H-Gram 009: Savo Island

8 August 2017

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USS Chicago *(CA-29) off Guadalcanal the day after the Savo Island action, showing crewmen cutting away damaged plating to enable the ship to get underway. She had been torpedoed at her extreme bow during the night action of 9 August 1942. View looks forward along her port side, with Number 1 8-inch gun turret in the upper right. Note life rafts hung on the turret side and destroyers in the distance (80-G-34685).*

75th Anniversary of World War II

1. Guadalcanal–Iron Bottom Sound

In the first U.S. offensive of World War II, about 5,000 Sailors lost their lives in the waters around the island of Guadalcanal between 7 August 1942 and February 1943, defending the U.S. Marines occupying the island from Japanese counterattack. The Marines paid dearly to hold the island as well: 1,152 Marines were killed on the island, along with an additional 446 Army troops who arrived later in the campaign. The Japanese surface navy did not get the memo that the tide of war had turned at the Battle of Midway (actually, literally, because the Japanese kept their losses at Midway a secret from almost everyone who didn't see it firsthand). Not realizing they were supposed to be losing, the Japanese navy repeatedly went on the attack, and for much of the campaign held the initiative. The result was seven brutal major naval battles and numerous lesser ones, including two carrier versus carrier battles on the scale of Coral Sea, and five ferocious and incredibly costly night surface actions.

The price for defending Guadalcanal paid by the U.S. Navy was two aircraft carriers (USS Wasp *[CV-7] and USS* Hornet *[CV-8]), five heavy cruisers (plus an Australian heavy cruiser and 84 of her crew), two light cruisers, and 15 destroyers sunk, and numerous other ships of all types heavily damaged. The Japanese lost an approximately equal number of combatants (including two battleships and a light carrier) along with numerous transports with thousands of troops. So many ships were sunk in the sound between Guadalcanal and Tulagi that it became known as "Iron Bottom Sound." The U.S.*

Navy and Marines lost over 400 aircraft in the campaign, and the Japanese lost somewhat more (figures vary.) It was in the skies around Guadalcanal (not at Midway as commonly believed) that the cream of Japanese naval aviation was finally lost, particularly over the guns of vastly improved U.S. shipboard anti-aircraft fire.

The Japanese Navy fought with extreme tenacity, skill, and determination, and the naval battles around Guadalcanal were bookended with two of the worst defeats in U.S. naval history (Savo Island and Tassafaronga), eclipsed only by Pearl Harbor. The battles inbetween were all narrow wins or losses for either side, all with substantial casualties. In the first night battle of Guadalcanal (13 November 1942) a force of U.S. cruisers and destroyers sacrificed itself to prevent a second Japanese battleship bombardment of Guadalcanal (the first had killed 40 Marines and destroyed or damaged over half the 90 U.S. aircraft on the island) at a cost of over 1,400 Sailors, including two admirals, and all five Sullivan brothers. For much of the campaign, the Japanese navy owned the night, while U.S. aircraft from carriers and Henderson Field on Guadalcanal owned the day. Attempts by either side to challenge the other's strength usually resulted in heavy losses. Throughout the campaign, the Imperial Japanese Navy fought with great valor and gave as good as it got, frequently to the surprise of U.S. forces, which also invariably fought with great courage. But despite severe losses, in the end it was the U.S. Navy that remained on the field, while the Japanese withdrew. The difference was that the U.S. could replace the losses in ships and aircraft, but the Japanese could not.

2. The Battle of Savo Island, 9 August 1942

At dawn on 7 August 1942, the U.S. Navy landed Marines on Guadalcanal, Tulagi, and a couple smaller islands at the southern end of the Solomon Islands chain. Shortly after midnight on 8–9 August, the Japanese counter-attack came. An eight-ship (five heavy cruisers, two light cruisers, and a destroyer) Japanese force slipped undetected past two radar-equipped U.S. destroyers and attacked two groups of Allied heavy cruisers and destroyers guarding the western approaches to the U.S. invasion force, which was still hectically engaged in landing supplies to support the Marines ashore. When it was over, four allied heavy cruisers were sunk (USS Astoria *[CA-34], USS* Quincy *[CA-39], USS* Vincennes *[CA-44), and HMAS* Canberra *[D-33], the heavy cruiser USS* Chicago *(CA-29) and a couple destroyers damaged, and 1,077 Allied Sailors killed in what CNO Admiral Ernest J. King would describe as the "blackest day of the war." Pearl Harbor was one thing, but to have suffered such a severe one-sided loss by a force whose very purpose was to guard against such an attack was a severe psychological blow.*

At Savo Island, the Japanese fired over 1,800 rounds of 8- and 6-inch ammunition with some 230 hits, along with multiple devastating hits by Type 93 "Long Lance" torpedoes. The surprised Allied force got off 471 rounds with ten hits. Japanese casualties were minimal. The Japanese commander, Rear Admiral Gunichi Mikawa, did not know that only one heavy cruiser and two light cruisers were the only major ships between him and dozens of U.S. supply ships and troop transports. But, fearful of being attacked by U.S. carrier aircraft at dawn (and not knowing that the three U.S. carriers supporting the landing were already steaming away from the area), and having received wildly inflated reports about how many U.S. ships had been destroyed in three major Japanese air attacks over the previous two days, Mikawa opted to withdraw back to Japanese bases over 500 miles to the northwest. Mikawa's decision, roundly and somewhat unfairly criticized over the years, spared the vulnerable U.S. supply ships and troop transports. Nevertheless, with no air cover, and concerned over a follow-on night surface attack, the result was an ignominious withdrawal of U.S. Navy forces the next day from the immediate Guadalcanal area, effectively leaving the Marines ashore to fend for themselves, and leading to the oft-repeated statement that the U.S. Navy abandoned the Marines at Guadalcanal (although at that time the only Japanese remaining on the island were the remnants of construction units that had been building the airfield). The only bright spot of the entire action was that the old U.S. submarine S-44 *torpedoed (using older Mark 10 torpedoes) one of Mikawa's cruisers, the* Kako, *as she was returning to*

port, the first Japanese major combatant sunk by a U.S. submarine in the war. For more on the disaster at Savo Island please see attachment H-009-1.

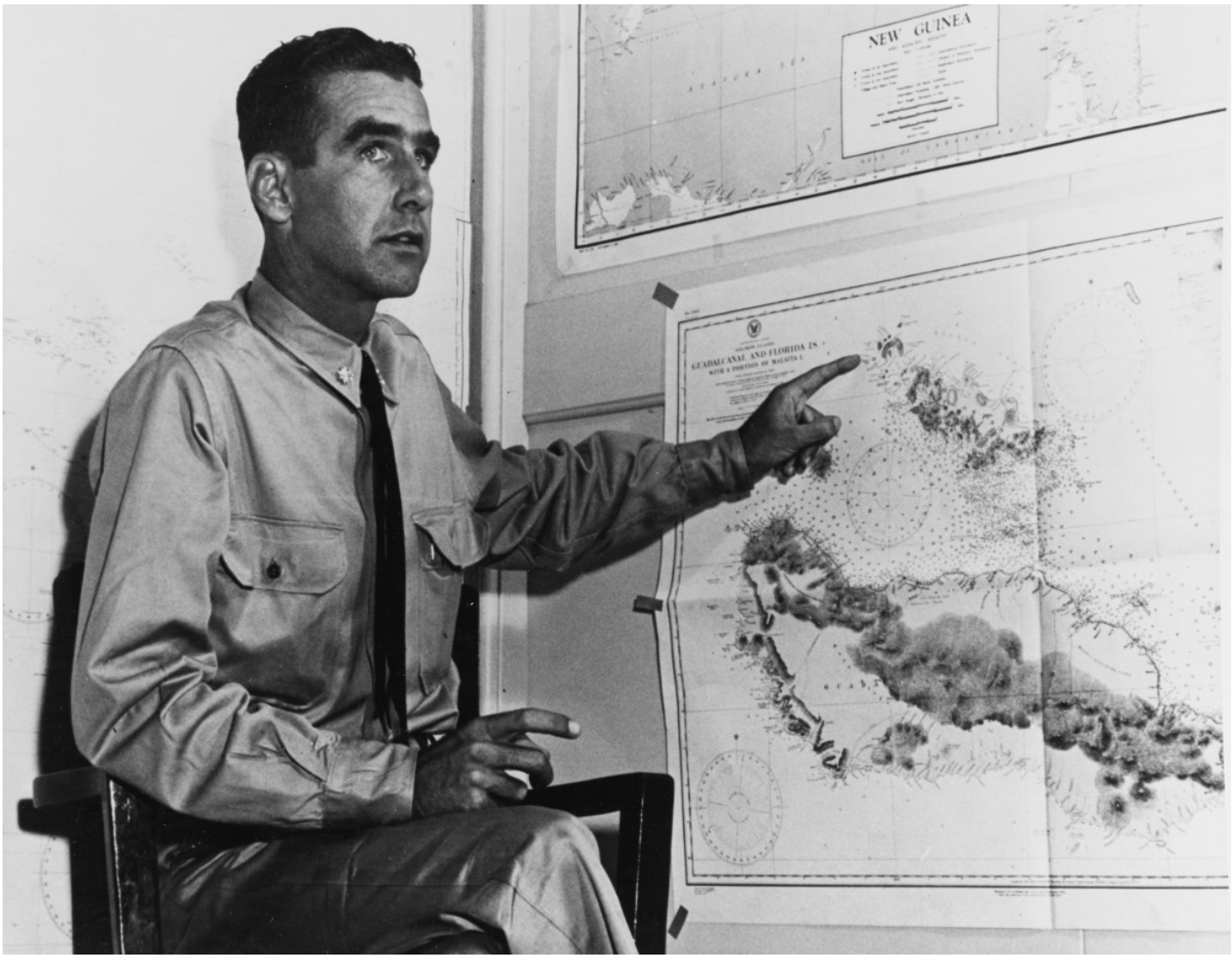
The attached photo (H-009-2) from NHHC's collection, taken by a Japanese cruiser at the Battle of Savo Island, shows the heavy cruiser USS Quincy *(CA-39) burning and sinking while caught in the glare of Japanese searchlights. The valor of Quincy was noted by Rear Admiral Mikawa: Quincy had charged the Japanese cruiser line and nearly took out Mikawa and his staff with a hit to his flagship's chart room.*

For those who may have missed it, I am also re-attaching H-008-3: "Torpedo Versus Torpedo" from my previous H-Gram, because the sections on Japanese and U.S. surface torpedoes and tactics explain a lot of what happened at Guadalcanal. In a future H-Grams, I plan to write on the U.S. development of radar, which also had significant impact on the campaign, although immaturity of radar technology, lack of U.S. commanders' understanding of the strengths and limitations of that technology, and tactics that had not kept pace with the technology frequently worked to the U.S. Navy's disadvantage.

50th Anniversary of Vietnam

3. U.S. Navy Operations

In the last H-Gram I discussed how one of the contributing factors in the fire aboard the USS Forrestal *was a shortage of Mark 83 1,000-pound bombs and the substitution of unstable older bombs. The shortage was due to the fact that in 1967 the U.S. Navy was conducting the most sustained bombing campaign in our history. Jets flying from U.S. aircraft carriers on "Yankee Station" flew thousands of sorties against targets in North Vietnam. Because of the 100th anniversary of World War I and 75th anniversary of World War II, I have not had a chance to cover the significant developments in the naval campaign in Vietnam in 1967 (or in the years prior to that.) To help remedy that, I asked one of my historians, Dr. Richard Hulver, to put together a "catch-up" piece covering the war in Vietnam, with emphasis on U.S. Navy involvement, and that is attachment H-009-3. With this background, I will endeavor to cover more about the U.S. Navy in Vietnam in the future because there are incredible accomplishments and valor that deserve to be remembered.*



Battle of Savo Island, 9 Agust 1942: Lieutenant Commander Harry B. Heneberger, former gunnery officer of USS Quincy *(CA-39), uses a chart of Guadalcanal and the Florida Islands to describe the action in which his ship was sunk, autumn 1942 (80-G-16521).*

H-010-1: Defeat at Savo Island

H-Gram 009, Attachment 1
Samuel J. Cox, Director NHHC
September 2017

Immediately upon being informed that U.S. forces were landing at Guadalcanal and Tulagi in the southern Solomon Islands on the morning of 7 August 1942, Japanese navy commanders on various missions in the vicinity of the Bismarck Sea (at the northern end of the 500-mile-long Solomon Islands chain) aborted their planned tasks without awaiting orders and congregated at the major Japanese base at Rabaul in anticipation of going on the attack. Meanwhile, the Japanese army headquarters at Rabaul, focused on their overland campaign in New Guinea to capture Port Moresby, dismissed the landings as nothing to worry about.

Rear Admiral Gunichi Mikawa, the new commander of the newly designated Japanese Eighth Fleet, quickly formed up all major elements of his force, which had not trained together before, and by mid-afternoon of 7 August was underway with eight ships, en route to attack the Allied invasion force. The force consisted of

Mikawa's flagship, the heavy cruiser *Chokai*, four heavy cruisers of Cruiser Division Six (*Aoba*, *Kako*, *Kinugasa*, and *Furutaka*) and two light cruisers of Cruiser Division Eighteen (*Tenryu* and *Yubari*), and the destroyer *Yunagi. W*ith the exception of *Chokai*, the cruisers were among the oldest in the Japanese navy. Mikawa was aware multiple U.S. carriers were supporting the landings, but nevertheless planned to conduct a night torpedo and gun attack on the Allied force on the night of 8–9 August. Mikawa had been at Midway, so he knew what he was up against. As he was departing, Mikawa duly transmitted his plan up the chain of command, where it was initially rejected by Chief of the Naval General Staff Admiral Osami Nagano as being too reckless, but Nagano eventually acquiesced on the recommendation of the commander of the Combined Fleet (Admiral Yamamoto.) Mikawa's plan was intercepted by U.S. Navy radio intelligence, but not decoded until a couple weeks after the battle. (The Japanese had made some call-sign and code changes both before and after the Battle of Midway, which impeded U.S. code-breaking capability.)

Based on their intelligence, the Japanese were anticipating a U.S. operation in the southern Solomon Islands (where the Japanese had just commenced construction of an airfield on the north coast of Guadalcanal) and were aware that a large U.S. and Allied force was gathering in the southern Pacific, northeast of Australia. However, they did not anticipate it so soon. The exact timing, and scale, of Operation Watchtower caught the Japanese completely by surprise. The 80-plus ships of the U.S. invasion force, including three aircraft carriers (USS *Saratoga* [CV-3], USS *Enterprise* [CV-6], and USS *Wasp* [CV-7], met no initial opposition at dawn on 7 August. Japanese troops on Guadalcanal, mostly construction laborers, fled into the jungle, although a small garrison force of Japanese naval infantry across the sound on Tulagi and small neighboring islands put up intense resistance that took some time to root out. Nevertheless, Japanese naval aviation units at Rabaul mounted two major attacks on 7 August and a third on 8 August, which interrupted the landing of supplies on Guadalcanal as the U.S. ships, forewarned of the incoming Japanese airstrikes by the coast-watcher network (consisting mostly Australian and European expatriate plantation owners who had taken to the jungle with a radio on various islands along the Solomons chain), dispersed into defensive formations that proved highly effective. Although about half the U.S. Navy fighters that opposed the Japanese strikes were shot down (about 20,) the Japanese bombers suffered severe losses and inflicted minimal damage, although they claimed many U.S. ships sunk (the commander of the 5th Air Attack Force claimed two heavy cruisers, one cruiser, two destroyers, and nine transports sunk. The reality was serious damage to the destroyer USS *Jarvis* [DD-393] and the transport USS *George F. Elliot* [AP-13], which had to be scuttled.) Nevertheless, the constant threat of air and submarine attack kept the U.S. ships at Condition One for almost 48 hours straight, which in conjunction with the extremely hot and humid conditions left U.S. Navy crews exhausted by sundown on 8 August.

Operation Watchtower, the first U.S. offensive of World War II, was championed by CNO Admiral Ernest J. King as a means to take the initiative following the U.S. Navy victory at Midway. Although King supported the agreed Allied "Defeat Germany First" strategy, he believed that an increase in apportionment of resources to the Pacific over that currently planned was necessary, and going on the offensive in the Solomon Islands was a means to force that. King's approach was opposed by General Douglas MacArthur (commander of the Southwest Pacific) and many other commanders on the grounds that it was premature and that U.S. forces in the region did not have the necessary numbers, capability, training, or logistics base to go on the offensive yet. Despite intense opposition, King prevailed in the newly created Joint Chiefs of Staff, and the operation was ordered to go forward despite

clearly recognized resource challenges. To make a long story short, an area was carved out of MacArthur's Southwest Pacific Region and Admiral Chester Nimitz's Pacific Region and designated the South Pacific Region (COMSOPAC) under the command of Vice Admiral Robert L. Ghormley. Ghormley ostensibly reported to Nimitz, but King exercised very direct, and frequently heavy-handed, direction throughout the Guadalcanal campaign.

The pre-invasion planning conference between the U.S. commanders leading the operation was one of the most bitter and acrimonious of the entire war. The naval amphibious force (CTF-62) would be commanded by Vice Admiral Richmond K. Turner and the supporting carrier force (CTF-61) by Vice Admiral Frank Jack Fletcher (who had been in command at Coral Sea and Midway). The two immediately clashed over Fletcher's refusal to commit to keeping his carriers in the vicinity of Guadalcanal for any more than 48 hours out of concern that doing so would leave the carriers vulnerable to Japanese land-based air and submarine attack. Departing so soon, however, would leave Turner's supply ships and transports without air cover before they could complete unloading, which could leave the Marines ashore, under the command of Major General Archibald Vandegrift, potentially vulnerable to Japanese counterattack. Turner literally accused Fletcher of cowardice, and Vandegrift tried to stay out of the frag pattern. The fact that Ghormley did not attend the conference (he sent a staff officer) and did not adjudicate the dispute has been heavily criticized by historians (and other commanders at the time). For his part, Vandegrift had serious concerns about the Navy's ability to get adequate supplies ashore to sustain his force.

Fletcher's position was not completely without merit. Japanese land-based torpedo bombers had already proven themselves to be extremely dangerous (sinking the British battleship HMS *Prince of Wales* and battlecruiser HMS *Repulse* in the first days of the war—although those ships did not have benefit of fighter air cover). Fletcher had already had two of his carrier flagships sunk from under him, and was acutely sensitive to losing more; he reasoned that the Marines could not be dislodged by Japanese bombers, but if he lost his carriers, the whole operation would be doomed. Given the long range that Japanese bombers would have to fly (over 600 miles) to reach his carriers (before the Japanese built intermediate airfields in the central Solomons), Fletcher was probably unduly cautious regarding the Japanese bomber threat. However, his concerns regarding submarines were well-founded. When the U.S. carriers returned for sustained support in September 1942, a Japanese submarine torpedoed Fletcher's flagship, the carrier *Saratoga* (CV-3), putting her out of action for months (for the second time in the war) and another sank the *Wasp* (CV-7), leaving only two U.S. carriers in the Pacific (essentially parity with the Japanese carriers *Shokaku* and *Zuikaku*).

U.S. Naval Intelligence had reasonably accurately determined the number of Japanese cruisers operating in the general vicinity of Rabaul, but was unable to detect Mikawa's actual departure. As Mikawa's force commenced its transit down the northern Solomons, it was sighted by the U.S. submarine *S-38*, a U.S. Army Air Force B-17, and two Australian Air Force Hudson bombers, all of which were subordinate to MacArthur's Southwest Pacific region and none of which were aware a U.S. landing was going on in the southern Solomons. Here the seam between the Southwest Pacific Region and South Pacific Region had major impact due to convoluted communication-routing paths that resulted in contact reports originating in the northern Solomons taking over ten hours on average to reach Turner's forces off Guadalcanal, when they reached them at all. Those that did get through had conflicting courses (Mikawa would change course whenever reconnaissance aircraft were sighted, to throw them off) as well as inaccurate reporting of ship types. The report that reached Turner around sunset on 8 August stated the force included two

"seaplane tenders or patrol boats" an ambiguous (and contradictory) recognition of ship type, which was not viewed as an immediate threat. Turner had also requested that U.S. Navy PBY patrol planes fly reconnaissance missions on the 8th over the central Solomons, but due to weather conditions at launch, the missions were scrubbed. However, Turner's force was not informed of the cancellation. The U.S. cruisers supporting the landing were not ordered to launch any of their own scout aircraft due to concern that the recovery of float planes would make the ships vulnerable to Japanese submarine attack (although there were no Japanese submarines in the area at the time, the U.S. did not know that). As a result, Mikawa's force completed the vulnerable daylight portions of its transit without being accurately identified or its intentions assessed. Thus, as of sundown on 8 August, the U.S. cruisers supporting the landing were disposed to guard against a night surface attack, but none of the U.S. Navy commanders off Guadalcanal were expecting one.

On the night of 8–9 August, Turner divided his cruisers into three groups to protect the three approaches to the landing area. To the east, covering Sealark Channel (considered the least likely avenue of enemy approach), were the light cruisers *San Juan* (CL-54) and HMAS *Hobart*. To the west, Rear Admiral Victor A. C. Crutchley, RN, embarked on the Australian heavy cruiser *Australia*, divided his force to cover the two western approaches, bisected by Savo Island. Covering southeast of Savo island were the heavy cruisers, HMAS *Australia*, HMAS *Canberra* (D-33,) and USS *Chicago* (CA-29), and two U.S. destroyers, USS *Patterson* (DD-392) and USS *Bagley* (DD-386) (referred to as the "Southern Group"). Covering northeast of Savo Island were the heavy cruisers USS *Vincennes* (CA-44), USS *Quincey* (CA-39), and USS *Astoria* (CA-34), and two U.S. destroyers, USS *Helm* (DD-388)and USS *Wilson* (DD-408) (referred to as the "Northern Group"). Two SC radar–equipped U.S. destroyers were stationed west of Savo Island, the USS *Ralph Talbot* (DD-390) to the north and the USS *Blue* (DD-387) to the south, to provide radar warning of any approaching Japanese force.

Just before sunset, Turner called for a conference of his senior commanders on board his flagship, USS *McCawley* (APA-4), upon learning that Fletcher's carriers were departing several hours earlier than planned, due to what Fletcher said was refueling concern as well as significant loss of fighter aircraft in the first two days of the operation. With the impending loss of air cover, Turner decided that U.S. ships would withdraw, beginning at dawn on 9 August, over the objection of Vandegrift, since many of the supplies had yet to be offloaded. (The art of "combat loading" and logistics-over-the-beach were still very much in a learning phase, resulting in a pile-up of supplies on the beach and a backlog of boats trying to reach it—a situation of significant chaos and confusion resulting in mutual recriminations among Navy and Marine Corps personnel). The landing of supplies continued throughout the night. Although Turner relented and decided to allow the supply ships and transports to remain for an additional day, the surface combatants would pull out the morning of 9 August. Like the pre-operation conference, this contentious meeting aboard Turner's flagship impacted U.S. Navy and Marine relations for decades.

Rear Admiral Crutchley had steamed over to the meeting in his flagship, HMAS *Australia*, but after the meeting opted not to sail in the darkness through the poorly charted waters to resume station southeast of Savo Island. He neglected to tell anyone that he would not return that night. As a result, tactical command of the Southern Group fell to Captain Howard Bode, CO of *Chicago*, which was in trail behind HMAS *Canberra*. Bode had previously been CO of the battleship USS *Oklahoma* (BB-37), but not aboard when she was sunk at Pearl Harbor. The Northern Group was under the command of the CO of the *Vincennes*, Captain Frederick Riefkhol. The cruisers had all

gone to Condition Two after sunset, and of the five heavy cruiser skippers, Bode was the only one awake after midnight. However, Bode had also ordered *Chicago*'s surface search radar turned off out of concern it would give away her position.

Mikawa made the night part of his transit at 24 knots, intent on steaming to the south of Savo Island, attacking the U.S. ships off Guadalcanal, then those off Tulagi, and then exiting to the north of Savo Island to be 150 or so miles up the Solomons at daybreak. He had launched several of his cruiser float planes to scout the area. Although the flights aroused suspicion, darkness precluded positive identification, and at least one of the float planes brazenly showed its running lights and was therefore presumed "friendly" by some of the U.S. ships that spotted it. No one deduced that the presence of single-engine aircraft at night was an indicator of imminent attack.

As Mikawa's force approached from west of Savo Island, Japanese lookouts sighted the pickets USS *Blue* at about 0044 and the USS *Ralph Talbot* shortly after. Mikawa slowed to minimize wake, guns trained to blast either ship at any sign of detection or alarm. However, neither ship detected the Japanese either by sight or by radar. The SC radars on the ships had an effective detection range of four to ten miles and, at the time, the two U.S. destroyers were 14 nautical miles apart on opening courses. The eight Japanese ships shot the gap unseen.

Shortly before 0130, Japanese lookouts sighted the Southern Group of U.S. cruisers, which were dimly backlit by a distant fire on one the U.S. transports off Guadalcanal, hit in an earlier air attack. In keeping with standard Japanese night-attack doctrine, Mikawa held gunfire until well after the Japanese launched torpedoes. Shortly before expected torpedo impact, Japanese float planes dropped flares backlighting the Southern Group, and Mikawa opened fire. U.S. lookouts had been hampered by lightning flashes from nearby rain squalls, but in response to what were Mikawa's initial gun flashes, USS *Patterson* (CDR Frank Walker, commanding) issued a voice broadcast at 0145 via TBS (Talk-between Ships), "Warning, warning, strange ships entering harbor." TBS had been clobbered with administrative traffic most of the night (not its intended purpose) and a few ships received the warning, ambiguous as it was, but many did not. Regardless, the Japanese torpedoes and shells were already on the way.

Although *Canberra*'s radar failed to detect the Japanese, her lookouts sighted the inbound torpedoes and she managed to avoid them. However she was then hit by almost 30 shells in two minutes, killing her CO, Captain Frank E. Getting, and other senior officers, and putting her effectively out of action for the remainder of the battle. *Chicago* was hit in the bow by a Japanese torpedo from *Kako* and hit amidships starboard by a second Japanese torpedo that failed to explode, as well as a shell that hit a leg of the forward tripod mast, killing two and wounding the XO. Of some 44 starshells fired by *Chicago*, all but six failed. Captain Bode ordered his ship on a westerly course toward what he thought would be the main battle, but it took him in the opposite direction. *Chicago*'s main battery never fired, although she did hit the Japanese light cruiser *Tenryu* with a 5-inch round, killing 23. However, Bode neglected to radio a warning to anyone, for which he was censured as a result of the post-battle investigation. *Bagley* fired a spread of torpedoes, at least one of which possibly hit *Canberra*; none hit the Japanese. The skipper of *Patterson* also ordered a spread of torpedoes, but his own guns drowned out the order, and he only discovered later that the torpedoes had not been launched.

As the southern battle developed, the destroyer USS *Jarvis* (DD-393—Commander William W. Graham, Jr., commanding) blundered through the area. Hit by a torpedo while valiantly interposing herself between *Vincennes* and an

inbound torpedo bomber in an earlier air attack, *Jarvis* had a 50-foot gash in her hull. Through a communications foul-up, she departed the Tulagi area in the middle of the night en route to Australia with no tug to support. The Japanese destroyer *Yunagi*, at the tail of the Japanese column, peeled off to go after *Jarvis*. What happened next is not known for sure, but *Jarvis* appears to have successfully defended herself and *Yunagi* broke off, now separated from the rest of the Japanese force. The next day, *Jarvis* was attacked by 31 Japanese bombers, who mistook her for a cruiser, and she was lost with all 233 hands.

The action with the Southern Group lasted only about ten minutes before Mikawa headed for the Northern Group. Lookouts and bridge watches on the U.S. cruisers saw the southern action, but assessed it incorrectly as shore bombardment, depth charges on submarines, or a friendly fire incident, everything except what it actually was. The radar operator onboard *Astoria* detected and reported the incoming Japanese force, but was overruled by the OOD, who insisted the contacts had to be interference from Savo Island itself. Debate raged on a couple ships whether to wake the captain, when finally the searchlight from *Chokai* ended the discussion.

The Japanese also fell into disarray after the battle with the Southern Group, and inadvertently split into two groups (three, counting *Yunagi*), which by chance caught the Northern Group in-between, taking the U.S. cruisers under fire from opposite directions, but also risking fratricide with their own ships. The U.S. ships began to return fire, but the Japanese had several salvos' jump. As the U.S. began to find the range, the Japanese began to score hits. Onboard *Astoria*, the gunnery officer ordered commence firing before the captain reached the bridge. Upon arriving there, Captain William Greenman first ordered his ship to cease fire, concerned that he was engaged in a friendly fire accident before continuing incoming rounds convinced him otherwise. Captain Riefkohl on *Vincennes* also tried signaling the Japanese, thinking he had blundered into an accidental engagement with the Southern Group. On two of the U.S. cruisers (*Quincy* and *Vincennes*,) the watchbill was written in a way that the main battery could not be fired in Condition Two, since key personnel were in the wrong place, and the rapid setting of "Zebra" (then "Zed") hampered getting to Condition One. *Quincy*, recently arrived from the Atlantic with no battle experience, went to General Quarters on receipt of Patterson's initial warning, but took almost 12 minutes to get to Condition One, which was already too late. Nevertheless, the cruiser attempted to charge the Japanese line before a couple of torpedoes from *Tenryu* and a direct hit on the bridge that killed Captain Samuel N. Moore put an end to that.

The Japanese fire revealed a serious design deficiency in U.S. cruisers, namely having the aviation detachment amidships. In each case, initial Japanese rounds set the scout planes, aviation fuel, and other flammable material on fire, effectively cutting the ships in two halves that could not communicate with each other. With the U.S. cruisers lit up like funeral pyres from the blazing aviation sections, the Japanese gunners had an easy time finding the range. *Astoria* was hit at least 65 times (219 KIA,) *Quincy was* hit "many" times by gunfire and by two torpedoes (370 KIA,) and *Vincennes* was hit at least 85 times and by one or two torpedoes (322 KIA.)

A few early U.S. rounds found their mark before the deluge of Japanese shellfire put most U.S. guns out of action. The Japanese heavy cruiser *Aoba* took a hit in her torpedo bank, but, having already fired 13 of her 16 torpedoes, the effect was not the catastrophe it could have been. *Quincy* put a shell into *Chokai*'s chart room, missing Mikawa and his staff by a few feet (although losing his navigation capability was one of several reasons Mikawa would break off the attack). *Chokai*'s aviation section amidships also went up in flames as a result of this hit (Japanese

cruisers had the same design flaw), but it was too late for any U.S. ships to take advantage of the situation.

In going after the Northern Group, Mikawa missed his chance to attack the U.S. transports and supply ships. Mikawa reasoned that by the time he regrouped his forces and commenced an attack on the transports it would be approaching dawn, and there would be no way he could get very far away before being attacked by U.S. carrier aircraft. He did not know that the U.S. carriers were already opening the distance to the east. Although Mikawa's own scout aircraft had provided a reasonably accurate reporting of U.S. force disposition off Guadalcanal, Mikawa had also been deceived by the wildly inflated claims of loss and damage to the U.S. force resulting from the earlier air attacks. Mikawa had done exactly what his years' of training and Japanese doctrine required him to do: Seek out and achieve a decisive victory against enemy combatants. The transports could be dealt with by air attack, and the Japanese army had assured him that the U.S. forces on Guadalcanal could be booted off whenever the army decided to get around to it. Nevertheless, Mikawa later would be heavily criticized, including by some who initially considered his plan foolhardy, for his failure to sink the U.S. transports.

As the Japanese force exited the area north of Savo Island, it encountered the destroyer *Ralph Talbot*, which took several hits before a fortuitous rain squall prevented her demise. *Quincy* and *Vincennes* went down shortly after the Japanese departed (0238 and 0250 respectively). Attempts to save *Astoria* continued until early afternoon of 9 August, when she finally sank. The heavily damaged *Canberra* appeared to be in no immediate danger of sinking, but Turner ordered that if she could not be removed from the battle area by 0630 she was to be scuttled (although *Astoria* received no such order for some reason). As *Chicago* returned from her futile foray to the west, she engaged in a brief exchange of friendly fire with *Patterson*, which was standing by *Canberra*, fortunately with no hits. When it came time to scuttle *Canberra*, four torpedoes and 263 rounds of 5-inch gunfire from USS *Selfridge* (DD-357) failed to do so. Finally, additional torpedoes from USS *Ellet* (DD-398) put the stubborn ship under. *Canberra* lost 84 of her 819-man crew. (The U.S. would subsequently name a new *Baltimore*-class heavy cruiser USS *Canberra* [CA-70] at the direction of President Roosevelt.) As the day went on, the Marines ashore would watch as the U.S. Navy headed over the horizon, leaving them behind.

As the Japanese cruisers returned to the port of Kavieng, New Ireland, the old U.S. submarine *S-44* (Lieutenant Commander J. R. Moore, commanding) got off a salvo of torpedoes. Apparently using older Mark 10 torpedoes was a blessing, because unlike other U.S. submarines that were encountering repeated torpedo failures, three of the four torpedoes fired by *S-44* hit the Japanese heavy cruiser *Kako* and actually detonated, sending her to the bottom with 34 of her crew. This was the first major Japanese combatant to be sunk by a U.S. submarine in the war. *S-44* would be sunk off the Kurile Islands in September 1943 with all but two of her crew.

The disaster at Savo Island was a profound shock all the way up the chain of command to President Roosevelt, and a huge embarrassment to Navy leadership. With the loss of over 1,000 Sailors, it is considered the worst wartime defeat in U.S. naval history, since technically the U.S. was not formally at war for Pearl Harbor. CNO King directed that details of the battle be withheld from the public, casualty notification substantially delayed, and wartime censorship enabled him to do so. Many of the details remained wrapped in secrecy even many years after the war. The board of inquiry found lots of blame to go around, but no one in particular to pin it on. The only officer to receive formal censure was Captain Bode of *Chicago*, and he killed himself before it was officially delivered. Captain Riefkol, commander of *Vincennes* and the

Northern Group of cruisers, was not censured, but never held command at sea again.

In his commentary to the inquiry, Admiral Turner ascribed the defeat to a "fatal lethargy of mind" and to over-confidence. The officers and men of the U.S. Navy were convinced of their superiority to the Japanese. Pearl Harbor was not considered a fair fight, and no one expected the outnumbered and mostly antiquated U.S. Asiatic Fleet to last for long. However, Midway seemed to have shown that even outnumbered, but absent Japanese perfidy, the U.S. Navy would triumph, and in any even fight U.S. victory would be inevitable. Savo Island proved otherwise and it was a bitter lesson for the U.S. Navy to swallow. An exhaustive post-war analysis of the battle by the U.S. Naval War College listed 26 enduring lessons-learned, most of which still resonate today and are worth a read.

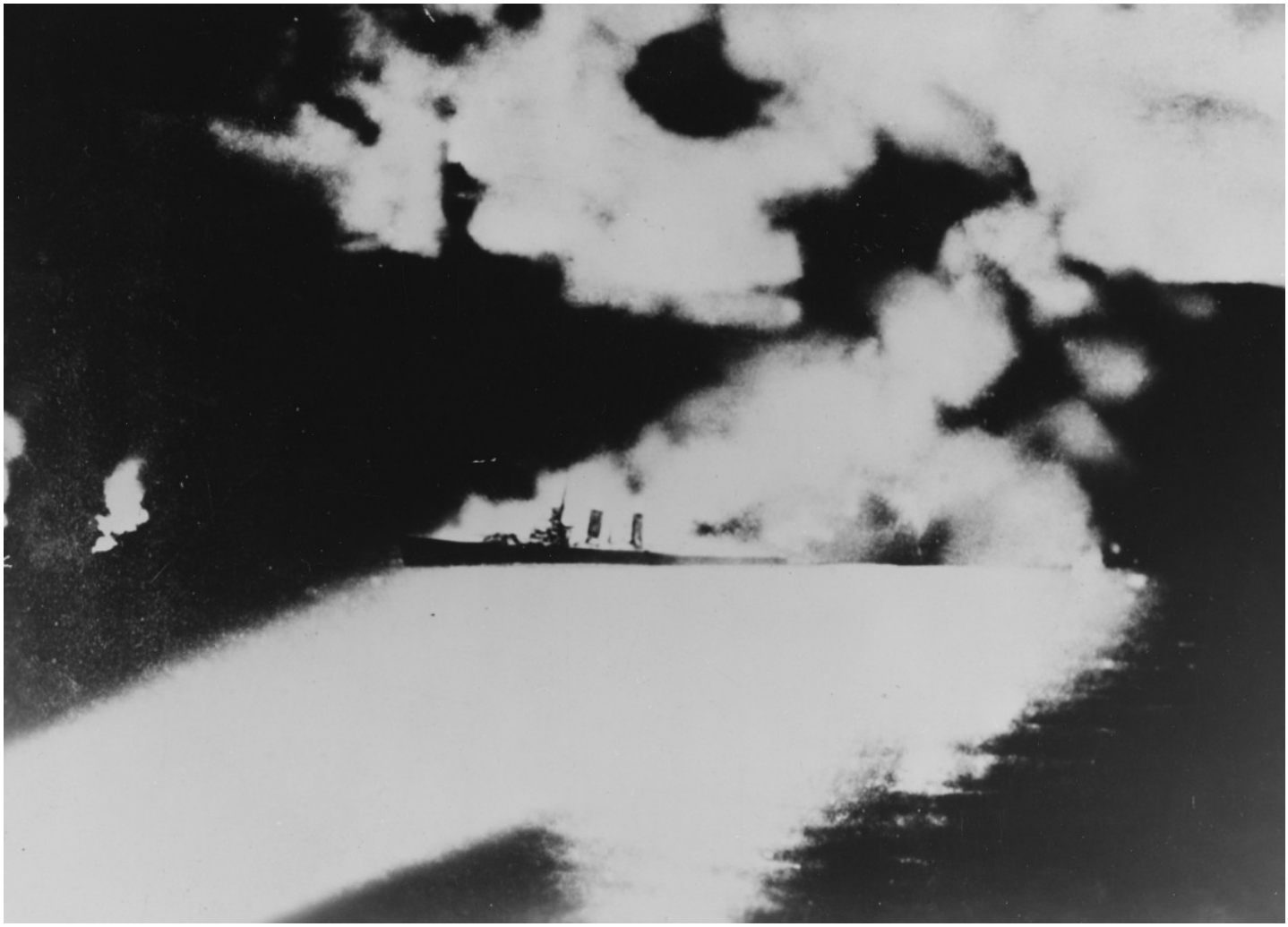
Rear Admiral Mikawa would later express considerable respect for the bravery shown by the Northern Group of U.S. cruisers, believing that if the U.S. ships had had only a few more minutes' warning, the outcome of the battle might have been very different. Mikawa's admiration notwithstanding, the outcome probably would still have been bad for the U.S. Navy, and the previously mentioned Naval War College study concluded that "valor alone was insufficient." For most of the interwar years, the U.S. approach to night combat was to avoid it. The Japanese approach to night combat was to seek it. In the series of vicious night battles that would follow, the U.S. Navy would pay dearly in the waters of Ironbottom Sound.

Although the 1950 U.S. Naval War College study of the Battle of Savo Island by Commodore Richard Bates and Commander Walker Innis formed the basis for this H-Gram, I also need to thank James Hornfischer for his superb research in *Neptune's Inferno: The U.S. Navy at Guadalcanal* (2011) and Ian Toll for his *The Conquering Tide: War in the Pacific Islands, 1942–1944* (2015). John Prados's work *Combined Fleet Decoded: The Secret History of American Intelligence and the Japanese Navy in World War II* (1995) is invaluable for intelligence aspects. And, of course, Samuel Eliot Morison's *History of U.S. Naval Operations in World War II, Vol. V, The Struggle for Guadalcanal*.

Below are the Naval War College lessons-learned (the actual lessons are somewhat meaty, these are just the titles from the index). Some of these may sound like, "duh!" today, but over 1,000 Sailors paid with their lives for the Navy to learn (or re-learn) them.

1. Relation between strategy and tactics
2. Importance of surprise
3. Correct location of the commander of an expeditionary force
4. Necessity for making every effort to accomplish the objective
5. Importance of correctly reporting enemy damages
6. Discussion concerning division of forces
7. Capabilities versus intentions in planning
8. Importance of setting conditions of readiness promptly
9. Influence of technological advantages on naval operations
10. Commander should have operational control over shore-based aircraft assigned
11. Necessity for providing land and tender-based aircraft adequate in numbers and in training
12. Fundamentals in planning
13. Necessity for promptly broadcasting contact reports
14. Officer-in-tactical command should be informed of the various changes in situations
15. Advisability of providing battle plans
16. Importance of advising command of changes in officer-in-tactical command
17. Employment of commanding officer as group commander as well not recommended

18. Gunnery effectiveness stems from gunnery training
19. Necessity for improvement of professional judgement in command
20. Functions of a carrier covering force
21. Importance of damage control training
22. Necessity for maintenance of reliable, rapid and secure communications
23. Importance of correct identification and recognition
24. Importance of mobile logistics support in the operating area
25. Task organizations should be flexible
26. Tactical voice radio discipline should be maintained



USS Quincy *(CA-39) photographed from a Japanese cruiser during the Battle of Savo Island, off Guadalcanal, 9 August 1942.* Quincy*, seen here burning and illuminated by Japanese searchlights, was sunk in this action (NH 50346).*

H-009-2: USS *Quincy* (CA-39) in the Battle of Savo Island, 9 August 1942

H-Gram 009, Attachment 2
Samuel J. Cox, Director NHHC
August 2017

Navy beachmasters precede the 3rd Marine Division ashore in Quang Tri Province, South Vietnam, April 1967 (K-37397).

H-009-3: Significant U.S. Navy Operations and Events in Vietnam Through 1967

H-Gram 009, Attachment 3

Samuel J. Cox, Director NHHC/ Richard Hulver, PhD

August 2017

Overview

U.S. began to fill the void left in Indochina following the departure of French troops and advisors in April 1956. The United States now would lead the training and advising of the South Vietnamese land and sea forces. Only a small number of Sailors were assigned to the Military Assistance Advisory Group (MAAG) and they were barred from going on operational missions with their South Vietnamese counterparts until May 1959, when North Vietnam formally initiated a conflict to overthrow South Vietnamese President Diem.

Navy advisors were increasingly frustrated with poor quality of Vietnamese naval leadership and poorly trained sailors. The cultural and language barriers between the U.S. advisors and the South Vietnamese Navy proved difficult.

From 1961–63, the Vietnam Navy (VNN) grew from 3,200 to 6,000 men. It had some interdiction success, but did not have the leadership, personnel, equipment, or logistics network to

stop the North Vietnamese on the scale needed. The VNN could not effectively slow the movement of supplies from North Vietnam to the insurgent Viet Cong (VC) in South Vietnam, it was recommended that the U.S. Navy intervene directly.

The first Navy assistance with interdiction came in December 1961, when four U.S. minesweepers (MSOs) were stationed south of the 17th parallel. Their radar located ships and notified the VNN so that it could intervene. In February 1962, destroyer escorts replaced the MSOs at the 17th parallel and also in the Gulf of Thailand—the "Gulf of Siam Patrol." Both operations were halted in spring/summer 1962 because there was little evidence of their need. North Vietnamese resupply efforts by sea skyrocketed in the years after the patrols ended.

In January/February 1964, the Military Assistance Command Vietnam (MACV) Special Operations Group initiated Operation 34A. This was a highly classified infiltration, surveillance, and sabotage mission using U.S.-trained South Vietnamese commandos, CIA, and Navy assets in attempts to undermine the North Vietnamese government. Over 2–4 August 1964, the U.S. destroyers *Maddox (*DD-731*)* and *Turner Joy (*DD-951*)* were conducting 34A Operations when they were attacked by North Vietnamese torpedo boats in the Gulf of Tonkin, leading to the official U.S. entrance into the Vietnam War.

Following the Gulf of Tonkin incidents, the Navy presence on the ground in South Vietnam and in Vietnamese waters increased steadily. Retaliatory and offensive carrier strikes become routine after a brief operational lull in late 1964.

On 16 February 1965, a North Vietnamese steel-hulled trawler filled with arms and ammunition was located at Vung Ro Bay in central Vietnam. This was evidence that large-scale resupply operations by sea to secret ports in South Vietnam were taking place and that a counter-operation was needed. It took the VNN four days to secure the area and seize the materials. MACV commander General William Westmoreland, along with Naval advisors from the U.S. Seventh Fleet, revamped the U.S. Navy–VNN interdiction program. Navy surface ships (minesweepers and destroyers) and shore based SP-2H Neptune patrol craft would be sent to the 17th parallel and eight other patrol areas along the coast to locate targets and direct the VNN to them. A Naval Advisory Group coordinated between Seventh Fleet and VNN. In May 1965, U.S. rules of engagement were changed to allow U.S. ships to engage suspect vessels.

1966 and 1967 are filled with blue and brown water Navy interdiction efforts, close-shore gunfire support for land forces, and carrier strikes against targets in South and North Vietnam. More detailed information can be found in the operational summaries and chronology below.

Major Operations and Events

2–4 August 1964: Gulf of Tonkin incidents—part of **Operation 34A**, the surveillance and infiltration of North Vietnam, which began that February.

TF-115, Operation Market Time—Initiated in March 1965 as TF-71, a large-scale U.S. Navy and Coast Guard coastal interdiction campaign off the coast of South Vietnam. Larger surface combatants acting as surveillance ships turned into a blockade of 5,000 personnel and 126 vessels and craft. Coastal interdiction was the largest and most successful aspect of the U.S. Navy's war in Vietnam. It almost immediately hurt the North Vietnamese Communists' ability to resupply their forces in the south with large boats. Market Time was so successful that by 1967 some of the assets were used for naval gunfire support, civic action, and patrolling of large rivers. The sea, land, and air radar–search capabilities of Market Time forces made it nearly impossible for large metal-hulled junks to slip through the U.S. net. However, a weakness of Market Time was the

operation's inability to stop small craft that could easily break the blockade. Another key problem was that North Vietnamese ships that stayed in international waters were off limits and could reach neutral Cambodian ports with impunity. The VNN was relegated as a junior partner in this operation.

TF-116, Operation Game Warden—Begun in May 1966 as a patrol of Long Tau River (shipping channel from Saigon to South China Sea), and then was expanded to cover the entire Mekong Delta. At its peak in 1968 it consisted of five divisions, each with 20 river patrol boats (PBRs). It searched water traffic for contraband, checked papers of travelers, and evolved into a mobile strike force that attacked Viet Cong positions and river crossings. The operation was not as successful at interdiction as it was as direct-action force disrupting enemy movements, providing gunfire support, and securing major rivers for commerce.

TF-117, Mobile Riverine Force—An amphibious riverine strike force operating with the U.S. Army to seek and destroy large VC formations. By 1968, it encompassed over 1,600 Sailors organized into four squadrons, each of which consisted of two river assault divisions. (In late 1968, **Operation Sealords** combined the interdiction efforts of Market Time and Game Warden. Vice Admiral Elmo Zumwalt strongly pushed an effort to place the VNN in the forefront of these operations.)

Operation Sea Dragon—Underway from 25 October 1966 through October 1968. It was conceived to interdict sea lines of communications and supplies going from North to South Vietnam, destroy land targets with gunfire support, and destroy waterborne craft. TF-77 assets were heavily involved in this. Two U.S. ships were hit in 1967 by enemy fire (each with KIA): August, *Dupont* (DD-941); September, *Mansfield* (DD-728).

Naval air strikes were launched from carriers on Dixie (South China Sea) and Yankee (Gulf of Tonkin) stations (see details in chronology below).

Chronology

16 August 1954: In the wake of the Geneva Accords, which ended French involvement in Indochina, the U.S. Navy began *Operation Passage to Freedom*. For nine months, 100 Navy and Military Sea Transportation Service (MSTS) ships transported nearly 300,000 North Vietnamese refugees from Haiphong to Saigon.

1 July 1960: Sixty officers and men are assigned to the Navy section of MAAG. The section would expand to 500 personnel by 1968.

1962

1 January: U.S. Navy establishes SEAL teams. SEALs arrived at Danang in July as advisors in a pilot program. They trained coastal force commandoes and did hydrographic surveys of the South Vietnamese coast. The first SEAL combat casualty occurred on 19 August 1966.

February: *Edmonds* (DE-406) and *Walton* (DE-361) replaced U.S. minesweepers patrolling along the 17th parallel.

8 February: MACV established, with a U.S. Navy contingent on its staff.

19 February: CNO authorized the formation of ten Seabee Technical Assistant Teams (STATs); two teams embarked for Vietnam. SEALS and STATS are part of the Navy's counterinsurgency program.

15 April: Aircraft from *Hancock* (CVA-19) provided distant cover while 24 Marine Corps UH-34D Seahorses of HMM-362 flew from *Princeton* (LPH-5) to Soc Trang, South Vietnam.

May: President Kennedy orders the *Hancock* carrier group and *Bennington (CV-20)* submarine

hunter-killer group to a position off Danang following tensions in Laos.

1 July: U.S. Navy activated Headquarters Support Activity, Saigon. The command provided administrative and logistical services to all U.S. forces in Vietnam and distributed military supplies to the Vietnamese.

19 July: The Navy's major schools began providing orientation courses in military, economic, political, social, and psychological aspects of Communist revolutionary warfare.

1963

24 April: At this point, 600 Naval officers and enlisted personnel were serving throughout South Vietnam.

1964

February: Operation 34A launched.

1 May: The Viet Cong mined USNS *Card*, manned by MSTS, alongside a pier at Saigon.

19 May: First Seventh Fleet flights from Yankee Station, reconnaissance over Laos.

2–4 August: Gulf of Tonkin incidents occurred.

5 August: In **Operation Pierce Arrow**, *Constellation* (CVA-64) and *Ticonderoga* (CV-14) aircraft bomb North Vietnamese patrol boat bases and oil depots in retaliation for Tonkin. Twenty-eight enemy boats destroyed. Lieutenant Junior Grade Everett Alvarez, Jr.'s A-4 Skyhawk is shot down and he becomes the first naval aviator PoW (held for 8.5 years). Lieutenant Junior Grade Richard C. Sather, piloting an A-1 Skyraider, became the first naval aviator to die in the conflict.

31 December: More than 1,100 naval personnel in South Vietnam, with 600 at HQ Support Activity, Saigon.

1965

6 February: Viet Cong attack Pleiku Air Base. TF-77 was moved into position for retaliatory strikes.

7 February: In **Operation Flaming Dart I**, 49 planes from *Coral Sea* (CVA-43) , *Hancock, and Ranger* (CVA-61)bomb North Vietnamese barracks and staging areas near Dong Hoi. President Johnson subsequently ordered Marines antiaircraft missile battalion to be deployed to Danang.

10–11 February: In **Operation Flaming Dart II**, over 100 planes from *Ranger, Coral Sea,* and *Hancock* strike North Vietnamese barracks and staging areas at Cahn Hoa.

16 February: A North Vietnamese steel-hulled trawler located at Vung Ro Bay in central Vietnam was found to be filled with arms and ammunition. This was evidence that large-scale resupply operations by sea to secret ports in South Vietnam were taking place and that a counter-operation was required.

2 March: **Operation Rolling Thunder**, an incrementally escalated joint bombing campaign against North Vietnam, begins.

8 March: The first amphibious landing of conflict: 3,500 Marines go ashore at Danang.

15 March: Seventh Fleet initiates **Operation Market Time**. The U.S. Navy also launches the first non-retaliatory strike of war, in which pilots from *Ranger* and *Hancock* hit an ammunition depot at Phu Qui.

15 April: *Coral Sea* and *Midway* (CV-41) aircraft conduct a strike against Viet Cong targets in South Vietnam.

16 May: *Henry W. Tucker* (DD-875) fired the first naval gunfire-support mission since the Korean War against Viet Cong positions near Thang Hai.

20 May: *Oriskany* (CV-34), the first carrier to operate from Dixie Station, arrived off South Vietnam.

2 June: *Canberra* (CA-70) became the first U.S. ship to fire 8-inch guns in combat since 1953.

20 June: North Vietnamese MIG-17s attacked four piston-engine Navy Skyraiders from *Midway*. A Skyraider shot down one of the MIGs.

2 July: A-6A Intruder attack aircraft arrived in-theater.

30 July: Chief, Naval Advisory Group, Vietnam assumed command of Market Time from Seventh Fleet.

18 August: In **Operation Starlite**, the first large-scale amphibious assault of the war, Seventh Fleet ships land Marines south of Chu Lai.

15 October: Naval Support Activity (NSA) Danang activated.

2 December: *Enterprise* (CVAN-65) launched 118 air sorties, marking the first time a nuclear-powered ship engaged in combat. Throughout the year, two carriers operated from Dixie, three from Yankee Station. TF-77 launched over 65,000 sorties. Naval gunfire-support ships fired more than 86,000 rounds in support of ground forces. At this time, more than 8,000 Navy and Coast Guardsmen were in-country; 24,000 Navy personnel were aboard ships operating off the coast.

1966

15 March: River Squadron Five was activated to command **Game Warden** units.

1 April: Commander, U.S. Naval Forces, Vietnam was established.

15 May: NSA Saigon was established to support Market Time and Game Warden.

6 August: Carrier strikes into South Vietnam were stopped, Dixie Station disestablished, and its carrier shifted to Yankee Station.

30 August: Navy UH-1B Seawolf helicopters began to support Game Warden.

1 September: River Assault Flotilla One was commissioned and would become the naval component of the Mobile Riverine Force (TF-117).

25 October: TF-77 initiated **Operation Sea Dragon** to interdict North Vietnamese vessels above the 17th parallel.

26 October: Fire onboard *Oriskany*; 44 killed.

31 October: In a three-hour engagement, 65 Viet Cong rivercraft were sunk by Game Warden PBRs led by BM1 James Williams; he was subsequently awarded the Medal of Honor.

23 December: During **Operation Sea Dragon**, *O'Brien* (DD-725) became first Navy ship to take a direct hit from North Vietnamese shore batteries; 2 Sailors are killed, 4 wounded.

31 December: At this time, over 23,500 Navy and Coastguardsmen are in-country and 36,000 Navy personnel manned the 55 Seventh Fleet ships off the Vietnamese coast.

1967

7 January: The first units of the Mobile Riverine Force arrive at Vung Tau; operations commence by February.

February: Sea Dragon forces were now authorized to operate as far north as 20th parallel.

24 April: U.S. Navy and Air Force aircraft conduct the first strike against jet airfields in North Vietnam.

29 April: *Ponchatoula* (AO-148) completed an eight-month deployment in which it set a record of 464 UNREPs.

May: *Bon Homme Richard* (CVA-31) aircraft penetrated the defenses of Hanoi and knock out an electrical power plant.

18 May: In the **Operation Beau Charger** amphibious landing, 11 Sea Dragon ships joined other vessels ships near the demilitarized zone (DMZ) nominally dividing North and South Vietnam. The gunfire support provided was the greatest concentration of naval gunfire since the Korean War. Although successful, the realization of the need for naval gunfire to reach further inland launched the first steps toward re-commissioning *New Jersey* (BB-62). DoD officially announced plans to re-commission her on 1 August.

29 July: Fire onboard *Forrestal* (CVA-59) fire; 135 killed.

August: *Oriskany* aircraft shut down the Hanoi thermal power plant. Naval aviators also dropped the center span of the Lan Son rail and highway bridge, 8 miles from the Chinese border, and attacked the naval base at Van Hoa.

15 August: Admiral James Russell (Ret.) convened the first meeting of the Aircraft Safety Review Panel to examine the actual and potential sources of fire and explosions on carriers.

29 August: *Dupont* had one Sailor killed and 40 wounded when a North Vietnamese shell struck the ship.

September: Previously off-limits areas in the port of Haiphong, Hon Gai, and Cam Pha were hit by attack squadrons from *Constellation, Oriskany, Coral Sea,* and *Intrepid* (CV-11) .

4 September: Navy carrier aircraft began the systematic destruction of all bridges leading out of Haiphong. The bulk of the weapons used in air operations were Navy-developed: Zuni, Bullpup, Sidewinder, Stardard ARM, and Walleye.

4 September: Lieutenant Vincent Capodanno, CC, USN, was killed tending Marines in I Corps. He was the first chaplain to be awarded the Medal of Honor in Vietnam.

4 September: The first traffic crossed Liberty Bridge south of Danang. The bridge, the longest in Vietnam, was constructed by Seabees of Mobile Construction Battalion Four.

25 September: One Sailor killed by North Vietnamese fire onboard *Mansfield* near the DMZ.

25 October: First year of Sea Dragon patrols ends; over 2,000 enemy supply craft were destroyed.

26 October: Lieutenant Commander John McCain, flying an A-4 Skyhawk off *Oriskany*, was shot down over Hanoi.

4 December: The Navy's newest attack aircraft, the A-7A Corsair II, flew its first combat mission over North Vietnam.

31 December: To date, Market Time and Game Warden units detected 1,700,000 craft and inspected 1,200,000 of them throughout the year. There were 32,000 Navy and Coastguardsmen in-country and 36,000 personnel manning Seventh Fleet ships off the Vietnamese coast. A total of 77,000 combat and support sorties were flown.