



“When Intelligence Made a Difference

<<< WORLD WAR II >>>

Across the Pacific

The Role of Intelligence in the Island- Hopping Campaign from Tarawa to Okinawa

by Peter C. Oleson

INTRODUCTION

“From mid-1942 and throughout most of 1943, relative calm reigned over the Central Pacific” while US forces fought in the Solomons and New Guinea.¹ After the defeat of the Imperial Japanese Navy (IJN) at Midway in early June 1942, with the US Navy’s fleet still being reconstituted from the devastation at Pearl Harbor and American industry still gearing up to produce the war material needed, there was little that the US could do in the mid-Pacific. While most American forces were committed in the South Pacific, the US did conduct pinprick attacks on the Japanese, the most famous being Doolittle’s raid on the Japanese home islands on 18 April 1942.² On 17 August US Marine raiders attacked the Japanese seaplane base on Makin Island, the northern most island in the Gilbert Island chain, approximately 2,400 NM southwest of Hawaii. Landed by the submarines USS Argonaut and USS Nautilus, the purpose was to divert Japanese attention from the landings at Guadalcanal, take prisoners, and gain intelligence, but was largely unsuccessful.

1. Charles R. Anderson, Edward J. Drea, and Stephen J. Lofgren. *US Army Pacific Campaigns in World War II*, Washington, DC: US Army Center of Military History, 1992, p. 80. See also Peter C. Oleson. “The Role of Intelligence in the Solomons Campaign, 1942-44,” *The Intelligencer*, Vol. 27, No. 1, pp. 73-9, and “Intelligence in the Southwest Pacific Campaign,” *The Intelligencer*, Vol. 28, No. 1, pp. 71-80.

2. See Peter C. Oleson. “The Doolittle Raid,” *The Intelligencer*, Vol. 26, No. 1, pp. 35-9.

THE ALEUTIANS SIDESHOW: OPERATION SANDCRAB

Meanwhile, on 30 August, US forces occupied Adak Island in the Aleutian chain and established an airbase to attack Japanese forces that had seized Kiska and Attu. Tipped once again by the breaking of the Japanese naval operational code, JN-25, at the naval Battle of the Komandorski Islands in late March 1943, the US Navy repelled Japanese attempts to resupply its forces.³

From a technical intelligence perspective most significant was the capture of a downed Mitsubishi A6M2 (Zero) aircraft, which when rebuilt allowed American test pilots to evaluate its capabilities and to devise aerial tactics to defeat it.⁴

The Aleutian campaign was a sideshow. As historian John Prados noted “This was the only theater where the weather was a bigger threat than the enemy.”⁵ After a brutal battle for Attu from 11-30 May 1943, American intelligence failed to detect the Japanese evacuation of Kiska Island two weeks before the American landing on 15 August.⁶

PACIFIC GEOGRAPHY

The “Pacific islands have a landmass of about 1,200 square miles, an area somewhat larger than... Rhode Island. The most easterly of the four island groups are the Gilberts [now Kiribati], low-lying coral atolls, straddling the equator just west of the international date line. North and west of the Gilberts are the Marshall Islands, a double chain of atolls, reefs, and islets, most of which rise only a few feet above sea level. Stretching almost due west from the Marshalls are the 550 tiny islands of the Caroline group. The

3. COMINT in April 1942 had indicated that the Aleutians were a “feint.” The breaking of the Japanese date cipher in May provided a precise date for the Japanese attack in the Aleutians. Frederick D. Parker. *A Priceless Advantage: US Navy Communications Intelligence and the Battles of Coral Sea, Midway, and the Aleutians*, Center for Cryptologic History, National Security Agency, 1993, 2011, pp. 36, 40, 49. Also, John Prados. *Combined Fleet Decoded: The Secret History of American Intelligence and the Japanese Navy in World War II*, Annapolis, MD: US Naval Institute Press, 1995, pp. 469-70. See also Peter C. Oleson. “The Breaking of JN-25 and its Impact in the War Against Japan,” *The Intelligencer*, Vol. 26, No. 2, pp. 79-84, and Anderson, et. al., p. 134.

4. <https://web.archive.org/web/20100106013056/http://www.j-aircraft.com/research/WarPrizes.htm>.

5. Prados, pp. 465-6.

6. <https://www.history.navy.mil/content/history/museums/nmusn/explore/photography/wwii/wwii-pacific/aleutian-islands-campaign/allied-invasion-kiska.html>.

The Pacific Theater in World War II



America at War, World War II, The Pacific Theater, Equator Maps, © International Mapping

Marianas lie just north of the Carolines in a 550-mile north-south chain.”

Geography of the Pacific helped Allied SIGINT. Isolated on islands, the Japanese had to communicate over the air code change instructions in the old code, which gave Allied cryptographers the instructions at the same time.⁷

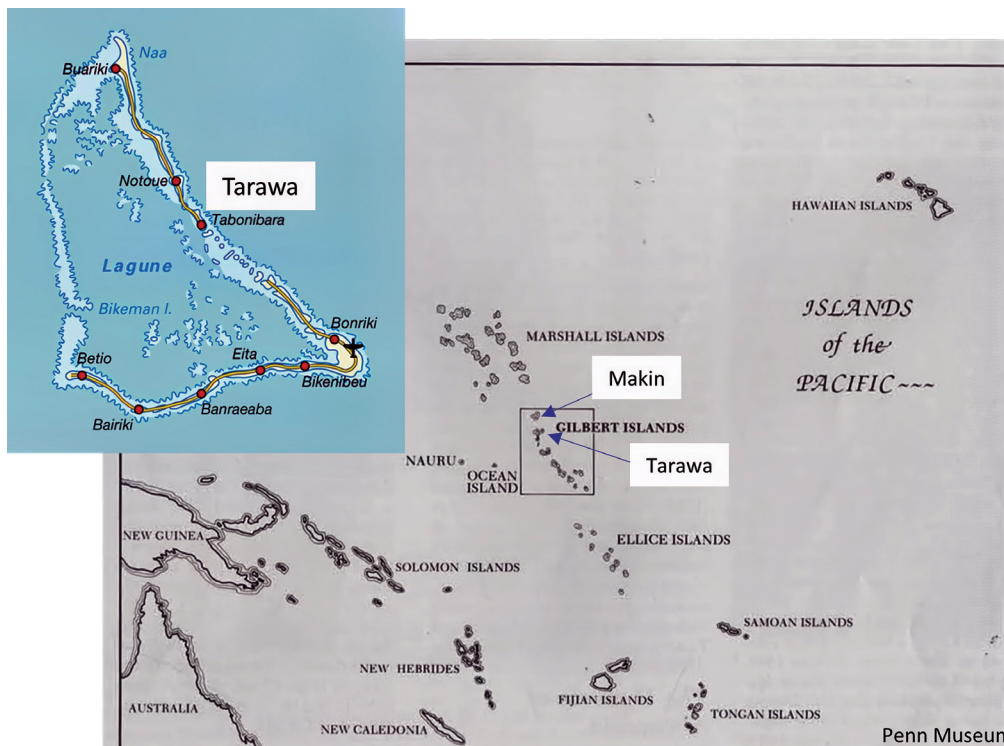
7. Sharon A. Maneki, “The Quiet Heroes of the Southwest Pacific Theater: An Oral History of the Men and Women of CBB and FRU – MEL,” United States Cryptologic History, Series IV, World War II, Volume 7, National Security Agency: Center for Cryptologic History, reprinted 2007), p. 38.

THE GILBERTS: OPERATION GALVANIC – TARAWA AND MAKIN

The July 1943 Allied Quebec Conference decided that the Central Pacific Campaign should be accelerated from 1944 to 1943. Admiral Nimitz’s first objective in Operation Galvanic was the Gilbert Islands, consisting of sixteen atolls, including Makin and Tarawa. Tarawa is located today in the nation of Kiribati.⁸ The quiet in the central Pacific ended in November. B-24 bombers hit Tarawa and Makin daily for a week before the invasions on 20 November.

On Makin the Army’s 27th Division, in its first amphibious operation, found that intelligence on the

8. Anderson, et al., p. 74.

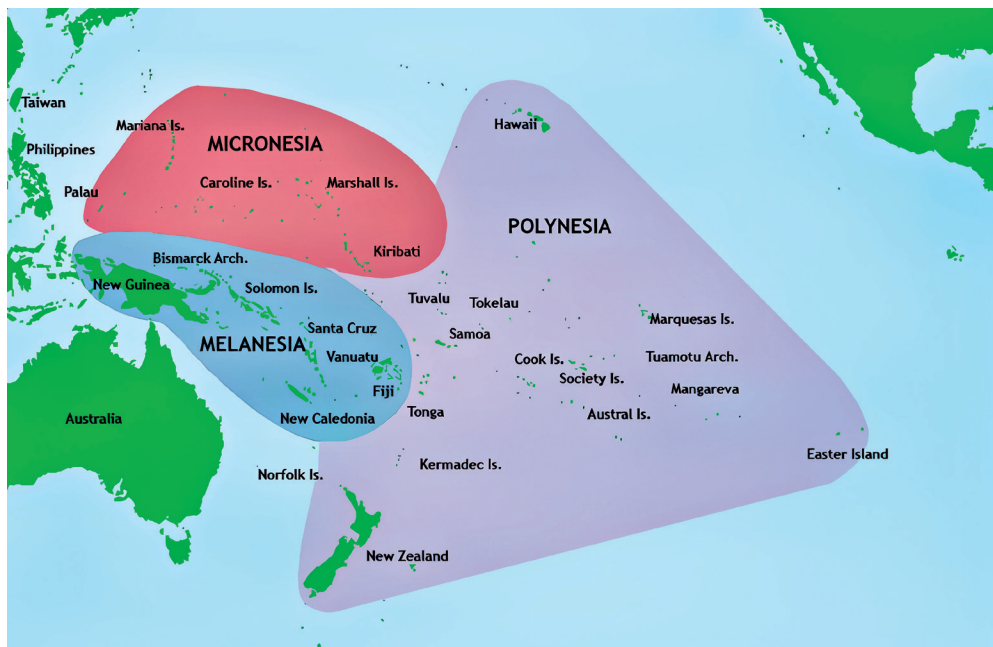


important for setting up airbases that could support operations throughout the mid-Pacific. Betio, one of the major islands of the Tarawa Atoll, as well as others, was heavily fortified by the Japanese.

Again, the water depth over the reef was misjudged and was too shallow for the Marines' landing craft, and the sea wall on the beach was too steep for the tracked landing vehicles. "Operations planners, relying on outdated nautical charts and the imperfect memories of foreign officers, had misjudged the tide."¹¹ "Many of the landing craft required a minimum of four feet of water to clear the reef, and the operations plan included high tide estimates of five feet." But the day of assault, "an apogean neap tide prevailed [and] would remain at approximately three feet, one of the lowest for the year, and would not budge for 24 hours."¹²

The "landing on Tarawa Atoll empha-

sized the need for hydrographic reconnaissance and underwater demolition of obstacles prior to any amphibious landing." After the Tarawa landing deba-



depth of the lagoon was in error. Their landing boats ran aground 250 yards off the beach forcing soldiers to wade ashore. Nonetheless, the island was captured in four days at minimal cost.⁹

The Marines' landing on Tarawa, however, was a different story. It was nearly a disaster. "Japanese fortifications were more substantial and resilient" than American intelligence had anticipated.¹⁰ Tarawa was

9. Anderson, et. al., p. 86-7.

10. Craig L. Symonds. *World War II At Sea: A Global History*, New York: Oxford University Press, 2018, p. 493.

11. "All too often, charts and sailing directions, if they could be found at all, were hopelessly out of date, in some cases more than 100 years old..." (Angelina Alzona. "Solving the Ocean," *Smithsonian*, July/August 2022, pp. 105-18.)

12. An apogean tide, which occurs monthly, has reduced range and occurs when the moon is at its farthest point from the Earth in its elliptical orbit. An apogean neap tide has the lowest tidal range and slowest tidal currents and occurs when the Sun and Moon are at 90 degrees and their gravitational forces partially cancel each other. (American Meteorological Society, *Glossary of Meteorology*. See also Alzona.)

"The Army and Navy cryptologic organizations... found cooperation difficult. The Army was willing to share everything it had... but [the Navy's] OP-20-G would not reciprocate. What finally brought matters to a head was the breaking of the Japanese Army code in early 1944. This produced information vital to the Navy in the Southwest Pacific. [The US Army] decided to withhold information... until the Navy agreed to expand cooperation. The Navy quickly came around..."¹ Through establishing committees, the Army and Navy eventually cooperated, although such cooperation was voluntary. At the operational level, however, the Allies continued to benefit from the New Zealand Navy's seizure off Guadalcanal in April 1943 from the wrecked IJN I1 submarine of about 200,000 pages of updated JN-25 code books.²

1. https://stationhypo.com/2020/07/07/a-rocky-start/?utm_source=feed%3A+StationHypo+%28Station+HYPO%29

2. <https://stationhypo.com/2017/01/29/how-discovering-japanese-code-books-by-new-zealand-supported-the-war-effort/#more-3407>.

cle, the Navy established its Underwater Demolition Teams to carry out these missions.¹³ Also, under the Joint Chiefs a hastily organized oceanographic unit prepared relevant chapters for the Joint Army-Navy Intelligence Studies (JANIS) for subsequent amphibious operations.¹⁴

Learning from the near debacle of Tarawa, the Navy employed underwater demolition teams (UDT) for subsequent island invasions. "...[U]nderwater reconnaissance was a major objective... taking depth measurements and notating terrain features... that often served as a determining factor in allied watercrafts' avenues of approach." "Scouting ahead to uncover enemy shoreline emplacements, the UDT divers were often the first to encounter enemy forces."¹⁵

During the Galvanic operation intelligence teams for the first time accompanied the invasion forces to interrogate prisoners and capture and preserve documents. Much useful intelligence about order of battle, standing orders, and supply data was captured on Makin.¹⁶ Also, Galvanic was the first-time mobile radio intelligence units accompanied invasion forces. In early 1943, the Marine Corps decided to create tactical radio intelligence units for use in direct support of amphibious operations.¹⁷

13. <https://navyseals.com/nsw/navy-seal-history/>. See also https://en.wikipedia.org/wiki/Battle_of_Tarawa.

14. Alzona.

15. Kyle Kray, "Demo Divers: The Frogmen of World War II," *Alert Diver*, The Magazine of Divers Alert Network, Fourth Quarter 2022, pp. 14-9.

16. Prados, pp. 530-1.

17. <https://stationhypo.com/2018/11/17/history-of-u-s-marine-corps>

The three-day cost of the battle for Tarawa was "horrific... far beyond any of the pre-invasion projections,"¹⁸ with 1,027 Marines killed and 2,292 wounded and 88 missing. Except for 17 prisoners, all of the almost 4,700 Japanese defenders were killed. There was a public outcry in the US over the casualties. "Of all the beaches assaulted during World War II, only Iwo Jima was more strongly defended than Tarawa."¹⁹ Tarawa was the bloodiest fight in Marine Corps history up to that point.²⁰

Japanese air attacks originating from the Marshall Islands, 565 miles north of the Gilberts, began immediately. Radio intelligence was particularly valuable in the interdiction of these raids by carrier fighters. They were "comparatively easy to predict... by watching requests for aviation weather from one island to another... [T]he Japanese almost always used plain language tactical signals in order to get their aircraft in position to attack, and when ready they would send the conventional 'all units attack' signal. The information which the radio intelligence units were thus able to give the [US] task group commander was a great help to him in maneuvering the force to avoid these attacks."²¹ When Seabees completed repairing the airstrip on Tarawa for land-based fighters, the supporting carriers withdrew in late November.

By the end of 1943 American industrial power was making itself felt in the war effort. American production of ships added 419 new combatants to the Navy's force level, including forty new aircraft carriers. Six were the new large Essex class carriers for the Pacific, which could carry 90 aircraft each, as well as smaller "Jeep" (Casablanca class) escort carriers, which carried 27 aircraft.²²

-comint-effort-part-6-of-6/#more-10253.

18. Symonds, p. 495.

19. Prados, p. 528 and Anderson, et. al, pp. 87-8.

20. Alzona.

21. https://stationhypo.com/2019/11/06/mobile-radio-intelligence_uni...medium=email&utm_campaign=Feed%3A+StationHypo+%28Station+HYPO%29.

22. <https://www.history.navy.mil/research/histories/ship-histories/us-ship>

Strategic SIGINT

Strategic SIGINT (ULTRA) was also an important element in the strategy to bypass certain Japanese island strongholds. US commanders knew the strengths, the organization, and the supplies of island strongholds. Once their offensive capabilities, usually aircraft, were destroyed the “strongholds” could not move and were impotent.

—Oleson. Book Review: Ian Toll's *Twilight of the Gods*, in *The Intelligencer*, Vol. 26, No. 2, pp. 111-2.

THE MARSHALLS: OPERATION FLINTLOCK

Turning north, away from the major Japanese stronghold on Truk in the Carolines, Nimitz launched his Marshalls campaign at the end of January 1944, 10 weeks after the seizure of Tarawa. The major objective was Kwajalein, “the largest atoll in the world.”²³ The Marshalls “were already an integral part of the Japanese perimeter of defense. Its facilities were being utilized as outlying bases for submarines and surface warships, as well as for... staging for future advances” into the South Pacific.²⁴ ULTRA pinpointed the locations of aircraft in the Marshalls. On 29 January US naval air strikes destroyed 92 out of 110 Japanese aircraft, leaving only 15 operational Japanese planes in the Marshall Islands. ULTRA also informed Nimitz that the Japanese had principally defended the outer Marshall Islands, so he decided to strike at less-defended Kwajalein in the center, which was the Japanese regional headquarters.²⁵ The Japanese “had not realized until the battle of Tarawa that American amphibious vehicles could cross coral reefs and land on the lagoon side of an atoll; accordingly, the strongest defenses on Kwajalein faced the ocean.” D-Day of Operation Flintlock, 1 February, caught the Japanese by surprise.²⁶

Also, on 1 February a joint Army/Marine Corps force took Majuro, 265 nautical miles southeast of Kwajalein, which was the “largest potential

fleet anchorage in the Central Pacific.”²⁷

With the relatively easy capture of Kwajalein, Majuro, and the other surrounding islands, The planned invasion of Einwetok was moved up. However, the threat from the major Japanese stronghold from Truk 723 miles to the southwest in the Carolines was significant. Known as “the Gibraltar of the Pacific”

Truk was the largest Japanese naval base in the Pacific, with 5 airstrips, a seaplane base, sub base, and anchorages in an 820 square mile lagoon. On 17 February Admiral Spruance's carrier task group attacked Truk in a pre-dawn surprise attack, taking advantage that Japanese radar could not detect low flying planes, a fact known by Allied intelligence.²⁸ Over three days Navy Grumman F6F Hellcats, with advantages of speed, altitude, and armor over Japanese Zeros – thanks to the technical intelligence evaluation of the Zero captured in the Aleutians — destroyed several hundred aircraft. Dive bombers and torpedo planes sank 20 transport ships and several combat and auxiliary vessels, which precluded any assistance to Eniwetok.²⁹ Unfortunately, Japanese sightings of US reconnaissance flights provided warning of the impending American attacks and the Japanese Navy relocated its major warships from Truk to Palau.³⁰ No invasion of Truk was planned. It was isolated. Starvation decimated the Japanese garrison. Only in June 1945 was the island complex invaded by British and Canadian troops.

Einwetok served the Japanese as a refueling base for aircraft. A large coral atoll with 40 small islands, its Japanese defenders arrived only six weeks before the Marines' invasion on 18 February. With Truk's airpower destroyed “[t]he Japanese garrison on Eniwetok was denied any... hope of reinforcement” and fell in three days.³¹ The Gilbert and Marshall Islands campaigns were the first time that tactical COMINT was used to direct ground forces.³²

-force-levels.html#1938. Symonds, p. 489.

23. Symonds, p. 509.

24. https://en.wikipedia.org/wiki/Battle_of_Kwajalein.

25. Prados, p.503.

26. Early estimates that Kwajalein had substantial defenses were exaggerated. Anderson, et. al., p. 248-52. See also Gordon Rottman. “Operations Flintlock, the Capture of Kwajalein and Eniwetok,” *The Marshall Islands 1944*, Oxford: Osprey Publishing Ltd., 2004, p. 33.

27. Anderson, et. al., p. 254.

28. Prados, p.537.

29. Anderson, et. al., pp. 255-6.

30. Prados, pp. 533-5.

31. https://en.wikipedia.org/wiki/Chuuk_Lagoon.

32. “A Sense of Urgency Continues (1941-1945)! <https://stationhypo.com/2018/08/19/wwii-and-comint-reporting/>.

With the Marshall Islands' capture US campaign plans for the Marianas accelerated.³³ Meanwhile, "MacArthur's offensive [on New Guinea] was moving at a 'snail's pace' compared to 'Nimitz's island-hopping campaign' [covering] 2,000 miles from the Gilberts to the Marshalls from November 1943 to February 1944. MacArthur [was] in a "strategic backwater."³⁴

THE MARIANAS: OPERATION FORAGER

In early 1943 Admiral Ernest King was convinced that the Marianas could serve as both an advanced submarine base and an airbase for the new technology B-29 bomber, which with its 3,290-mile radius could reach the Japanese homeland. Operation Forager was endorsed at the Allies' Cairo Conference of November 1943, despite the objections of General MacArthur.³⁵

In the initial action of Operation Forager, on 15 June 1944 the Marines landed on Saipan, the northernmost of the 15 islands, following two days of shore bombardment. Intelligence had not identified many of the hidden Japanese artillery positions. It was also learned too late that American Amtraks' armor was not heavy enough.³⁶ The 25,000 Imperial Japanese Army (IJA) and 6,000 naval personnel were twice what intelligence had estimated and their resistance was heavier than estimated. Resulting American casualties were the highest since Tarawa – 2,949 killed and 10,464 wounded.³⁷ US troops were horrified to witness the mass suicides of Japanese civilians fearful of being captured by Americans.³⁸

The Japanese high command, surprised by the invasion of Saipan, reacted immediately. The IJN had long had a plan for a decisive at sea battle to defeat the US Navy. The Allies knew this from documents captured from the plane wreckage of the IJN's Combined Fleet commander, Admiral Mineichi Koga, who crashed during a typhoon on 31 March. His documents

were recovered by Philippine guerrillas and sent to MacArthur's intelligence section in Australia.³⁹

On 19 June, alerted by submarine reconnaissance,⁴⁰ that had been queued by ULTRA, a US carrier force intercepted the IJN carrier task force. Out-numbered, lacking in oil for its ships, with a paucity of experienced carrier pilots, and facing a superior American force the Japanese suffered a devastating defeat. In what was called the "Great Marianas Turkey Shoot," in the Battle of the Philippine Sea, US Navy pilots, guided by improved radar, and naval anti-aircraft gunners, equipped with the new proximity fuse, shot down 385 out of 545 Japanese aircraft and sank one carrier and two oilers. US submarines later sank 2 more carriers. The "... Japanese carrier force had been decimated..." ending all Japanese hopes of resupplying the Marianas.⁴¹

On 21 July, the Marines and Army, after a week's delay due to the difficulties encountered on Saipan, landed on the American territory of Guam. Having learned the lesson from Tarawa, Underwater Demolition Teams reconnoitered the beaches and removed obstacles in days prior to the landings. But again, aerial intelligence was unable to discover many Japanese artillery positions under dense foliage, which inflicted heavy casualties.⁴² A new Marine radio intelligence unit supported the operations with tactical intercepts.⁴³ Although less important militarily, Guam was secured by mid-August. On 24 July, feinting a landing at Tinian town, known to be heavily defended, the Marines and Army landed on the other side of the island and secured Tinian by 1 August.⁴⁴

"The Mariana Islands were the last bastion of Japan's Central Pacific perimeter. Their capture by American Forces severed the Japanese supply lines with the Caroline Islands territories further south and pushed its defensive line west to the Philippines while opening the Japanese homelands for aerial assaults."⁴⁵

33. Anderson, et. al., p. 259.

34. Drea, 94-5.

35. Ian W. Toll. *The Conquering Tide: War in the Pacific Islands, 1942-1944*, New York: W.W. Norton & Company, 2015, pp. 436, 438-9. See also Bernard D. Cole. "Struggle for the Marianas," National Defense University, Institute for National Strategic Studies, printed in *Joint Forces Quarterly*, Spring 1995, pp. 86-93.

36. "Operation Forager: The Battle of Saipan," Naval History and Heritage Command, www.history.navy.mil.

37. Anderson, et. al., p. 311; John Toland, *The Rising Sun: The Decline and Fall of the Japanese Empire 1936-1945*, Random House, 1970, p. 519. See also, Cole, p. 90.

38. Symonds, p. 552.

39. Japanese American Veterans Association, <https://javadc.org/news/press-release/japan-imperial-navy-z-plan-two-nisei-served-on-translation-team/>.

40. The intelligence contribution from submarine reconnaissance had previously proved so valuable "that [it] became a standard technique." (Prados, pp. 527-8, footnote.)

41. Anderson, et. al., p. 287, 313. Cole, p. 92.

42. Gordon L. Rottman. *Guam 1941 & 1944: Loss and Reconquest*, (1st ed.), Botley: Osprey Publishing Ltd., 2004, p. 43.

43. <https://stationhypo.com/2018/11/17/history-of-u-s-marine-corps-comint-effort-part-6-of-6/#more-10253>.

44. Many believe the Tinian operation "was the perfect amphibious operation of World War II." Marine Corps University, "Tinian," <https://www.usmcu.edu/Research/Marine-Corps-History-Division/Brief-Histories/Marines-in-World-War-II/Tinian/>. Guam was important politically as it was US territory. (Cole, p. 89.)

45. <https://www.history.navy.mil/content/history/museums/nmusn/explore/photography/wwii/wwii-pacific/mariana-islands.html>.

Rapidly constructed airbases on Saipan and Tinian soon hosted the new long-range B-29 bombers.⁴⁶

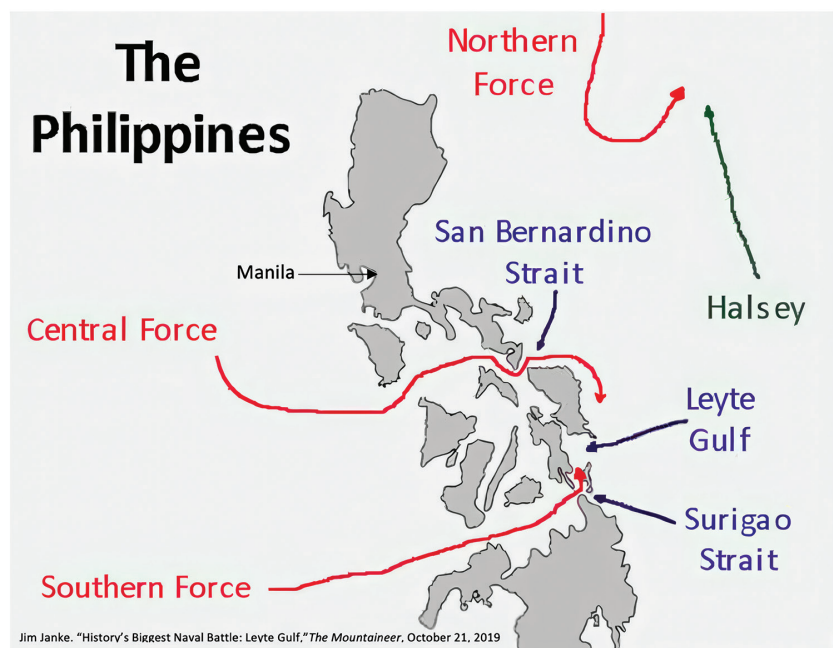
TOWARD THE PHILIPPINES: THE CAROLINES – OPERATION STALEMATE

MacArthur's strategy to return to the Philippines was approved by President Roosevelt. To protect his left flank the Palau islands of Peleliu and Anguar had to be neutralized. On 15 September US troops invaded Peleliu, the largest Palau island.

The Japanese had developed new island-defense tactics, abandoning beach-side engagement in favor of inland, "honeycombed" defense positions, which surprised the Americans. Aerial reconnaissance could not penetrate the island's heavy foliage.⁴⁷ The preliminary US naval bombardment was ineffective. The 1st Marine Division commander was overconfident expecting a quick victory in three days: it took over two months. Peleliu's importance had been misjudged. The Japanese on the island lacked the means to threaten the Philippine operation. The high casualties, almost 40% of the attacking force, in 73 days of hellish fighting (more than 3,000) were unnecessary.⁴⁸ The Marines' Second RI Platoon participated in the assault on Peleliu where it suffered such heavy casualties that it was subsequently disbanded.⁴⁹

As the island-hopping campaign continued, the accumulation of intelligence and the refinement of intelligence collection operations became more integrated with operations. ULTRA cryptanalysis provided strategic insights. Tactical radio intelligence provided early warning of Japanese

attacks and alerted ships' radars. It also revealed Japanese ship locations and planned courses, a key to positioning intercepting submarines. Captured documents and POW interrogations (that were relatively few due to Japanese defenders' tendency to fight to the death or commit suicide) added to the allies' knowledge of their opponents. Radar was one of the most important sensor developments during the war. It became a principal warning sensor for ships, submarines, and aircraft. It also contributed to bombings through overcast. While the Japanese also had radar, American radars were superior and, as historian Ian Toll recounts, in many instances provided task group commanders, ship captains, and aircrews with crucial advantages.⁵⁰



THE PHILIPPINES: OPERATION MUSKETEER

Following the loss of the Marianas COMINT indicated that the Japanese were moving air and ground forces from China and Manchuria to the Philippines.⁵¹ "Preparation for the invasion of the Philippines was greatly assisted by ULTRA." Through intercept, cryptanalysis and translation of Japanese messages, radio Intelligence supplied decision makers with a continuous flow of detailed information on Japanese naval and merchant shipping, convoy routing and composition of forces along with a wealth of other pertinent

46. B-29s from the Marianas with a range of over 5,000 miles, were capable of reaching targets throughout the Japanese home islands. Having a pressurized cockpit their ceiling was over 31,000 feet, far higher than that of Japan's principal fighter, the Zero, at 16,000 feet, a fact learned from combat intelligence and the analysis of the Zero captured in the Aleutians. <https://www.boeing.com/history/products/b-29-superfortress.page>.

47. Ian W. Toll, *Twilight of the Gods: War in the Western Pacific, 1944-1945*, New York: W. W. Norton & Company, 2020, p. 144.

48. Jeremy Gypton. "Bloody Peleliu," *Military History Online*. Military History Online, LLC., 2004. Also, <https://naval-encyclopedia.com/ww2/us-navy.php>. Toll, *Twilight of the Gods*, pp. 133, 158.

49. <https://stationhypo.com/2018/11/17/history-of-u-s-marine-corps-comint-effort-part-6-of-6/#more-10253>.

50. Oleson. Book Review: Toll's *Twilight of the Gods*.

51. Drea, pp. 102-3.

intelligence.⁵² Thus knowing Japanese force locations, in preparation for the Philippines campaign, during September US carrier forces struck airfields throughout the region, including as far west as Formosa. In the four days (12-16 October) of the “Air Battle of Formosa” Navy carrier air and ship’s anti-aircraft guns destroyed an estimated 500 aircraft from Formosa and another 500 in the Philippines. Additionally, US aircrews sank 180 seagoing merchant ships.⁵³

Allied combat intelligence had improved dramatically by the time of Operation Musketeer. Combining “aerial reconnaissance, radio intelligence, document translation and analysis, and [POW] interrogations,” briefing officers could “point pilots at targets... inform them of the extent of aerial opposition, the best routes to fly to avoid hostile anti-aircraft fire, [and] optimal altitudes to avoid radar detection...”⁵⁴

On October 20, 1944 the U.S. Sixth Army, under MacArthur, invaded Leyte in the Philippines.⁵⁵ Leyte is where MacArthur’s Southwest Pacific and Nimitz’s Pacific commands merged operationally.⁵⁶ IJA General Tomoyuki Yamashita decided immediately that Leyte would be the major defensive effort against the Allies and struck back with his remaining airpower and a coordinated naval offensive. The Japanese Navy mobilized almost all of its remaining major naval vessels to attack the allied fleet from the north, west and south. US intelligence misjudged the Japanese intent to fight a decisive battle on Leyte.⁵⁷ On 23 October the Battle of Leyte Gulf commenced.

BATTLE OF LEYTE GULF 23-25 OCTOBER 1944

The naval battle consisted of four separate, almost concurrent engagements. While radio intelligence informed US commanders of land-based air attacks from the time of take-off, due to strict ship radio silence, American radio intelligence was deaf

to the Japanese deployments.⁵⁸ However, on the night of 22-23 October, two US submarines’ radars detected the approach from the west of a strong Japanese Navy surface force headed for the San Bernardino Strait, north of the Leyte landing zone, the first indication that the Japanese would oppose the landings.⁵⁹ The Japanese turned back to the west after successful US submarine torpedo attacks on the 24th. Luzon-based Japanese Navy air attacks went against the transport and escort ships off Leyte, including the first use of kamikazes, which were a surprise tactic. Many were shot down.

Late on the 24th, alerted by radio intelligence based on traffic patterns, aerial reconnaissance detected the Japanese Northern Force, a four-carrier task group, approaching from Japan. It was a decoy that successfully drew off Admiral Halsey’s carrier task group away from the Leyte landings. Engaged by Halsey’s aircraft on the 25th, sinking three of the carriers, the survivors then retreated to Japan. Third Fleet intelligence officers surmised that the Japanese carriers were a lure, but their judgment was ignored by the command staff.⁶⁰

In the pre-dawn hours of the 25th the Japanese Southern Force headed north through the Surigao Strait into a trap after being detected by US PT boats. The superior radar on US heavy cruisers and battleships provided a long-range heavy gun advantage, and the Japanese force was mauled.

The Center Force, which had retreated westward, during the night turned around and on the 25th, emerging from the unguarded San Bernardino Strait, attacked the US force of light carriers and destroyers guarding the Leyte landings. Navy commanders had discounted nighttime aerial reconnaissance, and embracing their own (incorrect) hypotheses that the Center Force was a decoy mission. Surprised at the appearance of major Japanese warships, and with Halsey’s carrier task group far off, only the Jeep carriers’ residual airpower and a ferocious and suicidal attack by four US destroyers, all of which were lost, saved the day.⁶¹ Described by historian Ian Toll as a “naval banzai charge,” the Battle of Leyte Gulf was the largest naval battle of World War II.⁶² Prados judged

52. <https://stationhypo.com/2018/08/19/wwii-and-comint-reporting/#more-10094>. Also, Drea, p. 155.

53. Toll, *Twilight of the Gods*, p. 174. Anderson, et. al., pp. 263-4. Prados uses a lower number of 300 for Japanese aircraft destroyed in the Philippines. (Prados, p. 600.)

54. Prados, p. 613.

55. Nimitz had recommended bypassing the Philippines for Formosa and Okinawa to the north. But it was a matter of personal pride for MacArthur to return. After a debate the JCS and President Roosevelt sided with MacArthur. https://en.wikipedia.org/wiki/Battle_of_Leyte_Gulf

56. Drea, p. 158.

57. Anderson, et. al., p. 281.

58. Drea, p. 163.

59. Toll, *Twilight of the Gods*, p. 217

60. Toll, *Twilight of the Gods*, pp. 218, 241.

61. <https://www.history.navy.mil/browse-by-topic/wars-conflicts-and-operations/world-war-ii/1944/battle-of-leyte-gulf.html>. Also, https://en.wikipedia.org/wiki/Battle_of_Leyte_Gulf.

62. Toll, *Twilight of the Gods*, p. 191.

that “ULTRA provided American admirals an unparalleled advantage.”⁶³

Following the Battle of Leyte Gulf ULTRA revealed the Japanese strategy to reinforce the IJA. Based on poor intelligence and exaggerated claims of US losses, the Japanese decided to move additional troops to Leyte. ULTRA from the decrypted Japanese Water Transport Code allowed the pre-positioning of 44 US submarines, using new wolf pack tactics, along the shipping routes to the islands. More than two dozen Japanese merchantmen and attack transports were sunk with the loss of more than 10,000 troops.⁶⁴ MacArthur initially thought the Japanese ships were being sent to western Leyte for an evacuation, as had occurred on Guadalcanal. However, by early November intelligence realized the mistake.

American analysts had judged the Japanese order of battle on Leyte at an estimated 20,000. In fact “[a]pproximately 43,000 Japanese troops were on the island... about double the number estimated by US intelligence.”⁶⁵ Initial Japanese Army resistance, while sporadic and uncoordinated, stiffened with reinforcements.⁶⁶

On Leyte Philippine guerrillas provided critical intelligence to MacArthur’s forces about Japanese forces, and “ULTRA’s timely updates... [from the radio intelligence unit on the USS Nashville] exposed the Imperial Army’s intentions and weaknesses, and the island was largely cleared by the end of December.”⁶⁷

The capture of Leyte (and subsequently of other Philippine islands) isolated Japan from the industrial raw materials, particularly oil, of the East Indies. “Japan’s once formidable air force was also decimated, leaving the skies over the Philippines open to American air power.”⁶⁸

Knowing Japanese dispositions through intelligence, on 15 December Mindoro was invaded by US

and Australian forces, aided by Philippine guerrillas, again catching the Japanese by surprise. In three days Allied forces succeeded in cutting off Japanese forces further south in the Philippines and Borneo.⁶⁹

On 9 January 1945, the U.S. Sixth Army landed at Lingayen Gulf on northern Luzon. Based on his assessment of declining Japanese capabilities, MacArthur, initially ignoring the Japanese Army withdrawal to mountain redoubts where it fought battles of attrition, raced to Manila and the Bataan Peninsula. He bottled up the remaining Japanese, the last 50,000 of which finally surrendered on 15 August.⁷⁰

Besides JN-25 variants, “[a]t this time, Allied cryptanalysts were routinely solving an impressive variety of Japanese codes: the army’s mainline, four digit cipher; several army air force codes; the army water transport system; the military attaché code; the navy’s water transport system; and Foreign Ministry encryptions.”⁷¹

Besides misjudging the Japanese strategy to vigorously oppose the American landing on Leyte, US intelligence estimates were often off the mark: the capture of Leyte took substantially longer than predicted; order of battle numbers were underestimated (Leyte, Luzon and Manila) and overestimated (Bataan). Topographical maps of the Philippines were poor, frustrating ground commanders. While ULTRA was critical in revealing Japanese intentions, capabilities, and shortcomings, it was radio direction finding that was most useful in finding enemy locations.⁷² As he had previously, MacArthur often ignored intelligence if it differed from his personal opinion.⁷³

Recognizing the recurring allied problem of divided commands between the Army and Navy, on 3 January, in a political compromise, MacArthur took command of all ground forces and Nimitz all Pacific naval forces for the planned assaults on Iwo Jima, Okinawa, and the Japanese home islands.

IWO JIMA: OPERATION DETACHMENT

The Allies envisioned Iwo Jima’s two airfields as bomber bases that were closer to Japan than Saipan or Tinian — 760 miles versus 1,460. The island’s radar

63. Prados, p. 621.

64. Anderson, et. al., p. 263; Drea, pp. 76, 168, 176-8; Toll, pp. 213, 367.

65. Toll, *Twilight of the Gods*, p. 367.

66. https://en.wikipedia.org/wiki/Battle_of_Leyte.

67. Toll, *Twilight of the Gods*, p. 123. <https://stationhypo.com/2017/10/20/ultra-plays-a-significant-role-in-the-invasion-and-battle-for-leyte-in-october-november-of-1944/#more-7418>. It is interesting to note that much was gleaned from the Japanese attaché code, which was broken. This code was also very valuable for the insights gained about Nazi plans and capabilities. (Drea, p. 172; Peter C. Oleson, “Across the Pacific: The Role of Intelligence in the Solomons Campaign, 1942-44,” *The Intelligencer*, Vol. 27, No. 1, Winter/Spring 2022, p. 77.)

68. Samuel Eliot Morrison. “Leyte, June 1944-January 1945,” *History of US Naval Operations in World War II*, Vol. XII, Boston: Little & Brown, 1958; also, J.F.C. Fuller. *The Decisive Battles of the Western World*, Vol. III, London: Eyre & Spottiswood, 1956; and C. Vann Woodward. *The Battle of Leyte Gulf: The Incredible Story of World War II’s Largest Naval Battle*, New York: Skyhorse Publishing, 2007 (originally published in 1947). Also, <https://history.army.mil/brochures/luzon/72-28.htm>.

69. <https://history.army.mil/books/wwii/macarthur%20reports/macarthur%20v1/chog.htm>.

70. Anderson, et. al., p. 302.

71. Drea, p. 180.

72. Anderson, et. al., pp. 281, 295, 298. Drea, p. 200.

73. Drea, p. 230.

was an annoyance used by Japan for early warning of bomber raids on the home islands.

While some foresaw heavy casualties, once again, intelligence estimates were off. Knowing from ULTRA the Japanese logistics situation, and seeing abandoned defense positions in imagery, “American intelligence sources were confident that Iwo Jima would fall in one week... [it] failed to anticipate” innovative Japanese defenses and tactics.⁷⁴ The “dense network of bunkers, hidden artillery positions, and 18 kilometers (11 miles) of tunnels” interconnecting caves were a surprise to the Marines, who landed on 19 February 1945. Navy UDT teams had mapped the sea bottom near the beaches and destroyed obstacles.⁷⁵ “The beaches had been described as ‘excellent’ and the thrust inland was expected to be ‘easy.’ In reality, after crossing the beach, the Marines were faced with 15 ft-high (4.6 m) slopes of soft black volcanic ash. This ash allowed for neither a secure footing nor the construction of fox-holes...” The Amtraks could only churn.⁷⁶ Unlike earlier island invasions, “[a]fter allowing the Americans to pile up men and machinery on the beach for just over an hour...” with no opposition, the Japanese then unleashed its artillery, mortars and machine guns, transforming the beach into a bloodbath. Refraining from traditional banzai attacks, the defenders used the miles of tunnels to reoccupy cleared positions and surprise Marines from behind.⁷⁷ After 25 days of heavy fighting Iwo Jima, known as “Devil’s Island,” was declared secure on 26 March at the high cost of 24,053 Marines, Army and Navy dead and wounded.⁷⁸

OKINAWA: OPERATION ICEBERG

Okinawa was the next objective after Iwo Jima. As the largest of the Ryukyu islands, just 500 miles south of Kyushu. Starting in September 1944, US aircraft and submarines began to “tighten a noose” around Okinawa.⁷⁹ Photo reconnaissance aircraft took thousands of mission planning photographs.⁸⁰ Naval

aircraft attacked Japanese airbases in southern Japan and Formosa [Taiwan] to “blunt the [anticipated] Japanese air response.”⁸¹ The US Tenth Army, composed of both Army and Marine divisions, was formed for Operation Iceberg, which began in late March 1945 with the seizure of small islands off the Okinawan coast to be used as artillery bases. The main invasion began on 1 April.

While intelligence underestimated Japanese troop strength before the invasion and the Japanese air order of battle on Okinawa, amphibious geographical intelligence was fairly comprehensive, especially for the landing zones, based on extensive photo reconnaissance.⁸² Like on Iwo Jima the Japanese defenders hid in fortified caves, presenting a formidable defense. The Marines and Army were supported by the 3rd Marine Radio Intelligence platoon and daily (weather permitting) aerial observations.⁸³

What was unexpected, not having been encountered previously, was the Japanese Army’s use of civilians. “[U]sing the Okinawan people as human shields brought about a new aspect of terror and torment to the psychological capacity of the Americans.”⁸⁴ The Japanese Army also mobilized Okinawan schoolboys for front-line service. Half were killed. School girls were also pressed into service. “Thousands of civilians, having been induced by Japanese propaganda to believe that American soldiers were barbarians who committed horrible atrocities, killed their families and themselves to avoid capture...”⁸⁵ Estimates are that half the island’s pre-invasion population of 300,000 died. Unlike earlier Pacific island campaigns, the US captured a large number of POWs on Okinawa. Many were impressed Okinawans. “Even among [the] destitute and disorganized [Japanese] soldiers, less than a third chose to surrender rather than die...”⁸⁶

81. Toll, *Twilight of the Gods*, p. 559.

82. Ground forces included 183,000 combat troops and 120,000 service troops. US intelligence estimated only 65,000. (Toll, *Twilight of the Gods*, pp. 563-4). Hanson W. Baldwin. “America at War: Victory in the Pacific,” *Foreign Affairs*, October 1945 reprinted in FA July/August 2020; “US intelligence estimated there were 89 planes on Formosa, the Japanese actually had about 700, dismantled or well camouflaged and dispersed...” Hanson W. Baldwin, *Sea Fights and Shipwrecks*, Hanover House, 1956, p. 309 and www.nationalww2museum.org/topics/battle-of-okinawa. See also <https://stationhypo.com/2020/02/23/battle-of-iwo-jima-radio-intelligence-comint-report/#more-13336>.

83. <https://stationhypo.com/2018/11/17/history-of-u-s-marine-corps-comint-effort-part-6-of-6/#more-10253>; <http://www.history.army.mil/books/wwii/okinawa/index.htm>.

84. SSgt Rudy R. Frame, Jr. “Okinawa: The Final Great Battle of World War II,” *Marine Corps Gazette*, (<https://web.archive.org/web/20131214163259/http://www.mca-marines.org/gazette/article/okinawa-final-great-battle-world-war-ii>).

85. <http://www.sfgate.com/opinion/article/EDITORIAL-Corner-stone-of-Peace-A-Legacy-of-3029891.php>.

86. <http://www.history.army.mil/books/wwii/okinawa/chapter18.htm>

74. Toll, *Twilight of the Gods*, pp. 477-8.

75. Toll, *Twilight of the Gods*, p. 485.

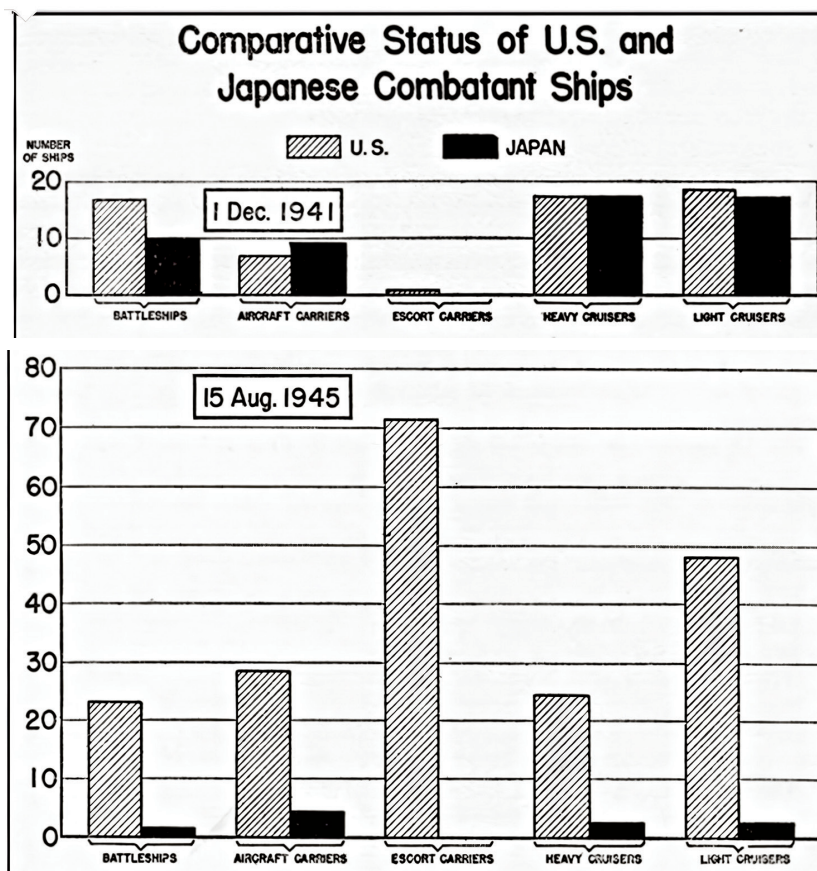
76. Robert E. Allen. *The First Battalion of the 28th Marines on Iwo Jima: A Day-to-Day History*, Jefferson, NC: McFarland & Co., 2004.

77. George W. Garand & Truman R. Strobridge. Part VI: Iwo Jima, Western Pacific Operations, *History of the U.S. Marine Corps Operations in World War II*, Vol. IV, History Branch, U.S. Marine Corps, 1971.; and Derrick Wright. *The Battle for Iwo Jima 1945*, Stroud: Sutton Publications, 1999.

78. <https://naval-encyclopedia.com/ww2/us-navy.php>; Toll, p. 516.

79. Anderson, et. al., p. 373.

80. Toll, *Twilight of the Gods*, p. 425.



Much of the battle for Okinawa occurred in the air at sea. "Allied intelligence and aviation analysts were trying to understand the scale and resilience of the remaining air threat posed by Japan. Opinions were divided. Estimates of the... warplanes remaining... ranged widely, from a low of 2,000 to an upper bound of about 5,000."⁸⁷ On 6 April, about 700 Japanese planes from Kyushu, 355 of which were kamakazes, counterattacked the US fleet off Okinawa. Kamakaze tactics, first observed at Leyte Gulf, had "became a major part of the [Japanese] defense" strategy with devastating effect. Twenty-six ships were hit by kamakazes that day.⁸⁸ Kamakaze and normal air attacks continued throughout the campaign, but Navy tactical radio intelligence often tipped-off the fleet intercepting Japanese "grid reports" from aerial scouts two to three hours before attack aircraft arrived from Kyushu to the north or Formosa to the south and monitoring

the "suicide attack frequencies" used by kamakazes. "Radio interception provided the complete picture of enemy [attack] intentions."⁸⁹

A Japanese Navy strike force, build around the super battleship Yamato, forayed to support the defenders on Okinawa. ULTRA had informed US commanders of its mission. It had been under aerial observation for a week.⁹⁰ US submarines were positioned to watch for it. Detected by Threadfin (SS-410), on 7 April the task force was attacked by more than 300 US carrier aircraft. Yamato and five other ships were sunk.⁹¹ This marked the end of the Imperial Japanese Navy.

"The price paid for Okinawa was dear. The final toll of American casualties was the highest experienced in any campaign against the Japanese, with total casualties of 49,151, plus another 26,000 listed as "non-battle" casualties. The losses in ships were 36 sunk and 368 damaged, most of them as a result of air

action. Losses in the air were 763 planes from 1 April to 1 July."⁹²

CONCLUSIONS

The JCS Study Group concluded that the island-hopping campaign would be more significant than MacArthur's Southwest Pacific efforts in defeating the Japanese.⁹³ While both MacArthur's and Nimitz's campaigns merged in the Philippines and Okinawa, separate command channels were often problematic. However, the capture of the Philippines and Okinawa separated Japan from its sources in Southeast Asia and the East Indies of oil and strategic raw materials essential for the conduct of war. Even

#b2, p. 465.

87. Toll, *Twilight of the Gods*, p. 567.

88. Toll, *Twilight of the Gods*, p. 581. Also, https://en.wikipedia.org/Battle_of_Okinawa. The Japanese also employed suicide motorboats and "[t]he Japanese equivalent to the UDT, the *fukuryu* (dragon divers) swam underneath Navy ships and stabbed upward at the hulls with pole charges." (Kyle Kray, "Demo Divers: the Frogmen of World War II," *Alert Diver, The Magazine of Divers Alert Network*, Fourth Quarter 2022, pp. 14-9.

89. <https://stationhypo.com/2020/04/06/battle-of-okinawa-part-5-of-6>.

90. Toll, *Twilight of the Gods*, pp. 581, 583.

91. <https://www.history.navy.mil/about-us/leadership/director/directors-corner/h-grams/h-gram-044/h-044-3.html>.

92. <https://www.history.army.mil/books/wwii/okinawa/chapter18.htm> #b2, p473; and Toll, p. 639. It should be noted that different sources use different casualty figures. What is not disputed is that Okinawa was the bloodiest battle of the Pacific campaign with casualties exceeded only by the Battle of the Bulge in Europe.

93. Toll, *Twilight of the Gods*.

before early 1945 historian John Prados opined in his *Combined Fleet Decoded* that the Pacific “war entered a new phase in the fall of 1943, in which American industrial power made itself the engine of victory. Intelligence continued to be important, guiding Allied operations, preventing major disasters, and in particular providing marching orders for the submarine forces that brought the Japanese Empire closer and closer to the edge of the abyss. But intelligence no longer made the difference between victory and defeat.”⁹⁴ By April/May 1943, “every major movement of [the Japanese fleet] was tracked and reported by submarines.”⁹⁵

In his 1945 final report on naval operations, Fleet Admiral Ernest King “credited victory in the Pacific to overwhelming sea power and America’s industrial might.” He included the comparative charts, below.⁹⁶

Admiral King might have mentioned the role of intelligence, especially cryptanalysis, but its contributions at that time remained highly classified. Earlier in the war he had commented that without communications intelligence “disaster is probable.”⁹⁷ ULTRA’s “impact on the air and sea dimensions of the war profoundly affected the conduct of operations.”⁹⁸ Cryptanalytic resources were very scarce in December 1941, but expanded rapidly with the success of breaking the IJN’s JN-25 operational code. US naval officers

who were knowledgeable of the Japanese language initially numbered about forty.⁹⁹ However, US COMINT capabilities grew with experience always “evolving, dynamic, changing...”¹⁰⁰ Prados also observes that the Americans learned “that a synergism existed between the different kinds of intelligence reporting, and that a multidimensional intelligence effort would be greater than the sum of its parts.”¹⁰¹

Probably the most fortuitous situation for the US was that neither the Japanese Navy or Army ever realized that their codes were broken. They always blamed Allied long-range aerial reconnaissance, coast watchers, technologically superior Allied radar, spies, and scouts for obvious allied foreknowledge of their operations.¹⁰² “[W]hen the Japanese Army’s code breakers not only managed to decipher American machines at times, but discovered that the Americans were reading Japanese naval codes, the army failed to provide the navy with either the means to break these codes or the warning that its own codes had been compromised.” The IJN did not know until 1945 that the IJA had broken US ciphers.¹⁰³ The result of this disfunction was catastrophic.

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94. Prados, p. 523.

95. Toll, *Twilight of the Gods*, p. 453.

96. Source: U.S. Naval Institute.

97. John B. Lundstrom. *The First South Pacific Campaign: Pacific Fleet Strategy, December 1941 – June 1942*, Annapolis: Naval Institute Press, 1956, p. 171.

98. Drea, p. 231.

99. Drea, pp. 242, FN 23.

100. Parker, pp. vii, ix.

101. Prados, p. 242.

102. Drea, pp. 130-1.

103. Ken Kotani. *Japanese Intelligence in World War II*, New York: Osprey Publishing, 2009, pp. viii, 72.