

Multi-Domain Battle in the Southwest Pacific Theater of World War II



Christopher M. Rein



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Michael L. Hogg

*In Memory of Dr. Roger J. Spiller:
Co-Founder of the Combat Studies Institute,
Scholar, Mentor and Friend.*

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1. Full video at <https://www.youtube.com/watch?v=pt0HzNbbSBk>, accessed 17 May, 2017.

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Introduction

At a recent Association of the United States Army meeting, GEN David Perkins, commander of the Army Training and Doctrine Command, outlined a concept of future warfare known as Multi-Domain Battle, where the armed forces of the United States leverage the strength each possesses in their respective domains to achieve synergized effects on a future battlefield.¹ Building on the AirLand Battle concept of the 1980s, which revolutionized inter-service cooperation between the air and ground domains, ushering in an era of unprecedented combat effectiveness highlighted by Operation Desert Storm, GEN Perkins laid out a vision whereby all domains, including air, land, maritime, space, cyberspace, as well as the electromagnetic spectrum, will be essential to future success. Coalition partners will provide critical capabilities, to include basing, local intelligence and specialized forces, in order to overcome any potential adversary's attempts to deny access to the battle area and prevent maneuver in theater, commonly known as anti-access area-denial, or A2AD. This vision of future warfare, at first glance, sounds new and revolutionary, but in implementing this concept, warfighters have a number of highly relevant case studies to draw upon, even if they predate the full development or even existence of several current domains.

In the opening stages of World War II in the Pacific, a highly-capable, conventional adversary seized the Philippine Islands, then a US territory. With the loss of the islands, an Allied coalition, which included primarily the United States, Australia and the Netherlands, lost valuable air and naval bases, enabling Japan to secure control of what they called their "Southern Resources Area" which included substantial natural resources, most notably the oil of the South China Sea. The Japanese pushed Allied air and naval forces out of the theater, as far as the western coasts of both Australia and the United States, and denied vital access and support to the ground forces locked in a futile battle for the defense of the islands. After killing or capturing the American Soldiers and Marines and their Filipino allies defending the islands, Japan consolidated their gains with a defensive perimeter, including air and naval bases in the East Indies, on New Guinea, at Rabaul and in the Solomons, designed to ring a protective cordon around the Philippines and deny coalition forces access to the area.

Faced with this challenge, with limited forces available, without air superiority, and fighting at a numerical disadvantage at sea, the Allied coalition successfully regained access to the theater and then liberated the islands. But none of the domains achieved success on their own. Ground

forces could not operate without naval logistic and amphibious support. Naval forces could not operate with air cover and air forces could not operate without safe and secure bases. Each of the three primary domains remained heavily dependent on the others for success. Through an operational campaign in which each service leveraged the support of others in order to achieve superiority in their assigned domain, ground, naval and air forces successfully defeated the enemy and achieved their campaign goals. Allied bombers, and especially submarines waged a disruptive campaign against the enemy's economy, achieving effects much less efficiently than offensive cyber forces could today, and the full use of the electromagnetic spectrum for intelligence gathering and communications duplicated effects achieved much more easily today from space. No domain specialist was capable of winning the battle in their domain independently; they each depended on the other domain specialists and their coalition partners for success. While not everything worked, and this was not a flawless campaign, as service prerogatives and stovepipes worked at times to hinder interoperability, a close examination of both successes and failures offers much valuable grist for the mills of future planners and operators attempting to conduct multi-domain battle anywhere on the globe.

Chapter One sets the stage by covering the loss of the Philippine Islands in 1941 and 1942. As Japanese forces quickly gained command of the air and the sea around the islands, the American and Filipino ground forces found themselves largely cut off from resupply or reinforcement. Highlighting the efforts of a single American infantry regiment, the 31st, the campaign illuminates the difficulties inherent in the transition from peacetime to wartime and the struggle to build effective combat power. Despite a significant numerical superiority and advanced aircraft types, the inability to sustain these forces resulted in a significant and humiliating defeat. In consolidating their gains, the Japanese built a strong barrier across the Southwest Pacific in order to force the Allies to fight a costly battle through these lines in order to regain the Philippines, which would themselves provide access to the home islands. The Japanese knew that American materiel superiority, given enough time, could likely breach this barrier, but they hoped to increase the cost to a level that the American public would lose heart and allow the Japanese to keep what they had taken. Despite their best efforts, they were unsuccessful.

Chapter Two covers the attritional campaign in the Solomons when Marine amphibious forces seized the island of Guadalcanal, then struggled to keep it in a seesaw campaign where the initiative on the ground swung towards whoever was able to gain mastery of the skies and seas around

the island. Initially cut off by Japanese naval power, the isolated Marines struggled to hold the critical airstrip, Henderson Field, which allowed a polyglot collection of aircraft known as the “Cactus Air Force,” to provide some hope of interdicting the flow of Japanese reinforcements into their forces already fighting on the islands. Through a multi-domain effort that heavily leveraged carrier airpower and accurate intelligence, Marine ground forces, reinforced by two Army divisions, eventually gained the upper hand, facilitating the liberation of the rest of the Solomon Islands and placing increased pressure on the Japanese fortress of Rabaul.

Chapter Three highlights a parallel campaign to stop Japanese aggression on the island of New Guinea. Here Australian forces valiantly struggled to slow and then halt a Japanese offensive along the Kokoda Trail over the Owen Stanley Mountains towards Port Moresby. The Japanese had been forced to attempt an overland attack largely due to the efforts of carrier forces turning back an amphibious invasion in the Battle of Coral Sea. Reinforced by elements of two more US Army divisions, organized under the leadership of the US Army’s I Corps, and growing strength in the air that successfully interdicted the flow of Japanese supplies into New Guinea, the coalition climbed back over the mountains and, after two years of difficult and sustained combat, pushed the Japanese off of the northern coast of New Guinea. While the efforts of the ground forces were essential to a successful conclusion for the Allies, the campaign demonstrates conclusively that the initiative lay with whoever was able to control the skies above and the seas around the island.

Sixth Army’s return to the Philippines and the liberation of island of Leyte form the basis of Chapter Four. While the Japanese defenders were unable to prevent the arrival of a massive invasion force, they did attempt to defeat it in one of the most spectacular naval battles of all time. At the Battle of Leyte Gulf, Allied naval forces successfully defended the beach-head against a combined air and naval attack that featured, for the first time, the Japanese suicide pilots known as *kamikazes*. American airpower, both carrier-borne and land-based, struggled to gain control around the island, permitting a massive infusion of Japanese ground forces that delayed the conquest of the islands and significantly increased the cost. But, in a relatively short period of two months, Leyte had been secured, and the Allies had the foothold they needed to liberate the rest of the Philippines, including the main island of Luzon.

In Chapter Five, the two field armies controlled by the Southwest Pacific Area Theater headquarters, which now functioned as an army group headquarters, successfully liberated the Philippine Islands. Both Sixth

Army, primarily on Luzon, and Eighth Army, on the southern portions of Luzon and the major islands in the southern part of the Philippines, destroyed Japanese ground combat power that had been isolated by the air and sea. Again, Japanese forces faced supply shortages, including the essentials of life, and suffered from both debilitating disease and starvation as they attempted to hold off their attackers and increase the cost to the point that an invasion of the home islands would become either unnecessary or too costly. It is difficult to say how successful they were in these efforts, as the stubborn resistance across the Pacific undoubtedly influenced the decision to use atomic bombs against Japan which did, in the end, make an invasion unnecessary and potentially saved hundreds of thousands of American and Japanese lives.

Throughout, the work benefits from an appreciation of insights gained from the study of environmental history, or how humans interact with and shape their environment, and how environmental factors guide human events. The islands of the Southwest Pacific hold some of the world's most foreboding terrain, as dense, mountainous jungles, extreme tropical downpours and one of the most lethal disease regimes on earth acted on both armies with virtual impunity. Overcoming the elements was one of the first tasks for both armies. Understanding how military forces sustain troops, use terrain to their advantage, and mitigate the effects of disease remain essential to any study of military operations. Efforts to control malaria alone absorbed significant military resources and required much higher troop levels due to significant casualty rates from it and other diseases. Judith Bennett observed, "More Japanese, for example, were to die from disease than from the enemy's armaments. Of all the theaters of World War II, combat fatigue came to the Americans the most quickly in the western Pacific battlefields."² As our world becomes one that is increasingly lived inside, soldiers, and citizens who will become soldiers, will face environmental challenges, such as securing safe drinking water and remaining free of pests and disease that their predecessors had a far greater awareness of and resistance to in the 1940s. The decline of rural populations and outdoor pursuits, such as scouting, hunting and hiking make it far more likely that leaders will have to pay more attention to teaching basic bushcraft than they have in the past.

In addition to newly-emerging work on environmental history, this work relies heavily on the official histories produced by each service during the war. Unlike Great Britain, which presciently elected to compile an official history of their participation in the war that integrated the contributions of the air, land and maritime domains, the United States in-

stead allowed each service to chronicle their individual contributions.³ The Army's magisterial "green books," expertly produced by the Center of Military History, are so richly detailed that they remain essential resources long after their publication dates. Samuel Eliot Morison's fifteen-volume series on the US Navy is equally valuable, though it is subject to some of that author's biases, but it also benefits immensely from his and his team's personal involvement in many of the actions described. Wesley Craven and James Lea Cate's seven-volume history of the Army Air Forces in World War II is especially valuable, though it reflects much of the nascent Air Force's preference for strategic applications over tactical uses of air-power. Fortunately, this neglect has left significant gaps in the historical record for future historians of airpower.⁴ The official histories, along with Ronald Spector's excellent *Eagle Against the Sun*, provided the essential foundation for this study.⁵ For additional contributing works, see the bibliographic essay at the end of this volume.

The book's theoretical framework borrows heavily from Phillips Payson O'Brien's *How the War was Won*, a provocative book that argues for the preeminence of Allied air and naval power in defeating the Axis Powers in World War II, specifically, Chapter 10, "The Air and Sea War Against Japan, 1942-44." The author spent so much effort making the case for the European Theater, an uphill battle given the importance of Soviet ground forces to the eventual defeat of Nazi Germany, that he devotes only one full chapter to the Pacific, perhaps assuming that the argument was so obvious that it barely required proving. His work expertly chronicles the difficulties Japan had in exporting combat power to the scene of the fighting and how well Allied air and sea power enabled the advance *across* the Pacific, but it is less clear how this Allied air and naval supremacy facilitated the conduct of individual battle and campaigns once *in* the theater. This work hopes to expand upon O'Brien's path-breaking analysis.⁶

This book offers a blueprint for an army seeking essential integration across multiple domains to fight and win the nation's battles anywhere on the globe. While set in the Pacific over seventy-five years ago (and coinciding with the seventy-fifth anniversary of many of the events covered), the lessons available are equally applicable to Europe, where a potential adversary could attempt to use multiple domains to deny NATO forces access to a beleaguered ally, or unforeseen conflicts elsewhere in Africa or Asia, where access to the theater could be denied by any number of means. It is hoped that this study, the first on the theater explicitly focusing on multi-domain battle, will serve as a primer for military professionals. But it is not a condensed collection of "lessons learned." Instead, it is a broad

history seeking to provide each reader with the opportunity to select those aspects that are most valuable to her or him. In his seminal work *Air Power and Armies*, perhaps the best work on service coordination produced during the interwar period, John Slessor wrote, “If there is one attitude more dangerous than to assume that a future war will be just like the last one, it is to imagine that it will be so utterly different that we can ignore all the lessons of the last one.”⁷ Choosing what to keep and what to throw out is the key to success in many endeavors, as any poker player can attest. Armed with an awareness of the specific challenges and opportunities of the multi-domain battle, Soldiers, sailors, airmen and Marines will be better prepared to face unknown foes and will have a positive example to draw upon as reassurance that the concepts envisioned can be successfully employed to achieve national security objectives.

In some respects, those services that operate primarily in the ground domain seem uniquely positioned to lead the effort to incorporate effects achieved across multiple domains into a single, coherent effort. Having balanced the integration of the infantry, armor and artillery branches, as well as supporting aviation, into “combined arms” doctrine, the Army in particular seems well positioned to take the doctrinal lead in integrating operators in multiple domains to achieve effects on the battlefield. But the same could be said of the Marine Corps, which first integrated the aerial weapon into a combined air-ground team. Success in warfare has historically depended upon and impacted the earth’s surface, where humans live and gather their sustenance, and it would be appropriate to charge the services charges responsible for achieving and managing effects on the ground with taking the lead in the development of multi-domain battle doctrine.

Notes

1. See <https://www.dvidshub.net/video/485976/ausa-2016-multi-domain-battle-ensuring-joint-force-freedom-action-future-war>, accessed 26 October 2016.

2. Judith Bennett, *Natives and Exotics: World War II and Environment in the Southern Pacific* (Honolulu, HI: University of Hawaii Press, 2009), 7. See also, Edmund Russell, *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring* (Cambridge: University Press, 2001), and Richard Tucker and Edmund Russell, *Natural Enemy, Natural Ally: Toward an Environmental History of War* (Corvallis, OR: Oregon State University Press, 2004).

3. See the British official history, *History of the Second World War: United Kingdom Military Series*, 33 vols. (London: Her Majesty's Stationary Office, 1952-1988).

4. See, for example, Thomas Hughes, *Overlord: General Pete Quesada and the Triumph of Tactical Air Power in World War II* (New York: The Free Press, 1995), Thomas Griffith, *MacArthur's Airman: General George Kenney and the War in the Southwest Pacific* (Lawrence, KS: University Press of Kansas, 1998), and Christopher Rein, *The North African Air Campaign: The U.S. Army Air Forces from El Alamein to Salerno* (Lawrence: University Press of Kansas, 2012).

5. *The United States Army in World War II*, 79 vols. (Washington, DC: Center of Military History, 1947-1998); Samuel Eliot Morison, *The History of United States Naval Operations in World War II*. 15 vols. (Chicago: Little, Brown & Co., 1948-1958); Wesley Craven and James Cate. *The Army Air Forces in World War II*. 7 vols. (Chicago: University of Chicago Press, 1947-1953); Ronald Spector, *Eagle Against the Sun: The American War with Japan* (New York: Vintage, 1985).

6. Phillips Payson O'Brien, *How the War was Won* (Cambridge, UK: Cambridge University Press, 2015), 385, 415.

7. John C. Slessor, *Air Power and Armies* (Oxford, UK: Oxford University Press, 1936), x.

Chapter 1

Single-Domain Battle

The Loss of the Philippine Islands: The 31st Infantry Regiment, 1941-1942



The Japanese conquest of the Philippine Islands from 1941 to 1942 is a classic case of the failures of fighting a battle in a single domain. After American and Filipino ground forces lost control of the skies and seas around the island, and were unable to accurately predict Japanese intentions, as a result of breakdowns in reconnaissance and communications, their efforts to defend the island were largely doomed. The Japanese campaign also represents the successful application of an anti-access, area-denial (A2AD) strategy. After isolating the islands with attacks on distant bases essential for potential relief operations, the Japanese gradually tightened the noose around the islands, ensuring they would not have to face a well-supplied enemy who was consistently receiving reinforcements. As the Japanese gradually strangled the combined American-Filipino force on Luzon, what had been a superior and well-equipped force built around the American 31st Infantry Regiment, became impotent, as a lack of reinforcements, equipment, and essential supplies combined with food, water, and medical shortages to decimate the Allied garrison, leading to surrender within six months. Despite having a superior number of troops and well-developed defensive facilities and fortifications, the United States lost control of the islands because they could not maintain a secure line of communications to the defensive forces established on the island. As a result, it had to embark on a lengthy campaign from distant bases to roll back the Japanese defensive perimeter in order to retake the islands three years later. While this timeline might be compressed in a contemporary setting, the basic strategy, and specific challenges faced in the Pacific War of 1941 to 1945 could easily be replicated in any future conflicts.

In order to roll back the Japanese barriers to the Philippines, the Allies would use what has become known as an “island-hopping” strategy, requiring the air, land, and sea domains to work closely together and capitalize on information superiority provided by command of the electromagnetic spectrum. Amphibious forces, under an umbrella of naval air cover, would first seize an air base, allowing land-based aircraft to be flown in and establish their own protective umbrella. Air raids from this new base could interdict the supplies flowing into the next target, thereby weakening defenders and enabling a subsequent amphibious assaults to succeed. An accurate appraisal of enemy dispositions and intentions undergirded this effort. All four services played an important role in the well-choreographed ballet, as Army units more often than not conducted the amphibious assaults, provided the follow-on forces, and secured the hard-won areas. But without air cover and naval resupply, this “stepping-stone” approach never would have worked. Forces operating in each domain would

have to extend their effects across the other domains in order to successfully execute multi-domain battle.

While the Allies generally get credit for successfully employing island-hopping, it must be noted that this was originally an operational concept developed by the Japanese. During the first six months of the Pacific War, Japan successfully executed an island-hopping campaign to secure Malaya, Indonesia, and the Philippines. Amphibious assaults seized air bases, which enabled shore-based aircraft to protect and support the ground forces as they moved towards their objectives in Singapore, Jakarta, and Manila. The preeminent naval historian of the Second World War, Samuel Eliot Morison, recognized and acknowledged Japan's leading role in amphibious assaults, noting "Japan depended on amphibious tactics for conquering territory in the Far East. She was the first nation to develop fully the technique of ship-to-shore attack."¹ But Morison neglected the broader connection to how these operations enabled success in other domains. The Allies only copied a Japanese-developed plan when they turned it against their opponent from 1942 to 1945. Japanese planners seldom get the credit they deserve for developing and implementing this highly successful way of war, which was to have dire consequences for the 31st Infantry Regiment and the rest of the garrison of the Philippine Islands.

Background

During the Spanish-American War, the United States seized the Philippines from Spain, which had established a colony there in the middle of the 16th-century, about the same time they were also colonizing the east coast of Florida. Over 300 years, Spanish mastery of the world's oceans enabled the empire to maintain a tenuous hold on their distant empire. As Spain declined as a global power, it faced twin threats from Filipinos who wished to follow the rest of Spain's New World colonies into independence, and surging Pacific powers, not least the United States, whose possession of the Hawaiian Islands and other bases threatened Spanish lines of communications to the Philippines. Tensions erupted into an open conflict, known as the Spanish-American War, in 1898, ostensibly over an explosion aboard the *USS Maine* in Havana harbor, but really an aggressive thrust by a United States that was reaching the limits of internal expansion and wanted to join other global powers by establishing a colonial empire, both in the Caribbean and across the Pacific. With the Spanish fleet suffering from years of neglect and the Philippines wracked by an internal revolution that sought independence and self-determination for the islands, the commander of the United States Asiatic Squadron, Commodore George Dewey, sailed from China to Manila Bay upon receiving

word of the declaration of war. Dewey's squadron entered the undefended harbor and, in a brief but sharp engagement, destroyed the obsolete Spanish warships at anchor, winning for the US a massive territorial expansion and its first major overseas colony.

However, the Filipinos were not eager to trade Spanish colonial masters for American ones. Once it became clear that the US had no intention of granting the islands their immediate independence, they launched a brutal, three year-long insurgency that took mountains of treasure and thousands of American and Filipino lives to finally suppress.² With the pacification of the Philippines, along with Guam, the US had won a string of strategic bases that dotted the central Pacific all the way to China's coast that signaled its arrival as a growing Pacific power. Similarly, the Japanese defeat of a Russian imperial fleet at Tsushima in 1905 completed the "changing of the guard" in the Pacific, as colonial powers Russia and Spain, who once had colonies that ranged from China to California, slipped into the background while emerging powers Japan and the United States replaced them as regional hegemons. Almost immediately, the two nations began to view one another as potential rivals for control of the lucrative trade emanating from the coast of Southeast Asia.

After consolidating their hold on the islands, by way of a brutal repression of the Filipino insurgents, American planners sought to strengthen their position, lest a rising Pacific naval power, such as Japan, do to them what they had just done to the Spanish. As the American ships had sailed directly into the unguarded mouth of Manila Bay and destroyed the Spanish fleet, the US became obsessed with closing this portal with strong defenses, including the island fortress of Corregidor, the tadpole-shaped island that commanded the harbor's approaches. With naval facilities both inside Manila Bay, at Manila proper and across the bay at Cavite, as well as a major base outside the harbor and further up the coast at Olongapo on Subic Bay, to prevent an enemy from bottling the fleet up in the harbor, the US Navy concentrated on building up the strength of its Asiatic fleet in order to guarantee the islands' security. The army's role, as it had been since its founding, was to man the harbor fortifications, both with combined-arms teams prepared to repel any landing and with coastal artillery fires established to dominate the maritime domain. While a recent focus on using Army shore-based artillery to attack targets at sea is sometimes seen as novel, in reality it is a continuation of over 200 years of the coast artillery mission, using the most technologically advanced large-caliber artillery in the army's arsenal to protect vital ports and seacoasts and hold any enemy at arm's length.

As an extension of this mission, the nascent Army Air Corps argued that the airplane was the next logical step of the Army's constant technological improvement in coast artillery, and prophets such as BG William "Billy" Mitchell demonstrated in tests in 1921 that even rudimentary aircraft could sink the most modern warships in the global inventory. Thus, what would eventually become a third domain entered the debate and quickly ascended to the point where control of the skies became essential for success in both ground and naval combat. Army leadership augmented their field artillery, primarily focused on ground-based targets, and coastal artillery, designed to engage targets at sea, with air defense artillery, intended to engage airborne targets and provide protection for the forces operating below. All three would figure prominently in the defenses of the Philippine Islands.

The Philippine dilemma occupied the attention of war planners throughout the interwar period. In a series of color-coded plans, War Plan Orange (WPO) envisioned a conflict with Japan which required the forces defending the island to hold out against an enemy less than 1,000 miles away while a relief force sailed and fought its way 7,000 miles across the Pacific to relieve the garrison. In the days before the airplane, this was entirely possible, as the fleet only needed a matter of weeks to assemble, cross the Pacific using the newly-won string of support bases, and engage and defeat any attacking enemy fleet. But technological advances in the sky and under the sea threatened to upset this timetable. From aircraft operating either from the new aircraft carriers or from bases seized from Germany after their defeat in World War I, and with submarines benefiting from rapid advances in submersible technology, Japan could wage a war of attrition as the US fleet crossed the Pacific, tilting the balance in the final, decisive battle and potentially denying access to the islands and prohibiting an unimpeded relief.

For their part, American planners concentrated both on strengthening the garrison, enabling it to hold out longer, and on building and maintaining a fleet capable of fighting its way through. Ultimately, both efforts would fail, as the garrison held out for only six months while a fleet heavily damaged by pre-emptive area-denial attacks took almost three years to reach the islands in force. The Navy was slow to change, still relying on the battleship as the centerpiece of naval combat, which left it with a shortage of aircraft carriers at the beginning of the war. Similarly, the Army placed too much faith in the airplane, mistakenly believing that an inadequately protected heavy bomber force could hold an enemy fleet at bay. In the months leading up to the Japanese attack, Army logisticians

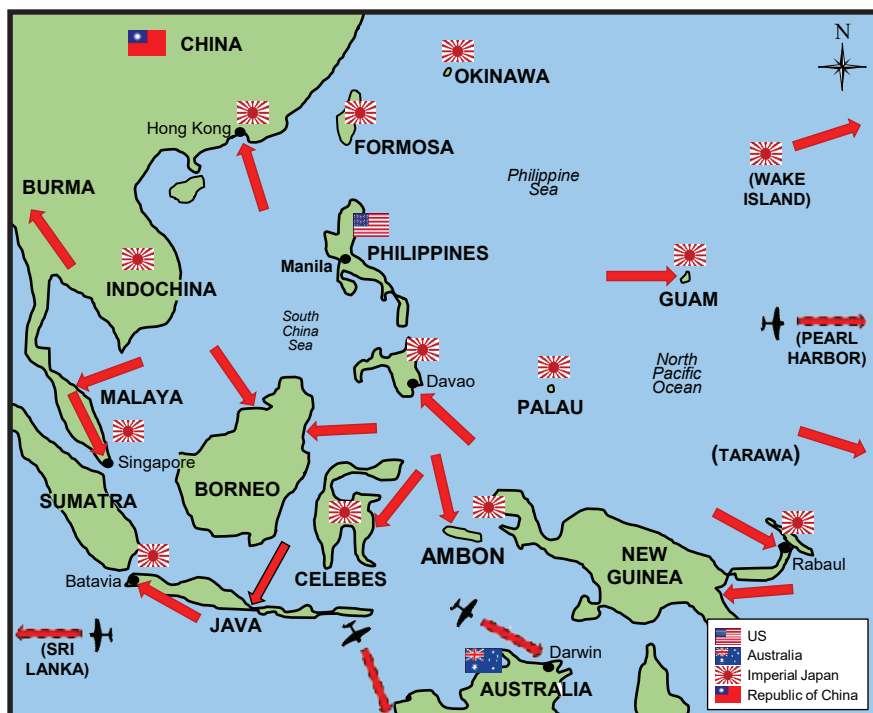
belatedly rushed reinforcements of men, tanks, and planes to the islands, but the long years of neglect could not be rectified in the few short months the Japanese afforded them. In the end the defenders were too few and too ill-prepared to successfully resist the onslaught that followed.

Plans for the Attack and Defense of the Islands

Douglas MacArthur, commander of the Philippine army since his retirement in 1935, still felt obligated to try. The War Department recalled the former chief of staff to active duty as a Major General on 27 July 1941, after Japanese forces seized Indochina from its feckless Vichy French masters, and promoted him two days later to Lieutenant General. As Commanding General, US Army Forces, Far East, MacArthur finally received promises of every conceivable type of reinforcement. He was even offered an entire National Guard division, the 41st from the Pacific Northwest, which had mobilized a year earlier and was now was fully manned and trained. MacArthur preferred additional equipment for his Filipino troops, and a second US infantry regiment, the 34th, and two US field artillery battalions for the Philippine Division, all of which were scheduled to sail from the states on 8 December, the same day as the Japanese attack on the Philippines. The 41st would eventually land in Australia and see extensive action in New Guinea, while only an anti-aircraft battalion and two tank battalions, equipped with 100 M-3 Stuarts, obsolete by modern standards but still better than any Japanese tank, managed to reach the islands prior to the opening of hostilities. Shipping shortages left more than a million tons of supplies and equipment cluttering docks on the West Coast.

The RAINBOW plans that followed WPO were more realistic — they recognized the islands were a lost cause. Virtually every war game conducted in the 1920s and 1930s had come to the same conclusion — the Philippines were indefensible. However, that would not stop MacArthur from committing his forces to the effort. The Army's official history noted:

It was admitted by Army and Navy planners that the Philippines were no longer defensible, and some urged that the limited resources of the United States should be used to “defend the defensible.” But the issue was not entirely a military one. “Politically,” says (Secretary of War Henry) Stimson, “it was still more important that this defense be supported as strongly as possible, for neither the Filipino people nor the rest of the Far Eastern world could be expected to have a high opinion of the United States” if it abandoned the Philippines at this critical moment. It was because of these considerations that Stim-



Map 1. Isolation of the Philippines. Graphic prepared by Army Press Staff.

son and Marshall strongly supported General MacArthur and firmly opposed any signs of a defeatist attitude in the General Staff. In this effort they had the support of the President.³

Thus, for political reasons, the Philippines had to be defended, and as strongly as possible, no matter how badly the effort violated sound military principles.

The Japanese grand strategy for World War II did not require the conquest of the Philippines themselves in order to secure any vital resources — most of the oil the empire needed was further south in the East Indies and the rice that comprised the islands' main export could be had elsewhere in the "Greater East Asia Co-Prosperity Sphere." The Japanese had to evict the US from the Philippines due to pure geography — as long as American air and naval bases remained on the eastern shores of the South China Sea, they posed an existential threat to commerce between the "southern resources area" and the home islands, like an "open hand around a windpipe." The bases had to be eliminated so that Japanese merchant shipping could safely import the spoils of their budding empire.

Neutralizing thousands of islands with a collective population of over sixteen million people required far greater resources than the Japanese had available. In fact, the entire operation would proceed with less than 50,000 troops, far fewer than the over 100,000 available to the defenders. Accordingly, LTG Masaharu Homma, commanding the Japanese 14th Army, chose to concentrate his forces against the largest island, Luzon, which also hosted the most significant military installations, specifically the naval stations at Cavite and Subic, Army Forts McKinley and Stotsenberg and Clark Field, as well as the main population center of Manila. Homma was primarily concerned with the capture of Manila, after which he assumed resistance would collapse. The retreat to the Bataan peninsula came as a nasty surprise and upset Japanese timetables for the conquest of points further south. Ultimately, Homma had to use a strategic pause, after his initial effort to seize the peninsula failed, and bring in reinforcements from the mainland while the American garrison weakened, before completing the conquest. Had the Americans and Filipino defenders received reinforcement or resupply during this vital period, the campaign might have had a different outcome.

To seize Manila, Homma planned a small landing in northern Luzon to seize air bases, sparing his air support the long flight from Taiwan. Once established ashore, his air arm would cover the main amphibious assault at Lingayen Gulf and the drive inland to Manila. With air supremacy over the islands, the American fleet would be unable to operate and ground forces would lose their mobility. Accordingly, the first Japanese actions concentrated on destroying the American air bases, to provide freedom of action for Japanese ships and ground forces. Once the skies and seas had been cleared, ground forces could land and advance at will.

To counter this, MacArthur requested reinforcements, particularly of long-range aircraft which, he hoped, would keep the invaders at bay. Plans called for a force of over 200 B-17s to be operating from the island by April 1942, but only thirty-five had arrived when the war opened in the islands on 8 December, and they were protected by only five squadrons of P-40 fighters, inferior in most respects to the Japanese Zero. MacArthur had also received authority to mobilize the Philippine Army, which would consist of ten divisions, but chose to do so in stages, so that each division would add a regiment (equivalent to a BCT) every few months until it reached full strength, with the first regiment reporting on 1 September and the second on 2 November. The third never arrived. As a result, when the first blows fell, he only had ten partially trained and equipped formations. The units suffered from language barriers, as American officers depend-



Figure 1. Training Filipinos. Photo courtesy of the Center for Military History.

ed on translators, but soldiers mobilized in different areas spoke different dialects or mutually unintelligible languages, hampering coordination. In addition, the Filipinos were being trained to fight alongside the single American division on the island (itself composed of the 31st Infantry Regiment and two Philippine Scout regiments) with US training methods and equipment, and dependent on large quantities of supplies, rather than using the irregular or light infantry tactics which had proven so successful against the Americans during the 1899 to 1902 Philippine War and would later bedevil the Japanese occupiers until liberation.

MG Jonathan Wainwright commanded the Philippine Division, later numbered the 12th Infantry Division, the strongest unit in the islands and, according to the Army's official history, "the most carefully hoarded unit of the Philippine campaign."⁴ Of its 10,000 troops, only 2,000 were American, all in the 31st Infantry Regiment, which was near full strength and composed of regulars with long experience in the islands. The two Philippine Scout regiments, the 45th and 57th, contained the best of the Philippine Army — highly trained soldiers familiar with American equipment and tactics. The 8,000 Philippine Scouts, which, including artillery, engineer, and support troops, consisted of "Filipinos enlisted as regulars in special units of the United States Army and commanded by American officers. Tough, experienced and well-trained, many of the scouts had seen twenty or even thirty years' service. Like all American units in the islands, they were understrength and lacked important items of equipment."⁵ As a result, MacArthur hoarded the division, especially the 31st Regiment, keeping it in strategic reserve through most of the

fighting and using it only to conduct vital counterattacks. The division's insignia was the head a Filipino carabao (Water Buffalo) in yellow on a red field, using the colors of Spain, the islands' first colonizers. Filipinos used the carabao throughout the islands for transport and power and its selection was intended to serve as a sign of strength. Instead, the carabao came to represent the sacrificial bull of Exodus to many of the units' soldiers, and the carabao themselves would become a principal source of meat during the long siege on Bataan.

Defenders on the Philippine Islands began the campaign with two significant handicaps. First, with the attack on Pearl Harbor, Japan had fatally damaged the resources and shipping needed for a relief force to fight its way through to the islands, greatly increasing the length of time the defenders would have to hold out. Second, with a near-simultaneous attack on the air bases in the Philippines, Japan robbed MacArthur of his "eyes and ears," creating effects similar to a cyber-attack on the communications and information networks, or a blinding of space-based assets. An incomplete picture of events forced the American and Filipino defenders to respond to threats and rumors, as less-credible inputs still made their way into what was left of the communications network. For example, on 15 December, MacArthur ordered the Philippine Division to respond to reports of a Japanese airborne landing on Luzon, but when the division arrived in the area they found the reports to be inaccurate. They still expended much effort on mobilizing and moving to the threatened area.

The Air Attacks on the Philippines

The destruction of MacArthur's air force in the campaign's opening hours has been a source of much controversy. Word of the attack on Pearl Harbor reached Manila in the overnight hours of 7 December (the islands lie across the international date line) providing ample opportunity for the islands' 90 P-40 fighters to defend themselves and the 33 B-17 bombers to launch a pre-emptive raid on the over 500 aircraft clustered on Japanese bases on Taiwan. The air forces expected an attack at dawn, which failed to materialize due to dense ground fog blanketing the Japanese airfields on Taiwan. At the same time, GEN Lewis Brereton attempted to gain approval from MacArthur for a pre-emptive strike on the Japanese airfields but, according to Brereton, MacArthur was apparently concerned about squandering his best defensive assets in an unescorted raid against heavily-defended bases. In MacArthur's version of events, Brereton delayed the raid while he waited for updated target imagery, which was likewise hampered by the dense fog.

Both men shared responsibility for what happened next: a heavy Japanese attack that caught the B-17s arming for the much-delayed strike while their air cover refueled from their dawn patrol. With an inadequate warning system and poor control, defensive fighters vectored out over the South China Sea chasing phantoms while a devastating raid wrecked the airfields on the island, including the main bomber base at Clark Field, inflicting over 50 percent losses in just the first day. Inadequate intelligence and communications, as could be expected in the loss of any space-based or cyber-attacks, had very real and immediate effects on the battlefield. Japan targeted the communications center at Clark Field, effectively destroying command and control at the dispersed fields attempting to counter the air threat, and actively jammed communications nets. Ground forces proved unable to assist in the air domain, as the anti-aircraft artillery at Clark Field was both inadequate and ineffective. Many of the shells, bearing dates from as early as 1932, had corroded in the tropical environment and gunners estimated that only one out of every six actually exploded. Clark Field lacked a well-developed or hardened integrated air defense network (IADS), leading to command and control breaking down under increasingly effective raids from a situationally-aware enemy. A similar situation hampered operations from the dispersal field at Del Monte on Mindanao, where a lack of radar and communications led to the eventual destruction of the aircraft hidden there as well. By 12 December, "American Army and Navy air power in the Philippines had been virtually destroyed."⁶ By 18 December, most of the heavy air assets had been evacuated as far south as Darwin, Australia, which itself was destined to come under air attack. Pilots and ground crews of the 24th and 35th Pursuit Groups kept their planes fighting as long as they could, cannibalizing wrecks for spare parts, but eventually the men would wind up fighting as infantry on Bataan. With the Allied air forces dispatched, Japanese aircraft turned their attention to the naval assets the ground forces depended on to keep the supply and reinforcement lines open. With command of the air, Japan was now free to destroy the Navy in port.

The Navy's Asiatic Fleet was strong on paper, consisting of two cruisers, thirteen old destroyers, and twenty-nine modern submarines, all operating from established bases at Subic Bay, on the South China Sea, and Cavite, protected inside Manila Bay. The naval garrison even provided additional ground forces when the 4th Marines arrived from China with 750 men on 1 December, and augmentees from the garrisons at Olongapo and Cavite raised the regiment's strength to 1,600. Unfortunately, the Navy had been oriented towards the last war in the islands, and everything had



Figure 2. Bombing of Cavite. Photo courtesy of the Center for Military History.

been positioned to defend against an attack such as Dewey's, straight into Manila Bay. However, Japanese doctrine mandated against striking at the strongest point and, once the air defenses had been rendered ineffective, destruction of the naval forces could begin in earnest. A heavy air raid on 10 December destroyed one submarine and over 200 torpedoes as raging fires swept across Cavite, making the base untenable — an effect achieved by aircraft in 1941 but far more likely to come in the form of air, sea, or surface-to-surface missiles today.

For many of the defenders, this was their first time under fire. Marine PFC Joseph Dupont described his first air attack at Subic Bay:

I had never been exposed to any bombing raid or any type of hostility before. It was a game for us. It was like a football game. We were here, Japs, we were going to kick their butts. You know, the little scrawny rascals couldn't see twenty-five feet. All of them had big magnification on all of their glasses. Well the bombs started falling and they made a noise... Your face would bang against the ground. It was a terrible experience. When the bombs went off, the bombs create a vacuum. Then, the air rushes back in. Your pants legs flop and all kinds of feeling that you never had before. Then you become aware of your mortality. Then it dawns on you that some people who hate you are trying to kill you. At first, you don't

think of these things. It's a big game. But, this dawns, hey, this is for real. They're trying to kill us. It's a strange thing that happens. After that, you say, hey, man, this is a hell of a situation. Buildings were being blown up. Fires were started everywhere. Men were screaming who were wounded from the shell fragments.⁷

That evening, after receiving a full account of the damage done, ADM Hart reported to the Chief of Naval Operations in Washington that he regarded Manila untenable as a naval base since the enemy had control of the air, but promised to "continue submarine and air operations as long as possible."⁸ He began the evacuation of the harbor the next day, sending his forces south to join British, Australian, and Dutch naval units defending Indonesia. The few remaining submarines submerged to the bottom of the harbor to escape attack found that their "operations were further hampered by lack of air reconnaissance."⁹

Even when communications nets did function, they were overwhelmed with inaccurate information. The enemy used false injects, as well as unsuspecting accomplices from the local populations to spread unfounded rumors, further eroding situational awareness, as could be expected from any compromised communications system. From 9 December on, ADM Hart wrote, "An extraordinary crop of incorrect enemy information flowed in over the warning net. Too many reports came in of enemy sightings when nothing actually was sighted."¹⁰ Cyber-attacks and the loss of information from space-based reconnaissance and communications assets could produce a similar effect on any commander. Without quality inputs, even the best and most secure network is useless, and can actually hinder military commanders, as they make logical but unsound decisions based on false or incomplete information. Without an accurate picture of what was occurring, and with the air and naval forces driven from the theater, the ground forces would face the invasion alone.

Much has been made of this critical destruction of MacArthur's air force on the morning of 8 December but, in reality, the struggle for mastery of the air over the islands was a foregone conclusion. Without viable corridors of resupply, such as that through the islands to the south or east which the Japanese were already working to close, Brereton's small air force could not have sustained itself nor replaced attrition for more than a week. The surprise attack hurt, but, without secure lines of communication to the rear, the air forces had little hope of a sustained defense against the Japanese attack.¹¹

The Japanese Invasion

To isolate the Philippines and deny access to the area, the Japanese captured Guam on 10 December, eliminating a potential American outpost, and attacked Wake Island, where they suffered the only significant repulse during their massive expansion into the Pacific. However, even the Marine garrison on Wake could not hold out without replenishment from Hawaii, and a second attack on 22 December successfully captured the islands. Japanese forces from Palau landed in the southern Philippines at Davao on 19 December and began pushing south towards Borneo and the Celebes, cutting a much shorter resupply line to Australia.

Due to an economy-of-force approach to free up scarce resources for campaigns elsewhere, it would still take Japan over six months to secure the Philippine islands. The Japanese 14th Army commander, LTG Masaharu Homma, had only the 16th and 48th Divisions and later received the poorly-trained 65th Brigade for the final assault on Bataan and the island fortress of Corregidor. The 48th Division was already slated for follow-on operations in Indonesia and had to be released after the fall of Manila, which the US forces would abandon in their retreat to Bataan. Supporting Homma's Army was a joint team including the Army's 5th Air Group under LTG Hideyoshi Obata, the Navy's 3rd Fleet of VADM Ibo Takahashi, and the 11th Air Fleet of VADM Nishizo Tsukahara. This air-land-sea force would cover initial landings on Batan Island, north of Luzon, and separate three landings on Luzon at Aparri, Vigan, Legaspi, as well as at Davao in Mindanao and Jolo Island in the Sulu archipelago.

The primary purpose of all of these landings was to seize airfields. According to the Army's official history, "The air force was to move to these fields as soon as possible and continue the destruction of the American air and naval forces from these close-in bases."¹² The Air Force's official history found, "An immediate objective of the landing parties, while overcoming such local opposition as might be met, was seizure of an airfield on which a prompt basing of fighters for defense of the invading forces was merely preliminary to the bringing in of bombers in preparation for the next move forward...Indeed, GEN MacArthur had been the war's first victim of a type of warfare he subsequently would make peculiarly his own."¹³

Within 48 hours, the defending air forces had been destroyed and naval forces driven away, allowing the main landings on Luzon to proceed unopposed. According to the Army's official history:

Within a few days after the landings the pattern of the Japanese plan had become clear to the American command. First, Japa-

nese air and naval forces were to cut off the Philippine Islands from all possible aid. Then, Japanese aircraft could destroy or neutralize the defending air and naval forces and gain superiority in the air and on the sea. At the same time, Japanese ground forces would secure advance bases at the northern and southern extremities of the island of Luzon and on Mindanao where the opposition was negligible or nonexistent.¹⁴

Samuel Eliot Morison agreed:

The Japanese spread their tentacles cautiously, never extending beyond the range of land-based aircraft unless they had carrier support. The distance of each advance was determined by the radius of fighter planes from airfields under their control. This range was generally less than 400 miles, but the Japanese made these short hops in surprisingly rapid succession. Amphibious operations, preceded by air strikes and covered by air power, developed with terrifying regularity. Before the allies had consolidated a new position, they were confronted with a system of air bases from which enemy aircraft operated on their front, flanks and even rear.¹⁵

Faced with this onslaught, and with repeated requests for reinforcements and resupply, planners in Washington began to ponder the true costs of a relief expedition and consider when and how to cut their losses. A newly-minted brigadier general, then working as the Deputy Chief for Pacific Defenses in the War Plans Division, complained that “The Navy wants to take all the islands in the Pacific — have them held by Army troops to become bases for Army pursuit and bombers, then the Navy will have a safe place to sail its vessels!”¹⁶ As Dwight Eisenhower would later learn in operations in the Mediterranean and across Europe, that was exactly what was required. Amphibious operations would have to prioritize the seizure of secure base areas, first around the shores of the Mediterranean, then in Northwest France, so that air forces could establish an air umbrella over the forces on land. Only then could they push forward toward the enemy’s heartland. Ordered to begin plans for a relief operation, Eisenhower instead recommended developing a base area in Australia, which highlights the importance of a secure base area in A2AD operations. And the bigger and more dispersed the base area is, the more difficult it is for an enemy to successfully neutralize it.

With secure air bases established in the islands, and the American Asiatic Fleet driven from its bases by sustained air attacks that wrecked the naval

bases at Cavite and Subic Bay, the Japanese landings in Lingayen Gulf went forward virtually unopposed on 22 December against dispersed defenders lacking artillery support. Hastily emplaced coast artillery could not reach the transports, and the superior Japanese forces easily parried nuisance air and submarine raids. The Army's official history recorded, "In the eight separate landings the Japanese made in the period between 8 and 25 December, the submarines proved unable to impede the enemy or even inflict any serious damage. Their record, like that of the B-17's, was most disappointing."¹⁷ Even an armored counterattack by the 192nd Tank Battalion, which had only recently arrived in the islands, just months before hostilities began, could not stem the assault. Japanese defenders armed only with light 47mm anti-tank guns easily repulsed the American M3 Stuarts. GEN Jonathan Wainwright, commanding the Philippine Division, requested that his unit be thrown into the counterattack but MacArthur judged the odds too long and refused. The total cost to attackers was only eighty-four killed and 184 wounded.¹⁸

Secondary landings by elements of the Japanese 16th Infantry Division at Lamon Bay, south of Manila, placed the city's defenders in a vise. Faced with strong elements both north and south of the city, and with superior numbers but poorly trained troops, MacArthur elected to abandon the city and move all his forces and supplies onto the Bataan Peninsula, a rugged area northwest of the city that also protected the island fortress of Corregidor, denying the Japanese Navy the use of the bay's fine anchorage. MacArthur hoped relief would arrive within three months, but it would take over three years. The double envelopment of Manila, developed by Japanese war planners as early as 1924, when they identified the US as their most likely enemy, calculated that it would take 1.5 divisions landing at Lingayen Gulf and Lamon Bay to seize Manila before the US fleet could arrive. The operation unfolded almost exactly as Japanese planners had envisioned. In fact, it worked so well, that Allied leaders duplicated their plan almost exactly in 1945.¹⁹

The Army's official history summarized the opening phase of the campaign as follows:

Within a period of three weeks, from 8 December to 25 December, the Japanese had achieved astounding results in the Philippines. They had completed one major amphibious assault and at least seven minor landing operations; they had placed a large number of troops ashore on Luzon, north and south of Manila, and were ready to move on the capital; they had cut the line of communications between the Philippines and Australia. During this three-week peri-



Map 2. The Japanese Advance. Graphic prepared by Army Press Staff.

od, the Japanese had also established complete aerial and naval supremacy in the Philippines and forced the Asiatic Fleet and the Far East Air Force to retire to the line Surabaya-Darwin, 1,500 miles from Manila. General MacArthur summed up his situation on 27 December as follows: “Enemy penetration in the Philippines resulted from our weakness on the sea and in the air. Surface elements of the Asiatic Fleet were withdrawn and the effect of the submarines has been negligible. Lack of airfields for modern planes prevented defensive dispersion and lack of pursuit planes permitted unhindered day bombardment. The enemy has had utter freedom of naval and air movements.”²⁰

Without air cover, naval forces, or hope of resupply, MacArthur could do little to defend the islands. By the end of December, he had declared Manila an “open city” (hoping to spare the city’s destruction but only delaying it until the reconquest in 1945 when the Japanese chose to defend it block-by-block) and ordered the execution of his plans for the final resistance on Bataan.

The Battle of Bataan

Once MacArthur made the decision to retreat into the jungle fortress of Bataan, holding Manila only long enough for the forces from South Luzon to evacuate, his troops temporarily lost contact with the invading Japanese, who entered Manila on 2 January. However, the strategy MacArthur implemented was, in military terms, “overcome by events.” There was no point in holding out for a relief column, because no relief column was *en route*. A convoy of merchant ships, escorted by the heavy cruiser USS *Pensacola* and containing A-24 dive bombers that might have provided the defenders some hope of close air support, as well as two field artillery battalions, had already been diverted to Brisbane, Australia, where it arrived on 22 December, waiting for a stronger escort to shepherd it through the Japanese-held waters. Neither it, nor subsequent resupply ships, could penetrate the Japanese cordon around the islands. Given their lack of air control over the sea lines of communication, the Navy was justifiably pessimistic about their chances. The Japanese easily intercepted the few chartered ships that attempted to run the gauntlet, meaning that only a small quantities of supplies ever arrived.

By retreating to Bataan and holding out as long as possible, all MacArthur could do was hope to tie up additional Japanese forces, preventing their use in other operations. George Marshall reasoned MacArthur “was containing a large number of Japanese, planes, and ships, and the longer he held out the more chance there was that the Japanese would be unable to put all their forces in the ABDA (Australia-Britain-Dutch-American) area.”²¹ The Japanese had the luxury of time, and they pulled the 48th Division out on schedule for operations on Java and replaced it with a fortress battalion from China, which did not materially affect the Japanese southward advance. Furthermore, MacArthur’s logisticians had bungled the withdrawal, blowing bridges before American armored units had finished crossing, leaving vital tanks outside the perimeter, and losing vast quantities of rice due to archaic rules about transferring the staple among the Philippine provinces. The Allies left over 10,000,000 pounds of rice at Cabanatuan, and abandoned more vital supplies at Fort Stotsenburg, and in Manila, meaning the over 50,000 troops on Bataan had less than two weeks’ worth of food when their siege began.²² The Allied leadership immediately placed the troops on half-ra-

tions, which only served to prolong the agony and ensure that the prisoners would enter captivity in a weakened state, making the horrors of the Japanese prison camps far more lethal.

Indeed, defenders in the Philippines and in Washington had been on the horns of a dilemma since July, when MacArthur successfully lobbied for holding the islands and sending out sufficient reinforcements, which were not scheduled to arrive until April of 1942. Should the Army continue to dump scarce assets into a distant and untenable theater in the hope of holding out against great odds, or marshal these reserves in preparation for a counterattack or relief column? All the assets dumped into the theater would increase the defenders' chances of success, but might fatally weaken any potential relief column. Withdrawing the garrison, even if it were possible from an isolated theater, would concede the initiative but might accelerate the counterattack designed to retake the islands. In the end, planners chose to cut their losses soon after the Japanese completed the encirclement. The chances of fighting through, either in or out, were slim against Japan's air and naval superiority. The ground forces would first have to regain their freedom of action, largely aided through offensives in the air and at sea, before they could successfully reengage on land.

After capturing Manila, Homma turned his attention to the Allied forces in Bataan, closing up on the Allied positions the first week of January. On 6 January, the Philippine Division finally saw its first action defending Layac Junction, a key point at the base of the peninsula. In a month of fighting, Homma could only push the Allies to their main defensive line, stretching from Bagac in the west to Orion on the east and crossing a high saddle cut by steep ravines. During January, the Japanese gradually burned up the Filipino units on the flanks in a month of delaying actions during which some 12,000 Filipino soldiers deserted and returned home.²³ The American-led Philippine Division's three regiments formed reserves, with the two Scout regiments behind the left and right halves of the lines, and the 31st in general army reserve. Pushed into the line, the 57th Philippine Scouts defended the far left of the line, where 2LT Alexander R. Nininger, Jr., USMA, 1941, posthumously earned the first Medal of Honor of World War II on 12 January while leading a counterattack with his scouts. On 17 January, units of the Philippine Division again counterattacked to clear up a penetration on slopes on the right end of the line along the Balantay River but were flanked and worn down. They then covered the retreat back to the Bagac-Orion line. By the 24th, after just a week on the line, the soldiers looked "like walking dead men. They had a blank stare in their eyes, wrote an officer of the regiment, and their faces, covered with beards, lacked any semblance of

expression. Unwashed and unshaven, their uniforms in shreds, they looked like anything but an efficient fighting force.”²⁴ Ordered to again reform in reserve, they left large gaps in the line defended by weak and understrength units, presenting Wainwright, then in charge of the defense on Bataan, with another dilemma: to defend along the main line of resistance at maximum strength or to hold his most effective units in reserve for a counterattack? He chose to spare the Philippine Division but could not prevent it from suffering the same fate as the units on the line.

By early February, Japanese forces reached a culminating point in their push into the Bataan peninsula, as the Allies temporarily held the upper hand. Secure in prepared positions, and with superior forces due to the 48th Division’s withdrawal, the Allies rebuffed the steadily weakening efforts to break into the perimeter. With control of the waters on the South China Sea (east) side of the peninsula, the Japanese attempted a nighttime flanking attack in small boats to turn the position, but found their small beachhead easily contained. A notable Allied success came on the night of 1 February, when the attackers attempted to reinforce their amphibious landing behind American lines, but successful intelligence, in the form of a captured message, tipped off the defenders. The four remaining functioning P-40s, a Navy torpedo boat, *PT-32* and alerted land forces from 88th and 301st Field Artillery combined to decimate the small Japanese landing fleet and repulse the landings at Quinauan Point, with the former pilots and mechanics of the 21st Pursuit Squadron making an amphibious assault in whaleboats to eliminate one of the landings.²⁵ The operation provided a signal example of what could be achieved when air, land, and naval forces all worked together, but future opportunities would be few and far between. As Homma pulled back to lick his wounds and build his combat strength, the struggle for the Philippines entered the decisive period of the campaign.

From early February until the first week of April, when hostilities resumed, Japan moved an entire division, the 4th, unimpeded from China, as well as a reinforced brigade, into the theater and buttressed it with hundreds of aircraft flown in from across Southeast Asia. By 1944, the Japanese would suffer prohibitive losses attempting to shift units from the Asian mainland to the Philippines, but in 1942 they could do so with impunity. As operations wrapped up in Malaya, Indonesia, and Burma, Japanese combat power became available to reduce the American garrison. “From Malaya had come two heavy bombardment regiments, the 60th and 62nd, with a total of sixty twin-engine bombers. This single accretion alone tripled Homma’s air strength. In addition, the Navy had sent two squadrons of Bettys (land-based, twin-engine bombers), one squadron of

Zekes (fighters), and one squadron of carrier-based bombers to the Philippines, thus making available for the offensive of late March and early April a considerably augmented air force.”²⁶ This additional air pinned the defenders to the ground, making maneuver impossible, and silencing supporting artillery.

At the same time, the American and Filipino forces on Bataan began to wither on the vine, as hunger turned into malnutrition and fatally weakened the garrison. Just as commanders have used starvation as a weapon throughout history, from Megiddo to Vicksburg, to successfully conclude sieges, so too did the Japanese allow its insidious effects weaken the Allied garrison. Individual Filipino soldiers, while possessing the fierceness of a Manny Pacquiao, could not continue to fight on a handful of rice a day. The inability to transport resources available elsewhere in the islands by air or sea to the scene where they were most desperately needed was decisive. The Japanese sank the few ships that tried to sneak through and overran major supply bases, such as the one on Cebu while it was still stocked with plentiful rations.

American soldiers fared no better in the tropical climate as a number of conditions and diseases began to wrack the garrison. Despite spending the time between 8 February and 3 April in a “rest area” in Army reserve, the 31st Infantry Regiment still suffered from the effects of malnutrition and disease, as less than 50 percent of the unit was rated effective, due to widespread dysentery and malaria, when they went back into the line on 4 April. The official history noted, “hunger and disease were greater enemies than the Japanese soldiers.”²⁷ This lack of food proved as decisive as anything the Japanese could throw at them. Starvation rations led to massive disease outbreaks as scurvy, hookworm, beriberi (a severe vitamin-B1 deficiency), (35% of the force) malaria (80%) and dysentery (75%) ravaged weakened immune systems, preventing soldiers from fighting off disease.²⁸ Many of the men went into the POW cages with compromised immune systems and the high mortality rate in the camps can be attributed to this as much as to their Japanese captors’ harsh and inhumane treatment.

Only the defenders of Corregidor, which had adequate supplies for its smaller garrison and did not need to move them through miles of trackless jungle to reach the front lines, fared better. Many of the men who survived the infamous “Bataan Death March” and subsequent captivity, including much of the Marine garrison, had spent most of the siege on the “Rock.” Men on the front lines came to resent visits from the “brass” on Corregidor, echoing complaints about “FOBbits” in future conflicts. The “Tunnel



Figure 3. The Malinta Tunnel. Photo courtesy of the Center for Military History.

Rats” who spent their lives in comparative safety in the deep tunnels on the “Rock” were betrayed by their pasty white skin, which contrasted sharply with the burnt tans of the soldiers at the front. Before his evacuation by torpedo boat in March, on Marshall’s orders, MacArthur made only one visit from Corregidor to Bataan, and that came early in the campaign on 9 January, leading to the sobriquet “Dugout Doug,” and a new stanza for the *Battle Hymn of the Republic*.

Dugout Doug’s not timid, he’s just cautious, not afraid
He’s protecting carefully the stars that Franklin has made
Four-star generals are as rare as good food on Bataan;
And his troops go starving on!²⁹

While humor could buttress some of the sagging morale on Bataan, hunger and poor leadership eventually took their toll.

Building a Defensive Barrier

While the Japanese worked to build their strength in the Philippines, they also used the months of February and March to extend their defensive perimeter, ensuring that the islands’ garrison could not be reinforced or resupplied. In late January, Japanese forces had captured Rabaul in the Bismarck Archipelago, establishing a base that would remain a thorn in the Allies’ side for the next two years. It also brought Australian forces directly into the conflict, which proved to be the US’s most important ally in the Pacific theater. Coalition support was critical, both in stemming the initial assault and in building up forces for the counterattack. Australian assistance provided secure base area, air and naval depots,

combined training activities, shared intelligence collection, especially from Australian coastwatchers now marooned behind enemy lines, and vital communications. In recognition of the nation's potential, Japan worked hard to threaten US supply lines across the Pacific into Australia, by moving deeper into the Solomons, and by attempting to cut the lifeline from northern Australia through New Guinea and Indonesia into the Philippines.

Landings on Bali on 18 February severed this route, and aircraft launched from carriers covering the landings on the new Japanese base inflicted a devastating air raid on Darwin on 19 February that destroyed a hangar full of supplies destined for the Philippines.³⁰ As in the earlier raids in the islands, heavy radio jamming preceded the raids, denying the defenders an opportunity for a coordinated defense, but the lack of radar meant the Allies were again fighting blind. Several American P-40s did manage to get airborne but MAJ Floyd Pell commanding the 33rd Pursuit Squadron lost his life in a futile attempt to stem the onrushing attackers. The Allies lost eight ships sunk in the harbor and another nine damaged. The loss of eighteen planes crippled Darwin's air defenses. As Morison observed, "an important link in the lifeline had been broken."³¹

Aircraft rushed to Java to provide air cover for the sea lines of communication through Indonesia to the Philippines struggled to defend the islands and protect their own supply corridors. Morison observed, "The 36 Army P-40 fighter planes brought in to Java from Australia at great cost were rapidly expended, owing largely to poor warning facilities which allowed them to be caught on the ground or at altitudes too low for effective interception. And, as the Allies had no carriers in this area, there was practically nothing with which to intercept a Japanese bombing attack on his ships."³² Further resupply was becoming impossible, as the Navy lost its first aircraft carrier, the converter collier USS *Langley* with a deck load of thirty-two P-40s intended for the defenders on Java to Japanese aircraft on 27 February. Raids on Broome in the Northwest Territories destroyed more Allied aircraft and killed forty-five civilians, pushing the Allied air umbrella further south. With air and naval defenses pushed back, Japanese troops could now land at Lae and Salamaua on the northern coast of Papua. Both places had rudimentary airfields which could be improved to extend the Japanese aerial umbrella over the island.

These events in Indonesia and the Java Sea would end any hope of support for the defenders of the Philippines. On 27 February, Japan forced Allied naval forces to evacuate Jakarta due to air raids and fuel shortag-

es. Incomplete intelligence left the Dutch naval commander fighting blind. “ADM Doorman, on the other hand, had to play a fatal game of blindman’s bluff. He had no planes of his own, and intelligence relayed through the cumbersome chain of command in Surabaya never reached him in time,” effects easily duplicated today with a degradation of space-based reconnaissance and cyber assets.³³ Even though he possessed superior strength on the ocean’s surface, he could not overcome deficiencies in air cover brought about by Japanese pressure on Allied air bases. In the decisive battles in the Java Sea, “ADM Doorman’s Striking Force was not greatly outnumbered or outweighed in ships and gunfire, and on the whole his shooting was better than that of the enemy. The main factors, any one of which doomed him to defeat, were the almost complete lack of air power whether for protection, scouting or spotting, bad communications, and the enemy’s vast superiority in torpedo materiel and tactics.”³⁴ Duplicating their plans for the Philippines, Japanese forces landed on Java on 1 March, quickly seizing airfields, and had captured Jakarta, then known as Batavia, by 5 March.

By the first week of April, the Japanese even pushed a strong naval force, consisting of five battleships and two aircraft carriers, as far as the Indian Ocean where they attacked British naval forces based there and raided bases at Colombo and Trincomalee on Sri Lanka. They thoroughly wrecked the harbor, sinking two cruisers and the aircraft carrier HMS *Hermes*, forcing the British to retire to the west coast of Africa, denying their access to Southeast Asia and protecting the rapidly-expanding Japanese empire’s new western flank. The British could only console themselves with the heavy losses they had inflicted on the Japanese carrier air wings, which were beginning to suffer attrition that would impact their performance in future battles. Two weeks later, on 18 April, LTC James H. “Jimmy” Doolittle led his own carrier-based raid on Japan which inflicted little damage, but lifted American morale and, like probing offensive cyber-attacks, caused the defenders to devote additional resources to defensively protecting vital military, political, and economic resources.

The Reduction of Bataan and Fall of Corregidor

By the time the Japanese opened their final assault on Bataan on 6 April, their attack landed on a brittle shell. A massive artillery and air bombardment destroyed entire units before the attack even jumped off. Frontline units melted away, counterattacks sent to restore the line lacked the strength to push through to their objectives. Down to 800 men and unable to counterattack, the remnants of the Philippine Division clung stubbornly to their defensive positions, but were reduced to only 160 men by 8 April.³⁵ Japanese forces broke through the center of the Allied line and

threatened the hospitals in the rear area at the southern tip of the peninsula. Fearful of what the Japanese might do to these defenseless prisoners, MG Edward King, who had taken over the Bataan defenses when Wainwright assumed MacArthur's former post on Corregidor, felt he had no recourse but to seek terms. The Japanese held such complete mastery of the air that they even bombed and strafed King's convoy repeatedly *en route* to the surrender negotiations.³⁶

The lack of resources, including basic supplies such as food and medicine, would eventually prove decisive.

The men on Bataan were already defeated and had been for almost a week. Disease and starvation rather than military conditions had created the situation in which General King now found himself. The men who threw away their arms and equipment and jammed the roads and trails leading south were beaten men. Three months of malnutrition, malaria, and intestinal infections had left them weak and disease-ridden, totally incapable of the sustained physical effort necessary for a successful defense.³⁷

On the evening of 8 April, the defenders destroyed hundreds of thousands of rounds of small arms ammunition, along with four Navy vessels at Mariveles. For all the time and effort the Army expended on designing weapons, training in advanced tactics, and supplying ammunition, the US military effort was ultimately defeated by a simple lack of food. According to Wainwright, "Physical exhaustion and sickness due to a long period of insufficient food is the real cause of this terrible disaster."³⁸ The Bataan garrison's final revenge on their attackers was to pass along the malaria that afflicted them to their captors through its mosquito-borne vectors. Japanese malaria rates spiked so high in the weeks after the collapse on Bataan that they considered delaying their final assault on Corregidor until they could receive additional reinforcements.³⁹

The loss of Bataan sealed the fate of the "Rock." All of the island's defenses were oriented towards the open mouth of the bay, not the shoreline on the northern flank which, it had been assumed, would remain in friendly hands. The Japanese attackers could now emplace heavy artillery on the tip of the Bataan Peninsula and shell the island, which struggled to respond. With no Allied airfields remaining in the islands, Japan could also bomb the island almost at will.

The air raids had comparatively little effect, as the anti-aircraft defenses held the attacking aircraft high enough to affect their accuracy, but

the 240-mm guns emplaced on Bataan savaged Corregidor. The relentless pounding of the Rock took its toll, shredding beach defenses and knocking out gun emplacements. While the defenders could shelter underground, their weapons had to remain in position to repel any landing and slowly succumbed under the weight of the attack. The loss of the land battle on neighboring Bataan had doomed the naval and Marine garrison to their fate. A strongly-supported Japanese landing on the night of 5 May overwhelmed the beach defenses and established troops ashore which could not be dislodged. Again, fearful of the fate of his wounded crowding the hallways of the Malinta Tunnel, and with no prospects for anything to be gained from continued resistance, Wainwright surrendered the garrison, consigning the survivors to their fate. For too many, this consisted of a brutal journey to prison camps in the interior where their captors shot or bayoneted any of the disease-ravaged men who fell out, earning the ordeal the name the “Bataan Death March.” Ironically, Corregidor fell with a month’s rations still on hand but with its water supply, which required electricity for pumping, almost destroyed. “There was only enough water to last four more days at most and no prospect that the pipes and pumps could be repaired.”⁴⁰

Only an Allied victory (though technically a draw) in the naval battle in the Coral Sea on 7 to 8 May could cushion the blow of the loss of the Philippines. Rapid Japanese expansion and “victory disease” had caused Japan to get sloppy and prevented distribution of codebooks to far-flung forces. Allied codebreakers were now able to divine Japanese intentions and the US Navy positioned two carriers in the path of an invasion force headed for southern New Guinea. The carriers fought the Japanese forces to a draw, trading one American fleet carrier for a Japanese light carrier, but halted the invasion, as American land-based air in Australia harassed the transports. By checking Japanese advances towards Port Moresby, the new bases in Australia now seemed reasonably secure. As Winston Churchill would say after the battle of El Alamein, “Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.”⁴¹

After six months of resistance, the defense of the Philippines proved the impossibility of ground defense without support from other domains, in this case, the air and the sea, but today would include information and communications superiority provided by space-based and cyber assets. Further, it vindicated the Japanese A2AD strategy, as any enemy that can effectively deny access to an area and limit maneuver within it will likely prevail. The British defenders of Singapore suffered a similar fate in

February 1943, when, cut off from air and naval resupply, the entire 8th Australian Division also went into brutal captivity, suffering thousands of deaths in prison camps in Borneo and in the “Sandakan Death March.”

As American ground forces redeployed stateside at the conclusion of the Cold and First Gulf Wars, American defense planners faced a planning problem similar to that faced by joint planners in the Pacific in World War II: US forces would now have to win the sea and air battles, just to reach the theater, before they could even engage in the land battle. Rather than defending with forward forces, as in the Cold War, they would now have to race to relieve beleaguered garrisons or, as MacArthur would do in the years ahead, marshal sufficient combat power to forcibly reenter the theater. Between January and March of 1942, over 80,000 troops sailed for Australia to form the nucleus of what would grow into an Allied Army Group capable of conducting a counteroffensive. As their commander, MacArthur first said in an oft-repeated speech, while changing trains in Terowie, South Australia on 20 March 1942, “I came through and I shall return.”⁴²



Early Launch, by James Dietz. Image courtesy of the artist.

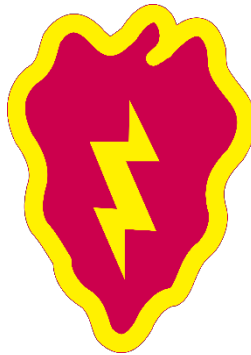
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Chapter 2

Multi-Domain Battle

**The Solomon Islands Campaign, 1942-1943:
The 25th Infantry Division**



The campaign for the Solomon Islands chain, including the major islands of Guadalcanal, New Georgia, and Bougainville, clearly demonstrated how ground combat depended on the successful control and exploitation of the air and maritime domains. Japanese forces landed on Guadalcanal in the spring of 1942 and began to construct an airfield, which threatened vital sea lines of communication between the US West Coast and MacArthur's forces in Australia. A Marine landing on 8 August 1942 precipitated a six-month long attritional battle in which Allied air, ground, and naval forces symbiotically combined to attrite Japanese military strength and win the first Allied ground victory of the war in the Pacific. From the hard-won Guadalcanal foothold, ground, air, and naval forces advanced up the Solomon island chain, eventually neutralizing the massive Japanese complex at Rabaul on New Britain, removing a thorn in MacArthur's flank and facilitating his advance up the northern coast of New Guinea towards the Philippines. Perhaps more than any other campaign in history, the Allied effort in the Solomons clearly demonstrates how interconnected air, ground, and naval forces are and how each depends vitally on success in the supporting domains in order to achieve success in its own. The addition of space and cyber domains does not alter this calculus — success in each depends materially on the effort expended and effects achieved in every other domain.

The US Army's 25th Infantry Division saw as much service in this campaign as any other ground unit. It closed out land combat on both Guadalcanal and New Georgia, and was initially scheduled to make the landing on Bougainville before being retasked to make an unopposed landing on the smaller island of Vella Lavella, off of New Georgia. It benefitted as much as other unit from the valiant efforts to win control of the air and sea domains, and was able to successfully exploit these victories to secure essential bases for follow-on operations. While Marine forces justly deserve credit for the victories on Guadalcanal, the 1st Marine Division, despite serving longer and suffering heavier casualties than any other division that fought on the island, had to be relieved before the conclusion of the campaign, largely because the air and sea domains were still heavily contested during the division's four months on the island. In contrast, the 25th Infantry Division, despite being on the island for the shortest length of time and suffering the fewest casualties, made the greatest territorial gains and saw the last Japanese forces evacuated from the island. The 25th's experience highlights the importance of the air, naval, and especially ground battles won earlier to first wrest control from the Japanese and then hold it against determined counterattacks that made the final exploitation possible. The

entire campaign could not have been fought, let alone won, without close cooperation between all the services and therefore clearly demonstrates the value of fighting and winning the multi-domain battle.

Background

By the late spring of 1942, Japanese forces remained in the ascendancy across the Pacific. After the American garrison in the Philippines surrendered during the first week of May, the conquest of the “Southern Resources Area” was largely complete. British naval forces had been pushed back to the eastern coast of Africa by a successful carrier raid on Royal Navy bases on the island of Ceylon (Sri Lanka), just south of India, and American and Australian forces absorbed heavy air raids while clinging to New Guinea, the last barrier between the expanding Japanese empire and Australia itself. Only the naval battle in the Coral Sea in May, a tactical draw but a strategic victory in that it repelled an amphibious force destined for the Allied supply hub of Port Moresby, had upset the string of Japanese successes thus far.

An event in late April would put the Japanese on a far more dangerous course. On 18 April, LTC James H. “Jimmy” Doolittle led a force of sixteen AAF B-25 medium bombers off the deck of the USS *Hornet* and over the Japanese home islands before traveling on to Nationalist-held areas of China. The raid, an embarrassment to the Japanese military, convinced them that their defensive barrier had to be expanded further, primarily by the capture of the Aleutian Islands off Alaska and Midway in the Central Pacific. The US Navy, alerted by skilled cryptographers in the Pacific Fleet headquarters, accurately divined the Japanese intentions, enabling the Navy’s carriers to effectively oppose the planned invasion of Midway. The resulting victory further demonstrated the value of accurate intelligence to military operations, no matter what technology enables its collection.

On 4 June 1942, flying from the besieged island of Midway, MAJ Lofton R. Henderson, commanding officer of VMSB-241, led sixteen Marine SBD dive bombers in an attack on the Japanese carrier force escorting the invasion force. The carrier’s combat air patrol destroyed Henderson’s plane and he posthumously received the Navy Cross for his efforts to disable the Japanese carriers. Though his squadron scored no hits, they did force the carriers to maneuver and contributed to a delay in the recovery, refueling, and rearming of their own aircraft. This and other attacks facilitated the destruction of all four Japanese carriers by a strike that arrived just over an hour later, when dive bombers from the US carriers *Enterprise* and *Yorktown* found the decks of the Japanese flat-tops loaded with fuel

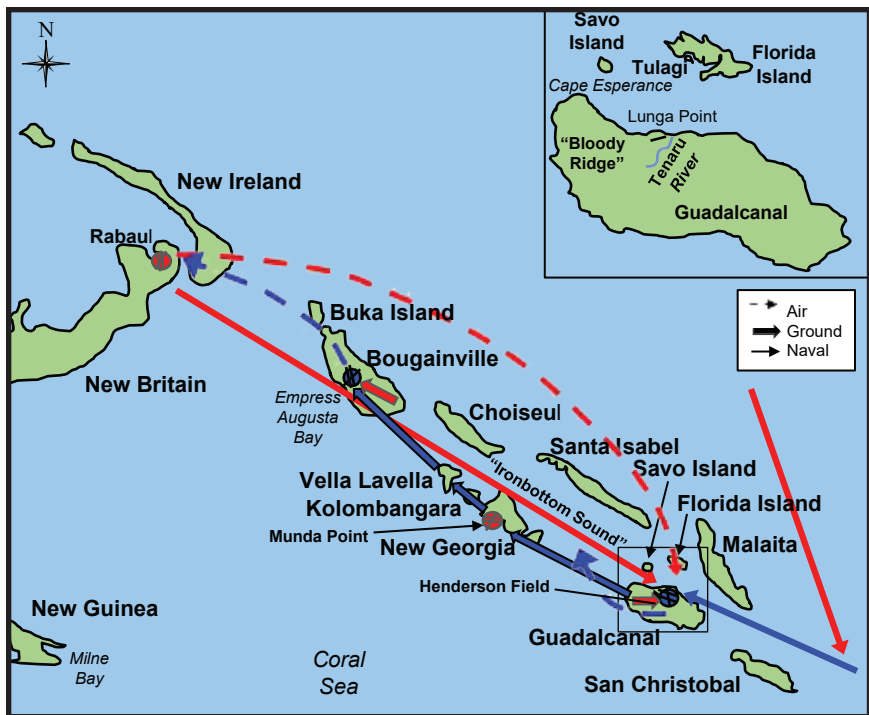
and bomb-laden planes. The battle provided the US Navy some freedom of action, as it leveled the carrier disparity in the Pacific, and enabled the Allies to assume the initiative in the theater. Without control of the skies over Midway, or the seas around it, the Japanese invasion force had to turn back, sparing the island's beleaguered defenders from an amphibious assault and preserving the airfield as a sentinel for the base at Pearl Harbor.¹

Guadalcanal and the Initial Landings

Guadalcanal earned its name in the sixteenth-century when the explorer Pedro Valencia named it after his hometown in Spain. The island, near the southern end of the Solomon Island chain, measures roughly ninety miles by thirty miles. Samuel Eliot Morison, who both visited the island and later wrote the Navy's official history, described it as "fecaloid," which is an apt description of both its oblong shape and its composition. Lying just sixty miles south of the equator, its coastline features dense jungles and mangrove swamps which provided a number of obstacles to human habitation, not least the malaria-carrying mosquito. Inland, coral ridges pushed up from ocean floor hosted dense stands of towering hardwoods that shielded the tangled jungle floor from observation, with the only clearings filled with patches of six-foot tall, razor-edged kunai grass. Habitation was densest along the coast where the few native villages and the colonizers' coconut plantations dotted the shoreline.

In April 1942, Japanese troops landed on Guadalcanal, and began construction on an airfield on the flat coastal plain near Lunga Point. Without heavy equipment, the work proceeded slowly, and was not unnoticed by the Allied reconnaissance aircraft based in the New Hebrides, now the island nation of Vanuatu. On 23 July, and again on 25 July, Army Air Forces B-17s conducted a photo reconnaissance of Guadalcanal, using navy cameras operated by Marine photographers, and learned that the Japanese airfield was nearing completion.² The threat posed by Japanese land-based bombers based at Guadalcanal to shipping as far south as New Caledonia, and the new base's ability to deny access into the Solomons, spurred planners to begin preparations to retake the island and complete the unfinished airfield. The 1st Marine Division left San Francisco in June for New Zealand with two regiments, the First and Fifth Marines, but neither was combat-loaded. The division's third regiment, the Seventh Marines, was then garrisoning Samoa.

Initial plans called for a preparatory landing on Tulagi Island, twenty miles north of Lunga Point, to provide a secure anchorage, followed



Map 3. Operations on Guadalcanal and the Solomons. Graphic prepared by Army Press Staff.

by the main assault on Guadalcanal itself. Planners did not expect the Japanese engineer, garrison, and communications troops to offer much resistance, but the threat of a strong naval and air response, followed by counter-landings from troops further up the Solomons, meant that the airfield would have to be secured quickly in order to prepare for an all-around defense against air, ground and naval attacks. Despite the rushed planning, the initial landings succeeded with little difficulty, as the marines secured both Tulagi and the airfield, which the Marines rechristened Henderson Field, in honor of MAJ Henderson's efforts at Midway. However, the landings triggered an aggressive response by Japanese air and naval forces, which threatened the vulnerable transports still unloading the Marines' supplies of ammunition, food, and heavy equipment.

ADM Jack Fletcher, commanding the carrier covering force was nervous about risking his three remaining fleet carriers within the range of Japanese land-based aircraft and elected to withdraw on the evening of 7 August, leaving a small surface force of heavy cruisers to protect the transports still littering the beachhead. On the night of 8 August, the Japanese Navy sent the first of what would become regular runs down the "Slot"

between the parallel chains of islands that make up the Solomons, which would become known as “Ironbottom Sound” due to the number of ships sunk there. In the night battle off Savo Island, the US Navy suffered one of the worst defeats in its history, as seven Japanese heavy cruisers sank five Allied cruisers, leaving the transports virtually unprotected. Only ADM Mikawa’s early retirement, to clear the area before dawn when aircraft would surely be searching for him, saved the transports from destruction. The American submarine *S-44* extracted the Allies’ only revenge by sinking a single cruiser. Without air or naval protection, the transports retired with almost half of the Marines’ supplies still aboard, including valuable radar and radio equipment. As the Army’s official history noted, “The departure of the Air Support and Amphibious Forces left the 1st Marine Division alone in the Guadalcanal-Tulagi area exposed to Japanese attacks, without air cover or naval surface support.”³

Without air or naval support, the Marines were indeed on their own until resupply and reinforcement convoys could break through to the island. In the meantime, the garrison supplemented their rations with captured Japanese rice, and Navy Construction Battalions (Seabees) labored to complete Henderson Field in order to help defend the island by interdicting the flow of Japanese reinforcements and supplies. At the same time, the Japanese unsuccessfully attempted to cut the flow of supplies and reinforcements to the beleaguered garrison. The Americans, with control of the air, could operate safely during the day and brought up convoys from Noumea, New Caledonia, surprisingly unopposed by Japanese submarines, which doctrinally preferred to focus on combatant ships. But at night, when darkness grounded the aircraft, the Japanese, with their penchant for night fighting, owned the waters off Guadalcanal and rushed through convoys from their base at Rabaul on New Britain to land troops on Guadalcanal. This back and forth contest would continue for months, as neither side could fully secure its lines of communication, leading to a lengthy, attritional campaign fought around the airfield’s perimeter. Thus the die was cast — whichever side could ensure its own access while preventing the enemy’s would prevail.

The Battles of the Tenaru and “Edson’s Ridge”

The Japanese struck the first blow when over 1,000 men of the 28th Infantry Regiment landed just east of the Marines’ perimeter on 19 August. In what became known as the “Battle of the Tenaru,” Marines entrenched behind the river easily contained what was to become the first of many counterattacks against the perimeter and virtually annihilated the entire attacking force. To this point, the underwhelming Japanese effort represent-

ed a flawed understanding of just how many American troops were on the island. Japanese commanders initially thought the operation was simply a raid to destroy the airfield and did not really expect the Americans to try to hold it in strength. Now fully aware of the garrison's strength, the Japanese resolved to send in a much larger force in mid-September.

The next day, 20 August, Henderson Field opened for business by welcoming 19 F4F Wildcats of VMF-223 and 12 SBD Dauntlesses of VMSB-232 flown in off the escort carrier Long Island. Unwilling to risk the slow, heavily-loaded transports in contested waters, the Navy pressed its fast destroyers into service to bring in aviation fuel, bombs, and the Marine squadrons' ground crews. Aerial resupply supplemented the effort, as twin-engined R4D's (C-47's) of Marine Air Group 25 brought in critical commodities and evacuated the most serious medical cases. "These planes made daily flights from Espiritu Santo to Guadalcanal, usually bringing in 3,000-pound cargo loads, and evacuating sixteen litter patients per trip."⁴

On 22 August, ships brought in the remainder of a third regiment for the 1st Marine Division, the Second Marines, to reinforce the battalion that had captured Tulagi. That same day the Army Air Forces made their first contribution when five P-400's (the export version of the P-39 Airacobra) of the 67th Fighter Squadron arrived, augmented by nine more on 27 August. The Navy's effort was not entirely planned, as dive bombers from the USS *Enterprise* arrived on 24 August after their carrier suffered heavy damage in the naval Battle of the Eastern Solomons. On 31 August they were joined by the *Saratoga*'s complement after that carrier suffered torpedo damage while patrolling south of the islands. This tri-service conglomeration operated as the "Cactus Air Force" (Cactus was the code name for Guadalcanal), all under the direction of Marine Air Wing One, commanded by the indomitable Marine BG Roy Geiger. As one historian put it, "Marine, Navy, and Army fliers flew on missions together, lived through bombing raids together, and many died together aloft or in foxholes."⁵

Heavy attrition threatened the survival of the Cactus Air Force. After just four days, only three of the original P-400s were left. In addition, the aircraft lacked an oxygen system, limiting the fighters to operations at lower altitudes. As a result their mission changed from air superiority to ground attack, thanks in part to the installed 37mm cannon and six .50-caliber machine guns. Ironically, only the Marine Wildcats could reach the high altitudes where the Japanese twin-engined "Betty" bombers operated, with the result that, in a conflation of contemporary roles, Marine air performed the air superiority mission, while the Army Air Forces executed Close Air Support. The ubiquitous Marine and Navy dive bombers, which

had sunk all four Japanese carriers at Midway, eclipsed the efforts of both. As the AAF's official history noted, "Yet the dive bomber, despite its vulnerability, proved to be a deadly weapon against all types of ships within 200 miles of Henderson, and it is reasonable to assume that the AAF crews could have made an equally brilliant contribution to the defense of Guadalcanal had they flown their own A-24 dive bombers," instead of the outclassed P-39s.⁶ Why they did not, and why the AAF chose to end procurement of their version of the lethal Dauntless, the A-24, at about the same time, is a story for another day.

The Cactus Air Force came into operation at a critical time, as Japanese destroyers and transports attempted to run in a reinforced regiment to wipe out the beachhead. These efforts precipitated the naval Battle of the Eastern Solomons on 24 August, which demonstrated that neither side yet controlled the seas around the islands. Air attacks that day prevented 1,500 Japanese troops from landing, and two days later dive bombers sank another transport with over 1,000 troops on board, and duplicated this effort by repelling another landing force embarked on destroyers two days later. Finally, on 1 September, the Japanese managed to sneak in a force of over 1,000 troops past a Cactus Air Force weakened by daily air raids and attrition. Additional reinforcements ran down nightly in the fast destroyers of the "Tokyo Express," increasing this force to near 6,000 by mid-month, including the remainder of the Japanese 28th Infantry Regiment and the 124th Infantry of the 18th Division, all of which now posed an immediate threat to operations from Henderson Field. Fortunately, the hasty unloading had prevented the Japanese troops from bringing in any heavy weapons, and the Marines' advantage in artillery would play a decisive role in the 12 to 14 September "Battle of Bloody Ridge," later renamed Edson's Ridge, for the commander of the Marines' raider battalion that held the ground during the fight. Despite being pushed back almost to the edge of the airfield, the outnumbered raiders held the perimeter and destroyed the attacking formation. The heavy fighting, combined with the high disease rates on the swampy, malarial island, depleted the Marines' ground strength, necessitating reinforcement (really replacement) on 18 September with arrival of the Seventh Marines. In addition to the combat losses, over 1,000 men had been evacuated due to debilitating disease. The reinforcement cost the Navy heavily, as on 15 September, the Japanese submarine *I-19* torpedoed and sank the carrier USS *Wasp* while it covered the Seventh Marines' troop convoy.

"Bloody Ridge" and "The Bombardment"

The most serious threat to control of Guadalcanal came in late October, when the Japanese sent most of two divisions, the 2nd and 38th, supported by heavy 150mm guns to the islands. Daily bombing raids flown down from Rabaul combined with increasing cases of combat fatigue among the island's flyers. The pilots flew multiple sorties each day in aircraft that mechanics were barely able to keep in flying condition, followed by restless nights interrupted by both mosquitoes and "Washing Machine Charley," a night-raiding Japanese biplane that would circle the airfield and drop anti-personnel bombs at random intervals. Combat losses resulted in high attrition in the Cactus Air Force. Most of both Japanese divisions snuck through the cordon in late September and early October, but the troops had to haul their heavy equipment and supplies across miles of trackless jungle before they reached the perimeter around Henderson Field.

At the same time, the 1st Marine Division was gradually reaching the limits of its endurance, as the reinforcements had barely been able to replace steady losses, most from disease, among the regiments defending the perimeter. As a result, MG Millard Harmon, commanding all the Army forces in the theater, ordered the commitment of elements of the "Americal Division" to reinforce the Marines. Formed from three "orphaned" infantry regiments left over from the triangularization of all infantry divisions just prior to the war and shipped as reinforcements to New Caledonia, the division took its name as an abbreviation for the "*American-Caledonian* Division," after the island where it had been officially formed. Its three regiments were the 132nd Infantry, formerly of the Illinois National Guard's 33rd Infantry Division, the 164th Infantry from North Dakota, formerly of the 34th ID, and the 182nd Infantry from Massachusetts, formerly attached to the 26th ID. Harmon sent the 164th first, raising Guadalcanal's troop strength to roughly 23,000 men, arriving just in time to help the Marines repel a major Japanese assault.

The convoy bringing the first Americal regiment to Guadalcanal triggered another naval battle, the 11 October Battle of Cape Esperance, when the covering force engaged a substantial Japanese flotilla attempting to bring in their own ground forces. The Allies outnumbered the Japanese in cruisers by a 4-3 margin and benefitted from increased use of radar to counter the Japanese advantage in night operations, fighting them to a draw. However, both forces had achieved their primary objectives, which was to escort transports carrying ground forces to the island. Over 1,000 Japanese troops landed as the naval battle raged while the men of the 164th arrived safely two days later. An inability to resolve affairs on the water meant the attritional land battle would continue.

Japanese warships welcomed the 164th to Guadalcanal with what become known simply as “The Bombardment.” On the night of 13 October, two Japanese battleships escorted the nightly “Tokyo Express” but, to provide some measure of safety for future runs, broke off and bombarded Henderson Field with almost 1,000 14-inch shells, knocking roughly half of the planes on the field out of commission and destroying virtually all of the Cactus Air Force’s fuel reserves, necessitating another emergency airlift by the C-47s loaded with twelve fuel drums each. For the next two nights, unopposed Japanese cruisers repeated the feat, preventing Allied aircraft from interfering with the landings. The shore bombardment of land-based aircraft was yet another creative use of cross-domain fires, whereby weapons systems designed to operate in one domain decisively influence another. Throughout the campaign, the fortunes of the ground forces ebbed and flowed with the success or failures of supporting naval forces bringing in supplies and reinforcements. These convoys depended heavily on air protection, supplied by either carrier – or ground-based aircraft. The Japanese use of heavy naval forces against land-based aircraft was an attempt to counter the Allied advantage of using their aircraft to control the maritime domain. The Marines’ lack of shore-based coast artillery prevented them from interfering with the shore bombardment or interdicting the Japanese transports, which subjected the air forces at Henderson Field to bombardment by land-based artillery as well. Each domain depended vitally on the other in order to achieve victory, as the Navy’s official historian observed, “The Guadalcanal campaign is unique for variety and multiplicity of weapons employed and for coordination between sea power, ground power and air power.”⁷

The Japanese 2nd Division finally launched their attack on the night of 24 October, again down the land feature known as Bloody Ridge, where it ran into LTC “Chesty” Puller’s depleted First Battalion, Seventh Marines, supported by two battalions of the 164th Infantry. During the battle, riflemen of the Third Battalion of the 164th and the Marines of Puller’s battalion of the Seventh fought intermingled, with men of both units often sharing the same fighting position. The Marines’ experience in the previous attacks, bolstered by the 164th’s manpower, all supported by artillery and ammunition run through the gauntlet of Japanese air and naval attacks on the island, proved decisive, as the attackers again suffered heavy casualties in unsophisticated frontal assaults.

While the land battle raged, the Imperial fleet again sortied in support and engaged a US carrier force from 25 to 27 October in the air and sea

“Battle of Santa Cruz Islands.” US naval units included two new fast battleships, supporting two aircraft carriers with over 170 aircraft embarked, with another sixty available ashore. The Japanese sent four battleships and four carriers (including two smaller escort carriers), with over 200 aircraft augmented by another 200 at the various land bases in the theater. In what would become the US Navy’s costliest naval battle until Okinawa, the service lost the carrier *Hornet*, which, fortunately, would be the last fleet carrier sunk in the war, and sustained heavy damage to the *Enterprise*, which made another carrier air wing available for the Cactus Air Force. The 1st Marine Division was still holding on to the airfield on Guadalcanal, but was exhausting itself in the process. As the Army’s official history summed things up: “Thus far in the campaign, Allied air and naval forces had fought valiantly, but had not yet achieved the result which is a requisite to a successful landing on a hostile island — the destruction or effective interdiction of the enemy’s sea and air potential to prevent him from reinforcing his troops on the island, and to prevent him from cutting the attacker’s line of communication.”⁸

US Army Reinforcements

The three months of fighting, including the major assault in October, threatened to sap the four Marine regiments of their offensive strength. In November, the Americal division’s remaining two regiments arrived on the island, as well the 147th Infantry Regiment of the 37th Division (Ohio National Guard). The Marines began sending the 2nd Marine Division, whose Eighth Marines arrived with the 147th Infantry on 4 November. These reinforcements permitted limited counterattacks from the



Figure 4. Reinforcements landing on Guadalcanal. Image courtesy of the Center for Military History.

perimeter which inflicted heavy casualties on the emaciated Japanese suffering in the jungle and provided greater security. With Hawaii now safe from attack, on 3 November Harmon formally requested that the island's garrison, the 25th Division, move to Guadalcanal as well. The 25th had been alerted for movement on 14 October but did not receive formal orders from the Joint Chiefs until 30 November. The 25th would augment the Americal Division, which was already weakened from the grinding, attritional battles and filled sickbays with North Dakotans who succumbed rapidly to the tropical environment's enervating heat and deadly diseases. Constant reinforcement became necessary just to maintain strength: "Between 19 and 25 November 117 of the 164th had been killed, and 208 had been wounded. 325 had been evacuated from the island because of wounds or illness, and 300 more men, rendered ineffective by wounds, malaria, dysentery, or neuroses, were kept in the rear areas."⁹

The 25th Division had been formed on 1 October 1941 when the War Department split the old "square" Hawaiian Division in two, forming the new 24th and 25th Divisions, each retaining the old division's taro leaf as part of its divisional insignia. After triangularization, the 25th boasted two regular regiments, the 27th and 35th Infantry, and the Hawaii Territorial Guard's 298th Infantry. After 7 December, unfounded suspicions about the latter regiment's reliability coupled with concerns about the ability to distinguish between its soldiers, many of whom were Americans of Japanese ancestry, and the enemy on the battlefield, led to its replacement in August of 1942 with an orphan regiment from the 41st Division, the Washington National Guard's 161st Infantry. After providing the Pacific theater with a number of trained linguists, many of the men of the 298th would go on to serve with distinction in the European Theater in the 100th Battalion of the famed 442nd RCT, the most-decorated Army unit of the war. New Orleans native and 1917 West Point graduate J. Lawton Collins, a future corps commander in the European Theater of Operations and later Army Chief of Staff, commanded the division from May 1942 until December 1943. The division embarked immediately upon receipt of orders, and the first units arrived on Guadalcanal by mid-December.

After the unsuccessful October assault on Bloody Ridge, the Japanese began to doubt their ability to wrest control of the airfield from the Americans, and realized that they were now locked in a brutal attritional battle that was draining away air and naval strength in the Solomons. Unable to disengage, they would continue to harass Guadalcanal with new attacks

from the jungle, air raids, and sorties of the “Tokyo Express” down “Iron-bottom Sound.” The increasing US naval strength in the Solomons made these nightly reinforcement and harassment runs even more hazardous. On the night of 12 November, two Japanese battleships again sortied down “The Slot” hoping to damage Henderson Field sufficiently to permit eleven large transports to bring over 7,000 troops into Guadalcanal. Alerted by ever-present aerial and submarine reconnaissance, ADM Halsey dispatched a strong cruiser force to halt the Japanese and escort American ground reinforcements. The resulting engagement demonstrated that the Americans had still not won control of the seas, as the five American cruisers all suffered heavy damage, with the *Atlanta* sunk and the damaged *Juneau* later torpedoed and lost. In exchange, the cruisers heavily damaged the Japanese battleship *Hiei*, which aircraft from Cactus finished off the next morning. The battle had prevented the Japanese transports from reaching the island, necessitating another attempt two nights later.

This time Halsey, tired of bringing “knives to a gun fight,” sent in his two modern, fast battleships, the *Washington* and *South Dakota* to oppose the Japanese battlecruisers. *South Dakota* contributed little and suffered heavy damage, but *Washington*, in one of only two battleship actions in the war, sank the battleship *Kirishima*, sparing Henderson another bombardment like the one it received in October. By sinking a second Japanese battleship, the force had evened the score for the two US battleships lost permanently as a result of the attack on Pearl Harbor. The next day, Cactus Air Force planes found and sank all eleven transports, but several had already beached and began unloading, allowing 4,000 troops to reach shore, minus their heavy equipment. With the Navy now committed to protecting the airfield, Japanese hopes for another assault like the one in October were dashed, and the Battle of Guadalcanal had turned a corner. The inability to safely shepherd the eleven fully-loaded transports into Guadalcanal signaled the end of Japanese efforts to overrun Henderson Field or to neutralize it from the air or sea. Cutting their losses, they began construction on a new airfield at Munda Point on the island of New Georgia, to provide an additional obstacle between the Americans and Rabaul.

Two weeks later at the Battle of Tassafironga, the Imperial Japanese Navy showed they still had some teeth, as destroyers equipped with the lethal “Long Lance” torpedoes savaged an American cruiser force, sinking one and damaging three more. American intelligence had remained woefully unaware of this weapon’s capabilities, which far exceeded that of the faulty American torpedoes. With the ground reinforcements, the Cactus Air Force also received additional support. By the time of the

November battles, air reinforcements had arrived from Espiritu Santo, including the first long-range P-38s of the 339th Fighter Squadron, as well as three other full squadrons. "Cactus" now boasted a total of 41 F4F Wildcats, 30 SBD Dauntlesses, 19 TBF-1 Avengers, two surviving P-400s, plus the survivors of *Enterprise's* air wing, as well as the first coalition support when 12 Lockheed Hudsons from the Royal New Zealand Air Force's No. 3 Squadron arrived on 24 November. The force gained a longer range bombardment capability in late December when the AAF's first B-26s arrived.¹⁰

The 25th Infantry Division on Guadalcanal

The following month, lead elements of the 25th Division relieved the weary Marines. As Vandegrift's divisional headquarters now controlled two full divisions' worth of troops, the Army sent LTG Alexander Patch's new XIV Corps to direct the battle. When activated on 22 January 1943 with three full divisions, the corps controlled over 50,000 troops, a testament to the American ability to build up combat strength in theater, due largely to control of the air and the sea lines of communication. Patch's corps had the full Americal Division and benefitted from almost weekly arrivals along his now unhindered supply line. The 25th Division's 35th RCT arrived on 17 December, followed by the 27th on 1 January 1943 and the 2nd Marine Division's Sixth Marines on 4 January to augment the Second and Eighth Marines already on the island. The same convoys bringing in the fresh soldiers evacuated the spent marines, with the Fifth Marines leaving on 9 December, the First Marines on 22 December, and the Seventh Marines on 5 January 1943.

Japanese planners realized they could no longer sustain their forces on Guadalcanal and began planning an evacuation. However, they would sell the real estate they held as dearly as they could, particularly the high ground around Mount Austen, which provided observation of Henderson Field and the new airstrips being carved out of the growing perimeter. Assigning the Americal Division to hold the perimeter itself, Patch launched a two-division assault against the Japanese forces to the west, with the 2nd Marine Division advancing along the coast and the 25th clearing Mount Austen and a hill complex, known as the "Gallop-ing Horse" from its appearance on aerial photos, further inland. XIV Corps' assault received support from the Cactus Air Force, now known as AirSols (Air Force, Solomons), under the direction of the 2nd Marine Air Wing. In mid-January, the AAF established 13th Air Force at Noumea, New Caledonia, to coordinate its growing commitment. The ad

hoc formations thrown together during the crisis of the initial battle were finally being formalized, sorted out, and reinforced.

In an attack that began on 10 January, the 27th RCT cleared the Japanese defenders from the slopes, including a stubborn pocket known as the “Gifu” after the defenders’ home prefecture in Japan. Moving on to the “Gallop Horse,” the 25th found logistics, rather than the Japanese, to be their biggest obstacle. At one point, a water shortage, in the words of a platoon leader in the 27th Regiment, “led directly to the disintegration of the attack on 11 January,” in part because, “the water which did start forward was usually consumed before it reached the front line companies.”¹¹ As a student in the Infantry School in 1947, Captain Winston Olson recalled, “the intense tropical heat was taking a heavy toll. Canteens were empty and heat exhaustion was sweeping the battalion... the men lay prostrate due to the lack of water.”¹² As late as 2008, water shortages continued to hinder operations in places as far away as Wanat in Afghanistan.¹³ Airdrops attempted to remedy the deficiency, even pressing the Air Force’s heavy bombers into duty. “On 13 January one B-17 dropped 7,000 pounds in four flights, and two days later another dropped four tons. Rations stood the rough treatment fairly well; 85 percent of the food was usable, but only 15 percent of the ammunition could be used, and nearly all the 5-gallon water cans were ruined.”¹⁴

In the assault on the “Gallop Horse,” CPT Charles Davis of the 25th ID earned the Medal of Honor:

On 12 January, during an attack on a Japanese position, “Captain Davis’ rifle jammed after one round. He threw it away, drew his pistol, and the five men leaped among the surviving Japanese and finished them with rifles and pistols. E Company witnessed this bold rush and, in the words of General Collins who observed the day’s fighting and helped to direct mortar fire from Hill 52, “came to life” and drove uphill to sweep the last Japanese from Sims Ridge.¹⁵

This division struggled in the difficult terrain, as later immortalized in James Jones’ novel, *The Thin Red Line*, but benefitted from fighting an enemy who suffered severely from a lack of logistic support or replacements. Some Japanese soldiers were so weakened by disease and malnutrition that they could not lift themselves from their spider holes to fire.

With the terrain features secured, the 25th ID and 2nd Marine Division pressed forward towards Cape Esperance on the island’s western tip. Using small craft that snuck in under the cover of darkness, the Japanese

evacuated their entire garrison of 11,000 troops on the nights of 1, 4, and 7 February. Operating on a logistical shoestring, the defenders could offer only token resistance, and the 25th's rapid advance earned the division the radio callsign "Lightning," which would be later immortalized both on the division's patch flash and as the division commander's nickname, "Lightning Joe" Collins.

The Japanese experience on Guadalcanal demonstrates that an anti-access, area denial strategy can lead to attritional battles, and the side that can best sustain itself and replace its losses will ultimately prevail. The campaign cost the US Navy two fleet carriers, the same number lost in the battles of Midway and Coral Sea combined. Both navies contributed heavily to the wrecks lining "Ironbottom Sound," with the US Navy contributing over twenty major warships to the ghost fleet on the seafloor, alongside over a dozen from the Imperial Japanese Navy. Neither side could maintain more than a few hundred aircraft in theater. New arrivals quickly became casualties, either in air-to-air action, through mishaps, or by being destroyed on the ground. While the Marine infantryman became the iconic figure of the Battle for Guadalcanal, immortalized in works such as Eugene Sledge's *With the Old Breed* and Richard Tregaskis' *Guadalcanal Diary*, (there is no truth, apparently, to the rumor that a Marine fire team consisted of two riflemen and three photographers!) his fate often rested in the hands of the Marine aviators, who suffered many of the same trials and tribulations on the ground, but faced additional perils in the air. It was Marine fighter and dive bomber squadrons that formed the bulk of the "Cactus Air Force" throughout its existence, and it was their efforts that determined if the Marines on the ground would face an overwhelming number of well-supplied attackers or the sick and diseased survivors of a harrowing trek through the tropical jungles and swamps. Even the accounts of Marine aviators tend to be dominated by coverage of Guadalcanal's fighter pilots, such as MAJ Joe Foss, the future governor of South Dakota, whose twenty-six kills made him the Marines' leading ace of the war, at the expense of the attack pilots who actually sank the troop-laden transports.

Ground forces suffered fearfully throughout the campaign. Combat, disease, malnutrition, war neurosis, fungal infections, dysentery, and a host of other maladies crippled fighting strength. Again, the American ability to sustain and replace losses, and deny the same to the enemy, provided the margin of victory, giving the 25th ID an advantage it was able to exploit in the battle's final month. "The Japanese troops lacked food because air

and naval power had almost completely isolated them from their bases.”¹⁶ As GEN Miyazaki declared: “The superiority and continuous activity of the American air force was responsible for our inability to carry out our plans. The superiority of American Army [sic] planes made the seas safe for American movement in any direction and at the same time immobilized the Japanese Army as if it were bound hand and foot.”¹⁷

While Guadalcanal marked a great victory and was, along with New Guinea, the turning point of the Pacific War on land and in the air, it was also only one island, and a long way from the Japanese home islands. And it had taken six long months and an immense quantity of material to secure, not to mention thousands of casualties from the four full American divisions (two Army and two Marine) eventually committed to the battle. Extrapolating the ground gained against the time and effort expended suggested a long and weary march to Japan which, of course, was exactly the Japanese strategy. By testing the Allied resolve and extracting as high a price as possible, they hoped that their adversaries would eventually tire of the task and accept a settlement that would ensure Japan maintained control of the Southern Resources Area. However, they underestimated the Allies’ commitment to the task. Guadalcanal was a sobering reality check, but it also provided encouragement that the Japanese were not invincible jungle fighters. Their inability to secure their vulnerable logistics presented a fatal flaw. By cutting the defenders off from their bases, each island fortress could be isolated and neutralized. First, ground forces would have to seize air and naval bases close enough to perform this asphyxiating task. The next rung on the ladder was on the hellish island of New Georgia at a place named Munda Point.

New Georgia

After clearing Guadalcanal, XIV Corps took advantage of the lull to get the newly-arrived 43rd Division (Connecticut, Maine and Vermont National Guard) some combat experience and improve the island’s defenses by seizing the Russell Islands just northwest of Guadalcanal. The fighter strip there enabled AirSols to intercept inbound bombers before they reached Henderson or any of the three new airstrips under construction around Lunga Point. The next big push would come against New Georgia, part of a cluster of islets measuring roughly 140 miles by 50 miles, from Mbulo in the southeast to Vella Lavella in the northwest. The main island, New Georgia, featured the same terrain and obstacles as Guadalcanal, except that the Japanese defenders at Munda Point had had time to dig in



Figure 5. Jungle fighting on New Georgia. Image courtesy of the Center for Military History.

and prepare defenses in the island's coral ridges. Unlike the landings at Guadalcanal, they would not be taken by surprise.

The Japanese Navy began the New Georgia campaign with new leadership, as a result of a daring raid that killed the planner of Pearl Harbor, ADM Isoroku Yamamoto. Tipped off again by Navy cryptographers, who had compromised Japanese internal communications in much the same manner used by offensive cyberspace operators, on 18 April 1943, Army Air Force P-38s from the hard-won air base on Guadalcanal embarked on a long over-water approach and intercepted the two bombers carrying Yamamoto and his staff exactly on schedule over the island of Bougainville, where the admiral had planned to inspect naval air units based there. 1LT Rex Barber shot down the admiral's plane, with two .50-caliber bullets striking Yamamoto himself, killing him before the crash. The operation was another feather for inter-service cooperation and a psychological blow for the Japanese.

The Allied plans for taking over flight operations at Munda Point involved a series of landings designed to isolate the garrison, including the main effort on an undefended point only five miles from the airfield. It would take parts of three divisions over a month to hack and fight their way through the dense and swampy jungle before they could accomplish their primary objective. The entire operation had been codenamed "Toenails," but it should have been called "Fingernails," as the 43rd Division was hanging by theirs for much of the assault. To help the main force, the Allies landed two battalions of the 37th Division and a Marine Raider Bat-

talion on the island's northern shore at Barioko, but this force also stalled and could not secure their objective until after Munda fell, making the intended cordon around the airfield a very leaky one. The northern force outran its supplies and had to be supported by tactical airlift. "The Raiders had run out of food and water by midafternoon of 10 July, but were succored by L Company, 145th, which brought rations and water up from Tri-ri. These had been dropped...by C-47's from Guadalcanal."¹⁸ Fortunately, the air and naval forces supporting the invasion were far more effective in destroying reinforcements and supplies sent down the "Tokyo Express," and this tactical interdiction weakened the airfield's defenders to the point where they could no longer resist and retreated into the jungle. Again, success in the ground battle hinged on winning the fight in multiple domains.

As a prelude to the main landings, planners hoped to occupy Segi Point on 30 June to provide a supporting airstrip, but word that the Kiwi coastwatcher who had provided so much valuable information was under imminent threat of capture caused the Marines to land on 21 June to rescue Donald Kennedy and his party of natives. Throughout the campaign, coastwatchers such as Kennedy provided essential intelligence on Japanese operations—those secluded on Bougainville could monitor the airfields there and report take-off times and force composition, not unlike what Serbian nationals near Aviano Air Base in Italy did during coalition operations against Kosovo.¹⁹ Ideally, space-based assets could provide the same overwatch from a distance but, in the absence of these vulnerable reconnaissance assets, "HUMINT," or human intelligence may be needed to fill the void. Should any one domain be denied in any future fight, forces operating in the other domains must be prepared and equipped to assume missions performed by domains where access is denied. Similarly, long range reconnaissance aircraft, especially the Navy's PBY flying boats, conducted regular surveillance, sparing a heavy additional demand on limited air assets. Seaplane tenders hosted amphibians that could turn any smooth stretch of water into an airbase and were used extensively by both sides. The planes themselves could not compete with land or carrier-based aircraft, but were highly effective reconnaissance assets, and remotely-piloted technology offers the same potential for unlimited air bases on the modern battlefield.

Other supporting landings by US and New Zealand troops at Viru Harbor and on Rendova Island went forward as scheduled, the latter placing Munda Point under direct artillery fire, limiting the field's usefulness to the Japanese. As early 6 March, a naval task force of four destroyers had brought Munda under direct cross-domain fires, but the 1,600 5-inch shells were unable to prevent operations for more than a

day.²⁰ By June, most of the aircraft had been pushed back to Bougainville by intense, sustained air raids in the months leading up to the invasion. The air forces now included a host of new fighter types coming off the American drawing boards and factories, including the P-38 for the AAF, the F6F Hellcat for the Navy, and the F4U Corsair for the Marine squadrons. The Royal New Zealand Air Force contributed their P-40 Kittyhawks to the fight as well. Long range B-17s and B-24s, now established on new bomber strips on Guadalcanal, ranged as far as Bougainville and Rabaul to beat down the Japanese air response to the invasion and radar-equipped, night-capable B-24s of the 868th Bomb Squadron interdicted coastal traffic. Beginning in March, Navy and Marine Avengers began seeding mines in the harbors used to unload supplies for the Japanese airfields. AirSols, operating from Munda, continued the finest inter-service traditions established by the “Cactus Air Force.” On 25 July, GEN Nathan Twining, a future Air Force Chief of Staff, took over command of AirSols from ADM Marc Mitscher, as the services continued to rotate the “CFACC” duties among the services, based on the preponderance of forces and types of operations envisioned.

Naval forces remained busy, both in planning and conducting the disparate amphibious assaults on and around New Georgia, while also standing ready to meet any Japanese Imperial Navy units that might sortie to reinforce the defenders or attack the anchorages. On the night of 12 July, the Japanese sent such a force, as a cruiser and nine destroyers, five with troops embarked, attempted to slip into Kolombangara, from which coastal lighters could ferry them to Munda. Two US and one New Zealand light cruiser, supported by ten destroyers, sortied to intercept, meeting just off the island’s coast. RADM “Pug” Ainsworth, in command of the Allied force, suffered heavy damage to all three of his cruisers and lost one destroyer, but also sank the Japanese cruiser with all hands. He could not prevent 1,200 troops from landing on Kolombangara, though, dragging out the battle for Munda.

The Struggle for Munda Point

The 43rd Infantry Division’s landing was uneventful, but the dense jungle behind the beachhead almost immediately began to sap the inexperienced division’s strength. As the New Englanders struggled in the tropical heat, Japanese troops sortied from their defensive positions and circled behind the attackers, cutting supply lines and breaking into rear-area supply depots and hospitals. Electing to use their naval superiority to advantage, the US Navy opened a second beach closer to Munda, but the 43rd, having looped deep into the jungle to avoid the swampy coast, became isolated and

had to fight their way back out to the new beachhead. Harmon became concerned about the division's strength, which included an unusually high number of cases of war neurosis in one regiment, as a result of the Japanese night harassment that denied the exhausted soldiers any rest. Accordingly, he ordered a second whole division, the 37th, and one RCT of the 25th, into line to resume the attack, all under LTG Oscar Griswold's XIV Corps. Unable to coordinate close air support or to accurately spot for their field artillery, the troops required support from a heavy naval bombardment provided by destroyers lying just offshore and firing parallel to the line of advance. The two reinforced divisions finally broke through to the airfield, with the 25th's soldiers clearing the airstrip itself on 5 August. By 14 August, the Allies had the field back in operation, and "Munda airfield, which by mid-October had a 6,000-foot coral-covered runway and thus was suitable for bombers, became the best and most-used airfield in the Solomons."²¹

Frustrated by the month-long campaign to advance through five miles of jungle and take a single airstrip, Allied planners began to modify their strategy of digging hardened Japanese defenders out of every coral atoll in the Pacific, and the 25th Division would play a leading role in the new strategy of "hitting them where they ain't!"²² Despite being scheduled for the landings on Bougainville in November, XIV Corps instead sent two RCTs of the 25th ashore on lightly-held Vella Lavella, just north of the volcanic cone of Kolombangara Island, which by now contained over 20,000 Japanese defenders, including the refugees from Munda and the survivors of the frequent naval engagements just offshore in Vella Gulf.

The 25th Infantry Division's 35th Infantry Regiment went ashore unopposed on 15 August, as "the real struggle for Vella Lavella took place in the air and on the sea. Japanese naval aircraft made a resolute effort to destroy the American ships bearing supplies and equipment to Vella."²³ The most notable example came on the night of 6 August, when six US Navy destroyers under Commander Frederick Moosbrugger met a force of four Japanese destroyers in the Battle of Vella Gulf. Demonstrating a much-improved night fighting ability, Moosbrugger got off a salvo of torpedoes that wrecked three of the enemy ships without suffering any damage. The victory prevented further reinforcement and assured Allied naval forces control of the waters around Vella Lavella.

Once established ashore, the 25th, later assisted by the 3rd New Zealand Division in mopping up the island, enabled the establishment of new air and PT boat bases. These, in turn, so successfully interdicted the flow of vital supplies for Japanese troops on Kolombangara that it was as if the Allies had "put a cork in the bottle" to prevent any air from getting in. "The bypass to

Vella Lavella was easier and cheaper than an assault on Kolombangara.”²⁴ Expanding this small tactical victory to an operational, and eventually strategic scale, the Allies used a similar plan on Bougainville and eventually decided to afford the almost 100,000 Japanese defenders on Rabaul the same treatment. By seizing lightly-defended islands along the Japanese supply route and extending naval and aerial umbrellas over the adjoining waters, the Allies could defeat Japan’s area denial strategy and successfully operate even with strong forces in their rear. Immobilized by a lack of shipping and air transport and steadily weakened by starvation, most of Rabaul’s garrison would still be there when the war ended in 1945. As the Air Force’s official history noted, Japanese bases “now were not much more than isolated prisons containing substantial quantities of men, equipment and supplies, of little value in their current position and incapable of easy movement elsewhere.”²⁵

The following description, penned by John Miller, Jr. in 1959, offers a succinct summary of combat operations in the Pacific throughout World War II, and provides a blueprint for multi-domain battle today. “The New Georgia operation is also significant as a truly joint operation, and it clearly illustrates the interdependence of air, sea, and ground forces in oceanic warfare. Victory was made possible only by the close coordination of air, sea, and ground operations. Air and sea forces fought hard and finally successfully to cut the enemy lines of communication while the ground troops clawed their way forward to seize objectives intended for use by the air and sea forces in the next advance.”²⁶

Bougainville

Once the Allies wrapped up operations on Vella Lavella and the Japanese had evacuated as much of their garrison from Kolombangara as they could, the next logical step up the Solomons chain was the island of Bougainville. Another sizeable island, measuring roughly 120 by 40 miles, Bougainville boasted strong Japanese garrisons at the northwestern and southeastern tips, but was lightly defended in between. In addition, it lay only 180 miles from Rabaul, meaning that the long overwater flights the Japanese had to contend with during the Guadalcanal campaign would be dramatically shortened, and a quicker and more powerful response could be expected in the air and at sea.

The original plan called for a two-division landing by the 25th and 3rd Marine Divisions against Buin, at the southern tip of Bougainville, where the Japanese had several airstrips in operation. However, the 20,000 Japanese defenders on the island were also concentrated in this area, raising the degree of difficulty for the operation and risking another lengthy attritional



Figure 6. Airfield construction on Bougainville. Image courtesy of the Center for Military History.

battle like the ones for Henderson Field and Munda Point. Furthermore, the experienced 25th Division was not yet ready after the landings on Vella Lavella, meaning the less-experienced 37th Division, which had fought alongside the 43rd on New Georgia, would have to deploy in their stead.

Looking for a “soft spot” on Bougainville, where a sufficient beach gradient permitted an amphibious assault, but also where the island’s steep mountains and dense jungles would limit a Japanese overland response, planners in the I Marine Amphibious Corps settled on the beaches around Empress Augusta Bay, an unprotected anchorage roughly half-way up the island’s southwestern side. The same Marine air-ground team that had prevailed on Guadalcanal, LTG Alexander Vandegrift and MG Roy Geiger, would oversee the initial phases before Vandegrift reported to a new assignment in Washington. The Empress Augusta Bay landings cut the distance to Rabaul to only 250 miles, but would also place almost fifty miles of trackless jungle between the invaders and the bulk of the Japanese garrison. In addition, the bay’s shores around Torokina promised only light resistance during the assault phase of the operation.

On 1 November, the 3rd Marine Division went ashore against minimal opposition and quickly seized their objectives, including a thin strip along the shore suitable for development into a field capable of supporting fighter aircraft. The 37th Division followed, taking over the western half of the Marine perimeter, repelling a light Japanese counter-landing of 400 troops in their sector. Supported by naval gunfire, the 8th Brigade of the 3rd New Zealand Division captured the Treasury Islands off Bougainville’s southern coast to harass the Japanese airfields there and

keep the defenders off guard, while Marine raiders landed on nearby Choiseul and made a noisy diversion on that island, providing further confusion and diluting the Japanese response. Naval gunfire from four cruisers pounded Japanese airfields at the north end of Bougainville and strong carrier raids added their strength to prevent Japanese aircraft from interfering with the beachhead.

To limit the aerial response, elements of LTG George Kenney's 5th Air Force, operating from GEN MacArthur's area of operations in New Guinea, combined with a strong carrier task force in beating up the Japanese fields around Rabaul. To replace their heavy losses, the Imperial Navy again flew down its "Sea Eagles," the highly trained crews of the carrier air wings, from their base at Truk, immobilizing the Japanese carriers. In their attempts to break through at Bougainville, they lost 121 of these 173 planes, along with 86 of the 192 aircrew.²⁷ These losses over Rabaul had the added benefit of keeping the Combined Fleet in port while the air wings rebuilt, preventing the carriers from opposing the Tarawa landings in the Gilbert Islands (modern Kiribati) later that month. AirSols also threw in their support, as

General Twining's composite force, Air Command, Solomons, had been striking hard at the northern Solomons bases during the same period and for the same purpose — to knock out the Bougainville bases so that Wilkinson's convoys could sail past in safety. Twining's available air strength had been displaced forward to bases within range of south Bougainville targets. At the start of operations in October, Twining had 614 Army, Navy, Marine Corps, and Royal New Zealand Air Force planes. Of these, 264 fighters and 223 medium, dive, torpedo, and patrol bombers were at New Georgia and the Russells, and 127 heavy bombers and patrol planes were at Guadalcanal.²⁸

Twining moved his headquarters forward from Henderson to Munda on 21 October, and had sixty-four Marine Corsairs flying from Vella Lavella to cover the new beachhead.

As expected, the landings precipitated a Japanese naval response as well. Determined to prevent any interference, the US Navy sent a strong force of four cruisers and eight destroyers to intercept this force, resulting in the 2 November naval Battle of Empress Augusta Bay. Against six Japanese cruisers and six destroyers, the Allies successfully fought off the attackers, with each side trading a destroyer but the Japanese losing a light cruiser as well. Freed from their mission of escorting the carrier

battle groups, the Japanese sent down a strong heavy cruiser force to Rabaul that, if loosed among the transports off Empress Augusta Bay, could isolate the landings and pound the forces ashore with heavy naval gunfire. Alerted to this movement, Allied aircraft met this force on their arrival at Rabaul and heavily damaged five of the cruisers in port, preventing them from sortieing and sparing the Navy another risky and potentially costly night action.

According to the Army's official history, "The ground troops at Cape Torokina could be expected to carry out their missions efficiently only if they were unhampered by Japanese aircraft and warships. Therefore the real battle for the beachhead was fought in the air and on the sea. The primary mission of South Pacific aircraft and warships during the first days of November was protection of the newly won beachhead. In this mission they fought hard and with excellent results."²⁹ The Air Force's official history agreed, noting, "It was in this fashion that land — and carrier — based aircraft functioned together in November to protect the beachhead on Empress Augusta Bay, where with all their weapons and determination the Japanese could not break through to wipe out the narrow lodgment of the Third Marine Division."³⁰ Not to be outdone, Samuel Eliot Morison, writing the Navy's version, found, that the Japanese commander had plans to send 3,000 troops to counter the landings, "but was compelled to abandon these plans because the United States Navy and AirSols had won command of the sea and air approaches to Bougainville."³¹

Freed from any possible interference, the Twenty-First Marines cleared a landmass known as "Hellzapoppin' Ridge," preventing any 150mm artillery the Japanese might be able to haul through the jungle from hitting the new airfields within the beachhead. Coalition engineers from New Zealand had the new airstrip in operation in just two months' time. Strong ground patrols branched out across the primitive trails crisscrossing the island's interior, meeting and delaying the Japanese overland response. In this effort, skilled troops from Fiji proved the most effective, using their knowledge of the South Pacific terrain to set and spring costly ambushes on the Japanese advance, retarding their progress and increasing the time they would have to spend in the malarial jungles before they could marshal sufficient strength for an assault. Meanwhile, troops inside the perimeter eased their supply situation by clearing several acres for and planting gardens: "The hot sun and frequent rains gave them fair returns, and fresh vegetables, normally a rarity in that part of the world, improved the otherwise almost unvarying diet of C and K rations and dehydrated foods."³²

Much delayed by effective patrolling and ambushes, the Japanese response took almost five months to move up from Buin in sufficient strength to

challenge the perimeter. During this time, the 3rd Marine Division had been withdrawn to prepare the amphibious specialists for another landing, and the Americal Division took over their half of the defensive perimeter. In early March, elements of the Japanese 6th and 17th Divisions, much reduced by fatigue and disease, finally reached the beachhead. Their weak attacks, unsupported by air or artillery, barely dented the Allied lines. In one sector, a night attack overran an observation post sited high in a banyan tree and captured several pillboxes, but a sustained counterattack the following day quickly recaptured the lost fighting positions and restored the lines. This would be the last serious threat to the Bougainville beachhead. More patrols met isolated detachments in the jungle outside of the wire, and “Buffalo Soldiers” of the 25th Infantry Regiment, part of the segregated 93rd Infantry Division, arrived after the Japanese counterattack had been repulsed to help expand perimeter.

Conclusion

The Solomons campaign clearly demonstrated what was possible when forces in the air, ground, and naval domains could mass fires and effects in their own and the other domains. With control of the air and seas, ground battles became less costly and greatly facilitated the rolling back of the Japanese defensive barrier. Strong air and naval forces were now within easy range of Rabaul, removing that potential thorn from MacArthur’s flank, enabling his advance to accelerate up the coast of New Guinea, towards the Philippines. The technique of bypassing strongpoints and later neutralizing them from the air and sea first utilized in the Solomons would come to mark both MacArthur’s advance in the Southwest Pacific and Nimitz’s Central Pacific drive, which opened just as the Solomons campaign concluded and benefitted from both resources freed from the successful conclusion of that campaign and from tactics and techniques developed in the theater.

As with Guadalcanal and Bougainville, virtually every battle the Marines fought in the Pacific was a battle for airfields. From the defensive actions at Wake and Henderson, to the landings on Tarawa, the Marianas, Peleliu, Iwo Jima, and Okinawa, Marine amphibious assaults captured terrain that permitted the establishment of tactical airfields that could support the next jump, and eventually bomber bases that enabled the strategic bombing of Japan proper. In many of these actions, including the Solomons, the Marianas, and Okinawa, Army and Allied divisions landed alongside or shortly after the initial assault to provide the necessary strength to clear and hold key terrain. The most successful battles were the ones that did not have to be fought at all. Instead of supporting a major assault against Bougainville after the hard-fought battles on Guadalcanal, New Georgia, and Vella Lavel-

la, the 25th Division instead found itself enjoying a brief period of rest and relaxation in New Zealand before moving to New Caledonia to prepare for its next offensive: the return to the Philippines.



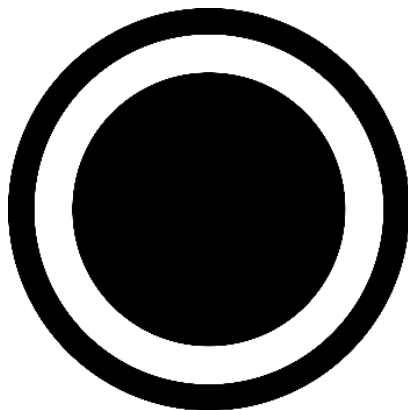
Warm Reception, by James Dietz. Image courtesy of the artist.

Notes

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Chapter 3
Achieving Synergy
The Papua-New Guinea Campaign, 1942-1944:
I Corps



While Allied forces waged a multi-domain battle for control of the Solomon Islands, General MacArthur's Southwest Pacific Area (SWPA) had their hands full containing Japanese thrusts towards Australia. The timely intervention of naval forces in the Coral Sea had denied the empire an easy over-water campaign towards Port Moresby that would have given Japanese air and naval forces control over the Torres Strait, cutting off Allied naval routes to Darwin and the seas beyond. From Port Moresby, air raids could reach down the eastern coast of Australia as far as the new air depot at Townsville, also the location of Australia's main communications intercept site.¹ A Japanese lodgment at that lightly-defended area would put Zeroes in the skies over Brisbane, curtailing that port's availability to receive shipments from the states. Halting the Japanese offensive was MacArthur's, and Australia's, top priority.

In a sense, though, that campaign had already been won. At Coral Sea, the Navy had denied the amphibious option to Japan, forcing them to fight a difficult, time-consuming overland campaign. As naval historian Samuel Morison wrote, "distances by water were short, those by air shorter, whilst land routes were long, tortuous and difficult. Yet the weakness of air and sea power in the Southwest Pacific, coupled with uncertain hydrographic information, forced both sides into the toughest of land campaigns."² From tiny missions on Papua's northern coast that could hardly count as ports, Japanese forces marched on meandering, native trails through malarial swamps, dense jungles, and up the 7,000 mountain passes over the Owen Stanley Mountains. Torrential rains washed away the track and chilling winds sapped strength and energy. Each day the advance delayed allowed more Allied troops to pour into Port Moresby. First the Australian militia, dubbed "chocos," or "chocolate soldiers," from the expectation that they would melt and run like chocolate in the heat of battle, but later by the hardened veterans of the regular Australian divisions, returning from years of combat in the Middle East against the Germans and Italians. American strength poured in too, initially aircraft of George Kenney's 5th Air Force, but eventually full divisions built around the cadres of National Guard formations from the Upper Midwest and Pacific Northwest, organized under I Corps, the first American corps headquarters to be deployed overseas. By September, Port Moresby was secure, but pushing the Japanese back over the mountains, and sustaining the forces involved in this effort, would consume the rest of 1942.

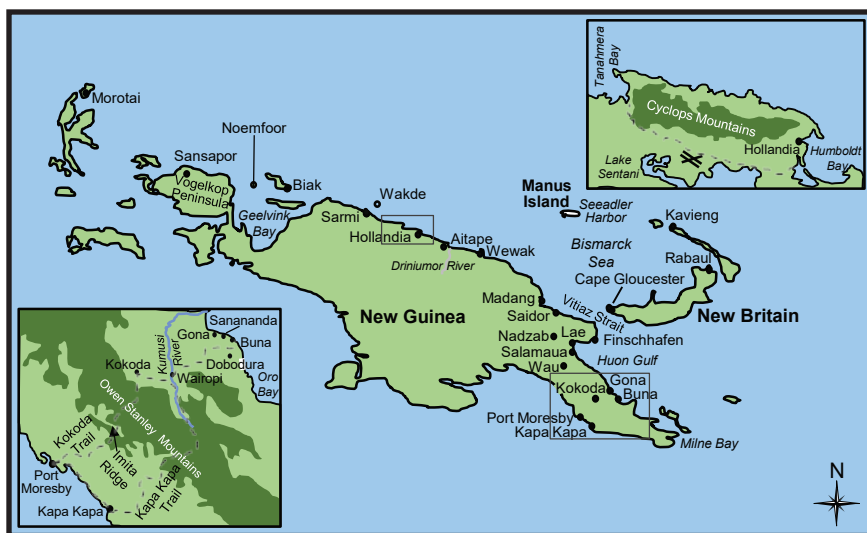
In 1943, Allied forces concentrated on winning control of air and naval bases ringing the Huon Gulf on New Guinea's northern coast. From Lae, Finschhafen, and Cape Gloucester, the Allies would tighten the noose

around Rabaul, strangling that obstacle to the open Pacific beyond and removing a thorn from the side of MacArthur's anticipated drive west, along the northern coast of New Guinea towards his ultimate objective of the Philippines. Again, these attritional campaigns, greatly facilitated by Allied control of the sea and the air, would consume most of a year. Allied interdiction of sea lines meant that their ground forces often met weakened Japanese garrisons, suffering from malnutrition and disease at the end of attenuated supply lines. Eventually, MacArthur's forces learned the same lessons as those acquired in the Solomons — that it was much easier to occupy undefended points and have the Japanese struggle through the jungle to counterattack than to launch attacks against well-defended outposts.

Using this strategy, Americans and Australians drove over 1,500 miles in 1944 in a frenzied pace of advance, fortification, and exploitation, until they had secured bases on Morotai, only 300 miles from the Philippines themselves. This remarkable advance could not have been achieved without the amphibious assaults and maritime logistics that sustained it, or the air forces that enabled the ships to operate. Neither of these could move forward until the ground forces had seized new bases from which to operate. Under the ocean, Allied submarines interdicted Japanese troop convoys, ensuring that strategic points could not be strengthened or reinforced before the soldiers came splashing ashore. These four domains: air, ground, surface, and subsurface, worked together like a well-conducted orchestra, with brass, woodwinds, percussion, and strings each playing their respective roles, but together executing a finely synchronized production.

The Papua-New Guinea Campaign

No pre-war American plans envisioned fighting in the jungles of Papua-New Guinea. After the Allied collapse in Java in February, the Joint Chiefs ordered the 41st Division, composed of three infantry regiments originally part of the Oregon and Montana National Guards, to embark for Australia, where they arrived in April and immediately began training for jungle warfare. The 7th Australian Division arrived in Adelaide in March from Egypt, but a deteriorating situation in the Middle East, as Erwin Rommel led his vaunted Afrika Korps towards the Suez, resulted in calls to retain the 9th Australian Division in that theater, where it would go on to play a decisive role in Rommel's defeat at El Alamein. To replace them in Australia, the United States shipped out a second division, the 32nd, originally of the Wisconsin and Michigan National Guard, which arrived in Adelaide in May and completed the unbroken string of units originally from the northern-most tier of states to serve in the tropics of



Map 4. Buna and New Guinea. Graphic prepared by Army Press Staff.

the South Pacific. The dispatch of two full divisions necessitated a corps headquarters for control, and I Corps, under LTG Robert Eichelberger, received this assignment in July. The corps' advance echelon flew from the United States to Australia from 20 to 25 August and took command of both divisions on 5 September, even though significant elements of the corps headquarters did not arrive in theater until 17 October.³ The corps was unable to institute a comprehensive training plan, and the 32nd and 41st spent more time shifting camps than they did learning how to fight in the jungle. As the front was then under Australian control, I Corps did not formally take command of the American sector until 13 January, 1943 towards the conclusion of the battle, even though Eichelberger had been in New Guinea since November, attempting to sort out the 32nd Division's efforts at Buna.

The entire region, including coaling stations seized from the Germans after World War I, retained European names that seemed out of place in the tropics. Papua-New Guinea had been administered by the Dutch and Australians before the Japanese Imperial Navy and Army arrived in late January 1942, but the token detachments on New Britain and New Ireland could not stop Japanese forces in command of the air and sea. The scattered defenders quickly took to the jungle, where they harassed the islands' occupiers and passed vital intelligence back to Allied headquarters. In March, unopposed Japanese forces landed at Lae and Salamaua on the Huon Gulf, extending their control over that body of water. An Allied carrier raid on 10 March proved no more than a nuisance — there

was no sustained effort to wrest control of the air or water.⁴ But the same carriers played a more important role in May, turning back the invasion fleet destined for Port Moresby at the Battle of Coral Sea, and damaging two Japanese carriers and their attached air wings so badly that they would miss the decisive naval Battle of Midway.

On 20 and 22 July, resigned to an overland advance, Japanese troops landed at Buna and Gona stations on the north coast of New Guinea, just 100 short air miles from the important Allied harbor and air bases on the south coast at Port Moresby. Allied bombers, tipped off by intelligence intercepts, sank one transport but most of the troops reached shore safely. On 29 and 31 July, Allied air attacks drove off another convoy carrying Japanese engineers and supplies for developing the airfield at Buna, but a second attempt pushed through on 13 August with 3,000 engineers, enabling work to begin on the Buna airstrip.⁵ Three more transports arrived unimpeded on 18 August carrying the Japanese 144th Regiment, with the 41st regiment arriving on 21 August, and more reinforcements on 3 September. Without control of the air and shipping lines off Papua's northern coast, Allied forces could not prevent a dangerous build-up of Japanese strength. In late August, 16,000 Japanese troops headed up the rugged Kokoda Trail and over the Owen Stanleys towards Port Moresby.

Alerted by codebreakers of Japanese intentions, Allied ground forces rushed to block their progress.⁶ Initially only, the 39th Australian Infantry Battalion was available. The 39th fought a month-long delaying action, first destroying a wire rope bridge at a place the natives called, appropriately enough, Wairopi, and then fighting a difficult delaying action over the crest of the mountains. The effort bought time for additional reinforcements to reach Isurava, where a gallant stand again stalled the Japanese advance. While they won the position at Isurava, the Japanese were reaching a culminating point and began to suffer logistics shortages of their own. Although only twenty miles from Port Moresby, and within sight of the Coral Sea, they lacked the strength to break through the final Australian position on Imita Ridge. An entire brigade of Australians had been airlifted into Port Moresby and now took position on the line, while the attackers paused to await resupply or reinforcements that would never come. Allied aircraft were increasingly punishing the Japanese supply line, and supplies moving up the trail had slowed to a trickle. After a week's pause the invaders realized they would be unable to even sustain what they had already pushed over the mountains at great cost, and retreated back over the mountains to shorten their supply line, in hopes of building enough

strength to try again. Imita Ridge, along with Bloody Ridge overlooking Henderson Field on Guadalcanal, would become the high-water marks of the Japanese empire in the South Pacific.

Milne Bay and the North Coast

Allied aircraft, operating from the besieged fields around Port Moresby proved unable to fully interdict the flow of Japanese troops and supplies into New Guinea. Light bombers could not transit the high Owen Stanleys with full bomb or fuel loads. The tropical weather brought daily thunderstorms that broke up formations and obscured targets. In an attempt to circumvent the mountains and extend aerial reconnaissance over the Coral Sea, Australian forces landed at Milne Bay, at the eastern extremity of New Guinea, in June and began construction of an airfield there. When the 7th Australian Division finally arrived in New Guinea in August, the 21st and 25th Brigades remained at Port Moresby while the 18th sailed for Milne Bay. Navy codebreakers intercepted orders for a Japanese submarine picket line off of Milne Bay, alerting MacArthur of an imminent invasion there. The 18th Brigade arrived just in time to repel a Japanese assault that made Milne Bay a miniature Guadalcanal.⁷

The Australians at Milne Bay operated on a logistical shoestring. Dutch cargo ships pressed into service unloaded supplies as best they could in the bare harbor while two squadrons of Royal Australian Air Force (RAAF) P-40 Kittyhawks from Turnbull Field provided top cover. When Japanese forces landed on 26 August, they failed to realize they had underestimated their opponent's strength, and attacked 10,000 defenders with only 2,000 assault troops. Under covering fire from destroyers, the attackers forced their way ashore and towards the airfield, but suffered increasing resistance in the air, from both the local fighters and from B-17 bombers sent from Port Moresby, which drove off some of the Japanese transports with cargo still in their holds. By the time they withdrew on 5 September, the Japanese had suffered as much from the terrain and weather as they had from Milne Bay's stout defenders. Holding the harbor and the airfield provided additional protection for Port Moresby and eventually allowed the Allies to extend a tenuous reach along Papua's northern coast.

The Counterattack

From Imita Ridge, the 6th and 7th Australian Divisions began to push the Japanese forces back over the Kokoda Trail. Once the 16th and 25th Brigades had recaptured the airfield at Kokoda, USAAF C-47 Dakotas could fly supplies into that strip, greatly alleviating supply difficulties on the trail. Aircraft even dropped a replacement bridge at Wairopi, enabling

the pursuers to span a gorge and continue their pursuit. At the same time, American forces sought an end run around the track, hoping to use small boats and aircraft to push up the northern shore from Milne Bay. On 1 October, MacArthur observed, “the successful employment of any considerable number of troops on the north shore of New Guinea is entirely dependent upon lines of communication. The enemy has complete control of the sea lanes, and we are not now, nor have any reasonable expectation of being in position to contest that control.”⁸ One of the first steps towards securing control of the seas was the establishment of an air base on the northern coast. A broad plain covered in kunai grass near Dobodura appeared ideal, and MacArthur ordered elements of the 32nd Division to seize the area in order to develop it into an airfield capable of sustaining the troops and blocking enemy resupply efforts. It was hoped that air forces based at the new field would be able to deny the skies, and therefore the seas, to the Japanese. As George Kenney, the 5th Air Force commander put it, “If his fighters don’t go, his troops and boats don’t go either.”⁹

Getting the 32nd Division to the north coast of New Guinea proved to be a tall order. The 126th Infantry sailed to Port Moresby while the 128th flew into Wanigela on transports. From there the units shuttled around or over the mountains to the north coast but still over 100 miles from the Japanese perimeter around Buna and Gona. After foundering around in the flooded swamps along the coast for weeks, the 128th finally re-boarded its improvised transports and was ferried up the coast in the small boats, sparing further efforts in the jungle. At the same time, the 2nd Battalion of the 126th departed on a tortuous overland march on the Kapa Kapa trail, scaling 9,000-foot peaks in a vain attempt to cut off the Japanese retreat. Supplies had to be delivered by air, but the regimental commander lost his life supervising one air drop of rations for his troops.

The inexperienced troops displayed poor march discipline and suffered heavy losses to disease during the rain-soaked crossing, which the survivors described as a “green hell.” The soldiers wore summer khaki uniforms, dyed green with a substance that kept fabric from breathing, leading to festering sores, and carried heavy M-1 Garands instead of lighter carbines, more suitable for the close-in fighting in the jungle. None of their gear was waterproof, and they lacked essential medication, including anti-malarials. By the time the battalion finally reached the north coast, the unit had suffered so many non-combat casualties that it was almost combat-ineffective in the attack on Buna. Over 70 percent of the men had contracted malaria and the unit, nicknamed the “Ghost Battalion,” had lost so much equipment *en route* they had to be reequipped. The rest of the

126th traveled by sea, first to Milne Bay and then up the coast. But Japanese aircraft still regularly patrolled the coast, meaning only small vessels could be used for the lift. The regiment left most of its heavy weapons, including attached artillery and armored units, behind.¹⁰

Before they even had a chance to engage the Japanese, the conditions around Buna continued to attrite the division's combat strength:

In the hot and muggy climate of the Buna-Gona area the humidity averages 85 percent, and the daily temperature, 96 degrees Fahrenheit. The area was literally a pesthole. Malaria, dengue fever, scrub typhus, bacillary and amoebic dysentery were endemic there, as were the lesser ills-jungle rot, dhobie itch, athlete's foot, and ringworm. Unless the campaign came to a quick end, disease would inevitably take heavy toll of the troops.¹¹

Maintaining fighting strength during the upcoming battle would be a constant struggle.

The Japanese had made good use of the slow Allied pursuit, fortifying the area around Buna, Gona, and Sanananda with heavily camouflaged coconut-log bunkers with interlocking fields of fire. Over 5,000 troops defended the perimeter, 2,000 of them at Buna, including over 1,000 reinforcements that arrived on 16 November. As the campaign opened, Japanese aircraft were still able to cover the small boats and barges bringing in supplies and reinforcement, and deny the same to the Allies. On 16 and 17 November, Japanese aircraft sank four vital Allied supply ships. "The loss of the boats was a catastrophe of the first magnitude. There were no replacement vessels immediately in sight, and artillery pieces, mortars, machine guns, and other essential matériel, which could not be replaced for days, had been lost on the very eve of the attack. The whole supply plan for the operation had been disrupted."¹² Allied airlift attempted to replace the losses, but there were no remaining vessels heavy enough to lift armor to the scene of the fighting.

Adequate supply, a basic ingredient of good morale, was simply out of the question at Buna during the latter part of November and the first few days of December, for the Japanese by the end of November had succeeded in cutting the division's supply line by sea. The division had had six "luggers" in operation on 21 November, but only one was still making the run on the 28th. The rest had either broken up on the reefs or been destroyed by the enemy. Everything



Figure 7. Nurse giving inoculation. Image courtesy of the Center for Military History.

now depended on the airlift, which was still too small to fill more than a fraction of the division's needs.¹³

The Battle at Buna

After retreating back over the Kokoda Trail, the Japanese continued to fortify their defensive perimeter on New Guinea's northern coast. They hoped the Allies would reach a culminating point similar to the one they experienced across the mountains, but herculean efforts by aircraft, coastal "luggers," and native carriers reopened supply lines. If they couldn't resume the offensive, Japanese forces hoped to at least buy as much time as they could to fortify new bases further up the coast around the Huon Gulf. Accordingly, the defenders at Buna and Gona sold every yard of ground as expensively as they could. And to the poorly trained, ill-supported, and weakened 32nd Division fell the unenviable task of rooting them out.

The battle began with the Allies at a massive disadvantage. While they had reached the north shore, both Australian and American troops were still suffering the effects of the journey. Supply lines were stretched thin, and the attackers lacked even minimal reserves of essential commodities such as food and ammunition. Luxuries, such as replacement uniforms, engineer tools, mosquito netting, and anti-malarial drugs were still weeks

away. Control of the air, gradually wrested away from the Japanese in an attritional campaign that involved raids on air bases as far away as Rabaul, promised to relieve Allied supply shortages. C-47s laden with food and fresh troops were already arriving on the primitive strips hacked out of the Papuan jungle. Most of the 32nd Division's 127th Regiment, which had arrived in Port Moresby in November but had been withheld over concerns about the ability to sustain it across the mountains, finally reached the north shore by 14 December. Fighter aircraft, including new deliveries of the long-range P-38, extended protective umbrellas over the coastal waters, so that "luggers" and barges could deliver much-needed supplies. Sick and wounded soldiers could be flown back to Port Moresby and Australia proper before they overwhelmed local aid stations. Over 100 patients per day were being medically evacuated by air, peaking at 280 on 8 December.

Of the supply situation, the Army's official history wrote:

The supply situation was improving. More luggers were becoming available, and General Johns of the Combined Operational Service Command (COSC) had already decided to send large freighters into Oro Bay. The airlift was beginning to bring in truly impressive tonnages. On 14 December, for example, the air force in seventy-four individual flights between Port Moresby and the airfields at Dobodura and Popondetta brought in 178 tons of high-priority matériel. This was a maximum effort that was never equaled during the rest of the campaign, but it indicated what the air force could do when it extended itself and the weather was favorable. The rapidly growing airlift, the opening of a fourth field at Dobodura, regular nightly deliveries by the luggers, and the completion by the engineers of additional jeep trails to the front had done more than merely make good the supply shortages that had so long afflicted the 32nd Division. They had made it possible for the first time to begin stockpiling food and ammunition for a sustained offensive effort.¹⁴

By the time Buna fell, freighters were discharging over 800 tons each night, up from an average of less than 200 tons per day at the beginning of the battle.

As Allied aircraft gradually won control of the air, their top priority became interdicting the Japanese reinforcing convoys, in order to shape the battle. The last significant supplies and reinforcements arrived in mid-November. After that, Japanese vessels would attempt

to sneak in under the cover of darkness, futilely attempting to elude the PT boats that prowled the darkened shores. On 29 November, Allied aircraft turned back four destroyers with 800 troops on board. A second force of similar size did make it to shore on 2 December, but landed well up the coast and outside the perimeter. On 8 December USAAF B-17s interdicted another 800 troops embarked on six destroyers by hitting three of the ships. While heavier naval units could not yet operate in the shoal-infested waters off the north coast, PT boats filled the gap and even sank a Japanese submarine attempting to deliver supplies on 24 December, exacerbating the Japanese supply situation. At the time, MacArthur had five cruisers and eight destroyers assigned to him, but the Navy was reluctant to risk them in poorly-charted waters where Japanese aircraft still made regular appearances.

The 21st Australian Brigade contained the growing threat to the west by capturing Gona on 9 December and erecting strong blocks along the coast, preventing the reinforcements from infiltrating into Buna. Coast-watchers monitored the Japanese unloading and called in accurate strikes on the supply dumps ashore, limiting the new troops' combat effectiveness and preventing barges from moving down the shore and into the battle. But containing the new threat prevented any Australian troops from being released to support the efforts against Buna and Sanananda.

While aircraft could alleviate supply shortages and limit the flow of new forces into the battle, they were unable to assist with the battle itself. Three attempts at close air support on 21 November ended in failure, as wet radios hampered communication and the featureless jungle prevented accurate identification of both targets and the front lines. After a number of "friendly fire" incidents, the Allies largely gave up on close air support for the rest of the campaign.

When the attack on Buna opened on 19 November, the 128th Infantry made little progress. They felt keenly the absence of supporting weapons and lacked proper tools for the job:

Most frustrating of all, however, was the realization that they did not have the proper weapons to reduce the bunkers that stood in their way. They were without tanks, grenade launchers, or flame throwers, and mortars, artillery, and air bombardment seemed to have no effect on the enemy's formidable bunker positions.¹⁵

After two weeks of fighting, the two weakened American regiments had barely made a dent in the Japanese lines. Reports of a lack of aggressiveness filtered back to MacArthur's headquarters in Port Moresby, who be-

came convinced his troops had not been giving it their all. Embarrassed in front of his Australian allies and concerned that the 32nd Division's commander, Edwin Harding, wasn't pushing the attack aggressively enough, MacArthur summoned LTG Eichelberger from Australia and hastily briefed him on the situation. Ordering him to relieve Harding, MacArthur told Eichelberger, "Go out there, Bob, and take Buna or don't come back alive!" After his relief, Edwin Harding remained benched for the rest of the war. Logistics had ruined him as much as anything else.¹⁶

Eichelberger and his I Corps staff arrived at the Buna front on 1 December and took command of all US forces, which still aggregated less than a full division, with the 127th still in reserve at Port Moresby. Eichelberger's energy shook up the front. After watching several assaults, he identified numerous failures of mission command. At one point, a lieutenant general was doing battalion commander's job, directing companies where to attack. Colonels were leading squads. But the new energy, and the improved supply situation finally bore results. Success came first with Sergeant Herman Bottcher's platoon of the 126th, which broke through to the beach and then held a gap between Buna village and Buna mission. More troops eventually secured Buna village, splitting the Japanese perimeter. Best of all, fresh troops from the 127th Infantry, which arrived on 9 December, relieved Bottcher's tired GIs. In action on 24 December, two NCOs of the 127th earned Medals Of Honor on the same day; First Sergeant Elmer J. Burr spared his squad by covering a grenade while Sergeant Kenneth E. Gruennert, single-handedly assaulted two Japanese bunkers, disabling both with grenades. Best of all, the lead elements of Eichelberger's second division, the 41st Infantry Division's 163rd Infantry Regiment, began arriving in Port Moresby on 27 December, allowing the rotation of exhausted units, including Australians that had trekked into the battle over the Kokoda Trail.

As the 32nd's supply situation began to improve in early December, new weapons finally arrived on the eastern sector around the Japanese airfield. The first were Australian Bren guns rather than tanks, and these light, tracked vehicles lasted only twenty minutes in combat. Fortunately, eight Australian M-3 Stuart tanks followed in mid-December, lightered in on new barges sent to improve the sealift. On 18 December Australian troops supported by the newly arrived tanks attacked along the beach into Buna and finally broke through the crumbling defensive lines. The armor, and the ability to provide it by sea, proved key: "As the mopping up proceeded and the construction of the enemy bunkers in the area was examined, it became apparent that infantry, with the weapons and support that the 32nd Division had, could probably never have reduced the enemy line alone."¹⁷

Post-war accounts confirmed that “the troops suffered heavy casualties while being hastily pressed forward in repeated attacks on prepared enemy positions with little more in the way of weapons than their rifles, machine guns, mortars, and hand grenades.”¹⁸

Buna finally fell on 2 January 1943, while Sanananda held out until 22 January. “Diggers” of the 2/10 and 2/12 Battalions and soldiers of all three of the 33rd Division’s infantry regiments were in on the kill. It had taken over 3,000 Allied casualties to eliminate 1,500 Japanese. Overall, American forces had suffered a 90 percent casualty rate, with the 126th Infantry reduced to less than battalion strength. Half of the men in the 32nd contracted malaria, a disease that recurs with a debilitating frequency. Eventually, over 2,000 men had to be medically discharged after repeated relapses. Fighting in, and just marching through, the tropical jungles sapped combat power. But, without control of the seas, marching was the only option. As Samuel Morison observed, “The main reason for this heavy price in life and suffering was the want of Allied sea power.”¹⁹

Conclusion of the Papuan Campaign

In hindsight, the well-defended positions could have been cut off and bypassed, but that lesson had not yet been learned. The Japanese garrison still keenly felt the effects of having their supply lines cut. At Sanananda, the Allies discovered gruesome evidence that the defenders had been reduced to cannibalism. As the Army’s official history recorded,

They had worked hard to establish a base at the mouth of the Mambare to supply Giruwa, using submarines and high-speed launches, but the vigilance of the coast watchers and the air force had defeated the plan. The result for the Japanese was catastrophic. General Yamagata had some 5,000 troops at the beachhead (including the sick and wounded), but the men had almost nothing to eat and every Japanese in the area faced death by starvation... By 12 January there was no rice left for issue to the troops.²⁰

Its mission complete, GEN Eichelberger and his I Corps staff returned to Port Moresby on 25 January, where they were awarded a Presidential Unit Citation for their work in the campaign.²¹

The campaign along the Kokoda Trail and the battles for Buna and Gona were primarily Australian victories, but with significant US help. While ground forces of the 32nd Infantry Division applied vital pressure on the Japanese defenses, the major American contribution came in the air, primarily by airlifting combat-ready troops and their equipment to the

front lines, saving an arduous trek through the jungle or a slow transit on vulnerable coastal craft. The C-47, unparalleled in the Allied inventory, was the primary workhorse, but airmen pressed other aircraft into service for airdrops. In his remarks after the battle, the Australian corps commander thanked, first, the infantry, but “Secondly, I would thank the Air Forces for their magnificent work, for the shattering blows they have delivered to the air forces of the enemy and his ships, which have tried so often and so vainly to reinforce and supply him. To the air transport service which made this campaign a feasible operation, for your untiring efforts in all weathers, I thank you.”²²

The Allied ability to build and sustain their forces, largely through control and exploitation of the aerial and maritime domains, while denying the same to the enemy, had been decisive. The Army’s official history asserted, “Starvation had worn down the enemy troops and had contributed directly to their final defeat,” which Japanese sources confirmed after the war. MAJ Mitsuo Koiwai, commanding officer of the 2nd Battalion, 41st Infantry, who was medically evacuated and became the only surviving officer from the campaign, argued, “We lost at Buna because we could not retain air superiority, because we could not supply our troops, and because our navy and air force could not disrupt the enemy supply line.”²³ By the end of the battle, “the action took on the aspect of a siege, and starvation was a significant factor in the enemy’s final collapse.”²⁴



Figure 8. Airlift in Papua. Image courtesy of the Center for Military History.

The Battle of the Bismarck Sea

Just as the multi-domain Allied interdiction efforts had played a vital role in denying Japanese access to Port Moresby, so too would the growing air and sea power influence the course of the next major phase of the Allied advance, the push up the northern coast of Papua-New Guinea to the Huon Gulf and the Bismarck Sea. In operations targeting the area around Lae and across the Vitiaz Straits on Cape Gloucester, aircraft, and, increasingly, naval vessels would isolate these strategic points, weakening and immobilizing the Japanese defenders. At this point, Allied strategy still envisioned a two-pronged assault on Rabaul, through both the Solomons and New Guinea, but the increasing effectiveness of the air and naval blockade eventually made that battle unnecessary. By the end of 1943, with Rabaul neutralized as a threat in his rear, MacArthur was ready to move west towards the Philippines.

Even as the last campaign wound down, Japanese commanders were already rushing forces into strategic points around the Huon Gulf. On 7 January, 4,000 Japanese troops of the 102nd Infantry, 51st Infantry Division embarked for Lae, in order to build combat power in their most important port. Lae also blocked the entrance to the broad Markham Valley, holding several excellent sites for airfields and allowing an “end run” around Cape Finschhafen and the strong Japanese base at Madang. But, tipped off by ULTRA, Kenney’s pilots and American submarines inflicted constant attrition on the convoy. According to Edward Drea, only one third of the force “safely reached shore at Lae, with just one-half of its supplies and equipment... Given the near success of the Japanese attack (on Wau), the remaining two-thirds of Okabe’s troops might have made the decisive difference. They never arrived because ULTRA alerts enabled the Allies to disrupt the effort.”²⁵ The successful aerial interdiction also enabled further intelligence. Patrols found a Japanese survivor on a nearby island with a copy of a complete list of Japanese Army officers and their assigned units, enabling intelligence officers to correlate message signatures with specific formations and unravel the Japanese Army’s order of battle. Similarly, codebooks salvaged from a Japanese submarine sunk off the coast of Australia enabled code breakers to decrypt naval transport messages, facilitating the interdiction of the ground forces onboard.²⁶

In March, Japan initiated efforts to run a second, larger convoy into Lae to provide an attacking force for an inland advance on Wau, where Australian troops operated an airfield in a pre-war gold mining district. This attempt would result in one of the most complete Allied victories of the war. The Japanese convoy, consisting of eight transports carrying 7,000 additional troops from GEN Adachi’s 51st Division, escorted by eight de-

stroyers, left Rabaul on 1 March. They hoped to use cloudy weather to hide their approach along the northern coast of New Britain, but Allied reconnaissance aircraft, again tipped off by ULTRA, spotted the convoy and reported its position and composition. By this point, the Allied air forces had over 200 bombers and 130 fighters based in New Guinea, more than enough to break through the small defensive fighter screen. The force was truly combined, with seventeen USAAF squadrons (six of heavy bombers, five of mediums, and five fighters) and seven RAAF squadrons (five light bomber and two fighter). Many of the American B-25 medium bombers had been specially trained in low-level, “skip-bombing” techniques, which they practiced against a wrecked freighter in Port Moresby’s harbor. Technicians in Australia and Port Moresby had modified the aircraft with up to eight forward-firing .50-caliber machine guns to suppress defensive fires while the planes made their minimum-altitude attacks.

The convoy’s first losses came on 2 March, when high-altitude B-17s sank two transports. The next day, the specially-modified B-25s of the 3rd and 38th Bomb Groups put twenty-eight of their thirty-seven skip bombs into the rest of the convoy, sinking the remaining transports and four of the escorting destroyers. Over half of the troops destined for Lae, up to 3,500, were lost at sea, while the remainder arrived without most of their equipment, eliminating their utility as an offensive force.²⁷ Though the troops that had arrived in January still made a vain attempt to capture Wau, reinforcing Australian troops flown in ahead of them beat back the attempt. Despite the Army Air Force’s inflated claims of over twenty ships, the twelve ships actually sunk were more than enough to seriously reduce the number and effectiveness of the Japanese force that Allied ground troops would encounter in the next phase of their advance. The Japanese never again attempted to run large ships into New Guinea, and resorted to small barges with limited payloads that could only bring in small numbers of troops and limited quantities of supplies. As a result the Japanese again began to suffer the effects of supply shortages and malnutrition.

Not to be outdone by aircraft, the twenty submarines operating from bases on the east and west coasts of Australia played an ever greater role, interdicting supply lines as far back as Truk and Palau, putting increasing pressure on Japanese supply lines, especially cargoes of oil from Borneo, as well as shipments from refineries there to the home islands. These attacks against the enemy’s industrial production and critical infrastructure approximate capabilities found today in modern offensive cyber forces. By shutting down vital factories and disrupting economic activity essential to the deployment and sustainment of combat forces, military forces far from

the battlefield and operating in very different domains can have important effects on the outcome of combat operations. By late 1943 submarines had sunk fourteen of the fifteen oil tankers lost in the Pacific, and two infantry divisions transferred from China would never reach New Guinea, with over half of those troops drowning in the shark-infested waters.²⁸

The Huon Gulf: Nadzab, Lae, and Finschhafen

On June 30, with their freedom of navigation in the Huon Gulf assured by Allied aircraft, PT boats and landing craft carrying the 41st Division's 162nd Infantry landed virtually unopposed at Nassau Bay. The beachhead was forty miles from Lae but only fifteen miles from a Japanese blocking position at Salamaua. The operation had been timed to coincide with the landings on New Georgia in the Solomons to stretch the Japanese assets available to respond. Establishing a base at Nassau Bay would relieve the C-47s of some of their logistic burden of flying supplies into Wau and would provide a secure anchorage for follow-on operations around the Huon Gulf. Further inland, troops of the 17th Australian Brigade, flown into Wau in 194 plane-loads, had seized the airfield at Tsili Tsili, just forty miles from Lae, on 16 June and had it in operation by 26 June. In a demonstration of a successful exploitation of air mobility, the airfield had been built and was defended by troops, now designated as the Australian 3rd Division, brought in entirely by air. Further advances compressed the Japanese troops into their positions at Salamaua, where they were unavailable to reinforce the garrison at Lae. Together, the air-lifted and sea-borne ground forces pinned the enemy in place until he was forced to evacuate on 12 September after the successful attack on Lae.

By mid-1943, the Japanese had elements of three full divisions in New Guinea, a substantial force if they could be concentrated at any one point. But, unsure of where the Allies, enabled by aerial and maritime mobility, would strike next, the defenders had scattered their forces. The Japanese 20th Division held Madang, the 41st defended Wewak, with only the remains of 51st around the Huon Gulf. This division had been further scattered, with most of one regiment tied up at Salamaua, leaving only a small garrison at Lae itself. The aerial blockade of Japanese logistics was again the key. "In the months following the Bismarck Sea disaster the supply systems for Lae and Salamaua had almost broken down."²⁹ The defending troops were already malnourished by the time the invasion came.

With the defenders isolated and surrounded, the Allies developed plans for an ambitious two-pronged attack to seize Lae. The newly-arrived 9th Australian Division would conduct an amphibious assault east of Lae

while the 7th Division would be air-landed on a primitive airstrip seized and held by the American 503rd Parachute Infantry (PIR) Regiment. The two forces would then converge on Lae, scattering the weak defenders into the jungle. The amphibious landings were a baptism of fire for the “Army’s Navy,” as amphibian brigades equipped with landing craft vehicles, both personnel and mechanized (LCVPs and LCMs), conducted rapid shore-shore operations in lifting troops to undefended points.

In preparation for the moves, George Kenney’s bombers conducted preliminary raids, including a heavy strike on Wewak by B-25s escorted by P-38s. In these efforts, the airmen had first let the Japanese build up their strength on the field, in the false belief that the base lay beyond the range of Allied bombers. Alerted by intelligence intercepts of Japanese dispositions, the airmen waited until the ramps were full of aircraft. The single raid on 17 August inflicted far more destruction than could have been achieved by a series of raids against an alerted and dispersed enemy. Fifty B-24s attacked from high altitude while fifty more B-25s came in at minimum altitude with parachute-retarded fragmentation bombs. It was difficult to obtain an exact count of the number of Japanese aircraft destroyed and damaged, but estimates climbed over 100 and, whatever the number, the raid achieved the larger goals of suppressing aerial resistance to follow-on operations. With the skies cleared, American and Australian warships could now operate in the Vitiaz Strait. They shelled the Japanese base at Finschhafen on 23 August, in another example of cross-domain fires, and interdicted coastal traffic destined for Lae.

Ships operating safely in the Huon Gulf could also provide additional protection against air raids from Rabaul. On 4 September a RAAF officer suggested the use of an “aircraft control ship” for sea-borne fighter-direction to fill a gap in radar coverage.³⁰ In an employment similar to modern “Red Crown” missions performed today by Aegis-equipped cruisers and destroyers, the destroyer USS *Reid* used its ship-borne radar to detect incoming air raids and vector fighters to intercept. As a result, only two ships suffered minor damage in the landings at Lae. On 22 September the *Reid* vectored Allied fighters to an ambush of seventy Japanese aircraft attacking the invasion force at Finschhafen, which likewise protected the convoy. Altogether, the Allies claimed fifty enemy aircraft destroyed for a loss of only three fighters, and all of the ships of the invasion fleet escaped damage. Elements of the 9th Australian Division captured Finschhafen in less than ten days forcing one weakened regiment of the Japanese 20th Division, which had been shipped in from Madang, to withdraw into the jungle. Here they attempted to unite with reinforcements arriving overland

but the counterattack arrived piecemeal, enabling the Aussies to hold. The remnants of the Japanese 20th Division, cut off from reinforcements and supplies, lost half its strength in the last four months of 1943, mostly in a brutal retreat back up the coast to Wewak.

The airborne landings at Nadzab came to be the centerpiece of the Huon Gulf operations. On 5 September, 1,700 men of the 503rd PIR, loaded on eighty-four C-47s of 54th Troop Carrier Wing, jumped into open fields near Nadzab in the Markham Valley. Linking up with small Australian units that had reached the LZ overland, the units marked out and established a primitive airfield, enabling the 7th Australian Division to air-land, sparing both units a debilitating and logistics-intensive trek through the unforgiving jungle. Coupled with the 9th Division's landing at Lae, the Japanese defenders saw that they could not hold the area and evacuated on 16 September. They attempted to march overland to unite with the 20th Division, then at Wewak, but the jungle consumed most of them and they never arrived. The airfields in the Markham Valley, coupled with the port to supply it at Lae, were the real prizes of the operation. Aircraft operating from this area could extend control well up the coast of New Guinea and could contribute to the increasing weight of attacks against Rabaul.

The Army's official history summarized the difficult terrain, and the new Allied techniques for dealing with it: "New Guinea terrain precluded large-scale overland movements. To bring sufficient power to bear GEN MacArthur and his subordinates and staff therefore employed all available means-amphibious assault, an assault by parachute troops, an airlift of an entire division, and the shore-to-shore operation already executed at Nasau Bay."³¹ The Air Force's history agreed, noting, "Ground forces carried forward by air and water would seize and make secure an advancing line of air bases."³² Often, the increased mobility was sufficient in and of itself to defeat the enemy. Japanese commanders admitted that, by cutting off Lae on all four sides, the Allies had "inflicted an annihilating blow on us without engaging in direct combat."³³

The Air War and Cape Gloucester

The Allies continued to build air strength in the theater, to ensure they would maintain control of the skies and enable continued advances on the ground and at sea. By the time of the Nadzab jump in September of 1943, Kenney's 5th Air Force had fourteen full airlift squadrons in the theater. But maintaining these squadrons required a constant flow of replacement pilots. Kenney later remembered, "between weather and Nips a man lives longer in a P-39 than he does in a C-47 flying the troop carrier supply runs

in New Guinea.”³⁴ Kenney’s air strength included new types, such as the P-47 fighter, but he always suffered a shortage of heavy bombers, despite their tremendous potential when used against Japanese harbors and airfields. For example, a massive raid on 27 September featured over 100 B-25s covered by 120 Allied fighters, but only seventeen B-24s. Despite his protests, 5th Air Force was never able to get more 200 B-24s into the theater, as thousand-plane raids became common in other theaters, and he would never receive any of the new B-29 *Superfortresses*, despite numerous protests. The effects delivered by the B-24s were far out of proportion to their numbers, and the weight of their bombs became the key in air superiority and interdiction campaigns.

Naval aircraft assigned to the theater, despite the absence of aircraft carriers, made steady contributions as well. Navy scouting aircraft and photo-reconnaissance squadrons kept Rabaul under constant observation, alerting air and naval forces of the enemy’s strength and facilitating massive raids during the second half of October that reduced resistance to the Marine Corps’ Bougainville landings. With a secure base on that island planners began to debate whether the next major operation, an attack by the reconstituted veterans of Guadalcanal in the 1st Marine Division on Cape Gloucester, was still necessary. From Cape Finschhafen and the Markham Valley, the road to the west towards the Philippines was open; moving east to Cape Gloucester seemed like backtracking. MacArthur now had five American divisions at his disposal—the 1st Marine Division, slated for transfer to Nimitz’s Central Pacific theater, and the 24th, (the other half of the split Hawaiian Division), 32nd, 41st Infantry and 1st Cavalry Divisions. But the ability to emplace airfields closer to Rabaul on New Gloucester and hold open both sides of the Vitiaz Strait with naval bases on both shores was too appealing to pass up, so the landings went forward in December. In hindsight, the effort was wasted. The Allies never developed major bases on New Britain and the requirements had already been overtaken by events elsewhere.

The independent 112th Cavalry Regiment opened the New Britain campaign with a landing on the southern coast at Arawe on 15 December 1943. The landings served little purpose, other than to provoke strong Japanese air attacks that failed to prevent the landing but did reduce pressure on the Marines at Cape Gloucester. The rebuilt 1st Marine Division went ashore on 26 December, pushing two battalions of the Japanese 65th Brigade into a debilitating, 300-mile retreat to Rabaul at the far end of the island. Four cruisers and eight destroyers provided gunfire support, with one destroyer and two LSTs lost to Japanese air attack. The Seventh

Marines seized the Japanese airfields within a week, but it took two more weeks of combat in the nearly constant downpours to dig out the defenders. The weather and terrain limited the area's utility for air operations, and the over 1,000 casualties suffered were better saved for other operations. The Air Force, at least, was encouraged by "prison interrogations which showed these veterans dazed from the heavy aerial effort as well as weak from short rations imposed by the aerial blockade of the barge supply lines."³⁵ The Army agreed, noting "The enemy garrison at Cape Gloucester, especially Matsuda's command, had been in poor physical condition before the invasion. The incessant air attacks against barge supply routes had forced it on short rations, and malaria, dysentery, and fungus infections were rife."³⁶

Manus and Seeadler Harbor

As 1944 opened, the Allies sought to close out Operation CART-WHEEL, the reduction of Rabaul, which by now had been effectively neutralized. Heavy air raids had made the base's harbor untenable and suppressed air strength in the theater. Over 70,000 troops could still offer stout resistance to any ground attack, but there was no reason to give them the opportunity. The garrison remained isolated and immobilized until the end of the war. But the Allies pressed forward with important operations that would facilitate the neutralization of Rabaul. In the first, the 32nd Division's 126th Infantry landed at Saidor, on the northern coast of New Guinea past the Vitiaz Straits. But Japanese troops from the bases around the Huon Gulf cut off by the landing at Saidor chose to bypass the 32nd instead of counterattacking, in hopes of reconstituting further up the coast. Instead, their numbers would be halved in another nightmare march through the jungle, as starvation and disease took their toll. An Australian patrol located a metal trunk containing the Japanese 20th Division's cipher library which had been abandoned in the jungle. Codebreakers put this information to good use in divining the status and intentions of the Japanese Army on New Guinea.³⁷ Knowing exactly where the Japanese ground forces were made it much easier to strike weakly defended locations, and facilitated economy of force. Air and naval bases at Saidor would complement those on Cape Gloucester in preventing any Japanese naval sortie through the straits and back into the Huon Gulf, but the likelihood of the planned "decisive naval engagement" occurring in New Guinea waters was decreasing with every mile the Japanese forces withdrew back towards the home islands. In fact, it would occur in two parts, in the Philippine Sea in June and in Leyte Gulf in October. After those twin Allied victories, the Imperial Japanese Navy would cease to be a planning concern.



Figure 9. LSTs at Saidor. Image courtesy of the Center for Military History.

The second operation bore greater fruit. To extend Allied reconnaissance over the Pacific Ocean, as well as to “put a cork in the bottle” now holding Rabaul, the Allies next planned to seize Manus in the Admiralty Islands. The large (50 by 15 mile) island is 350 miles northwest of Rabaul and spanned the naval lines of communication that stretched to bases in the Caroline and Marianas Islands. It possessed an excellent harbor at Seeadler Bay and boasted several flat coastal plains ideal for airfield development. Indeed, the Japanese had already begun construction on two, hoping the island could become the next key link in their defensive chain. Manus would enable long-range reconnaissance assets to regularly monitor the Japanese naval base at Truk and to scour the ocean for any sortie by fleet elements based further west. The Japanese had tried to reinforce their garrison in the Admiralties, but the submarine USS *Whale*, directed to the scene by intelligence intercepts, attacked their convoy and sank the transport carrying the Japanese 66th Regiment, killing half the men.³⁸

With Nimitz’s drive through the Central Pacific gaining steam, MacArthur felt the timetable for his own advance compressing. After aerial reconnaissance reported no resistance and overgrown runways on Manus, he put forth a plan to seize the island with light forces from the 1st Cavalry Division, in hopes that the Japanese had evacuated their garrison. But when a squadron of the 5th Cavalry regiment landed at Momote airfield

on 29 February 1944, it found the Japanese defenders still there and in regimental strength. Fortunately, the 1st Cavalry Division had retained its pre-war square organization and therefore had four regiments to pour into the fight. Reinforcements from the 7th Cavalry and 99th Field Artillery Battalion arrived a week later onto a beachhead that naval gunfire support had helped the 5th Cavalry to hold. Additional landings on the opposite side of the harbor by the 8th and 12th Cavalry regiments helped secure the harbor, one of the best in the southern Pacific. Within a month, the port and airfields had been cleared and were back in operation under new management. During the entire transit “no enemy ship or plane made an appearance,” highlighting how easy it is to forget about the air and naval battles that are never fought.³⁹

The Allies were now in a position where they could begin to employ an economy of force approach to troop levels. The assault on Manus could have been thrown back into the sea had the Japanese garrison been able to concentrate quickly against the outnumbered attackers. Samuel Eliot Morison asked, “Why then, did the venture succeed? Simply because the United States and Australia dominated that stretch of the ocean and the air above it...The Japanese were as completely sealed off from help as MacArthur’s forces had been on Bataan in early 1942.”⁴⁰ The Air Force’s official history explained the absence of any Japanese carrier response. “In general, the Japanese navy had lost so many of its experienced pilots to Allied air action that it was in no condition to force a major attack.”⁴¹ The greatest use of Manus came from the long range B-24s and flying boats and tenders based in Seeadler Harbor, which extended Allied aerial reconnaissance, critical for any force lacking overhead assets, as far as the Caroline Islands and the Philippines. Elements of three squadrons of PBVs, two of Liberators, and one of PV-1 Venturas provided a robust scouting force, and Seeadler Harbor later became a major fleet anchorage.

By April of 1944, ground forces available in the Southwest Pacific Area had grown to seven US divisions and three more regimental combat teams, plus five Australian divisions.⁴² Only five Japanese divisions opposed them in New Guinea, with three more close by in the East Indies. But MacArthur’s combat power was magnified by the ability to employ it at the place and time of his own choosing. The Japanese could not defend everywhere, and the Allies could choose to avoid the fortified strongholds in favor of lightly defended points that could be quickly developed into major bases. Pinned to their defenses, Japanese forces would struggle to counterattack; lacking air or naval mobility, they could only reach their enemy by long overland marches through a forbidding landscape. By the

time they reached the sites of the Allied landings, they were usually too weak, and the defenders too strong and too well supplied to be evicted. As the Air Force's official history put it, "SWPA thus committed its entire effort to an advance up the New Guinea coast along an exceedingly narrow front. Its four remaining operations in New Guinea would advance the land-based bombers by successive occupations of minimum air-base areas, selected in positions lightly held by the Japanese. Air would prepare the way for each invasion and would protect SWPA's flanks."⁴³

Aitape and the Driniumor River

From Manus and Saidor, the next logical step up the spine of New Guinea was the Japanese base at Wewak, only 300 miles from each base, but strongly held by elements of two Japanese divisions who had had several months to fortify their position. Instead, the Allies opted for a bold leap, well beyond the protection of the land-based fighters in the Markham Valley, to Hollandia. Situated on a good harbor at the base of the Cyclops Mountains, which jutted out into the ocean, Hollandia also offered access to a broad interior plain sheltered by mountains on the north and south. At the far end, Halmahera Bay offered another potential anchorage to support development of an airfield complex. Indeed, a few Japanese engineers and laboring parties were already at work on this task. They were hampered in their efforts by Allied submarines, which continued to interdict reinforcement convoys, including one carrying a ground radar detachment intended to protect the base.⁴⁴ Thus intelligence forces enabled the maritime domain to conduct operations that eventually enabled the air domain. The landing at Hollandia was beyond the range of land-based fighters and would have to be supported by carrier-based aviation.

Thanks to American industrial production, unimpeded by economic warfare and armed with a workforce nigh immune to demoralizing propaganda, new carriers flowed out of shipyards in great numbers. Fleet carriers would raid the Japanese bases at Wewak and further up the coast, and guard against any sortie by the Japanese carriers, while escort carriers would provide essential air support until airfields could be captured and put into working order. The five fleet carriers and seven light carriers from Task Force 58, escorted by five battleships formed a powerful striking force, while the eight escort carriers of Task Force 78 provided robust support for the landings. The Allies successfully employed a similar task organization six months later at Leyte.

Concerned that it might take a while to clear and rebuild the road from Hollandia to the interior airfields around Lake Sentani, planners added

an intermediate objective at Aitape, both to provide a roadblock preventing overland access from Wewak to Hollandia as well as a site that could quickly be put in order for fighters. On 22 April, the 41st Division's 163rd Infantry Regiment landed and chased 240 surprised defenders into the jungle. Two days later Australian engineers had a strip available for P-40s of the RAAF's No. 78 Wing, but construction of a heavier strip for bombers required over a month of hard labor on the soggy ground.

As the rest of the 41st Division had landed at the same time at Hollandia, the 163rd rotated out quickly, to be placed in corps reserve, and the hard-luck 32nd Division, now rebuilt after the Papuan campaign, took their place. To the 32nd would fall the difficult task of holding a defensive line on the Driniumor River, as the Japanese troops from Wewak moved along the coast in a vain attempt to snuff out the new airbase. Fortunately, it would take the almost 20,000 troops of those two Japanese divisions (the 20th and 41st) over two months to reach the 32nd's perimeter, providing ample time to build a strong defensive line. ULTRA intercepts kept the defenders aware of the slow Japanese progress through the jungle. The attackers suffered greatly in their march, as they had little food and could not be resupplied with ammunition, as the ever-present PT boats interdicted their coastal barges bringing supplies from Wewak. Weakened by this lack of supplies, and by now suffering from debilitating tropical diseases, the two divisions were not ready to attack until 10 July. In the intervening two months, the 43rd Division, veterans of the Solomons campaign, arrived as reinforcements, along with the independent 112th Cavalry Regiment, relieved from its assignment on New Britain. In the largest battle since Buna, this force, placed under command of the new XI Corps, managed to seal off a Japanese penetration and effectively counterattack in continuous fighting that did not end until 9 August when the Japanese withdrew, "plagued by insoluble logistic problems."⁴⁵ The Japanese commander, GEN Hatazo Adachi "knew that his supply problems alone had already defeated him... Most of these troops had been without food for some time. They were suffering from starvation, malaria, and skin diseases, and morale was cracking."⁴⁶

Hollandia

Still under the direction of LTG Eichelberger, I Corps landed two divisions at Hollandia on 22 April, the 24th on the west at Tanahmerah Bay and the 41st on the east at Humboldt Bay, in a classic double envelopment of the inland airfields at Lake Sentani. There was little resistance in the air and almost none on the ground, as the defenders quickly faded into the jungle, where disease and starvation would eventually claim nine of every

ten. "For the most part, the Japanese retreating through Genjem towards Sarmi died slowly from starvation, wounds, and disease."⁴⁷ Of the over 10,000 who attempted the journey, less than 7 percent survived. The Air Force's official history reported, "Many of these troops would straggle into Hollandia long after the Allies had landed. Others perished from starvation, malaria and general debility along the way; one Japanese officer captured at Hollandia, who had made the trek, told of passing hundreds of men dying from sickness and starvation along the trails."⁴⁸

Fortunately, the landing had been lightly opposed, because the logistical situation quickly degenerated into chaos. Soldiers of the 24th found that their assigned staging areas behind the beach were in an impassable swamp and the road that supposedly led inland to the airfields was a single-track trail that wound up steep switchbacks. Sustained by air-dropped supplies, the assault elements pressed inland and reached the airfields in only four days, but Eichelberger halted the unloading and switched the rest of the 24th to the 41st's beaches at Humboldt Bay in the east. Unfortunately, this only complicated the congestion there. As the Army's official history observes, "[Hollandia] was a logistical nightmare, due primarily to the fact that too much was thrown too soon into too small an area."⁴⁹

Heavy, pre-invasion bombardments had wrecked a Japanese supply dump, and the lingering fires guided in a single Japanese airplane, whose bombs managed to strike an Allied ammunition dump. The resulting explosion and fires undid two days' worth of work, as almost two-thirds of the supplies that had already been landed went up in flames. Immediately troops went on half rations and depended on captured Japanese stocks of rice and canned fish until their lost supplies could be replaced. Worse, the loss threatened to slow the pace inland and delay rehabilitation of the airfields, throwing the whole timeline into disarray. Already the Navy was pressing for the return of its carriers, to support the invasion of the Marianas the next month. The actions of a single pilot, whose name is lost to history, underscored the dangers of accepting too much risk. They also serve to highlight the dangers to any land or naval operations threatened with the loss of control of the aerial domain.

Ground forces further enabled the information domain by capturing several codebooks at Hollandia. While the Japanese correctly suspected that the books had been lost and switched to newer books, the Allies used the captured logs to decrypt previously intercepted messages. One of these revealed that a barge carrying the new codes had been sunk off Aitape, and requested a new shipment. Based on this information, salvage divers were

able to pinpoint the wreck and recover the soggy codebooks, facilitating penetration of the new code.⁵⁰

Until follow-on convoys could arrive from the now-distant base area, aircraft jumped into the breach. Pilots flew in almost 4,000 C-47 loads as “initially, twenty planes each day were required to haul ammunition and rations to ground troops.”⁵¹ That they could do so was a testament to the effectiveness of the bombardments MG Ennis Whitehead’s airmen had made in the weeks prior to the invasion. B-24s, supported by tactical bombers and their fighter escorts, had wrecked the defenses at Hollandia and elsewhere in New Guinea with extensive and accurate strikes. The raids went forward even in poor weather, resulting in high attrition rates but Whitehead justified cost, saying the raids “saved the lives of many hundreds if not thousands of our comrades in arms of the ground forces.”⁵² Fortunately, the effort paid off. “The Hollandia area was to prove an excellent air, naval and logistic base from which future operations in western New Guinea were to be staged and protected, and from which a large part of the force which invaded the Philippines in October 1944 set sail.”⁵³ But calculating the required forces for each operation and the suitability of many areas for airfield construction, as a result of imperfect intelligence, remained more of an art than a science.

Wakde and Biak

The light resistance and timid Japanese response to the Aitape-Hollandia operation in April emboldened the Allies to accelerate their timeline for the next jump. Encouraged by the utility of the airfields at Manus and discouraged by the unsuitability of inland sites for airfields at Hollandia, planners concentrated on offshore coral islands for the remaining operations, both for their ease of defense as well as their suitability for development. The first of these was Wakde, 300 miles west of Hollandia, which fell to the redeployed 41st Division’s 163rd Infantry on 17 May. Landings on the one by two-mile island enjoyed extensive cross-domain naval gunfire support and the 700 Japanese defenders only cost the US forty servicemembers killed. The newly-won airfield was in operation on 21 May. From Wakde, heavy bombers could now reach Mindanao, the southern-most island in the Philippines, but the pace of operations moved so quickly that the airfield had been largely abandoned by September. All of the troops and supplies for Wakde came by sea, as Morison reported, “the ocean was the only available road. The battle-tested VII Amphibious Force carried many thousands of troops and thousands of tons of supplies and equipment.”⁵⁴

A supporting operation on the opposite coast at Sarmi did not go as smoothly. The 6th Infantry Division received its baptism of fire in a cost-

ly battle with the Japanese 36th Division that chewed up both divisions over the course of three months. In fighting made largely unnecessary by the early seizure of the offshore air base, the 6th lost 400 killed in an effort to eliminate 4,000 Japanese troops. It could have been far worse, had the Japanese 46th Division, *en route* to reinforce, not been sunk at sea by submarines. Sarmi did serve as a support, staging, and training base, and eventually parts of three different divisions passed through, adding their part to the fighting centered on the misnamed "Lone Tree Hill." First in were the "Bushmasters" of the Arizona National Guard's 158th Infantry, a regiment made surplus by the triangulating of the 45th Infantry Division. They were eventually reinforced by the 41st Division's 163rd Infantry, but were still unable to take a coastal airfield until further reinforced by the 6th Infantry Division's 1st and 20th RCTs, freeing up the 163rd for operations at Biak. In one assault on Lone Tree Hill, cut-off elements of the 6th ran out of water, but had their thirst relieved by a timely rainfall the men collected in their ponchos and canteen cups. After suffering over 1,000 casualties, the 6th gave way to the 31st Infantry and later the 33rd Infantry Divisions.

Two hundred miles further up the coast, in the center of Geelvink Bay which separates the Vogelkop (bird's head) peninsula from the rest of New Guinea, sat the island of Biak. The 75 by 25 mile-long island held several excellent airfield sites along its southern shore. Unfortunately, they had already attracted the attention of Japanese engineers and substantial ground forces, who began fortifying the area. However, the solid coral terraces and the potential to extend fighter cover over the entire Vogelkop made Biak an unavoidably attractive target. A pre-invasion bombardment by supporting B-24s from as far away as Manus and Darwin forced the Japanese to evacuate the designated landing area after bombs destroyed their supply dumps. The 41st Division's 162nd and 186th Infantry went ashore on 27 May, less than ten days after Wakde, initially meeting only light opposition. The absence of Japanese aircraft enabled the attackers to put 12,000 troops, twelve tanks, and twenty-nine artillery pieces ashore on the first day. The initial landing site was two miles up the coast from the site of a Japanese airfield heavily defended by over 10,000 troops of the Japanese 222nd Regiment, brought in from China. The Japanese had sent two divisions, but most of the Japanese 32nd and 35th Divisions had been sunk by submarines *en route* on 29 April and 6 May. Thanks to the decryption of the Japanese shipping codes, the submarines had been "forewarned with precise intelligence of the convoy's route, speed, daily noon positions, and destination."⁵⁵ The attritional battle would eventually suck

in the entire 41st Division, as well as the 24th, again requiring the services of Eichelberger and the I Corps headquarters.

The landing provoked a strong reaction, resulting in the first armor engagement of the New Guinea Campaign. American M4 Shermans made quick work of the Japanese light tanks, but their presence indicated that the defenders were well-supplied and had ample time to build up stores and dig in. A Japanese counterattack cut off the first American attempt on the airfield, as the troops found the narrow defile they had just passed through blocked in their rear. The unsupplied troops had to be extricated by boat for another attempt. A second drive took the airfield by the end of the first week, but strong defensive positions dug into caves in the high ground overlooking the field prevented its use for over a month, again upsetting carefully crafted timetables for follow-on operations. Troops had great difficulty digging Japanese defenders out of caves and jungles, and basic supplies, even water, were at a premium. Water shortages delayed one attack more than the Japanese did, and only a timely rain shower allowed the advance to continue.⁵⁶ The difficult fight foreshadowed the Marines' well-documented efforts on Peleliu a few months later. The Japanese were able to hold out so long because the initial Allied cordon around the island leaked badly, and Japanese barges from around Geelvink Bay were able to bring in limited quantities of supplies. Hundreds of Japanese reinforcements snuck in during the week ending 9 June, and over 1,000 arrived in the month after the landings.

Japan had decided that Biak was worth defending and immediately dispatched reinforcements to the large island. Due to the long distances, Allied troops inside the beachhead could not reach parts of the island where the barges landed, and, without an airstrip in operation, aircraft could only play a limited role. B-25s from as far away as Wakde interdicted some local reinforcements, but bigger attempts were brewing. In early June, the Japanese Navy assembled a large counterattacking convoy in the Philippines containing 2,500 troops, escorted by two cruisers and six destroyers. Fortunately aircraft detected and intercepted this attempt, sinking one destroyer on 8 June. An Allied naval force of three cruisers and fourteen destroyers encouraged the rest of the Japanese to turn back. Undeterred, the Japanese then organized a larger force that included their two superbattleships, the *Yamato* and *Musashi*, but early word of the invasion of the Marianas sent that fleet scurrying north. The dual drives in the Pacific did invite defeat in detail, but also stretched the defenders' assets. Operations at Biak diverted some air and naval strength from the invasion of the Marianas and the Battle of Philippine Sea, but could have been overwhelmed if the Japanese had pressed the issue.

The fight ashore was difficult enough without the reinforcements. Frustrated by the painfully slow progress with the airfields, MacArthur again sent Eichelberger forward with the lead elements of the 24th Division's 34th Infantry Regiment. Dissatisfied with the progress, Eichelberger relieved MG Horace Fuller of command of the 41st Division. As at Buna, the tide had probably already turned. A more effective barrier around the island, fresh reinforcements from the 24th Division, and an improved logistical situation helped the 41st to finally clear out pockets of resistance above the airfields. "Although the Japanese were unable to send sufficient reinforcements to Biak to affect the ultimate outcome of operations there, enough fresh troops did reach the island to delay Allied employment of the Biak airstrips; to prompt GEN Fuller to ask for reinforcements on 13 June; and, at least indirectly, to have something to do with changes in the Allied command at Biak."⁵⁷ In addition to claiming the career of another division commander, Biak also cost over 7,000 casualties from a particularly virulent form of scrub typhus spread by microscopic mites. Clearing vegetation and liberal use of insecticides finally brought the epidemic under control.

The Vogelkop Peninsula

In an attempt to get at least one airfield into operation in the Geelvink Bay area, on 2 July the 158th Infantry landed on Noemfoor, a 15 by 12 mile-long island 60 miles west of Biak that the Japanese had used as staging area to run in reinforcements. Again, air and naval bombardment paved the way, as eighty-four B-24s and the cruiser HMAS *Australia*, supported by four destroyers, limited any opposition. "Despite the extensive enemy defensive preparations in the Kamiri Drome area, the CYCLONE Task Force's losses on D Day were only 3 men killed (1 accidentally), 19 wounded and 2 injured. This is a tribute to the heavy air and naval bombardment, which succeeded in driving most of the Japanese away from the beach or keeping those who remained pinned down as the assault waves moved ashore."⁵⁸

Slow progress, caused primarily by a decision to "mop up" strong-points rather than bypass them, prompted calls for the operation's reserve, the 503rd PIR, to be dropped onto the island. Aircraft of the 317th Troop Carrier Group dropped 1,424 paratroopers of the 1st and 3rd Battalions directly on the hard coral runways of the airfield, portions of which still had parked and disabled Allied equipment on them. The unit suffered 10 percent casualties and did not materially aid the pace of the advance. In the time it took to coordinate and execute the operations, the entire 34th Infantry could have been shipped from Biak by boat. By 6



Figure 10. Paratroopers on Noemfoor. Image courtesy of the Center for Military History.

July, Australian P-40s were using the airstrip and B-24s based at Noemfoor would eventually strike the Japanese oil refineries at Balikpapan on Borneo. Though the island had been defended by almost 2,000 troops, the aerial blockade had put them on short rations. For the first time, Allied forces found evidence of what inclusion in the “Greater East Asian Co-Prosperity Sphere” meant to citizens of the nations occupied by Japan. Indonesian slave laborers had been worked and starved to death; there were only 400 survivors from over 3,000 brought to the island six months prior. Of the 1,000 Taiwanese brought to the island for slave labor, less than 500 survived. Many had been reduced, along with their Japanese captors, to cannibalism.

On 30 July troops of the 6th Infantry Division took Sansapor on the tip of the Vogelkop Peninsula. Here an airfield had to be hacked out of the jungle and built from the ground up. The landing bypassed 15,000 Japanese troops at Manokwari, and the few casualties came from scrub typhus, which killed almost as many as soldiers as the Japanese. A fighter strip opened on Middleburg Island by 17 August, and engineers had a medium bomber strip operational on the mainland by 3 September, in time to support the landings on Morotai.

Conclusion

After struggling for six months to take Buna and another year around the Huon Gulf, it took less than a year to cover the rest of New Guinea. Once air and naval forces had eliminated any opposition, ground forces could land at a place and time of their own choosing and operations could occur simultaneously rather than sequentially. While the separate advances in the Central and Southwest Pacific did invite defeat in detail, they could also be complementary. Concerned that Nimitz might take the lion's share of available resources, MacArthur aggressively pushed his timetable to ensure the Philippines remained in the path of the advance. While haste could make waste, and did sometimes result in marginally useful objectives being taken at great cost, the increased pace hastened MacArthur's return to the Philippines. He could not have moved as far, or as quickly, without complete dominance of the air and maritime domains, which limited opposition and fatally weakened his opponent. When the ground forces seized vital bases that enabled air and naval power, all three major elements moved forward in harmony. By late 1944, the Southwest Pacific Area had largely perfected multi-domain battle.



Junglers, by James Dietz. Image courtesy of the artist.

Notes

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Chapter 4
Regaining Access
The Sixth Army in the Campaign for Leyte and the
Southern Philippines, 1944



After spending two full years fighting to get back within striking distance of the Philippines, the Allies finally returned to Philippine soil in October of 1944. The final jump, from Morotai in the Molucca Islands to Leyte in the central Philippines, took Allied ground forces beyond the range of ground-based air power, forcing a far greater reliance on naval air power. This shift coincided with a Japanese transition to *kamikaze* pilots, a suicide-bombing tactic that attempted to extract as much destructive potential out of a pilot's final moments as possible, which increased the toll on Allied naval units, both materially and psychologically. At the same time, the threat of new air bases in the Philippines, the justification for the initial Japanese invasion, prompted a forceful response that saw the island of Leyte, along with its air and maritime domains, become the scene of a massive Japanese counterattack. While Allied naval units easily parried the final thrusts of the now impotent Imperial Fleet, air and ground units were not so easily neutralized. With *kamikazes* at least contesting, if not controlling the skies over Leyte, Allied naval units could not interdict reinforcement and resupply convoys that swelled Japanese ground forces on Leyte from a single division to four, greatly delaying the ground campaign and increasing the cost. In addition, the territory the ground forces gained proved unsuitable for airfield development, negatively affecting Allied air strength and complicating the struggle for control of the island. The campaign for Leyte clearly demonstrated that ground forces remained heavily dependent on other domains, especially those of the air and sea, in order to achieve their objectives.

Morotai and Peleliu

From the Vogelkop Peninsula of New Guinea, ground and naval forces needed intermediate air bases to cover the seas southeast of the Philippines and to prevent Japanese air forces from using bases in this area to interdict the movement of invasion and resupply convoys. Accordingly, the Joint Chiefs of Staff assigned Morotai Island to the Southwest Pacific Theater and Peleliu in the Palaus to the Central Pacific Theater. The 31st Infantry Division had a much easier time on Morotai than the First Marine Division on Peleliu. The 31st faced only light resistance on Morotai while the Marines confronted a well-fortified foe, occupying easily-defensible caves in the coral ridges that dominated Peleliu's airstrip. The defenders of both islands had already been cut off by sea and air, making the ultimate outcome of the ground battle a foregone conclusion. Both islands would bring Allied land-based aircraft within range of the southern Philippines, though Leyte, the next objective, would lie at the edge of the medium bombers' range. Fighter aircraft would have to wait for ground forces to

capture and develop air bases within the Philippines themselves before they could contribute to the aerial defense and lend their weight to the interdiction campaign against Japanese forces in the islands. While this effort would ultimately be successful, providing a jumping-off point for the invasion of Luzon, it would also be far longer and costlier than necessary, due to the Allied failure to isolate Leyte by sea and air.

MacArthur's last jump prior to his return to the Philippines came on the island of Morotai, halfway between the Vogelkop peninsula and Mindanao. The 31st Infantry Division, reinforced by the 32nd Division's 126th Infantry went ashore unopposed on 15 September on the forty-mile by twenty-five-mile long island. Poor beach reconnaissance led to the worst landing conditions of the entire New Guinea campaign, as vehicles foundered in potholes dotting the coral shelf offshore, delaying a buildup of supplies. By 4 October, engineers had made the airfield operational and set the stage for the landings in the Philippines later that month. The operation had been timed to coincide with the landings in the Palaus, including Peleliu, to take advantage of carrier air cover. "The carrier-based planes, which destroyed twenty-eight Japanese aircraft on the ground, met no aerial opposition...As a result of the combined efforts of aircraft from the Third Fleet, the Seventh Fleet, and the Allied Air Forces, not a single Japanese plane approached within range of Morotai during the day."¹

Strategic Situation in the Philippines

After losing the bulk of its carrier aircraft in the Battle of the Philippine Sea in June, Japan's chances for a decisive naval engagement that could destroy the American fleet were shrinking daily. Unable to challenge the American carriers on the open seas, the only chance for anything close to parity in the air depended on luring naval vessels within range of shore-based aircraft. The Philippines were ideally suited, as the islands hosted a number of air bases and hidden fields that would be almost impossible to neutralize, a similar situation faced by any fleet approaching within range of anti-ship missiles today. In addition, aircraft could be flown in from Taiwan or the home islands, making it that much more difficult to maintain control of the air. On 4 August, 1944, the USAAF had roughly 2,300 aircraft in theater, with the RAAF adding another 400 to the Allied total. However, not all of these would be able to reach the Philippines, especially as airfield construction lagged. Only the long-range B-24s, operating from the new fields and depot on Biak, could reach the islands, but these would not have escorts, and there were only six groups of heavy bombers (a total of 491 aircraft) in theater. Initially, attacks centered on the airfields around Davao, on Mindanao, both to beat down the aircraft there and to

deceive the Japanese into thinking that island would be the site of the initial landings. Against them the Japanese could only field between 800 and 1,200 aircraft in the Philippines proper, but could quickly reinforce from their airfields and factories in the home islands. The direct threat that Allied bases in the Philippines posed to Japanese supply lines between the home islands and the Indies meant that Japan would throw much of its remaining strength into the ensuing battle.

At the outset Japan had nearly ten full divisions scattered throughout the Philippines. If mobility by sea could be restricted, each could be defeated in detail. As long as Japanese forces retained tactical mobility in the islands, they could concentrate their forces at any point they chose, which meant any Allied operation had to be strong enough to defeat all available Japanese ground forces. In addition, the ten divisions in the islands could be further reinforced from Taiwan, China, and Korea, making the submarine interdiction campaign even more vital to the success of the ground battle.

In October of 1944, only the Japanese 16th Division was actually on Leyte, with a total strength of 20,000 troops, but only 10,000 of them were trained and ready for combat. The 102nd Division was scattered throughout the rest of the Visayas, or the central Philippine Islands, while the 30th and 100th Divisions garrisoned Mindanao. Two additional brigades were on Zamboanga and Jolo. Each of these could be transported to Leyte within a matter of days, making an effective force of almost five full divisions to contest control of the island. Luzon held three more infantry divisions and one armored division, plus two independent brigades that could also be sent, but not without fatally weakening Luzon's defenses should follow-on operations land there. Overall, there were 180,000 Japanese troops on Luzon, 50,000 in the Visayas and another 50,000 on Mindanao, a far more formidable force than either side had available in 1941, and much stronger than anything the Southwest Pacific forces had faced thus far in the campaign.²

As with Manus, aerial reconnaissance suggested that Leyte was lightly defended, and had possibly been evacuated, although human intelligence supplied by coastwatchers and Filipino guerillas contradicted this narrative and reported that the Japanese still held the island in force. But, always looking for a way to speed up the end of the war, ADM William Halsey suggested that the Allies skip a planned landing on Mindanao and jump directly to Leyte, accelerating the timetable for the decisive campaign on Luzon. With Nimitz's support, MacArthur pitched Halsey's plan to the Combined Chiefs of Staff meeting at the QUADRANT Con-

ference in Quebec in August of 1944, which the Allied commanders quickly approved.

The island of Leyte itself is approximately 100 by 40 miles, oriented north to south, roughly the same size as Bougainville. However, the Allies had not tried to take *all* of Bougainville. On the eastern side is a broad coastal plain, known as Leyte Valley, where the Allies hoped to establish airfields and staging bases for the follow-on operation against Luzon. The plain was poorly drained, being used extensively for rice cultivation, and only the firmer ground near the coast could support airstrips of any size. Most of the island's population, over one million people, lived in this area, and presented much higher population-density than anything seen in New Guinea. Fortunately, it was possible to warn the civilians so that they could evacuate the areas selected for pre-invasion bombardment. The towns were well-developed, but most were not so well constructed as to present an obstacle or initiate any urban fighting. In fact, most would be almost flattened over the course of the campaign, especially Ormoc on the western coast. A spine of 3,000 to 4,000-foot tall mountains ran the length of the island, hugging the western shore. The best access across the mountains came by following the northern coast to Carigara, at the head of Leyte Valley, then following a twisting Highway 2 over a low saddle into the much smaller and narrower Ormoc Valley on the west coast. Ormoc itself, roughly halfway down the western coast, would become an important port, as the Japanese shuttled reinforcements into "their" side of the island to counter the Sixth Army's lodgment on the eastern coast.

Pre-invasion plans called for a series of raids on Japanese air bases in the Philippines, primarily by carrier-based aircraft, but also long-range bombers from New Guinea. The Army Air Force had begun to establish its new, "very long range" bomber, the B-29, on bases in the Marianas, but preferred to see this "strategic" asset used against the home islands rather than softening up airfields in a tactical role. Similarly, Kenney's B-24s based in New Guinea could finally reach the oil refinery at Balikpapan from their new bases on the Vogelkop and devoted considerable effort to hitting that target during the pre-invasion period, concentrating on that task until 18 October, two days before the landings. As a result, the lion's share of the air superiority campaign fell to the more-limited payloads of the Navy's fighters and tactical bombers.

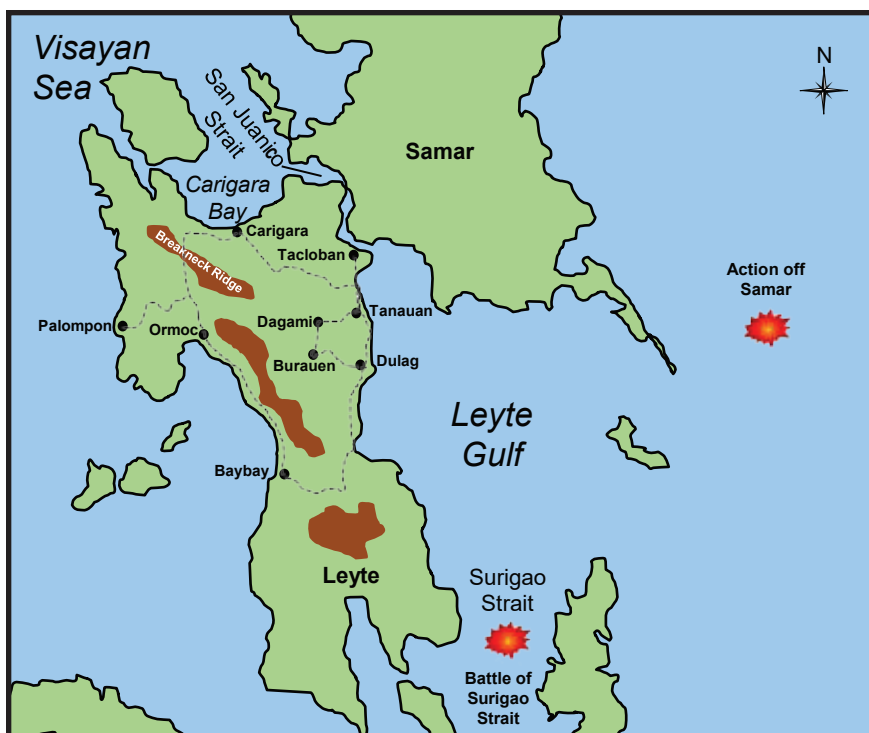
The Navy's air superiority campaign was effective enough to allow the invasion forces to reach the beaches with very little resistance in the air. Unfortunately, it cost the Navy heavily in terms of ships damaged, as the fast carrier strike groups had to venture within range of land-based avia-

tion in the Philippines, Taiwan, Okinawa, and the home islands. On 13 October, Japanese aircraft torpedoed the cruiser *Canberra*, and the next day heavily damaged the cruiser *Houston*. Believing pilot reports of far-greater damage than was actually inflicted, the Japanese Navy sortied after the damaged ships, hoping to finish them off in a surface action. Tipped off by radio intercepts, Halsey instead used the crippled ships as bait to lure the Japanese fleet within range of his strike force. Unfortunately, Japanese reconnaissance aircraft revealed the still very-much undamaged US fleet, and the Japanese ships escaped the trap and returned to their home waters. "As a result of the operation, the Japanese lost half of their naval air strength. This loss gave assurance that the US forces would have air superiority over the Leyte area on A-Day."³

The hard-won aerial supremacy was difficult to maintain, and slowly eroded as Japan shifted more units into the battle area. Though only two capital ships suffered damage in the invasion itself, with USS *Honolulu* torpedoed on D-Day, and the HMAS *Australia* hit by *kamikaze* on 21 October, massive raids using this new suicide tactic began on 24 October, coinciding with what would become known as the Battle of Leyte Gulf. This new tactic essentially turned Japanese aircraft into guided missiles, which placed an increasing strain on naval forces supporting the ground invasion and enhanced the destructive potential of Japanese pilots in their final moments.

The Invasion

The invasion force itself sailed from two major bases in New Guinea wrested from the Japanese earlier in the year. 471 ships departed from Hollandia and linked up at sea with another 267 from Manus in the Admiralty Islands.⁴ Sixth Army planned to land two corps abreast. X Corps, with the 1st Cavalry Division and 24th Infantry Division, would take the northern half of the beachhead, with the 32nd Infantry Division in reserve. The southern half was the responsibility of XXIV Corps, temporarily borrowed from Nimitz's Pacific Ocean Area, comprised of the veteran 7th and untried 96th Infantry Divisions, with the 77th Infantry Division in reserve. The two beachheads were within supporting distance and would be linked within the first few days. X Corps' initial objective was the airfield at Tacloban, while MacArthur charged XXIV Corps with securing the airfield at Dulag. XXIV Corps had been originally loaded for an invasion of the island of Yap in the Caroline Islands, but planners agreed that the corps could be better used at Leyte, control of which would further isolate the Japanese in the Carolines. Both landings proceeded against light opposition, as the Japanese wisely elected to de-



Map 5. Leyte and the Battle of Leyte Gulf. Graphic prepared by Army Press Staff.

fend inland rather than at the water's edge, where American fires would be greatest. The only difficulties came from a shallower-than-expected beach gradient, which meant that heavier ships, including the LSTs, had to be diverted to the sandy spit that formed Tacloban's airstrip. As a result, the airfield became a supply dump, hampering engineers' efforts to develop the field and put it into operation. Samuel Morison observed, "This was an easy landing, compared with most amphibious operations in World War II — perfect weather, no surf, no mines or underwater obstacles, slight enemy reaction."⁵

X Corps pushed quickly into Tacloban, enabling MacArthur to make a public pronouncement reestablishing the civilian government in the Philippines. Troops took advantage of amphibious lift to move up the narrow San Juanico Strait, separating Leyte from the island of Samar, in order to seal off that portion of the battlefield. In the southern area Catmon Hill dominated beaches in the 96th Division's beachhead, requiring several days of fighting to isolate, overcome and clear. In the 7th Division's sector, the troops advanced against light opposition, with 49 killed and 192 wounded on the first day. The division quickly pressed inland towards its

objectives, the three airfields around Burauen, which were under Allied control by 24 October. The primary difficulty in the initial phase came from building up the base of supplies necessary to sustain operations. While logisticians put ashore over 100,000 tons over open beaches on the first day, the lack of storage space ashore led to jumbled supply dumps in the narrow coastal strip. Dumps could not expand inland due to the swampy ground, and that ground which was initially dry quickly flooded in the pounding rains that dominated the island's weather during the winter months. With all the congestion, "fortunately, there was no bombing or strafing of the area."⁶ In Tacloban, covered storage was at a premium, and warehouses competed with field hospitals and headquarters units for a limited supply of shelter.

November to April is Leyte's monsoon season, and over 35 inches of rain fell during the operation's first 40 days, including several typhoons and tropical storms that halted aerial and maritime operations and scattered ships and aircraft. Ashore, the torrential rains turned streams into rivers and accelerated the deterioration of the island's primitive road network, as vehicular traffic turned the unimproved roads into ribbons of mud. Engineers designated for airfield improvement constantly diverted their efforts to the road network just to keep supplies flowing, and runways and aprons suffered from neglect. While the ground advance proceeded on or ahead of schedule, airfield and road construction fell well behind, with serious consequences for the course of the campaign.

Without airfields on the island, the Army Air Forces could not provide immediate support nor establish the aerial umbrella that had worked so well in earlier campaigns to isolate the defenders. Upon receiving word of the landings, the Japanese 30th Division sent two battalions to Leyte immediately, both of which arrived unimpeded. On the night of 23 October, the headquarters of the Japanese 35th Army arrived at Ormoc to coordinate the flow of reinforcements into Leyte, unimpeded from the air. The dispatch of an Army headquarters was an ominous indication of the size and scope of the operation, as the multiple divisions committed to the battle would require ample coordination. Ultimately, most of five additional divisions arrived on Leyte (Japanese 1st, 8th, 26th, 30th, and 102nd). Moving these divisions to Leyte facilitated the later Allied conquest of the Visayas and Mindanao but substantially delayed the timetable of operations on Leyte. Even the Air Force's official history had to admit that "the Fifth Air Force supported the Leyte invasion only indirectly and at extreme range."⁷ This placed a far greater burden on the naval air forces, which were beginning to struggle with threats of their own.

The Battle of Leyte Gulf

After the naval forces covered the landing, ships came under increasing attack from Japanese air and eventually naval units, resulting in the Battle of Leyte Gulf on 24 and 25 October. In a bold and elaborate plan, the Imperial Japanese Navy attempted to lure the American carrier strike force away from the beachhead in order to slip a force of battleships and heavy cruisers in amongst the transports and their escorts. Thanks to Halsey's aggressiveness coupled with miscommunication that epitomizes Clausewitz's concept of "fog and friction," the Japanese plan worked to perfection. But, at the last moment, desperate resistance from the out-gunned escorts convinced the battleship force commander, ADM Takeo Kurita, that the plan had failed, and he broke off the action, throwing away victory at the decisive moment.

The battle opened on 24 October with a sortie by the major elements of the Imperial Japanese Navy from bases at Lingga Roads, near Singapore, and the home islands. In an unnecessarily complex plan, ADM Jisaburo Ozawa's carriers would come down from the north and attempt to lure Halsey's carrier strike forces away from Leyte. Virtually stripped of their air wings after disastrous losses in the Battle of the Philippine Sea in June, the carriers were little more than bait. Halsey, cognizant of ADM Marc Mitscher's failure to destroy the Japanese carriers in the earlier battle, remained determined not to let them escape again. While Ozawa drew Halsey away from Leyte, two separate columns of battleships and cruisers would slip around either side of Leyte and converge on the shipping gathered off the invasion beaches. ADM Kurita's five battleships, including the two "super-battleships" *Yamato* and *Musashi*, ten heavy cruisers, and two light cruisers would force their way through San Bernardino Strait north of Samar and approach the anchorage from the north. At the same time, VADM Shoji Nishimura's smaller force of two older battleships, the *Fuso* and *Yamashiro* and one heavy cruiser would pass through Surigao Strait and attack the transports from the south. It was hoped that one of the two converging columns would attract the attention of RADM Jesse Oldendorf's invasion support force, consisting mostly of older, slower battleships, many of them survivors of Pearl Harbor, allowing the other column to hit the vulnerable amphibious ships and transports unopposed. This part of the plan would also work to perfection, as Kinkaid mistakenly believed that Halsey had successfully blocked the northern column with his fast battleships, freeing Kinkaid to focus his full attention to the south. As a result of audacious planning, aggressive American responses, and almost comical miscommunication, the Japanese successfully threatened the am-

phibious ships gathered in Leyte Gulf while they were fully engaged in supporting the ground forces ashore.

The battle proper opened with attritional attacks by two American submarines as the Japanese warships approached the Philippines. *Dace* and *Darter* first reported the approach, supplying vital intelligence of Japanese strength and dispositions, before engaging Kurita's force on 23 October. With accurate shooting, the submarines sank two cruisers, but lost the *Darter* when it ran aground. Though still beyond the range of carrier aircraft, naval historian Samuel Morison pointed out that the columns could have been reached by American B-29s based in China, which had been committed to the battle largely by striking airfields in Taiwan. But on 24 October, they were busy preparing for a heavy strategic raid on the home islands, executed the following day by 59 Superfortresses on a Japanese aircraft factory at Omura, where they at least succeeded in destroying the factory.⁸

On 24 October, Kurita's column came within range of Halsey's three fast carrier attack groups (he had sent a fourth, under ADM John S. McCain, back to Ulithi atoll to refuel, after covering the landings) which inflicted serious damage on Kurita's force. Carrier aircraft sank the *Musashi*, one of the two super-battleships, the largest in the world, with nineteen torpedo-hits, for a loss of eighteen planes. Japanese pilots, using the new *kamikaze* tactics, extracted a small measure of revenge by sinking the light carrier *Princeton*. After suffering damage to one of his heavy cruisers, Kurita temporarily turned back. When his strike pilots reported that Kurita was retiring, and scout planes located Ozawa's empty carriers to the north, Halsey took off in pursuit. He sent a message to ADM Nimitz in Hawaii that he was forming a separate task force, TF 34, of four battleships and five cruisers under VADM Willis Lee to guard the entrance of San Bernardino Strait. Although the task force had been formed on paper, it was never actually detached, as Halsey believed Kurita had turned back and he wanted his powerful surface striking force with him to finish off any crippled Japanese carriers. According to Morison, Halsey "believed that (Kurita's) Force had been so heavily damaged in the Sibuyan Sea that it could no longer be a serious menace," and made the mistake of "accepting aviators' (inflated) reports of damage as actual damage."⁹ Halsey ignored the concerns of two of his subordinate carrier task force commanders about the dispositions of Kurita's remaining ships.

Kinkaid, who had copied the message from his position off Leyte, believed the force had been both formed and detached, freeing him to concentrate on Nishimura's column, which by now had been detected to the

south. Falsely believing that TF 34 was guarding the back door at San Bernardino Strait, Kinkaid took his entire force of six older shore-support battleships (five of them survivors of Pearl Harbor) to Surigao Strait, where, supported by four heavy and four light cruisers, 30 destroyers, and a force of torpedo boats, he formed an elaborate gauntlet for Nishimura to run before he could reach Leyte Gulf. In a night action, the PT boats alerted Kinkaid to the Japanese fleet's presence, and American destroyers lining both sides of the strait torpedoed both battleships, sinking one, slowing the other, in a reversal of what Japanese destroyers had done to heavier American ships two years earlier off Savo Island. When the depleted Japanese force finally came within range of Oldendorf's battleships, they executed the classic naval maneuver of "crossing the T," enabling every American ship to train its heavy guns on each Japanese ship as it approached in a column that masked the guns of the ships behind. Only one light cruiser escaped the carnage, and aircraft sank it later. The destroyers were the real heroes, as they stymied the Japanese fleet before it ever reached the decisive point. The battle at Surigao Strait would become the last battleship action of the war, and probably ever. A supporting force under ADM Shima never reached the American battle line, turning back after seeing the damage inflicted on Nishimura's column, but American aircraft later sank one light cruiser at anchor in Manila harbor, where divers recovered a treasure trove of classified documents after American forces retook the bay in 1945.

The Action off Samar

Having reversed his course during the night Kurita's four surviving battleships and eight heavy cruisers emerged from San Bernardino Strait on the morning of 25 October. They could not believe their good fortune at not having to try to fight their way through. Turning south towards the invasion fleet, Kurita first encountered RADM Clifton Sprague's three "Taffy" groups of six escort carriers each and their attached destroyers, which provided anti-submarine protection to the fleet and close air support ashore. Kurita had essentially attacked along an unprotected seam between Halsey and Kinkaid. Surprised at the lack of opposition, and at seeing aircraft carriers on the horizon, which he expected to be off chasing Ozawa, Kurita launched an uncoordinated, piecemeal attack rather than reforming his disorganized ships. Unable to run away from the faster capital ships, Sprague's escort carriers attempted to open the range and launched aircraft armed with high explosive, rather than armor-piercing bombs and depth charges. These aircraft immediately tackled their pursuers, inflicting little damage but forcing the ships to maneuver away from suspected torpe-

do attacks. Taffy 3, the first force in line, suffered the heaviest damage, as the Japanese ships walked a barrage in among the hapless destroyers and escort carriers, with the *Gambier Bay* eventually succumbing to naval gunfire. Fortunately, Taffy 2 had time to re-arm its aircraft with more lethal torpedoes and began to claw back, sinking a total of three cruisers in the melee. Likewise, the escorting destroyers also counterattacked the much heavier ships, which cost them three of their number, but made such a spirited resistance that Kurita mistook the weaker elements for a much stronger force.

Aware that Nishimura's column had been destroyed, and believing that Ozawa had failed to decoy the American carriers, Kurita disengaged and head back for San Bernardino Strait. His force lost three cruisers and had two more damaged and eventually sunk by aircraft. In addition to the three destroyers and the *Gambier Bay*, the US Navy lost another escort carrier, the *St. Lo* to kamikaze attacks that also damaged several other escort carriers. In all, over 2,000 sailors became casualties. Plaintive pleas from Sprague, Kinkaid, and eventually Nimitz himself forced Halsey to clarify that TF 34 was indeed still with him in his battle with the Japanese carriers and their empty flight decks. The planes managed to sink all four carriers, including the *Zuikaku*, the last survivor of the Pearl Harbor attacks, but TF 34 had to break off to engage Kurita and protect the invasion fleet. ADM McCain turned his force around to help, but was also too late to prevent Kurita's escape, though an American submarine later sank the battleship *Kongo*. Caught in between, the battleships failed to seal the strait before Kurita escaped, with the result that they played no role in either engagement. In yet another case where control of the aerial domain enabled the naval forces, both Halsey and Sprague's aircraft enjoyed good hunting because, "neither had any air opposition worth mentioning."¹⁰

In the final tally, the Japanese lost four carriers, three battleships, and ten cruisers against an American loss of one light cruiser and two escort carriers. Tactically, the battle was a tremendous success, but it is remembered more for what might have happened, had Kurita pressed his attack, than what actually transpired. Although counterfactual, it is worth considering just what would have happened had Kurita's battleships broken loose among the transports. While he certainly could have inflicted serious damage to the Allied shipping, most of the transports had already unloaded their initial cargoes, and the follow-on convoy had not yet arrived, so, while serious, the reverse would not have been crippling. Second, there was no way Kurita could have maintained his fleet in the area off the anchorage. Two powerful forces, Kinkaid's victorious battleships from the south and



Figure 11. *Kamikaze Attack on the USS Franklin*. Image courtesy of the Center for Military History.

Halsey's fast carriers from the north, were converging on him. It is difficult to see how he could have survived, although he certainly could have inflicted further damage on American naval units. Without control over the supply lines leading to the forces ashore, it would have been almost impossible for Japanese land forces to destroy the ground forces already on Leyte. At best, it would have been a stalemate similar to Guadalcanal, where both sides forced through resupply convoys to their forces on the island. And the Allies were in a far better position to prevail in a battle of attrition in late 1944 than they had been two years earlier. Unfortunately, Halsey's aggressive pursuit of the Japanese fleet and neglect of the landing force led to charges that the Navy was far more interested in sinking Japanese carriers than the less-glamorous mission of shore support.

The Japanese could count two successes from Leyte Gulf. First, the *kamikaze* attacks were taking an increasingly heavy toll on American shipping, especially the vital carriers. In the following days, both the *Franklin* and *Belleau Wood* suffered heavy damage, degrading air cover over the island. Without airfields ashore, carrier-based aircraft had to protect the fleet and provide what ground support they could. Unfortunately, this left too few sorties for an effective interdiction campaign. On the day after the main fleet engagement, Japan sent two cruisers and four destroyers carrying over 2,000 troops from Mindanao to Ormoc, all of which arrived safely. These were the first of many reinforcement convoys that eluded Allied air and naval forces, pouring strong reinforcements into Leyte. This both extended the battle for the island and increased its final cost.

Securing Leyte Valley

With its own supply lines secured by the air and naval forces now mostly in control of the skies over Leyte Gulf, Sixth Army could continue its liberation of Leyte. The rapid pace of advance enjoyed during the first two weeks slowed considerably as American units finally encountered the entrenched Japanese in their mountainous defenses. From the western port of Ormoc, reinforcements continued to flow into Leyte, with nine major convoys arriving in the first six weeks, all unhindered by air or naval action. The 16th Division was soon joined by the 1st and 26th Divisions, and parts of two more, the 30th and the 102nd. By the beginning of December, the 20,000 Japanese troops on the island at the time of the landing had been increased to 55,000, and another 10,000 more arrived that month. Up until early December, only one convoy of 10,000 troops had been successfully interdicted. In addition to the troops, 10,000 tons of Japanese supplies had arrived on Leyte by 12 November. As Morison lamented, "Without round-the-clock air supremacy it was impossible to prevent the running in of reinforcements by the 'Tokyo Express.'"¹¹ The Army agreed, noting, "The numerical weakness of the US land-based aircraft enabled the Japanese to land many thousands of troops and tons of supplies on Leyte."¹²

As the 24th Division swung right from its beaches towards the northern end of Leyte valley, it encountered growing resistance from elements of the Japanese 30th and 102nd Divisions moving up from Ormoc and through the mountain passes. Strategic consumption began to affect the division, as it had to block each mountain pass it uncovered to prevent any possible Japanese foray into its flank or rear. Eventually, the 1st Cavalry Division, which had far better terrain and less resistance along the coast, had to be pushed inland to support the 24th. On 1 November, the Japanese evacuated Carigara, placing the entire northeastern coast in American hands, and X Corps units moved in the following day. The defenders had elected to fall back and join up with reinforcements arriving almost daily through Ormoc, and fight in the mountains rather than stay on the open plain or in the city where Allied fires and maneuver superiority threatened quick destruction. The first two weeks gave the false impression of a quick conquest typical of operations in the SWPA, with the vital ports and airfield sites secured, and the Japanese holed up in mountains. "Victory appeared to be in sight — but continued reinforcement of the island by the Japanese and delay in the construction program for building Leyte Valley into a major air and supply base were matters of grave concern."¹³

From the southern beachhead, the raw 96th Division enjoyed slower progress, having to dig defenders out of Catmon Hill before landing craft

could be free to unload with the prying eyes and occasional mortar and artillery rounds directed by Japanese observers. To overcome logistic shortages, coconuts supplied food and drink during the time when ammunition enjoyed priority in the supply chain.¹⁴ On 25 October, elements of the 24th and 96th Divisions linked the two beachheads and Catmon Hill fell to the “Deadeyes” of the 96th on 29 October, freeing up more troops to support the 7th Infantry Division’s drive inland. Leyte’s large landmass with a rudimentary road network meant that vehicles could be used in large numbers for the first time in the Pacific campaign, and forty-five tanks supported the final assault on Catmon Hill. Wheeled armored cars, such as the M-8 Greyhound proved especially useful in providing supporting fires and covering long distances quickly over improved roads.

To the south, the 7th Infantry Division enjoyed the fastest progress, as the Japanese had declined to hold in force the rugged and sparsely populated southern half of the island. After pushing inland against light resistance, the division captured the airfields around Burauen on 24 October, repelling an ineffective counterattack of Japanese light tanks. By 30 October, it was in Dagami, its initial objective, and began to throw elements across the mountain passes. Company G of the 32nd Infantry crossed the spine of the island and reached Baybay on the western coast on 2 November, but had to wait three weeks until the 11th Airborne Division could relieve the rest of the 7th, freeing it for a drive up the western coast towards Ormoc. The Japanese defenders used the time to construct defensive positions across the narrow ridges that blocked any movement up the coast. In their efforts, the 7th displayed a marked preference for Navy to Army CAS, perhaps reflecting the naval aviators’ experience in close coordination in earlier island battles, while the AAF units in New Guinea had rarely encountered fixed Japanese defensive positions as bypassed troops took to the jungle.¹⁵ Navy CAS had also helped the 24th Division repel an early counterattack and seize a hill mass overlooking their beachhead, but defending against the growing threat to their carriers siphoned off more and more naval air strength.

The Push into the Mountains

From Carigara, X Corps turned left to head south down the winding Highway 2, across the mountains to Ormoc. Opposing them was the Japanese 1st Division, which rushed into the islands from Shanghai from 1 to 2 November, with all 11,000 troops arriving without interference. The division could have been even stronger, but on 3 November P-38s from Tacloban hit a ten-mile long convoy of trucks, tanks, and artillery pieces on the road between Ormoc and Valencia, destroying 35 trucks and two

tanks. This affair demonstrated what a robust ground-based air force could contribute to the interdiction battle, but these efforts were still too few and too far between. "The bringing in of reinforcements by the Japanese brought into sharp focus the lack of American aerial strength on Leyte... The few aircraft based on Leyte could not prevent the flow of additional enemy forces into the island or give direct support to the ground troops of Sixth Army."¹⁶ The arriving Japanese troops dug in on the reverse slope of a high east-west ridge which came to be known as "Breakneck Ridge," for the difficulty the soldiers would have in breaking through it. Had X Corps turned immediately into the mountains after liberating Carigara, they might have been able to break through before the defenses were fully prepared. LTG Walter Krueger, concerned about the possibility of an unlikely amphibious landing in the corps' rear as they turned south, insisted that the beaches be fortified against attack. This unnecessary delay highlights the concerns of ground commanders who lack control of the air and sea. Unfortunately, this delay bought time for the Japanese defenders to dig in and bring up reinforcements, prolonging the battle of Breakneck Ridge.

Initially, the 24th stubbornly pushed up the slopes against skilled defenders well dug-in on reverse slopes and expertly camouflaged in the dense jungles. After a week of little progress against unexpectedly stout resistance, Krueger began looking for answers. His first step was to replace the commander of 21st Infantry. However, leadership was not the only problem. On 8 November, a typhoon struck Leyte, but this "divine intervention" was insufficient to scatter the supporting fleet or save the Japanese. A stronger typhoon the following month inflicted serious damage on Halsey's fleet, sinking several ships, but fortunately this was after the crisis on Leyte had passed.

Unable to penetrate the Japanese defenses in a direct assault, the 24th took advantage of its control of the air and water to outflank the Japanese defenses. Two battalions looped around Breakneck Ridge in order to gain a lodgment astride Highway 2, the main Japanese supply route back to Ormoc. For its efforts in achieving this objective and holding it against repeated and determined counterattacks, the 2nd Battalion of the 19th Infantry received a Presidential Unit Citation. Not to be outdone, the 1st Battalion of the 34th Infantry achieved a similar feat on a land mass that came to be known as Kilay's Ridge, named for Henry Kilay, a Filipino Scout and guide killed in the action. 1-34 took advantage of the Allied control of the sea by moving up the coast in LVTs, and then inland and around the Japanese main line of resistance. In almost two weeks of independent operations, the battalion maintained a line of communication

using LVTs that reached the west coast and then traveled up inland rivers. As they moved away from that valley, the unit relied on airdrops and, when those failed, procured locally-obtained rations, including bananas, rice, potatoes, and chickens liberated from Filipino farms. Local guerillas provided timely and accurate intelligence on Japanese dispositions and strength, but captured documents remained the “most fruitful source of intelligence,” demonstrating the importance of intelligence activities carried out in domains such as cyberspace that can penetrate enemy networks and provide access to internal communications. For their part, the Japanese obtained information on the American order of battle from a radio station in San Francisco, demonstrating the possibility of collecting and collating vital intelligence from open-sources.

Combat and the environment took its toll on the battalion, as the weather, lack of sleep, and constant action increased the suffering, and “fever, dysentery and foot ulcers were commonplace.”¹⁷ Despite their valiant efforts, ammunition ran low, and several companies had to give up strong positions. The battalion was isolated throughout the battle and almost cut off from its supply line, but it had achieved its mission. By forcing the defenders to counterattack to their rear, they had weakened resistance on Breakneck Ridge, which fell to a combined infantry and armor assault on 12 November. 1-34 finally linked up with, and was relieved by, the 2nd Battalion of the 32nd Division’s 128th Infantry, having lost 26 men killed and over 100 wounded, but virtually destroying the Japanese 1st Infantry Regiment. It, too, received a Presidential Unit Citation for its efforts. The “Red Arrows” of 32nd Infantry Division, veterans of Buna and the Druinimor River fight on New Guinea, relieved the 24th on 14 November after that division had been chewed up in the fighting for Breakneck Ridge.

Further to the south, the 1st Cavalry Division also received reinforcement, in the form of the independent 112th Cavalry Regiment, which extended the division’s line and placed increasing pressure on the Japanese 102nd Division. The 112th’s arrival was a welcome addition, and helped address a shortage of infantry replacements that was beginning to affect combat effectiveness. South of the cavalymen, the Japanese 16th Division, the island’s original garrison, continued to hold off the 96th Division, which used accurate, directed artillery fire to break up periodic counterattacks from the mountains. Despite the heavy rain, water shortages in the extreme tropical heat threatened to delay combat operations. To alleviate the shortage of potable water, the navy converted a number of its fleet oilers into water tankers but even this source became contaminated and spoiled in the tropical heat.¹⁸



Figure 12. Water supply point on Leyte. Image courtesy of the Center for Military History.

The Interdiction Campaign and Airfields

One of the main reasons X Corps had so much trouble breaking into Ormoc Valley was that the air forces, and therefore the naval forces, could not completely stop the flow of troops and supplies into Leyte. Major Japanese convoys arrived in Ormoc every day between 25 and 30 October. Although heavy air attacks against the next movement on 2 Nov by AAF B-24s and P-38s sank an empty ship that could not be used on future runs, 11,000 troops and 9,000 tons of supplies arriving from as far away as Manchuria still made it ashore. The 102nd Division arrived between 23 and 25 October while the 30th began coming ashore after the 26 October. The 1st Division arrived from Shanghai on 1 November with 12,000 troops, bringing the total to 22,000 reinforcements in just the first two weeks. After replenishing, American aircraft carriers returned for another sweep 3 to 6 November, but the AAF's B-29s were still sitting out the battle. With reinforcements coming from across the Japanese empire, the interdiction effort extended far from Leyte's shores. While it was difficult to interdict coastal convoys within the islands, submarines had better success on the open seas. Off the coast of China, the submarine *Tang* sank five transports leaving the Philippines before being destroyed by one of its own torpe-

does that circled back into it. Sadly, many of the ships sunk carried Allied POWs from both the Philippines and Singapore who were being evacuated from the path of the advance. Submarines had better luck from 15 to 18 November against a convoy carrying the Japanese 23rd Infantry Division from China, when they sank two of seven transports and an escort carrier, preventing another division from reaching the Philippines intact. Heavy carrier raids on Manila from 13 to 14 November sank four destroyers, and seven transports, limiting further reinforcement convoys. Morison reported, "The destruction of shipping and damage to Manila harbor facilities made heavy reinforcement of the Japanese garrison in Leyte difficult for want of troop lift."¹⁹

These raids also came at a cost, as *kamikazes* took their toll on a subsequent raid 25 November, damaging three carriers. As at Guadalcanal, the air wings found refuge ashore and added their weight to the air battle above the islands from the "unsinkable carrier" at Tacloban, but the loss of the carriers forced the cancellation of another shipping strike in the southern Philippines. Overall, though, the increased air strength was beginning to have an effect. "The net result of this pinch-hitting activity, as we may fairly call these support strikes of TF 38 in November, was to make a further drain on Japanese air forces, and to destroy so much shipping that the enemy could not effectively reinforce his hard-pressed positions on Leyte."²⁰

The key to a successful interdiction campaign was the new airfield being rushed to completion on Leyte. "From the Allied point of view, the air situation deteriorated at the end of October. The enemy was able to stage in fresh planes to his Philippine fields from Formosa and Kyushu but our carrier-based air power diminished, and the Army Air Force was not yet ready to take over, because Tacloban Field, the one serviceable strip on Leyte, could not yet accommodate more than a few land-based planes."²¹ Airfield construction had bogged down, quite literally. Dulag had 35 inches of rain in the campaign's first 40 days, and poor drainage insured that the water stayed where it fell. Roads across the island needed to bring equipment to the fields turned to quagmires, churned into a thick soup by the constant overuse. Even improved roads, designed for light traffic, began to break down under the weight of heavy military vehicles, with shoulders crumbling until only a single lane remained. "As the roads on Leyte became more and more unserviceable, greater reliance was placed on the use of naval vessels to transport supplies and personnel to various parts of the island."²² In addition to supply missions, navy vessels also relieved the medical evacuation system with ample use of floating hospitals. Airlift

attempted to pitch in, with over 1,000,000 pounds dropped or airlifted, but this effort, too, was hampered by the poor facilities. After a month of fruitless filling and grading, the AAF finally gave up on rehabilitating the Japanese fields around Burauen and concentrated instead on Dulag, closer to the coast, but the new field at Tanauan would not be operational until 16 December. "Thus, almost two months were wasted in trying to improve strips that were unimprovable and to construct new ones on unsuitable soil."²³ At Tacloban, 34 P-38s arrived on 27 October, but these were woefully inadequate even for local defense, as demonstrated on 4 November when 35 Japanese aircraft destroyed two fighters on the ground, damaged another 39, and cratered the recently rehabilitated runway.

With the carriers absent for replenishment, as fuel and ammunition stocks had been exhausted by the pre-invasion strikes and the naval battle, medium bombers flying from Morotai helped fill the gap. During the first two months of November, Japan threw in aircraft from across the islands, successfully contesting control of the air and providing cover for the supply convoys into Ormoc. Without air cover, naval vessels could not operate on the west coast, and most Fifth Air Force assets were still based too far away to be much help. "The lag in construction of airdromes made it impossible for land-based air forces to give adequate close air support to the ground forces. This lack of support was another handicap to GEN Krueger's men as they fought their way into the mountains."²⁴ The Army's official history lamented, "The fact that the main part of Fifth Air Force was unable to displace forward to Leyte made it possible for the Japanese to reinforce their Leyte garrison and thus prolong the campaign."²⁵

But the engineers' herculean efforts to build and maintain a functional airstrip finally began to pay off. After almost 10,000 troops of the Japanese 26th Division arrived at Ormoc on 9 November, air strikes destroyed four of the five ships carrying another 2,000 soldiers the next day. Most of the troops that did arrive were deprived of their ammunition and heavy equipment, after AAF planes drove off those transports before they could be unloaded. The following day carrier aircraft scored a major success when they sank six transports and four destroyers carrying another 10,000 troops, with almost all of the troops drowned. "Their destruction materially shortened the Leyte campaign."²⁶ ULTRA had provided constant tracking of the troop convoys, enabling successful intercepts. Although the Japanese 26th Division moved south to block the 7th Infantry Division's thrust up the coast, the allies were finally beginning to squeeze off the flow of men and supplies. By the time the

last 3,000 men of the Japanese 8th Division arrived at Palompon on 11 December, the Japanese estimated that Allied aircraft sank 80 percent of the shipping sent to Leyte *en route*.

7th Infantry Division's Drive up the West Coast and the Japanese Counterattack in Leyte Valley

Although the 7th Infantry Division had crossed to the west coast of the island during the first week of November, it took until 20 November before the newly-arrived 11th Airborne Division, then staging on Leyte for future operations in the Philippines, could relieve the 7th of its responsibility of guarding the mountain passes between the Japanese-held sector of the west coast and the airfields and supply dumps in Leyte Valley. This delay temporarily handed the initiative to the Japanese, who sent their 26th Division against the 7th on 23 November. The first contact between came at Shoestring Ridge near Damulaan, so named because the American logistical line to the troops there was always operating on a shoestring. The Japanese hoped to block any advance, preserving access to a trail across the mountains between Albueria and the American airfields under construction at Burauen, which figured into Japanese plans for a counterattack. The 7th also had concerns about a Japanese landing in their rear at Baybay, which would cut off their own tenuous supply line over mountains.

After turning the American flank inland, Japanese attackers pinned the defenders back against the coastal road. But the 7th kept its supply line to Baybay open and used its artillery to good effect in breaking up the attack, despite heavy and accurate counter-battery fire. An unauthorized withdrawal by Company G of the 32nd Infantry left a hole in American lines, but the 184th Infantry reinforced the line on 27 November and restored the position lines. Together with 17th Infantry, the two regiments resumed the drive towards Ormoc on 5 December. As air superiority had now given the Allies control of the seas, the 7th could use amphibious operations, even "swimming" tanks, to outflank Japanese positions along the coast. Inland, the 7th engaged more of the Japanese 26th Division, pulling it into a sustained fight over a series of ridges, leaving Ormoc virtually undefended in their rear. This would facilitate the 77th Division's amphibious attack on Ormoc on 7 December, which would be the decisive action of the campaign.

7th Infantry Division's advance was also helped by the type of desperate Japanese counterattack that invariably accelerated Allied progress in the various campaigns across the Pacific. As the original architects of

the multi-domain, island-hopping strategy, the Japanese knew the critical importance of the Allied airfields on the eastern side of the island. Unable to neutralize them from the air, in late November they began working on an elaborate plan to overrun them on the ground, using troops sent back over the mountains augmented by an airborne or air-landed force on the fields themselves. The first attempt came on 27 November when three troop-carrying aircraft crash-landed near the airfields. One was destroyed on landing and the occupants of the other two escaped into the jungle without inflicting any damage.

The next major effort occurred on the night of 4 December when paratroopers were to land on the airfields near Burauen at the same time that ground forces marching over the mountains would come boiling out of the jungle. Coordination proved to be difficult. When the ground forces experienced delays getting through the jungle, planners delayed the airborne operations by twenty-four hours. The 16th Division, already in position, did not get the message and attacked as scheduled and, without the distraction provided by the airborne troops, did not seriously threaten the perimeter. With insufficient rations during their trek over the mountains, they had been forced to survive on bananas and coconuts. Though they did surprise some service troops, killing a few in their bivouacs, the 11th Airborne's 187th Glider Infantry and a battalion from the 96th Division easily repulsed the attack.

A now fully-alert garrison met the airborne attack the following night, which still achieved some local success. Paratroopers hit San Pablo airfield, targeting aircraft, and ammunition and fuel dumps. Troops from the 11th Airborne, including airborne engineers and artillerymen regained the airfields and successfully defended them, while two battalions from the newly-arrived 149th Infantry of the 38th Infantry Division recaptured Buri. The Fifth Air Force headquarters took some incoming fire, but operations remained unaffected. When the Japanese 26th Division finally arrived on 10 December, four days after the airborne attack, they succeeded in overrunning only one mess hall on base, which AAF ground personnel easily retook. The few survivors broke off the engagement and returned over the mountains in a futile attempt to retake Ormoc, which had fallen to the American 77th Division in their absence. The 511th Parachute Infantry Regiment of the 11th Airborne Division pursued them through Mahonag, over steep mountain trails. "Sucking mud, jungle vines, and vertical inclines exhausted men before they had marched an hour. Though it rained often during any one trip, still there was no drinking water available throughout the journey."²⁷ Eventually,

the 187th Glider Infantry pushed through and linked up with both the 32nd and 7th Divisions on the west coast.

Landings at Ormoc

The Japanese resupply convoy that arrived in Ormoc on 28 November would prove to be the last successful run of the “Tokyo Express” on Leyte. The next day, PT boats began to patrol the west coast, shooting up shipping in Ormoc harbor. With air cover gradually extended to the western coast, destroyers began to make forays as well, and the US and Japanese navies traded destroyers on the night of 3 December. The shipwrecked survivors of both ships floated near each other but declined to continue hostilities from their life rafts.²⁸

The 77th Division marked the third anniversary of Pearl Harbor with a landing just south of Ormoc. The attritional struggle for control of the skies over Leyte had tilted far enough in the Allies’ favor that Krueger and Kinkaid felt comfortable risking a small amphibious force of destroyers and LSTs along the island’s western coast. Although Japanese aircraft did interfere with the landings, they were unable to prevent it and inflicted only minimal damage. The 77th had arrived on Leyte on 23 November, in preparation for follow-on operations on Mindoro, scheduled for 5 December, but the deteriorating situation on Leyte required their commitment in support of XXIV Corps’ attack on Ormoc. Instead of taking the primitive trails across the island, placing increasing strain on roads and the logistical network, an amphibious operation offered the elements of speed and surprise, as well as the possibility of sustainment by sea as well, as Navy resupply became critical to operations on the western coast. “If suicide planes were bad, the mud was worse.”²⁹

Shore-based AAF and Marine fighters provided cover for the invasion and support for the troops once ashore. The invasion force arrived in Ormoc Bay at almost the same time as a Japanese reinforcement and resupply convoy carrying the 68th Brigade, demonstrating just how effective the surprise had been. The invasion convoy’s air cover quickly attacked the Japanese force, as AAF P-47 Thunderbolts and Marine F4U Corsairs sank most of the convoy, preventing another 4,000 troops and additional supplies from reaching the island. Even with the loss of the destroyers *Ward* and *Mahan* to *kamikazes*, Japanese aircraft were unable to prevent or even seriously disrupt the landing, though they did claim a Liberty ship, a LCT, and a PT boat. US fighter strength had increased dramatically in the two weeks surrounding the landings, from only 111 operational fighters available on 30 November to 232 by 14 December. Once the battle for air superiority had been won,



Figure 13. Air attacks on Japanese transports at Ormoc. Image courtesy of the Center for Military History.

ground and naval actions progressed accordingly. After the landing south of the town, the division captured Ormoc itself on 10 December, cutting the lifeline behind the Japanese 1st and 102nd Divisions still opposing X Corps' advance from the north, and virtually destroying the town in the process. The following day, troops of the 7th Division linked up with the 77th in Ormoc, freeing the latter for a continued pursuit up Ormoc Valley towards X Corps. The Japanese resistance in front of the 7th had evaporated into the mountains after the 77th landed behind them.

By this point in the campaign, the Japanese 16th and 26th Divisions had been virtually destroyed in the failed counterattacks on the Allied airfields, and only the 1st and 102nd Divisions were still fighting at the northern entrance to Ormoc Valley. With their supply lines cut, their days were numbered, as food and ammunition shortages begin to take their toll. The 1st Division had arrived at the beginning of November with roughly a month's-worth of supplies but these had been largely consumed by 1 December. A resupply landed at Ormoc on 3 December had been either destroyed during the offloading or captured by the 77th Division on 10 December. Additional Japanese reinforcement and resupply ships contin-

ued to arrive in American-held Ormoc after the port had fallen. On 11 December, Marine F4U Corsairs virtually destroyed a convoy of three transports and two destroyers carrying the Japanese 8th Division's 5th Infantry Regiment. Surface ships in Ormoc Bay and the 77th Division artillery ashore contributed their fire to the sinking one of the transports. These "cross-domain fires" by air, land, and sea combined to finally sever the Japanese supply line.

In a replay of what had happened to troops in New Guinea when cut off from resupply, the Japanese soldier's diet devolved to bamboo shoots, coconuts, and whatever fruits and vegetables could be found in Filipino gardens, and starvation began to take its toll. After the final retreat to the extreme northwest corner of the island, and the evacuation of 700 men of the 1st Division to Cebu in January, the survivors were able to accumulate enough food to survive, but were largely incapable of offensive action. These men remained stuck until March, but the boat that finally evacuated them was unable to find any port in the islands still in Japanese hands. As GEN Krueger later observed, "The landing of the 77th Division near Ormoc, serving to split the enemy forces and to separate them from their supply base, proved to be the decisive action of the Leyte operation."³⁰

Ormoc Valley and Mindoro

The 77th's pursuit up the Ormoc valley towards the 32nd Division, leading X Corps' advance, made little progress against heavy resistance the first four days. The 77th finally shook loose on 17 December and accelerated its advance up Highway 2. At the same time, the 1st Cavalry Division moved around the 32nd to Lonoy and took the lead in the drive towards Ormoc. The jaws of the trap slowly began to close, and the lead elements of the 1st Cavalry and 77th Divisions finally linked up on 21 December at Kananga. It had taken two weeks to cover the intervening fifteen miles. With the loss of Ormoc, Palompon on the extreme northwest coast became the only port still open to the Japanese, and its utility was in doubt as Allied aircraft ranged even further west over the Japanese maritime supply routes. .

Combat operations on Leyte officially wrapped up 25 December, as a battalion of the 77th Division's 305th Infantry made a Christmas present of the port of Palompon — the last port in Japanese hands-fittingly, in a shore-to-shore operation. This conclusion highlighted the ground forces' dependence and reliance on naval forces throughout the campaign. The battalion, which reached Palompon in a day, linked up with the rest of the regiment traveling overland. Their journey had taken a week. To this point,

Sixth Army estimated that it had killed 56,000 Japanese troops on Leyte, and had suffered 15,000 casualties of its own, including 3,000 killed and 12,000 wounded. The 7th, 24th, 77th, and 32nd Divisions took the heaviest casualties. On 26 December, the Eighth Army under the former commander of I Corps, LTG Robert Eichelberger, officially took over operations, freeing Sixth Army for the Luzon landings scheduled for January. Eighth Army estimated that it killed 25,000 more Japanese defenders before fighting finally ended on 8 May 1945, though Japanese sources estimated their entire combined losses on Leyte at only 60,000. During Eighth Army's operations, the Navy's PT boats continued to interdict barges and small shipping running troops and supplies in and out of Leyte.

Even before combat operations on Leyte had concluded, the 24th ID's 19th Infantry and the 11th Airborne Division's 503rd Parachute Infantry Regiment landed near San Jose on the nearby island of Mindoro. In virtually every respect, the Mindoro operation proved superior to Leyte. It was lightly defended — largely as a result of the defenders being thrown into the "Leyte cauldron" — it was closer to the Luzon landings, and the island was in a rain shadow of the other islands, meaning the milder weather made it easier to build and maintain airfields. Although the landings had been postponed from 5 to 15 December, Leyte, the new airfield at San Jose opened on 20 December, in plenty of time to support the landings on Luzon. In contrast to the mud of Leyte, the chief complaint at San Jose was that the airfield was too dusty!

The Navy's fast carriers raided Luzon from 14 to 16 December to cover the Mindoro landings, but *kamikazes* still hit the cruiser *Nashville*, killing 175 of her complement, and sank two LSTs carrying AAF stores. At the conclusion of this operation, Halsey's fleet ventured into the path of a very strong typhoon which sank three more ships, with a loss of over 800 sailors and 146 planes on the carriers.³¹ Modern space-based weather reconnaissance satellites make it unlikely that any such surprise could recur, but any absence or degradation of space-based assets would place a premium on terrestrial forecasting and weather monitoring stations.

In a miniature version of the Battle of Leyte Gulf, the Japanese navy sent two cruisers and six destroyers from Cam Ranh Bay in Indochina to counterattack the Mindoro invasion force. Absent air or naval cover, the column broke through an aerial screen and claimed one transport off the beachhead. Only inaccurate shelling saved the troops ashore from further damage, and a PT boat sank one destroyer on withdrawal. The resupply convoys continued to suffer heavily in the aircraft-infested Philippines, as the loss of two transports on 28 December and two more ships on 30 De-

ember, including a valuable tanker, threatened efforts to build up reserves of aviation fuel and ordnance. By the conclusion of the Mindoro operation, MacArthur's Southwest Pacific Area was finally ready for a return to Luzon, with two full armies (the Sixth and Eighth) comprised of ten divisions and five additional independent regimental combat teams (brigades).

Conclusion

The Leyte campaign is a classical case study in the interdependence of air, land, and sea forces on the modern battlefield and the vital support provided by control of the information domains. According to the Sixth Army after-action report, Leyte "brought out very strongly, although in a negative way, the vital relationship of air power to the success of the offensive as measured by the period of time required to complete the utter destruction of the hostile force."³² The inability to control the skies with naval, and especially ground-based air power, extended the campaign and increased the cost to the ground forces. The inaccurate intelligence that resulted from the lack of air superiority meant that much of the sacrifice was for naught. The Air Force's official history observed, "Leyte was a disappointment to the commanders in terms of its potential airfields and facilities"³³ How could military planners know so little about the terrain and soil characteristics of islands that had been in US possession for most of the previous fifty years? Evidence suggests that engineers were aware of the difficulties before the campaign even began, but were ignored.³⁴ The Army's official history summarized the campaign as follows: "The importance of the development of the airfields cannot be overemphasized. The inability of the Sixth Army to meet its construction dates on the airstrips, because of poor soil conditions and heavy rains, prevented the US forces from stopping the flow of Japanese reinforcements and made it impossible for the Allied Air Forces to give sufficient land-based air support to the ground troops. It also forced a postponement of the Mindoro operation."³⁵ The unimpeded arrival of the Japanese 1st Division on 1 November had been critical, and Krueger reported that "this unit, more than any other hostile unit on Leyte, was responsible for the extension of the Leyte Operation."³⁶

Perhaps no aspect of the campaign has attracted more attention than Halsey's decision to pursue the Japanese carriers at the expense of the landing forces during the Battle of Leyte Gulf. Naval historian Samuel Eliot Morison took Halsey to task for this failure. "In every amphibious operation the covering force has the duty to engage any enemy fleet that may challenge the landings...but he is not supposed to go out and seek battle while the amphibious forces require his protection."³⁷ In his history of the battle, Morison extensively quotes naval theorist Julian Corbett who

argued “the paramount function of a covering force in an amphibious operation is to prevent interference with the...landing, support and supply of the Army.”³⁸ Halsey was more focused on destruction of the enemy fleet, concentrating excessively on victory in his primary domain at the expense of the joint fight. MacArthur’s orders to Kinkaid, commanding the Seventh Fleet, specifically enjoined him to “support the operation by...preventing Japanese reinforcement by sea of its Leyte garrison,” but Kinkaid found his task complicated by the persistent air threat.³⁹ The Army Air Forces, seeing that the Army and Navy generally refused to put “their” theaters under the command of another service, did likewise, assigning control of the B-29 groups then arriving in the Marianas directly under GEN Arnold in Washington, DC. This complicated coordination with a powerful very heavy bomber force, which could have intervened decisively in the naval and ground battles.

There is little doubt that Allied planning underestimated the Japanese response to the invasion. Expecting the Japanese to “keep their powder dry” for the follow-on operations on Luzon, commanders failed to anticipate the fury of the air, ground, and naval response to the Leyte landings. The *kamikazes* proved a most unwelcome development and the most lethal of the Japanese countermeasures. The naval sortie and ground reinforcement left those two domains with a narrower superiority than they would have liked. It is clear that the Allied response overly focused on the most likely course of action (passive resistance) rather than the most dangerous (massive response). “The inability of the Americans to establish considerable land-based air forces on Leyte, as well as the unexpected Japanese reinforcement program, had retarded the campaign.”⁴⁰

Despite these difficulties, the successful conclusion demonstrates yet again the incredible synergy achieved by well-coordinated forces in a multi-domain battle. Morison agreed, noting, “The Leyte campaign offered another convincing demonstration of the immense striking power of a coordinated Army-Navy team, with its air components.”⁴¹ Much as the Axis decision to defend Tunisia at the end of a tenuous supply lines had played into Allied hands in North Africa, so too did the Japanese decision to reinforce Leyte with vulnerable supply lines to their rear ultimately aid the reconquest of Luzon.⁴² Ultimately, “The dispatch of reinforcements and supplies to Leyte had seriously crippled the defense of Luzon-the strategic heart of the Philippine archipelago.”⁴³ With the Leyte campaign concluded and the new airfields on Mindoro in operation, the stage was finally set for the massive battle for Manila, Luzon, and the entire Philippine Islands.



Safe Harbor, by James Dietz. Image courtesy of the artist.

Notes

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3. Cannon, *Leyte*, 43-44.
4. Ronald Spector, *Eagle Against the Sun* (New York: Vintage, 1985), 426.
5. Morison, *History of United States Naval Operations in World War II*, vol. 12, *Leyte: June 1944-January 1945* (Chicago: Little, Brown & Co, 1958), 134.
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17. Cannon, 231.
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21. Morison, 343-344
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29. Morison, 386.
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31. For the full story, see Bob Drury and Tom Clavin, *Halsey's Typhoon: The True Story of A Fighting Admiral, an Epic Storm and an Untold Rescue* (New York: Atlantic Monthly Press, 2006). Events were later dramatized in the 1954 film *The Caine Mutiny*.
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33. Craven and Cate, 388.
34. Morison, *History of United States Naval Operations in World War II*, vol. 12, 14.
35. Cannon, *Leyte*, 369.
36. Edward Drea, *MacArthur's ULTRA: Codebreaking and the War against Japan, 1942-1945* (Lawrence, KS: University Press of Kansas, 1992), 169.
37. Morison, *History of United States Naval Operations in World War II*, vol. 12, 58.
38. Morison, 59.
39. Morison, 57.
40. Cannon, *Leyte*, 306.
41. Morison, *History of United States Naval Operations in World War II*, vol. 12, 397.
42. See Douglas Porch, *The Path to Victory* (New York: Farrar, Straus and Giroux, 2005).
43. Cannon, *Leyte*, 369.

Chapter 5
Liberating the Philippines
The Southwest Pacific Area (SWPA) Army Group, 1945



With the liberation of Mindoro and the airfield complex around San Jose, MacArthur's Southwest Pacific Area forces were finally ready for the campaign's final stage, the liberation of the Philippine Islands. Under his command, he would have two entire armies, the Sixth, under Walter Krueger, which would eventually employ ten divisions in its primary task, the liberation of the main island of Luzon and the Philippine capital of Manila, and the Eighth, under Robert Eichelberger, whose six divisions would be responsible for clearing the southern islands in the chain. Eighth Army would also establish air bases for further interdiction of the South China Sea and support the Australian effort to liberate Borneo and portions of Indonesia. Four corps headquarters, the I, X, XI, and XIV, would provide the ability to delegate portions of these tasks in a widely-dispersed theater of operations.

The final liberation of the Philippines would not have been possible without the efforts of the air and naval forces to secure sea lines of communication to the islands. Even with mastery of the sea — hard-won in the Solomons and, especially in the battles in the Philippine Sea and Leyte Gulf — Japanese *kamikaze* pilots threatened to inflict significant damage on the invasion convoy. That they were unable to do so was largely thanks to the efforts of the Navy's carrier-based and the Army Air Force's ground-based aircraft, who punished the airfields harboring *kamikazes* and then maintained combat air patrols over the vulnerable fleet. Both naval and air forces ensured that the over 500,000 Japanese troops in the islands were completely cut off from reinforcement and resupply, effectively isolating the battlefield.

Without hope of resupply or reinforcement, the campaign became an eight month-long effort to reduce committed defenders who had barricaded themselves in some of the most foreboding terrain in the Pacific. Only the determined efforts of the American and Filipino ground forces could root them out of their fortresses, but their task was greatly eased by the successful interdiction campaign waged by the naval and air forces, and by the logistical support provided by secure control of those domains. Control of the various information domains ensured the support of the local population, a significant force-multiplier, and provided detailed descriptions of Japanese force dispositions and intentions that enabled the forces to be employed economically and effectively. The liberation of the Philippines was, in every sense, a multi-domain battle.

Japanese Forces

The Leyte campaign seriously dislocated Japanese plans for defense of the Philippines. While Japanese efforts to reinforce that island's gar-

risson had successfully prolonged the battle and increased the cost, it had ultimately provided a favorable situation for the Allies. By forcing the Japanese to fight with their vulnerable logistical lines spread out across the Visayan Sea, the Allies were able to partially interdict the flow of reinforcements and almost completely stymie the flow of supplies to the troops fighting on Leyte. Many of these came from Luzon and were therefore unavailable to GEN Tomoyuki Yamashita's 14th Area Army for that campaign. Accordingly, he placed no faith in his ability to meet the invasion force in anything like a set-piece battle on the Central Plains between Manila and Lingayen Gulf. Instead, he planned use the six infantry and one armored divisions available to him to fortify three isolated mountain redoubts.

The smallest of the three groups, the Kembu Group, held the vital airfield complex at Clark Field and the mountains of western Luzon, including the Bataan peninsula. The Kembu was the first group the Sixth Army would have to reduce, but Yamashita had no hope of holding these areas for an extended period, given the region's comparatively smaller size and proximity to both the Allied airfields and the coast, which provided many points of entry for amphibious forces. From their redoubt, the miscellaneous units of the Kembu Group would threaten the right flank of any drive to Manila, while holding the high ground overlooking Clark Field, denying its use for as long as possible. The second major group, the Shimbu Group, held southern Luzon, including the Batangas coast southwest of the capital and the Bicol peninsula. Like western Luzon, these areas were also vulnerable to amphibious flanking attacks, but Yamashita judged their ability to hold the capital's water reservoirs in the hills east and southeast of the capital of enough value to assign two infantry divisions, the 8th at Batangas and the 105th on the Bicol peninsula, to this area. These two divisions would come under attack after the Sixth Army had reached Manila.

The Shobu Group, in north Luzon, would be the largest of the three, with five divisions deployed in the Central Plains and Cagayan Valley, the primary agricultural regions on the island. It was hoped this group could hold these areas long enough to extend the campaign until, by some miracle, Japanese fortunes turned, or at least to increase the attrition to a high enough level to prevent an invasion of the home islands. Yamashita would command this group personally, and deployed his 10th Infantry Division and the 2nd Tank Division at San Jose, guarding the evacuation corridor between Manila and the mountains but also in position to fall on the left flank of any drive south from Lingayen Gulf, which Yamashita correctly anticipated would be the site of the main landings, towards Manila. To

protect against the landing itself, he positioned his 19th Infantry Division at San Fernando and the 23rd at Lingayen, along the gulf's eastern shores, to forestall any immediate drive into the mountain redoubt. The landing beaches themselves were undefended, as the Japanese expected that the heavy pre-invasion bombardment would do extensive damage to any troops in the flat, indefensible terrain. Behind the mountain redoubt, the 103rd Division guarded Yamashita's rear and the coastal entrance to the Cagayan Valley at Aparri. Like MacArthur in 1941, the defenders were unable to fully evacuate supplies to these redoubts, which limited their ability to hold out for extended periods. Between 65,000-70,000 metric tons of supplies were available in Manila, but the defenders had evacuated only 4,000 tons by 9 January.

The Allies became aware of these dispositions after guerillas recovered documents outlining Yamashita's plan from a plane crash.¹ Captured enemy documents continued to provide the most valuable intelligence, just as cyber attacks, capable of penetrating an enemy information network, can provide access to vital internal communications. Throughout the campaign, human intelligence, or HUMINT, collected by guerillas and Filipino civilians kept the Allies posted on Japanese movements and capabilities, providing overwhelming information superiority. Armed with this information, MacArthur planned to reduce each of the three fortress areas in detail. While over 500,000 Japanese garrisoned all of the islands in the Philippines, not all were combat troops. The islands held many service units, as well as air and naval personnel, and coordination was not always perfect among these. Yamashita directly controlled only 275,000 troops on Luzon, and only 90,000 of these were designated as combat troops.

In addition, the islands were low on supplies, as Allied submarines and aircraft operating from Leyte and beyond had seriously reduced the merchant shipping reaching the islands. The last major convoy landed at the extreme northern end of the islands in December. Ground-based air interdicted reinforcements, sinking three cargo ships destined for Luzon on 30 December, and four more three days later. Of the three infantry divisions dispatched to Luzon after Leyte, two lost a third of their troops to interdiction, and the remainder were short of ammunition, medical supplies, and food, as rice had to be imported from Indochina to feed both the military and civilian populations. "With increased Allied air and submarine activity in the South China Sea, imports were drastically reduced until, in December, not a single shipload of food reached Luzon."² Those supplies that did arrive could not be distributed efficiently, as the poor transportation network hindered movement. By the time of the Allied landings in January,

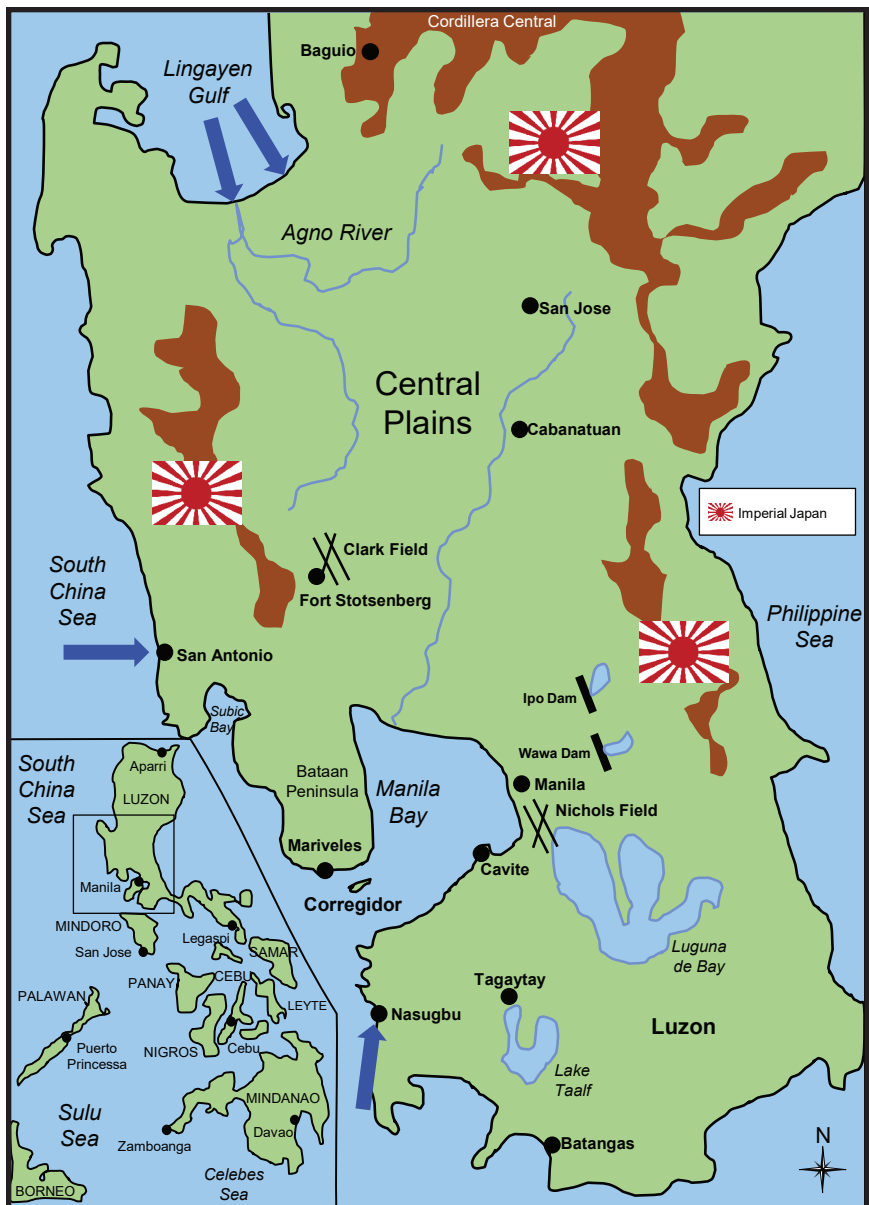
the troops were down to a half pound of rice per day. Loss of control of the sea also meant the defenders would have to disperse their forces to defend many isolated points. As with the Allies in 1941, Japanese naval forces had to evacuate the islands, especially the fine harbor in Manila Bay, once they lost control of the air, meaning the island's remaining aircraft would offer the only opposition to the invasion convoys.

The Invasion Flotilla and the Kamikazes

The invasion force for Luzon embarked from hard-won bases across the SWPA Area of Responsibility. The 37th Infantry Division and XIV Corps Headquarters boarded at Bougainville, and 40th Infantry Division at Cape Gloucester on New Britain. The Corps conducted a brief rehearsal on the Huon Gulf, between Lae and Salamaua, site of the 1943 battles, and made a final stop at Manus before sailing for the Philippines. I Corps embarked at Hollandia, site of SWPA's biggest amphibious operation on New Guinea, with the 6th Infantry Division boarding at Sansapor on the Vogelkop Peninsula and 43rd Infantry Division at Aitape. Other units came from Milne Bay and Biak. Even the army reserve, the 25th Infantry Division, conducted a rehearsal on Guadalcanal, the site of its first combat commitment exactly two years earlier. Sixth Army headquarters had a much shorter journey, having been engaged on Leyte until December before handing off mop-up operations there to Eighth Army. Thus, the various units participating in the invasion conducted what was almost a farewell tour of all the battlefields that had led to this point. As Samuel Morison pointed out, "The troops for the Lingayen landing were lifted from sixteen different bases in the South and Southwest Pacific, all but one of which-Noumea-the Allies had wrested from the Japanese."³

To escort the ships to the invasion beaches, the Navy assembled a close covering force consisting of six escort carriers, three battleships, three heavy cruisers, and eighteen destroyers. Altogether, ADM Jesse Oldendorf had available a total of twelve escort carriers, six old shore-bombardment battleships, and six heavy cruisers. Pre-invasion carrier strikes by the Navy's fast carrier groups hit Taiwan, but were unable to work over Luzon's fields due to continuing bad weather which, at least, helped shield the invasion force. Instead of waiting for individual aircraft to target them, the carriers were now using "blanket" tactics, patrolling over enemy airfields to prevent takeoffs and intercepting the threat at its source rather than its target.

Despite this pre-emption, *kamikazes* still threatened, but could not halt, the invasion force. Japanese suicide planes sank the escort carri-



Map 6. Luzon and the Southern Philippines. Graphic prepared by Army Press Staff.

er USS *Ommaney Bay* off Mindoro on 4 January, with a loss of over 100 sailors. Two more escort carriers, two heavy cruisers, the USS *Louisville* and HMAS *Australia*, and three destroyers suffered heavy damage *en route* as the convoy passed Manila Bay and airfields close ashore. Still more ships felt the *kamikaze's* wrath on 6 January, when

heavy raids pounded the shipping as it gathered in Lingayen Gulf. A strike on the USS *New Mexico* killed the ship's captain and a British general who was observing the operation and inflicted over 100 casualties on the well-armored ship. Attacks on the USS *California* injured 200 more men. Additionally, the *Colorado* suffered serious damage to its fire direction center from a 5-inch flak shell returning to earth. Overall, Japanese aircraft sank or heavily damaged twenty-five large ships during invasion, at a cost in naval personnel of over 3,000 casualties. Having refined their tactics in the months of experience gained off Leyte, the attackers now used the high terrain around the gulf to mask their low-level approach. The supply seemed inexhaustible and nigh unstoppable. Neither Halsey's carriers, nor a raid of twenty-two B-24s could effectively neutralize the airfields, but a massive low-level raid on 7 January finally provided some relief. The constant alerts and attrition took a heavy toll on amphibious and naval shipping, much of which was scheduled to return to Nimitz's control for operations against Iwo Jima in February and Okinawa in April.

While the naval forces were largely occupied in transporting the ground forces to the fight, and fending off the aerial threat to their ships, the air forces focused on preparing the battlefield as well. As early as 22 December heavy bombers had begun softening up the Philippines, but the requirement to stage through Tacloban on Leyte and the continuing foul weather hampered their efforts. Fifth Air Force had only one heavy bomb group immediately available, leaving much of the work to the smaller medium bombers. The heavies could carry a much larger bomb and, more importantly, could fly well above the flak that proved costly to fighter-bombers and mediums working over spot targets such as airfields. At Clark Field, only heavies could have inflicted serious damage. Japanese sources agreed, admitting, "Disruption of our air operations was caused by the heavy land-based bombers. They gave us no rest and we were unable to recover between attacks."⁴ These raids forced an inefficient dispersal, with a resulting loss of effectiveness, as mechanics, spare parts essential for repairs, and their aircraft were now at widely separated locations for survival. The B-29s, built at so much cost, could have reached Luzon from their new bases in the Marianas but were largely held out of the pre-invasion bombardment. They finally hit Taiwan, with fifty-five B-29s pounding Kagi on 14 January and seventy-seven striking Shinchiku on 17 January, despite the AAF CG, Henry H. "Hap" Arnold's insistence that airfields were not suitable targets for B-29s. Unfortunately, these raids came well after the most serious threat

to the invasion fleet had passed, as *kamikaze* attacks had largely tapered off by 13 January.⁵

Fortunately, carrier-based aircraft filled the gap admirably, working over the Luzon fields before and during the invasion, and then shifting their attention to Taiwan on 15 and 21 January, during a week-long foray into South China Sea by Halsey's fast carriers. This raid had been planned to meet any sortie by the Imperial Fleet, then at anchor near Singapore, that always seemed to follow any major Allied landing, but at this stage of the war the Japanese Navy had largely lost its ability to respond. The carriers had to satisfy themselves with attacks on the anchorage at Cam Ranh Bay in Indochina and on airfields along the China coast. The cruise did plug the shipping lanes, sinking over a dozen tankers, while Seventh Fleet submarines added several more to the total. The aerial and naval dominance ensured the security of the vulnerable logistics lifeline into Lingayen Gulf, but it did not come without a cost. The latter raid on Taiwan resulted in heavy damage to the *Ticonderoga*, with 150 killed and 200 wounded, and 36 aircraft destroyed. The *Hancock* also took heavy casualties from an accidental explosion. Marine air lent their weight to the attacks with Marine Air Group (MAG) 12 on Leyte and MAG-14 on Samar adding F4U Corsair fighter sweeps and interdiction attacks. The aviators were also successful in dropping bridges to impede any movement towards the beachhead, but the lack of Japanese resistance meant that the invasion forces needed the bridges more than the defenders.

The supply of *kamikazes* appeared endless, as Japanese aircraft factories were still turning out over 1,000 planes per month, and would continue to do so until almost the end of the war. The adoption of suicide tactics largely overcame the training deficiencies that plagued the Luftwaffe in Europe, when that service had to curtail pilot training due to fuel shortages. Fortunately for the Allies, the supply was not bottomless, at least not in the Philippines. "By 12 January the Japanese had expended every aircraft they had in the Philippines."⁶ Cut off by air and sea from the home islands, they could not easily replenish their supply. Aircraft could still reach the islands by staging through Taiwan, but fuel, critical spare parts, and trained mechanics, essentials for any modern air force, could not break through the cordon. The *kamikaze* threat largely exhausted itself shortly after the landings, long before the first airfields had been overrun. After Navy, Marine, and AAF aircraft had largely won control of the skies over Luzon, most *kamikaze* attacks came from Taiwan, as the Philippine airfields were largely neutralized and the few surviving aircraft had to flee

the islands in order to continue to operate. “Thus, Yamashita had to fight a campaign on Luzon without friendly air power.”⁷

Allied Plans and the Lingayen Gulf Landing

The liberation of Luzon presented the forces of the SWPA Army Group with several problems that it had not yet faced in the campaign. First, Luzon was far bigger than any island yet attacked, except New Guinea, and the Allies had only landed at selected spots on New Guinea’s coast. They would attempt to liberate all of Luzon, a 500 mile-long island shaped like an irregular crescent open to the northeast. It was much wider in the north, over 100 miles, before trailing off to less than thirty miles in the south. Manila, the Philippines’ capital and largest city, sat roughly in the island’s center, with Manila Bay open to the South China Sea through a narrow channel on the west coast. By 1945, an estimated seven million Filipinos lived on the island, making it one of the most densely populated places yet seen, though the population was friendly and had been working to defeat the Japanese for years. These dense cities, especially Manila, offered the prospect of urban combat for soldiers largely trained for jungle fighting.

GEN Krueger’s Sixth Army planned to land 175,000 troops at Lingayen Gulf on the northwest coast beginning on 9 January. I Corps, under MG Ennis Swift went ashore with the 43rd Infantry Division on the left and 6th Infantry Division on the right. Their initial mission was to seal off the left flank from any potential counterattack from North Luzon. XIV Corps, under MG Oscar Griswold, also had two divisions abreast, the 37th Infantry Division on the left and the 40th Infantry Division on the right. The latter would block any attacks against the right flank while the former struck out across the central plains towards Manila. The 25th Infantry Division formed an afloat reserve and three more divisions — the 11th Airborne, 32nd Infantry Division and 1st Cavalry Division — were all scheduled to arrive by the end of the month. After a heavy, and largely unnecessary, pre-invasion bombardment by VADM Jesse Oldendorf’s aging battle wagons, the landings went ashore virtually unopposed, except for *kamikazes*. The Japanese defenders declined to stand the fire of shore bombardment and preferred to defend well inland. The only significant resistance came on the left flank in 43rd Infantry Division’s sector, where artillery in the hills overlooking the beaches hampered unloading. As a result, I Corps’ drive inland slowed on the flank only a few miles inland, in hills honeycombed with positions manned by elements of the Japanese 23rd Division and the attached 58th Brigade. Resistance would have been much stronger, had the 23rd division not lost its division headquarters, four infantry battalions, and an artillery battalion to submarine attacks while in transit

two months earlier.⁸ The remaining decimated units attempted to hold the mountains beyond, which shielded the bulk of Yamashita's defenders.

The 43rd Infantry Division troops had the misfortune of attacking on a diverging front and struggled to build sufficient combat power. With the invasion beaches lying at the bottom of a gulf open to the north, the troops had to attack north along the eastern shoreline, east into the mountains, and south, to provide flank security for the 6th Infantry Division as it pushed inland. The division quickly became task-saturated, necessitating the commitment of the separate 158th Infantry Regiment to reinforce the division. Its initial mission was to seal off Highway 11 leading from the mountains and Baguio, at its exit near Rosario. Despite the reinforcements, which also included the 6th Infantry Division's 63rd RCT, the attack suffered from a lack of artillery support and supply shortages, especially water, which had to be hand-carried forward in the enervating heat. On 16 January alone, the 158th suffered thirteen killed, twenty-four wounded, and forty-nine heat exhaustion casualties.⁹ A solid month of combat reduced the 43rd Infantry Division to half strength, but it finally took the vital road junction leading from the mountains on 30 January. But, with five regiments attacking on a twenty-five mile-long front, the 43rd required additional support.

Krueger elected to commit the Army reserve, the 25th Infantry Division, in this sector to fill the widening gap between the 43rd and 6th Infantry Divisions. When the division landed on 11 January, half of the ten divisions that would eventually fight on Luzon were ashore. The 25th received its baptism of fire at Binalonan on 17 January, easily repelling an attack by under-gunned Japanese tanks. It pressed forward to San Manuel, to firm up the beachhead's left shoulder, and found the town strongly defended by elements of the Japanese 2nd Tank Division with fifty tanks in in prepared positions. In a combined-arms assault, the 161st Infantry took the position and held it against strong counterattacks, trading three of its attached tanks for all fifty of the Japanese. With the 43rd and 25th Infantry Divisions shoring up the flank, 6th Infantry Division was free to perform its mission, which was to support XIV Corps' drive south. The division initially bypassed defenses in the Cabaruan Hills, but had to go back and dig the defenders out, stalling the advance for almost a week. Krueger had been waiting for the arrival of the 32nd Infantry Division and 1st Cavalry Division, scheduled for end of month, to begin the drive on Manila. He plugged the 32nd Infantry Division into the I Corps line between the 43rd and 25th IDs, freeing the latter up to help speed 6th Infantry Division's advance south. The 1st Cavalry Division went to XIV Corps, to provide

additional impetus to its push south. By the end of January, Krueger had seven full divisions on one continuous line aimed south towards Manila.

In the XIV Corps zone on the army's right flank, everything had gone according to schedule or even better. A rudimentary airfield was operational by 15 January, thereby preventing a recurrence of what had happened at Leyte when the escort carriers had been left to shoulder the burden of air support ashore for far too long. Already, C-47s were bringing in essential cargo, and night fighters occupied the field on 16 January to provide protection against night raiders. AAF fighters formally relieved the escort carriers of their mission when the first groups of P-38s arrived the following day. B-25 medium bombers set up shop at Mangaldan on 22 January, giving the Luzon-based forces some offensive punch, along with the 35th Fighter Group and the 3rd Air Commandos, a unique unit designed to work specifically with forces operating behind enemy lines and a forerunner to the modern "airpower + SOF" team. By early February, Marine Air Groups 24 and 32 were flying from the beachhead airstrips, adding their Corsairs to the list of available CAS aircraft.

With the rainy season approaching, what the AAF really needed was the all-weather strips at Clark Field, providing an imperative for XIV Corps' rapid advance inland. The corps advanced four miles on D-Day, and four more the next, across waterlogged terrain, but fortunately it was unopposed. It had established firm links with I Corps on its left on D-Day, and expanded the beachhead to a thirty by thirty mile perimeter by the end of the first week. Unfortunately, this rapid advance began to outstrip the corps' supply line in places, as issues with a shallower-than-expected beach gradient complicated unloading, necessitating improvised bridging to connect the LSTs, which had grounded hundreds of yards offshore, to the beach. Bouts of foul weather and occasional enemy fire in the I Corps sector also interrupted unloading. Beachmasters overcame high surf on the beaches themselves by unloading fragile landing craft inside the mouths of the many small streams along the shore, which provided a protected, if congested anchorage. In order to speed up the shipment of supplies inland to the front line, logisticians clamored for the early repair of the railroad line leading down the valley, which became critical in easing the supply shortage. The effort benefitted greatly from the lack of any aerial opposition, permitting the establishment of massive supply dumps, which both eased the job of filling requisitions and limited pilferage.¹⁰

The XIV Corps zone contained the substantial obstacle of the Agno River, which flowed from east to west directly across the valley before turning abruptly northward to enter Lingayen Gulf. The river could have

presented a substantial obstacle, if defended, but the Japanese had simply blown the bridges and moved off to their mountain hideouts. This permitted the use of lighterage, especially DUKWs and LVTs as ferries, often miles inland, which compensated partially for the slow delivery of bridging equipment to the engineers. However, an Army accustomed to slow advances through difficult jungle terrain was unprepared for the rapid movement far inland that typified the campaign on the Central Plains, highlighting the necessity for a balanced force capable of both light and mechanized forces. A rapid landing of mobile field artillery relieved the vulnerable ships in the bay of their shore support assignment, and the Navy turned its attention to other tasks, including protecting resupply convoys. Six escort carriers, four light (anti-aircraft) cruisers, and seventeen destroyers remained just offshore, specifically devoted to this task.

Western Luzon and Clark Field

With I Corps protecting the left flank, XIV Corps formally began its drive on Manila on 18 January. While 40th Infantry Division dispatched some elements to watch the right flank of the beachhead, most of that division, with the 37th Infantry Division on its left, pushed south against very light opposition. Once across the Agno River, neither division encountered any significant opposition until they reached the vicinity of Bamban. Here they bumped into the first elements of the Kembu Group, a collection of almost 30,000 troops sent to hold northwest Luzon, but composed of a hodgepodge of naval, service, and 2nd Tank Division troops that followed the familiar pattern of holing up in hills overlooking airfields to prevent and delay their use. The troops were poorly-trained, but compensated for their shortcomings with strong fortifications and by arming themselves with automatic weapons stripped from aircraft. The XIV Corps advance slowed between 23 January and 2 February, as 40th ID detached elements first to watch the flank, then to begin clearing the threatening elements from the slopes above Clark Field. Meanwhile, 37th Infantry Division took Clark Field proper on 28 January and Fort Stotsenburg beyond on 30 January. The division's right flank elements required two more days to assist the 40th Infantry Division in clearing the hills above the airfield, but soon shook loose to continue its drive.

XIV Corps encountered far less opposition than I Corps for a number of reasons. The first was that Yamashita had emplaced much stronger opposition on the eastern side of the valley than the west. The second was that Filipino guerillas were capable of pushing back the lighter troops on the XIV Corps front, but were unable to dislodge the heavier Japanese formations on the I Corps front without assistance. The final reason was



Figure 14. P-47s dropping napalm. Image courtesy of the Center for Military History.

that SWPA had taken advantage of its command of the air, and therefore the sea, to introduce another threat to the rear of the defenders in northwest Luzon. On 29 January, Eighth Army's XI Corps, consisting of the 38th Infantry Division, plus the attached 34th RCT of 24th Infantry Division, landed at San Antonio on the Zambales coast against negligible opposition. Planners hoped this movement would prevent any potential Japanese retreat into the rugged Bataan peninsula but Yamashita refused to repeat MacArthur's error, preferring instead to defend the more remote Cagayan Valley, which at least had some agricultural resources. XI Corps made slow progress in the dense jungle, stalling at a horseshoe-shaped bend on the road through Zig Zag pass. Repeated frontal assaults against prepared Japanese positions, rather than flank attacks through the jungle, resulted in a regimental commander's relief, but the attack had achieved its larger objective. The Japanese troops overlooking Clark Field and XIV Corps now had to contain a landing in their rear. A liberal use of P-47-delivered napalm from airfields seized inside the new beachhead finally blasted defenders out their positions, and on 21 and 22 February, 163 B-24s carpet-bombed the last Kembu caves allowing the positions to be cleared within a few days.

In less than a week after the new landing on the western coast, engineers had opened the airfield inside that beachhead at San Marcelino, and XI Corps elements linked up with XIV Corps on 5 February, freeing the 37th Infantry Division to continue its drive to Manila without having

to worrying about 40th Infantry Division's ability to contain the threat in their rear. The insertion of an eighth division into the fight at a time and place of their own choosing was just one of the many advantages the attackers had accrued by winning the multi-domain fight around Luzon.

40th Infantry Division took two more weeks to clear the Japanese main line of resistance before being transferred to XI Corps' control, allowing XIV Corps to focus on the drive south. In early March the 43rd Infantry Division, detached from I Corps, relieved 40th Infantry Division, freeing that unit for follow-on operations in the southern Philippines. Meanwhile, 38th ID turned south, and, reinforced by 6th Infantry Division's 1st Infantry, attacked into the rugged Bataan peninsula with a massive pincer movement. In yet another shore-to-shore movement, the 38th's 151st Infantry landed at Mariveles on the tip of the Bataan Peninsula on 15 February, with destroyers and AAF B-24s providing ample preparation and fire support which, unfortunately, leveled the town. The landing forces repelled a light counterattack and advanced inland, enabling the reinforced 38th Division to clear and secure the peninsula much more easily than the Japanese had in 1942. The defeated defenders retreated into the mountains, where many died of starvation and disease before they could be rooted out by guerillas or mop-up patrols. Eventually the 38th Infantry Division moved north and relieved the 43rd, taking another two months to secure rugged mountains of northwest coast.

The Drive on Manila

I Corps' attack on San Jose sought to sever communications between Japanese defenders in northern Luzon and the southern part of the island, breaking the resistance up into manageable pockets and preventing it from massing. Before this window closed, Yamashita tried to move up his 105th Division from the south, and sent most of his 10th and 2nd Tank Divisions to hold San Jose and keep this corridor open. The defenders had dispersed widely around the town, with medium tanks armed with 47 mm guns fighting from hull-down defensive positions. I Corps made slow progress in the debilitating heat across flat terrain with few open flanks. A combined assault by the 6th and 25th Infantry Divisions finally captured the town on 4 February, but not before the commander of the 20th Infantry Regiment had been relieved. With this obstacle secured and the threat of any armored thrust into its flank eliminated, XIV Corps was again free to press forward to Manila. I Corps had destroyed over 180 Japanese tanks, finishing the 2nd Tank Division as a mobile threat and forcing its reconstitution as an infantry formation, rebuilt with levies from the various service formations in North Luzon. I Corps units reached the eastern coast of Luzon on 11 February, permanently severing the defending forces

into three parts, but most of the Japanese 105th division made it through the corridor and into North Luzon, strengthening Yamashita's defensive position there. Without control of the sea, Yamashita could no longer shift forces from the isolated parts of the island, turning his otherwise mobile formations into static defensive garrisons.

During this time, elements of the 6th Ranger Battalion, supported by Filipino guerrillas, conducted a daring raid well behind enemy lines. On 30 January, in what became known as the "Great Raid," 200 Rangers assaulted the Cabanatuan prison camp, overwhelming the guards and liberating over 500 POWs, many of whom were too sick to walk. Carrying their charges back on carts pulled by carabao, the raid did not lose a prisoner. Aircraft supported the operation, with P-40s providing ample close air support on the return from the nighttime raid. A P-61 night fighter also provided a critical distraction that enabled the liberators to reach camp perimeter unobserved. The most important contribution had been detailed reconnaissance provided by Filipino guerillas, who also supported the attack by preventing Japanese forces camped nearby from responding to the raid.

Throughout the campaign, the air and ground forces developed a synthesis lacking in other campaigns in the Pacific. The Air Force's official history argued, "Of the many Pacific tactical air operations, we think the most striking example of the effective use of tactical air power, in cooperation with ground troops and the Navy, to achieve decisive results at a minimum cost in lives and materiel was the work of the Far East Air Forces in the Lingayen-Central Luzon campaign."¹¹ By this point in the war, both ground and air forces had gained valuable experience in requesting and conducting close support missions, and the absence of an air superiority campaign enabled the air forces to free up additional assets to intervene in the ground battle. By the end of the campaign, the air-ground-naval team was firing on all cylinders.

With its flanks clear, ample air support overhead, and its opposition fixed in place, XIV Corps was ready to begin the final assault on Manila. Shaking free from any resistance left in the Central Valley, the newly-arrived 1st Cavalry Division took the lead and launched a combined arms "Thunder Run" towards Manila with two "Flying Columns," consisting of a cavalry squadron, a tank company, and a self-propelled 105mm battery, each covered by Marine fighters directed by jeep-mounted FACs, not unlike the "armored column cover" practiced by Patton's Third Army and the Ninth Air Force in the drive across France the previous summer. After covering over 100 miles in just three days, the lead elements arrived at the edge of the city on 3 February, well before the defenders

were fully prepared to meet them. The Flying Columns had moved so fast that they took bridges before they could be blown, with one column even “crossing the T” of a late-arriving Japanese convoy at an intersecting road. LTJG James Sutton of a naval EOD team attached to the flying columns cut the fuses on the bridge over the Tuliahan River, providing the cavalry an entry into the city. When infiltrators dropped the bridge the following night, enough of the 8th Cavalry regiment had already gained a firm foothold in the city. It officially crossed the city limits on 3 February at 1900 and immediately set out for Santo Tomas University liberating over 4,000 prisoners. Blown bridges began to canalize traffic and slowed the flow of logistics onto the battlefield. The 1st Cavalry Division was unable to maintain its speed in the urban environment and could not save the bridges over the Pasig River that would enable it to vault into the southern half of the city. As a result, XIV Corps established zones for the 1st Cavalry, on the left, and 37th Infantry Division on the right, and pressed into the city on a two-division front.

The 2nd Battalion of 37th Infantry Division’s 148th Infantry liberated Bilibid Prison, with another 800 POWs inside. One of them, Joseph Dupont, a “China Marine” who had experienced his first air raid in the Philippines in 1941 before being captured on Corregidor, later recalled the moment of liberation:

Then the Thirty-Seventh Division is advancing. They come to the . . . We were out there the next day about four o’clock in the afternoon eating whatever we could find and wondering what’s going to happen. Shells still going back and forth, and hear all kinds of gunshots going on out there. Then we hear a pounding on the back wall. There was a section where there was door, where they had boarded it up. We heard this pounding back there. Boom! Boom! What the hell is that? The planks fell in. These big, huge people, huge people with green (uniforms) and new weapons we’d never seen before, new helmets. They come walking in. They looked like they were from Mars. But you see, they looked huge to us because we were all skin and bones. These people were big. I’ll never forget it. Somebody said, “Who the hell are you guys?” to them. And they said, “Who the hell are you?” We said, “We’re POWs, American.”¹²

The American battalion lacked the resources to evacuate the prisoners that night, but provided rations and security until trucks could be sent in the next day.

While XIV Corps pressed into Manila from the north, the 11th Airborne Division's 187th and 188th Glider Infantry Regiments landed south of Manila Bay at Nasugbu, fifty-five miles from Manila, on 31 January, under Eighth Army control. The AAF's 310th Bomb Wing, operating from Mindoro, covered the naval convoys and the ground forces' advance. A part of the Japanese 8th Division opposed the advance, which had to pass a narrow 2,000' defile. In an attempt to clear this obstacle and the division's path to Manila the 11th Airborne Division's 511th Parachute Infantry Regiment dropped onto Tagaytay Ridge. Forty-eight C-47s of the 317th Troop Carrier Group lifted over 1,750 men into the area, but almost half landed six miles away when the task force misinterpreted the inadvertent drop of a cargo chute as the jump signal. The airlift made up for their inaccuracy with resupply runs that sustained the separated column and evacuated wounded troops. On-call CAS overhead from P-38s and P-47s based on Mindoro helped overcome resistance, although an increase in "friendly fire" incidents marred the effort. The paratroopers needed trucks sent forward from the beachhead to speed their advance towards the city, which they finally reached on 5 February. Held up by prepared defenses around Nichols Field, occupying a narrow isthmus leading into the city, the 11th Airborne didn't break through until 12 February. The combined airborne and sealift assault further stretched the city's defenders, who now had to deal with threats from both the north and the south, as the 11th Airborne had provided a potential anvil to the XIV Corps hammer.

The Battle of Manila

Manila was the only urban combat the US Army would engage in during World War II in the Pacific Theater. Unlike heavily-developed Europe, most of the Southwest Pacific theater featured small villages of light construction. But Manila was much different. Over 800,000 people lived in the fifteen square-mile Asian "megacity," known as "The Pearl of the Orient." The city featured sprawling suburbs of lighter construction, but also an industrial downtown with heavy concrete buildings designed to withstand the region's frequent earthquakes. At the city center, facing Manila Bay, sat Intramuros, the original Spanish colonial city, surrounded by a stone wall forty feet thick that would form the center of the Japanese Navy's defenses. A month-long campaign for the city took the lives of over 100,000 residents and largely destroyed the city, including the principal government buildings. Yamashita had originally planned to evacuate his forces and leave an open city, but naval troops insisted on defending it block-by-block, with the usual Japanese fanatical resistance, even when cut off, resulting in the highly destructive battle. In some areas, the defenders set fire to highly inflammable residences



Figure 15. Street fighting in Manila. Image courtesy of the Center for Military History.

to slow their attackers' progress. It took XIV Corps until 3 March to secure the city, after a methodical campaign. While the Army used artillery liberally, MacArthur forbade the use of CAS, ostensibly to prohibit collateral damage and minimize casualties, but this prescription did not significantly reduce the substantial damage.

Yamashita had directed the Japanese Army to evacuate, but the Japanese Navy had other ideas. They were loath to give up their port and warehouses without a fight. Caught in the middle was GEN Tadamichi Kobayashi, whose small garrison was eventually sucked into the fighting, as either attempting to evacuate or fruitlessly defending the city was likely to have the same unhappy result. Of the 20,000 defenders, 15,000 came from the Japanese Navy. Most of the major buildings had been heavily fortified and were linked by subterranean tunnels to facilitate reinforcement or reoccupation after clearing. While individual strongpoints were mutually reinforcing, there was no overall defensive plan, which made it difficult to interpret Japanese intentions. The defenders liberally used mines, heavy-caliber anti-aircraft artillery, and numerous automatic weapons, which partially compensated for the poorly-trained troops.

XIV Corps successfully transitioned tactically from jungle to urban combat, as the high degree of coordination required to successfully reduce prepared positions applied equally in both types of terrain. Operationally, there were broader concerns about food and water supplies for civilians, and the availability of electricity from hydroelectric plants, which were likely to remain under Japanese control for some time. The 1st Cavalry Division was able to secure a smaller reservoir and then repelled a weak counterattack on 16 and 17 February, demonstrating the Japanese inability to conduct any offensive actions. From there, they pushed into the city alongside the 37th Infantry Division, with 11th Airborne still blocking to the south. The converging columns limited some longer-range artillery fires, but the cavalymen eventually pushed the defenders back into a pocket against the bay, eliminating this concern. The 11th's two glider regiments, strongly supported by Marine air, finally cleared Nichols Field on 12 February, facilitating the link-up with the 1st Cavalry Division and sealing the defenders inside the city. While XIV Corps took over operations in the city proper, the glider troops turned west along the southern shore of Manila Bay to clear the naval base at Cavite and prepare these facilities for use once the harbor's entrance had been cleared. The Navy desperately wanted the secure anchorage and repair facilities for naval vessels damaged by *kamikazes*, and Manila Bay saw extensive use in this capacity in subsequent operations against Okinawa. 11th Airborne also received a rescue mission to conduct a raid on the Los Baños prison on 23 February, which led to the liberation of another 2,000 POWs. This too was a combined air-land-sea operation, as paratroopers from the 511th dropped directly on the camp, while troops of the 188th Glider Infantry rode am-tracs across the bay to bring out the prisoners.

Inside the city, the defenders had not fortified every building but defended enough to slow progress. Detonations fueled many fires, and the troops found themselves fighting these as much as the Japanese, as flames jumped rapidly across thatched roofs. Crossing the Pasig River proved challenging, but both divisions had successfully executed the complicated task of forcing a river crossing in urban terrain by 10 February. As yet, they could not flank this obstacle through the bay with larger craft because Corregidor remained in enemy hands, denying entrance into the bay, and lighter LVTs had to suffice for the river crossing. An assault on defenders well-entrenched in the electrical power plant on Provisor Island destroyed the facility, complicating the task of keeping the lights on for residents and making possession of the main hydroelectric dams and their transmission lines even more important. Even with the liberal application of firepower

to spare manpower, regiments became hundreds of men understrength, as losses exceeded replacements available in the theater.

The final assault on Intramuros, at the city center, was the most costly, as the defenders were by now compressed into smaller area, making their defense denser and more difficult to flank. Even with most of the heavy weapons destroyed, it still took over a week to reduce. As the defenders become more desperate, atrocities increased, and civilians were frequently on the receiving end of Japanese frustration. As is true in most urban combat, it was easier to clear buildings by going through walls and ceilings than heavily defended doors. A wide variety of structures came under attack, including a hotel, a police station which took eight days to reduce, and even a baseball stadium, complete with bunkers in the outfield. Many of the buildings were of heavy, earthquake-proof, reinforced concrete construction.¹³ The Japanese even defended and fortified churches and hospitals. Vauban would have recognized the techniques used to take Intramuros, as the walls had to be breached with direct fire from 240mm, 8-inch, and 155mm howitzers. Once the walls were down, troops of all three regiments of 37th Infantry Division and the 1st Cavalry Brigade's 5th and 12th Cavalry Regiments broke in on 23 February. Among the most gruesome discoveries were the bodies of civilians found murdered in church basements.

The very last objective taken was the Philippines' capitol, destroyed by 155-mm direct fire. The battle concluded on 3 March, taking over a month and costing 1,000 troops killed and another 5,500 wounded to eradicate an estimated 16,000 Japanese. The assault destroyed the most important buildings in the city, including the Spanish wall that had stood for over 400 years. The 37th Infantry Division drew the most difficult assignments and paid the highest price, not counting the estimated 100,000 Filipino civilians. Before the gains could be consolidated, and the port put to use, troops needed to seize the harbor defenses, especially the strong fortifications on the island of Corregidor.

“The Rock”

The island of Corregidor posed an interesting tactical problem. There were only a few adequate landing beaches on the one mile by three mile tadpole-shaped island. AAF B-24 heavy bombers and B-25 and A-20 medium bombers plastered the island while a total of eight cruisers and fourteen destroyers added their weight to the bombardment, but likely inflicted little damage on defenders burrowed into the island's caves and tunnels. But further exploitation of the air and maritime domains would again be critical to the ground forces success. On 16 February, the 3rd Battalion

of the 503rd Parachute Infantry Regiment jumped directly onto a narrow landing zone on Corregidor, consisting mostly of the parade ground and a small golf course on what was known as “Topside.” The 317th TCG, flying in two columns of single-file aircraft over each DZ, dropped “sticks” of paratroopers in repeated passes. The first lift at 0830 suffered 25 percent casualties, as incorrect altitude and stronger-than-expected winds pushed paratroopers over the cliffs and into the ocean below where PT boats waited to pluck them out of the water. The second drop benefitted from adjustments, and the 2nd Battalion landed at noon with lower casualties, dropping the overall rate to 14 percent (280 of 2,065 dropped). The paratroopers benefitted from a simultaneous amphibious assault by the 24th Infantry Division’s 3rd Battalion, 34th Infantry, which was already running onto the beaches when the paratroopers landed. While the Japanese could not prevent the landing, they did hold off the attackers at the tiny island’s narrow waist, but found their defenses slowly crumbling under the airborne attack. It still took ten days to clear the island, and one final explosion of an underground bunker killed dozens of troops above ground before resistance finally ended on 26 February.

The combined airborne and amphibious attack had been both audacious and effective. Planners expected only 850 defenders, not the 5,000 actually on the island. Naval gunfire provided ample artillery support and severed communications between isolated pockets of attackers while one of the first sticks of paratroopers overran the primary observation post, killing the garrison’s commander. The double effect of blinding and decapitation, accomplished today by a crippling cyber attack, effectively paralyzed the defenders, as “leaderless, the remaining Japanese were no longer capable of coordinated offensive or defensive efforts.”¹⁴ For almost 1,000 casualties, most of them in the 503rd, the attackers killed over 4,500 Japanese defenders, capturing only twenty.¹⁵ With the fall of Corregidor, the last ghosts of 1942 had been expunged, and by 15 March, Manila Bay was again open for business.

Southern Luzon

The same land and air and naval forces that facilitated the capture of Corregidor would again be put to good use in clearing southern Luzon. With Manila secured and the harbor open, MacArthur’s two armies were free to turn their attention to the second of Yamashita’s three redoubts — the southeastern “tail” of Luzon and the reservoirs that provided the city’s water supply. The justification for clearing this part of the island was to eliminate any pockets of Japanese suicide boats from the shoreline that could interfere with resupply convoys transiting a shorter route through

San Bernardino Strait. While XIV Corps worked on this task, Eighth Army would clear the southern coast of the channel on Samar and Mindoro as well as the islands in the passage. The disparate XIV Corps sent the 1st Cavalry Division, 11th Airborne Division, and the 6th Infantry Division east and southeast, while I Corps, now consisting of the 25th, 32nd, and the newly-arrived 33rd Infantry Division, contained the main Japanese force in Northern Luzon. XI Corps' 38th and 43rd Infantry Division were still mopping up in central Luzon, while the 37th Infantry Division reconstituted and 40th prepared for redeployment to Eighth Army's X Corps for duty in the southern islands of the Philippines. As a result, Sixth Army would only have nine divisions to complete the conquest of Luzon, instead of the eleven Krueger expected.

The drive on the hydroelectric dams began even before the city fell. Parts of two Japanese divisions, the 8th and the 105th, were well dug-in on defensible terrain overlooking Marikina Valley. The initial attack bogged down in the interior against ubiquitous caves; the Japanese defenders by now having learned how to effectively neutralize the Allied air and naval superiority, at least tactically. The 43rd Infantry Division moved south to add more impetus to the 6th Infantry Division and 1st Cavalry Division attack. This prompted a Japanese counterattack on 12 March that fortuitously drew the defenders out into the open. Continuing the attack led to an attritional campaign that was grinding up the American divisions, just as the Japanese wanted. One bright spot was the first combat use of the helicopter in a MEDEVAC role to quickly extract wounded troops from remote terrain. Sixth Army next sent the full XI Corps, with the fresh 38th Infantry Division and reconstituted 37th, into the fight, and the overwhelming manpower eventually took effect.

The Japanese were suffering far greater losses, and mounted counterattacks so weak that US units often did not even notice they were being counterattacked. It still took the 43rd Infantry Division and a Filipino unit until 17 May to take Ipo Dam, fortunately intact, supported by a massive use of napalm from over 600 fighter aircraft. The 38th Infantry Division captured Wawa Dam on 28 May, also intact, but serious water shortages and the resultant sanitation problems had already afflicted Manila. Meanwhile, Japanese survivors fled to the mountains, where disease and starvation took their toll, killing ten Japanese for every one lost in combat.¹⁶ They were only "able to issue six to eight ounces of rice per day. Most troops were reduced to eating roots, bark, grass and food scrounged from long-abandoned Filipino gardens."¹⁷ Pressed by guerillas, the Japanese were "on the verge of starvation," and the Shimbu Group was largely de-

stroyed by 11 June.¹⁸ Despite these challenges, the cut-off, starving defenders still tied up parts of five US divisions for three full months.

Meanwhile, the 11th Airborne, eventually relieved by 1st Cavalry Division, cleared the long, winding unfortified “tail” of southeastern Luzon in a month-long campaign. At the same time, the Americal Division of Eighth Army liberated Samar and the islands in San Bernardino Strait, clearing both shores of potential hideouts for suicide boats and allowing maritime resupply convoys to use the protected waters. To supplement the drive, the separate 158th Infantry Regiment moved along the coast to Legaspi, where a pre-invasion bombardment made short work of the defenders. Navy LCMs carried the troops and artillery while AAF and Marine aircraft provided cover overhead. The regiment went ashore almost unopposed on 1 April and cleared the Bicol peninsula during that month, eventually linking up with 1st Cavalry Division. As long as the Navy controlled seas, it would be impossible for the Japanese to adequately defend the peninsula.

Northern Luzon

While XIV Corps cleared southern Luzon and Eighth Army worked on the islands in the southern part of the archipelago, I Corps, with the 25th, 32nd, and 33rd Infantry Divisions, faced the same problem it had confronted since landing: the containment and reduction of Japanese forces in northern Luzon. Several divisions had already cycled through the fight, with the 43rd and 6th moving off to the south, leaving I Corps with the 25th, the 32nd — fresh from a debilitating campaign on Leyte — and the 33rd, which arrived on 10 February, to accomplish its mission. While GEN Swift would later receive the 37th Infantry Division, once it completed its tasks in Manila and southern Luzon, he expected to have at least one more division to counter the parts of six Japanese divisions opposing him. For his part, Yamashita had split these units into two corps-sized groups, with the Japanese 19th, 23rd, and 103rd Divisions holding the line facing I Corps while the 10th, 105th and the reconstituted 2nd Tank held the Cagayan Valley. The 200 by forty-mile long valley, stretching from Bambang in the hills north to Aparri on the coast, represented the defenders’ only hope for both sustenance and reinforcement. Featuring a rich agricultural area, the valley also had a port at its northern tip that could be used for reinforcement or evacuation. These possibilities had long been foreclosed by the US Navy’s control of the sea, and Aparri instead presented a threat for additional Allied amphibious landings. Yamashita had no real hope of holding the entire valley, but wanted to delay American progress towards his final redoubt in the rugged Cordillera Central on the

valley's western flank, for as long as possible, ideally, long enough to harvest another rice crop in the fall.

I Corps spent most of February conducting local clearing attacks designed to secure its flank and improve its position without bringing on a major engagement that would distract the Army Group's headquarters from the fight for Manila. In this, they were aided materially by guerillas, who conducted reconnaissance and captured Japanese documents that revealed Yamashita's plans. In northern Luzon, COL Russell Volckmann, part of the Philippines garrison force in 1941 who had refused to surrender and fled to the hills, operated a division-sized unit. Known as USAFIP (US Army Forces in the Philippines), Volckmann's Filipinos operated behind Japanese lines, supplied by air and sea, harassing and providing updates on Japanese dispositions and intentions.¹⁹ With air support, often provided by the 3rd Air Commando Group, and robust communications, USAFIP became, in some respects, a forerunner to the modern "Airpower + SOF model." For the time being, USAFIP acted as a "malicious code" within the Japanese defenses, periodically unleashing debilitating attacks and surreptitiously sending out valuable data.

By early March, events elsewhere on the island finally permitted I Corps to resume the offensive. The 33rd Infantry Division sent a holding attack towards Baguio on three converging axes, but it would take the division almost two months to reach its objective, thanks largely to the rugged, mountainous terrain, stubborn Japanese defenses, and only a slight numerical superiority. When the 37th Infantry Division finally arrived, the two Midwest-raised divisions seized the southwestern apex of Yamashita's triangle-shaped redoubt on 26 April. The defending Japanese 23rd Division had grown much weaker, as USAFIP and airpower cut supply routes. They "suffered heavy losses during March, losses that probably stemmed largely from lack of food and medical supplies rather than from combat action. By mid-March, Japanese supply problems on the Baguio front had progressed from bad through worse to impossible."²⁰ The troops received less than half a pound of rice a day, when at least 2.5 pounds were required. "Starvation and diet-associated diseases filled hospitals and sapped the strength of combat units."²¹

The March attack by the 25th and 32nd Infantry Divisions on Bambang, the second apex of the triangle, hoped to sever the redoubt from the resources in valley. It was somehow fitting that the first two divisions to be engaged in major combat operations in the SWPA would be fighting alongside one another in the last major campaign. The hard-luck 32nd, which had opened the SWPA campaign at Buna, was again virtually de-



Figure 16. Terrain on northern Luzon. Image courtesy of the Center for Military History.

stroyed as a combat force while fighting up the Villa Verde trail into Bambang against the Japanese 10th Division and elements of the 2nd Tank Division, now rebuilt as infantry. The Army's official history summarized the campaign as follows: "In brief, the battle for the Villa Verde Trail became a knock-down, drag-out slug fest...This was combined mountain and tropical warfare at its worst."²² The 32nd moved up a narrow trail, with few opportunities to flank defensive positions on either side, and suffered heavy casualties from unimaginative but necessary frontal assaults on excellent positions in the energy-sapping tropical environment.

In a month of combat, the 127th Infantry Regiment alone suffered 110 killed, 225 wounded, and another 500 evacuated, for both disease and "combat fatigue," all while receiving only a few replacements. Both the 127th and 128th regiments were 1,000 men understrength, with few of the original battalion and company commanders remaining in action. In some cases, privates led rifle platoons.²³ The division "had a major morale problem," as troops were "approaching complete mental and physical exhaustion," and "the combat troops' aggressive spirit was diminishing rapidly and markedly," presenting difficult challenges for the inexperienced

leaders.²⁴ Three months of sustained combat without relief or rotation effectively ended the division's utility as a fighting force. It had fought in the most difficult campaigns of the war, from Buna, after which it completely rebuilt, to the Driniumor River on New Guinea, to the mountains of Leyte, and now Northern Luzon in the Philippines. The last mission may have been one too many for an understrength and long-service division. The 32nd finished with more days in combat than any other US division in World War II, and earned the honor of accepting Yamashita's surrender at the end of the war.

The fresher 25th Division moved north over equally difficult terrain. Initially, it benefitted from captured documents revealing the locations of the Japanese artillery batteries opposing them, again demonstrating the tactical advantages of information superiority. Still, it was a slow advance towards Bambang, and the division took most of three months just to reach Santa Fe. It finally made significant progress after concentrating the available forces on a much narrower front. The slow pace was a result of the operation being an "economy of force" campaign, designed to free units for clearing out the southern Philippine Islands. After moving through the 25th's lines, the "johnny-on-the-spot" 37th Infantry Division pushed through the 25th's positions and took Bambang on 6 June. Later analysis revealed, "the only real solution to the problem facing I Corps would have been at least one more infantry division."²⁵

The drive into the redoubt brings into focus the value of mass. Lacking sufficient manpower, I Corps opted for a slower advance that would save lives, much like a driver going at a slower speed to save gas, but taking much longer to reach the destination. The pace played into Japanese hands of tying up as much combat power for as long as possible, but it also allowed their logistical isolation to play heavily among their ranks. This pace benefitted operations elsewhere as USAFIP faced Japanese units suffering heavily from malnutrition and disease in its push towards Bontoc, the triangle's northern apex. "Japanese supplies were virtually exhausted and troops were rapidly dying from malaria, beriberi and other diseases."²⁶ Against this weakened opposition, USAFIP took the Bessang Pass on 14 June, opening the road into Bontoc and forcing a Japanese withdrawal.

Yamashita had planned to strip the Cagayan valley of "all the rice and other food — including carabao on the hoof," as MacArthur had attempted to do at Bataan, but the Japanese were equally unsuccessful in stocking their fortress.²⁷ The 37th Infantry Division had largely sealed off the valley from the mountain redoubt in early June. By the end of that month, the remaining Japanese forces had been trapped inside a rapidly shrinking

perimeter. SWPA planners had initially envisioned a landing at Aparri, on Luzon's northern tip, to close off any possibility of a Japanese evacuation or resupply landing. With the fall of Okinawa in June, this was no longer a realistic possibility, but the plans, especially for the use of airborne forces, had a remarkable inertia. Accordingly, the 1st Battalion of the 511th Parachute Infantry jumped into Camalaniugan, near Aparri, on 23 June, but ground forces had already reached that point by traveling along the coast and were there to greet the paratroopers. Any defenders the operation hoped to cut off had long since reached the mountains. Thus, the Army's official history opined, "The airborne operation had proved both useless and unnecessary."²⁸

In Yamashita's redoubt, just north of 9,500' Mount Pulag, the highest point on the island, a converging attack compressed the final perimeter in on all sides. The defenders were now completely cut off, while the Americans were able to continue to bring in fresh troops, including the 6th Infantry Division. The campaign's conclusion was now only a matter of time. When the final supply route closed, the Japanese "had just begun to move food and other military supplies up Route 4 from the Cagayan Valley and Route 5. The group had virtually no medical supplies left; it had no stocks of clothing; its food would be completely exhausted by mid-September. The Shobu Group could look forward only to slow death by starvation and disease if it were not annihilated by the force of Fil-American arms."²⁹ US-AFIP, 6th, and 32nd Infantry Divisions, now under XIV Corps and Eighth Army control, applied continuous pressure as the Japanese defenses began crumbling. Only the arrival of the rainy season in northern Luzon provided the Japanese any hope of slowing the Allied progress. When the Japanese government formally asked for a cease fire on 15 August, a few troops were still holding out inside the tiny five-by-ten mile perimeter, while thousands more had dispersed into the Cordillera Central and Sierra Madre mountains flanking the valley. Only 50,000 troops remained of 150,000 who had held northern Luzon, but they had tied up most of three divisions for seven long months. Clearing the island had cost 8,000 soldiers killed, and another 30,000 wounded, while the Navy had suffered thousands of casualties of its own.³⁰

The Southern Philippines and Borneo

After wrapping up operations on Leyte and Mindoro, SWPA had bypassed the remaining Philippine Islands in order to complete the liberation of Luzon. With Manila cleared and the Japanese defenders contained in the mountains, MacArthur ordered Eighth Army to proceed with the task of clearing the remaining islands. In addition to

the X Corps headquarters, the army had six divisions allotted to it, including the Americal, 24th, 31st, 40th, and 41st Infantry Divisions, and later the 93rd Infantry Division, plus a large force of increasingly effective guerillas. Opposing them, the Japanese had only two divisions, the 30th and 100th on Mindanao, with most of another, the 102nd, scattered across the Visayas. On paper, this was an impressive total of over 100,000 troops, but less than half of that number had received training as combat troops. In addition, they were fixed in place, lacked air and naval support, and were completely isolated from any logistical supply line. "Numerically (the) troops were perhaps equal to the attacking American forces, but they lacked air support, and, with inter-island barge traffic reduced to a minimum, they had to fight as isolated units."³¹ While the ground forces had fought the Philippines campaign somewhat sequentially, undertaking operations in series, the air forces could fight in parallel, striking targets on Luzon or in the southern Philippines, depending on the theater commander's needs and other factors, such as weather. Throughout the Leyte and Luzon campaigns, Allied aircraft had successfully neutralized airfields in the southern Philippines and interdicted naval traffic

The campaign for the southern islands began with the 41st Infantry Division's 186th Infantry taking Puerto Princesa on the long, narrow island of Palawan on 28 February. Engineers had repaired and put back into operation the city's airfield, a rare, well surfaced concrete strip, by 20 March. After that date, heavy bombers used it extensively, ranging as far as the China coast. Sadly, the troops also found evidence of the murder of 150 POWs. Their Japanese captors had forced them into air raid shelters and then covered them with gasoline and set it aflame while machine-gunning any who tried to escape. Preventing further atrocities such as this provided much of the justification for continuing with the liberation of islands.

The next objective was the Zamboanga peninsula of southwestern Mindanao, long sought for its airfields which could project power into Borneo. Two companies of the 24th Infantry Division's 21st Infantry Brigade air-landed on the guerilla-held airfield at Dipolog to provide additional protections for sixteen F4Us of Marine Air Group 12. This was but one example in the campaign of ground forces directly supporting the air domain. From there, the Marines could cover a larger landing on Zamboanga on 10 March with the 162nd and 163rd Infantry of the 41st Infantry Division. With five groups of AAF heavy bombers and ample naval gunfire support preceding the invasion, the ground forces easily took their objective, an airfield just inland. Marine CAS paved way,

with the defenders pushed off of the hills overlooking airfield and into the jungle in just a few weeks, harassed all the way by Filipino troops. Meanwhile, engineers had the airfield operational by 15 March, enabling MAG-12 to displace forward, and the 186th Infantry, fresh from Palawan, joined the rest of the division for drive inland. In July, the 93rd Infantry Division's 368th Infantry relieved the 41st, and Eighth Army declared the area secure.

The rest of Mindanao would have to wait until the month after Zamboanga, when X Corps, including the 24th ID embarking at Mindoro and the 31st Infantry Division at Morotai, landed on the island's west coast on 17 April. The two Japanese divisions holding the island totaled almost 43,000 troops, but they were split, guarding the northern and southern halves of the island. If X Corps could drive quickly inland, it would split the defenders, leaving each to be mopped up piecemeal. Again, B-24s preceded the landing with three groups from 7th Air Force contributing from their base in the Palaus. After securing the beachhead, the 24th Infantry Division used small boats to ascend the Mindanao River, outflanking defenses on the winding jungle road and sparing an overland campaign. From a critical road junction at the island's center, the Corps split, with 24th Infantry Division driving south towards the city of Davao while 31st ID moved north, where they found some defenders, unaware that the Americans had been ashore for over a week, still oriented towards the coast.³² Yet again, blinding the defenders and cutting them off from all sources of accurate intelligence had compromised their ability to offer effective resistance. Meanwhile, 24th Infantry Division took Davao, the islands' third-largest city, from the interior on 3 May, sparing another assault against a defended shore. The 24th then had to root defenders out of prepared positions well inland and accordingly suffered the heaviest casualties of the campaign. Air and naval forces supported 31st Infantry Division's drive to the north coast, the former by aerial resupply and the latter with an amphibious end-run by the 108th RCT of 40th Infantry Division to Macajalar Bay, which blocked Sayre Highway, trapping the remnants of the Japanese 30th Division in between the two forces. Their link-up on 23 May completely cut off the defenders, ending the campaign. Guerillas spent most of June mopping up, as some of the Japanese even began to surrender from their hopeless position. For one naval historian, this effort on Mindanao was an exemplar. Samuel Morison wrote, "The Mindanao campaign was brief and brilliant, deserving more detailed study . . . , as an example of flexibility, improvisation and perfect cooperation between Army, Navy and Air Forces."³³ By "Navy," he certainly meant "Marines" as well, which provided the bulk of the air support.

The Visayas were even less trouble, given their proximity to both Leyte and Mindoro. The 40th Infantry Division, less the 108th RCT, landed on Panay 18 March, after redeploying from Luzon, but found guerillas already in control of most of the island. Northwestern Negros took longer to secure, eventually involving three regiments, the 185th, 160th, and 503rd Parachute Infantry Regiment, in a campaign that began on 29 March. Again, guerillas provided key support, and the outcome was never in doubt. Still, it took 1,400 casualties to contain 15,000 Japanese, half of whom eventually surrendered.

The Americal Division hit Cebu on 26 March, taking Cebu City, the nation's second-largest, after Manila, the next day, though it had largely been destroyed by the Japanese. Naval gunfire again provided excellent support throughout, but the undetected presence of IEDs on landing beaches came as a nasty surprise. The Japanese rigged additional IEDs inland, including one in a cave that killed twenty and wounded thirty more.³⁴

According to one historian, "The remaining islands of the Philippines, including Mindanao east of the Zamboanga peninsula, were of no strategic value whatsoever."³⁵ Yet the six American divisions and Filipino units continued to engage bypassed troops until the cease fire in August, leaving Sixth Army somewhat depleted in its efforts on Luzon. Some have speculated that MacArthur kept all of his units engaged for so long to prevent them from being siphoned off for other projects in adjacent theaters, but their employment in the Philippines did not forestall any other significant campaigns. Throughout the conquest of the southern Philippines, naval and air forces had proven critical to the rapid conquest. On 5 July, MacArthur declared the Philippines campaign officially over, even with some Japanese units still holding out in the mountains and on the more remote islands.

While US forces engaged the Japanese forces in the Philippines, Australia liberated the Netherlands East Indies (Indonesia) and Borneo, capturing Japan's largest source of oil.

Cut off from the home islands, the defenders of Tarakan on west coast of Borneo fell to a combined naval task force landing the Australian 9th Division on 1 May. Borneo's Brunei Bay, followed on 10 June. Balikpapan, softened up by over a thousand RAAF B-24 sorties, fell to the 7th Australian Division on 1 July. Underwater Demolition Teams (UDTs) had been employed extensively in clearing beach obstacles at the latter, and naval gunfire contributed to capture of airfield 4 July. Morison was again impressed, this time by the smooth Allied cooperation, writing, "The outstanding features of this final amphibious operation of World War II were

thorough minesweeping, excellent work by UDTs, and enormous expenditure of gunfire by the Australian and United States Navies.”³⁶

Conclusion

Liberating the Philippine Islands from their Japanese occupiers was but one campaign in the successful defeat of Japan during World War II. From air and naval bases in the islands, Allied forces could more effectively interdict the flow of supplies from the “Southern Resources Area” to the home islands. Submarines had already done much of the heavy lifting, and by April Seventh Fleet submarines had returned to their base at Subic Bay after a wartime exile in Fremantle. The air forces could now add their weight, with even the B-29s getting involved, mining Japanese harbors, after GEN Curtis LeMay temporarily ran out of incendiaries in April, which turned out to be a major contribution.³⁷ Heavy bomber units moved into fixed bases in the Philippines, prepared to interdict the South China Sea and to bomb Taiwan in support of operations on Okinawa. Taiwan took a heavy pounding throughout the latter campaign, but Japanese dispersal and camouflage enabled that island to remain a source of *kamikaze* attacks, and “strategic” targets, such as factories, railroads, and power generation began to absorb more of the air effort. AAF air depots opened on 20 April at Nichols Field and on 22 May at Laoag, ensuring that this would be a sustained campaign.

Air forces in the islands supported operations with both interdiction as well as close air support. Though the Army’s official history is somewhat critical, the AAF had a more positive outlook, arguing that assigning a bomb wing to work with each corps improved coordination, and “personal contacts between ground and air commanders, together with simplified communications, facilitated effective employment.”³⁸ As in Europe, the closing stages of the war saw the best coordination, proving yet again that practice makes perfect. Airmen, soldiers, sailors and Marines who had a shared understanding of what was required, backed it up with a willingness to carry it out. Throughout the campaign, the Navy kept the islands isolated, while the air forces helped blast defenders out of prepared positions, shortening operations and sparing lives.

The campaign depended on success in each domain, including air, land, and sea, as well as the diplomatic, information, and economic arenas dominated today by space and cyber assets. It also serves as a model for how to defeat an anti-access, area-denial strategy. Japan had tried to keep the Allies away from the home islands by defending as far out as possible,

but the Allies sequentially overwhelmed each defensive position, first by isolating them by air and sea and then, as warring nations have always done, by sending in ground forces to perform the difficult task of engaging with the enemy at close quarters. The cost throughout was high but it would have been higher still, if not impossible, without a coordinated efforts in all available domains.



We Have Returned, by James Dietz. Image courtesy of the artist.

Notes

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2. Robert Ross Smith, *The US Army in World War II, The War in the Pacific: Triumph in the Philippines* (Washington, DC: GPO, 1963), 91.
3. Morison, *History of United States Naval Operations in World War II*, vol. 13, 97.
4. Wesley Craven and James Cate, eds., *The Army Air Forces in World War II*, vol. 5, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945* (Chicago: University of Chicago Press, 1953), 408, 412.
5. Smith, *The US Army in World War II*, 36, 64.
6. Morison, *History of United States Naval Operations in World War II*, vol. 13, 152.
7. Craven and Cate, *The Army Air Forces in World War II*, vol. 5, 415.
8. Edward Drea, *MacArthur's ULTRA: Codebreaking and the War Against Japan, 1942–1945* (Lawrence, KS: University Press of Kansas), 184.
9. Smith, *The US Army in World War II*, 108, 109.
10. Smith, 134.
11. Craven and Cate, *The Army Air Forces in World War II*, vol. 5, 429.
12. Joseph Emile Dupont Jr. Oral History Interview, Mss. 4700.1409, Louisiana and Lower Mississippi Valley Collections, LSU Libraries, Baton Rouge, LA. When the soldiers and Marines went into captivity in 1942, the standard issue tropical uniform was still khaki, and the M1 “bucket” helmet, M1 Garand, and M1 carbine had not yet reached the front line units. Such was the speed of change in less than three years or war.
13. Smith, *The US Army in World War II*, 285.
14. Smith, 345.
15. Smith, 348–349.
16. Morison, *History of United States Naval Operations in World War II*, vol. 13, 209.
17. Smith, *The US Army in World War II*, 421.
18. Ronald Spector, *Eagle Against the Sun* (New York: Vintage, 1985), 529.
19. See Russell Volckmann, *We Remained: Three Years Behind the Enemy Lines in the Philippines* (New York: Norton, 1954); and Mike Guardia, *American Guerilla* (Philadelphia, PA: Casemate, 2010).
20. Smith, *The US Army in World War II*, 478.
21. Smith, 478.
22. Smith, 498.
23. Smith, 499.
24. Smith, 503.
25. Smith, 539.
26. Smith, 554.
27. Smith, 559–560.

28. Smith, 571.
29. Smith, 568.
30. Smith, 579.
31. Craven and Cate, *The Army Air Forces in World War II*, vol. 5, 450.
32. Smith, *The US Army in World War II*, 628.
33. Morison, *History of United States Naval Operations in World War II*, vol. 13, 250-251.
34. Smith, *The US Army in World War II*, 614.
35. Spector, *Eagle Against the Sun*, 526.
36. Morison, *History of United States Naval Operations in World War II*, vol. 13, 276.
37. See Alvin Coox, "Strategic Bombing in the Pacific, 1942-1945," in Cargill Hall, *Case Studies in Strategic Bombardment* (Washington, DC: Air Force History and Museums Program, 1998).
38. Craven and Cate, *The Army Air Forces in World War II*, vol. 5, 441.

Conclusion

The Pacific Theater: Pacific Ocean Area



The loss and liberation of the Philippines offers a useful case study for the defense or liberation of a US ally in the PACOM AOR. In fact, this scenario presented itself twice more in the quarter-century that followed the liberation of the Philippines. The first came in 1950, when North Korea invaded South Korea, which United Nations forces were able to hold onto just barely before exploiting the air and naval domains to launch and amphibious “end run” at Inchon, again under GEN MacArthur, and successfully liberate South Korea. The second came in the following decade, when North Vietnam initiated an insurgency in South Vietnam, but American forces were unable to sustain a free and independent country in the south for a number of reasons, both military and political. Thus, for historical precedents as well as current and future security concerns, the likelihood of supporting an ally in the western Pacific against aggression from a major power on the Asian mainland seems a realistic possibility and a task that undoubtedly occupies the attention of defense planners in the region.

While the liberation of the Philippines was, itself, a successful operation, it was also part of a larger strategy to defeat Japan. Indeed, for a time in 1944, it was a highly controversial campaign, as commanders in adjacent theaters, most notably ADM Chester W. Nimitz, argued that an operation aimed directly at Taiwan or some point along the Chinese coast would achieve the same effect of severing Japanese communications between the home islands and the Southern Resources Area. Nimitz’s Pacific Ocean Area (POA) command had fought across the Caroline, Marshall, and Marianas Islands and believed it could continue its approach directly towards the home islands with greater speed, fewer resources, and lower cost. MacArthur prevailed upon President Roosevelt, arguing that the United States had a moral obligation to liberate the islands, and refused to consider any strategy which did not include a triumphant return to the Philippines. This was not the first, nor would it be the last, time that political considerations intruded upon military affairs. Of course, neither the liberation of the Philippines nor the POA’s attack on the Ryukyu Islands at Okinawa in June was sufficient in itself to end the war, although both islands provided excellent air and naval bases, as well as staging areas for ground troops, in the event an invasion of the home islands was necessary. Fortunately, after suffering the atomic attacks on Hiroshima and Nagasaki, as well as a Soviet invasion that overran almost half of the Japanese-held territory in Manchuria in less than a week, the Japanese emperor agreed to Allied demands for an unconditional surrender.

In some respects, the POA drive across the Central Pacific offers an equally valid case study for multi-domain battle. In this Navy-led the-

ater, AAF units, six Marine divisions with their associated air forces, and another entire army's worth of divisions (the Tenth) overcame inter-service difficulties to successfully take island bases that provided jumping off points for the next step in the campaigns. The naval battles, especially at Midway and in the Philippine Sea, exceeded in scale and importance anything in the Solomons or the Bismarck Sea, but the ground actions, usually involving tiny coral atolls, such as Tarawa, but also some larger islands, including Saipan, generally did not approach the scale of ground combat in the Southwest Pacific. The wider distances between objectives meant they usually were not within the range of the Army Air Force's supporting aircraft, placing a much heavier reliance on carrier-borne aircraft. Finally, the Central Pacific drive did not begin in earnest until the fall of 1943, almost a year after the attritional battles in the Southwest Pacific that had already heavily reduced Japanese naval and air strength.

The Central Pacific did offer a number of advantages though. It was a more direct route to the home islands. The smaller land masses meant that the ground combat would not be as long, or as costly, and the coral atolls and volcanic outcroppings, such as Iwo Jima, while presenting their own problems, generally did not require as much time, or as large a force to reduce as the Solomons, New Guinea, and the Philippines had. This corridor offered a potentially better environment: "The Central Pacific Route was also better hygienically — it would entail far less jungle and swamp warfare with attendant tropical diseases than would operations in New Guinea."¹ While many have criticized the Joint Chiefs' refusal to appoint a single overall commander in the Pacific, preferring to allow the Army and the Navy to have their own theaters, as it were, the campaigns proved far more complementary than most have been willing to admit. Ronald Spector has criticized the dispersal, suggesting it invited defeat in detail, as MacArthur's operations in the summer of 1944 almost experienced before the attack on the Marianas drew off the bulk of Japan's remaining resources. By dividing resources, the US was able to maintain a much higher operational tempo, cycling between operations in the Central and Southwest Pacific and shuttling resources between each as required. A single force, moving methodically, consolidating gains, planning a follow-on operation and then executing it would have provided Japan much more time to react and permitted a concentration of force. By attacking on multiple axes, the Central and Southwest Pacific theaters stretched Japanese forces to the point where they could not achieve a decisive concentration anywhere and were destroyed piecemeal.

In both campaigns, it was allied air and naval superiority that enabled the ground advance, and the subsequent superiority of ground forces over

their often weakened and isolated Japanese opponents that then enabled the air and naval forces to project power further. All three domains benefitted from economic and information superiority, as naval codebreakers were reading the Japanese “e-mail” almost before the war started. Indeed, continued intercepts of Japanese preparations to meet any invasion force, and their ability to continue to create new formations despite the aerial and naval blockades, coupled with the almost fanatical resistance on Okinawa, likely contributed to Truman’s decision to use atomic weapons.² America’s vast economic infrastructure remained secure from attack, as the weak Japanese efforts at propaganda never had any noticeable effect in reducing the Allied public’s support for the war. Victory in the Pacific came from a successful, fully integrated joint and combined effort that involved gaining and maintaining superiority in every domain, and coordinating significant effects across domains to defeat Japanese aggression.

While technology has progressed and alliances have shifted, certain geopolitical realities remain—the vast distances that significantly complicate any logistical effort, the massive populations of the most densely populated corner of the globe, and a physical environment where heat, dampness, and disease provide significant obstacles to survival, much less sustaining combat power. Given these persistent aspects of the region, and the enduring nature of war across the globe, it seems useful to continue to mine the past for ideas about how to face future challenges, even if certain domains are far more developed and present much greater challenges today than they did in the 1940s. Most of the commanders who led the drives across the Pacific came of age in a time when airplanes were frail contraptions of wood, canvas, and wire. But it took a nation that had historically demonstrated a cultural preference for targeting the war-making assets of its opponents, either on the frontier or in the interior of the Confederacy, to harness this new technology into a force capable of devastating an enemy economy, or adapting innovations in combined arms warfare to make the airplane an integral part of the air-ground team and revolutionize naval combat. Thus, the experiences of the past still have tremendous utility for educating the minds of the present, in order to achieve success in the conflicts of the future.



On the Rock, by James Dietz. Image courtesy of the artist.

Notes

1. Robert Ross Smith, *The Approach to the Philippines* (Washington, DC: Office of the Chief of Military History, 1953), 5.
2. Edward Drea, *MacArthur's ULTRA: Codebreaking and the War Against Japan, 1942-1945* (Lawrence, KS: University Press of Kansas), 204.

Bibliographic Essay

The literature on the Pacific theater is voluminous and continues to grow at a rapid clip, as military professionals refocus their attention on major-theater warfare after fifteen years of counterinsurgency. The reading public remains interested in popular histories of World War II, inspired by major motion pictures and miniseries such as *The Pacific*, released in 2010. The following list is by no means all inclusive, but includes some of the more influential and widely-read works in the field.

The category of “official history” contains those works produced either officially by the services, or with their sanction and cooperation in the years immediately after the war. Though now dated, they are extremely useful, both because of the detail they contain and because they benefitted from the availability of sources that were accessible after the event, but have since drifted further afield or been lost completely, complicating the historians’ task. The principal weakness of these works is the lack of access to still-classified information. As a result, the works do not adequately capture the magnitude and scale of the codebreaking and other intelligence activities, and how they enabled Allied commanders to penetrate the “fog of war.” The Center for Military History’s *The United States Army in World War II* is richly detailed on ground combat, strategy, and logistics, lacking only detail on the air and naval battles. Samuel Eliot Morison’s fifteen-volume *The History of United States Naval Operations in World War II* is more opinionated, reflecting some of the author’s biases, but still captures the essence of naval combat, though he shows a preference for major fleet actions over the less-glamorous amphibious and submarine operations. The Air Force’s *The Army Air Forces in World War II*, reflects the post-war interest and belief in strategic airpower and is less detailed in the tactical and support missions, but is still an essential source. Australia’s participation is expertly chronicled in twenty-two volumes entitled *Australia in the War of 1939-1945*, published by the Australian War Memorial, but, like the American official histories, includes separate series for each branch of the service rather than an integrated approach.

Several excellent general histories cover the war. Ronald Spector’s *Eagle Against the Sun* remains in widespread use in many university courses, and is perhaps the best operational history. John Costello’s *The Pacific War, 1941-1945* is equally comprehensive and has more of a Commonwealth approach. Ian Toll’s recent trilogy, especially the middle volume, *The Conquering Tide*, has achieved bestseller status as a page-turning account of dramatic actions and engaging personalities. Phillips Payson

O'Brien's *How the War was Won*, especially Chapter 10, provides an excellent overview and is representative of the most recent scholarship.

Works focused specifically on the Japanese perspective, and the engagement between that nation and the Allies include John Dower's *War Without Mercy*, which illuminates the bitter racial animosities that motivated each side. Michael Barnhart's *Japan Prepares for Total War: The Search for Economic Security, 1919-1941* is essential for understanding the Japanese economy and war aims. Edward J. Drea has become the principal chronicler of Japan's wartime military, and his work *Japan's Imperial Army* provides the necessary cultural context for understanding how the Japanese Army operated, and why. Drea's *MacArthur's ULTRA: Codebreaking and the War Against Japan, 1942-1945* is an excellent single-volume source in the critical role of codebreaking and intelligence in the campaign, while John Prados' *Combined Fleet Decoded* is equally authoritative. Prados also integrates the Allied information superiority into two campaign-specific works, *Islands of Destiny* on the Solomons and *Storm over Leyte* on Leyte Gulf.

Within each domain, historians have continued to plumb the depths of the Pacific War. In the air, Thomas Griffith's *MacArthur's Airman* is both an excellent operational-level study of George Kenney and a useful corrective to the Fifth Air Force Commander's self-aggrandizing autobiography. Within that genre, Joe Foss's *A Proud American* is illuminating. Ian MacFarling's essay "Australia and the War in the Pacific, 1942-45," in Seb Cox and Peter Gray's *Air Power History* provides a concise summary of that nation's contributions in the air, while the late Jeffrey Grey's *A Military History of Australia* provides a broader examination of that nation's development and strategic priorities. Sadly, Thomas Miller's dated *The Cactus Air Force* is the only book-length study devoted to that organization, and it focuses excessively on the carrier air wings. We are badly in need of a scholarly study focused on both the Cactus Air Force and Air Sols. Eric Bergerud's *Fire in the Sky* is a substantial contribution and itself a comprehensive study, and an excellent adjunct to his *Touched with Fire: The Land War in the South Pacific*.

Other studies focusing on the land war include Lida Mayo's *Bloody Buna*, concentrating on that battle, which should be read alongside Peter Williams' *The Kokoda Campaign 1942* and James Campbell's *The Ghost Mountain Boys* for a full picture of that campaign. The subtitle of Richard Frank's *Guadalcanal* suggests that it is the "definitive account" of that battle. Robert Eichelberger's *Our Jungle Road to Tokyo* is a detailed first-person account of his distinguished career, while Kevin

Holzimmer's *General Walter Krueger: Unsung Hero of the Pacific War* attempts to restore that general to his rightful place in the pantheon of World War II heroes. Among the many works on Douglas MacArthur, William Manchester's *American Caesar* looms large, while Stephen Taaffe's *MacArthur's Jungle War* attempts to readjust the balance between MacArthur's enormous legacy and the substantial contributions of his very capable subordinates.

At sea, James Hornfischer has carved out significant space with highly readable accounts of the various naval battles, including *Neptune's Inferno* (Guadalcanal) and *Last Stand of the Tin Can Sailors* (Leyte Gulf). Dan Barbey's memoir *MacArthur's Amphibious Navy* highlights interservice cooperation, while Tameichi Hara's *Japanese Destroyer Captain* provides an excellent description from the Japanese perspective. Clay Blair's *Silent Victory* is an essential account of the submarine service's substantial contributions. While there are excellent scholarly studies of the Marine Corps' substantial contributions, the very best accounts have been memoirs written by Marines themselves. Eugene Sledge's *With the Old Breed* and Robert Leckie's *Helmet For My Pillow*, both mined extensively for *The Pacific* miniseries, are two of the best memoirs of any war in any era. That the Corps produced two such authors in the same theater at almost the same time says much about the quality of recruit they attracted. Marine William Manchester is also the author of *Goodbye Darkness*, another excellent memoir, and Joseph Dupont's oral history, conducted by LSU's T. Harry Williams Center and transcribed by the Hill Memorial Library is an outstanding record from a POW's perspective, and further evidence of the Marines' appeal to men of character and conviction.

Indeed, memoirs of the war are substantial enough to form an entire category of their own. Among the best are naval aviator Samuel Hynes' *Flights of Passage*, combat correspondent Richard Tregaskis' *Guadalcanal Diary*, and Japanese pilot Saburo Sakai's *Samurai*. Russell Volckmann's *We Remained* is a powerful account of the oft-neglected irregular warfare that authors frequently omit from more popular accounts, although Hampton Sides' book *Ghost Soldiers* has done much to bring the Rangers' contributions back into the limelight. Many excellent memoirs remain buried in the interviews collected from participants in the years just after the war, and now housed at a number of public and private institutions, including the Army's Ike Skelton Combined Arms Research Library at Fort Leavenworth and the Donovan Research Library at Fort Benning. The crown jewel of the Army's research facilities remains the Army Heritage and Education Center at Carlisle Barracks, Pennsylvania.

Our collection of environmental histories of the war continues to expand, with Judith Bennets's *Natives and Exotics* forming the first volume dedicated completely to the theater. Ed Russell's *War and Nature* explores the relationship between chemicals and warfare, and spends a great deal of time on the connections between insecticides and the battles against malaria in the Southwest Pacific. Richard Tucker's collaboration with Russell, *Natural Enemy, Natural Ally* is an excellent introduction to the field and Charles Closmann's edited collection *War and the Environment* contains a number of useful essays, as does Tucker and Tom Robertson's forthcoming *The Nature of War*.

This is but a partial list of the immense number of excellent works on the theater and any omission is unintentional and by no means a reflection of the utility of works not specifically mentioned by name.



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