Marching Across the Sea: Field Army Operations in Pacific Archipelagoes at Leyte and Okinawa

A Monograph

by

MAJ Joshua J. Welte
US Army

School of Advanced Military Studies
US Army Command and General Staff College
Fort Leavenworth, KS

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The US Army is updating its doctrine and operational concepts focusing on large scale combat operations (LSCO) in an era of great power competition. An essential element of this transition is regionally aligned, forward-deployed field armies to facilitate strategic and operational maneuver. The western Pacific's archipelagic operating environment represents a prime area for great power competition with an increasingly powerful People's Republic of China.

This monograph examines the characteristics of successful field army operations in the Pacific. It examines two case studies: the invasion of Leyte by Sixth Army as a component of the larger Philippine campaign and the invasion of Okinawa by Tenth Army as a more standalone major operation. Examining the importance of experience, organization, joint fires, and sealift integration yield critical insights into field army operations in the archipelagic environment.

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Approved by:

_____//signed 2 APR 21/DCF//_____, Monograph Director
Dan C. Fullerton, PhD

_____//signed 2 APR 21/BKE//_____, Seminar Leader
Brit K. Erslev, COL

____//signed/12 May 21/BAP//_____, Director, School of Advanced Military Studies
Brian A. Payne, COL

Accepted this 20th day of May 2021 by:

_____, Assistant Dean of Academics for Degree Programs and Research, CGSC
Dale F. Spurlin, PhD

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Abstract

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The US Army is updating its doctrine and operational concepts focusing on large scale combat operations (LSCO) in an era of great power competition. An essential element of this transition is regionally aligned, forward-deployed field armies to facilitate strategic and operational maneuver. The western Pacific's archipelagic operating environment represents a prime area for great power competition with an increasingly powerful People's Republic of China.

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Abbreviations

A2/AD	Anti-Access/Area Denial
AOR	Area of Responsibility
AWC	Army War College
C2	Command and Control
CAP	Combat Air Patrol
CCP	Chinese Communist Party
CFLCC	Coalition Force Land Component Commander
CGSS	Command and General Staff School
DMO	Distributed Maritime Operations
DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Policy
EABO	Expeditionary Advanced Base Operations
GHQ	General Headquarters
IGHQ	Imperial General Headquarters
IJN	Imperial Japanese Navy
IMB	Independent Mixed Brigade
INDOPACOM	Indo-Pacific Command
JAM-GC	Joint Concept for Access and Maneuver in the Global Commons
JCS	Joint Chiefs of Staff
JFC	Joint Force Commander
JFLCC	Joint Force Land Component Commander
JFMCC	Joint Force Maritime Component Commander
LAFASCU	Landing Force Air Support Control Units
LCM	Landing Craft Medium
LCVP	Landing Craft Vehicle Personnel

MCCP	Marine Corps Concept Paper
MDO	Multi-Domain Operations
OA	Operational Area
PME	Professional Military Education
POA	Pacific Ocean Areas
RCT	Regimental Combat Team
SAMS	School of Advanced Military Studies
SER	Specialty Established Regiment
SWPA	South West Pacific Area

Figures

> Since men live upon the land and not upon the sea, great issues between nations at war have always been decided—except in the rarest cases—either by what your army can do against your enemy's territory and national life, or else by the fear of what the fleet makes it possible for your army to do. The paramount concern, then, of maritime strategy is to determine the mutual relations of your army and navy in a plan of war…The problem of such coordination is one that is susceptible of widely varying solutions.
>
> —Julian Corbett, *Principles of Maritime Strategy*, 1911

Introduction

The US military is revising its doctrine and operational concepts in order to adapt effectively to the future environment created by rising powers and technological change. Effective integration of the land domain into the emerging joint operational concepts in the western Pacific requires analysis through the lenses of history, theory, and doctrine. This study seeks to identify the factors that enable effective field army operations against a peer competitor in Pacific archipelagoes. The last time the US Army conducted operations at the field army level against a peer competitor in the Pacific archipelagoes was against the Japanese in the Second World War. The invasions of Leyte and Okinawa were major operations in the "first island chain".[1] conducted by field armies as part of a joint force. An examination of these operations informs the evaluation and development of emerging doctrine for both the field army and the Joint Force. This study argues proper experience and organizational structures enable joint fires and the utilization of the sea as maneuver space, which are critical factors for successful field army operations in the Pacific. Critical experience includes the breadth of key leader experience and the organization's familiarity with the environment. Organizational structures allow the field army to manage the conflicts that arise from the diversity and interdependencies of the Joint Force effectively. Finally, the field army is able to utilize air and sea power to limit enemy

[1] The "first island chain" refers to a line of islands that lie immediately off of the east Asian mainland coast. It includes the Japanese Home Islands, Ryukyu Islands, Taiwan, and the Philippine archipelago. James Holmes, "Defend the First Island Chain," *Proceedings* 140, no. 4 (2014), accessed 2 February 2021, https://www.usni.org/magazines/proceedings/2014/april/defend-first-island-chain.

freedom of maneuver and expand its own to defeat the enemy through isolation and dislocation at the operational level.

The People's Republic of China poses a military threat to American interests due to its increasing national power and territorial ambitions within the first island chain. James Fennell, a retired naval intelligence officer and policy analyst, argues that "the CCP is engaged in a total, protracted struggle for regional and global supremacy. This supremacy is at the heart of the 'China Dream.'"[2] The China Dream is a national vision of rejuvenation and restoration that aims to reorient the world around a China-centric order. Becoming a maritime great power and recovery of what China perceives as its historic territories are key national strategic end states supporting the China Dream. These end states rest on China's ability to exert control over the first island chain. These territories and their surrounding waters, which China calls its "Blue Territories," provide critical basing for China to project military power into the Pacific. China's military is facilitating these national strategic end states by developing anti-access/area denial (A2/AD) capabilities that obstruct military operations in the western Pacific as well as significantly expanding its navy with a goal of building 550 ships by 2030.[3]

To operate effectively in increasingly contested environments such as the western Pacific, the US Army is developing the operational concept of Multi-Domain Operations (MDO). In the construct of MDO, the US Army solves five problems presented in Chinese operations by applying three interrelated tenets (see Figure 1). The first problem is effective competition that counters attempts at coercion and disruption while deterring escalation. In the event of armed conflict, the Army, as part of the Joint Force, must solve the second and third problems of penetrating and dis-integrating the enemy's A2/AD systems in order to enable operational and tactical maneuver. The fourth problem is exploiting the resulting freedom of maneuver to defeat

[2] James Fennell, "Asia Rising: China's Global Naval Strategy and Expanding Force Structure," *Naval War College Review* 72, no. 1 (2019), 12.

[3] Ibid., 1, 13, 14.; Liza Tobin, "Underway—Beijing's Strategy to Build China into a Maritime Great Power," *Naval War College Review* 71, no. 2 (2018), 18.

the enemy. Lastly is how to re-compete in a more advantageous security environment. The three interrelated tenets through which the Army solves these problems are a *calibrated force posture* that allows for maneuver across strategic distances, *multi-domain formations* that can operate in contested spaces, and *convergence* that enables multi-domain effects in the decisive space.[4]

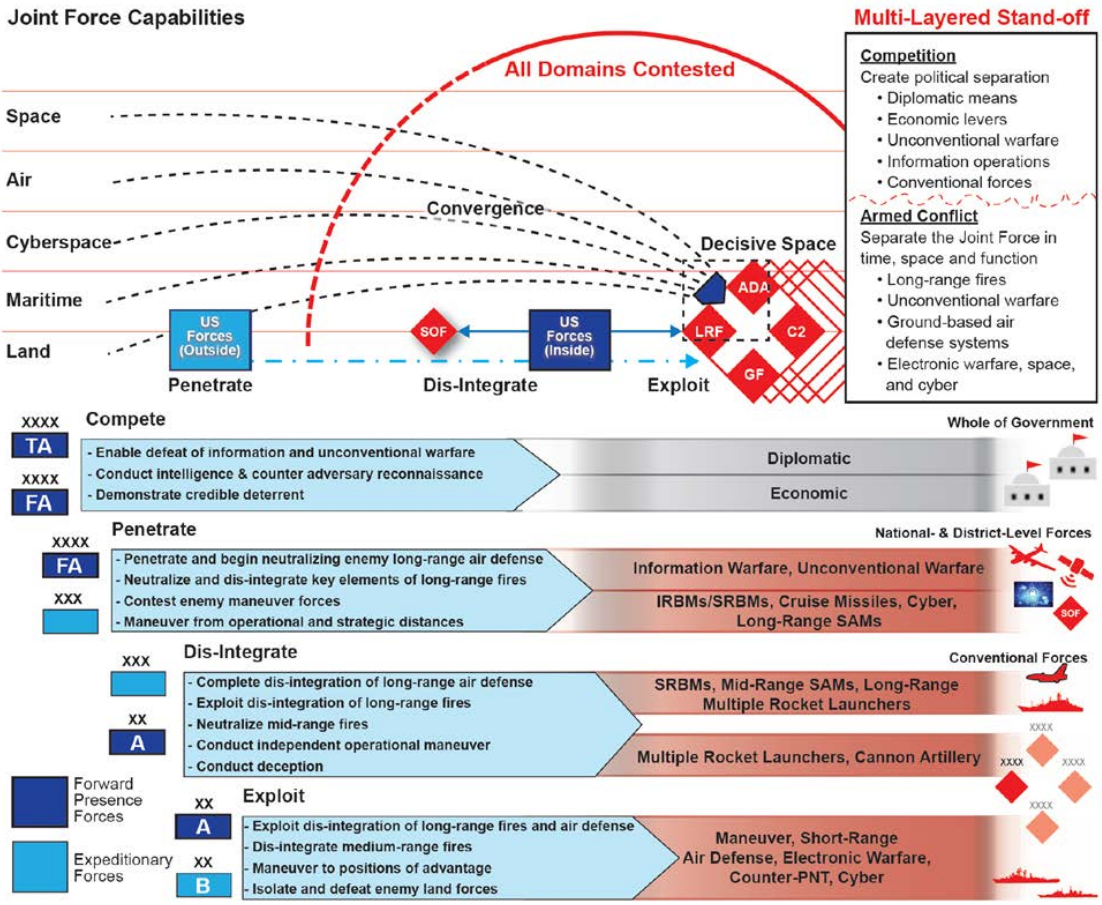

Figure 1. MDO solutions. Training and Doctrine Command, *The U.S. Army in Multi-Domain Operations 2028*, TRADOC Pamphlet 525-3-1 (Fort Eustis, VA: TRADOC, 6 December 2018), 26.

The US Army has established the field army as a critical component of this new operational concept, and this fact has required an update to US Army doctrine, which has not

[4] Training and Doctrine Command, TRADOC Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, (Fort Eustis, VA: TRADOC, 6 December 2018), vi-ix.

emphasized or resourced the field army in the post-9/11 operational context.[5] The US Army's draft version of the updated FM 3-94 *Armies, Corps, and Division Operations* identifies "field armies are primary units of operational maneuver, conducting the decisive operations of the land campaign."[6] MDO envisions field armies as forward presence forces which "set the campaign" against a specific near-peer adversary. It works with the theater army to facilitate maneuver from operational and strategic distances. The field army is the critical echelon for integration with joint partners at the operational level and is tasked to "coordinate complex joint convergence (air and naval strikes, cyberspace) in support of corps scheme of maneuver or on behalf of subordinate echelons."[7] An understanding of effective field army operations in the Pacific archipelagoes is essential to ensuring that the Army's force structure and doctrine effectively allow the operational concept of MDO to achieve its objectives against China.

The other military services are also developing operational concepts involving increasingly contested environments. The Marine Corps has developed the operational concept of Expeditionary Advanced Base Operations (EABO), which is focused on supporting the Joint Force Maritime Component Commander (JFMCC) with small, distributed military assets in key maritime terrain in close and confined seas. These dispersed and resilient "inside forces" undermine the enemy strategy and facilitate the operations of the more robust platforms of the "outside force." This concept is designed to respond quickly with forward-deployed forces to

[5] The 2014 version of FM 3-94 *Theater Army, Corps, and Division Operations* does not include field armies and explicitly states that, "the theater army is not designed, organized, or equipped to function as a combined forces land component command or a field army in major combat operations. It does not exercise OPCON over corps and larger formations." US Department of the Army, Field Manual (FM) 3-94, *Theater Army, Corps, and Division Operations* (Washington, DC: Government Publishing Office, 2014), 2-4. The draft version of the updated FM 3-94 is titled *Armies, Corps, and Division Operations* and explicitly states, "field armies are primary units of operational maneuver, conducting the decisive operations of the land campaign." US Department of the Army, Field Manual (FM) 3-94, *Armies, Corps, and Division Operations* (Washington, DC: Government Publishing Office, 2020), 3-29.

[6] US Army, FM 3-94, *Armies, Corps, and Division Operations* (2020), 3-29.

[7] TRADOC, TP 525-3-1, *US Army in MDO*, 22, 26, C-6.

secure strategic initiative and prevent an enemy *fait accompli*.[8] This concept complements the Navy's Distributed Maritime Operations (DMO), which proposes a distributed and resilient striking force of smaller ships, with sensors and decision-making technology that enables the fleet to attack effectively first at the decisive places.[9] The central idea of the US Air Force concept for future operations is operational agility, which allows the air force to survive in a contested environment and "rapidly generate—and shift among—multiple solutions for a given challenge."[10] At present, these operational concepts are complementary but not yet integrated.

Current efforts are underway to integrate these concepts into an effective operational concept for the Joint Force. The initial response by the Joint Force to the Chinese A2/AD challenge was the development of Air-Sea Battle in 2009. This approach, however, focused too narrowly on air and sea domains, and in 2015 began to evolve into the Joint Concept for Access and Maneuver in the Global Commons (JAM-GC). JAM-GC presents an operational approach that counters enemy A2/AD capabilities while not relying on their systematic destruction. The future Joint Force conducts these operations by being "distributable, resilient, and tailorable, as well as employed in sufficient scale and for ample duration."[11] This concept is not predicated on a particular adversary, but it grew out of the western Pacific's A2/AD challenge.[12] The Marine Corps' current EABO operating concept supports this framework through effective deterrence

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[8] US Marine Corps, *Expeditionary Advanced Base Operations (EABO) Handbook, Version 1.1* (Quantico, VA: Marine Corps Warfighting Laboratory, 1 June 2018), 5-6, 21, accessed 2 September 2020, https://mca-marines.org/wp-content/uploads/Expeditionary-Advanced-Base-Operations-EABO-handbook-1.1.pdf.

[9] Kevin Eyer and Steve McJessy, "Operationalizing Distributed Maritime Operations," *Center for International Maritime Security*, 5 March 2019, accessed 15 September 2020, http://cimsec.org/operationalizing-distributed-maritime-operations/39831; Wayne Hughes and Robert Girrier, *Fleet Tactics and Naval Operations, Third Edition* (Annapolis, MA: Naval Institute Press, 2018), 267-8, 293.

[10] US Department of the Air Force, *Air Force Future Operating Concept* (Washington, DC: Government Publishing Office, 2015), 7.

[11] Michael Hutchens, William Dries, Jason Perdew, Vincent Bryant, and Kerry Moores, "Joint Concept for Access and Maneuver in the Global Commons: A New Joint Operational Concept," *Joint Forces Quarterly*, 84, no. 1 (2017), 137.

[12] Ibid., 136-7.

and rapid response by small units of forward-deployed forces to support the Navy's sea control mission. This rapid response prevents a *fait accompli* and the need for the costly reconquest of territory.[13]

There are several issues with this operational concept as it is applied against China in the western Pacific theater. The concept is predicated on the enemy as the "first mover." This creates the first problem as the situation moves from deterrence to armed conflict. If deterrence fails and a peer competitor such as China decides to escalate to armed conflict, it is unlikely to do so if it lacks the military power to secure its initial operational objectives. Given China's rapidly increasing military power, it is unlikely that the US will be able to sustain long-term forward-deployed forces capable of preventing a *fait accompli*. The second problem is that warfare's natural escalatory nature makes it unlikely that small units of maritime-focused Marines will be sufficient to control the key terrain in the first island chain. These problems with the current framework create a situation where the projection of land power becomes a byproduct of JAM-GC, which must integrate land power in a way that enables the achievement of cross-domain synergy.[14] The US Army MDO operational concept and the field army provide a critical solution to these problems. This is accomplished as "the field army calibrates force posture to reduce an adversary's local military superiority, employs multi-domain formations to withstand a surprise attack, and demonstrates the ability to converge forward presence, joint, and national-level capabilities to disrupt any surprise attack."[15] The field army then facilitates strategic and operational maneuver of reinforcing expeditionary forces.[16] The case studies of Leyte and

[13] EABO Handbook, 21, 38, 41.

[14] Cross-Domain Synergy is defined as "the complementary vice merely additive employment of capabilities in different domains such that each enhances the effectiveness and compensates for the vulnerabilities of the others—to establish superiority in some combination of domains that will provide the freedom of action required by the mission," US Department of Defense, Joint Staff, *Joint Operational Access Concept* (Washington, DC: Government Publishing Office, 2012), ii.; Brian Dunn, "Fighting for the Land—from the Sea," *The Land Warfare Papers*, no. 116 (2017), 7.

[15] TRADOC, TP 525-3-1, *US Army in MDO*, 30.

[16] Ibid., 26.

Okinawa provide historical examples of field armies conducting operational maneuver in archipelagic environments after forward deployed forces failed to prevent the enemy's seizure of its initial operational objectives.

Methodology

This work is an inductive case study that qualitatively assesses the invasions of Leyte and Okinawa to identify historical lessons that can inform the development of current doctrine. Both of these operations were selected as major operations that were executed in the first island chain by a field armies utilizing high levels of joint integration. It is important to distinguish a major operation, defined by current joint doctrine as a "series of tactical actions (battles, engagements, strikes) conducted by combat forces of a single or several Services, coordinated in time and place, to achieve strategic or operational objectives in an OA," from a campaign, which is "a series of related major operations aimed at achieving strategic and operational objectives within a given time and space."[17] The Leyte operation occurred within the larger campaign for the Philippines, while Okinawa was a more standalone major operation.

This study will analyze these cases through the lenses of history, theory, and doctrine. Each case study will explore the historical events from the perspective of the Sixth and Tenth Armies at the operational level of war. The historical analysis will utilize secondary source histories of the broader war, the operations, themselves, and biographies of key leaders. Critical primary source documents include the operation orders and after-action reports of the various headquarters as well as journals and autobiographies of key leaders. Each case study concludes with an assessment through current doctrine on the principles of joint operations and the tenets of operational art. The final section of this work consists of a theoretical analysis of the critical aspects of field army operation in archipelagic operations identified in the case studies.

[17] US Department of Defense, Joint Staff, Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: Government Publishing Office, 2017), V-5.

This study will use a structured, comparison methodology that focuses on specific aspects of the operations. The first area considered will be the training and organization of the field army. What relevant differences are observed between a more experienced organization, such as the Sixth Army on Leyte, and a newer organization like Tenth Army on Okinawa? The second question is, what differences exist between Sixth Army operating as a lead component among equals as opposed to Tenth Army as a more self-contained joint task force? The second area considered is the field army facilitating operations at relative depth to isolate and dislocate enemy forces. How did the Sixth and Tenth Armies facilitate joint fires throughout the depth of the battlefield? Also, how effectively did the Sixth and Tenth Armies integrate sea lift into their operational and tactical maneuver? This study will identify historical lessons and inform emerging doctrinal development in field army and joint doctrine.

Literature Review

Understanding these two major operations requires an understanding of the emergence of operational art from an American perspective, the historical perspectives through which these the operations have been analyzed, and theoretical frameworks through which to analyze important aspects of field army operations. Operational art as a cognitive approach is not necessarily limited to a specific time period, but it is generally acknowledged to have emerged out of the increasingly large-scale operations of the Napoleonic Wars. Numerous works trace this development in general and the American experience in particular. Several authors explore American military developments before the Second World War from the perspective of technology, theory, and doctrine. Historical analysis of the Leyte and Okinawa operations consists of general histories of the war, theater-level analyses of the individual operations, and biographies of the key leaders. In many ways, these operations were exemplars of broad developments in the American military's theory and practice.

Though there is disagreement over exactly when the operational level of war and operational art emerged, there is general agreement that the US was participating in this development and gained an understanding of it by the Second World War. The US Army defines operational art as "the essence of applying skill, experience, and judgment when exercising military command at the operational-level of warfare…to ensure that military actions are aligned with, and directly support strategy…[and] that tactical actions occur under the most advantageous conditions possible."[18] Robert Epstein, a professor at the School of Advanced Military Studies (SAMS), argued that the distributed maneuver that resulted from larger conscript armies of the Napoleonic Wars allowed for the linking of campaigns and battles into a broader operational framework.[19] James Schneider, another SAMS professor, argued that operational art did not fully emerge until sometime during the American Civil War when technological changes led to extra-battle maneuver and distributed operations as a means of overcoming increasing battlefield lethality. This development contrasts with the concentric maneuver and concentrated battle of the Napoleonic Wars, what Schneider termed the strategy of a single point. These changes led to a focus on retaining or denying freedom of action as opposed to destroying the enemy's army.[20] The Civil War's new operational paradigm persisted into the 20th century.

Several works emphasize the impact of operational art on 20th century warfare. In *The Evolution of Operational Art*, Antulio Echevarria, a professor at the US Army War College, surveyed the development of American operational art during the 20th century by emphasizing its joint nature and its interaction with the "two grammars of war," the first grammar being conventional and the second grammar applying to irregular warfare. Critical insights of this study

[18] US Department of the Army, Army Doctrine Publication (ADP) 3-0, *Operations* (Washington, DC: Government Publishing Office, 2019), 2-1.

[19] Robert Epstein, *Napoleon's Last Victory and the Emergence of Modern War* (Lawrence, KS: University Press of Kansas, 1994), 4-5.

[20] James Schneider, *Vulcan's Anvil: The American Civil War and the Foundations of Operational Art*, SAMS Theoretical Paper No. 4, 16 June 1992, 29-31.

are the lack of training and experience among US commanders and staffs as well as repeated use of amphibious assaults to outflank enemy positions.[21] Michael Matheny, a professor at the US Army War College, explains that "the key elements of operational design that can be traced back to the interwar period or even earlier are culmination, lines of operation, phasing, center of gravity, leverage, and linking tactical, operational, and strategic objectives."[22] He describes how the developments in operational art affected land, sea, and air power and uses the Philippines campaign and invasion of Okinawa as case studies to illustrate the culmination of these developments. The US Army Center for Military History's *Historical Perspectives of the Operational Art* analyzed the development of operational art in various countries. For America specifically, it is noted that the exceptional distances involved in its major wars required an especially broad scope of planning. Formal intellectual and doctrinal developments did not support this requirement until the interwar period between the First and Second World Wars. The US Army only developed an official doctrine that explicitly articulated operational art in the 1980s.[23]

General histories of the Second World War illustrate the Leyte and Okinawa operations as culminations of American intellectual development and combat experience and emphasize various services of the Joint Force. Historian Russell Weigley emphasizes the naval contribution and describes these operations as part of "a Mahanian triumph of sea power."[24] Naval historian

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[21] Antulio Echevarria II, "American Operational Art, 1917-2008," in *The Evolution of Operational Art: From Napoleon to the Present*, ed. John Andreas Olsen and Martin van Creveld (Oxford: Oxford University Press, 2011), 137, 146-8.

[22] Michael Matheny, *Carrying the War to the Enemy: American Operational Art to 1945* (Norman, OK: University of Oklahoma Press, 2011), xviii.

[23] Michael Krause and R. Cody Phillips, eds., *Historical Perspectives of the Operational Art* (Washington, DC: US Army Center of Military History, 2007), 15, 329.

[24] In naval theorist Alfred Thayer Mahan's estimation, "sea communications…are the most important single element in national power and strategy." In war, control of the sea is the central purpose of naval strategy. This control is established by destroying the enemy's ships and fleets in battle. Mahan asserted that the battle could be won, and sea control established quickly. He also argued for a concentrated fleet as the surest, though not only, way of winning decisive battles and establishing sea control. Weigley criticizes Mahan for his conservatism and asserts that his approach was "more appropriate to the age of

Ian Toll criticizes Mahanian orthodoxy in the Pacific War and illustrates how technological innovation had led to additional considerations.[25] Strategic theorist Colin Gray assessed that Japan was defeated through maritime siege and amphibious assault but emphasized that "the leading edge of that sea power–enabled amphibiosity was airpower."[26] In *A War to Be Won*, Williamson Murray and Allen Millett emphasize the necessarily cooperative nature of the operations, and note that the unique character of the Leyte operation "forced the highest degree of interservice cooperation…of the Pacific War."[27] They are highly critical of General Simon Bolivar Buckner's generalship at Okinawa overall and are especially so of his decision against a second landing behind Japanese lines.[28] Buckner's generalship is a hotly contested issue throughout the general and campaign histories.

Historical analysis of the individual operations primarily focuses on the theater-level of both the Southwest Pacific Area (SWPA) and Pacific Ocean Area (POA) headquarters. Much of this literature is more narrative than analytical and consists of official service histories of the operations. The US Army and Navy published their official histories in the early 1950s. *Leyte: Return to the Philippines* covers the ground operations in great detail while engaging in relatively light discussion of the naval and air contributions. Samuel Eliot Morison, the eminent naval officer and historian, explored the Leyte operation in his fourteen-volume History of the United States Naval Operations in World War II. His work is primarily focused on the naval perspective and includes a significant description of the ground and air operations. Milan Vego, a professor at

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wood and sail than that of steel and steam." As Mahan was writing his theories, technological developments in the areas of mines torpedoes and submarines were undermining his conclusions, Russell Weigley, *The American Way of Way: A History of United States Military Strategy and Policy* (New York: Macmillan Publishing Co., Inc., 1973), 174-80, 311.

[25] Ian Toll, *Twilight of the Gods: War in the Western Pacific, 1944-1945*, Kindle Edition (New York: W.W. Norton & Company, 2020), 301-3.

[26] Colin Gray, *Airpower for Strategic Effect* (Maxwell AFB, AL: Air University Press, 2012), 146.

[27] Williamson Murray and Allen Millett, *A War to Be Won: Fighting the Second World War* (Cambridge: Harvard University Press, 2000), 372.

[28] Ibid., 514-5.

the Naval War College, has written a more recent history in his 2006, *The Battle for Leyte, 1944*. His work provides a thorough analysis from the theater-level, and he is critical of Sixth Army's tempo of operations, especially the neglect of the key port of Ormoc.[29] Historian Kevin Holzimmer's biography of General Walter Krueger is more laudatory, emphasizing Krueger's ability to balance care for his soldiers with General Douglas MacArthur's demands for speed. He characterizes the land based double envelopment strategy as "aggressive" and attests "Krueger's generalship provides an excellent example of the successful application of operational art."[30]

The literature on Okinawa is much more extensive but also similar as it exists in many of the same multi-volume service histories as the Leyte operation. The official US Army history, *Okinawa: The Last Battle*, was published in 1948, while the Marine Corps published its history in 1955. Both works focus fairly exclusively on ground operations. The Marine Corps history is highly narrative, while the US Army history contains important analytical sections tactical employment and logistics. Samuel Eliot Morison published his final volume on the Pacific War, *Victory in the Pacific*, in 1960. This work is focused primarily on the Iwo Jima and Okinawa operations and covers the naval operations around Okinawa in much greater detail than the other service histories. The capabilities of General Buckner and his decision against a second landing emerge as some of the most contentious issues of debate. Samuel Eliot Morison is much more sympathetic to Buckner than Murray and Millett as he asserts that "faced with such defensive works as General Ushijima devised, no army on earth could have done better than General Buckner's Tenth."[31] Morison also notes that all of Buckner's naval superiors concurred with his decision against a second landing in spite of criticism in the press at the time. The US Army's history, as well as historian T.M. Huber, note that a division landing in the south was not

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[29] Milan Vego, *The Battle for Leyte, 1944* (Annapolis MD: Naval Institute Press, 2006), 342.

[30] Kevin Holzimmer, *General Walter Krueger: Unsung Hero of the Pacific War* (Lawrence, KS: University Press of Kansas, 2007), 204-7.

[31] Samuel Eliot Morison, *Victory in the Pacific* (Annapolis, MD: Naval Institute Press, 1960), 242.

logistically supportable as confirmed by post-combat operations. The US Army history, however, does note that a window of opportunity opened in early May as Japanese forces moved north, and Tenth Army made no preparations to exploit the opportunity.[32]

Four areas of critical importance to understanding the Leyte and Okinawa operations include experience, organization, joint fires integration, and sealift to expand the maneuver space. Several theorists present important insights into these areas of interest. Journalist David Epstein's *Range: Why Generalists Triumph in a Specialized World* presents a compelling exploration of how broad practitioner experience is important in preventing "cognitive entrenchment" in unfamiliar, complex environments. In *Power and* Influence, management theorist John Kotter presents a framework for understanding organizational success through management of diversity and interdependence in organizations. Naval theorist, Julian Corbett analyzes naval strategy as a means to an end within the larger framework of human conflict in his *Principles of Maritime Strategy*. Aviation theorist John Slessor, in *Airpower and Armies*, stresses the importance in interdependent planning between land and air forces. Colin Gray addresses the unique capabilities of airpower and the unity of the air domain in *Airpower for Strategic Effect*. Finally, in *Battle Studies,* French soldier and theorist Ardant du Picq presents a morale-centric explanation of battle, which specifies the material and moral aspects of the effect of military maneuver.

This study seeks to contribute to the Pacific War scholarship by analyzing these operations from the perspective of the field armies through the lens of current American operational art doctrine in order to draw lessons forward to inform future operating concepts. Leyte illustrates a major field army operation that occurred as part of a wider campaign in the Philippine archipelago against a peer adversary that retained significant land, sea, and air power in the theater. Okinawa presents a more isolated major operation in which the field army was

[32] Morison, *Victory in the Pacific,* 273; Roy Appleman, James Burns, Russell Gugeler, and John Stevens, *Okinawa: The Last Battle* (Washington, DC: Center of Military History, 1948), 258-64; T. M. Huber, *Okinawa, 1945* (Havertown, PA: Casemate, 2003), 46-7.

employed as a subordinate echelon of the naval forces in close proximity to the enemy's home territory. This study makes the key assumptions that future joint large-scale combat operations will be evolutionary as opposed to revolutionary, will involve relatively large numbers of troops numbering over 100,000, and that A2/AD capabilities do not represent a permanent victory for the defense in the challenge-and-response dynamic of warfare.[33]

Case Studies

By 1944, the Allies finally possessed the means to conduct large scale expeditionary warfare across the Pacific theater. Simultaneous drives across the south and central Pacific both competed for resources and prevented the Japanese from focusing their efforts against a single Allied thrust. As these drives began to converge in the western Pacific, Allied leaders faced critical strategic decisions and increasingly desperate Japanese resistance. These factors also made possible and necessary the Allied use of field armies for the first time in the Pacific War. This occurred initially in the campaign in the south through New Guinea and the Philippines and then also at Okinawa.

The Seizure of Leyte, October 1944 – February 1945

By the summer of 1944, the US faced a critical strategic decision following the seizure of the Marianas Islands and New Guinea and their naval victory at the Battle of the Philippine Sea (see Figure 2). The axes of advance of General Douglas MacArthur's SWPA theater and Admiral Chester Nimitz' POA theater were converging in the western Pacific. The Joint Chiefs of Staff (JCS) had to decide between continuing a southern approach through the Philippines or bypassing them to invade Formosa and southern China. The Philippines presented significant political as well as military considerations. It was a US territory, and General MacArthur was eager to fulfill

[33] The challenge-and-response dynamic of warfare is a specifically western concept asserted by historian Geoffrey Parker in which "innovation broke the prevailing equilibrium and provoked a phase of rapid transformation and adjustment."; Geoffrey Parker, "The Western Way of War," in *The Cambridge History of Warfare*, ed. Geoffrey Parker (Cambridge, UK: Cambridge University Press, 2005), 7.

his pledge to return after fleeing the islands as the Japanese seized them in 1942. By capturing the main Philippine island of Luzon, the Allies would be able to cut off Japan's home islands from critical resources in Southeast Asia. Basing on Luzon also supported the neutralization of enemy air power on Formosa and the eventual invasion of Japan. Ultimately, the JCS directed the seizure of Leyte in the central Philippines on 1 September without a decision on whether subsequent operations would occur in Luzon or Formosa.[34]

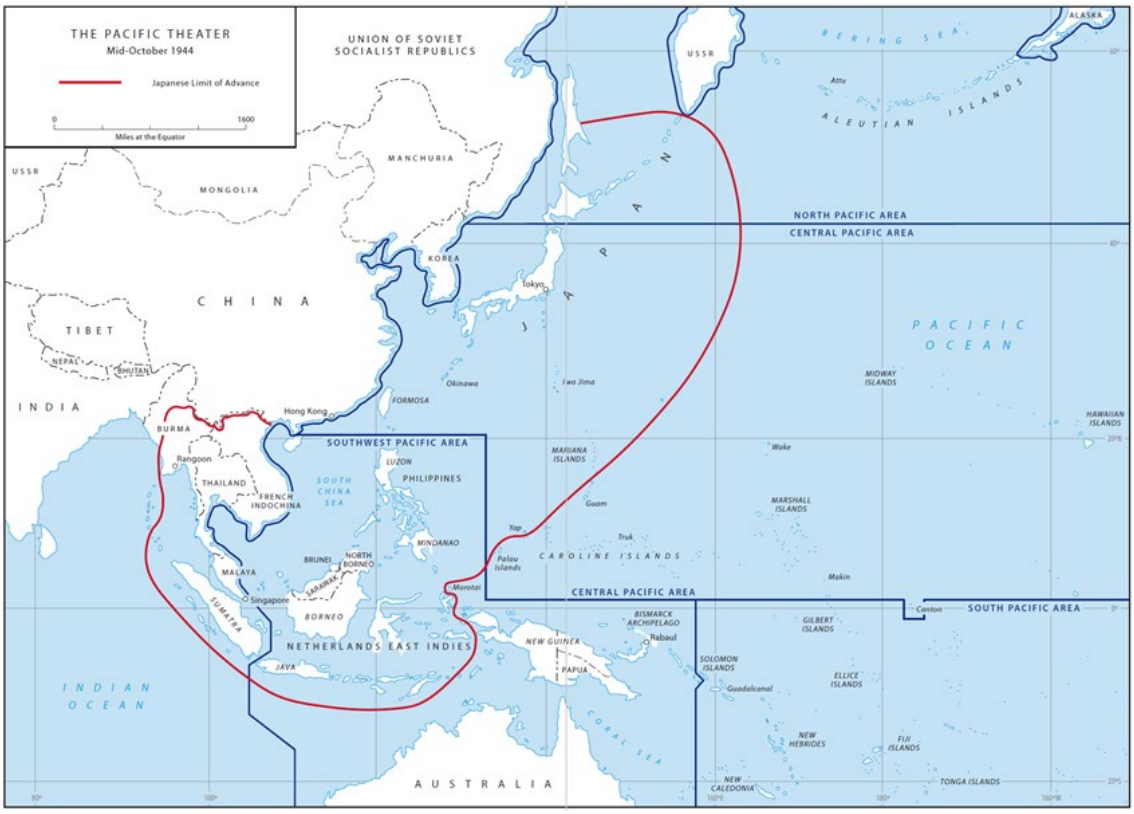

Figure 2. The Geographic Military Situation in the Pacific War in Mid-October 1944. Charles Anderson, *Leyte: 17 October 1944-1 July 1945* (Washington, DC: Center of Military History, 2019), 8-9.

SWPA General Headquarters (GHQ) ordered General Walter Krueger's Sixth Army to seize and secure multiple objectives on and around the island of Leyte with support from air and naval forces across the Pacific theater. A-Day, 20 October, was set as the target date for the

[34] Vego, 1-12.

landings. This development was a significant shift from the initial timetable. Based on the limited Japanese air resistance to the Third Fleet's carrier airstrikes, Admiral William Halsey had recommended that the southern island of Mindanao be bypassed in favor of an earlier Leyte landing.[35] The decision to bypass Mindanao was a bold move that carried significant risk. Leyte was outside the range of US land-based aircraft, and Sixth Army would be dependent on carrier air support until sufficient land-based airfields could be established on Leyte. Allied forces would approach Leyte along exterior lines at the strategic level, but once the landings took place, Sixth Army and its supporting air and naval forces would be operating from a central position.[36] Sixth Army formed the ground component of the operation with subordinate XXIV and X Corps (each with two divisions). Two fleets supported the land component—the Seventh Fleet's amphibious forces and the Third Fleet's fast carriers. The Fifth Air Force provided direct support, to the extent that basing and range allowed, as part of SWPA. Adjacent air forces conducted additional shaping operations by bombing Japanese bases to attrit their air power and also force its dispersion throughout Japan's defensive perimeter.[37]

[35] Holzimmer, 185; Samuel Eliot Morison, *Leyte, June 1944 – January 1945* (Annapolis, MD: Naval Institute Press, 1953), 13.

[36] The X and XXIV Corp arrived from the south Pacific. The 77th Infantry Division operated as a reserve out of Guam. The Third Fleet carrier task forces arrived from the north after strikes against Okinawa and Formosa. Once the forces concentrated at Leyte, they were surrounded by Japanese forces on Mindanao in the south and Luzon in the north; Vego, 13, 91; Thomas Griess, ed., *West Point Atlas for the Second World War: Asia and the Pacific* (New York, NY: Square One Publishers, Inc., 2002), 29.

[37] Ibid., 188; Morison, *Leyte*, 12, 55-7, 60.

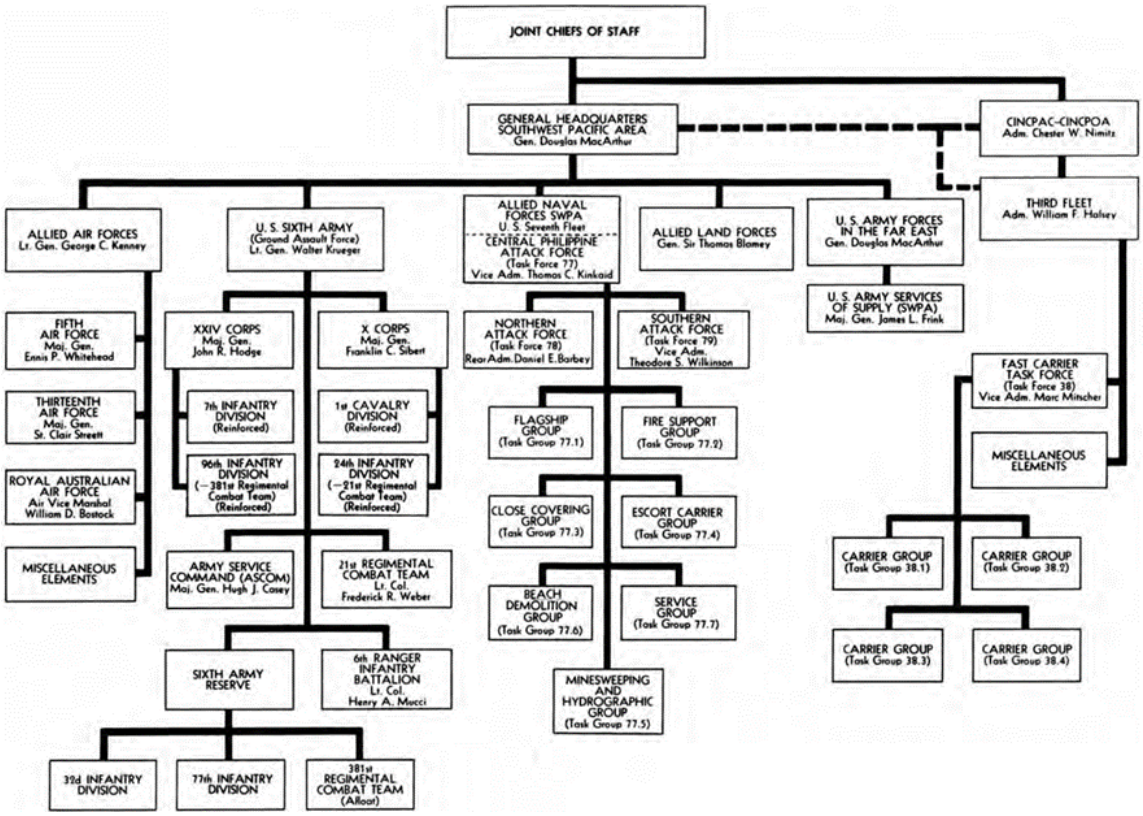

Figure 3. Operational Organization for the Leyte Operation. M. Hamlin Cannon, *Leyte: The Return to the Philippines* (Washington, DC: Center of Military History, 1993), 25.

Overall, the rugged terrain, adjacent occupied islands, and inclement weather favored the defender. Leyte is part of the Visayan group, the middle of three groups of islands in the Philippine archipelago. It lies between the larger islands of Luzon to the north and Mindanao to the south. Leyte is rugged and heavily forested, 115 miles long from north to south and fifteen to forty-three miles long from east to west, with a mountainous spine from north to south. These mountains separate the relatively flat Leyte Valley in the east from the smaller Ormoc Valley in the West. Most of the coastline is unsuitable for landing operations except for the northeast coast off of the Leyte Valley, Ormoc Bay, and Carigara Bay.[38] The Leyte Valley contained the provincial capital of Tacloban, the majority of the population, and the most significant airstrips. (See maps on pages 24 and 27 for topographical details) The landings were set to take place at the

[38] Walter Krueger, *From Down Under to Nippon: The Story of the Sixth Army in World War II* (Washington DC: Combat Forces Press, 1953), 145-6.

height of the typhoon season, which created problems for air support due to visibility. The weather also undermined terrain trafficability due to high levels of precipitation and the primitive road network on Leyte.[39]

Figure 4. The Philippines, 1944. Charles Anderson, *Leyte: 17 October 1944-1 July 1945* (Washington, DC: Center of Military History, 2019), 11.

[39] Vego, 86-8, 93; Holzimmer, 185.

Sixth Army began its preliminary planning for operations against the Philippines at a planning conference in Brisbane, Australia, between 20 July and 6 September. This planning occurred in conjunction with the air, naval, and supply components of SWPA. During the conference, "planning groups concentrated their efforts upon the preparation of tentative troop lists and the considerations of logistics for the four operations."[40] On 15 September, GHQ informed Sixth Army of the cancellation of the Talaud and Mindanao operations in favor of an earlier invasion of Leyte. Sixth Army had to revise its plans in light of the new timeline and the availability of manpower and logistical lift. SWPA and POA GHQs substituted XXIV Corps for XIV Corps, and the 24th Division was substituted for the 40th within X Corps. Significantly less shipping was projected to be available to support the updated timeline due to ongoing operations. SWPA convened a subsequent planning conference on 16 September to synchronize changes between the service components.[41] Planning operated under the general assumption that the Japanese would not strongly contest the seizure of Leyte. Still, dissenting opinions, such as that MacArthur's senior naval staff officer and head of the SWPA Red Team, envisioned a more determined defense.[42]

The final Sixth Army plan necessarily assumed significant amounts of risk. Only four divisions were available for the landings, and they could not expect reinforcement until mid-November. Leyte was also within range of fifty-two enemy airfields, and Sixth Army would be entirely dependent on carrier-based air support until sufficient airfields could be captured and established on Leyte.[43] Sixth Army oriented on the major urban area of Tacloban, with its port and airfield, as the center of gravity for the Japanese defense. Operation King II was envisioned in four phases. Phase I consisted of the 6th Ranger Battalion seizing control of smaller islands

[40] Sixth Army, *Report of the Leyte Operation* (Unknown: US Sixth Army, 1945), 17.

[41] Ibid., 18.

[42] Vego, 101-4.

[43] Sixth Army, *Report of the Leyte Operation*, 23; Vego, 101.

necessary to control the eastern entrance to Leyte Gulf. Phase II included the main landings in which X Corps (1st Cavalry Division and 24th Infantry Division less 21st Infantry Regiment) was to seize Tacloban, control the San Juanico Strait, and seize the northern coast in the vicinity of Carigara. XXIV Corps (7th Infantry Division and 96th Infantry Division less 381st Infantry Regiment) was to seize the villages and airfields in vicinity of the Dulag-Burauen-Dagami area. The 21st Infantry Regiment was to secure control of the entrance to Sogod Bay in the south and the 381st Infantry Regiment acted as Sixth Army's floating reserve. In Phase III, Sixth Army was to conduct a double envelopment of Japanese forces in the Ormoc Valley using overland and shore-to-shore operations, as well as seizing southwestern Samar. Phase IV consisted of consolidation of gains and preparation for follow on operations against adjacent islands.[44]

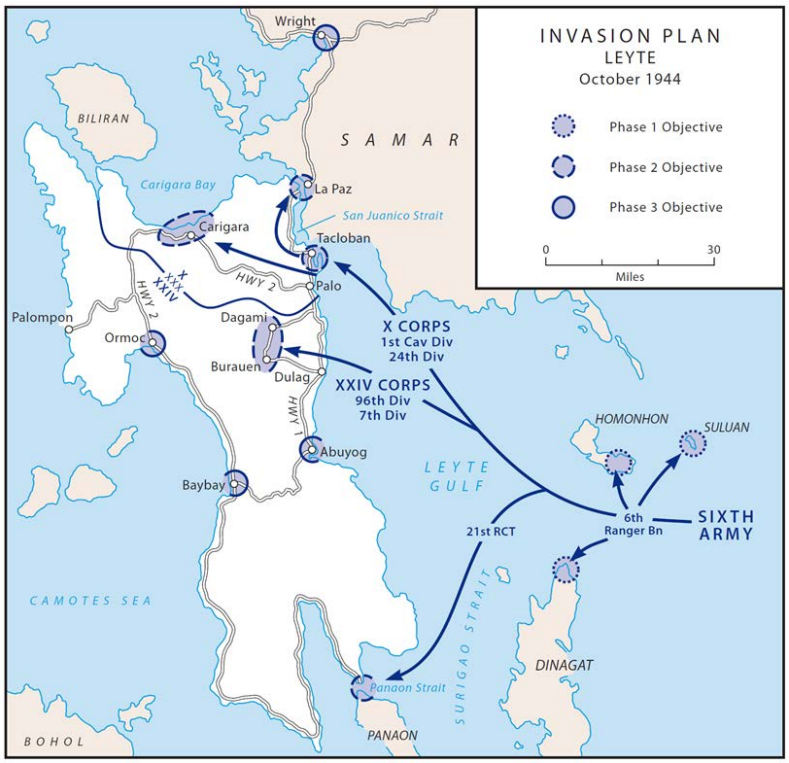

Figure 5. The Sixth Army's Leyte Invasion Plan. Charles Anderson, *Leyte: 17 October 1944-1 July 1945* (Washington, DC: Center of Military History, 2019), 15.

[44] Krueger, 148-50; M. Hamlin Cannon, *Leyte: The Return to the Philippines* (Washington, DC: Center of Military History, 1993), 23, 34.

The Japanese plans to defend the Philippines suffered from poor cooperation between the army and navy. The services suffered from a critical disconnect in which the army sought to fight the decisive battle on ground of its choosing in Luzon, but Japanese air and naval forces benefitted from attacking American forces before they could consolidate control of the southern islands and establish airfields. The 14th Area Army was responsible for the defense of the Philippines and was reinforced throughout the summer. The 35th Army was subordinate to the 14th and had specific responsibility for fighting a delaying defense in Mindanao and the Visayas in preparation for the decisive battle on Luzon.[45] The Japanese 16th Division was deployed to Leyte to delay US forces.[46] Early on, the Japanese recognized airpower as "the key factor in the successful defense of the Philippines."[47] The Imperial General Headquarters (IGHQ) dispatched Japanese air units from all over the western Pacific to the Philippines and nearby airfields. Air assets included the 2nd and 4th Air Divisions of the Fourth Air Army as well as a large amount of land-based naval aviation. The US Navy severely weakened the Imperial Japanese Navy (IJN) by destroying large amounts of its carrier aircraft at the Battle of Philippine Sea earlier in the summer, but the IJN retained significant combat power. The navy also had little choice but to defend the Philippines in order to maintain its access to fuel sources in the Dutch East Indies.[48]

SWPA and POA cooperated in preliminary operations from September through Phase I of Operation King II to isolate Leyte from wider theater and strategic support. Air attacks across Japan's defensive perimeter aimed to prevent reinforcement, while determined attacks in the vicinity of the Philippines sought to prevent effective air resistance. The most notable attacks were Fifth Air Force's attacks from Morotai against Japanese airfields on Mindanao and the

[45] A Japanese area army was the equivalent of a US field army. A Japanese army was the equivalent of a US corps.

[46] Vego, 47-54.

[47] Ibid., 46.

[48] Ibid., 45-6, 53-4, 64.

eastern Visayas, for which they had range, as well as Third Fleets carrier air strikes against airfields on Formosa, Okinawa, and throughout the Philippines. While aircraft shaped the theater, the Seventh Fleet began transporting the Sixth Army invasion forces from Hollandia and Manus to Leyte, a distance of 1,250 and 1,530 miles, respectively. The initial objectives for Phase I consisted of northern Dinagat and three smaller islands that separated the entrances of Leyte Gulf from the Philippine Sea. Aerial reconnaissance had identified enemy installations, which were presumed to be early warning radar installations. These objectives were scheduled to be attacked by A-3, the morning of 17 October. By noon on 18 October, the 6th Ranger Battalion, supported by naval gunfire from cruisers and destroyers, had secured the Japanese installations with minimal casualties. With the entrance to the gulf in American hands, minesweeping and fire support operations shaped Leyte itself for the main landings of Phase II.[49]

On 20 October, the 89,900 men of Sixth Army began their landings on the beaches near Tacloban and Dulag, opposed by 21,700 Japanese of the 16th Division and assorted support units. Naval gunfire fire, minesweepers, and escort carriers from the Seventh Fleet as well as carrier aviation from the Third Fleet's carrier task forces supported the landings.[50] By the end of A-Day, X and XXIV Corps had secured their beachheads and were in a position to seize their initial objectives. Both units would make steady progress over the next few days. The IGHQ had already initiated its plan for a decisive battle in defense of the Philippines, Operation *Sho*-1, on 18 October. However, it was not until 23 October, that IGHQ rectified the contradictory service strategies in the Philippines and decided to fight the decisive battle at Leyte as opposed to Luzon. Consequently, 35th Army could expect significant air support, the commitment of virtually the entire remnant of the Combined Fleet, and reinforcement by several divisions in the coming

[49] Morison, *Leyte*, 86-109, 118-23, 415-18; Vego, 153-5, 182.

[50] Holzimmer, 189; Morison, *Leyte*, 70, 132-3, 155, 160, 167.

days.[51] The IGHQs decision invalidated a critical assumption of the American commanders and would have significant consequences for the conduct of the campaign.

The Japanese Navy had always planned on fighting a decisive engagement at the outset of a US attack on the Philippines. The operation would draw the bulk of Japan's remaining naval forces from across the Western Pacific into the largest naval battle in history. By having three separate fleets converge on Leyte from different direction, the Japanese were able to split the American fleets defending the beachhead, and the Japanese Center Force fell upon the Seventh Fleet escort carriers supporting Sixth Army. Several were either sunk or damaged enough to be withdrawn. The invasion transports were only saved by the Japanese decision to withdraw in fatigue and confusion.[52] During the battle, the Third Fleet opted to pursue the Japanese aircraft carriers at the amphibious force's expense, with disastrous results for the escort carrier force.[53] After the battle the Japanese fleet would never again seriously challenge the US Navy, but the destruction of the escort carriers had serious consequences for Sixth Army's operations on Leyte. The consequences would have been far direr had the Japanese Center Force pressed on to the transports. General Krueger asserted that "if the plan had succeeded, Sixth Army would have been isolated on Leyte and placed in an extremely precarious situation."[54] The Philippine campaign may have been delayed by months, and American forces would have been distracted with monumental amounts of interservice recrimination.[55]

Despite the increased Japanese commitment to Leyte, Sixth Army was still able to complete the seizure of its Phase II objectives with relative ease. X Corps advanced inland from Tacloban and secured its objectives by 2 November. The 1st Cavalry Division seized Tacloban

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[51] Krueger, 158-61; Morison, *Leyte*, 149.

[52] Matheny, 227; Toll, 188-203, 212-3, 231, 242-3, 279-8.

[53] Matheny, 228-9.

[54] Krueger, 165.

[55] Toll, 304.

and used a combination of overland and shore-to-shore movements to secure the San Juanico Strait and seize the northern coastal village of Barugo, while the 24th Infantry Division advanced overland to seize Carigara, which was more lightly defended than anticipated. XXIV Corps advanced from its beaches near Dulag. The 7th Infantry Division advanced to the west against the main defensive position of the Japanese 16th Division around Burauen. The division then turned north and seized Dagami by the end of October. The 96th Division advanced to the north to seize the Catmon Hill and Tanauen. Sixth Army's attacks were going so well that MacArthur dispatched the 77th Infantry Division, part of the Sixth Army reserve, to Admiral Nimitz's command without consulting General Krueger.[56] This decision would prove to be a great mistake as flawed American assumptions would greatly complicate the transition to Phase III, attacking into the Ormoc Valley.

[56] Holzimmer, 192-5; Sixth Army, *Report of the Leyte Operation*, 34-41.

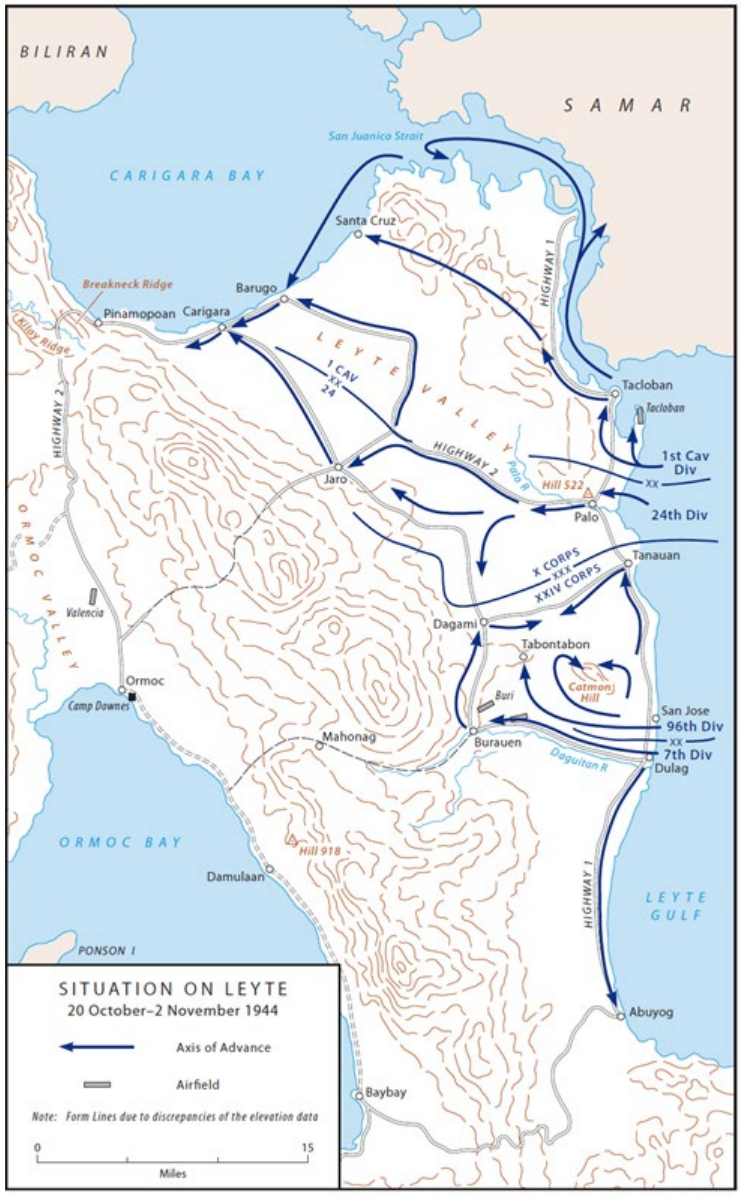

Figure 6. Sixth Army Advances on Leyte through 2 November 1944. Charles Anderson, *Leyte: 17 October 1944-1 July 1945* (Washington, DC: Center of Military History, 2019), 22.

American commanders made assumptions that the Japanese would not seriously contest the seizure of Leyte and that the island's airfields could be seized and put into operation quickly. Quick establishment of these airfields was necessary to bring Fifth Air Force within range and alleviate the need for carrier air support. Unfortunately, the weather and marshy terrain of Leyte Valley prevented the rapid establishment of these airfields, which seriously undermined the Fifth Air Force's ability to provide support. After IGHQ decided to fight the decisive battle at Leyte,

Japanese air sorties increased substantially on 24 October in concert with the attack of the Combined Fleet. These attacks targeted Tacloban airfield, Sixth Army supply depots, and shipping off of the invasion beaches. On 25 October, Japanese air attacks destroyed several Sixth Army supply dumps. *Kamikaze* suicide aircraft also began taking a toll on US Navy ships. With the Third Fleet drawn north, Seventh Fleet's escort carriers attrited, the Fifth Air Force out of range, and endemic poor weather conditions, there was little the American force could do to prevent Japanese reinforcement through the port of Ormoc. Beginning on 25 October, 35th Army began reinforcing the island with five divisions and two mixed brigades. Japanese aircraft began limiting their operations to dusk and dawn as limited Fifth Air Force fighters began operating out of Tacloban airfield on 27 October. [57] Japanese reinforcement, escort carrier attrition, and limited land-based aircraft greatly complicated the Sixth Army's attack into the Ormoc Valley.

Due to these developments, Sixth Army's attack towards the Ormoc Valley culminated shortly after the initiation of Phase III on 3 November. Lack of replacement troops and monsoon rains that degraded roads and air support also challenged the advance. X Corps' attack in the north culminated by 4 November as it faced the elite Japanese 1st Division, recently arrived in the hills of the northern Ormoc Valley. X Corps was responsible for its beachhead's security near Tacloban, the San Jaunico Strait, and defending Carigara Bay against a possible Japanese amphibious assault that would cut the corps' supply lines. Reinforcement by the recently-arrived 32nd Infantry Division failed to break the stalemate that had developed in the north. XXIV Corps, reinforced with the 11th Airborne Division, was able to advance to the western coast of Leyte in the south but was unable to break through the Japanese 16th and 26th Divisions to seize Ormoc. General Krueger recognized an amphibious assault on Ormoc was necessary to break the stalemate but had difficulty securing the required resources. He was able to get the 77th Infantry Division back from POA on 23 November but could not secure the necessary shipping unless the

[57] Sixth Army, *Report of the Leyte Operation*, 40-43; Holzimmer, 194; Krueger, 165; Toll, 287-90.

planned Mindoro operation was delayed until 15 December.[58] A Japanese regimental-sized, airborne operation in the XXIV Corps' rear area around Burauen on 6 December was poorly coordinated and failed to achieve any significant objective.[59] After the 77th Infantry Division landed and seized Ormoc between 7 and 11 December, the Japanese defense began to collapse, and the Sixth Army pursued the Japanese into the mountains of northwestern Leyte. On 25 December, Eighth Army took responsibility for Leyte's consolidation to allow Sixth Army to prepare for the invasion of Luzon.[60] Total American casualties during the Leyte operation included over 3,500 killed and nearly 12,000 wounded. The estimate of Japanese dead from all services is 59,400.[61]

[58] Holzimmer, 195-201.

[59] Sixth Army, *Report of the Leyte Operation*, 71-2.

[60] Holzimmer, 201-2.

[61] Cannon, 367-8.

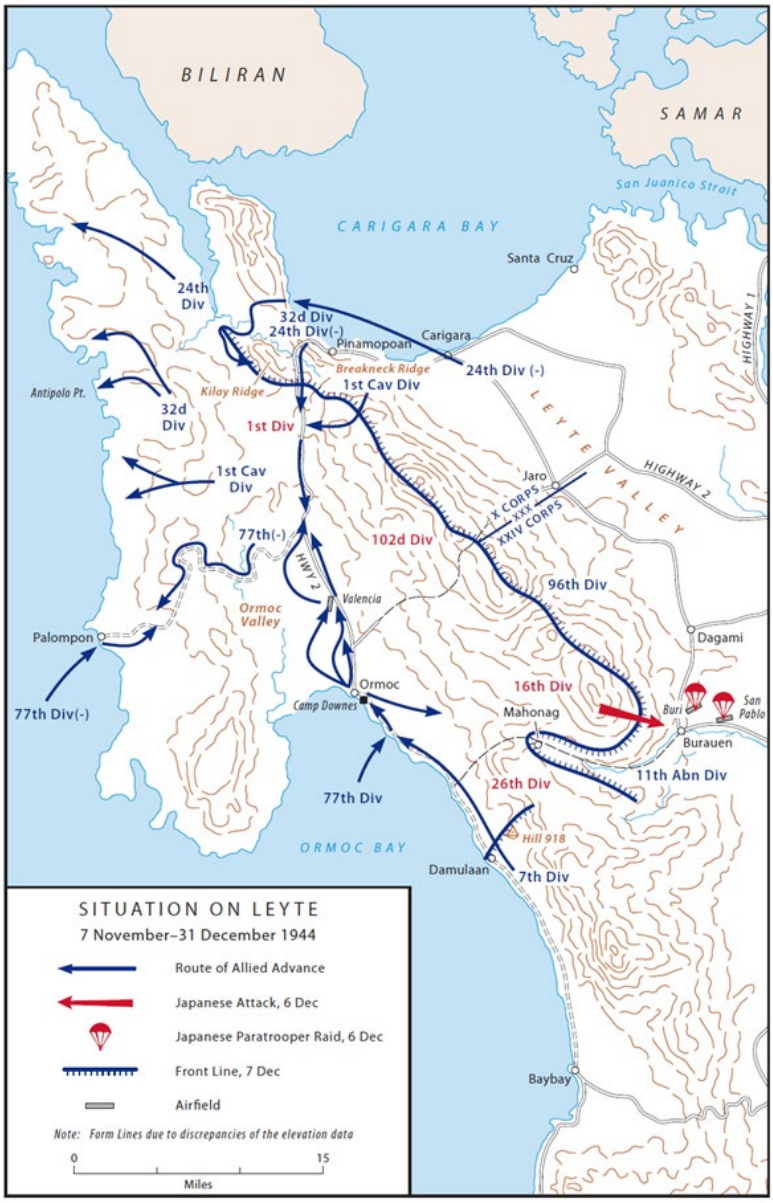

Figure 7. Sixth Army Advances on Leyte through 31 December 1944. Charles Anderson, *Leyte: 17 October 1944-1 July 1945* (Washington, DC: Center of Military History, 2019), 27.

When Sixth Army was ordered to move up its timeline for the invasion of Leyte, it was accepting significant risk for that major operation in order to create the opportunity to seize the initiative in the broader Philippine campaign. Rather than a sequential, linear line of operations from the south through Mindanao, Leyte was an opportunity to seize a central position from which to dominate the Philippines and accelerate the defeat of the Japanese. US doctrine states,

"understanding risk requires accurate running estimates and valid assumptions."[62] The initial estimates of Japanese defenses were fairly accurate, but two key assumptions proved to be false. These assumptions were that the Japanese would not seriously contest the island and that the US forces could rapidly establish land-based air operations out of the airfields in the Leyte Valley.[63] These false assumptions increased operational risk and greatly impacted the conduct of the operation. The fact that US forces found it so critical to establish air operations at Leyte rapidly would logically suggest that it was in the Japanese interest to contest the attempt vigorously. Unfortunately, objections to the assumption failed to convince decision-makers. General Krueger recognized the risks inherent in the operation. He would later claim, "I considered additional combat troops highly desirable," and "developments did prove the soundness of my request."[64]

The Sixth Army's selection of Tacloban as the enemy center of gravity was flawed in the sense that its port and airfield turned out to be much less advantageous than anticipated. The Tacloban airfield did prove to be the most effective but was still limited in utility due to soil and weather conditions. The Tacloban port could receive supplies, but road conditions necessitated significant amphibious resupply of advancing X Corps forces in the north. Historian Milan Vego criticized the focus on a broad front operational approach across the Leyte Valley as "too conventional." A direct attack against the enemy's main force followed by an advance on a broad front across the island carried little risk but also forfeited the potential for a more rapid advance with a more risk accepting plan that incorporated more intricate maneuver. Focus on the Leyte Valley did allow for the early capture of the majority of airfields and the early engagement of the Japanese 16th Division. Unfortunately, these airfields proved to be much less useful than envisioned, and the Japanese forces retreated to strong defensive positions along the island's mountainous spine. Ormoc Bay was a critical source of power that was addressed far too late in

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[62] US Army, ADP 3-0, *Operations*, 2-12.

[63] Sixth Army, *Report of the Leyte Operation*, 93; Vego, 98-9, 103-4; Holzimmer, 187, 194.

[64] Krueger, 150-1.

the operation due to the false assumptions on Japanese intentions and effectiveness of US airpower.[65] Vego estimated that Leyte could have been captured much more quickly with an earlier amphibious turning maneuver at Ormoc. In his analysis, "such a maneuver would have been riskier than slow advance across the island but would probably result in a much shorter operation and lower allied losses."[66]

Because of false assumptions and a failure to appreciate Ormoc adequately as a significant source of power, Sixth Army was unable to transition effectively from Phase II to its Phase III double envelopment of the Ormoc Valley. Both X and XXIV Corps culminated in the face of Japanese reinforcements prior to gaining access to the Ormoc Valley. A significant disconnect appears to have opened between Sixth Army and SWPA GHQ near the end of Phase II. General Krueger was worried about insufficient combat power before the start of the operation. By the end of Phase II, Sixth Army had taken casualties that were not being replaced because injured soldiers in hospital were being counted against the units' "effective strength," and General Krueger was aware of Japanese shipping in Ormoc Bay, which he called "strong evidence that the Japanese garrison was receiving reinforcements."[67] MacArthur and his staff interpreted the shipping as evidence of Japanese evacuation and transferred the 77th Infantry Division, part of Sixth Army's reserve, to POA without consulting Krueger.[68] The increase in Japanese shipping to Leyte, as well as the savage Japanese air and naval attacks at the end of October, should have alerted the American commanders to flawed assumptions and a need to adjust their operational approach for Phase III. The rapid advances of Phase II led to overconfidence that only an early culmination in the face of the enemy could dissuade.

[65] Vego, 106-7.

[66] Ibid., 107.

[67] Krueger, 166; Holzimmer, 197.

[68] Holzimmer, 195.

The last notable aspect of the operation was the degree to which the components understood the primacy of land power and the reciprocal nature of the relationship between the services. The analysis of Julian Corbett is instructive of this overall relationship when he observes that, "since men live upon the land and not upon the sea, great issues between nations at war have always been decided – except in the rarest cases – either by what your army can do against your enemy's territory and national life, or else by the fear of what your fleet makes it possible for your army to do."[69] The main objective of Operation King II was to seize control of Leyte and establish airfields with which to support subsequent land and sea operations. Throughout the Pacific War, sea and air forces projected and supported land forces in seizing bases, which were then used to extend the operational reach of air and sea forces in order to project and support land forces on a subsequent objective. Sixth Army, Fifth Air Force, and the Seventh Fleet had operated together for some time and understood this reciprocal relationship. A significant debate had emerged within the Navy in the wake of the Battle of the Philippine Sea as to whether the primary mission of the fleet was to destroy the Japanese fleet or to defend invasion beaches. The reduction in air assets available to Sixth Army due to the Navy's decisions contributed to the delay of the operation as a whole. The longer the land operations dragged on, the longer the Third Fleet had to remain on station and absorb *kamikaze* attacks, which were becoming more of a problem.[70]

The Seizure of Okinawa, April – July 1945

Following Leyte's seizure, American forces in the Pacific sought to maintain unremitting pressure on the Japanese. The invasion of Luzon in January 1945 cut off Japan from its possessions in Southeast Asia, neutralized enemy airpower in Formosa, and provided a valuable base for future operations. After securing the Luzon-Marianas line, the Allies sought to advance to the Ryukyus-Bonins line on Japan's doorstep. Seizing Iwo Jima, in the Bonins, during

[69] Julian Corbett, *Principles of Maritime Strategy* (Mineola, NY: Dover Publications, Inc., 2004), 14.

[70] Toll, 304-7.

February provided airfields in between Japan and the Marianas, from which US Army Air Force (USAAF) B-29 Superfortresses bombed the home islands. These fields provided an advanced base for fighter escort and emergency landings. The seizure of Okinawa in the Ryukyus further isolated the Japanese home islands and provided air bases and an advanced fleet anchorage. From these bases, the Allies sought to tighten their blockade of Japan, range southern Japan with Army Air Force medium bombers, and use Okinawa to support an eventual invasion of the southern Japanese island of Kyushu.[71]

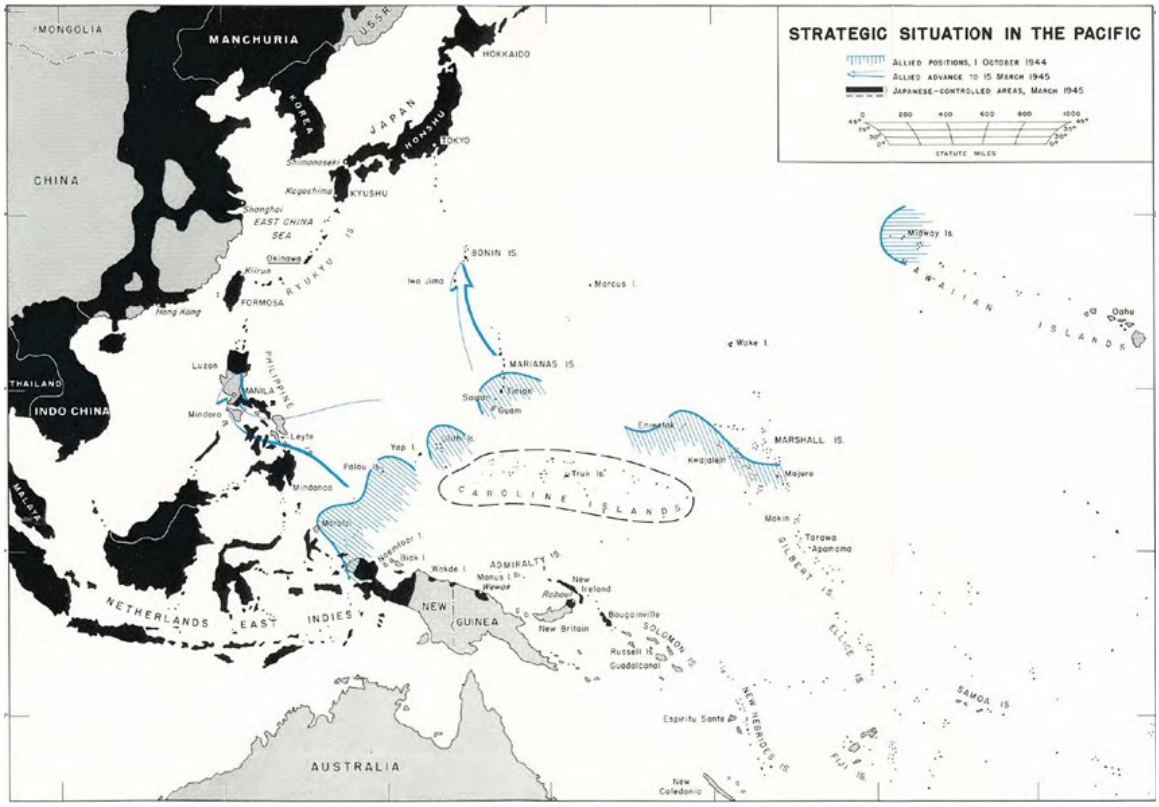

Figure 8. The Strategic Situation in the Pacific in March 1945. Roy Appleman, et al., *Okinawa: The Last Battle* (Washington, DC: Center of Military History, 1948), Map No. I.

Okinawa is the central island in the Ryukyu island chain the extends between Formosa and Japan. Overall, the island possessed "few good beaches and [offered] terrain as difficult to assault and easy to defend as any yet encountered in the war against Japan."[72] It is a long (sixty

[71] Appleman et al., 4-6.

[72] Matheny, 238.

miles) and narrow (two miles at the central isthmus) island generally oriented southwest to northeast. The Motobu and Katchin Peninsulas give the island its areas of greatest width at eighteen and fifteen miles, respectively. Many smaller groups of islands surround the main island. The northern portion of the island contains jagged peaks of 1,000 to 1,500 feet, while the southern portion has more rolling hills that rarely exceed 500 feet. Mobility is difficult throughout the island due to the rugged terrain, dense vegetation, and few roads of poor-quality. Okinawa's climate is relatively moderate, and the islands receive a majority of their rain between May and September. The island was heavily populated, especially in the south. The local population was culturally distinct from the Japanese, who looked down upon them. The southern city of Naha, the island's capital and its main port, had a population of 65,000. The island also had several critical airfields, with Naha airfield in the south being the most developed. Yontan and Kadena airfields were in the center of the island, and Ie Shima, an island off the Motobu Peninsula, had another large airfield.[73]

Plans for the seizure of Okinawa took shape between the end of 1944 and the beginning of 1945. The JCS decided to seize positions in the Ryukyus at the same time that SWPA GHQ was directed to seize Luzon, and they gave POA a target date of 1 March 1945 for the invasion of the Ryukyus. In Washington, DC, the Joint War Plans Committee (JWPC) submitted an initial plan for Okinawa's seizure to POA GHQ in November 1944. The plan envisioned the prior seizure of smaller islands to provide land-based air cover for a sequential assault by two divisions on the west coast and one division on the southeast coast. By January 1945, POA submitted their revisions to the plan and made the necessary coordination for support. The analysis by POA GHQ determined that the Marine Corps forces available were insufficient for the operations, and it assigned Tenth Army, commanded by General Simon Bolivar Buckner, Jr., to direct the operations ashore. Tenth Army operated as a joint task force, subordinate to the naval fleet, with

[73] Chas Nichols and Henry Shaw, *Okinawa: Victory in the Pacific* (Washington, DC: US Marine Corps Historical Branch, 1955), 6-8; Appleman et al., 7-13, 30.

integrated staff from other services and assigned air and naval components. It had its own tactical air force, under Marine Major General Francis Mulcahy, that grew to nineteen fighter squadrons and sixteen bomber squadrons.[74] POA allocated two corps of three divisions each and two reserve divisions for the operation. These were the Army's XXIV Corps and the Marines' III Amphibious Corps.[75] Island Command was a component of Tenth Army assigned to sustain and develop bases on the island. Vice Admiral Richmond Turner's Joint Expeditionary Force was in charge of landing and supporting Tenth Army. The fast carriers of Admiral Raymond Spruance's Fifth Fleet isolated the islands from Japanese air and naval support. The Fifth Air Force on Luzon and Twentieth Air Force in China and the Marianas targeted Japanese airfields from Formosa to Kyushu to destroy Japan's airpower on the ground.[76]

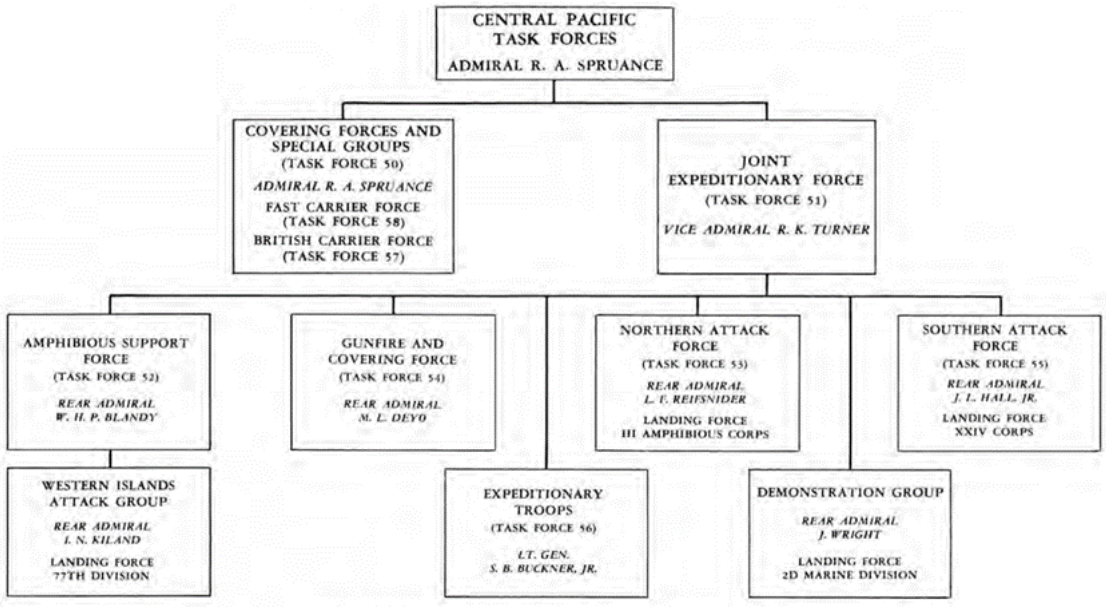

Figure 9. Organization of the Central Pacific Task Forces. Roy Appleman, et al., *Okinawa: The Last Battle* (Washington, DC: Center of Military History, 1948), 22.

[74] Matheny, 237-41.

[75] Tenth Army, *Report of Operations in the Ryukyus Campaign* (Unknown: US Tenth Army, 1945), 3-0-8.

[76] During this period of the Pacific War the Pacific Fleet used a rotating command structure for its carrier task forces. When Admiral Spruance was in command, they were considered the Fifth Fleet. When Admiral Halsey was in command, they were considered the Third Fleet. Thus, the fast carrier task forces in both case studies constitute the same force under different commanders, Matheny, 239-42; Appleman et al., 21.

The major headquarters involved in the operation began planning Operation Iceberg based on the POA staff study published in October 1944. Planning conferences began at the end of November to reconcile differences between components.[77] The overall planning effort rested on three assumptions. The first two were that operations in the Philippines and Iwo Jima would progress to where adequate forces were available for operations against Okinawa. The last was that preliminary air and naval operations could secure control of the air around Okinawa. The imperative of gaining and maintaining air superiority over Okinawa was the driving force behind the planning of sea, air, and land operations supporting Operation Iceberg. Tenth Army was in charge of planning the land operations and was a relatively new organization, only activated in June 1944. Many of General Buckner's staff came with him from the Alaska Department, and others were transferred from Europe. Tenth Army had not yet directed a major operation, but its subordinate corps and divisions had all seen combat in the Pacific. General Buckner's command became a truly joint organization with large numbers of Navy and Marine Corps officers in every staff section. Tenth Army was originally created for an invasion of Formosa, and its planners adapted the existing logistical plans for that operation to Okinawa. Planners revised the initial estimates for troop requirements by an additional 70,000, which greatly increased the naval transport requirement. Naval planners also increased estimates for the naval bombardment and added a protected anchorage requirement in the target area for logistics purposes. This change affected the scheme of maneuver for ground forces by adding additional preliminary landing requirements for a division-sized force in the eastern islands.[78]

Tenth Army planners eventually settled on a plan to land two corps abreast on the west coast of Okinawa, just south of the Ishikawa Isthmus, in a manner that sought to enable the exploitation of maneuver to a greater degree than in previous operations. Air and naval forces

[77] Tenth Army, *Report of Operations in the Ryukyus Campaign* (1945), 3-0-8.

[78] Appleman et al., 19-28.

were to isolate the island in advance of the landings. The 77th Infantry Division would seize the Kerama and Keise Islands west of Okinawa between L-6 and L Day. The Kerama Islands were to serve as an advanced naval anchorage for repair and resupply and a seaplane base to facilitate reconnaissance. The XXIV Corps Artillery would provide fire support with two 155mm artillery battalions from the neighboring Keise Islands. H-Hour, the time of the main landing, was set for 0830 on L-Day. The Northern Attack Force would land the 1st and 6th Marine Divisions of III Amphibious Corps just north of the Bishi River, the corps boundary. The Southern Attack Force would land 7th and 96th Infantry Divisions of the XXIV Corps south of the river. The 6th Marine Division was tasked to seize the Yontan airfield and the Ishikawa Isthmus, while the 1st Marine Division was to advance across to the Katchin Peninsula. The 7th Infantry Division would seize the Kadena airfield and advance across the island, and the 96th Infantry Division would secure key bridges and high ground in the south to protect the beaches and facilitate the subsequent advance to the south. Tenth Army anticipated reaching these objectives between L+10 and 15. The western Hagushi beaches offered the advantage of quick seizure of two of the best airfields on the island, the best logistical capacity, and the seizure of a central position that isolated enemy forces in the south and north. The 2nd Marine Division would conduct feint landings on the southeast coast on L-Day and L+1 to fix enemy forces in that area. The 27th Infantry Division, the floating reserve, was to arrive at Ulithi by L+1. Subsequently, it would seize the islands off Okinawa's east coast and then land to support XXIV Corps, which would continue its attack to seize the southern portion of the island while the Marines seized the north.[79]

[79] Appleman et al., 30-34.

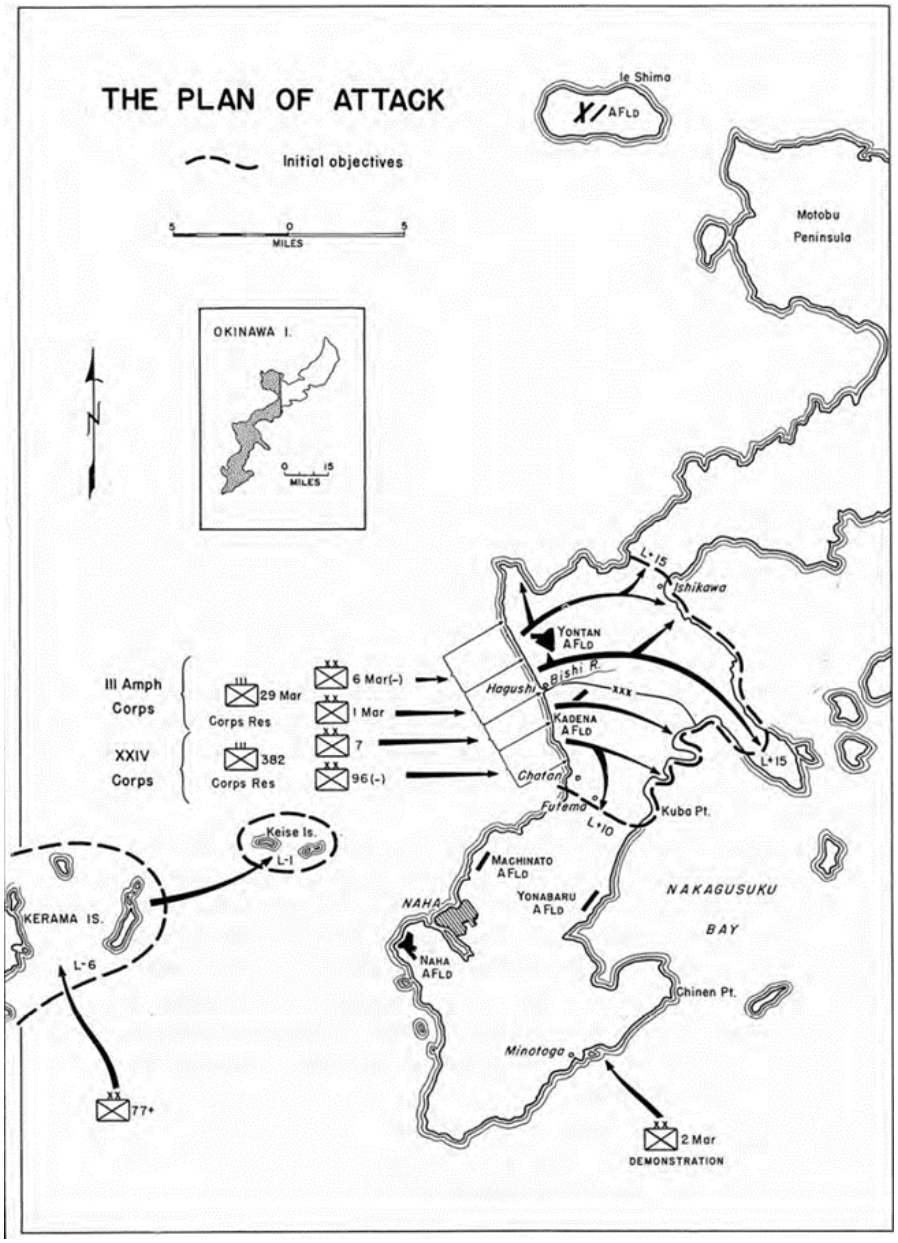

Figure 10. Tenth Army Plan for Operation Iceberg. Roy Appleman, et al., *Okinawa: The Last Battle* (Washington, DC: Center of Military History, 1948), 30.

The Imperial Japanese Army had the advantage of knowing roughly when and where it would fight when the American forces invaded Okinawa, but there were fairly few units available relative to the island's size. By February 1944, Japan realized the need to fortify the Ryukyus in the event that the Mariana Islands line should fall. The Japanese established the 32nd Army on the island in March. The initial defense of the island was centered around the creation and

defense of several airfields that could be mutually supportive with adjacent islands from Formosa to Kyushu.[80] The failure of Japanese air power to prevent the seizure of the Marianas and Philippines along with the transfer of the 32nd Army's best division to Formosa prompted a fundamental review of the army's operational concept. The headquarters ultimately settled on concentrating all forces in the strategically critical south. The 32nd Army would hold well-prepared and defensible terrain and delay the American seizure of the island for as long as possible. The Japanese had no likelihood of effective support or reinforcement, and this objective was the maximum they could hope to achieve. The 62nd Division held the critical defensive zone north of Shuri Castle. The 24th Division and the 44th Independent Mixed Brigade (IMB) were positioned further south to defend against landings and were prepared to support the 62nd Division. The 5th Artillery Command dug in with 150mm howitzers and mortars, and the 27th Tank Regiment provided a mobile striking force. A few thousand naval personnel around Naha were organized into the Naval Base Force to provide local security. Further north, the 1st Specialty Established Regiment (SER) of Okinawan conscripts established positions around the Yontan and Kadena airfields. Two battalions of the 44th IMB's 2nd Regiment defended the Motobu Peninsula and Ie Island in the far north. Japanese forces on Okinawa numbered around 100,000, including 67,000 army, 9,000 navy, and 24,000 local conscripts.[81]

Preliminary operations in preparation for the main landing included the destruction of Japanese air and naval assets in the theater and the seizure of adjacent islands to support the landings. POA delayed L-Day until 1 April based on troop lift availability. On 18 March, the fast carriers of America's Fifth Fleet began launching strikes against Japanese airfields on Kyushu, naval assets in the Inland Sea, and the ports at Kure and Kobe. The Fifth Fleet began strikes on Okinawan airfields by 23 March. The carrier strikes were so effective that Japanese air power was

[80] Hiromichi Yahara, *The Battle for Okinawa*, trans. by Roger Pineau and Masatoshi Uehara (New York: John Wiley & Sons, Inc., 1995), 7-11.

[81] Huber, 10-22.

unable to contest the initial American landings. B-29s from the Mariana's began strikes against the Kyushu airfields on 27 March, and the Fifth Air Force in the Philippines struck airfields on Formosa. As these strikes were underway, Admiral Turner's Joint Expeditionary Force began to assemble from all over the Pacific. The Northern Attack Force staged from the Navy's logistics base at Ulithi, and the Southern Attack Force staged at Leyte where XXIV Corps had fought over the winter. The Western Islands Attack Force staged from Leyte as well and landed the 77th Infantry Division on the Kerama Islands on 26 March (L-6) with the support of escort carriers of the Amphibious Support Force and battleships of the Gunfire and Covering Force. The operation suffered few casualties by its completion on 27 March, and the soldiers discovered and neutralized over 250 well-concealed suicide boats that intelligence had not anticipated. The 77th Division seized the Keise Islands with little difficulty on 31 March, and XXIV Corps Artillery battalions were emplaced to support the landing.[82]

The main landings on 1 April went smoothly, and Tenth Army made much more rapid progress than anticipated. III Amphibious Corps and XXIV Corps easily established a beachhead and secured the two airfields on the first day. The conscripts of the Okinawan 1st SER suffered heavy losses around the airfields and retreated to the north. By 3 April, both corps had reached the east coast and cut the island in two. The next day, the 6th Marine Division seized the Ishikawa Isthmus, and XXIV Corps was on line and advancing south.[83] General Buckner was aware by 2 April that the "main Jap forces are apparently in the south and heavy fighting should start within two days." He initially attributed this to "the Jap's apparent misconception of our plan" but realized that "very hard fighting is still ahead," but realized, soon after, that the Japanese planned to neutralize Tenth Army's ability to maneuver and force it to attack into heavily fortified

[82] Morison, *Victory in the Pacific*, 87, 94-102, 108-128.

[83] Nichols and Shaw, 69-75; Huber, 30-1.

zones.[84]. The XXIV Corps' southern advance began to slow by 5 April as they engaged the Japanese Gaya Detachment that had been sent forward of the main Japanese defensive zones. The Japanese were able to recover from the initial carrier airstrikes and mass aircraft on Kyushu. On 6 April, they launched the first of ten massed *kamikaze* attacks and a final sortie of the IJN's remaining surface fleet. The American carriers easily sunk the Japanese fleet, but *kamikaze* attacks took a heavy toll on both warships and supply ships throughout the operation. By 8 April, the Marines had reached the Motobu Peninsula in the north, and XXIV Corps' attack stalled as it reached 32nd Army's northernmost fortified defensive lines.[85]

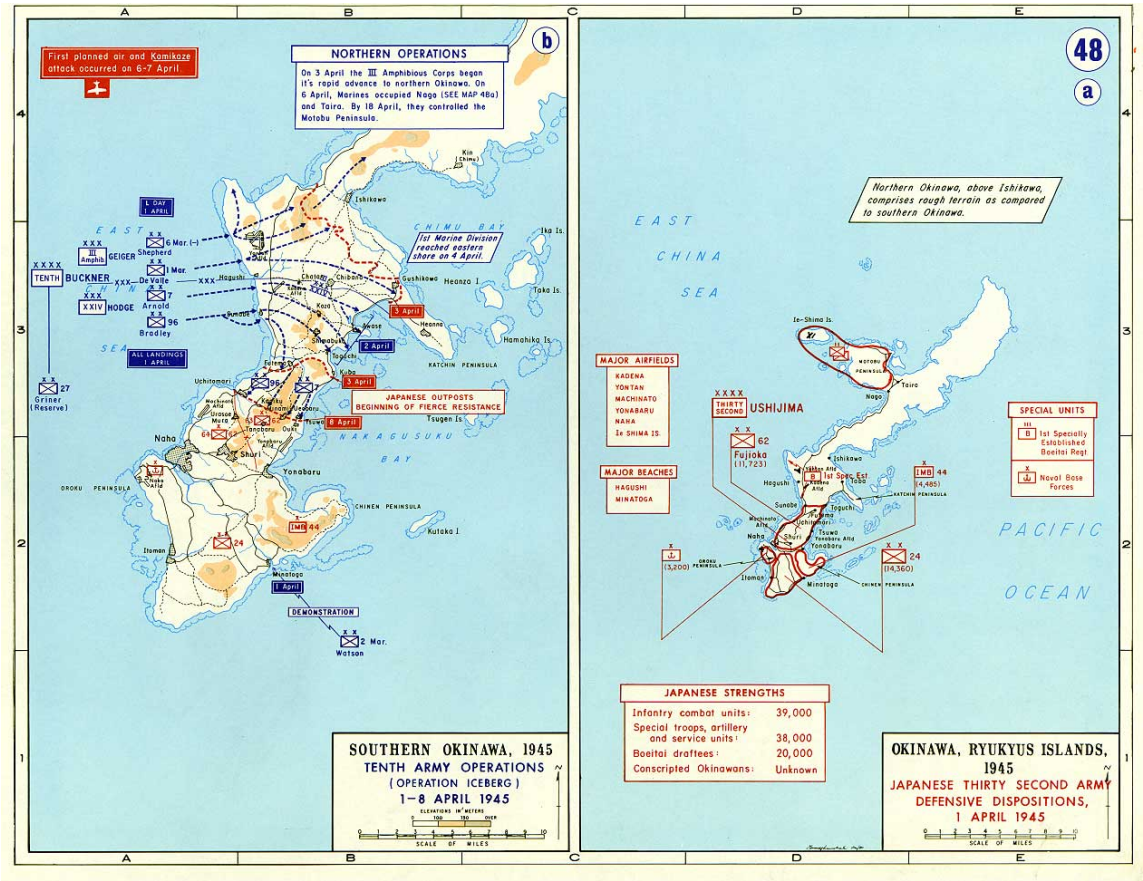

Figure 11. Tenth Army Operations on Okinawa through 8 April 1945. Thomas Griess, ed., *West Point Atlas for the Second World War: Asia and the Pacific* (New York, NY: Square One Publishers, Inc., 2002), 48.

[84] Nicholas Evan Sarantakes, ed., *Seven Stars: The Okinawa Battle Diaries of Simon Bolivar Buckner, Jr., and Joseph Stilwell*, (College Station, TX: Texas A&M University Press, 2004), 30-1.

[85] Ibid., 31; Huber, 39; Morison, *Victory in the Pacific*, 180, 202-9.

At this point in the operation, the 6th Marine Division maintained a steady advance in the north and had identified significant Japanese forces on the Motobu Peninsula. It became clear that XXIV Corps required additional support in the south. Fortunately, Tenth Army captured Yontan and Kadena airfields in good repair, and two Marine Fighter Groups arrived on 9 April. The 6th Marine Division steadily cleared the elements of the Japanese 2nd Regiment from the Motobu Peninsula between 8 and 18 April, the 7th and 96th Infantry Divisions kept pressure on the Japanese with attacks against Kakazu Ridge between 9 and 12 April, while the 27th Infantry Division landed at the beachhead and made its way south to support XXIV Corps. The 27th Infantry Division detached the 3rd Battalion, 105th Regimental Combat Team (RCT) to seize the eastern islands off the Katchin Peninsula on 10 April. The Japanese defensive orientation on Okinawa was deeply unpopular with many in the 32nd Army, and many urged for attack throughout the campaign in accordance with the Japanese Army policy of 'decisive battle.' The 32nd Army commander, Lieutenant General Mitsuru Ushijima, relented by 10 April, and the Japanese launched a counterattack with four battalions on 12 April. The attack gave up all the Japanese advantages and ended in near-total failure by 14 April. The result was a waste of precious manpower that could not be replaced. The 77th Infantry Division landed on the northern island of Ie on 16 April to capture its airfield. The division met unexpectedly stiff resistance and had difficulty landing adequate supplies. The operation had relatively high casualties of 1,120, and Japanese resistance continued until 23 April.[86]

By 19 April, XXIV Corps was on line with 27th, 96th, and 7th Infantry Divisions from west to east and prepared for a deliberate assault against the northernmost Japanese defensive line. The Japanese defensive zone north of Shuri Castle was roughly 8,000 yards wide and 6,000 yards deep between the towns of Machinato and Naha in the west and Ouki and Yonabaru in the

[86] Nichols and Shaw, 88-90; Sarantakes, 37; Appleman et al., 97, 113-24, 130-7, 141-8, 153-83; Huber, 14.

east. The lines were well fortified and made use of reverse slope firing positions for protection against American firepower. The soldiers of XXIV Corps had no alternative but to attack through the prepared engagement areas which were well sighted with artillery, anti-tank guns, and interlocking machine guns.[87] Tenth Army marshaled an unprecedented level of firepower to compensate for XXIV Corps' inability to maneuver. At least 650 Navy and Marine Corps planes, as well as six battleships, six cruisers, and six destroyers, targeted the 4,000 Japanese 62nd Division soldiers manning the northern defense line. Twenty-seven battalions of corps and division artillery fired over 19,000 shells, ranging from 105mm to 8-inch caliber. Unfortunately, this impressive display of firepower failed to achieve significant effects against the Japanese who were dug into cave complexes.[88] The XXIV Corps took heavy losses on the 19th for no significant gains. American commanders began to realize the true nature of the situation. Over the next several days, the XXIV Corps advanced with "slow, bloody, treacherous work, involving flamethrowers, grenades, satchel charges, small arms, bayonets, and even knives and bare hands."[89] General Buckner dubbed this the "blowtorch and corkscrew" method. By 23 April, the XXIV Corps had penetrated the northernmost Japanese line to the point of becoming untenable, and the surviving 62nd Division soldiers withdrew to the subsequent line of defenses under a night artillery barrage.[90]

As the 77th Infantry Division and III Amphibious Corps completed their missions in the northern parts of Okinawa, Tenth Army faced a critical decision as to how to deploy its forces for subsequent attacks against 32nd Army in the south. The 77th Infantry Division commander, Major General Andrew Bruce, who had carried out the successful Ormoc landing at Leyte, recommended a similar operation to Tenth Army for Okinawa. Landings had been previously

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[87] Tenth Army, *Report of Operations in the Ryukyus Campaign* (1945), 8-0-4; Toll, 590, 601.

[88] Appleman et al., 194.

[89] Toll, 603.

[90] Appleman et al., 248, 256.

considered and ultimately feinted with the 2nd Marine Division on the southwestern beaches near Minatoga. Tenth Army eventually rejected the idea as logistically unsupportable and too risky with the Japanese 24th Division and 44th IMB believed to be in the vicinity. The army also assessed that the divisions opposite the Shuri line needed to be relieved due to casualties and fatigue. By 22 April, General Buckner and the Tenth Army staff had definitively rejected a second landing. Tenth Army decided on a conservative operational approach of bringing both corps on line to envelope the Shuri line on both flanks. To this end, 1st Marine Division relieved 27th Infantry Division in the west. The 77th Infantry Division relieved 96th Infantry Division in the center, and 7th Infantry Division remained in position in the east. The 6th Marine Division would move south as soon as it could be relieved of garrison duties in the north by 27th Infantry Division.[91]

The defensive posture of the 32nd Army had proven devastatingly effective, but the feelings of helplessness and pessimism of impending death took its toll on Japanese morale. General Ushijima overrode objections and conceded to calls for an "honorable death attack" to take back the initiative. Nearly the entire 32nd Army moved forward for the attack on 3 May. They faced the same problems as the Americans in terms of maneuver along such a narrow front. The Japanese 23rd and 26th Shipping Engineer Regiments were assigned shore-to-shore envelopment operations against the XXIV Corps lines to the east and west. The 24th Division attacked in the center and east, while the 44th IMB and 27th Tank Regiment supported the attack in the center. The 62nd Division, which had sustained the brunt of the American attack up to this point, held the western sector of the line and would support the attack once a breakthrough had been made. The results of attacking in the open against the regrouping Tenth Army were disastrous, and the offensive was called off short of complete suicide for the 32nd Army. Both amphibious operations either landed too close to the American lines or in too open an area and

[91] Appleman et al., 258-67.

were annihilated.[92] The rest of the maneuver elements were severely attrited. The 5th Artillery Command was nearly out of ammunition and had lost many guns. The forces that remained were out of position for an effective defense. Colonel Hiromichi Yahara, the 32nd Army's operations officer, estimated his forces could have held out for an additional month if not for the offensive.[93]

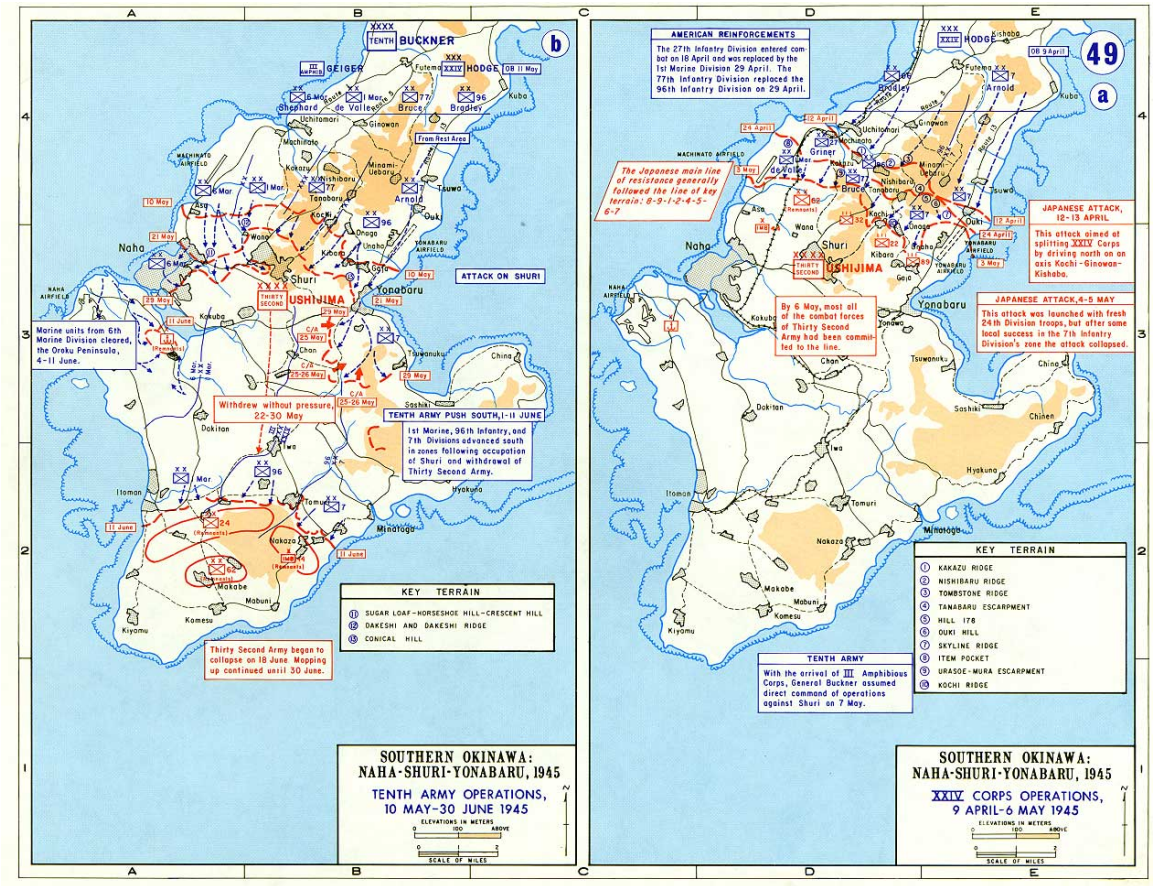

Figure 12. Tenth Army Operations on Okinawa through 30 June 1945. Thomas Griess, ed., *West Point Atlas for the Second World War: Asia and the Pacific* (New York, NY: Square One Publishers, Inc., 2002), 49.

The Japanese had committed most of their reserves to the attack, and General Buckner sought to exploit this with a general attack by Tenth Army on 11 May. Tenth Army assumed direct control of operations against the Shuri line and began preparatory attacks on 7 May but failed to reach all of their objectives by the desired date. The heavy naval losses due to *kamikaze*

[92] Huber, 72-8.

[93] Yahara, 43-4.

attacks drove the offensive forward regardless. III Amphibious Corps attacked in the west with 6th and 1st Marine Divisions and XXIV Corps in the east with 77th and 96th Infantry Divisions (7th Infantry Division in reserve). By 21 May, the 6th Marine Division had crossed the Asa River, captured Sugar Loaf Hill, and entered northern Naha. The less-rested 1st Marine Division and 77th Infantry Division in the center made slower progress. By 21 May, after hard fighting, the 96th Infantry Division seized the key terrain of Conical Hill, which allowed the 7th Infantry Division to pass forward along the east coast and threaten an envelopment of the Japanese line. Heavy rains beginning on 22 May, however, bogged down operations and prevented an effective envelopment. The 7th Infantry Division still made significant progress into the south but was unable to cut off the phased Japanese withdrawal to the south between 22 and 30 May. The Japanese were thus able to complete their withdrawal relatively unobserved due to the weather. Despite the rain, the 6th Marine Division occupied the rest of Naha by 29 May. The 1st Marine Division seized Shuri Castle on 29 May, and the Tenth Army began breaking through the few Japanese defenders that remained to cover the retreat.[94]

The 32nd Army subsequently set up an effective final defensive line in the far south of the island. Tenth Army assigned the 77th Infantry Division to consolidate the Shuri defense line, and 1st Marine Division, 96th, and 7th Infantry Division began their pursuit south on 1 June.[95] The remnants of the Naval Base Force chose to make its stand on the Oroku Peninsula, southwest of Naha. The 6th Marine Division made amphibious landings on the peninsula on 4 June and completed the seizure of the peninsula by 11 June.[96] Organized resistance by the 32nd Army in the south collapsed by 18 June. At the same time, General Buckner was killed in action by a Japanese shell while inspecting the lines, and he was replaced temporarily by General Roy Geiger, the only Marine to command a field army. By the end, American forces had incurred the

[94] Appleman et al., 302-3, 310-402.

[95] Ibid., 422-4.

[96] Yahara, 125-6.

highest losses of any operation in the Pacific, 49,151 casualties, 36 ships sunk, 368 damaged, and 763 planes lost. The Japanese lost 110,000 dead and 7,400 prisoners.[97]

The operational approach for Iceberg focused on seizing initial basing to support internal lines of operation, but the Japanese 32nd Army forced Tenth Army into external lines of operation by concentrating its forces on defensible key terrain. Critical basing for the operation included the Kerama Islands as a logistics anchorage for the naval forces, the Keise Islands as a fire support base for the XXIV Corps Artillery, the Hagushi beaches as the only location on the southern half of the island capable of supporting a landing of four divisions abreast, and Yontan and Kadena airfields which were easily captured on L-Day.[98] By seizing a central position on the island, Tenth Army sought to isolate Japanese forces in the south and maximize the use of maneuver.[99] The Japanese, though, forced Tenth Army to utilize exterior lines of operation against a well-defended position by concentrating its forces in the south. Tenth Army's primary lines of operation stretched south from the Hagushi beaches through the 32nd Army's Shuri defensive zone. Operations along the coastal flanks made excellent use of naval gunfire support and a 6th Marine Division shore-to-shore landing to affect a double envelopment, but operations remained painfully slow against the well-fortified Japanese positions. The only other option for Tenth Army was a logistically-difficult landing against well-fortified beaches in the Japanese rear.

Assessment of risk was a critical factor in Tenth Army's reassessment of operations following the failure of the XXIV Corps' 19 April attack against the first Shuri defensive line and the completion of operations in the north of the island. The 77th Infantry Division and III Amphibious Corps were becoming available for landings in the enemy rear areas. The Minatoga beaches, in the far south, were ruled out due to the Tenth Army's determination that they did not

[97] Appleman et al., 458-61, 473-4.

[98] Tenth Army, *Report of Operations in the Ryukyus Campaign* (1945), 3-0-10 - 3-0-11.

[99] Appleman et al., 33.

provide enough space to support a division logistically and also due to the presence of the Japanese 24th Division and 44th IMB in the vicinity. Beaches further north were too close to the infantry and firepower of the Shuri defensive zone. The last factor was time. It was much faster to move units south by land than to coordinate an amphibious landing, and it was critical that the hard-pressed divisions of the XXIV Corps be relieved as soon as possible. General Buckner committed the Tenth Army to a conservative broad front approach against the Shuri defensive zone. Many of the Tenth Army concerns about landings in the south were valid, but a more flexible approach may have exploited the opportunity when the 24th Division and 44th IMB deployment to the Shuri zone between 23 April and 4 May.[100]

During Operation Iceberg, a disconnect emerged between the operational end state and the wider strategic considerations. The operation's mission was "to seize and develop such islands in the Ryukyus as can be utilized most profitably for basing air and naval forces."[101] This wording presents an end state which is not particularly enemy- or time-dependent. This fact had a considerable effect on the tempo of the operation. The original planning factor for the seizure of the island was thirty-eight days, but the operation ultimately required eighty-two days.[102] Tenth Army felt comfortable adopting a slow and methodical approach against resistance in the south because it had already seized and was developing anchorages and airfields on the island. General Buckner explained in a press conference during the operation that, "we didn't need to rush forward, because we had secured enough airfields to execute our development mission."[103] Though this may have been sound logic with respect to the land operations, it did not take into account the well-being of the naval forces and their ability to posture for future operations. The massed *kamikaze* attacks were sinking and forcing the withdrawal of large numbers of US Navy

[100] Appleman et al., 258-64.

[101] Joint War Plans Committee, *Plan for Seizure of the Ryukyus* (Washington, DC: Joint War Plans Committee, 1944), 1.

[102] Ibid., 47; Tenth Army, *Report of Operations in the Ryukyus Campaign* (1945), 7-V-1.

[103] Sarantakes, 80.

ships, which affected the Navy's ability to execute future operations and strained its relationship with the Army.[104] Admiral Spruance expressed his frustration that, "I do not think the Army is at all allergic to the losses of naval ships and personnel."[105] Admiral Nimitz, the theater commander, had to order Tenth Army to increase its tempo to eliminate the disconnect between operational and strategic considerations.[106]

Findings and Analysis

Analysis of the Leyte and Okinawa operations demonstrated four areas of critical importance to field army operations in archipelagos which include experience, organization, joint fires integration, and sealift to expand the maneuver space. A theoretical analysis of each area yields important insights. David Epstein's explanation of how environments and practitioner experience yield different results illuminates key differences in the case studies. John Kotter presents a framework for understanding organizational success as the realization of long-term benefit by managing the short-term problems of conflict that arises from the interaction of diversity and interdependence in organizations. Julian Corbett addresses the interdependencies of army and naval forces in different situations. John Slessor and Colin Gray address the relationship between air and land forces, unique capabilities of airpower, and the unity of the air domain. Lastly, Ardant du Picq presents a morale-centric explanation of battle, which specifies the material and moral effects of operations which is critical to understanding defeat mechanisms in the archipelagic environment.

Training and combat experience are critical for a field army to integrate joint effects into land operations effectively. David Epstein presents a framework for understanding how different experiences affect responses to both kind and wicked learning environments. The distinction in

[104] Matheny, 248, 251.

[105] Sarantakes, 30.

[106] Matheny, 248.

environments is critical to understanding the type of experience that produces optimal results. In kind learning environments, "patterns repeat…and feedback is extremely accurate and usually very rapid," while "in wicked domains, the rules of the game are often unclear or incomplete, there may or may not be repetitive patterns and they may not be obvious, and feedback is often delayed, inaccurate, or both."[107] When experienced practitioners with narrow specialization encounter a wicked learning environment, they can develop "cognitive entrenchment" that causes them to turn to familiar solutions rather than adapting to changing circumstances effectively. Practitioners can avoid this danger by cultivating a breadth of experience and pursuing career streams outside of their primary specialty.[108]

Cross service professional military education (PME) experience by senior officers cultivates a breadth of domain experience and facilitates increased levels of cohesion during joint operations. Historian Paul Kennedy observed of amphibious operations of the war that "in many cases, operational failure was due to a lack of appreciation of what the other service could or could not do, or even how the other service thought."[109] General Krueger's education experiences included several years as a student and instructor at both the Army and Naval War College. During these assignments he "studied the complexities of a war against Japan…[and] also forged important relationships with naval officers, many of whom he would work within World War II."[110] General Buckner's educational experiences were limited to Army institutions such as the Command and General Staff School (CGSS), Army War College (AWC), and West Point commandant. He did reap the benefits of his subordinate III Amphibious Corps commander, Major General Roy Geiger's cross service educational experience as the two developed a

[107] David Epstein, *Range: Why Generalists Triumph in a Specialized World* (New York, NY: Riverhead Books, 2019), 20-1.

[108] Ibid., 30-4.

[109] Paul Kennedy, *Engineers of Victory: The Problem Solvers Who Turned the Tide in the Second World War* (New York, NY: Random House, 2013), 218.

[110] Holzimmer, 49, 58-9.

friendship at the US Army CGSS in 1925. SWPA GHQ designated Krueger's Sixth Army Headquarters to integrate ground, air, and naval planning.[111] Joint staff coordination was conducted at Sixth Army Headquarters, and Krueger's interservice educational background enabled him to address any impasses in consultation with fleet and air force commanders. He observed that "it was remarkable that we always managed to adjust existing differences and it was this and the spirit of cooperation…that made it possible for us to operate as an Army-Navy-Air Forces Team."[112] Operation Iceberg was the first operation of the war in which a Marine Corps amphibious corps operated as part of a field army. The operation benefitted greatly from the existing friendship between General Buckner and Geiger, whereas Army-Marine Corps relations had demonstrated significant friction in previous operations on Saipan. Observers of Tenth Army and III Amphibious Corps attested that "three was never any friction…[and they] got along very well."[113]

Regional experience and enduring relationships between service headquarters facilitated environmental familiarity and influenced the degree to which field army headquarters could integrate with the other services. Sixth Army had a much greater advantage in cultivating relationships and experiences. Most of the staff had previously worked together in the stateside 1941 "Louisiana Maneuvers" as Third Army under General Walter Krueger. These operations focused, however, on European-style warfare, and Sixth Army had to learn Pacific warfare in its drive across New Guinea with the Seventh Fleet and Fifth Air Force from 1943 to 1944.[114] Tenth Army had an integrated joint staff with Navy and Marine Corps officers, but little experience and few enduring relationships. It had only been activated in June 1944. Most of the staff came from

[111] Sarantakes, 7; Matheny, 236, 241.

[112] Krueger, 137.

[113] Sarantakes, 7.

[114] Holzimmer, 89, 97, 101-3.

the Alaskan Department or Europe, and they had never executed a major Pacific operation.[115] Sixth Army appeared much more comfortable adjusting its operational approach to include shore-to-shore operations across Carigara Bay and an amphibious turning movement at Ormoc. In contrast, Tenth Army appeared much less flexible and clung to a conservative army-centric approach to its operational dilemma. Murray and Millett harshly assert that "compared with his subordinates, Buckner was hardly fit to command a corps, let alone a field army."[116]

These case studies of two field army commanders demonstrate the dynamics of the type of environment, breadth of experience, and cognitive entrenchments. General Buckner had a narrow, Army-centric career experience. During that time,

> Buckner absorbed and then disseminated US Army doctrine that emphasized the decisive role of artillery in combat. According to this approach, the best way to destroy the enemy was through the use of overwhelming firepower in a head-on confrontation. The infantry's mission was to find and hold the enemy. The artillery would then destroy the opposing force.[117]

General Krueger had the broader experience and "believed in all a commander did, he needed to be flexible." He idolized a less direct approach in the fact that "Hannibal's performance at Cannae epitomized for Krueger military action that was bold and offensive as well as creatively and imaginatively conceived."[118] At Okinawa, Buckner was commanding his first large-scale operation in the Pacific. Krueger had already commanded Sixth Army's campaign across New Guinea prior to Leyte, and during that time, he was able to adapt the Army's operating concept to island jungle warfare, operated at the high tempo demanded by General MacArthur, and understood the importance of maneuver in the operational environment.[119] As a result, Sixth Army

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[115] Sarantakes, 9; Appleman et al., 25.

[116] Murray and Millett, 515.

[117] Sarantakes, 11.

[118] Holzimmer, 60.

[119] Ibid., 182-3.

displayed much more flexibility in its operational approach while Tenth Army adopted a conservative and conventional approach.

The operations of Sixth and Tenth Armies also demonstrate important differences in the way that the organizations were structured for joint operations with the other services and how that may have influenced the conduct of the operation. Kotter explains the interaction of diversity and interdependence and their effects on organizational performance. He observes that "differences in goals, values, stakes, and outlook will lead different people to different conclusions. The greater the diversity, and the greater the interdependence, the more differences of opinion there will be. Because of the interdependence, people will not be able to resolve these differences either by edict or by walking away."[120] This situation leads to conflicts that create short-term problems, but effectively managed this conflict leads to higher levels of innovation and long-term success.[121] The dilemma of managing diversity and interdependence effectively was especially pronounced for the military services conducting amphibious operations in the Pacific. Murray and Millet observe that, "the campaign for Leyte…fully engaged every element of the air, ground, and naval forces the belligerents had deployed to the Pacific War. It also forced the highest degree of interservice cooperation…of the Pacific War."[122] Given these dynamics, it is critical to explore the effects of how field armies were organizationally situated relative to the other services and the effect this had on the leadership's perception of its mission.

Sixth Army operated as a lead component with supporting air forces and fleets, while the Tenth Army operated as a self-contained joint task force subordinate to a fleet. First, these operations' results demonstrate that while more formal command and control (C2) is typically valued more highly by commanders, formalized cooperation-based relationships can yield

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[120] John Kotter, *Power and Influence: Beyond Formal Authority* (New York, NY: The Free Press, 1985), 18.

[121] Ibid., 33.

[122] Murray and Millett, 372.

superior results. Historian Adrian Lewis asserted that "only by working, training, and fighting together could the military and naval cultures and the emerging air force culture be merged into a successful joint command."[123] Prior to the war, General Kreuger criticized the Army for its focus on cooperation while failing to facilitate it. He taught that "if the army and navy were not going to formalize the issues of command in joint operations, then the two services should make every effort to understand each other to ensure bilateral cooperation."[124] As commander of Sixth Army, he was in the position to implement these ideas from a pre-eminent position of "first among equals." Sixth Army conducted joint planning with the staffs of Seventh Fleet and Fifth Air Force under Krueger's supervision, and a final agreement was reached at a commanders' conference.[125] This habitual cooperation and relationship building allowed for a more flexible integration of amphibious maneuver at Carigara Bay and Ormoc. Air integration was less effective at Leyte. This was as much a function of range, weather, and construction delays as it was organizational disfunction between the services. At Okinawa, Tenth Army operated as a self-contained joint task force that was subordinate to the Fifth Fleet and the amphibious Joint Expeditionary Force.[126] Tenth Army also had no enduring relationships with these fleets, and General Buckner had had an extremely strained relationship with his prior naval counterpart in Alaska.[127] During Operation Iceberg, Tenth Army demonstrated little interest or ability in executing hasty amphibious maneuver.

In addition to the consideration of relationships, the command structure has an important effect on how a field army commander views his operation in the campaign or strategy's broader context. Corbett explains that "the paramount concern…of maritime strategy is to determine the

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[123] Adrian Lewis, *Omaha Beach: A Flawed Victory* (Chapel Hill, NC: University of North Carolina Press, 2001), 33, 57-8.

[124] Holzimmer, 48.

[125] Ibid., 108; Krueger, 136-7.

[126] Appleman et al., 22-3.

[127] Sarantakes, 11.

mutual relations of your army and navy in a plan of war."[128] SWPA GHQ envisioned the Philippines' liberation as a multi-phased campaign in which Leyte became the first major operation. General Krueger recalled that "I was charged with directing all four operations," and he did so in collaboration with his fellow component commanders.[129] During the operations on Leyte, Krueger operated under the pressures of maintaining an adequately rapid advance that could facilitate successive operations against Mindoro and Luzon. It was with this urgency that he attempted to secure the forces for a landing at Ormoc, though ultimately, it took a delay in the Mindoro landings to facilitate this.[130] General Buckner and the Tenth Army were not responsible for a wider campaign, but only the major operation against Okinawa. They executed this operation as a subordinate joint task force. Tenth Army plans for Operation Iceberg were presented to and approved by Admirals Turner and Spruance. The fact that General Buckner was responsible to, rather than for, the naval component likely contributed to his lack of awareness of the need to increase his operations' tempo in the face of heavy naval attrition.[131]

Effective integration with joint fires presents the field army with unique requirements for maneuver and objectives as well as unique opportunities to isolate the enemy in an archipelagic environment. Unique environmental considerations in the employment of fires in archipelagic operations dictate certain tendencies in the scheme of maneuver. John Slessor observed in the interwar period that, "It is no longer a matter of the soldier making his plan for battle on the ground and then turning to see how the air can help him. Land and air operations must be deliberately planned to get the best out of each other."[132] Both the Leyte and Okinawa landings occurred outside of land-based aircraft range and selected landing sites where the field armies

[128] Corbett, 14.

[129] Krueger, 141, 144.

[130] Krueger, 175-9.

[131] Sarantakes, 18, 30; Matheny, 248.

[132] John Slessor, *Airpower and Armies* (London: Oxford University Press, 1936), 212.

could quickly capture and repurpose airfields. It was critically important that this occured as quickly as possible to enable land-based aircraft to take over for the carriers which were vulnerable to attack, rotated for resupply, and fielded planes with smaller fuel and bomb loads. On Okinawa, the 77th Infantry Division also captured the Keise Islands to enable the XXIV Corps Artillery to support the landings and follow on operations.[133] Once ashore, both field armies pursued double envelopment attacks along the shore against the Japanese defenders. In addition to the logistical benefits of attacking along the shoreline, these attacks benefitted from the volume of fire that the bombardment groups delivered. The critical terrain of Conical Hill on the east coast of Okinawa gained the name "Million Dollar Hill" due to the amount of ordinance the Navy delivered onto it in support of the Tenth Army's attack.[134]

The effective integration of airpower for defense and interdiction is especially important for field armies in the distributed environment of archipelagic operations. Colin Gray notes that "even though air support of armies by interdiction may be the most potent effect of airpower upon modern warfare, the right to impose such effect had to be earned through trial by battle for air superiority."[135] The primary benefits to the field army of effective air integration are, therefore, the preservation of friendly freedom of maneuver through effective defense and the undermining of the enemy's freedom of maneuver through interdiction. Gray asserts that a unique strength of airpower is to "directly assault physical centers of gravity regardless of their location, [and] attack the enemy inside to outside from his center to his periphery."[136] Both the Leyte and Okinawa operations displayed these characteristics. They occurred beyond the range of land-based aircraft, were supported by carrier aircraft, and sought to repurpose captured airfields in the face of

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[133] Thomas Griffith, Jr., *MacArthur's Airman: General George C. Kenney and the War in the Southwest Pacific* (Lawrence, KS: University Press of Kansas, 1998), 179, 187; Morison, *Victory in the Pacific*, 91, 127-8.

[134] Appleman at al., 351.

[135] Gray, 148.

[136] Ibid., 281.

massed aerial counterattacks. Sixth Army's air support struggled to both defend the Army and interdict reinforcement from adjacent islands. Had the air support been more effective, it could have been applied to the critical center of gravity at Ormoc that neither land nor sea power affected until much later. Air forces at Okinawa also struggled to defend against the massed *kamikaze* attacks. Still, they had much more effective integration with ground forces through the Tenth Army's Tactical Air Force and the Marine Landing Force Air Support Control Units (LAFASCUs).[137] Due to weather and faulty assumptions, the Tenth Army did miss a critical opportunity to utilize its airpower more thoroughly against the Japanese 32nd Army as it retreated from the Shuri line to its final positions in the far south.[138]

Achieving unity of command in the air is difficult in an archipelagic environment and can significantly hinder operations. As Colin Gray explains, "it is sensible to think about the sky as a single strategic domain and about airpower, friendly and other, as a unitary force…Particular cases will demand and require some dispersion and variety in airpower commitment, but those need to be recognized as tolerated exceptions to the rule of unity. Air strategy should be indivisible."[139] General Krueger did not have this unity in the air forces supporting his field army, and Operation King II suffered as a result. At the outset of the operation, Fifth Air Force was responsible for the Mindanao and Western Visayas islands. The fleet carriers of the Third Fleet were responsible for Luzon and other islands in the north. The Seventh Fleet's escort carriers were responsible for direct support to Sixth Army until Fifth Air Force units could be established on Leyte. Several factors limited the quality of air support that Sixth Army received. These included slow airfield establishment, escort carrier attrition, and General George Kenney, commander of Far Eastern Air Forces, clashed with the naval commanders over authority for air

[137] Nichols and Shaw, 261-4.

[138] Appleman et al., 389-92.

[139] Gray, 286-7.

operations.[140] Tenth Army had similar divisions of air authority during Operation Iceberg between the Fifth Fleet carriers and the land-based Tactical Air Force, but the Marines and Navy had much higher levels of interoperability which manifested much less friction in the aerial aspects of the operation. Both commands seamlessly rotated flights between combat air patrol (CAP) and ground support.[141]

It is critical for field armies to integrate sealift into maneuver to enable positions of relative advantage that dislocate and isolate enemy forces.[142] Marine Corps Concept Paper (MCCP) 1 *Operational Maneuver from the Sea* explains that "Operational Maneuver from the Sea uses the sea as maneuver space…generates overwhelming tempo and momentum…[and] pits strength against weakness."[143] The first way in which the field army accomplishes this is through preliminary shaping operations, such as seizing key smaller islands in the archipelago to facilitate the main landings as the decisive operation.[144] At Leyte, the 6th Ranger Battalion accomplished this by seizing the small islands at Leyte Gulf's entrance to eliminate suspected enemy radar emplacements and facilitate unhindered access for the Northern and Southern Attack Forces.[145] At Okinawa, the Western Island Attack Group with the 77th Infantry Division seized the Kerama Islands as a foreword logistics and reconnaissance seaplane base and the Keise Islands for the XXIV Corps Artillery.[146] The Japanese had not expected these preliminary seizures before the

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[140] Griffith, 186-7.

[141] Nichols and Shaw, 261-4.

[142] Dislocate is to employ forces to obtain significant positional advantage, rendering the enemy's dispositions less valuable, perhaps even irrelevant. Isolate means to separate a force from its sources of support in order to reduce its effectiveness and increase its vulnerability to defeat; US Army, ADP 3-0, *Operations*, 2-4.

[143] Headquarters US Marine Corps, Marine Corps Concept Paper (MCCP) 1, *Operational Maneuver from the Sea* (Washington, DC: Government Publishing Directorate, 1996), 11.

[144] A shaping operation is an operation at any echelon that creates and preserves conditions for success of the decisive operation through effects on the enemy, other actors, and the terrain. The decisive operation is the operation that directly accomplished the mission. US Army, ADP 3-0, *Operations*, 4-5.

[145] Morison, *Leyte*, 118-9.

[146] Morison, *Victory in the Pacific*, 118, 127-8.

main landings, and the artillery positioned there posed a strong flanking position against their Shuri defensive zone. After the main landings, the 77th Infantry Division also seized Ie Island in the north with its valuable airfield.[147]

Envelopment operations along the coast are another way that field armies exploit the defeat mechanisms' material and moral aspects. Du Picq asserts that "the effect of an army…is both material and moral. Material action on troops lies in destructive power, the moral effect lies in the fear that it inspires."[148] Along the coasts, field armies can project and sustain more material combat power through sealift. At Leyte, this was demonstrated by X Corps' advance around the northern coast of the island to the Ormoc Valley. The advance maintained a higher tempo with seaborne logistics and shore-to-shore landings when the roads began to bog down due to weather. Ultimately the advance had to be halted due to the threat of a Japanese counter-landing on the corps' flank at Carigara Bay.[149] At Okinawa, both corps of the Tenth Army were supported by seaborne logistics and firepower along the island's coasts, and the 6th Marine Division executed a regimental-sized landing on the Oroku Peninsula. This seaborne support was critical to the XXIV Corps' attempted envelopment in the east.[150] The success of these attacks' material effects enabled the moral effects to manifest, and in the case of Okinawa, they achieve dislocation of the Japanese forces in the Shuri defensive zone. Achieving a position of relative advantage is critical as du Picq explains, "the less mobile the troops, the more lethal the fighting," and he quotes Frederick the Great in explaining, "three men behind the enemy were worth more for moral effect than fifty in front."[151]

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[147] Appleman et al., 57, 149.

[148] Ardant du Picq, *Battle Studies*, ed. and trans. Roger Spiller (Lawrence, KS: University Press of Kansas, 2017), 60.

[149] Holzimmer, 195-7; Cannon, 206.

[150] Appleman et al., 351, 377, 405-7, 431.

[151] du Picq, 55.

Coastal envelopments supported from the sea are not always capable of achieving dislocation, much less isolation, and division-sized secondary landings in the enemy rear area are required. Du Picq observed the critical nature of isolation as a defeat mechanism in explaining the need to "convince the enemy that he lacks support…convince him he is isolated; his men, his squadrons isolated, his battalions his brigades, his divisions, and you win."[152] In archipelagic operations, this task is twofold, isolate the enemy on the island from support and then dislocate and isolate the forces on the island. Leyte was very difficult for the Sixth Army to isolate as it was located at the center of a very large archipelago with supporting land, air, and naval units. Due to weather and the Japanese's efforts, American air and naval forces were unable to isolate the Japanese 16th Division and Sixth Army's double envelopment stalled in the face of Japanese reinforcement. The 77th Infantry Division's landing at Ormoc was required to achieve dislocation and isolation of the Japanese forces on the island.[153] Okinawa was much more isolated geographically and was thus easier to isolate with the overwhelming naval and air power of the Fifth Fleet prior to Tenth Army's landing. The landing was intended to achieve a central position and enable dislocation and isolation. The Japanese 32nd Army had explicitly planned to avoid this by concentrating in the Shuri defensive zone. However, distributing its forces in underground fighting positions led to self-isolation and degradation of morale that resulted in the disastrous Japanese offensive on 4-5 May. Within Tenth Army, the Marines and the 77th Infantry Division encouraged a secondary landing in the Japanese rear. A second landing faced serious logistical challenges and carried considerable operational risk until the Japanese moved the 24th Division and 44th IMB to the Shuri defensive zone at the end of April.[154] Ultimately, the idea of a landing was abandoned early on and no allowance was made to revisit it as conditions evolved.

[152] du Picq, 59.

[153] Holzimmer, 195-204.

[154] Appleman et al., 33, 258-64.

Conclusions

From 1941 to 1942, Allied military forces lacked the operational reach to reinforce their territories effectively and failed to prevent rapid Japanese territorial expansion with forward-deployed forces. This fact necessitated the massive buildup of troops and equipment for an extended campaign across the Pacific islands. To achieve victory, the American military required amphibious capable Army forces up to the level of field armies. These field armies had to solve the critical problems of translating existing, Europe-centric, operational concepts to the Pacific theater's rugged archipelagoes and integrating operations with fleets and air forces to a much higher degree than occurred during prewar training. The Sixth and Tenth Armies' operations on Leyte and Okinawa demonstrate the importance of joint education and enduring relationships in addressing these challenges. Another critical element was joint planning among service headquarters for current and future operations to achieve shared understanding. This conceptual and organizational integration facilitated the effective employment of joint fires and the use of the sea as maneuver space in support of the field army's mission.

As the United States faces another prospective east Asian hegemon in the 2020s, it must be prepared to encounter similar strategic dynamics. The US Army's current MDO operating concept envisions field armies as "forward presence forces in regions that have near-peer threats. They relieve the operational burden on theater armies to facilitate focused opposition toward that specific threat within a distinct area of operations."[155] The Indo-Pacific Command (INDOPACOM) certainly fits this description and is a likely candidate for a permanent regionally aligned field army. The field army exists to provide strategic and operational maneuver to prevent *fait accompli* or regain lost territory. In the Pacific archipelagoes, this requires unique integration with the sea domain. China is a rising great power, and the Indo-Pacific is the largest theater in

[155] TRADOC, TP 525-3-1, *The U.S. Army in MDO*, 22.

which the US expects potential conflict. It is possible, even likely, that any conflict in this area will require the direction of two or more corps in large-scale combat operations, and the US Army must be prepared in organization, training, doctrine, and theory. Based on size and strategic value, the two most likely regions where field armies may be required in the Pacific are the region between the South China Sea and Australia, as well as the Korean Peninsula. Taiwan is large enough as well but would likely place a US field army at a severe disadvantage in operational reach and carry significant risk of escalation. Because of technological changes, it is unlikely that an entire field army would operate on a single island as in the two case studies, but instead, a future field army will coordinate forces simultaneously across multiple islands. The same lessons apply in this case.

Several lessons from these case studies can be drawn forward to inform the establishment and operations of a future field army in INDOPACOM. First, because the field army is likely to serve as the Joint or Coalition Force Land Component Commander (JFLCC/CFLCC) in modern force organization, these case studies inform the way in which the Joint Force Commander (JFC) establishes supported and supporting relationships as well as integrating staffs between components to assure unity of effort. Integration and clear support relationships manage the conflict of diversity and interdependence for long-term success. Second, due to the theater's maritime nature, commanders and staff of an INDOPACOM field army should have PME experience at the Naval War College. This breadth of experience will help prevent "cognitive entrenchment." Third, an INDOPACOM field army needs to conduct regular amphibious operational planning in conjunction with the Combatant Command and theater army as well as relevant air force, fleet, and allied headquarters. Lastly, the US Army, in conjunction with the joint force, must ensure that it has the amphibious assets available to facilitate strategic and operational maneuver from the sea at the field army-level. Maintaining these forces in the long-term may be cost-prohibitive, and strategic planning needs to account for the time needed to generate or acquire these assets.

The Army requires several specific DOTMLPF-P solutions based on these recommendations. The first solution is in Policy for a requirement of the commander of the INDOPACOM field army to have previous PME experience at the Naval War College, and for primary staff officers to have PME experience at a joint institution. A Training solution involves an annual INDOPACOM amphibious staff exercise involving the field army. This exercise may be a stand-alone event or integrated into an existing exercise in the Area of Responsibility (AOR). Lastly, an Organization and Material solution establishes a type of amphibious support brigade to enable the field army's operations in the maritime domain. The engineer special brigades that supported field army operations in the Pacific during the Second World War serve as an appropriate model.[156] These units were "designed to provide the services essential to combat for a corps landing force." They were built around "boat units, with LCVPs and LCMs for water transportation, combined in balanced teams with shore engineer units, which organize and control embarkation beaches and organize, develop and operate logistical services on the far shore."[157] These units were also critical to providing Army forces with the flexibility to conduct sustainment operations by sea and conduct smaller-scale shore-to-shore envelopment operations.[158]

This study raises several promising areas of future study. First, is a study of Korea to analyze field army operations in an Asian peninsular environment. Several of the dynamics in this study would likely apply. Joint integration in Korea was likely more forgiving outside of explicitly amphibious operations due to less vulnerable supply lines and a greater area for dispersion. Another promising area is a study of the adequacy of existing US sealift capacity, the ability to repurpose existing ships, and the ability to manufacture ships to support field army

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[156] Joshua Bost, "Amphibian Engineers in the Southwest Pacific," Monograph, School of Advanced Military Studies (Fort Leavenworth, KS, 2017).

[157] Landing Craft Vehicle-Personnel (LCVP) and Landing Craft Medium (LCM); Headquarters, 2nd Engineer Special Brigade, *A Guide to the Employment of Engineer Special Brigade* (Fort Worden, WA: 2nd Engineer Special Brigade, 1947), 3.

[158] US Department of the Army, Army Regulation (AR) 5-22, *The Army Force Modernization Proponent System* (Washington, DC: Government Publishing Office, 2015), 4, 12-14.

operations in the Pacific. Lastly is a study of the adequacy of the existing fire support capabilities of naval ships. Currently, US Navy cruisers and destroyers are armed with single and double five-inch guns. In the past, battleships, cruisers, and destroyers with batteries of several turrets of calibers ranging from five- to sixteen-inches have provided support for amphibious operations. The US Army is developing increasingly long-range artillery. Land-based fire support from adjacent islands similar to the XXIV Corps Artillery from Keise Island at Okinawa may provide a solution to this shortcoming in the future. The US Navy could also invest in specialized shore bombardment ships since missiles have supplanted guns on its surface combatants.

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