). This left a gap in the formation's outer screen. *New Mexico* detected a radar contact at 6 nautical miles and closing, which was then lost, and no evasive action was taken. The contact was probably the Japanese submarine *I-175*, commanded by Lieutenant Commander Sumano Tabata, which had arrived off Makin the day before.

At 0450, *Liscome Bay* went to flight quarters, and, at 0505, to general quarters, preparing to launch 13 planes, including one on the catapult, all fueled and armed. The remaining seven planes were in the hanger and were armed but not fueled. As the formation turned into the wind to launch aircraft, *I-175* was in the perfect position to take advantage of the gap in the outer screen. The sub remained submerged and fired four bow torpedoes based on sound, and then immediately went deep. None of the destroyers ever saw the submarine, although they dropped 34 depth charges, six of which were close. Two of *I-175*'s torpedoes narrowly missed *Coral Sea*.

An officer on *Liscome Bay* sighted a torpedo approaching from starboard only moments before impact at 0513 just aft of the after engine room. The explosion of the torpedo immediately detonated the poorly protected bomb storage magazine (one of the design flaws) that was stocked with almost a full allowance of 200,000 pounds of bombs. The resulting explosion was so massive that it was seen on ships many miles away: Shrapnel hit destroyers at 5,000 yards and the battleship *New Mexico* at 1,500 yards was showered by metal, clothing, and body parts. More than one third of the after end of *Liscome Bay* was obliterated and everyone aft of the forward bulkhead of the after engine room was killed. All steam, compressed air, and fireman pressure was immediately lost, large parts of the flight deck were destroyed, and the hangar deck engulfed in flames. Of 39 aircrew in the planes on deck, 14 were killed. It was obvious that the ship could not be saved, and within 23 minutes she rolled to starboard and sank.

Like many World War II losses, the exact number of crewmen killed as a result of the sinking of *Liscome Bay* may never be known, as it was difficult to track wounded who may have died later. Of the 272 (55 officers and 217 enlisted personnel) recorded as being rescued, many were grievously burned and maimed. Initial casualty reports listed 642 (51 officers and 591 enlisted men), while other accounts list a total of 644 killed. The Navy Department War Damage Report lists 54 officers and 648 enlisted men killed (702 total), which may include those who died from wounds.

Among the dead was the task group commander, Rear Admiral Mullinix, and Cook Third Class Doris Miller, the first African-American to be awarded a Navy Cross (for his actions during the Pearl Harbor attack). The ship's commanding officer, Captain Wiltse, was last observed walking into a mass of flames and never seen again. A number of aerographer's mates, who had survived the sinking of the *Wasp* (CV-7) in September 1942 were lost, although one survived both sinkings. *Liscome Bay* suffered the highest percentage of casualties (over 70 percent) of any U.S. aircraft carrier in World War II.

Among the survivors was VC-39 commanding officer, Lieutenant Commander Beebe, who would go on to distinguished service in World war II (as a "double ace"—10.5 kills—and a Navy Cross recipient) and Korea (where he would be the inspiration for James Michener's book *The Bridges at Toko-Ri*, which was dedicated to Beebe). Admiral Mullinnix' chief of staff, Captain John G. Crommelin also survived. Crommelin was the oldest of five brothers who all graduated from the U.S. Naval Academy and served in the war. Two of them were killed, and two, including John, would reach flag rank after the war. The *Perry*-class frigate *Crommelin* (FFG-37) was named in honor of the five brothers (and was sunk as a RIMPAC target in 2016, where she didn't go down easy).

I-175 would be sunk with all 100 hands on 4 February 1944 during Battle for Kwajalein, when destroyer *Charrette* (DD-581) and destroyer escort *Fair* (DE-35) engaged her, and *Fair* fired a hedgehog depth charge pattern that sank the submarine.

(Sources for this section include, Navy Department Bureau of Ships War Damage Report No. 45, dated 10 March 1944, "USS LISCOMBE BAY, Loss in Action, Gilbert Islands, Central Pacific, 24 Nov 1943" and "USS *Liscome Bay* Hit by a Torpedo Near Makin I During WWII," by William B. Allmon in the July 1992 edition of *World War II* magazine.)

Rear Admiral Henry M. Mullinnix, here as a captain, circa 1940 (NH 96540).

Loss of Rear Admiral Henry Maston Mullinnix

Rear Admiral Henry M. Mullinnix was the fourth of five U.S. Navy flag officers to be killed as a result of enemy action in World War II, cutting short an extremely promising career begun when he graduated first in his class of 177 as the five-stripe regimental commander (highest midshipman rank at the time) in the U.S. Naval Academy class of 1916 (and he played varsity football, too). After initially serving in destroyers deployed to Queenstown for European anti-submarine operations, he became one of the Navy's early aviators. Among other things he was credited with being responsible for the development of the air-cooled engine for naval aircraft. He rose through the aviation ranks to become commanding officer of USS *Saratoga* (CV-3), before being selected for

rear admiral (at age 51, possibly the youngest ever at that time) and given command of the three escort carriers of Carrier Division 24, which formed TG 53.2, supporting the landings on Makin Island.

Embarked on *Liscome Bay*, Mullinnix was in Air Ops when the torpedo from *I-175* struck and caused the massive catastrophic explosion that sank the ship on 24 November. Some accounts say he was last seen sitting with his head in his hands, possibly badly wounded. Other accounts say he was last seen in the water. Either way, he did not survive. Navy historian Samuel Eliot Morison wrote in the dedication to Volume VI of the *History of U.S. Naval Operations in World War II*, "Admiral Mullinix, one of the most gifted, widely experienced and beloved of the Navy's 'air admirals'…He died just as the air arm of the Navy, to which he devoted the second half of his life, was coming into the fullness of its power and glory."

Rear Admiral Mullinnix would be awarded a posthumous Legion of Merit with Combat V:

The President of the United States takes pride in presenting the Legion of Merit (posthumously) to Rear Admiral Henry Maston Mullinnix, United States Navy, for exceptionally meritorious conduct in the performance of outstanding services to the Government of the United States as Commander of a carrier air support group during the assault on Makin Atoll during World War II. Admiral Mullinnix skillfully conducted anti-submarine and combat air patrols supporting our landing operations. Through his brilliant leadership, escort carriers were able to carry out a well-coordinated attack against the Japanese.

The *Forrest Sherman*-class *Mullinnix* (DD-944), which served from 1957 to 1983, was named in his honor. (Of note, his name is misspelled with one "n" in Memorial Hall at the U.S. Naval Academy, and regretfully, I managed to misspell it as well in the last H-gram.)

Then-Mess Attendant Second Class Doris Miller receives the Navy Cross from Admiral Chester W. Nimitz, at an awards ceremony held on the flight deck of USS *Enterprise* (CV-6) at Pearl Harbor, 27 May 1942 (80-G-23588).

Loss of Cook Third Class Doris Miller

As noted above, one of the sailors lost in the sinking of Liscome Bay (CVE-65) was Cook Third Class Doris Miller, who had been the first African American to be awarded the Navy Cross for his heroism in combat aboard the battleship West Virginia (BB-48) during the attack on Pearl Harbor on 7 December 1941. Miller's highly publicized award made him the first real hero of the African American community in the United States during the war, and his loss came as a profound shock. I have found no account that describes how Miller met his ultimate fate, other than that he was one of the 591 (at least) enlisted men lost when *Liscome Bay* was torpedoed by a Japanese submarine, exploded, and rapidly sank on 24 November 1942 near Makin Island during Operation Galvanic.

Doris Miller enlisted in the U.S. Navy on 16 September 1939 into the messman branch, the only branch open to him as an African American. The messman branch was racially segregated and comprised primarily of Black and Filipino personnel; White sailors were not permitted to serve in the messman branch. Conversely, Blacks sailors were not allowed to serve in almost all other ratings, since with the conversion of Navy ships to oil, "coal passer" was no longer an option.

The messman branch was responsible for feeding and serving officers, who at the time were all White. (The all-White commissary branch cooked for the enlisted crew.) At the time, messmen could advance from mess attendant third class to second class to first class and then branch to officer's cook third class or steward third class up to chief officer's cook or chief steward. In February 1943, the messman branch was changed to the steward branch. Mess attendants became steward's mates, and the "officer's" was dropped from the cook titles (although the duties remained the same). In June 1944, new rating badges were introduced to cooks and stewards that had petty officer and chief chevrons. However, despite the rating badges, even chief cooks and chief stewards ranked below petty officer third class. It was not until 1950 that cooks and stewards were accorded petty officer status.

How messmen, cooks, and stewards were used in battle depended to a degree on where in the country the ship's commanding officer was from. In general, most had battle stations that involved significant manual labor, such as ammunition handling or stretcher bearing, and a number of others assisted in first aid stations. On some ships, however, they were given more responsibility. For example, on the submarine *Cobia* (SS-245) the skipper held a competition among the crew to find the best gunners to man and operate the deck gun. *Cobia*'s two Black stewards won the competition, and when the submarine went to surface battle stations, the Black stewards manned the deck gun. Nevertheless, *Cobia*'s action reports treat the fact that Black sailors manned the deck gun as almost an embarrassing secret, but at least the skipper put combat capability ahead of racial prejudice.

After enlisting, Miller was first assigned to the ammunition ship, *Pyro* (AE-1), but on 2 January 1940 he reported to the battleship *West Virginia*, where he quickly became the ship's heavyweight boxing champion. He was promoted to mess attendant second class on 16 February 1941. In July 1941, he had temporary duty on the battleship *Nevada* (BB-36) for secondary battery gunnery school, returning to *West Virginia* in August. On the battleships, the secondary battery was comprised of 5-inch guns, some in protected locations for surface action, and some on deck for antiaircraft (or surface action) defense.

On 7 December 1941, Miller had finished serving breakfast and was collecting laundry when the attack began. In the first minutes of the attack, *West Virginia* was hit by at least five torpedoes (and later by two bombs). When Miller got to his battle station in the ammunition magazine for the amidships antiaircraft battery, it had already been destroyed by a torpedo hit.

As *West Virginia* was sinking—only quick counter-flooding kept her from capsizing like *Oklahoma* (BB-37)—Miller reported to a

location on the ship known as "Times Square" to make himself available for duty. The ship's communications officer, Lieutenant Commander Doir C. Johnson, ordered Miller to accompany him to the bridge to assist in moving *West Virginia*'s commanding officer, Captain Mervyn Bennion, to a less exposed location. Bennion had been on the bridge when he was hit and severely wounded by shrapnel from a bomb that hit *Tennessee* (BB-43), which was nested inboard of *West Virginia*. Bennion's wound would prove mortal, but he continued to issue commands to defend the ship, despite having his abdomen sliced open. Miller and another sailor moved Bennion behind the conning tower for better protection, but Bennion insisted on remaining on the bridge, although he was fading rapidly.

At this point, Lieutenant Frederic H. White ordered Miller to help Ensign Victor Delano load the unmanned No. 1 and No. 2 .50-caliber antiaircraft machine guns. (The operational ships at Pearl Harbor were actually at Condition Baker (equivalent to Condition III—wartime steaming) readiness with a quarter of their antiaircraft guns manned and ready before the attack.) White gave Miller quick instruction on how to feed ammunition to the machine guns, but after a momentary distraction, White turned to see Miller already firing at Japanese aircraft, so White wound up feeding the ammo to Miller and Delano (on the other gun).

Various accounts give different numbers on how many planes Miller shot down. The reality is that there is no way of knowing as by then antiaircraft fire was so intense from all the ships that it is not possible to determine exactly which gun shot down which plane, and some more recent accounts have become embellished. The problem with the .50 calibers was that they were completely ineffective against aircraft before the weapons release point; the best they could do was keep an attacking aircraft from coming back a second time. Nevertheless, Miller and Delano fired until they were out of ammunition.

At this point, Lieutenant Claude V. Rickets (the first seaman to rise via the United States Naval Academy to four-star rank, and who was responsible for ordering the counterflooding that saved *West Virginia* from capsizing), ordered Miller and Signalman A. A. Siewart to carry the now only partially conscious Captain Bennion up to the navigation bridge to get him out of the smoke pouring into the bridge, but Bennion died soon after. Miller then helped move numerous other injured sailors as the ship was ordered abandoned due to her own fires and flaming oil floating down from the destroyed *Arizona* (BB-39). *West Virginia* would lose 105 killed out of her crew of 1500. Captain Bennion would be awarded a posthumous Medal of Honor.

Following the attack, Miller was transferred to the heavy cruiser *Indianapolis* (CA-35) on 15 December 1941. On 1 January 1942, the Navy released a list of commendations for 7 December, including a commendation for an "unnamed Negro." The National Association for the Advancement of Colored People (NAACP) asked President Franklin D. Roosevelt to award the Distinguished Service Cross (which wasn't a Navy medal) to the unnamed Black sailor, and the recommendation was routed to the Navy Awards Board. In the meantime, Lawrence Reddick, the director of the Schomburg Center for Research in Black Culture in Harlem, was able to discover Miller's name,

which was then published in the African American newspaper the *Pittsburgh Courier* and then by the Associated Press on 12 March 1942.

In response to public pressure, Senator James Mead (D-NY) and Representative John D. Dingell Sr. (D-MI) introduced Senate and House resolutions to award Miller the Medal of Honor. The Navy responded with a letter of commendation signed by Secretary of the Navy Frank Knox (who was not known for racially progressive views). This ignited an extensive writing campaign by numerous Black organizations to convince Congress that Miller should be awarded the Medal of Honor, and the National Negro Congress denounced Knox for recommending against it.

Unlike Knox, Chief of Naval Operations Ernest J. King at least saw the importance of having the Black community's support for the war effort. (During the war, over one million Black workers would be employed in defense industries, including six hundred thousand Black women.) On 11 May 1942, President Roosevelt approved the award of the Navy Cross to Miller, the first for an African American. At the time, the Navy Cross was third in the order of precedence, after the Medal of Honor and Distinguished Service Medal, but was moved to second precedence in August 1942.

On 27 May 1942, Admiral Chester Nimitz, commander in chief of the Pacific Fleet, personally presented the Navy Cross to Miller in a ceremony with other awardees on the flight deck of *Enterprise* (CV-6) in Pearl Harbor. Nimitz stated, "This marks the first time in this conflict that such high tribute has been made in the Pacific Fleet to a member of his race and I'm sure that the future will see others similarly honored for brave acts."

The Navy Cross Citation for Mess Attendant Second Class Doris Miller is as follows:

For distinguished devotion to duty, extraordinary courage and disregard for his own personal safety during the attack on the Fleet in Pearl Harbor, Territory of Hawaii, by Japanese forces on December 7, 1941. While at the side of his Captain on the bridge, Miller, despite enemy and strafing and bombing and in the face of a serious fire, assisted in moving his Captain, who had been mortally wounded, to a place of greater safety, and later manned and operated a machine gun directed at enemy Japanese attacking aircraft until ordered to leave the bridge.

Miller was promoted to mess attendant first class on 1 June 1942. As the first Black hero of the war, there was intense pressure to bring Miller back to the United States for war bond tours, to which the Navy was slow to respond, resulting in editorial comments in the press like "Navy felt Miller too important waiting tables in the Pacific." On 23 November 1942, while still assigned to *Indianapolis*, Miller was brought back to the states for multiple speaking engagements on a short war bond tour.

After returning to *Indianapolis*, Miller was promoted to cook third class (under the renamed steward branch) and on 1 June 1943 reported to the escort carrier *Liscome Bay*. On 7 December 1943, Miller's parents were informed that he was missing in action. He would never be found. The *Knox*-class frigate *Miller* (FF-1091), commissioned on 30 June 1973, was named in Doris Miller's honor

and would serve until decommissioned in October 1991.

It should be noted that during the Civil War at least seven Black sailors were awarded the Medal of Honor, at a time when the enlisted ranks in the Navy were integrated (which was true up until the Wilson administration implemented segregation in the federal government, including in the Navy). The Navy Cross was not created until 1919 (retroactive to World War I), so the Medal of Honor was the only medal for valor at the time of the Civil War, and standards were different. Nevertheless, the Medals of Honor awarded to Black sailors were for courage in serious battles, including four awarded for the Battle of Mobile Bay.

Then-Lieutenant Edward H. Butch O'Hare, USN, stands beside an F4F Wildcat, circa April/May 1942 (80-G-K-892-B).

Loss of Medal of Honor Recipient Lieutenant Commander Butch O'Hare

After sundown on 26 November 1943, the U.S. Navy attempted the first carrier-based night fighter intercept operations. The fighters were launched in response to continuing night attacks by Japanese land-based twin-engine Betty torpedo bombers (which had previously hit and damaged the light carrier *Independence*. During the mission, the commander of *Enterprise* Air Group, Lieutenant Commander Edward H. "Butch" O'Hare, was shot down, and neither his aircraft or body were ever found. O'Hare had previously been awarded the Medal of Honor for single-handedly downing several Japanese Betty torpedo bombers attempting to strike the aircraft carrier *Lexington* (CV-2) on 20 February 1942, making him the first naval aviator to be awarded the Medal of Honor in World War II. This also made him an instant national hero at a time when the nation needed one in the dark days after the attack on Pearl Harbor. Like the loss of Doris Miller on *Liscome Bay*, the loss of Butch O'Hare was a shock to the American public. For many years, there was uncertainty as to whether he was shot down in the darkness by "friendly fire" from another Navy aircraft or whether he was shot down by the Japanese. The analysis that I find most compelling indicates that he was hit and downed by a lucky shot from one of the Betty bombers.

O'Hare came from a colorful background. At the time O'Hare was seeking to enter the U.S. Naval Academy, his father was a lawyer working for mobster Al Capone, but who turned on Capone providing key evidence leading to the gangster's conviction on tax evasion, and was rewarded for his efforts by being gunned down in a mob hit in

November 1939. Despite this, O'Hare graduated from the Naval Academy in 1937 and finished aviation training in May 1940, reporting to Fighter Squadron 3 (VF-3), where future "ace" Lieutenant John S. "Jimmy" Thach was executive officer. Thach quickly recognized O'Hare's talent, especially at gunnery. When *Saratoga* (CV-3) was torpedoed and damaged by a Japanese submarine on 11 January 1942, VF-3 transferred to *Lexington*, replacing her obsolete F2A Brewster Buffalo squadron, and was re-designated VF-2. Thach led one section and future ace (and four-star) Noel Gayler led the other.

On 20 February 1942, Task Force 11, centered on *Lexington*, was approaching the Japanese base of Rabaul (which had yet to develop the formidable air defenses seen in 1943), but was detected by a Japanese flying boat while still 450 miles away. At 1112, Thach and another pilot shot down the four-engine Kawanishi H6K4 Type 97 Mavis at 43 nautical miles from the carrier, but not before the plane had radioed a report. At 1202, two other *Lexington* fighters shot down a second Mavis, while a third radar contact turned away. The Japanese wasted no time in launching a two-group 17-plane strikeof G4M Betty medium torpedo bombers. Unfortunately for the Japanese, no torpedoes or fighters had arrived at Rabaul yet, so the Bettys carried only bombs, and launched with no fighter escort.

At 1542, *Lexington* radar detected the incoming strike at long range, but lost the contact. At 1625, radar re-acquired the incoming strike at 47 nautical miles and closing fast, which turned out to be nine Bettys. Fighters were vectored to intercept and additional fighters were launched, including O'Hare (flying F4F BuNo. 4031 "White 15"), but O'Hare and his wingman Marion "Duff" Dufilho were held overhead as the Bettys were engaged and five were shot down. Four of the Betty's dropped bombs on *Lexington,* but missed by 3,000 yards. The surviving Bettys were pursued and shot down, although two Wildcats were shot down by the Bettys' lethal tail guns. One of the Bettys was actually shot down by an SBD Dauntless dive bomber on ASW patrol.

However, at 1649, *Lexington* radar detected a second formation of Bettys approaching from the disengaged side at a range of only 12 nautical miles. The situation was critical as seven Wildcats were pursuing the remnants of the other formation of Bettys in the opposite direction, while five were orbiting, waiting to recover and low on fuel. O'Hare and Dufilho were vectored toward the new threat and intercepted the incoming Bettys (reported as nine, but actually eight) at 9 nautical miles from the carrier. Dufilho's guns jammed and O'Hare attacked alone. (Early models of the Wildcat mounted four .50-caliber machine guns with 450 rounds per gun, which amounted to about 34 seconds of firing time.)

On his first firing pass, using a deflection technique he had developed (which kept him out of the envelope of the 20-mm cannon in the Betty's tail position), O'Hare hit the two trailing Bettys, knocking them out of formation, one of them on fire. However, the crew of the burning Betty was able to extinguish the fire, and, unbeknownst to O'Hare, both Bettys were able to catch up and rejoin the formation before the weapons release point. On his second firing pass, O'Hare hit two Bettys in a trailing "V" formation, one of which crashed in flames

while the other dumped its bombs and aborted.

As the Betty's approached their bomb release point, O'Hare made his third firing pass, shooting down the leader of the trailing "V," and then shooting down the plane of the Japanese mission commander, Lieutenant Commander Takuzo Ito. O'Hare made a fourth firing pass on what was actually one of the planes that had caught up, but ran out of ammunition. As Ito's command plane was falling, his command pilot, Warrant Officer Chuzo Watanabe, attempted to crash the flaming plane into *Lexington,* but missed. The four surviving Bettys dropped ten 250-kilogram bombs on *Lexington*, but missed, this time by only 100 feet. Of the 17 Betty bombers, only two made it back to Rabaul, both damaged by O'Hare.

O'Hare claimed to have shot down six Bettys and damaged one. *Lexington*'s commanding officer, Captain Frederick "Ted" Sherman, reduced it to five, since four of what was believed at the time to be nine aircraft flew over the *Lexington*. Lieutenant Commander Thach reported seeing three planes falling in flames at the same time, which, based on post-war records, was in fact the actual number, as only eight Japanese planes were in the second strike. Nevertheless, O'Hare was given credit for five kills, which made him the first Navy ace of the war. O'Hare's plane received only one bullet hole in the engagement, although he was fired on by a *Lexington* .50-caliber gunner while returning, who fortunately didn't lead enough. O'Hare's historic aircraft crashed while later being transferred to *Yorktown* (CV-5). O'Hare was sent back to the States and, on 21 April 1942, President Franklin Roosevelt presented him with the Medal of Honor:

"For conspicuous gallantry and intrepidity in aerial combat, at grave risk to his life above and beyond the call of duty, as section leader and pilot of Fighting Squadron 3 on February 20, 1942. Having lost the assistance of his teammates, Lieutenant O'Hare interposed his fighter between his ship and an advancing enemy formation of 9 attacking twin-engine heavy bombers. Without hesitation, alone an unaided, he repeatedly attacked this enemy formation of 9 attacking twin-engine heavy bombers, at close range in the face of intense combined machine gun and canon fire. Despite this concentrated opposition, Lieutenant O'Hare, by his gallant and courageous action, his extremely skillful marksmanship in making the most of every shot of his limited amount of ammunition, shot down 5 enemy bombers and severely damaged a sixth before they reached the bomb release point. As a result of his gallant action – one of the most daring, if not the most daring action in the history of combat aviation – he undoubtedly saved his carrier from serious damage."

After several months of duty as a national hero (and missing the Battle of the Coral Sea), Lieutenant Commander O'Hare assumed command of VF-3 from Thach on 19 June 1942 and spent the next year training others. On 15 July 1943, VF-3 swapped squadron designations with VF-6 and was equipped with the new F6F-3 Hellcat fighter. VF-6 was planned to go aboard *Enterprise* (CV-6), which is why the designation was changed, during a time when air group and squadron numbers were supposed to match the parent carrier's hull number, a system that was soon given up on as too complicated. Instead, two thirds of O'Hare's VF-6 (24 Hellcats) embarked on light carrier *Independence* (CVL-22) on 22 August 1943. It participated in

the strikes on Marcus Island on 1 September 1942, the first combat missions for the Hellcat, during which O'Hare would be awarded a Distinguished Flying Cross (DFC.) He would be awarded a second DFC for actions on the Wake Island strikes on 5 October 1943.

On 17 September 1943, O'Hare became commander of Carrier Air Group 6 (CAG 6) embarked on *Enterprise*. However, his squadron, VF-6, was split up amongst the light carriers and VF-2 embarked on *Enterprise* instead. By this time of the war, it had become standard practice for the CAG to fly in a TBF Avenger configured as a command aircraft to coordinate strikes. However, O'Hare successfully lobbied to continue flying the F6F Hellcat.

During Operation Galvanic, groups of Japanese twin-engine Betty bombers, trained in making night torpedo attacks, flew from airfields in the Marshalls attempting to strike U.S. ships. On the evening of 25 November, 13 Betty twin-engine torpedo bombers from the Marshalls attacked the U.S. Northern Assault Group. However, Rear Admiral Turner's insistence on constant battle drills while en route to Makin and Tarawa paid off. Due to radical (but purposeful) and constant maneuvering by the U.S. ships, the Japanese bombers were never able to gain an advantageous torpedo attack position. Nevertheless, the night-time raids represented a serious threat. In an attempt to counter these raids, the commander of the Northern Carrier Group (TG 50.2), Rear Admiral Arthur W. Radford (embarked on *Enterprise*), O'Hare, and the *Enterprise* air officer, Commander Tom Hamilton, worked to develop ad hoc tactics for conducting night carrier-based fighter intercepts.

The tactics involved using a "Bat Team" of one radar-equipped TBF Avenger and two F6F Hellcats. The Hellcats would join on the Avenger and would be vectored to the targets by the *Enterprise* fighter director officer based on shipboard radar, and then the Avenger would use its radar to lead the Hellcats to the incoming Japanese strike. Once the Hellcats sighted the blue-flamed exhaust of the Japanese bombers, they would engage. Four Bat Team fighter pilots were selected, one of which was Lieutenant Roy Marlin Voris, who would later found and command the Blue Angels Navy Flight Demonstration Team.

On the night of 26 November 1943, another Japanese raid was detected inbound and the Bat Team was launched, with O'Hare choosing to fly one of the fighters himself. The other was flown by Ensign Warren Andrew "Andy" Skon of VF-2. The TBF-1C Avenger was flown by the VT-6 ("Black Panthers") squadron skipper, Lieutenant Commander John C. Phillips. The night tactics proved harder to execute in practice than in theory. The fighter director had difficulty sending the Bat Team in the right direction, and the fighters had a hard time finding the TBF. When they did, it appears they were already in the middle of the Japanese formation flying the same direction.

O'Hare's plane was last seen by his wingman and the TBF turret gunner at the five o'clock position on the TBF. The turret gunner then saw a Betty bomber that was above and behind O'Hare in the six o'clock position. The turret gunner fired on the Betty and the nose gunner in the Betty returned fire. O'Hare's plane did not appear to have been hit in the crossfire, but both the turret gunner and wingman reported that O'Hare's plane veered

to the left, dropped down into the darkness, and was never seen again, suggesting that a round from the Betty's nose gun killed or incapacitated O'Hare and he lost control of the aircraft. The action caused confusion in the Bettys' formation and they broke off the attack. Navy historian Samuel Eliot Morison recorded that one Betty was shot down by Phillips in the TBF (which had a forward-firing gun). An extensive search for O'Hare failed to find any trace of him or his aircraft, and, on 9 December, he was officially declared missing in action. O'Hare would be awarded a posthumous Navy Cross for his last action:

"The President of the United States takes pride in presenting the Navy Cross (Posthumously) to Lieutenant Commander Edward Henry "Butch O'Hare, United States Navy, for extraordinary heroism in operations against the enemy while serving as a Pilot of a carrier-based Navy Fighter Plane in Fighting Squadron TWO (VF-2), attached to the USS ENTERPRISE (CV-6), and deployed over Tarawa in the Gilbert Islands, in action against enemy Japanese forces on 26 November 1943. When warnings were received of the approach of a large force of Japanese torpedo bombers, Lieutenant Commander O'Hare volunteered to lead a fighter section of aircraft from his carrier, the first time such a mission had been attempted at night, in order to intercept the attackers. He fearlessly led his three-plane group in combat against a large formation of hostile aircraft and assisted in shooting down two Japanese planes and dispersed the remainder. Lieutenant Commander O'Hare's outstanding courage, daring airmanship and devotion to duty were in keeping with the highest tradition of the United States Naval Service. He gallantly gave his life for his country."

The *Gearing*-class destroyer, USS *O'Hare* (DD-889), launched 22 June 1945 was named in honor of Butch O'Hare and served until she was decommissioned in October 1973 and transferred to the Spanish Navy before being scrapped in 1992. On 19 September 1949, Chicago's Orchard Depot Airport (ORD) was renamed Chicago O'Hare, and an F4F Wildcat, recovered from Lake Michigan in the 1990s and restored and on loan from the National Naval Aviation Museum in Pensacola, is on display in Terminal 2, painted in the markings of O'Hare's Medal of Honor flight.

(Sources for this section include: "Defending the USS *Lexington*: Action off Bougainville" by Allyn Vannoy, 27 November 2018, on warfarehistorynetwork.com, and *Fateful Rendezvous: The Life of Butch O'Hare* by Steve Ewing and John B. Lundstrom, 1997.)

End of Operation Galvanic: Payback for USS Wasp *Sinking*

On 25 November 1943, Japanese submarine *I-19* was detected on the surface 50 nautical miles west of Makin Island by radar on *Radford* (DD-446). Although *I-19* submerged, *Radford* conducted seven depth charge attacks that sank *I-19* with all 105 of her crew. *I-19* had previously sunk the aircraft carrier *Wasp* (CV-7), fatally damaged the destroyer *O'Brien* (DD-415) and seriously damaged the battleship *North Carolina* (BB-55), all with a single spread of six torpedoes, on 15 September 1942 south of Guadalcanal.

(Sources for this H-gram include: *History of U.S. Naval Operations in World War II, Vol. VII—Aleutians, Gilberts and Marshalls, June 1942–April 1944* by Rear Admiral Samuel Eliot

Morison, USNR; *The Little Giants: U.S. Escort Carriers Against Japan* by William T. Y'Blood, 1987, Naval Institute Press; as well as numerous NHHC *Dictionary of American Fighting Ships* [DANFS] entries for individual ships. The website www.combinedfleet.com is invaluable for Japanese records of actions.)

View in the front part of the Navy Department Library, February 1949. The library was located at the southern end of the Main Navy Building's Second Corridor, in Room 1241 on the first floor. The view looks eastward in the front part of the library, with the reading area at left, stacks at right, and staff desks in the foreground (80-G-660939).

H-Gram 066-1: 50th Anniversary of the Establishment of the Naval Historical Center

H-Gram 066, Attachment 1
Samuel J. Cox, Director NHHC
December 2021

I usually post information about the history of the Navy as a whole, but today I'd like to recognize a milestone in the history of the command I lead. On 1 December 1971, the Navy combined the Naval Historical Display Center—now the National Museum of the U.S. Navy—with OPNAV's Naval History Division to create the Naval Historical Center. The first director of the new center was Vice Admiral Edwin B. Hooper, who had recently retired from active duty. The mission of the new command was:

To provide a Center for naval historical activities; to operate the Navy Department Library; to operate the archives for naval operational and other selected records; to manage the collection, preservation, exhibition, and distribution of objects of historical interest; to operate the Navy Memorial Museum; to provide historical information services; to conduct research in and compilation of naval histories; and to carry out other historical activities as assigned

by the Chief of Naval Operations. (OPNAVNOTE 5450 dtd 30 Nov 2971)

This mission statement remains at the heart what we do today, and this combination of Navy documentary history, material history, and museum programs created the basic structure of today's Naval History and Heritage Command (NHHC).

A reflection of NHHC's historical roots is that many parts of the command have their own anniversaries to observe. For example, the Navy Department Library was founded in 1800, survived the burning of Washington in 1814, and housed its extensive and growing specialized collection of works on U.S. and foreign navies in at least four locations before coming to the Washington Navy Yard in 1970.

In the 1880s, the library was consolidated with a new archives function to manage the official records created during the Civil War. Throughout the 1800s, the library was the Navy's de facto foreign intelligence capability, with its mission to acquire books and manuscripts on other navies around the world. When the Office of Naval Intelligence (ONI) was first stood up in 1882, it was collocated with the Navy Department Library, and it was the library's budget that sustained ONI for several years until Congress finally agreed to fund ONI.

The Office of Library and Naval War Records was placed in the Secretary of the Navy's office in 1889. At the beginning of World War I, the office shifted its focus from gathering records of previous wars to collecting records documenting current wartime operations. In 1918, a History Section was established. The active collection of Navy history took off in World War II with the commissioning of Samuel Eliot Morison and other historians into the Naval Reserve to collect Navy history as it was being made with the fleet. An Office of Naval History was formed in 1944 to continue the work of documenting World War II.

A similar 1941 initiative recruited combat artists from civilian life to augment the Navy's existing art collection with art created on the spot. This work could be dangerous: Lieutenant Commander McClelland Barclay, a prominent civilian artist who had volunteered for active duty, died with most of the crew when *LST-342* was torpedoed in the South Pacific in July 1943.

On the historic artifact side, base commanders began displaying ordnance and other artifacts early in the 19th century. By the time of the Civil War, places like the Washington Navy Yard had well-organized "relic" displays. By the 1920s, the need for a Navy museum in Washington had become apparent to Navy leadership, and my predecessor Dudley Knox was appointed Curator for the Navy—a title I now proudly hold—to formalize artifact collecting, although little progress was made on a museum.

In 1961, then-CNO Admiral Arleigh Burke brought an end to decades of discussion by establishing the Naval Historical Display Center in a disused building at the Washington Navy Yard—the same building occupied by the National Museum of the U.S. Navy (NMUSM) today. The National Museum drew on an extensive central artifact collection begun in 1908, which in addition supported (and still supports) other federal and civilian borrowers with artifact loans. With the support of the SECNAV and CNO, we are currently planning to relocate the NMUSN to a new location near the Navy Yard that is

outside the base gates. This will provide the public unfettered access to the Navy's collection and a stable environment to house it.

Our command's progress did not end with the consolidation of the Naval History Division and the Navy Historical Display Center.

- In 1982, the command headquarters moved into its current core building complex at the Washington Navy Yard.

- The value of having a cadre of trained reservists to document current operations was recognized during the Gulf War in the early 1990s, resulting in the establishment of a reserve unit directly supporting the Naval Historical Center, now NHHC.

- Around the same time, with the disestablishment of SUPSHIP Boston, NHC was assigned the responsibility of maintaining USS *Constitution*.

- As the oldest part of NHHC, the Navy Department Library was one of our most prodigious contributors to our new website in the 1990s, thus using new ways to share knowledge about the Navy with a broad public.

- In 1996, the command acknowledged the growing importance of protecting sunken Navy craft by establishing an Underwater Archaeology Branch. Today this branch partners with other commands and organizations to manage and learn more about Navy ship and aircraft wrecks, and manages a permitting program for non-federal groups wishing to investigate them.

- In the mid-2000s, the Navy consolidated all SECNAV-designated museums under NHC, thus gathering under one organizational roof the exceptional expertise and collections of these museums.

After periodic reinvigorations of the combat art program with civilian artists in the Korean and Vietnam wars and occasional peacetime periods, the command established two civilian billets to provide a continuing combat artist capability.

The Naval Historical Center was renamed the Naval History and Heritage Command in 2008 to recognize its expanded responsibilities.

In 2015, we consolidated our central artifact collection to a new Collection Management Facility in Richmond, and established an organic artifact conservation capability there.

Of course, we're not the only people in the Navy who do Navy history. We are proud to work with our colleagues in the fleet, the schoolhouses, and the Navy's post–secondary education commands to ensure that the Navy and its sailors are effectively using our shared heritage and the hard-won lessons of the past to support and improve today's Navy.

The common element throughout this story is our people, the passionate experts who are skilled at looking backward decades and centuries while also looking forward to ensure that irreplaceable knowledge and objects from the Navy's entire past will be available for the Navy's entire future. I am proud and privileged to lead the Navy's largest assembly of history professionals, whose ability to tell extraordinary stories from the most unlikely sources or objects is amazing.

Thanks to all of you for your attention to these H-Grams, and for your kind remarks in support of the historical knowledge infrastructure that makes them possible. There have been NHHC components around since the dawn of the Navy Department, and we will continue working to improve and expand our support to the Navy.

For more detail on the history of NHHC and its component parts, please follow these links.

Origins of the Naval History and Heritage Command:
[https://www.history.navy.mil/about-us/organization/naval-history-and-heritage-command-origins.html]

Navy Department Library History:
[https://www.history.navy.mil/research/library/about.html]