THE DEVELOPMENT OF AMPHIBIOUS DOCTRINE

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Although the U.S. had conducted amphibious operations since the Revolutionary War, it was not until after the Spanish-American War that the military services attempted to codify procedures in doctrine. Early emphasis focused on command relationships and the responsibilities of commanders, eventually expanding to incorporate operational concepts, tactical techniques, and the necessary equipment. In an environment characterized by inter-service rivalry, as well as monetary and materiel constraints, dedicated individuals and organizations overcame numerous obstacles to develop, practice, and successfully execute amphibious operations in World War II. This thesis examines the evolutionary development of amphibious doctrine by the U.S. Marine Corps, Army, and Navy, and the employment of that doctrine during Operations Watchtower and Torch in World War II. The examination includes an analysis of the historical efforts to develop innovative solutions to a wide range of challenges the services faced at the beginning of the 20th Century leading up to World War II. How the leadership solved those challenges informs the efforts of current leadership in addressing contemporary doctrinal, operational, and tactical challenges and those of the future.

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE DEVELOPMENT OF AMPHIBIOUS DOCTRINE, by Maj David C. Emmel, 160 pages.

Although the U.S. had conducted amphibious operations since the Revolutionary War, it was not until after the Spanish-American War that the military services attempted to codify procedures in doctrine. Early emphasis focused on command relationships and the responsibilities of commanders, eventually expanding to incorporate operational concepts, tactical techniques, and the necessary equipment. In an environment characterized by inter-service rivalry, as well as monetary and materiel constraints, dedicated individuals and organizations overcame numerous obstacles to develop, practice, and successfully execute amphibious operations in World War II. This thesis examines the evolutionary development of amphibious doctrine by the U.S. Marine Corps, Army, and Navy, and the employment of that doctrine during Operations Watchtower and Torch in World War II. The examination includes an analysis of the historical efforts to develop innovative solutions to a wide range of challenges the services faced at the beginning of the 20th Century leading up to World War II. How the leadership solved those challenges informs the efforts of current leadership in addressing contemporary doctrinal, operational, and tactical challenges and those of the future.

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TABLE OF CONTENTS

Page

MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE iii

ABSTRACT iv

ACKNOWLEDGMENTS v

TABLE OF CONTENTS vi

ACRONYMS viii

CHAPTER 1 INTRODUCTION 1

Introduction 1
Problem Statement 3
Scope of Study 4
Structure 4

CHAPTER 2 INITIAL AMPHIBIOUS DEVELOPMENTS: 1898-1919 6

Advanced Base Force: Development of a Unique Mission 10
Army and Navy Cooperation 15
Early Army and Navy Landing Exercises 19
Conclusion 20

CHAPTER 3 THE PATH TO AMPHIBIOUS DOCTRINE: 1920-1933 24

Marine Organization in the Early 1920s 28
Army and Navy Coordination 33
Unilateral and Joint Landing Exercises in the 1920s 34
Educational Developments 40
Fleet Marine Force 44
Joint Action 46
Conclusion 50

CHAPTER 4 TRAINING AND AMPHIBIOUS DOCTRINE: 1934-1942 60

Marine Corps Schools' Contribution to Doctrinal Development 61
Fleet Training Exercises 64
First Joint Training Force 77
Army Amphibious Training School and Engineer Amphibious Command 81
Conclusion 84

CHAPTER 5 EXECUTING THE DOCTRINE: OPERATIONS WATCHTOWER AND TORCH 92

Guadalcanal 92
North Africa 104
Western Task Force 109
Central Task Force 110
Eastern Task Force 110
Europe Versus Pacific Tactics 113
Conclusion 115

CHAPTER 6 CONCLUSION AND RELEVANCY 122

Conclusion 122
Relevancy 129
Past as Prelude to the Future 131

APPENDIX A JAPANESE LIMIT OF ADVANCE AND U.S. PACIFIC THEATER BOUNDARIES 134

APPENDIX B GUADALCANAL AND FLORIDA ISLANDS 135

APPENDIX C GUADALCANAL AND FLORIDA ISLANDS SCHEME OF MANEUVER 136

APPENDIX D OPERATION TORCH SCHEME OF MANEUVER 137

APPENDIX E WESTERN TASK FORCE SCHEME OF MANEUVER 138

APPENDIX F CENTER TASK FORCE SCHEME OF MANEUVER 139

APPENDIX G EASTERN TASK FORCE SCHEME OF MANEUVER 140

BIBLIOGRAPHY 141

INITIAL DISTRIBUTION LIST 152

ACRONYMS

FLEX	Fleet Landing Exercise
FTP	Fleet Training Publication
JCS	Joint Chiefs of Staff
U.S.	United States

CHAPTER 1

INTRODUCTION

Introduction

Many militaries suffer from service parochialism which prevents the achievement of synergy and impairs unity of effort in support of national goals. The results of this lack of cooperation detract from a military's effectiveness and efficiency. The United States (U.S.) is no different. To address this, the U.S. passed the Goldwater-Nichols Department of Defense Reorganization Act of 1986 which dictated better cooperation between services and restructured joint command relationships. Although coordination has arguably improved between the services since then, the influence of inter-service rivalry still impacts relations and, at times, impairs overall performance. The current operational environment requires cooperation not only between all U.S. military services but also with coalition partners to accomplish the military and political objectives of the U.S.

Continuing operations have also negatively impacted the levels of training for the different services. Army Chief of Staff, General George W. Casey, describes the state of the Army as "out of balance. Overall, we are consuming readiness as fast as we can build it. These conditions must change. Institutional and operational risks are accumulating over time and must be reduced in the coming years."[1] In other words, the constant operational deployments have reduced the ability of each service to provide time for units to reset and conduct a standard predeployment training cycle. Moreover, the continued commitment in extended land operations has caused the Army and Marine Corps to sacrifice proficiency in certain areas in order to focus on those warfighting skills needed for the present conflicts. The Commandant of the Marine Corps stated that the level of

amphibious readiness has declined because the Marine Corps "lacks a cadre of officers with maritime experience, a growing number of rank-and-file Marines have never stepped foot on a ship, and less money is available in the budget to focus on the future of the amphibious fleet."[2] With the conflicting demands of ongoing operations, the Marine Corps cannot maintain its desired levels of amphibious training--as the majority of units are focused on the current war effort. As a result, all the services are feeling the strain and must make hard decisions on how to maintain viability to meet uncertain world conditions in the future.

To gain insight into many of the issues prevalent today, one can look back to the period leading up to World War II when the services attempted to address similar deficiencies through the development of joint doctrine. Although the U.S. conducted amphibious operations since the Revolutionary War, these tended to be on an ad hoc basis, with no doctrine to guide the participants. Not until after the Spanish-American War did the U.S. military services make a concerted attempt to codify procedures in doctrine. During the early operations, emphasis rested on command relationships and the responsibilities of commanders, eventually expanding to incorporate operational concepts and tactical techniques for amphibious operations.

The development of amphibious doctrine during the interwar years and its execution throughout World War II greatly contributed to the U.S. ability to overcome the Axis powers in both the European and Pacific Theaters. Despite conflicting requirements and lack of monetary and materiel support, as well as inter-service rivalry, dedicated individuals and their organizations overcame numerous obstacles to develop, practice, and execute ship-to-shore movement, which proved vital to achieving U.S.

national objectives. By understanding the processes and individual and organizational efforts at work during this period, one can better comprehend the requirements to develop innovative techniques in meeting and overcoming future obstacles to military requirements in support of U.S. strategic objectives.

Problem Statement

This thesis will explore how the service culture and assigned missions of the Marine Corps and the Army combined with operational requirements to uniquely shape each service's doctrinal development, training, and execution of amphibious operations from the Spanish-American War to the U.S. entry into World War II. To analyze this problem, further inquiry will attempt to address the motivations, innovations, and major obstacles, if any, that influenced each service's development of amphibious doctrine and approach to solving problems. Besides service culture as an influencing factor on approaches to the development of amphibious doctrine, this thesis will also address the influence of any one service over another throughout the process. Specific attention will be given to the impact of inter-service rivalry on each of the services as well as the development process in general.

In addition to the focus on service relationships, further attention will be given to analyzing the approaches to amphibious training in order to determine if they differ between services, especially between the Army and Marine Corps as the landing forces. Further analysis will also attempt to answer the question of how different operational problems shaped the execution of amphibious operations for the Army and the Marine Corps. Supplementary consideration will focus on what impact, if any, the missions of the Army and Marine Corps had on each service's tactics for amphibious operations.

Scope of Study

This thesis will examine the historical development of amphibious doctrine, primarily during the years prior to World War II. The study will only cover the period from the Spanish-American War through the first two major amphibious operations of World War II: the Guadalcanal and North Africa campaigns. Additionally, only the amphibious portion and those aspects that impact it will be analyzed for Guadalcanal and Operation Torch.

The thesis will take a U.S.-only approach to illustrate the development of amphibious doctrine although it will analyze specific contributions from both the Army and the Marine Corps in collaboration, as well as in conflict, with the Navy and each other. The analysis will cover the generally parallel development of amphibious doctrine and its implementation by the Army and the Marine Corps in conjunction with the Navy. It will emphasize technical and materiel developments only in-so-far as to illustrate the effects on training and execution of amphibious operations.

Structure

Chapter 2 will provide background covering the period from the Spanish-American War to the end of World War I. This chapter will explore the Spanish-American War as an impetus for change and the introduction of initial doctrine for the Army and Navy. The review will set the framework for follow-on discussion in succeeding chapters. Chapter 3 will cover the doctrinal development of command relationships for the Army and Navy as well as the growing acceptance of the defensive advanced base mission for the Marine Corps as a precursor to the offensive mission of amphibious operations. This chapter will cover the period following World War I to

1933, focusing on the gradual shift to an offensive understanding of amphibious operations and the organizational developments necessary to conduct them. Chapter 4 begins with the advent of the Marine Corps' *Tentative Landing Operations Manual* in 1934 and will trace the amphibious training of the Army and Marine Corps to 1940, culminating in a shift to greater Army involvement in training its own forces in order to prepare for commitment to the European Theater. Chapter 5 will analyze execution of the amphibious doctrine by the Marine Corps in the Battle of Guadalcanal and the Army's performance during Operation Torch in North Africa. The last chapter will provide an overall conclusion to the analysis and identify its relevancy to today's leaders.

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[1]House, *Statement By General George W. Casey, Jr., Chief of Staff, U.S. Army, Before the House Committee on Appropriations Subcommittee on Military Construction, Veterans Affairs and Related Agencies*, 111th Cong., 1st sess., 6 May 2009.

[2]Amy McCullough, "Conway: Wars Stunt Amphibious Training," *Marine Corps Times*, 25 January 2010, http://www.marinecorpstimes.com/news/2010/01/marine_amphib_012410w/ (accessed 19 May 2010).

CHAPTER 2

INITIAL AMPHIBIOUS DEVELOPMENTS: 1898-1919

From the Revolutionary War to the twentieth century, the United States (U.S.) Navy and Marine Corps experienced a long history of conducting expeditionary operations to achieve American strategic goals and enforce the nation's foreign policy objectives throughout the world. This relationship created a strong foundation for ensuring overall cooperation, despite occasional disagreements. The ongoing association revealed the unique requirements of each service at sea, the common language necessary to communicate effectively, and the impact of the limited resources and support available during expeditions ashore. These experiences helped the two services realize the necessity of bold initiative, good judgment, and collaboration to overcome the many operational obstacles that each faced. In other words, there developed a distinct naval culture based on the shared operational experiences and close association with one another. Although each service shared the same naval culture, it also maintained its own distinct character which influenced its approach to and resolution of major institutional challenges.[1]

For the Marine Corps, this character also developed from a sense of apprehension caused by the inter-service rivalry with both the Navy and the Army throughout the nineteenth century. This contention centered on the abolition or annexation of the Marine Corps by the Army and proposed limitations on the authority of Marine officers by the Navy. Despite being a separate service, its close affiliation with the Navy reinforced the outlook by many that this relationship was one of subordination, although no law explicitly stated so. As a result, a persistent struggle with the Navy ensued, beginning just

before the Spanish-American War and continuing into the early twentieth century. The uneasiness caused by the actions of the other services provided the impetus for the Marine Corps to innovate and strive for efficiency in war fighting in order to justify its continued existence as a distinct service.

In 1894, and again in 1896, the Marine Corps barely defeated a Navy initiative to remove Marines from combatant ships. The leading spokesman for this reform movement was Navy Lieutenant (eventually Rear Admiral) William F. Fullam. In light of the Navy's transition to steam powered ships, Fullam asserted that the role of the Marines had become anachronistic and, as such, unnecessary. As one Marine Corps officer observed during this time, "the distinction given [to the Marine Corps] at its birth, retained for many years, and gradually allowed to drift from its moorings, a little now, a little then, until it is questionable whether any disinterested and close student of the history of the Marine Corps would at present recognize it, by the duties it performs, and the lack of responsibilities now placed upon its officers."[2] For Fullam, one responsibility the Marines did not need was providing Marines for ships' guards. Instead, he forwarded the idea that the Marines should be formed into expeditionary battalions for use with the fleet. However, he and his supporters did not gain enough momentum to force this opinion into law and the Navy became focused on the imminent war with Spain. Therefore, the ships' detachments of Marines were retained, although the controversy continued into the twentieth century.[3] The conflict concerning the function of Marines aboard Navy ships highlighted the fact that the Marine Corps did not have a unique mission that it alone could accomplish, only customary roles that could be performed by the Navy or the Army just as well as the Marine Corps. Consequently, these two services

continually targeted the Marine Corps as unnecessary, redundant, or incompetent, motivating its institutional search for validity defined by a distinct mission.

With the Spanish-American War in 1898 came an opportunity for the Marine Corps. At the request of the Secretary of the Navy, the Marine Corps provided an expeditionary battalion to the Caribbean--although initially without a specific task. After assembling a battalion composed of six companies of Marines, its commander, Lieutenant Colonel Robert W. Huntington, finally received the mission of securing an advanced base near Santiago, Cuba for use by the Navy as a coaling station. The battalion, supported by naval gunfire, dispersed the few Spanish soldiers in the vicinity to conduct an unopposed landing near Guantanamo Bay. Soon after landing, Huntington received information on the presence of four to five hundred Spanish in a nearby village. Acting on this report, he and his men--once again supported by naval gunfire--confronted and defeated the Spanish garrison at Cuzco.[4] With this action the Marines directly supported the success of the Navy and the overall operation by seizing an advanced base for the Navy's use in support of the campaign. As a result, the battalion accomplished its assigned mission and, in the process, received wide publicity for its efforts.[5]

For the Army, the war with Spain served to highlight the consequences of inter-service rivalry. Each commander, shaped by his service culture, framed the operational requirements in opposition to those of the other service. Rather than collaboratively achieving a unity of effort, the commanders succumbed to a service-centric approach that hindered cooperation. As a result, the Army's expedition experienced numerous complications during the embarkation and debarkation of equipment and supplies as well as a slow movement marked by excessive dispersion of ships which created security

issues. Additionally, the Army and the Navy initially disagreed on the landing site and, once determined, poorly executed an unopposed landing, which culminated with the Army misplacing a brigade for three days. This brigade conducted a diversionary landing and in the confusion was forgotten about until the Army's commander, General William R. Shafter, inquired about their location. Further landings in Puerto Rico were also marked by disagreements and outright animosity between the services.[6]

During the expedition to Cuba, both the Army and the Navy demonstrated a reluctance to work together and, more importantly, understand the requirements of the other service. The Army did not appreciate the needs of the Navy and, consequently, often asked for support without considering the ramifications of its requests on the Navy. The Army simply looked to the Navy to provide transportation and whatever support requested by the commander ashore. This outlook negated the requirement to submit to a naval chain of command during the conduct of a naval expedition, relying on cooperation that oftentimes did not manifest itself. Without extensive experience working with each other, the two services--in the form of their commanders--found it difficult to appreciate the other's perspective and the constraints imposed by the situation that negatively affected the conduct of an operation. The need of a specific landing doctrine, which could help clarify roles and resolve issues, compounded this lack of understanding.[7]

Despite the somewhat flawed execution of the Army and Navy expedition to the Caribbean in meeting the war's requirements, these forces adequately executed their duties. Additionally, the Marine Corps, as a force-in-readiness, proved its effectiveness by assembling and embarking a temporary expeditionary battalion aboard ship to conduct an uncertain mission dependent upon the changing requirements of the operation. The

successful conclusion of the Spanish-American War and the acquisition of additional overseas possessions--including the Philippines, Puerto Rico, and Guam, when added to the already acquired Hawaiian Islands--rapidly transformed the nation's security perspective and requirements. Most importantly for the Marine Corps and the Navy, the Guantanamo operation validated the concept that advanced bases could be seized to provide service and protection to the U.S. Fleet with worldwide responsibilities. The Marine Corps, as an adjunct of the Navy, proved that it possessed the ability to occupy these bases and defend them from an enemy attack if necessary.[8] The advanced base and command relationship problems began an evolutionary journey to develop amphibious doctrine that would involve all the services and lead to its ultimate execution and validation during World War II.

Advanced Base Force: Development of a Unique Mission

In 1900, the newly formed General Board of the Navy--an advisory panel of senior naval officers formed to provide recommendations to the Secretary of the Navy--assigned the responsibility of defending advanced bases to the Marine Corps as the service best suited for the job. The Board went further in prescribing the organization, assigned location, and type of training for this new force.[9] Although not fully accepted by all of the Marine Corps leadership, an ever-growing number viewed this new role as a great opportunity. One of the leading proponents, Captain Dion Williams (who played an integral part in the development of the advanced base concept), stated, "the day has passed when the marine was light infantryman alone, and though the Navy still needs him to some considerable extent in that capacity, the other duties have become more important, and he must be fitted to perform them or lose the greatest opportunity in his

history."[10] For Williams and others, the future of the Marine Corps was tied to its service to the Navy as an Advanced Base Force.

The variety of expeditionary duty throughout the Marine Corps' history, including ships' detachments and small interventions overseas, called for a flexible organization to meet the specific requirements of each task. Mobilization of expeditionary units was executed on a case-by-case basis, gathering men and units from across the Marine Corps to form an organization based on the needs of the situation. As described by the future Major General Commandant John A. Lejeune, "The Marine Corps has been constantly practiced on the organization and training of the different type-task units required for the varying service demanded by its mission, and to meet its requirements it is purposefully not organized into the rigid units necessarily employed by the army forces."[11] This tradition of flexible organization proved very useful in furnishing a ready-force and adapting to the requirements of seizing and defending advanced bases for the Navy.

To begin the process of developing the techniques as well as validating the equipment necessary for this new organization, the Marine Corps participated in exercises with the fleet on the Caribbean island of Culebra during 1902 and 1903 and in the Philippines during 1907. As one participant in Culebra observed, these exercises were "the first thing of [their] kind many of us had seen, and involved dragging heavy ordnance up a hill, building gun emplacements and--what was worse than anything else--locating equipment and getting it from ship to shore."[12] As one of the first exercises of this kind, it was more focused on identifying rudimentary details required to conduct advanced base work rather than fine-tuning the minutiae of a well developed concept of naval base defense.

In response to international tensions with Japan in 1907 over discriminatory restrictions and riots against Asians in California, war planners began studying the details of a possible war with Japan, which involved the defense of the Philippines.[13] It was at this time that Marines at the naval base in Olongapo, Philippines were tasked with reinforcing the defenses of a temporary advanced base during an exercise. The Marine detachment, led by then Major John A. Lejeune, accomplished this task in the middle of typhoon season, "yet by night and by day, in tropical downpours, in storms and typhoons the men landed the guns through heavy seas, hauled them up the steep, slippery inclines, shoveled the mud from the deep gun-pits, handled the heavy timbers, and mounted the guns."[14] Although the Marines accomplished the task of emplacing the guns, the exercise indentified the shortcomings in gear and equipment of the Advanced Base Force and generally highlighted the unpreparedness of the overall Philippine defenses to repel a Japanese attack.[15]

Despite the opportunity this new task presented for the Marine Corps, the limited successes of the exercises were followed by modest to little effort to organize and adequately equip the force that this mission entailed. Institutionally, the Marine Corps failed to seize the opportunity to forge itself a unique niche in support of the Navy. Personnel shortages, the need to provide ships' detachments as well as continuous expeditionary service in the Philippines and various Caribbean countries vied for the attention of Marine Corps leaders. As one amphibious pioneer and future Marine general proselytized,

> In performing its "Task" the Marine Corps will, naturally, have many "Special Missions" presented to it, in fact in years of Peace, they are apt to become so numerous that the impression is likely to prevail that such subsidiary work is not

> at all subsidiary but is, in reality, the Master Work of the Marine Corps. Such an impression is worse than misleading, it is dangerously false, and if allowed to permeate the service would result in its failure to properly prepare itself for the real issue and cause it to fight at an enormous and perhaps decisive disadvantage.[16]

The real issue was effectively supporting the Navy's strategic goal of projecting naval power to control the sea lanes. That meant the seizure and defense of advanced bases to maintain the nation's naval fleets. Although assigned directly by the General Board, the Marine Corps' personnel shortages and almost continuous operational commitments did not allow it to vigorously pursue this new role until some years later.

In 1908, this lack of overall enthusiasm fueled another incident led again by now Captain Fullam. Once more the role of the Marines as ships' guards became an issue of contention within the Navy. However, this time the movement gained support, culminating with President Roosevelt issuing Executive Order 969. This directive effectively removed Marines from Navy ships and specifically assigned them the duties to garrison navy yards and stations, to provide and man the mobile defense of naval bases and stations outside the U.S., to garrison the Panama Canal, and to furnish garrisons and expeditionary forces for overseas duty in times of peace. Absent, however, was the task to provide ships' detachments. In addition, the President's move was soon followed by assertions that the Marine Corps would be absorbed by the Army. To combat this movement, the Marine Corps eventually mobilized enough political support to regain its lost role and prevent its assimilation into the Army. With ever-increasing publicity, Congress eventually became involved and ultimately decided in favor of keeping the Marines not only aboard ships but also separate from the Army.[17]

Once again the Navy and the Army attempted to limit the Marine Corps' role and structure. These continuing machinations to restrict or eliminate the Marine Corps served to gradually solidify acceptance of the new task as well as generate intellectual focus on the requirements of an Advanced Base Force. In 1910, the Major General Commandant of the Marine Corps, Major General George F. Elliott--at the direction of the Secretary of the Navy--established the Advanced Base School in New London, Connecticut, (which moved to Philadelphia the next year) to train the Marine officers for the defense of these bases. The practical application for this instruction took place in the Atlantic Fleet exercises of 1913-1914. The exercise was "the first thoroughly planned advanced base problem whereby the Marine Corps would try out the advanced base materials."[18] It provided the venue necessary for the Marine Corps to continue shaping its conceptual understanding of the requirements for this mission and, equally important, identify its shortcomings.

The 1913-1914 exercise became even more important to the Marine Corps as a means to overcome the continuing accusations of incompetence voiced by Captain Fullam, this time in his capacity as the Navy's Aide for Inspections. In his opinion, the Marines failed to adequately prepare the formation of personnel and equipment as an Advanced Base Force. As a result, he once again asserted that the Marines should be removed from ships and assigned to permanent battalions and that command of the Advanced Base Force should be given to him to ensure the Marine Corps accomplished this task.[19] Although the General Board eventually disapproved Fullam's proposals, the negative focus on the Marine Corps demanded the successful execution of the exercises with the fleet.[20]

With this added motivation, the Advanced Force Brigade formed for the exercise effectively demonstrated the feasibility of the advanced base concept, establishing a defense at Culebra and repelling an attack by an opposing force. The official reports of the exercise all highlighted its effective execution along with recommendations for improvement concerning equipment and personnel.[21] With the requirement to conduct continuous expeditionary duty in the Caribbean as well as the coming of World War I and the subsequent commitment of personnel, equipment, and national focus, the Culebra exercise served as the last large-scale practical application of the advanced base mission until the 1920s.

Army and Navy Cooperation

The friction between the Army and the Navy highlighted during the execution of the Cuban and Philippine campaigns of the Spanish-American War eventually led to the formation of the Joint Army and Navy Board in 1903. The Joint Board was an advisory group composed of the military heads and key staff members of each service. The Joint Board was designed to foster cooperation and make recommendations to the two service secretaries on a variety of topics. Within its purview rested the development of war plans and doctrine, which it steadily addressed throughout its existence.[22]

Prior to the Joint Board issuing any publications concerning combined operations between the Navy and the Army, the Navy published the *Landing-Force and Small-Arms Instructions* in 1905. As a foundational document providing guidance on landing operations, it continued issuing subsequent revisions until 1918 when it changed the name to *Landing-Force Manual, United States Navy*. The Navy proceeded to update this publication at various times to incorporate current tactics, and, in 1927, the revision was

brought "into agreement with the [Army's] present Unites States Training Regulations" to facilitate understanding and cooperation.[23] However, this manual provided scant information on the actual movement from ship-to-shore, reserving most of its pages for drill, ground tactics, and combat principles. The small portion on landing operations emphasized choosing an undefended beach to effect a landing. If the enemy covered the beach with effective artillery fire that could not be neutralized, the manual advised that, "it will usually be better to change the place of landing and attempt to capture the position by a flanking movement."[24] Thus, the idea of conducting broad assaults across the beach did not influence the writers of the manual. Instead, it simply forwarded the basic tactics used in the past to insert small naval landing parties or larger expeditionary forces either unopposed or against lightly defended beaches, like those encountered during the Spanish-American War.

Since the Army maintained numerous ships of its own, used to move troops during exercises as well as for routine deployments and expeditionary duties, it published the *United States Army Transport Service Regulations, 1905* which drew largely from the *Field Service Regulations United States Army, 1905* issued a few weeks prior.[25] These regulations included direction on the embarkation and debarkation of the troops and any animals, as well as guidance on the conduct of convoys. Additionally, within its pages, specific duties were listed for both the ships' crews and the troops being transported. The commanding officer of the embarked troops and the ship were counseled to "work in harmony. . . . [and] on all occasions use their best endeavors in cooperating with each other in the execution of the duties respectively intrusted [sic] to them, in order that by their united exertions the service on which the ship is employed may be performed in the

most efficient and satisfactory manner possible."[26] For the Army, these regulations provided broad guidance designed more to facilitate movements of soldiers to foreign ports within a naval convoy--whether of a routine nature or in support of an expedition. These regulations did not provide the specifics required for large, complicated landings as would later be seen in World War II.

Building upon the initial regulations from the Navy in the *Landing-Force and Small-Arms Instructions*, the Joint Board issued a complementary publication entitled *Rules for Naval Convoy of Military Expeditions* in 1906. These regulations described the details governing the roles of the Army and Navy commanders during joint convoy operations designating the authority of each service from embarkation to debarkation. The Navy appointed the convoy commander who was responsible for overall security of the convoy en route to its destination as well as supporting the landing with naval gunfire and landing boats. The Army commander determined the time of departure along with the time and place of landing. He also coordinated any changes necessary with the Navy convoy commander.[27] In other words, the impetus for action resided with the Army commander. "The military commander remained in control of his force while at sea and in all essential aspects was the overall commander of the expedition, although this fact was avoided in the wording of the document."[28] Although the regulations did not specifically designate which commander had overall authority, it generally described the Navy commander's duties as in a supporting role to that of the Army commander.

During this period, both the Army and the Navy issued updates to their 1905 regulations covering the conduct of convoys. The Army published the *Transport Service Regulations, 1908* and the Navy issued the *Regulations for the Government of the Navy*

of the United States in 1909. Each of these updated publications reaffirmed the duties put forth in the *Rules of Naval Convoy of Military Expeditions*--through almost identical wording--concerning the extent of authority for each commander. Both also retained the Army-centric wording, implicitly designating the Army commander as the overall commander. Moreover, each encouraged that "the army commanding officer shall, if convenient, be embarked in the flagship of the naval convoy commander. . . . in order that communication between them may be readily had at any time."[29] The corresponding phrases in these regulations reveal the close collaboration of the two services and the desire to eliminate the past areas of conflict by promoting a single doctrine covering convoys during combined operations, although none of these guidelines explicitly designated who had overall command.

By the time of the *Rules of Naval Convoy of Military Expeditions* revision in 1917, the focus on the Army shifted to the Navy. The past Army-centric phrasing disappeared, designating the Navy commander as the one who possessed the greater responsibilities and authority. It was the Navy commander who, once he received orders for an expedition from the Navy Department, determined the exact departure time and date after the Army commander reported the readiness of his troops. Now it was the Navy commander who consulted with the Army commander regarding changes en route to the destination. Furthermore, it was the Navy commander who determined the time and place of landing. However, the Army commander still retained the authority to dictate the plans for the landing.[30] Despite the shift in focus to the Navy, in all other areas the revised regulations of 1917 supported the past guidance on collaboration contained in the Army's *Transport Service Regulations, 1908* and the Navy's *Regulations for the Government of*

the Navy of the United States, 1909. Each document contained the same wording reiterated similarly by the Joint Board directing that the Navy commander "render the greatest possible assistance practicable with the sole object of ensuring to the utmost the plan of campaign of the Army commander."[31]

Early Army and Navy Landing Exercises

Along with these doctrinal developments, the Army also worked with the Navy to conduct landing exercises similar to those of the Marines during this time. Although somewhat limited in nature, the Army exercises served two purposes. The first such exercises were conducted in 1902 and 1903 and allowed the Army to "test the training of personnel and the efficiency of the material" during day and night attacks. They also provided opportunities to test coastal defenses which involved one of the main responsibilities of the Army--the security of the coastal borders of the Continental United States.[32]

The second, exemplified by the exercise in Massachusetts during August of 1909, consisted of a much larger force of 6,000 predominantly National Guard soldiers, including infantry, cavalry, and artillery. Although not conducted under tactical conditions, the landing did test the Army's basic procedures for landing troops and equipment as described in the pages of *United States Army Transport Service Regulations, 1908*.[33] During the exercise, the Army successfully brought together widely dispersed units stationed along the New England Coast to points of debarkation as per the overall plan. The proclamation that, "More prompt and efficient work could hardly have been performed by any regular troops in the United Sates [and that this] performance speaks loudly for the increased efficiency of the National Guard and augurs well for the

future" was most likely an overstatement.[34] This becomes more apparent when examining the units' embarkation, which did not reflect the same level of accomplishment. As one observer noted, "it was the Spanish war over again. Cavalry and Artillery horses on one steamer, guns and equipment on another, and men on another, so that . . . horses stood in the streets for hours until men and equipments [sic] could be got together."[35] Despite the overall stated success of these exercises, it is unlikely that the knowledge gained had long term effects on the Army overall. The number of participants was only a small percentage of the Army, with National Guard soldiers conducting the largest of these landing exercises--inhibiting the development of institutional memory. Furthermore, these lessons would not be examined again until the next major joint exercises with the Navy and the Army following World War I.

Conclusion

In its conception phase, the initial doctrinal development of landing and convoy operations was centered on two distinct lines of development. The Marine Corps grudgingly focused on techniques and procedures necessary for its evolving role as an Advanced Base Force in support of the Navy's fleet, as directed by the General Board. In contrast to the Marines and as a result of being a separate and distinct service, the Army's attention emphasized command relationships between it and the Navy in joint operations. The varying approach and emphasis stemmed from the cultural backgrounds and mission focus of the Army and the Marine Corps in relation to the Navy and to each other. The Marine Corps' close relationship with the Navy, although strained at times, de-emphasized the need to delineate command authority, and, therefore, allowed the Marine Corps to invest itself--however sporadically at first--in expanding its amphibious

knowledge to support its new and unique role. Gradually, the Marine Corps began to embrace the advanced base work as a means to fulfill a unique mission, distinguished from the nation's primary land force. The Army, its attempts at subsuming the Marines continually thwarted, ultimately accepted the latest Marine quest for a distinctive mission as long as that mission did not impinge on the Army's traditional mission of coastal defense and defense of permanent bases, such as the Philippines. For its part, the Army concentrated its efforts on delineating its authority in relation to the Navy during joint operations.

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[1]For the purposes of this thesis, culture is defined as a "set of shared attitudes, values, goals, and practices that characterizes an institution or organization." Merriam Webster's Dictionary, http://www.merriam-webster.com/dictionary/culture (accessed 8 March 2010).

[2]H. B. Lowry, "United States Marine Corps," *Journal of the Military Service Institution* 16, no. 75 (May 1895): 527.

[3]Victor H. Krulak, *First to Fight: An Inside View of the U.S. Marine Corps* (Annapolis: Naval Institute Press, 1984), 8.

[4]Allen R. Millet, *Semper Fidelis: The History of the United States Marine Corps* (New York: MacMillian Publishing Co., Inc., 1982), 131-134; Leo J. Dougherty III, *Pioneers of Amphibious Warfare, 1898-1945: Profiles of Fourteen Amercian Military Strategists* (Jefferson, NC: McFarland & Company, Inc., 2009), 21-28.

[5]Krulak, *First to Fight*, 10.

[6]William F. Atwater, "United States Army and Navy Development of Joint Landing Operations, 1898-1942" (PhD diss., Duke University, 1986), 7-13.

[7]Ibid., 10-14.

[8]Although a separate service from its founding, the Marine Corps' close association with the Navy (centered on providing ships' detachments and expeditionary forces) fostered the perception that the Marine Corps was part of the Navy. This outlook contributed to numerous confrontations in its history that both hindered and promoted the Marine Corps' development and independence.

[9]Kenneth J. Clifford, *Progress and Purpose: A Developmental History of the United States Marine Corps 1900-1970* (Washington, DC: History and Museums Division, Headquarters, United States Marine Corps, 1973), 9-10.

[10]Dion Williams, "The Defense of Our New Naval Stations," *United Sates Naval Proceedings* 28, no. 102 (June 1902): 193.

[11]John A. Lejeune, "The United States Marine Corps," *United States Naval Institute Proceedings* 51, no. 272 (October 1925): 1861.

[12]J. C. Breckinridge, "Why Quantico?," *United States Naval Institute Proceedings* 54, no. 309 (November 1928): 969.

[13]Edward S. Miller, *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897-1945* (Annapolis, MD: Naval Institute Press, 1991), 21-22.

[14]John A. Lejeune, *The Reminiscences of a Marine* (Quantico, VA: Dorrance and Company, Inc., 1930), 176.

[15]Dougherty, *Pioneers of Amphibious Warfare*, 101.

[16]John H. Russel, "A Plea for a Mission and Doctrine," *Marine Corps Gazette* 1, no. 2 (June 1916): 112.

[17]Clifford, *Progress and Purpose*, 2-6; Krulak, *First to Fight*, 12-13; Millet, *Semper Fidelis*, 140-144.

[18]Clifford, *Progress and Purpose*, 17.

[19]Ibid., 17-19; Lejeune, *The Reminiscences of a Marine*, 202; Millet, *Semper Fidelis*, 278.

[20]Clifford, *Progress and Purpose*, 15-21; Millet, *Semper Fidelis*, 280-383.

[21]Clifford, *Progress and Purpose*, 19-21; Millet, *Semper Fidelis*, 283.

[22]Miller, *War Plan Orange*, 13-14.

[23]U.S. Navy Department, *Landing-Force Manual: United States Navy, 1927* (Washington, DC: Government Printing Office, 1927), iii.

[24]Ibid., 243.

[25]U.S. Department of the Army, *United States Transport Service Regulations, 1905* (Washington, DC: Government Printing Office, 1905), 32-46; U.S. Department of the Army, *Field Service Regulations United States Army, 1905* (Washington, DC: Government Printing Office, 1905), 142-155. With minor exceptions, the entire section

titled “Transportation by water,” including paragraphs 441-534, of the *Field Service Regulations United States Army, 1905*, was transposed to the *United States Army Transport Service Regulations, 1905*. The *Field Regulations* were published on 1 February 1905 and the *Transport Service Regulations* were published ten days later on 11 February 1905.

[26]U.S. Department of the Army, *Transport Service Regulations, 1908* (Washington, DC: Government Printing Office, 1908), 37.

[27]Atwater, “Development of Joint Landing Operations,” 21-24; James Joseph Henry, IV, “A Historical Review of the Development of Doctrine for Command Relationships in Amphibious Warfare” (Master’s thesis, Command and General Staff College, 2000), 28.

[28]Atwater, “Development of Joint Landing Operations,” 24.

[29]U.S. Navy Department, *Regulations for the Government of the Navy of the United States, 1909* (Washington, DC: Government Printing Office, 1909), 394; U.S. Department of the Army, *Transport Service Regulations, 1908,* 63.

[30]Atwater, “Development of Joint Landing Operations,” 24-25; Henry, “A Historical Review of the Development of Doctrine,” 29.

[31]Atwater, “Development of Joint Landing Operations,” 24-25; U.S. Navy, *Regulations, 1909*, 394; U.S. Army, *Transport Service Regulations,1908*, 62.

[32]Atwater, “Development of Joint Landing Operations,” 51.

[33]Ibid., 52-53.

[34]“Field Exercises in Massachusetts,” *Army and Navy Journal* 46, no. 52 (28 August 1909): 1475.

[35]“The Massachusetts Maneuvers,” *Army and Navy Journal* 46, no. 52 (28 August 1909): 1474.

CHAPTER 3

THE PATH TO AMPHIBIOUS DOCTRINE: 1920-1933

Following World War I, the U.S. and other prominent powers wanted to reduce the likelihood of future conflict. The abhorrence of the massive losses in material and human life incurred during that struggle compelled many to search for ways to alleviate friction between nations--reducing the likelihood of future conflict. The Treaty of Versailles, which formally marked the end of World War I, severely limited Germany's ability to regain power in Europe. To punish Germany as well as limit its capacity to mount aggressive attacks in the future, the treaty imposed war reparations and restrictions to constrain its military capabilities.

One of Germany's major losses after World War I was her former colonies throughout the world. The League of Nations, under Article 22 of the treaty, established mandates designating certain countries to be:

> responsible for the administration of the territory under conditions which will guarantee freedom of conscience and religion, subject only to the maintenance of public order and morals, the prohibition of abuses such as the slave trade, the arms traffic, and the liquor traffic, and *the prevention of the establishment of fortifications or military and naval bases and of military training of the natives* for other than police purposes and the defence [sic] of territory. [Italics added for emphasis.][1]

These territories included many in Africa which were divided among the Allied powers in Europe. Furthermore, in the Pacific, Japan gained numerous islands, including the Marshall, the Caroline, the Marianas, and the Palau Islands. For the U.S., which retained the Philippines, Guam, and Hawaii, these Japanese mandates were viewed with concern because they allowed Japan a position to potentially interfere with U.S. access to this

region. As a result--even more so than before World War I--Japan became inextricably linked to the U.S. strategic focus in the Pacific.

Confrontation with Japan had been posited since the beginning of the twentieth century along with other potential foes. Following World War I, Japan became the most likely U.S. adversary and the focus of war planners. These plans were color coded, assigning specific colors to opponent states. In what became known as War Plan Orange, the Army and the Navy, through the Joint Board, devised a plan to combat Japanese aggression and defend American interests in the Far East. These services also supervised the constant revision of this plan as a result of changing political and military factors. Consequently, throughout the years preceding World War II, the military proved a constant motivating source for generating and maintaining a viable strategic outlook in the Pacific.[2]

War Plan Orange was an evolutionary plan that changed according to the prevailing outlooks of the Army and Navy, incorporating the best perceived methods of opposing Japanese aggression and defending U.S. Pacific possessions. The defense of the Philippines, Hawaii, and the Panama Canal (which allowed the U.S. to reinforce its Pacific fleet) proved the driving factors that shaped the focus of the plan. The Army's insistence on the defense of the Philippines diverged from the Navy requirement to preserve naval combat power in order to deal with the Japanese fleet. Friction centered on the time required to mount a campaign in response to Japanese aggression--a quick response to save the Philippines or a longer, systematic operation to preserve sea power.[3] No matter which version, however, the plan always incorporated a naval campaign across thousands of miles of ocean. The vast distances involved highlighted the need for a

strong Navy as well as one that could acquire the necessary advanced bases required for projection of sea power. This reality placed the Navy and its interests in the predominant position for planning.[4]

After the end of World War I, the U.S. grew more inwardly focused; once again the country adopted an isolationist perspective. The election of President Harding in 1920 heralded a period of fiscal constraint that lasted to one degree or the other over the next two decades. Shortly after the election, a movement within Congress advocated a reduction in military spending. A natural outcome of this overarching desire to reduce spending was the prevention of an arms race that many foresaw as taking place during this period. To help avert an uncontrollable escalation in arms procurement, the U.S. hosted the Washington Naval Conference of 1921-1922.

This conference was the first of its kind held in the U.S. and resulted in the Five-Powers Naval Treaty of 1922, which restricted the naval power of each signatory. The U.S., Great Britain, Japan, France, and Italy all accepted limits to the number and type of ships they possessed. The three prominent powers in the Pacific (the U.S., Great Britain, and Japan) settled upon the tonnage ratio 5:5:3 respectively (the other powers were allotted 1.75).[5] The greater number for the U.S. and Great Britain reflected the need to maintain a Navy that could support its colonies over two oceans whereas Japan only operated in the Pacific. Although touted as a success in gaining a numerical advantage in ships over Japan, Article XIX of the treaty negated much of this advantage. It stated "that no new fortifications or naval bases shall be established in the territories and possessions specified; that no measures shall be taken to increase the existing naval facilities for the repair and maintenance of naval forces, and that no increase shall be made in coast

defences of the [specified] territories and possessions."[6] Rather than providing a material advantage as envisioned, the restrictions on Pacific bases established in Article XIX posed a serious problem to the success of U.S. efforts within the parameters of Plan Orange.

For the Navy, Article XIX meant that all Pacific bases, as they existed, would remain constant with no upgrades and no new bases could be created. This stipulation gave the advantage to Japan which possessed the mandates awarded by the League of Nations in the Treaty of Versailles. That is to say, the fortification clause stunted the U.S. military's overall effectiveness. The Army's main concern was centered on the isolation of the Philippines and its defense against a Japanese attack which had to be sustained until reinforced from Hawaii. More importantly, Japan could strengthen its mandates with troops and equipment well before the U.S. Fleet could arrive, creating the need to neutralize potential enemy bases enroute.[7] Without additional bases for its fleet, the U.S. Navy was left with only Hawaii to support its Pacific operations, limiting its power projection. The modernization of ships from coal to oil enhanced their overall operational distances, but also made Hawaii more vulnerable to enemy attack. Moreover, the increasing threat posed by aircraft compounded this dilemma.[8] As a result, the Joint Board once again focused on revising Plan Orange, and the Navy, in particular, began a long process of addressing its needs to overcome these base restrictions in order to defeat Japan in the Pacific.

The Navy focused on mobile bases to address the lack of permanent bases as a means to overcome the restrictions of the fortification clause endorsed at the Washington Conference. This idea was not new, but gained added emphasis following World War I

and the Treaty of Versailles.[9] A growing focus for the Navy was how to service its ships without permanent facilities; however, an ever-tightening budget prevented significant development in this area. In 1920, just prior to the Washington Conference, the Office of Naval Intelligence conducted a study of this problem with regard to operations in the Pacific. The study, *The Conduct of an Oversea Naval Operation*, discussed the need to increase the Navy's capacity to provide a basing force in order to establish facilities for servicing its ships during a campaign through Micronesia. "The authors gave specific numbers of bases desired for the campaign: two major bases for the 'battle fleet,' which implied locations at Guam and Manila, and at least seven 'minor' bases for auxiliary forces in theater and along the lines of communication."[10] The only way to feasibly conduct an operation in the Pacific, then, was the ability to establish permanent bases to sustain the fleet. Therefore, in order to support the findings of this study and overcome the base restrictions imposed by the Washington Conference, the use of mobile and advanced bases (which more than likely would have to be seized from the Japanese) became a critical feature of the Navy's success in overcoming potential Japanese aggression in the Pacific.

Marine Organization in the Early 1920s

To overcome the increased threat posed by the Japanese, the Marine Corps built upon a fluid institutional organization that drew from past experience to continue developing the Advanced Base Force first introduced in 1900. Although progress stagnated with the continuous deployments from 1914 until after World War I, the Marine Corps rededicated its efforts beginning in the early 1920s. The Advanced Base Force guaranteed great flexibility in meeting short-notice missions by providing a unit

specifically organized and designed to seize and defend advanced bases. It was up to the Marine Corps to ensure that it could accomplish the task in support of naval operations.

To meet this requirement for a versatile unit, the Marine Corps maintained the Advanced Base Force at full strength throughout World War I, ensuring its proficiency in a variety of skills to include "infantry, heavy and light artillery, mining and signaling of every variety known, and engineering."[11] Nonetheless, with the focus on the extended land war in Europe, the Marine Corps was not used in this manner. World War I did, however, provide valuable experience that benefited the Marines both in familiarity in conducting division level operations and in the notoriety it gained from its successful battles.

Following the war, an early proponent of the advance base concept, John A. Lejeune, became Major General Commandant of the Marine Corps in 1920. As Commandant, he focused much of his efforts on defining the advanced base role of the Marine Corps. He endeavored to establish the conditions necessary to develop its institutional understanding of this mission as well as the organization's capacity to conduct it despite fiscal and manpower constraints. Rather than pursuing a role as an additional land force based on the recent experiences with the Army during World War I, Lejeune refocused the Marine Corps' efforts and tied its future to that of the Navy. In his view, "the Marine Corps must ever be closely associated with the Navy, understanding the life at sea, the requirements and methods of naval warfare, and being imbued with the esprit of the naval service; and it must be organized and trained to meet the peculiar requirements of naval expeditionary duties with the fleet."[12] Following his vision,

Lejeune strove to provide the Marine Corps with a distinct mission only it could conduct in close collaboration with the Navy.

In this way, Lejeune tried to prove the necessity of the Marine Corps as a distinct service. By demonstrating its usefulness through efficiency, he hoped to dissuade past and future proponents for the organization's outright abolition or amalgamation with the Army. In his view, the Marine Corps, as an expeditionary force, brought value to the Navy by "accompany[ing] the fleet in its overseas campaigns, for the conduct of such shore operations as are required for the expeditious and successful prosecution of the naval campaign."[13] By serving this role and proving its efficiency, the Marine Corps would ensure its future.

To achieve his goal, Lejeune began by reorganizing his staff to better support the needs of the Marine Corps. The influx of personnel during World War I no longer allowed a few select officers to manage the formerly small service. Despite the post war drawdown, the Marine Corps still had an authorized strength of 27,000 with funding for 20,000 officers and men. Prior service with the Army exposed Lejeune--as well as many other officers--to its staff system. Consequently, the Marine Corps adopted a structure of numbered sections similar to those used by major field commands. He also introduced additional sections at Headquarters Marine Corps, including personnel, education, recruiting, and operations and training with numerous functional subdivisions.[14] This reorganization allowed the Commandant to better and more efficiently administer a larger overall force than that which existed prior to World War I.

To assist in overcoming the strategic challenge posed by the Japanese, the new Operations and Training Division became the center of Marine Corps war planning. One

of the leading thinkers working in the office that time was Major Earl Ellis, an officer who devoted much time and effort to the advanced base problem. His commitment resulted in two seminal works involving advanced base operations. His study, "Navy Bases: Location, Resources, Denial, and Security," detailed the location, resources, and security for naval bases, the denial of bases to the enemy, the security of advanced bases, advanced base operations, and the Advanced Base Force. He emphasized that the Japanese would prevent the use of advanced bases in the Pacific which would require "the A.B. [Advanced Base] force being prepared for the execution of opposed landing operations, and of attacks on denial positions." Furthermore, this required that the Advanced Base Force "be so composed and prepared as to carry out its work with the greatest speed possible."[15]

Ellis also provided a detailed study of the strategic and tactical realities affecting not only a war with Japan but how it would be fought. The timing of this plan, which followed the Office of Naval Intelligence study on mobile bases in Micronesia as well as the Navy's own work on revising War Plan Orange, suggests that Ellis drew inspiration from previous efforts to formulate his detailed plan for seizing advanced bases from Japanese control in the Pacific.[16] In any event, the quality analysis provided by Ellis ensured its quick endorsement by Lejeune on 23 July 1921 as Operation Plan 712, "Advanced Base Force Operations in Micronesia," which served "as the basis for future training and wartime mobilization planning in the Marine Corps."[17]

While still emphasizing the defensive nature of the Advanced Base Force, Ellis' Operation Plan 712 (in conjunction with his "Navy Bases: Location, Resources, Denial, and Security") also highlighted the importance of offensively striking the enemy. The

offensive focus stemmed from the Japanese occupation of specific islands and, consequently, that "we [U.S.] cannot count upon the use of any bases west of Hawaii except those which we may seize from the enemy after the opening of hostilities."[18] This operation would entail three phases involving the reduction of Japanese defensive positions located in the Marshall Islands, the western Caroline Islands, and finally the remainder of the Caroline Islands, including the Palaus. To effectively overcome Japanese defenses, Ellis advocated the use of feints to "confuse the enemy and lead him to disperse his resistance," as well as the use of "surprise and rapidity of execution" to land forces ashore and move them forward to inland objectives in order to overwhelm enemy resistance. To achieve this, commanders must use units specifically organized for this type of warfare, conducting landings at daybreak with adequate air and naval gunfire support.[19] In this way, Marines would conduct amphibious assaults to seize advanced bases for use by the Navy in a protracted naval campaign against Japan in the Far East.

While the focus of the Advanced Base Force was initially defensive, the specific requirements of War Plan Orange continued to drive the Marine Corps, as exemplified in Ellis' authoritative works, to stress offensive operations in order to seize advanced bases rather than simply occupying undefended areas as previously accepted. For Lejeune, the primary mission of the Marine Corps in war was "to supply a mobile force to accompany the Fleet for operations on shore in support of the Fleet. . . . Also it should be further utilized in conjunction with Army operations on shore, when the active naval operations reach such a stage as to permit its temporary detachment from the Navy."[20] This offensive emphasis spurred Lejeune to redesignate the Advance Base Force as the Marine Corps Expeditionary Force in 1921, which better expressed the Marine Corps' offensive

role (the advanced base work being within the broader category of expeditionary operations).[21] This change also introduced a permanent headquarters for continuity and improved control. The East Coast Expeditionary Force was stationed at Quantico and consisted of the same permanent units that formerly comprised the Advanced Base Force as well as all temporary or provisional units.[22] In 1925, the Marine Corps also created the West Coast Expeditionary Force and stationed it at the newly acquired base in San Diego, California.

The name change served to incorporate the offensive character required for both seizing advanced bases and conducting follow-on operations while still maintaining its defensive characteristic. In addressing the strategic problems presented in War Plan Orange, the Marine Corps tailored its organization to meet the Navy's offensive needs of seizing bases from an enemy determined to repel such efforts. This offensive mindset marked a distinct break from the past and helped shape the future vision of amphibious operations.

Army and Navy Coordination

Following World War I, the reorganized Joint Army and Navy Board emerged, once again, as a catalyst for collaboration between the Army and the Navy.[23] The Joint Board served to "secure complete co-operation and co-ordination in all matters and policies involving joint action of the Army and navy relative to the national defense."[24] In fulfilling this role, the Joint Board issued guidance within *Joint Army and Navy Action in Coast Defense* in 1920. This publication covered the responsibility vested in each service to provide adequate coast defense against an attack. Moreover, as published in past regulations, this one also dealt with the question of command in joint operations.

Joint Army and Navy Action in Coast Defense described this cooperation in terms of paramount interest.[25] This concept relied foremost on cooperation of the subordinate commander to support the commander with paramount interest. When a situation occurred in which the U.S. naval forces available possessed superior strength to that of an enemy, then it would maintain paramount interest, directing the operations of both the Army and the Navy forces. If, however, an enemy had superior forces compared to the Navy, then the Army would maintain paramount interest and coordinate the entire operation.[26] For this model to work best, it relied on commanders to cooperate in preparation of defensive plans which would list who had paramount interest based on the estimate of the situation.[27] Although intended to clarify command roles, this system was not designed to readily adapt to a dynamic situation where the enemy disposition was indiscernible. Success of this command relationship depended more on the favorable disposition of the involved commanders toward cooperation than on a clear system that could be applied to all situations. It remained to be seen how effective and responsive this command structure actually could be.

Unilateral and Joint Landing Exercises in the 1920s

The requirements detailed in Ellis' Operation Plan 712 and War Plan Orange made it clear that the Marine Corps needed to begin to apply the necessary offensive techniques in its landing exercises to provide practical application in opposed amphibious landings. The Army and the Navy, too, had to work out the details of command relationships as stated in the joint war plans. These exercises acted as the initial venues for the extrapolation of valuable lessons to improve the U.S. defense of key bases as well as to develop sound techniques for emerging offensive amphibious operations.

In 1921, the Marine Corps conducted simulated amphibious training during its annual field training exercise. In this exercise, the East Coast Marine Expeditionary Force, composed of approximately four thousand Marines, executed a landing on the "beach" of an imaginary island which happened to be on the same ground as the Civil War's Battle of the Wilderness in Virginia. The phases of this operation included a notional landing on a beach, attacking land objectives, and establishing a defense to repel an enemy attack.[28] This display of ingenuity and efficiency maximized the limited training available to help gain both experience and positive publicity.

The first actual joint landing exercise conducted by the Marine Corps occurred in 1922 and involved a small force of two companies and mirrored the previous advanced base exercises prior to World War I, concentrating primarily on the movement of artillery ashore. The landing force experienced difficulties in landing equipment under other than ideal sea conditions.[29] Although defensive in nature, the exercise once again illustrated how far the Marine Corps needed to progress to be proficient in offensive amphibious operations.

Unlike the Marine Corps, the Army had no landing exercises comparable to those conducted by the Marines during this time. For the most part, it held training exercises that concentrated on practice with weapons and small-scale maneuvers. This training was further exacerbated by an overall lack of funding, which only allowed a limited number of exercises. However, in 1923, the Army did participate with the Navy in a joint exercise (Fleet Problem No. 1) simulating an attack on the Panama Canal Zone and its garrison. The exercise focused on the use of aircraft carriers and did not involve a landing force attacking the Army's defenses.[30] This first annual maneuver served as a precursor for

future expanded exercises which involved landing forces, although composed Marines, not soldiers. In joint exercises, then, the Army's emphasis lay in examining its coastal and base defense capabilities, mostly in the Panama Canal Zone and Hawaii.

It was not until the Winter Maneuvers of 1924 (Fleet Problem Nos. 3 and 4) that the Marine Corps incorporated a landing against an opposing force. The exercise incorporated two groups within the expeditionary force. The first was composed of 1,750 Marines under the command of Brigadier General Eli Cole, and the second was a force of 1,550 Marines led by Colonel Dion Williams. In addition, four Army liaison officers observed the exercises. Cole's mission as part of Fleet Problem No. 3 required him to attack the Army garrison in the Panama Canal Zone while Williams offloaded his forces at Culebra to establish an advanced base for the follow-on Fleet Problem No. 4. Cole and his force effectively attacked and overwhelmed the Army defenses at Fort Randolph and Coco Solo in Panama, but failed to achieve the same success against Williams' defense in Culebra.[31] There were many issues encountered by the Marines during both landings, to include loading and unloading deficiencies, insufficient naval gunfire support, poor night landing techniques, and inadequate landing craft.[32] Despite the numerous issues, these exercises demonstrated the overall feasibility of both the offense and the defense for the Marine Corps and the need for the Army to enhance its defense of the Panama Canal Zone. Notwithstanding the problems encountered--and more often than not because of them--the training conducted during these exercises offered many lessons and identified numerous areas for further development.

Additionally, during the Culebra portion of the maneuvers, the naval commander of the defensive force was called away and did not participate in the exercise. As a result,

command was divided between the commander of Submarine Division No. 8 for naval forces and Williams as commander of the Marine Corps Expeditionary Force on land, requiring them to cooperate in defending the base in Culebra.[33] This exercise proved that reliance on cooperation as a command relationship between naval and land forces could work--at least in a limited defensive encounter such as the one experienced in the Winter Maneuvers. However, the issue of cooperation and command relationships proved to be a point of friction not only between the Marines and the Navy but also between the Army and the Navy in future offensive landing operations.

The next test of this cooperation came the following year during the Grand Joint Exercise of 1925 in Hawaii.[34] A force of 1,500 enlisted Marines and 227 officers from both the East and West Coast Expeditionary Forces simulated an attacking force of two divisions of 42,000 men. The participants included the Commanding Officer, Marine Corps Schools, Colonel Robert Dunlap, as well as the students and instructors from the field officers course after Lejeune suspended classes so the faculty and students could benefit from first-hand experience planning and executing amphibious landings. The Army's defense consisted of approximately 16,000 men from the regular Army units stationed on Oahu as well as Reserve and Army National Guard units. Each side also had comparable naval forces to support its respective attack or defense.

The Marine force conducted two simultaneous landings, the main one on the northwest coast and a diversionary one on the southwest coast. The main landing force achieved success in overcoming Army defenses; however, the Army repelled the Marines' diversionary landing. For the Marine Corps, the lack of adequate landing craft became the most important lesson learned from the exercise. Brigadier General Dion

Williams, representing the Commandant during the after action sessions, stated, "The essential thing being to get men and material of the expedition on the beach in shortest possible time with least confusion, and in the best condition for immediate action, it is vital that every effort should be made to provide beforehand suitable means for transporting men and material from ship to shore."[35] Without a doubt, this capability did not exist; and, like all past exercises, a lack of adequate landing craft remained a critical detractor from fully developing sound landing techniques. Despite these and other problems, the Commandant viewed the exercise as "completely successful from the standpoint of the marines . . . [and] that cooperation on the part of the Navy was the determining factor which insured success."[36]

For the Army, the overall commander of the exercise, Major General John L. Hines, noted the need for a "flexible and mobile" defense to repel an enemy landing force. Since the Army failed to do this against the main landing of Marine forces, he went on to say, "Dependence must not be placed primarily or even predominantly upon mechanical means--field guns and machine guns--but upon mobile troops and aircraft, counter-attacking whenever and wherever necessary. . . . In this instance the [defending] commander could not do this, for his force was not adequate for the task assigned to it."[37] As a result of this exercise, then, the Army recognized its insufficient level of manpower to protect the Hawaiian Islands and took steps to correct this deficiency.

Another contributing factor to the overall ineffectiveness of the defense was the poor level of cooperation between the Army and Navy. For the defense, paramount interest was invested in the Army, in accordance with the *Joint Army and Navy Action in Coast Defense*, which depended on close cooperation of the commanders for success of

the plan. As a result, the plan directed that "commanders of respective Army and Navy forces will spare no effort to secure such cooperation."[38] Unfortunately, the results of the exercise differed from this intent. With no unified air command, the defenders' Army and Navy aviation forces did not synchronize their efforts. Therefore, conflict rather than harmony prevailed as the normal state between the Army and Navy over specific roles in coastal defense and aviation support.[39] This internal friction between commanders of the defensive force--unlike that experienced the previous year in Culebra--illustrated the many problems associated with the practice of paramount interest in command relationships for large-scale operations.

With operational commitments in China and Nicaragua consuming most available manpower, neither the Marine Corps nor the Army conducted any additional large-scale joint exercises involving landing operations until 1932.[40] Fortunately, the prevailing lessons from the landing exercises conducted in the early 1920s provided numerous topics for further examination during the remainder of the decade. Along with this internal reflection, the 1932 Grand Joint Exercise No. 4 in Hawaii, involving both soldiers and Marines, again illustrated many of the same deficiencies as those experienced during the 1925 exercise in the same locale. The severe lack of sufficient landing craft (the majority of which were ships' boats) illustrated the need for craft that could cross reefs and overcome the effects of strong surf. These problems prevented large numbers of men to land in sufficient force to reflect an effective assault force. As General Holland Smith (later amphibious corps commander of both Marine and Army divisions in the Pacific during World War II) recalled in his memoir, many of the problems experienced in 1925 still persisted, revealing "our total lack of equipment for such an

undertaking, our inadequate training, and the lack of coordination between the assault forces and the simulated naval gunfire and air protection."[41]

Educational Developments

One location where the examination of lessons drawn from landing exercises took place was at the Marine Corps Schools. Lejeune believed that operations of "an expeditionary force are extraordinarily difficult and hazardous and require unusually skilful [sic] and resolute leadership, and troops which are especially trained for the accomplishment of their mission."[42] To gain the needed expertise, the Marine Corps combined practical application (as in the joint exercises) with formal military education. As a result, Lejeune placed added emphasis on the development of the Marine Corps Schools, which included the basic course, the company officers course, and the field officers course.

For the Marine Corps Schools, the failed British experience at Gallipoli in 1915 served as a central point of study with the students continuously examining it. The numerous mistakes of the battle caused many to argue that opposed landings could not be accomplished. However, as Colonel Dunlap (later Commanding Officer, Marine Corps Schools) wrote in his study of Gallipoli, it included "many of the problems which would confront the Marine Corps on declaration of war with a naval power." For Dunlap and others, the practical analysis of the Gallipoli campaign proved vital to future success in amphibious operations, "for until we have determined upon the force and organization necessary, and have trained and equipped it (insofar as *peace time* training permits) so that it can actually execute the tasks foreseen with the maximum mobility, celerity and efficiency, the Corps will have failed to properly perform its assigned duty."[43] As a

result, the Marines used the failure of the Gallipoli campaign as a means to identify what not to do. This approach identified those areas that must be effectively addressed to conduct the amphibious operations so vital to the success of War Plan Orange.[44]

Following the joint exercise of 1925 in Hawaii, which was based on the Gallipoli campaign,[45] the Marine Corps facilitated study by increasing its instruction of landing operations. As a result of Colonel Dunlap's after action report of the Hawaii maneuvers, the Commandant required the curriculum at the Company and Field Officers Schools to incorporate ship-to-shore operations and overseas expeditions--expanding education on landing operations at each school from five hours in 1925 to 49 hours by the end of 1926. Additionally, Lejeune sent an increasing number of officers to the other service schools to broaden their education as well as bring officers from the other services to Marine Corps Schools as lecturers and instructors.[46] One of these officers was Major Holland Smith who, upon arriving at Marine Corps Schools in 1926, described his consternation to find "almost the same degree of outmoded military thought as I had found at the Naval War College."[47] For Smith, the instructors still held to the doctrines of World War I. By 1928, however, the curriculum covering amphibious operations was further overhauled, tripling the amount of instruction from that of 1926.[48] With a decreasing budget and increasing operational commitments in Nicaragua and China, the Marine Corps could not participate in any fleet landing exercises until the 1930s, leaving the Marine Corps Schools as the one venue still available to develop the advanced base concept in the 1920s.

In the 1930s, the Marine Corps Schools continued to emphasize the study of landing operations. To provide added emphasis to the educational development of Marine

officers, the Marine Corps assigned the first general officer, Brigadier General Randolph C. Berkeley, to head the school in 1930. Under his guidance, a committee was formed in 1931 to formulate a tentative text on Marine Corps landing operations. This committee evolved into the Landing Operations Text Board and was assigned the task of developing a doctrinal publication on landing operations for internal use by the Marine Corps Schools. Other boards created were the Experimental Landing Lighters Board charged with identifying landing craft requirements and the Curriculum Board designated to ensure the courses at Marine Corps Schools reflected the current developments in amphibious operations.[49] Although an actual manual was not published by 1933, the work of these boards added to the overall knowledge of landing operations and would be further developed for eventual inclusion in the *Tentative Manual for Landing Operations* published in 1934.

With a change of leadership in 1932, Brigadier General John C. Breckinridge and his assistant Lieutenant Colonel Ellis G. Miller, re-energized the schools' focus and direction and improved instruction on landing operations. The first step in this process was to re-emphasize the study of the Gallipoli Campaign, using the new official British history as the course book. The next step required the replacement of all the courses adopted from the Army with Marine-centric classes written by the instructors at the schools. Marine tables of organization and equipment also replaced the previously used Army tables, allowing solutions to tactical problems with Marine organizations and equipment.[50] The still "lingering fear that the Marine Corps would become just another army unless it were unique in as many respects as possible," fueled the process of formulating the "Marine Corps science" used in amphibious operations.[51]

The examination of landing operations--at least as part of larger naval and land operations--was not confined to just the Marine Corps Schools. The Naval War College and Army Schools also considered different strategic problems related to the war plans and foreign affairs. In analyzing a general situation, students were required to arrive at a solution after consideration of the tactical and other issues involved in the problem.[52] These exercises were often related to a Japanese attack on the Philippines. The Strategic Problem IV in 1926 at the Naval War College exemplified this practice. This exercise placed the U.S. and Japan in opposition and required the student's assessment and necessary decisions to respond to the Japanese threat. The Strategic Problem IV Special Situation stated that the available fleet "will act in cooperation with the Army" in the Philippines. As a result, the planes of the Army would assist the Navy commander in attacking the Japanese fleet and "While so employed…will be under Navy control." Conversely, when the Japanese landing took place, Navy planes "will be assigned to assist the Army. While so employed they shall be under Army control."[53] Although not directly addressing the techniques of amphibious landings, it did involve command and cooperation considerations as well as specific tactical concepts necessary for success.

The Navy War College also paired with the Marine Corps' Field Officers School annually to solve a series of ten Advanced Base Problems. These problems dealt directly with seizing or defending advanced bases in support of naval operations. This interaction with the problems "awakened an understanding of the importance of the establishment of organized fleet landing units" that would later serve to more strongly connect the Marine Corps with the Navy in conducting amphibious operations.[54]

Fleet Marine Force

President Hoover's election and the Great Depression, which continued the administration's focus on reducing expenses, served as a significant obstacle to forming a specific landing force unit. Although all the services suffered from a drawdown in personnel, each year the Marine Corps' appropriations were reduced to the point that the Marine Corps could barely meet its requirements in support of the Navy. Due to this downsizing, the Commandant determined that "the Marine Corps, with the strength provided by the Budget estimate for the Fiscal Year 1933, and with no additional duties imposed upon it, will encounter serious difficulty in the accomplishment of its MISSION of adequately supporting the NAVY and, even under the most favorable conditions will not be able to meet the requirements for forces in readiness."[55] Within this environment, the Joint Board directed reviews of roles and functions of the different services to ensure the utmost efficiency. It was during this period that General Douglas MacArthur, as the Army Chief of Staff, once again encouraged the assimilation of the Marine Corps into the Army as a means to eliminate redundancy. He ordered a review and presented a position paper arguing that absorbing the Marine Corps would save millions of dollars and not detract from the country's defense.[56] This threat convinced Major General Commandant Ben H. Fuller to tie the Marine Corps' future to the service of the Navy as its prime mission.

Throughout its history, the Marine Corps conducted expeditionary duties involving the landing of small detachments of Marines and Sailors from Navy ships serving throughout the world to protect American interests. In the twentieth century, these operations also increasingly involved pacification efforts for extended periods of

time by Marine regiments and brigades in foreign countries such as China, Haiti, Cuba, Dominican Republic, and Nicaragua. To meet these obligations, the Marine Corps pooled its resources in manpower and equipment from across the Corps to create temporary units that could deploy at a moment's notice. This process often severely depleted personnel assigned to base security and other administrative duties in order to gather enough Marines to execute a mission. The resulting unit did not possess the benefit of previously training together and suffered from the lack of a standing headquarters ready to support it during operations. To effectively support amphibious operations and gain the backing of the Navy, the Marine Corps needed a standing force trained in and capable of conducting offensive landings to seize and defend advanced bases.

To best fulfill the requirements of carrying out offensive landing operations, Major General John H. Russell, Assistant to the Commandant, recommended that the Marine Corps "should have a striking force, well equipped, well armed and highly trained working as a unit of the Fleet under the direct orders of the Commander in Chief."[57] Consequently, in 1933, with Russell's urging, Major General Commandant Fuller requested that the Chief of Naval Operations approve a name change to the Marine Corps Expeditionary Force. He recommended that this "new" force be called the Fleet Base Defense Force or the Fleet Marine Force to reflect its role as an Advanced Base Force and amphibious assault force. By providing the Navy with this fleet landing unit, it was thought that it "might stimulate Navy interest in amphibious operations and provide more funding to the Marine Corps."[58] This force existed as a standing force integral to the U.S. Fleet available solely to carry out assigned missions. As a result, it did not have to contend with additional tasking that might degrade its capabilities as in the past. On 7

December 1933, Navy Department General Order No. 241 authorized the activation of the Fleet Marine Force as "a part of the organization of the United States Fleet and [that it] be included in the Operating Force Plan for each fiscal year."[59] With the Fleet Marine Force, the Marines now had a force specifically linked to the Navy as a type-command designed to conduct offensive landing operations.[60] However, it still needed the doctrine to guide these operations.

Joint Action

The difficulties in command relationships experienced in Hawaii during the 1925 Grand Joint Exercise spurred the Joint Board to once again examine the requirements for joint action between the Army and the Navy.[61] During this process of reviewing *Joint Action of the Army and Navy in Coastal Defense,* Lejeune was asked for his input, to which he suggested that the Joint Board include delineating the responsibilities of each service.[62] Upon conclusion of the Joint Board's deliberations in 1927, it published the *Joint Action of the Army and the Navy*.[63] In chapter 1, this publication articulated the specific functions of each service in joint actions. The Army and the Navy were assigned responsibility for land and sea operations, respectively. It further stated that both share responsibility for coastal defense, following the principle that, "Sea operations by the Army or land operations by the Navy are proper only when immediately auxiliary to the normal functions."[64] The Marine Corps' primary mission was to conduct "land operations in support of the fleet for the initial seizure and defense of advanced bases and for such limited auxiliary land operations as are essential to the prosecution of the naval campaign."[65] Although both the Army and the Marine Corps were assigned tasks for land attacks and for supporting the Navy to seize and defend advanced bases, the publication

further directed that the Corps "will be given special preparation in the conduct of landing operations."[66] The defense of advanced bases resembled the same function in *Joint Action of the Army and Navy in Coastal Defense*, but this updated version now specifically acknowledged the Marine Corps' close association with this function and the requisite training required to be proficient. As an adjunct of the Army, the Marine Corps was required to perform additional duties on land as directed by the President.

Regarding command relationships, *Joint Action of the Army and the Navy* retained the concept of paramount interest already advanced in *Coastal Defense*. However, instead of determining paramount interest in relation to the enemy's strength, now it was assigned based on whether the Army or Navy force had the "greater importance." *Joint Action of the Army and the Navy* did not, however, explain how this was determined. In any event, the commander who possessed paramount interest assigned the mission to those commanders not having paramount interest and could further "designate the service to have paramount interest in subordinate operations as far as the necessity for this designation can be foreseen."[67]

Joint Action of the Army and the Navy also introduced the concept of unity of command where the President could delegate his authority to a commander of a joint operation who could then assign missions to subordinate commanders, as necessary. Under the unity of command concept, a commander was directed to maintain a separate headquarters to "coordinate the operations of the forces of both services assigned to his command by the organization of task forces, the assignment of missions, the designation of objectives, and the provision of logistic support; and to exercise control during the progress of the operations to insure the most effective effort toward the accomplishment

of the common mission."[68] Furthermore, commanders could--if deemed necessary--designate a subordinate commander to exercise either unity of command or paramount interest in accomplishing supplementary operations.

Air operations of the Army and Navy best exemplify the use of this concept of command relationships. The developing use of aircraft in support of military operations had become a point of contention between the Army and the Navy as exemplified by the 1925 joint exercise in Hawaii. To clarify which service had control over air operations and to prevent duplication of effort, *Joint Action of the Army and the Navy* defined the purpose and types of aircraft for each service. The Marine Corps air component was designated as a part of the Navy air component. With regard to command of air operations, it stated that for "a force of the service having paramount interest in the particular operation, unity of command for the conduct of the participating air forces shall be immediately vested in the commander of the force to be supported."[69] It also explained that for a common mission, the commander will "designate an officer to exercise unity of command over such task force."[70] For air operations, then, *Joint Action of the Army and the Navy* forwarded unity of command as the best means to conduct operations whether under paramount interest or during a combined air mission in a task force.

Joint Action of the Army and the Navy did much to identify the specific functions and command relationships for all joint operations. A revision in 1935 introduced a further concept of limited unity of command. A commander having paramount interest could be authorized limited unity of command, which allowed the assignment of a mission but not (as it did in unity of command) the "responsibility to control the action of the forces of the service not having the paramount interest."[71] Of note, the last change to

this publication took place in 1938 when it was recommended that "control of forces be by mutual co-operation, with each Service commanding its own forces, except where specific operations were required by war plans or by the President's order."[72] In the latter cases, unity of command would be used. Although unity of command remained an option, emphasis on mutual cooperation hearkened back to the pre-1920 version of the *Field Service Regulations United States Army* and the *Regulations for the Government of the Navy of the United States* which directed cooperation between Army and Navy commanders as the principal means for ensuring harmonious joint action. However, the reality of this command relationship, more often than not dependent on the relationship of the Army and Navy commanders involved, fell far short of the ideal. Instead of cooperation, the lack of a distinct delineation of responsibilities led invariably to conflict wherein the commanders confronted each other over who had authority over an action at a given time and location. Command relationships based on mutual cooperation remained a point of friction leading into World War II.

More importantly for the Marine Corps, the 1935 revision only included the functions of the Navy and the Army. All of the Marine Corps functions assigned in the 1927 edition were removed. In 1936, another revision was issued without the functions specifically being assigned to the Marine Corps. However, the Navy was tasked with providing forces "for emergency service in foreign territory [and]. . . . To seize, establish, and defend, until relieved by Army forces, advanced naval bases; and to conduct such limited auxiliary land operations as are essential to the prosecution of the naval campaign."[73] This omission detracted from the overall status of the Marine Corps as a separate service with a distinct mission. Although not directly tasked to the Marines, the

assignment of the previously deleted functions to the Navy, did--at least implicitly--provide for these functions to be carried out by the Marines as an adjunct of the Navy.

The 1935 version of *Joint Action of the Army and the Navy* also incorporated the previously published pamphlet from 1933, *Joint Overseas Expeditions,* in chapter 6. A tentative version was issued in 1929 as a secret document and disseminated throughout the service to solicit recommendations for improvement.[74] The 1933 edition was issued following a review of the lessons learned from the joint exercise of 1932 in Hawaii. This pamphlet included the most thorough joint doctrine on landing operations up to that time. It provided common definitions and detailed considerations for command, planning, embarkation, landing, withdrawal and re-embarkation, and communications. The portion on landings was the largest of the sections and incorporated many lessons learned from the years of examination and practical application of amphibious landings. "The major significance of this document lies in the fact that it represented a substantial body of landing doctrine, first promulgated by the Joint Board in 1929, tested in an exercise in 1932, and revised in accordance with the lessons learned in that exercise in January 1933."[75] For with all the concepts it included, the *Joint Overseas Expeditions* did not contain specific doctrine on the tactics needed to overcome a determined enemy opposing an amphibious landing. This task would be taken up by the Marine Corps.

Conclusion

The Marine Corps' usefulness to the Navy and to the U.S. as a whole rested with its ability to efficiently support the Navy in a naval campaign. Although lack of resources and manpower impaired its ability to achieve this goal, the Marine Corps did make some progress throughout the 1920s and early 1930s. Major General Commandant Lejeune

endeavored to transform the Marine Corps by reorganizing its staff to better administer its development of the advanced base mission. More importantly, he altered the defensive outlook of the past to one that centered more on offensive amphibious operations. To do this, the Corps first established the Marine Corps Expeditionary Force and then created the Fleet Marine Force, as part of the U.S. Fleet, to seize advanced bases defended by an enemy as well as conduct expeditionary duties as needed. In this way, the Marine Corps best supported the Navy, as dictated by War Plan Orange, in conducting an offensive against Japan in the Pacific.

To hone its skills in this type of warfare, the Marine Corps carried out practical application during the annual fleet landing exercises of the 1920s despite numerous obstacles such as minimum funding and lack of sufficient ship transport and landing craft. "The limitations of landing craft also meant that supporting artillery and light tanks could not get ashore to help breach beach defenses, and assault engineering, close air support, and naval gunfire were clearly inadequate."[76] Instead of dampening initiative, overcoming these difficulties served to inspire the continued refinement of its offensive capabilities in support of the U.S. Fleet.

While the Marine Corps continued its quest to define a unique task centered on developing the technical expertise to conduct offensive amphibious operations, the Army and the Navy continued to define roles and responsibilities in joint operations. To support this effort, the Joint Board published regulations concentrated on identifying specific functions for each service as well as the type of command relationships required to conduct joint operations. Based on one of its primary roles of defending the U.S. and its possessions, the Army concentrated on its coastal defense mission, namely in Hawaii, the

Philippines, and the Panama Canal Zone. As a result, the Army's participation in the annual fleet exercises concentrated on validating its defensive capacity to repel an enemy attack or invasion. These exercises highlighted its shortcomings in the size and composition of its forces as well as the difficulties involved in coordinating the joint efforts of the Army and Navy forces defending these areas. The many complications involved in amphibious landings did not inspire the Army to pursue a more offensive role, leaving it to the Marines to figure out the specific techniques. These particulars still needed to be addressed to fully create an effective amphibious doctrine that would eventually lead to victory in World War II.

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[1]*The Treaties of Peace 1919-1923.* New York: Carnegie Endowment for International Peace, 1924. The complete text of the 1919 Treaty is reprinted in http://history.sandiego.edu/gen/text/versaillestreaty/vercontents.html (accessed 30 January 2010).

[2]Edward S. Miller, *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897-1945* (Annapolis, MD: Naval Institute Press, 1991), 14. The discussion of War Plan Orange is derived from this book.

[3]Miller describes these two opposing approaches as Thrusters and Cautionaries. Thrusters advocated a campaign to overcome Japan quickly to avoid war-weariness by the American public. This expeditious response to Japanese aggression would prevent Japan from seizing U.S. possessions in the Pacific. The Cautionaries advocated the exact opposite viewpoint. For them, a longer war prevented the loss of large portions of the U.S. Fleet, allowing time for the conversion of the country's industrial base to fully support the war effort. In this course of action, the U.S. would progress across the Pacific in bounds, seizing islands as advanced bases. These efforts would undoubtedly end in a large-scale naval battle such as occurred between the Russians and Japanese in 1905. But unlike that conflict, the advanced bases would allow the U.S. to replenish and refit, sustaining its projection of naval forces until it overcame the Japanese.

[4]Miller, *War Plan Orange*, 13-14.

[5]John T. Kuehn, *Agents of Innovation: The General Board and the Design of the Fleet That Defeated the Japanese Navy* (Annapolis, MD: Naval Institute Press, 2008), 25-29. The tonnage ratio represents 100,000 tons and applied to capital ships including battleships and battle cruisers.

[6]Article 19, *Treaties and Resolutions Approved and Adopted By the Conference on the Limitation of Armament*, Senate Document No. 124, 67th Cong., 2d Sess., reprinted in Raymond Leslie Buell, *The Washington Conference* (New York: Russell and Russell, 1922), 378.

[7]Kuehn, *Agents of Innovation*, 32.

[8]J. E. Kaufmann and H. W. Kaufman, *The Sleeping Giant: American Armed Forces Between the Wars* (Westport, CT: Praeger Publishers, 1996), 49.

[9]Kuehn, *Agents of Innovation*, 131. Kuehn reviews how A. C. Cunningham, a Navy civil engineer, introduced the idea of mobile bases in 1904, but the Navy did not pursue this course because of budgetary constraints--instead relying on permanent bases already in existence.

[10]Ibid., 131.

[11]United States Marine Corps, *Annual Report of the Major General Commandant of the United States Marine Corps to the Secretary of the Navy for the Fiscal Year 1918* (Washington, DC: Government Printing Office, 1918), 16.

[12]John A. Lejeune, "The United States Marine Corps," *United States Naval Institute Proceedings* 51, no. 272 (October 1925): 1862.

[13]John A. Lejeune, *The Reminiscences of a Marine* (Quantico, VA: Dorrance and Company, Inc., 1930), 115.

[14]Kenneth J. Clifford, *Progress and Purpose: A Developmental History of the United States Marine Corps 1900-1970* (Washington, DC: History and Museums Division, Headquarters, United States Marine Corps, 1973), 27-29; Allen R. Millet, *Semper Fidelis: The History of the United States Marine Corps* (New York: MacMillian Publishing Co., Inc., 1982), 323-325.

[15]U.S. Marine Corps, Fleet Marine Force Reference Publication (FMFRP) 12-45, *Naval Bases: Location, Resources, Denial, and Security* (Washington, DC: Headquarters Marine Corps, 1992), 7-B - 8-B. This study was based on earlier work with the same title provided in a lecture by Ellis given prior to 1919. See Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington: Indiana University Press, 1977), 254.

[16]Kuehn, *Agents of Innovation*, 242 in en. 16; Millet, *Semper Fidelis*, 326.

[17]Allan R. Millet, "Assault from the Sea: The Development of Amphibious Warfare Between the Wars," in *Military Innovation in the Interwar Period*, eds. Williamson Murray and Alan R. Millet (Cambridge, U.K.: Cambridge University Press, 1996), 72.

[18]U.S. Marine Corps, Fleet Marine Force Reference Publication (FMFRP) 12-46, *Advanced Base Operations in Micronesia* (Washington, DC: Headquarters Marine Corps, 1992), 29.

[19]FMFRP 12-46, *Advanced Base Operations in Micronesia,* 39-45; Dirk Anthony Ballendorf and Merrill Lewis Bartlett, *Pete Ellis: An Amphibious Warfare Prophet, 1880-1923* (Annapolis, MD: Naval Institute Press, 1997), 119-122. Ellis explains that the movement of transports should take place under the cover of darkness so that the actual landing could occur at daybreak. This extended to the use of smoke as well. Smoke would impair friendly observation as well as that of the enemy and create confusion. Thus, the use of smoke should be confined to cover the transfer of troops from the transports to the landing craft.

[20]Commandant of the Marine Corps memo to General Board, "Future Policy for the Marine Corps as Influenced by the Conference on Limitation of Armament," 11 February 1922, File 432, Records of the General Board as cited in Clifford, *Progress and Purpose,* 30. This emphasis in mission is continued by Lejeune in "The United States Marine Corps," *United States Naval Institute Proceedings* 51, no. 272 (October 1925): 1860; "The Marine Corps, 1926," *United States Naval Institute Proceedings* 52, no. 284 (October 1926): 1962.

[21]Gordon L. Rottman, *U.S. Marine Corps World War II Order of Battle: Ground and Air Units in the Pacific War, 1939-1945* (Westport, CT: Greenwood Press, 2002), 80-82. Lejeune redesignated the Marine Corps Expeditionary Force as the East Coast Expeditionary Coast in 1922.

[22]Leo J. Dougherty III, *Pioneers of Amphibious Warfare, 1898-1945: Profiles of Fourteen Amercian Military Strategists* (Jefferson, NC: McFarland & Company, Inc., 2009), 182.

[23]Mark Skinner Watson, *United States Army In World War II, The War Department, Chief of Staff: Prewar Plans and Preparations* (Washington, DC: Historical Division, Department of the Army, 1950), 79. The Joint Board had suspended meetings during 1913-1914 but resumed them in 1915. Following World War I, the Joint Board was reorganized to include the Army Chief of Staff, Chief of the G-3 (later replaced by the Army Deputy Chief of Staff), and Chief of the War Plans Division. For the Navy, membership included the Chief of Naval Operations, the Assistant Chief, and the Director of the Navy's War Plans Division.

[24]Ray S. Cline, *United States Army in World War II, The War Department, Washington Command Post: The Operations Division* (Washington, DC: Government Printing Office, 1951), 44.

[25]Although not specifically defined in *Joint Army and Navy Action in Coast Defense,* this term dictated the command relationship between Army and Navy commanders when conducting a joint operation against an enemy. The commander of

whichever service had the predominant forces was deemed to have paramount interest and could then coordinate the actions of the other service to support his scheme of maneuver and intent.

[26]Joint Board, *Joint Army and Navy Action in Coast Defense* (Washington, DC: Government Printing Office, 1920), 14-15.

[27]Ibid., 15.

[28]John H. Craige, "The 'Wilderness' Manoevres," *The Marine Corps Gazette* 6, no. 4 (December 1921): 421-423. Interestingly, the training exercise was led by Brigadier General Smedley Butler who was an outspoken proponent of the Marine Corps' role in small wars rather than the Advanced Base Force.

[29]Kenneth J. Clifford, *Amphibious Warfare Development in Britain and America From 1920-1940* (Laurens, NY: Edgewood, Inc., 1983), 86; Millet, *Semper Fidelis*, 327.

[30]Kaufman, *The Sleeping Giant*, 37-46.

[31]United States Marine Corps, *Annual Report of the Major General Commandant of the United States Marine Corps to the Secretary of the Navy for the Fiscal Year 1924* (Washington, DC: Government Printing Office, 1924), 6; James E. Hamilton, "Early Amphibious Training Experiences," *United States Naval Institute Proceedings* 74, no. 544 (June 1948): 737-740.

[32]Clifford, *Amphibious Warfare Development*, 85-89; Millet, *Semper Fidelis*, 327; Dion Williams, "The Winter Maneuvers of 1924," *The Marine Corps Gazette* 9, no. 1 (March 1924): 21-25. Williams declared the loading and unloading of the ship USS *Sirius* an exception to the many problems that occurred during the exercise. The fact that Marine officers were involved in preparing the loading diagram contributed to this success. He recommended that an officer with a Marine detachment be assigned to the ship for this purpose.

[33]Dion Williams, "The Winter Maneuvers of 1924," 13.

[34]Joint Board, "Regulations for Joint Army and Navy Exercises," 15 August 1924, in U.S. Marine Corps, *Basic Plan, Joint Army and Navy Exercises, 1925, Problem No. 3: Blue Marine Corps Expeditionary Force*, Division of Operations and Training, Headquarters Marine Corps, 8 January 1925, 8-15. The regulations describe Grand Joint Exercises as those that include the entire U.S. Fleet or any major subdivisions and any necessary land forces. Problems for these grand exercises were prepared and coordinated by the Joint Board. Minor joint exercises were coordinated jointly by the participating Army and Navy commanders.

[35]Dion Williams, "Blue Marine Corps Expeditionary Force," *The Marine Corps Gazette* 10, no. 2 (September 1925): 87. Kenneth Clifford states that "If there was a single unchanging thread in all of the fleet exercises during the 1920s, it was the constant

recommendation that a 'suitable boat' be developed to land the landing forces." See Clifford, *Amphibious Warfare Development*, 90. Williams also identifies the need for larger aircraft carriers, further training in disembarking, and improved communications equipment.

[36]United States Marine Corps, *Annual Report of the Major General Commandant of the United States Marine Corps to the Secretary of the Navy for the Fiscal Year 1925* (Washington, DC: Government Printing Office, 1924), 11-12.

[37]John L. Hines, "Maj. Gen. Hines Reports on Hawaiian Maneuvers," *Army and Navy Journal* 62 (13 June 1925): 2258.

[38]U.S. Marine Corps, Basic Plan, Joint Army and Navy Exercises, 1925, Problem No. 3: Blue Marine Corps Expeditionary Force, Division of Operations and Training, Headquarters Marine Corps, 8 January 1925, 4-5.

[39]Leo J. Dougherty, "Away All Boats: The Army-Navy Maneuvers of 1925," *Joint Forces Quarterly* no. 20 (Autumn/Winter 1998-99): 111.

[40]In 1931 the Marines did form a provisional battalion with artillery to participate in maneuvers with the Navy onboard the USS *Wyoming* and *Arkansas*. Holland Smith, "The Development of Amphibious Tactics in the U.S. Navy, Part III," *Marine Corps Gazette* 30, no. 8 (August 1946): 44.

[41]Holland M. Smith and Percy Finch, *Coral and Brass* (New York: Charles Scribner's Sons, 1949), 59.

[42]Lejeune, *The Reminiscences of a Marine*, 115.

[43]Robert H. Dunlap, "Lessons for Marines From the Gallipoli Campaign," *Marine Corps Gazette* 6, no. 3 (September 1921): 238.

[44]Robert D. Heinl, Jr., "The U.S. Marine Corps: Author of Modern Amphibious Warfare," in *Assault from the Sea: Essays on the History of Amphibious Warfare*, ed. Merrill L. Bartlett (Annapolis, MD: Naval Institute Press, 1983), 186. Heinl describes how the Marine Corps used exercise reports and instruction at Marine Corps Schools as a "parallel approach to a common problem." The examination of the mistakes of Gallipoli to find solutions to present amphibious problems, "gave to the navy and Marine Corps, through its schools, the following: philosophy of parallel command relationships, modern technique of a controlled ship-to-shore movement, experimental development of landing craft and landing vehicles, ship-to-shore communications, doctrine of naval gunfire support, the fundamentals of embarkation and combat loading of transports, [and] the fundamentals of shore party organizations."

[45]Smith, *Coral and Brass*, 59.

[46]Clifford, *Progress and Purpose*, 36-38; Charles A. Fleming, Robin L. Austin, and Charles A. Braley III, *Quantico: Crossroads of the Marine Corps* (Washington, DC: History and Museums Division, Headquarters, U.S. Marine Corps, 1978), 51-52.

[47]Smith, *Coral and Brass*, 57. The importance of Smith and other Marine officers assigned to Navy and Army service schools cannot be over emphasized. Lejeune used these Marine ambassadors to not only learn existing doctrine practiced at the time by the other services but also to inject the Marine perspective where it may not have been before. While attending the Naval War College in 1920, Smith describes the accepted view of the institution (headed by Rear Admiral William S. Sims as the President) and the Navy as a whole as one that viewed the Marines as a secondary force. This mentality still retained the outlook of predominantly Navy personnel effecting unopposed landings with the inadequate landing boats of the time under limited naval bombardment. Smith describes his tour at the college as one consumed with forwarding the Marines' capabilities and overall role in amphibious warfare during all discussions and studies of naval plans involving problems in attacking islands and continental bases.

[48]Clifford, *Progress and Purpose*, 38.

[49]Ibid., 43-46; Fleming, *Quantico: Crossroads of the Marine Corps*, 60. Lighters were landing craft that were modifications of the scow design which were used to carry vehicles and artillery pieces.

[50]Clifford, *Progress and Purpose*, 43-46; Fleming, *Quantico: Crossroads of the Marine Corps*, 60; Dougherty, *Pioneers of Amphibious Warfare*, 256-261.

[51]Fleming, *Quantico: Crossroads of the Marine Corps*, 60-61. Fleming also identifies that the change in curriculum followed a general policy in June 1931 of adding "Marines" to its regimental organizational titles (e.g., 6th Marines instead of 6th Regiment). This period marks a strong push to identify Marine solutions to Marine problems that carried over to the development of amphibious doctrine.

[52]William F. Atwater, "United States Army and Navy Development of Joint Landing Operations, 1898-1942" (PhD diss., Duke University, 1986), 45-46.

[53]U.S. Navy, Strategic Problem IV, (Strat. 74, Mod. 2), "BLUE Statement of Problem and Staff Solution," Naval War College, 9 February 1926.

[54]Clifford, *Progress and Purpose*, 45.

[55]"U.S. Marine Corps Operating Plan for the Fiscal Year 1933, Approved By the Major-General Commandant," *Marine Corps Gazette* 17 no. 2 (August 1933): 53.

[56]Merrill L. Bartlett, "Ben Hebard Fuller and the Genesis of a Modern United States Marine Corps, 1891-1934," *The Journal of Military History* 69, no. 1 (January 2005) 85-86; Krulak, *First to Fight*, 80.

[57]John H. Russell, "The Birth of the FMF," *United States Naval Institute Proceedings* 72, no. 515 (January 1946): 51.

[58]Rottman, *U.S. Marine Corps World War II Order of Battle*, 82-85.

[59]Navy Department General Order No. 241, "The Fleet Marine Force," 7 December 1933, reprinted in Rottman, *U.S. Marine Corps World War II Order of Battle*, 83.

[60]In the Navy, all ships were organized into categories by general mission type, e.g., the Scout Fleet, the Battle Fleet, the Control Fleet, and the Fleet Base Force, etc. The creation of the Fleet Marine Force and its classification as a type-command gave it equal status with these other type-commands.

[61]These coordination issues most often involved the use of aviation in coast defense.

[62]Millet, *Semper Fidelis*, 328.

[63]*Joint Action of the Army and the Navy* defined joint operations as "Operations, usually requiring tactical coordination, conducted by forces of the Army and of the Navy for the accomplishment of a common mission." Joint Board, *Joint Action of the Army and the Navy* (Washington, DC: Government Printing Office, 1927), 10.

[64]Joint Board, *Joint Action of the Army and the Navy* (Washington, DC: Government Printing Office, 1927), 2.

[65]Ibid., 3.

[66]Ibid., 12.

[67]Ibid., 5.

[68]Ibid.

[69]Ibid., 9.

[70]Ibid.

[71]Joint Board, Field Training Publication (FTP) 155, *Joint Action of the Army and the Navy* (Washington, DC: Government Printing Office, 1936), 7, http://www.ibiblio.org/hyperwar/USN/ref/Joint/index.html (accessed 15 March 2010).

[72]Kenneth J. Clifford, *Amphibious Warfare Development in Britain and America From 1920-1940* (Laurens, NY: Edgewood, Inc., 1983), 148; Atwater, "Joint Landing Operations," 112-113; James Joseph Henry, IV, "A Historical Review of the

Development of Doctrine for Command Relationships in Amphibious Warfare" (Master's thesis, Command and General Staff College, 2000), 35.

[73]Joint Board, Field Training Publication (FTP) 155, Change No. 1, *Joint Action of the Army and the Navy* (Washington, DC: Government Printing Office, 1936), 3, http://ibiblio.org/hyperwar/USN/ref/Joint/joint-c1.html#6 (accessed 15 March 2010).

[74]Atwater, "Development of Joint Landing Operations," 71.

[75]Ibid., 74.

[76]Millet, "Assault from the Sea," 75.

CHAPTER 4

TRAINING AND AMPHIBIOUS DOCTRINE: 1934-1942

The U.S. government's policy of fiscal austerity in the 1920s continued into the 1930s. This focus manifested itself each year in the proposed reductions of the military services and the limitations on procurement of equipment necessary to adequately defend the country. The lack of resources also affected the priorities of each service. With less to work with, the Navy diverted most of its funds and concentrated its effort to developing battleships and aircraft carriers (and the required aircraft to go with them) which would be needed for a decisive action--namely, a naval battle against the Japanese. The Army focused much energy on the effects of new technologies to mechanize and motorize its forces as well as on the best use of air power to conduct extended land campaigns and defend the U.S. against an invasion. The Marine Corps' labors went toward proving its usefulness and overall efficiency as introduced by Major General Commandant John A. Lejeune. In doing so, the Marine Corps struggled to define what it saw as its true amphibious mission of seizing advanced bases with the required manpower to achieve it. At the same time, the Marine Corps continued to do everything else asked of it, from expeditionary duty to ships' detachments to protecting the U.S. mail. Each service, then, strove to obtain its share of the limited resources available to promote its own interests. Ultimately, this fiscal austerity influenced the overall importance and enthusiasm the Marine Corps directed toward the development of amphibious warfare techniques.

Marine Corps Schools' Contribution to Doctrinal Development

The general direction contained in *Joint Overseas Expeditions* articulated the responsibilities of the Navy and Army and provided the broad concepts for cooperation in amphibious operations--as tested during the fleet landing exercises in the 1920s. However much this publication forwarded the ideas on amphibious thought, it still did not provide the specific doctrine for the embarkation and debarkation of a combat ready force capable of movement from ship-to-shore in order to assault across the beach and defeat an opposing enemy. In the early 1930s, the Marine Corps began to focus its efforts in this direction. With the formation of the Fleet Marine Force, the Marine Corps possessed a unit that could seize and defend advanced bases, but still lacked a doctrinal foundation to guide its actions. The Landing Operations Text Board was founded to develop curriculum that addressed landing operations for internal use at Marine Corps Schools in order to fill this gap in doctrine. The board's work, along with the increased emphasis on landing operations as part of the curriculum at Marine Corps Schools, created momentum that was seized upon by the new leadership of Brigadier General James Breckenridge and Colonel E. B. Miller. Miller became the driving force who steered the Marine Corps' efforts to develop needed doctrine.[1]

To generate the amphibious doctrine necessary for the Marine Corps, on 28 October 1933, Major General Commandant Ben H. Fuller ordered Breckenridge to "proceed as expeditiously as practicable to prepare for publication a manual for landing operations."[2] At this same time, the Marine Corps' increasing operational commitments, caused by the mobilization of 7th Marines for duty in Cuba, severely depleted available personnel at the Marine Corps Schools--and throughout the Marine Corps--for further

development of the curriculum. As a result, Fuller authorized the Marine Corps Schools to suspend classes in order to devote the full energy of both the instructors and the students to this process.

With *Joint Overseas Expeditions* of 1933 as a basis, committees were convened to formulate an outline of the manual from which chapters were written. In doing this, a chronological approach was used to identify the components of a landing operation from inception to completion. In January 1934, a conference was held with seventy officers of all ranks from the Fleet Marine Force (including four Navy officers and one Army officer) to review the outline. After agreeing upon the outline, groups of students were formed into groups led by an instructor to write a specific chapter based on personal knowledge and past experience. The insight gained from the Marine Corps Schools' detailed analysis of the Gallipoli Campaign and the initial work completed by the Landing Operations Text Board undoubtedly contributed to this process. In addition, "exchanges with officers from Headquarters and the Naval War College" also provided needed refinement to their products.[3]

The exertions of these students and instructors culminated on 13 June 1934 with the submission of the final chapters. This effort produced the *Tentative Manual for Landing Operations, 1934*. Although groundbreaking, "It was a work not too well written, it was not handsomely printed, and it was bound with shoestring but it was there, some 127,000 words of it—more hard, doctrinal pronouncement on the seizure of an objective by amphibious assault than had ever been assembled in one place in all of history."[4] The *Tentative Manual* was used within the Marine Corps Schools for the 1934-1935 course and was also published and distributed solely within the Department of the

Navy as the *Manual for Naval Overseas Operations* in July 1934. The following year, during a revision process, inclusion of constructive comments, as well as photographs and sketches produced the *Tentative Landing Operations Manual, 1935*. The next revision board produced the updated version with the title *Landing Operations Doctrine, U.S. Navy 1937*. Then, on 25 November 1938, the Navy incorporated the Marine effort into the Fleet Training Publication (FTP) 167, *Landing Operations Doctrine, U.S. Navy 1938*.

More so than *Joint Overseas Expeditions*, the *Tentative Manual* provided detailed guidance on command relationships, naval gunfire support, aviation support, ship-to-shore movement, securing the beachhead, and logistics. As a naval operation, the Navy commander was in charge of the task force composed of the landing force--designated from units of the Fleet Marine Force--and the naval support groups.[5] Thus, the amphibious operation relied on unity of command under the naval task force commander. Important to the Marine Corps and desirous for the Navy, this command structure allowed the Navy commander to direct the landing force commander's action ashore. However, the *Tentative Manual* failed to clarify the procedures for transferring command ashore for long campaigns. Additionally, great emphasis was placed on the importance of fire superiority by naval gunfire and aviation support as a means to fill the gap caused by the landing force's lack of internal fire support during its movement ashore--the most critical phase of the operation. To facilitate the movement and supply of the landing force once ashore, the *Tentative Manual* identified the importance of combat loading the ships based on the requirements of the landing force. In this way, priority of embarkation of both personnel and equipment reflected how and when the units were going to be

employed according to the ground scheme of maneuver--first to be used were the last to be loaded. The *Tentative Manual* marked an amalgamation of past experience and guidance disseminated in previous manuals with the technical details of "Marine Corps science" necessary to form an enduring doctrine that would stand up to the test of combat in World War II.

Fleet Training Exercises

With both the amphibious doctrine and the Fleet Marine Force (although sorely undermanned) to carry it out, the Marine Corps still needed to perfect its procedures and validate the tenets through experimentation. Practical application to achieve these objectives began in 1935 and continued annually until 1941 with the Fleet Landing Exercises (FLEX). The FLEXs took place predominantly in the Caribbean on the island of Culebra, but some were also conducted at San Clemente, California. Like the landing exercises in the 1920s, the FLEXs involved Navy maneuvers with available ships and a landing force of Marines, but they increasingly included soldiers--initially as observers, but later as participants.

FLEX No. 1 took place from 21 January to 8 March 1935 and FLEX No. 2 the following year, between 4 January and 24 February--both at Culebra. The 5th Marines (minus one battalion) and a battalion of the 10th Marine Artillery Regiment (with 75mm and 155mm artillery guns) and aviation elements from First Marine Air Group served as the major elements of the landing force, which averaged approximately 1,500 Marines each year. The Navy supplied five ships in 1935, including a cruiser, three destroyers, two battleships, and a troop transport. Five of these ships also participated the following year, with an additional cruiser and two destroyers joining the exercise. The Army also

sent representatives each year as observers to garner the lessons learned from the Marines' experiences.

The first of these exercises concentrated on field training ashore rather than ship-to-shore movement, although one battalion-level landing was conducted. Marines piled into ships' boats daily for movement ashore to conduct training. Despite being severely restricted, this training included practice in aviation bombing, strafing, and laying of smoke screens. The Navy and Marines also experimented with a 50-foot motor launch adapted to move artillery and small vehicles ashore and discharge them over a ramp. Unfortunately, this technique proved inadequate and increased the likelihood of capsizing because the boat became too top-heavy.[6]

Most importantly, practice in naval gunfire support did take place; even though, there was no fire in conjunction with the landings for safety reasons. The work with naval gunfire focused on experimenting with the effects of various types of shells on shore targets, controlled by both aerial and shore observation. "Experiments were made to determine the destructive and anti-personnel effects of naval ordnance, the effect of gunfire on reverse slopes and the particular missions for which given caliber projectiles and fuses were best suited."[7] The results showed area fire superior to pin-point bombardment.[8]

Unlike FLEX No. 1, FLEX No. 2 incorporated much more practice in landing operations--eight in all, to include four day (with and without smoke screens) and two night battalion-level, one day regimental-level, and one day brigade level-landings.[9] The ship-to-shore portion involved the movement of men and equipment, but failed to use the opportunity for exercising "beach and shore party organization, liaison with supporting

ships, nor the problem of handling ammunition and other supplies in a landing operation."[10] The landings using smoke screens proved rather ineffective, due to the smoke dissipating rapidly and failing to conceal the subsequent waves of boats. Also problematic were the night landings, in which confusion reigned despite the use of light markers on shore and on many of the ships, resulting in missed rendezvous points and landings at the incorrect beaches. Following these landings, one Army observer noted that many "Marine Corps officers are against any night landing, principally on the grounds of the difficultly of control in a strange area. Many also believe that smoke is undesirable for the same reason."[11] Additionally, naval gunfire support validated the preference for a high explosive round over an armor piercing round against shore targets.[12] Experimentation with spotting naval gunfire rounds by using a gridded map to direct fire also proved very useful.[13] Overall, the first two FLEXs afforded the Marine Corps and Navy (and the Army observers) outstanding opportunities to identify many useful lessons through practical application, which ultimately validated the basic doctrine contained in the *Tentative Manual*.

In 1937, the Army became more interested in FLEX No. 3, which was held at San Clemente, California, and attached the 1st Expeditionary Brigade made up of the 30th Infantry Regiment and other units.[14] Also, for the first time, both the East and West Coast Fleet Marine Force units participated together.[15] Together, these units totaled 251 officers and 2,479 enlisted Marines with 61 officers and 731 enlisted soldiers from the Army. At sea, in addition to the increased number of combat ships, the Army also provided a transport to go with the three Navy transports. During the month prior to commencement, the Marines offered instruction on amphibious landings, in accordance with the *Tentative*

Manual, to the Army officers and supervised practical application for all soldiers. Although this training went well, the same success did not carry over to the landings during the actual exercise. As in the past, obscured and unobscured daylight landings were conducted along with night landings. The heavy surf helped highlight, once again, the inadequacy of the landing boats, which often capsized. As Holland Smith recalled, these experiences, along with the results from testing other types of landing craft, emphasized the "real need for fast, maneuverable, surf-riding landing craft was again clearly indicated, and valuable recommendations were contributed for the development of special craft as a result of the exercises."[16] On a much larger scale from previous FLEXs, participants gained valuable experience in naval gunfire and air support which was used during the landings, unlike in the past. Although some advances were made, namely in the aforementioned naval gunfire and aviation support, the Marine Corps and the Navy still had far to go to overcome the shipping and equipment deficiencies prevalent at the time. The Army, with the Marine Corps' help, did prepare a provisional amphibious unit to participate in the exercise, but still did not vigorously pursue an amphibious role.

The following year, in 1938, the Army also took part in FLEX No. 4 with the 2nd Provisional United States Army Brigade (18th Infantry Regiment with a battalion of 7th Field Artillery) composed of 42 officers and 547 enlisted soldiers. However, FLEX No. 4 marked the last exercise the Army participated in with the Marines until 1941. The Marine Corps contributed the 1st Marine Brigade consisting of 153 officers and 1,200 enlisted Marines. The training in landings, naval gunfire support, and aerial support provided similar results to those from the previous year. On this occasion, however, the amphibious training was even more realistic, with less artificiality incorporated into the

problems and the use of an opposing force, culminating in a brigade landing against two National Guard regiments and one Regular Army regiment, at Puerto Rico.

Many lessons were gleaned from the experiences of both the Army and Marine Corps. The use of smoke screens during the landings created confusion among the attacking force and provided an advantage to the defenders rather than the assault force.[17] Reports also identified aircraft carriers as a requirement to provide aviation support during amphibious landings. The usual lack of troops and inadequate landing craft continued to plague the exercise. Interestingly, during the last phase of the training, the Navy commander transferred command ashore to the 2nd Provisional U.S. Army Brigade so that the brigade's commander could exercise his staff during this portion of the training. This incident was officially noted in the Navy's report on the FLEX as an alternative to the Navy commander retaining control of shore operations in addition to naval actions per the existing doctrine.[18] Although not part of the official objectives of the FLEX, it did show that cooperation among commanders was critical to transferring control ashore during an amphibious operation.

Participation of the Army in this exercise represented a growing awareness of the importance of the FLEXs and amphibious training. Although not a focus in the past, for some this understanding was becoming clearer. The Army Chief of Staff General Malin Craig, requested the Navy's Chief of Naval Operations to allow the Army to participate in amphibious training more substantially in the future. On 11 August 1938, Admiral William D. Leahy replied that he believed the opening phase of a war would be naval in character and not a joint operation. As such, it would involve "the seizure of temporary bases in the immediate theater of fleet operations. It is essential that naval forces,

including the Fleet Marine Force, perfect the doctrines and techniques of such operations."[19] This naval perspective, along with a shortage of ships for large landing forces, most likely contributed to the focus on the Marine Corps as the major participant of successive FLEXs until 1941 when the Army once again participated in the joint exercise.

This exchange followed a series of correspondence between Leahy and Craig earlier in the year concerning necessary changes to the *Joint Action of the Army and Navy*. The content of these letters recommended that mutual cooperation become once again the method of cooperation between the Army and the Navy, instead of the more ambiguous paramount interest. However, Leahy still proposed unity of command for operations such as amphibious landings, which were overall considered naval functions. In March 1938, the General Board of the Navy recommended a revision that once again emphasized cooperation as the primary command relationship, with unity of command also an alternative when directed.[20] This suggestion probably reflects Leahy's desire to ensure that the Navy remained in control of the type of operation most likely needed to fulfill the requirements of War Plan Orange.[21]

During this time, there was a growing realization that War Plan Orange, which depicted the U.S. fighting Japan alone, did not reflect current realities. The collaboration between Japan, Germany, and Italy exemplified by the Anti-Comintern Pact of 1936, indicated that any future war would most likely involve opposition from multiple countries.[22] As a result, the Joint Board directed a review of the war plan. The problem of determining the possible situation within which the U.S. would fight became the sticking point--specifically, whether the U.S. would have any allies and whether it would have to

fight simultaneously in the Atlantic as well as the Pacific theaters. The revised War Plan Orange of 1938 maintained the offensive strategy in the Pacific, but for the first time also included the possibility of a concurrent conflict in the Atlantic.[23]

In the fall of 1938, the Joint Board directed the study of a two-front war waged simultaneous and its impact on the defense of the U.S. and the Western Hemisphere. This examination resulted in the joint war planners recommending the development of new war plans that incorporated the idea that the enemy would be composed of a coalition, rather than a single aggressor. This study resulted in the formulation of a series of five Rainbow Plans that addressed multiple combinations of allies and aggressors that might develop. The outbreak of war in Europe highlighted the efforts to update American strategy, and the President issued a limited national emergency which began a gradual expansion of military forces.[24]

World events and then current war planning gave even more relevancy to FLEXs No. 5 and 6, which took place from mid-January to mid-March in 1939 and 1940, respectively. Both years saw approximately 2,000 Marines participate in a series of three progressive landings--opposed and unopposed--from battalion to brigade level, including night landings. The training during each of these exercises tried to build upon the experiences of previous ones, but continued to suffer from many of the same deficiencies. The use of destroyers as troop transports proved useful in compensating for the existing transport deficiencies experienced to date, although their use fell far short of rectifying the problem.[25] Moreover, adequate landing craft were still conspicuously absent, with the result that training suffered accordingly. Most importantly for the participating forces, the application of the doctrine contained in the *Tentative Manual* and now FTP 167 (issued in

1938) concerning combat loading and landing techniques could not be fully achieved during the amphibious training because of the lack of sufficient transports and landing craft to simulate wartime conditions.

These exercises did provide opportunities to test a wide variety of different landing craft to address this gap in capability.[26] During the two FLEXs, the most notable of the experimental landing craft was the 36-foot Higgins "Eureka" boat, which outperformed the various versions of the Navy-designed boats.[27] Its shallow draft allowed it to be grounded on shore and then retracted with little difficulty. The advantages of this design, along with its easy handling and maneuverability, compared to the other boats tested, became evident by the end of FLEX No. 6. Its overall performance resulted in the acceptance and eventual purchase of the personnel and tank versions of the craft, known as the Landing Craft, Vehicle and Personnel, or LCVP, and the Landing Craft, Mechanized--also identified as the LCM.[28] The Higgins boat would prove to be one of greatest innovations that improved the execution of amphibious operations. As Holland Smith later claimed, these craft "did more to help win the war in the Pacific than any other single piece of equipment."[29]

Then Brigadier General Holland Smith was the newly-appointed commander of the 1st Marine Brigade during FLEX No. 6, where he distinguished himself for his leadership style. He fostered initiative in those he led, identifying the goals and objectives of the exercise and letting his subordinates figure out the details. Smith was an intellectual and a perfectionist to a fault, earning him the nickname of "Howlin' Mad" to describe his temper when confronted with inefficiency or outright incompetence.[30] These

traits helped drive the training during FLEX No. 6 and undoubtedly contributed to his dramatic impact on the development of amphibious warfare.

Between FLEX No. 6 and FLEX No. 7, Smith continued to train his brigade in amphibious tactics, but decided to do it in a new locale with the challenges this change entailed. He selected Guantanamo Bay, Cuba, and arrived there 19 October 1940. The brigade alternated between establishing the necessary facilities at the Naval Station--which was not equipped to handle the additional personnel--and conducting small unit landings on Culebra and St. Thomas, U.S. Virgin Islands. In November, the Marines also tested a new amphibian vehicle called an "Alligator" after its initial demonstration at Quantico.[31] The noted deficiencies related to its power, communications, tracks, armor, and controls were reported and modifications eventually incorporated in a new version of the vehicle. Nevertheless, the overall positive feedback proved enough to secure a contract for 200 amphibian vehicles before the modifications were completed.[32] The Marines continued their intensive training until the unit was redesignated the 1st Marine Division just four days prior to its participation in FLEX No. 7.[33]

The Army's lack of participation in FLEX No. 6 did not indicate its total disregard for amphibious training. International developments and a revision of U.S. strategy required focus in this area. Since it was not scheduled to take part in FLEX No. 6 and it was too difficult to adjust planning to include significant Army forces, the Army conducted a division-level joint exercise on the West Coast in January 1940. This exercise was designed to test the joint doctrine contained in *Joint Action of the Army and Navy* and did not address the doctrine contained in the FTP 167, which was strictly a naval publication at the time. However, the Army did not achieve its goal of providing

practical application in amphibious operations to the entire 9,000 man 3rd Infantry Division.[34] Naval concerns for the safety of the landing craft and untrained boat crews drove Admiral James O. Richardson to only land approximately 1,500 soldiers across the beach, with the rest landed at the Monterey Wharf. The lack of both an adequate number of landing craft and support from the Navy disappointed the Army and contributed to a perception that the Navy was unwilling or incapable of supporting the joint plans for the upcoming war.[35]

During this same period the war in Europe continued to develop in favor of the Germans. The defeat of France and the uncertainty of Britain's ability to withstand the German offensive caused a review of the Rainbow Plans. Japan's open aggression in the Far East during the fall of 1940 only added to the need for a re-assessment of U.S. strategy and increased coordination with the British. In early November, the Chief of Naval Operations, Admiral Harold R. Stark, forwarded an analysis of strategic options available to the U.S., which was distinctly dependent on partnership with the United Kingdom. He stated that "if Britain wins decisively against Germany we could win everywhere; but that if she loses the problems confronting us would be very great; and while we might not *lose everywhere*, we might, possibly, not *win* anywhere."[36] In other words, U.S. security was inextricably tied to cooperation with the United Kingdom and focus on Europe. This view reinforced a policy indentifying the European Theater as decisive. The past primacy of a Pacific war contained within the many versions of Plan Orange became obsolete and the loss of France now provided added emphasis for the Army to develop the amphibious skills necessary to retake Europe in fulfillment of the American's new "Germany First" policy.[37]

The situation in Europe and the growing realization that proficiency in amphibious operations would be required in both the Pacific and the Atlantic raised the importance of FLEX No. 7. The final FLEX took place in 1941, once again at Culebra and Vieques, during the first two weeks in February. Rear Admiral Ernest J. King maintained unity of command as the Commander of the newly designated Atlantic Fleet. Major General Holland Smith commanded the landing force composed of the newly formed 1st Marine Division and the Army's 1st Division, which had been designated, along with 3rd Division, to conduct amphibious training.[38] However, events leading up to this exercise pitted the Army against the Navy in the continuing debate over the Navy's capability to adequately support the Army's growing requirement for division-level amphibious training. A temporary compromise resulted in the 1st Division being invited to take part in FLEX No. 7, although only in proportion to the size of the Marine forces.[39]

Each force conducted a series of three landings which provided opportunities both to determine the time needed to debark a battalion from a transport into a landing craft and to conduct needed boat training. Sufficient shipping and landing craft were again conspicuously absent, although the five transports and three destroyer transports (a result of the 1940 naval expansion bill) reflected the most available for a FLEX to date.[40] Advancements in naval gunfire also proved elusive since most of the ships lacked modern fire control equipment and the right mix of ammunition. However, the high rates of fire of the heavy cruisers and their low muzzle velocity, which allowed them to reach the reverse slope, did prove ideal for providing fire support during amphibious landings.

Besides the now constant shortage of equipment, problems of command relationships also became evident during FLEX No. 7. Like Smith, King had very

specific ideas of how the training should transpire. As the overall commander, King decided to choose a landing beach that, in Smith's opinion, would prove suicidal under combat conditions by exposing the forces to enfilading fire upon approach. The heated exchange reached an impasse until Smith won over the Admiral with the argument that "his decision, if he insisted upon it, would seriously reflect on the judgment of the higher command in the minds of the men who knew such a choice was wrong in amphibious warfare."[41] This did not stop the controversy, as King attempted to choose another beach which was also unsuitable, being in a marshy area susceptible to malaria. Once again, Smith's arguments prevailed, limiting--in Smith's view--King's interference in the landing force's plan, which was his responsibility.

Once the Marines effected the landing and Smith transferred his headquarters ashore for training, King conducted an inspection of the Marines' position, which was within his purview as the overall commander. In Smith's opinion, King was reluctant to relinquish any control and he resented King's judgment of the Marines because Smith believed King did not have experience to do so.[42] It is interesting to note that King's command directives to date emphasized decentralization of command and empowering his subordinate commanders to make decisions based on their initiative and good judgment. On 21 January, he issued a circular letter to all his commanders entitled "Exercise of Command--Excess of Detail in Orders and Instructions." Within its paragraphs, he states:

> It is essential to extend the knowledge and the practice of "initiative of the subordinate" in principle and in application until they are universal in the exercise of command throughout all the echelons of command. Henceforth, we must all see to it that full use is made of the echelons of command . . . by habitually

> framing orders and instructions to echelon commanders so as to tell them "what to do" but not "how to do it" unless the particular circumstances so *demand*.[43]

In light of this directive, one can only conjecture at the cause of King's overly constrictive handling of Smith during the exercise. A possible explanation may be King's previous lack of experience with amphibious operations prior to FLEX No. 7. However, Smith's exhibited proficiency and initiative throughout the exercise eventually swayed King to accept his advice and, rather than relieve Smith (as he threatened), offer his congratulations and express his feeling that "such well-trained troops, so well commanded, are an integral part of the Atlantic Fleet, and my confidence in their capacity to do their full part and to do us all credit in whatever active operations may come our way."[44]

These interchanges underscore the friction that existed within the command relationships of the landing force and amphibious force commanders. The strong personalities of both King and Smith compounded the situation but also led to a mutual respect grounded in competence. Unlike FLEX No.4 when the naval commander transferred command ashore to the Army commander, King maintained his authority, exercising it by involving himself in decisions of the landing force and in its direction once ashore. King's actions reflected the authority provided him as first encapsulated in the *Tentative Manual For Landing Operations* and continued in the doctrine of FTP 167. The personal relationship forged during this training proved essential to work through the conflicts of command inherent in amphibious landings and helped shape King and Smith in their future planning and execution of amphibious operations.

First Joint Training Force

Smith's unending crusade to prove the Marine Corps competent in amphibious operations created both adversaries and proponents. The positive results of his personal drive and outspoken advocacy for perfecting the conduct of amphibious operations led to his appointment as the commander of the First Joint Training Force in June 1941. This command, located at the new Marine Corps Base at New River, North Carolina, included the 1st Marine Division and the Army's 1st Division. A similar organization was created later that year on the West Coast under Major General Clayton Vogel with the 2nd Marine Division and the Army's 3rd Division. These units were directed to "plan, conduct, coordinate, and supervise all amphibious training in a series of exercises."[45] To guide this training, the Joint Board issued the Carib Plan on 21 June and Pearl Plan on 9 September.[46]

The first phase of the training in New River began with small unit exercises in July and proceeded to battalion- and regimental-level landings in July.[47] This was followed by the second phase involving a two-division landing in August, which was the largest landing attempted to date.[48] The newness of the regiments of the Army's 1st Division required preliminary training prior to the exercise. During this preparation the Army requested copies of FTP 167 from the Navy and quickly adopted it with only slight modifications as Field Manual 31-5, *Landing Operations on Hostile Shores* on 2 June 1941.[49] With this doctrinal background, the 1st Division completed its preparatory training by 23 July and embarked its assigned ships to take part in the joint exercise.

Limited exposure to the amphibious doctrine and general inefficiency contributed to the numerous issues encountered during the exercise. The embarkation and

debarkation of personnel and gear revealed insufficient numbers of transports and improper combat loading. Combat teams were split up, which ran counter to accepted doctrine, and four battalion landing teams from the 1st Division were not combat loaded.[50] Shore party operations also proved extremely disorganized and inadequate. The poor attention to logistics during the smaller FLEXs became manifest in the confusion and delays in offloading and distributing supplies to the landing force, compounded by the lack of dedicated personnel and vehicle support. The generally inexperienced shore fire control parties also failed to establish effective communications with firing ships, inhibiting effective naval gunfire training. In Smith's opinion, however, the "experience[s] gained in the New River exercises were extremely valuable and showed the need for frequent full-scale rehearsals to test the efficiency of equipment, organization, staff functioning and training."[51] In other words, despite the numerous problems experienced during the training (and specifically because of them), many lessons were drawn from the exercise which provided focus for future amphibious training.

Following the August exercise, the First Joint Training Force was disbanded and immediately reconstituted as Amphibious Force, Atlantic Fleet to continue the joint amphibious training for the services. Under its supervision, the second joint landing exercise, called Joint Army and Navy Exercise 1, took place in January 1942. The outbreak of war detracted from this exercise, and it turned out to be a rather small affair focused on ship-to-shore movement techniques--mainly for the battalions of the 1st Infantry Division.[52] Even with the limited goals, the performance was poor overall. The majority of the battalions landed on the wrong beach because of poor planning and

coordination between the Navy and the Army. Most of the past mistakes seemed to be relived once again, and the training, as a result, fell far short of expectations. Smith also offered harsh criticism of the Navy's support of the exercise and believed that the result was "the loss of confidence by the first-class combat troops in the ability of responsible command echelons to place them ashore in formations that would offer a reasonable chance of success."[53] He also recommended that unity of command should rest with the landing force commander, who had more of a vested interest in the efficient execution of amphibious operations.

Culminating with this exercise, the 1st Infantry Division became the most trained amphibious unit in the Army after conducting five amphibious maneuvers throughout the previous year. As such, the Army chose it as the assault element of a possible operation in Africa and detached it from Amphibious Force, Atlantic Fleet. Future focus for the division commander would shift to division-level conventional operations in anticipation of those kinds of missions as well, although 1st Infantry Division continued to participate in smaller unit amphibious training. The Army's broad view of operational requirements stemmed from an internal organizational debate over specialized and general proficiency training. Unlike the Marine Corps, which focused primarily on amphibious operations, the Army maintained a broader view. It still valued specialized training, but in a more complementary role to the basic general training. General George C. Marshall's comments reflected this idea. "The need for specialized training . . . is not questioned, but it should follow--not precede--the basic and general training indicated. . . . In other words, I do not question the need of special training, but believe that in general its

priority is below both expansion and sound general training."[54] With this approach, the Army endeavored to comprehensively prepare its growing number of soldiers for combat.

The 9th Infantry Division took the place of the 1st Infantry Division in the redesignated Amphibious Corps, Atlantic Fleet in order to continue joint training with Marine units in amphibious techniques during the spring and summer of 1942.[55] This training evolved into a ten day program of preliminary training, followed by a day and night regimental landing exercise, which emphasized communications and logistical support as much as possible.[56] Specialty schools at various bases on both coasts were also established to conduct naval gunfire, transport loading, and communications training in support of amphibious operations. The impact of the Amphibious Corps, Atlantic and Pacific, cannot fully be delineated. However, Holland Smith boasts

> that the first three U.S. Infantry divisions ever to become amphibious units, the 1st, 3rd and 9th, were trained by the Marine Corps; these were likewise the total of assault infantry divisions which executed our North African landings. Furthermore, in addition to these crucial three divisions, Marines trained the 7th, 77th, 81st, and 96th Infantry Divisions. . . . With seven Marine-trained divisions, even the Army, I should think, would find relatively little difficulty in carrying on with training the rest.[57]

Without a doubt thousands of Marines, soldiers, and sailors received valuable exposure to the intricacies of amphibious operations that helped prepare them for the forthcoming challenges in the European and Pacific theaters of World War II. With the valuable knowledge gained through exposure and training in amphibious operations, the Army dedicated itself to further meet its expanding training requirements in preparation for expected operational commitments.

Army Amphibious Training School and Engineer Amphibious Command

The continued frustrations experienced during the amphibious exercises with the Navy and Marine Corps prompted the Army's General Staff to review options regarding the best training possible for its divisions. Smith made no friends with his critique of the Army and Navy after Joint Army and Navy Exercise 1. However, like Smith, the Army General Staff recommended that unity of command rest with the landing force commander rather than the Navy, which had continually failed to effectively support the Army during training. To this end, the Army began to direct its efforts toward establishing its own amphibious training center to compensate for the Navy's inability to supply enough trained crews for landing craft.[58] This organization would train soldiers from an Army perspective at a level that would meet the manpower needs for expected operations in Europe. The planners on the Army's General Staff believed that "only the Army had both the means and grasp of the problem to plan, prepare, and train the necessary ground and air forces for joint amphibious operations on the scale envisaged."[59] Unlike the Marines with limited objectives, projected Army operations in the Atlantic and Southwest Pacific required the forces with the requisite logistical support for extended land operations.

The exertions of the General Staff culminated in the activation of the Army's Amphibious Training Center at Camp Edwards, Massachusetts, on 15 June 1942.[60] This unit was originally tasked to train twelve divisions, but this goal quickly changed in July to the more realistic number of five divisions. The change in mission also caused modifications to organization and structure, which became the norm during the center's tumultuous and brief existence. With Europe in mind (as well as to avoid more issues

with the Navy), shore-to-shore training and the development of the required doctrine became the focus.[61] This left ship-to-shore training within the realm of the Navy. Instruction design endeavored to mold a division into "a highly-efficient, well-coordinated, hard-hitting, and fast-moving amphibious force, thoroughly qualified to act independently or in conjunction with other army troops and naval forces in a combined operation. This objective also includes the mental and physical hardening of all officers and enlisted men for arduous field service and battle."[62] With this in mind, the first 23-day course of instruction began shortly after activation on 15 July.

To compensate for the inadequate Navy support, the Army also created the Engineer Amphibian Command on 9 May 1942. This unit began to form engineer amphibian brigades to operate small landing craft and to provide "essential shore engineering on the beaches" for shore-to-shore operations.[63] In preparation for its anticipated involvement in future amphibious operations, the Army's Corps of Engineers had already completed a study in 1940 and 1941 of the problems involved. The committee assigned to conduct the study, which included one Marine, spent four weeks reviewing Marine Corps and British doctrine and landing techniques as well as the tactics of the Japanese and Germans. Its findings revealed that engineers would have a significant role in this type of warfare. As a result, the committee recommended that engineers, along with shore party duties, should receive training in small boat handling in addition to loading and unloading procedures.[64]

The committee's recommendations were validated during the Joint Army and Navy Exercise 1 in early 1942. As a result, the Army finally acted to establish specialized engineer units to support the Amphibious Training Center. Like the Amphibious Training

Center, the Engineer Amphibian Command had to create the doctrine it would follow for shore-to-shore operations. Throughout its development, "in matters of organization, equipment and tactics the original atmosphere of open-minded experimentation . . . [was] intentionally maintained."[65] With this principle in mind, Colonel Daniel Noce commanded and began to recruit from across the services, as well as the civilian sector, to gain the widest level of experience in engineering, boat handling, and maintenance as quickly as possible. With only a minimum amount of time available, he formed and trained the 1st Engineer Amphibian Brigade, providing the necessary boat crews in order to assist in training the first division (45th Infantry Division) at Camp Edwards.[66]

As with most hurried endeavors, the Center experienced many challenges. The rushed preparations to begin training, not only required building the proper facilities but also the recruiting and training of the instructor staff. Rather than taking part in a well-established curriculum with proven procedures, instructors often conducted concurrent training alongside the divisions that attended the course. This was compounded by the personnel and equipment fluctuations occurring on a continuous basis. During the 45th Infantry Division's training, the 1st Engineer Amphibian Brigade had to be replaced halfway through the cycle after receiving orders for duty in Europe. This type of unexpected unit rotation occurred throughout its existence and impacted the training.[67]

The awkward command structure these organizations operated under only compounded their issues. The Amphibious Training Center fell within the Army Ground Forces and the Amphibian Engineer Command within the Army Service Forces. This structure led to a constant state of confusion. Consequently, from the perspective of Brigadier General Frank A. Keating, Commander of the Amphibious Training Center,

"there was full cooperation with the Engineers, but that both organizations were not certain as to where the functions of one left off and the other began."[68] This did not prevent collaboration, but it did add to the constant state of uncertainty within both commands. Ultimately, however, each unit achieved its assigned mission.

The Army's effort to conduct its own amphibious training proved a threat to the long accepted role of the Navy. The existence of a parallel and arguably redundant structure to the Navy's Amphibious Training Commands ran counter to the practice up to that time. Even the statement of the Joint Chiefs inferred that amphibious operations and training fell within the purview of the Navy.[69] In February, 1943, the Navy finally agreed to train the necessary boat crews and maintenance personnel to support future Army requirements.[70] The Navy's position, along with this settlement, was supported by the Joint Chiefs. Consequently, the Army agreed to close the Amphibious Training Center on 10 March 1943. The remaining engineer amphibious brigades proceeded to the Southwest Pacific Theater at General Douglas MacArthur's request. During their existence, these unique organizations strove to not only perfect their own procedures and abilities but, more importantly, provided the Army with the ability to expeditiously and sufficiently train its divisions and separate units in techniques of amphibious operations needed to prosecute the war in Europe as well as the Pacific.

Conclusion

With the codification of a detailed amphibious doctrine begun with the *Tentative Manual* and eventually adapted by the Navy in Field Training Publication 167 and the Army in Field Manual 31-5, *Amphibious Landing on Hostile Shores*, the services focused on fine-tuning the specific methods to bridge the space between doctrine and execution.

The combined efforts of the services during joint exercises identified numerous deficiencies--many of which were caused or impacted by the lack of transports and landing craft. These challenges motivated the leaders and participants of the annual amphibious exercises to solve those problems that they could through adaptation of gear, equipment, or training. Ingenuity and perseverance were the means of advancement within a chaotic environment of change.

The existing command relationships as well as inter-service rivalry and misunderstanding, more often than not, created an environment of friction and fostered a sense of frustration. However, the force of personality and personal relationships along with the growing proficiency of military leaders helped gradually to address these issues. The drive and ingenuity of individuals and units within each service solved many problems and contributed to a continual developmental progression toward perfecting the practice of amphibious operations. By 1942, amphibious doctrine had been developed to a point where it could be executed successfully, but not without numerous challenges that would have to be overcome by Admiral King's "initiative of the subordinate," promoted in the doctrine and fostered during the joint exercises prior to World War II.

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[1]Discussion of the development of the *Tentative Manual for Landing Operations* was derived from Clifford, *Progress and Purpose*, 46-47; Victor H. Krulak, *First to Fight: An Inside View of the of the United States Marine Corps* (Annapolis, MD: Naval Institute Press, 1984), 80-82; Allen R. Millet, *Semper Fidelis: The History of the United States Marine Corps* (New York: MacMillian Publishing Co., Inc., 1982), 330-335.

[2]Ben H. Fuller to Commandant, Marine Corps Schools, Quantico, 28 October 1933, File 1520-30-120, Entry 18, Record Group 127, National Archives and Records Administration, Washington, DC, cited in Merrill L. Bartlett, "Ben Hebard Fuller and the Genesis of a Modern United States Marine Corps, 1891-1934," *The Journal of Military History* 69, no. 1 (January 2005): 90.

[3]Millet, *Semper Fidelis*, 331.

[4]Krulak, *First to Fight*, 81.

[5]The naval groups included the Fire Support Group, the Air Group, the Covering Group, and the Transport Group.

[6]Information on the FLEXs was drawn from Holland Smith, "The Development of Amphibious Tactics in the U.S. Navy, Part IV," *Marine Corps Gazette* 30, no. 9 (September 1946): 43-47; Jeter A. Isley and Philip A. Crowl, *The U.S. Marines and Amphibious War: Its Theory, and Its Practice in the Pacific* (Princeton, NJ: Princeton University Press, 1951), 46-58; Millet, *Semper Fidelis*, 337-343.

[7]Smith, "The Development of Amphibious Tactics, Part IV," 44.

[8]Millet, *Semper Fidelis*, 338.

[9]Major A. Franklin Kibler, "Report on Fleet Landing Exercise No. 2," to Commandant, Command and General Staff School, Fort Leavenworth, Kansas, 1936, 12.

[10]Ibid., 62.

[11]Ibid., 4.

[12]Smith, "The Development of Amphibious Tactics in the U.S. Navy, Part IV," 44.

[13]It is interesting to note that the use of a grid system for locating indirect fire targets and the use of ammunition with reduced charges for enhancing effects on reverse slopes were highlighted in a 1929 article on joint overseas operations by Major General Eli Cole (who led the Marine landing forces in the 1924 fleet landing exercises in Culebra). Eli Cole, "Joint Overseas Operations," *United States Naval Institute Proceedings* 55, no. 321 (November 1929): 936.

[14]William F. Atwater, "United States Army and Navy Development of Joint Landing Operations, 1898-1942" (PhD diss., Duke University, 1986), 90-91. Just prior to FLEX No. 2, the Chief of Naval Operations, Admiral William H. Standley, corresponded with General Douglas MacArthur, the Army Chief of Staff, to remind him that the FLEXs provided valuable opportunities for the Army to participate and prepare itself more fully to conduct joint operations per the requirements of *Joint Action of the Army and Navy* and War Plan Orange. Although it was too late to participate in FLEX No. 2, he welcomed the Army's involvement in future FLEXs.

[15]Smith, "The Development of Amphibious Tactics, Part IV," 44. Although the West Coast Brigade of the Fleet Marine Force did not participate in the other FLEXs, it still conducted annual training in separate amphibious exercises with the fleet.

[16]Ibid., 45.

[17]Atwater, "Development of Joint Landing Operations," 105-106.

[18]Ibid., 106-107.

[19]Quoted in Smith, "The Development of Amphibious Tactics, Part IV," 46.

[20]Kenneth J. Clifford, *Amphibious Warfare Development in Britain and America from 1920-1940* (Laurens, NY: Edgewood, Inc., 1983), 148.

[21]Atwater, "Development of Joint Landing Operations," 111-112.

[22]This agreement between Germany and Japan advanced both countries' interests and tied them to each other in opposition to the Soviet Union. It stated that the two countries would work together to forward their common interests against the Russians if the Soviet Union interfered with their territorial expansion. A year later, Italy also signed the accord, laying the foundation for further collaboration as the Axis powers in World War II.

[23]Louis Morton, "Germany First: The Basic Concept of Allied Strategy in World War II," in *Command Decisions,* ed. Kent Roberts Greenfield (Washington, DC: Center of Military History, United States Army, 1960), 15-20.

[24]Ibid., 20-27; Millett, *Semper Fidelis,* 344-345.

[25]The destroyer transports were used as a means to compensate for the overall lack of transports in the Navy and the Army. These converted ships could carry a reinforced company for up to six days. For a more insightful discussion of the development of transports, see Norman Friedman, *U.S. Amphibious Ships and Craft: An Illustrated Design History* (Annapolis, MD: Naval Institute Press, 2002), 33-35.

[26]Holland M. Smith, "The Development of Amphibious Tactics, Part IV," 43-47. FLEX No. 5 tested two tank lighters, one artillery lighter and an assortment of 19 experimental craft. FLEX No. 6 involved two tank lighters, two artillery lighters, 25 special landing craft, and eight landing skiffs. Smith notes that "tests showed the Higgins Eureka landing craft, the 45-foot tank lighters and rubber boats were the best adapted to landing operations."

[27]Krulak, *First to Fight,* 88-99; Lieutenant Colonel Frank O. Hough, Major Verle E. Ludwig, and Henry I. Shaw, *Pearl Harbor to Guadalcanal: History of the U.S. Marine Corps Operations in World War II, Volume I* (Washington: Historical Branch, G-3 Division, Headquarters, U.S. Marine Corps, 1958), 23-32; Friedman, *U.S. Amphibious Ships and Craft,* 77-99.

[28]Hough, Ludwig, and Shaw, *Pearl Harbor to Guadalcanal, 27*-28; Friedman, *U.S. Amphibious Ships and Craft,* 80-81. The Navy approved the personnel version of the Eureka by September of 1940. Besides its superior performance during FLEX No. 6, the Navy's adaption of merchant ships to troop transports became a contributing factor to

accepting the Eureka as the new standard. These converted ships possessed davits capable of handling 36-foot boats as opposed to the 30-foot boats currently being used. Therefore, since the Eureka "had twice the capacity . . . and could make the same speed without an increase in horsepower, the Navy decided to adopt the larger as the standard." Shaw, *Pearl Harbor to Guadalcanal*, 28.

[29]Holland Smith and Percy Finch, *Coral and Brass* (New York: Charles Scribner's Sons, 1949), 72. Smith provides a descriptive account of the evolution of the different versions of the Higgins Boat and its final acceptance by the Navy and Marine Corps.

[30]Ann Cipriano Venson, *From Whaleboats to Amphibious Warfare: Lt. Gen. "Howling Mad" Smith and the U.S. Marine Corps* (Westport, CT: Praeger Publishers, 2003), 67-68.

[31]The vehicle was discovered in an article in *Life* magazine about the inventor, Donald Roebling, whose tracked vehicle proved useful in emergency work in the Everglades following devastating hurricanes.

[32]Hough, Ludwig, and Shaw, *Pearl Harbor to Guadalcanal*, 32-33; Friedman, *U.S. Amphibious Ships and Craft*, 99-100. Testing of Roebling's amphibian also took place as part of FLEX No. 7 where it continued to impress the Marines with its performance. This led to further modifications that proved essential to breaching the coral reefs surrounding the atolls in the Pacific Theater during World War II.

[33]Hough, Ludwig, and Shaw, *Pearl Harbor to Guadalcanal*, 48. The same order redesignated the 2nd Marine Brigade as the 2nd Marine Division. The increasing growth of the Marine Corps resulted from the President's national emergency authorization to expand the military services. The Fleet Marine Force experienced an impressive expansion, more than doubling from 4,525 to 9,749 by the end of fiscal year 1940 largely due to the call up of Marine Corps reserves. By the end of November 1941, this number tripled to 29,532.

[34]Earl Burton, *By Sea and By Land: The Story of Our Amphibious Forces* (New York: Wittlesey House, McGraw-Hill Book Company, 1944), 31; Friedman, *U.S. Amphibious Ships and Craft*, 19-20; Atwater, "Development of Joint Landing Operations," 124-125. To prepare for the joint exercise, the 3rd Infantry Division conducted orientation training very similar to the simulated amphibious landing the East Coast Expeditionary Force executed in 1921 under Brigadier General Smedley Butler, as detailed in the previous chapter. In what was called the "alfalfa assault" the division's soldiers, using trucks as landing craft, assaulted the "beach" that had been marked out by stakes in an open meadow.

[35]Friedman, *U.S. Amphibious Ships and Craft*, 20; Atwater, "Development of Joint Landing Operations," 124-125.

[36]Morton, “Germany First,” 35.

[37]Morton, “Germany First,” 33-41; Mark S. Watson, *United States Army in World War II, The War Department, Chief of Staff: Prewar Plans and Preparation* (Washington, DC: Historical Division, Department of the Army, 1950), 117-125.

[38]The 3rd Division was stationed on the West Coast and did not take part in FLEX No. 7. Additionally, the division designation for the Marines did not reflect a significant influx of personnel from the expansion of the Marine Corps. The Army also did not contribute a full division for the exercise based on the restriction in the overall number of soldiers that could participate (due to available ships). Consequently, the landing force for FLEX No. 7 rose to only brigade size rather than one of corps level as depicted by the two division commands.

[39]Atwater, “Development of Joint Landing Operations,” 130-134.

[40]Holland M. Smith, “The Development of Amphibious Tactics in the U.S. Navy, Part V,” *Marine Corps Gazette* 30, no. 10 (October 1946): 45-46.

[41]Smith, *Coral and Brass*, 77. This argument even devolved into a disagreement over the use of the word beach and beachhead--a term to depict the area beyond the actual beach held to protect the operations on the beach. King did not see the need for the term as opposed to beach.

[42]Smith, *Coral and Brass*, 74-80.

[43]Reproduced in Ernest J. King and Water Muir Whitehill, *Fleet Admiral King: A Naval Record* (New York: W. W. Norton and Company, Inc., 1952), 314.

[44]Smith, *Coral and Brass*, 80. King became a leading supporter of Smith stemming from their initial interactions during this period. As the Commander of the U.S. Fleet, King often sided with Smith’s proposals even if contentious with the Army.

[45]Smith, “The Development of Amphibious Tactics, Part V,” 46.

[46]Kent Roberts Greenfield, Robert R. Palmer, and Bell I. Wiley, *United States Army in World War II, The Army Ground Forces, The Organization of Ground Combat Troops* (Washington, DC: Historical Division, Department of the Army, 1947), 86. The Pearl Plan for the 2nd Joint Training Force was never completed due to operational commitments and lack of gear and equipment following the outbreak of war in December 1941. Consequently, joint training did take place but never reached the level experienced on the East Coast.

[47]Information on the Joint and Amphibious Force exercises was drawn from Smith, “The Development of Amphibious Tactics, Part V,” 46-48; Isley and Crowl, *The U.S. Marines and Amphibious War*, 61-67; Wiley, *The Organization of Ground Combat Troops*, 85-92.

[48]Smith, "The Development of Amphibious Tactics, Part V," 53. The landing force involved approximately 16,500 Marines and soldiers and over 300 vehicles and 2,200 tons of supplies.

[49]Atwater, "Development of Joint Landing Operations," 146. FM 31-5 added sections discussing the disembarkation of horse cavalry and pack animals as well as withdrawal and re-embarkation of the landing force.

[50]A contributing factor to this problem was the use of the smaller destroyer transports, which could not support full battalion landing teams with all assigned equipment and transportation assets.

[51]Smith, "The Development of Amphibious Tactics, Part V," 54.

[52]In 1942, the Army began giving designations to its divisions, e.g., infantry or cavalry.

[53]GHQ Memo, 23 February1942, OCMH (WD 353/25) quoted in Kenneth J. Clifford, *Amphibious Warfare Development in Britain and America from 1920-1940* (Laurens, NY: Edgewood, Inc., 1983), 55; Wiley, *The Organization of Ground Combat Troops*, 91.

[54]Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 39.

[55]This redesignation also occurred for the Pacific Fleet on the West Coast.

[56]This training program did not have the same naval shipping support as the larger exercises due to ongoing commitments for World War II. The lack of air and naval gunfire support groups was slightly compensated by the dedication of a transport group on each coast. However, availability of many of these ships was decreased because of overhaul schedules in the Navy yards. At best, only piecemeal amphibious training could be conducted.

[57]Smith, *Coral and Brass*, 84; Robert D. Heinl, Jr., "The U.S. Marine Corps: Author of Modern Amphibious Warfare," in *Assault From the Sea: Essays on the History of Amphibious Warfare*, ed. Merrill L. Bartlett (Annapolis, MD: Naval Institute Press, 1983), 190. Robert Heinl lists the 97th Infantry Division instead of the 77th Infantry Division and adds the 184th and 53rd Regimental Combat Teams as those trained by the Marines. Also trained was the 13th Canadian Brigade in preparation for the Aleutian operations.

[58]Blanche D. Coll, Jean E. Keith, and Herbert H. Rosenthal, *United States Army in World War II, The Technical Services, Corps of Engineers: Troops and Equipment* (Washington, DC: Office of the Chief of Military History, Department of the Army, 1958), 358-360. The Navy's focus was justifiably directed toward supplying enough crews for its warships and its own expanding amphibious training program.

[59]Captain Marshall O. Becker, *The Amphibious Training Center Study No. 22* (Historical Section, Army Ground Forces, 1946), 1.

[60]Successive camps were to be established at Carrabelle, Florida and Fort Lewis, Washington, although Carrabelle was the only other camp to train units beginning on 23 November 1942.

[61]The Army focused its training on shore-to-shore rather than ship-to-shore, which was within the Navy's scope of responsibility. This distinction resulted from the ongoing inter-service rivalry between the Army and the Navy. Although the basic principles were similar, Army training did not incorporate naval ships. The shore-to-shore focus also reflected the perceived future mission of a cross-channel landing in Europe.

[62]Headquarters, Amphibious Training Center, Training Memorandum No. 7, "Training Program Effective November 15, 1942," Camp Carrabelle, Florida, 10 November 1942. To accomplish the training objective, the course focused on small unit proficiency in conducting the basic techniques of amphibious operations.

[63]William F. Heavey, *Down Ramp!: The Story of the Army Amphibian Engineers* (Washington, DC: Infantry Journal Press, 1947), 2.

[64]Coll, Keith, and Rosenthal, *Corps of Engineers: Troops and Equipment*, 357-358.

[65]Engineer Amphibian Command, *Engineer Amphibian Command Tentative Training Guide No. 1*, Camp Edwards, Massachusetts, February 1943, 1.

[66]Heavey, *Down Ramp!*, 2-9; Coll, Keith, and Rosenthal, *Corps of Engineers: Troops and Equipment*, 361. The Navy supplied the initial instructors to train the engineers on small craft.

[67]Becker, *The Amphibious Training Center Study No. 22*, 23; Coll, Keith, and Rosenthal, *Corps of Engineers: Troops and Equipment*, 373. Besides being assigned overseas, engineer units were continually rotated in and out of the Amphibious Training Center to allow them to train with the very limited landing craft available. As a result, overall training for the infantry divisions suffered somewhat due to the boat crews' lack of experience.

[68]Becker, *The Amphibious Training Center Study No. 22*, 40.

[69]Atwater, "Development of Joint Landing Operations," 161-162; Coll, Keith, and Rosenthal, *Corps of Engineers: Troops and Equipment*, 378-379.

[70]Vice Admiral George Carroll Dyer, *The Amphibians Came to Conquer: The Story of Admiral Richmond Kelly Turner* (Washington, DC: Government Printing Office, 1969), 216.

CHAPTER 5

EXECUTING THE DOCTRINE: OPERATIONS WATCHTOWER AND TORCH

Guadalcanal

The first half of 1942 saw Japan consolidate and expand its control throughout the Far East. Its sphere of influence extended west from China to Burma and south from Malaya and the Dutch East Indies to the northern half of New Guinea. This defensive line also reached to the Marshall Islands in the east (see Appendix A). Despite its naval losses incurred during the Battle of Coral Sea, in May, and the Battle of Midway in June, the Japanese Navy was still a formidable force in the Pacific compared to the U.S. Navy. These battles were the first to blunt Japanese expansion--at least in the Central Pacific. Prior to Coral Sea and Midway, however, Japan was looking further south to the Solomon Islands in order to protect its bases at Rabaul and Truk as well as to "choke off the flow of Allied supplies to Australia."[1] Without these sea lines of communications, Australia and New Zealand would be cut off from Allied support, exposing them to Japanese conquest. The naval defeats only emphasized Japanese desires to initiate operations in eastern New Guinea and the Solomon Islands to protect its bases at Rabaul and Truk.[2] As a result, Japan extended its control throughout the Solomons and occupied the island of Tulagi as a site for a sea plane base. More importantly for the Allies, they then began building an airstrip in July 1942 on the neighboring island of Guadalcanal which could be used for further advances to the south toward Australia.

The U.S. commanders in the Pacific were Admiral Chester Nimitz who commanded the Pacific Ocean Areas subject to the Commander in Chief of the U.S. Fleet, Admiral Ernest King, and General Douglas MacArthur, Commander in Chief of

the Southwest Pacific Area, ultimately under Army Chief of Staff, George Marshall. As the commander of the Southwest Pacific Area (SWPA), MacArthur proposed a plan to begin an offensive to wrest control of eastern New Guinea and New Britain away from the Japanese before they could add further forces. To do this, MacArthur needed aircraft carriers and an amphibiously trained unit to effect the landing and allow the follow-on troops to continue the attack against the Japanese.[3] This amphibiously-trained division would have to come from Nimitz's command, which meant the 1st Marine Division. Since the objectives were within SWPA, MacArthur would command the overall effort, but Nimitz and King did not want to lose the 1st Marine Division or expose the limited number of carriers to Japanese land-based air attacks.[4]

During the same period of time, Admiral King pushed to initiate an advance in the Pacific commanded by the Navy. King wanted to capitalize on the momentum of the recent naval successes to offensively strike at the Japanese in the more weakly defended East Solomon Islands as opposed to New Guinea as suggested by General MacArthur.[5] To provide better command and control in his area of responsibility, in early spring of 1942, Nimitz, as the Navy commander of the Pacific Area, designated Vice Admiral Robert Ghormley as the Commander in Chief of a new subordinate command--the South Pacific Area. As such, Ghormley would lead the task force in the naval offensive on the Solomons.

The topic of command became the most contentious issue between the Army and the Navy, and, as a result, the Joint Chiefs of Staff (JCS) decided the matter. The compromise entailed a three-phased operation up the Solomons with the New Britain and New Guinea area being the final objective. The plan called for an initial Navy-led

offensive against the less-fortified Santa Cruz Islands and the Tulagi-Guadalcanal area, followed by the Army which would attack the northern Solomons and seize Rabual from the Japanese during the last two phases. To accomplish this, the JCS shifted the boundary between SWPA and the South Pacific Area west, placing the objectives of phase one within Admiral Nimitz's jurisdiction (see Appendix A).[6] The JCS set 1 August as the date for the amphibious assault on Guadalcanal, known as Operation Watchtower.

Nimitz assigned Vice Admiral Robert Ghormley to command the operation and directed him to "exercise strategic command in person."[7] However, Ghormley--not a supporter of the operation--did not follow this direction and left the responsibility of directing the immediate operation to Rear Admiral Frank F. Fletcher, the commander of the carrier task forces. Rear Admiral Richmond Kelly Turner, having been involved in the planning for the operation as assistant chief of staff to King, was designated as the amphibious commander and Major General Alexander A. Vandegrift, Commanding General, 1st Marine Division, as the commander of the landing forces under Turner's authority.

The planning for the operation suffered from a compressed timeline and the physical separation of the commanders. Ghormley, having assumed his command in early spring, did not have adequate time to establish supply bases and work out the details of resupply for the task force. The island of Espiritu Santo, as the base of supply, only became operational a week prior to the offensive.[8] Consolidation of all the forces under Turner, Fletcher, and Vandegrift did not take place in theater until mid to late July, just prior to execution. When Major General Vandegrift was notified of 1st Marine Division's mission by Ghormley in late June, he stated, "I didn't even know the location of

Guadalcanal. I knew only that my division was spread over hell's half-acre, one-third in Samoa, one-third in New Zealand and one-third still at sea. My equipment, much of it new, had to be broken in; my supply had to be sorted and combat-packaged; shortages had to be determined and filled."[9] Consequently, the physical challenges of combat loading the ships and gathering all the disparate units for the operation combined with Vandegrift's and Ghormley's plea for an extension eventually convinced King to postpone execution of the operation for one week until 7 August.

The urgency of the operation and the physical separation of the limited forces available did not allow all the commanders to meet together for planning until 26 July; only Ghormley failed to attend, deferring his authority to Fletcher to provide the overall guidance for the operation (although he did send his chief of staff, Rear Admiral Daniel J. Callaghan). His absence seems rather remarkable given the importance of Guadalcanal as the first Allied naval offensive in the Pacific.[10]

At this conference, Fletcher, who was steadfastly against the operation, notified the other commanders that the carrier task groups would only provide air coverage for two days despite the necessity to negate the threat posed by Japanese land-based aircraft located in the Solomon Islands.[11] Fletcher's main concern was the safety of the three aircraft carriers under his command. All of the U.S. carriers save one were vulnerable as part of this offensive, and Fletcher adhered to Nimitz's directive that he "will be governed by the principle of calculated risk . . . interpret[ed] to mean the avoidance of your force to attack by superior force without good prospect of inflicting, as a result of such exposure, greater damage to the enemy. This applies to a landing phase as well as

during preliminary air attacks."[12] Exposing his forces to land-based air attack did not allow him to inflict "greater damage to the enemy" as directed by Nimitz.

This single-minded focus proved detrimental to the amphibious force. Denying it the necessary air coverage put the amphibious force in an extremely vulnerable position. However, after much arguing by Turner and Vandegrift, Fletcher slightly altered his position and decided to provide three days of support, which would have significant ramifications on the operation.[13] Additionally, Fletcher's preoccupation with his carriers narrowed his focus to providing air cover to the amphibious task force, which, by default, left Turner in charge of everything else for the operation.[14]

The conference was quickly followed by a brief rehearsal on the island of Koro, in the Fijis, from 28-31 July. This practice proved frustrating because of restrictions imposed by the coral reefs in the area and bad weather, which only allowed a portion of the force to practice the scheduled amphibious landings. Security concerns also required radio silence during the exercise, preventing air coordination with landing forces. It did, however, offer the landing force crucial familiarity with offloading procedures for personnel and equipment as well as the opportunity to identify the necessity for a boat pool system to account for the mechanical breakdown of landing craft.[15] Following the mixed results of the exercise, the landing force and supporting task forces steered for Guadalcanal.

On the morning of 7 August, undetected by the Japanese in the area due to bad weather, the almost simultaneous landings took place on the islands of Guadalcanal and Tulagi, with further landings on Gavutu and Tanambogo, following bombardment from both air and sea (see Appendix B).[16] These landings completely surprised the Japanese

tactically on the islands as well as strategically in Japan. The multiple landings on Tulagi and the two nearby islands, compounded by the restricted maneuver space, proved more complicated for the approximately 4,000 Marines, "necessitating a more elaborate schedule for both landing boats and for fire support" (see Appendix C).[17] Although the air strikes per the schedule were mostly on target, the "carrier pilots, not specially trained for this exacting and difficult air support chore, did not always come up to the expectations of the Marines, their own desires, or the desires of the top command."[18] Additionally, the landing force soon discovered that the thin-shelled ammunition for the naval guns was ineffective against dug-in troops in the defensive structures found on the islands of Tulagi, Gavutu, and Tanambogo.[19] This contributed to the higher level of resistance than expected on these islands and provided a prelude to Japanese tactics faced in subsequent landings by U.S. forces in the Pacific. The complexity, coupled with a stiff resistance encountered from the Japanese defenders, required the commitment of the landing force reserve to gain control and finally secure Tulagi on 8 August and the neighboring islands by 9 August.

Unlike on the smaller islands, the landing on Guadalcanal progressed rather uneventfully on the first day, with little resistance met by the 11,000 Marine force (see Appendix C). Following the unopposed landing, the Marines pushed into the interior to seize the airfield, but failed to accomplish this task for the first day despite the lack of a concerted Japanese effort to repel them. The 5th Marines were tasked with seizing the airfield and the 1st Marines were supposed to advance to Mt. Austen, which was assumed to be a few miles from the airfield. In reality Mt. Austen was approximately ten miles away and would remain unoccupied until the Army forces that eventually relieved the 1st

Marine Division in December mounted an attack and finally drove the enemy off the island.[20] After reorganizing during the night of 7 August, Vandegrift finally occupied the airfield by 1600 the following day and prepared for a counter-attack by the enemy.

The significant lack of intelligence plagued all participants of the operation from planning through execution. Prior to the landing, there were no detailed maps or reliable information on the enemy attainable by the U.S. planners. Some knowledge was gained by interviewing past occupants of the island and by aerial reconnaissance prior to the landing, but what little was known tended to be vague. Upon landing, "the fact that the character of such information was recognized quickly, and that plans for continuing the campaign were changed radically in accordance with correct data, speaks eloquently for the ability of General Vandegrift and his staff to improvise quickly and effectively."[21] From the beginning, the Marines continually struggled to obtain information on the enemy from land and air patrols, as well as from coast watchers and higher headquarters.[22] This improvisation proved to be a trend that allowed the Marines and the Navy to build their situational awareness and overall understanding in order to counter and ultimately defeat the Japanese.

Concurrently, a beachhead was quickly established and eventually extended out to facilitate movement and offloading of follow-on supplies. However, with the focus on the unknown enemy situation, Vandegrift dedicated almost all his manpower to overcoming the expected enemy resistance.[23] As a result, the small shore party could not handle the task of offloading all the supplies and quickly fell behind schedule. In his after action report, the commander of the transport group for Guadalcanal noted, "supplies were piling up on the beach faster than could be moved and by dark there were about 100

loaded boats at the beach and 50 more lying off waiting. It finally became necessary to discontinue unloading for the remainder of the night."[24] The status of the offloading in the Florida Islands was no better. With the added help of ship's crews, the landing force gradually overcame this obstacle, despite the frequent interruptions caused by enemy air attacks and other threats.

Following the occupation of the airfield on Guadalcanal and the seizure of Tulagi on the evening of 8 August, Vandegrift attended a meeting with Turner and Rear Admiral Crutchley, the screening force commander and second-in-command to Turner. It was here that Vandegrift was informed that Vice Admiral Fletcher had pulled the carriers from the area at least twelve hours earlier than originally planned.[25] This controversial action by Fletcher created a dilemma for Turner, who decided that he would also leave in the morning because of the lack of air coverage.[26] Unknown to the Allied forces, Vice Admiral Gunichi Mikawa of the Japanese 8th Fleet had organized a task force of all available ships to repel the enemy invasion of Guadalcanal by destroying its transports. During the early morning of 9 August, this task force imposed a devastating defeat on the Allies, causing the lost of four cruisers. Due to his fear of an air attack, however, Mikawa failed to press the naval advantage he did not realize he had and missed the opportunity to destroy the transports.

Mikawa's fears of an air attack were justified. Neither the Japanese nor the Allies acquired air superiority in the vicinity of Guadalcanal and both suffered from air strikes as a result. The lack of effective reconnaissance by the carrier- and land-based aircraft resulted in Japanese air strikes during the Allied landing and confusing reports to Turner on Mikawa's task force. The two reports by General MacArthur's land-based

reconnaissance planes provided contradicting information as to the size, composition, and direction of movement of Mikawa's task force. Additionally, these reports were delayed as much as nine hours before submission. As a result, Turner believed that the convoy of ships was not headed toward Guadalcanal and acted accordingly.[27] This point highlights the drawbacks of the command structure that relied on coordination rather than unity of command for land-based aircraft.

Air coverage was split between carrier- and land-based aircraft, each working for separate commanders in different theaters of operations. Rear Admiral John S. McCain, Jr. was responsible for coordinating the land-based air controlled by SWPA. In this capacity he worked for Fletcher, but did not actually own any of the land-based aircraft vital to the operation. In Turner's opinion, "unity of operational command might have produced a greater feeling of responsibility on the part of the individual reconnaissance aircraft pilot to get his intelligence of enemy forces through to his top operational commanders promptly."[28]

In an attempt to overcome the drawbacks from the sporadic carrier support, concentrated effort was applied to getting the airfield on Guadalcanal operational as soon as possible and to maintain it throughout the campaign. In this way, the dedicated aircraft on the island could be expanded to more effectively protect resupply operations critical to survival as well as to repel any Japanese assaults to regain control of the island. Without what would be known as the Cactus Air Force--a conglomeration of Army, Navy, Marine, and New Zealand aircraft that fluctuated based on combat losses--the Allied forces would not have been able to eventually gain greater control of the air from the Japanese.[29] The build-up of forces was a long process. The paucity of building materials

and equipment and the lack of naval dominance to facilitate resupply prolonged the build-up of the airfield on Guadalcanal. The Commander of Army Forces, South Pacific, Major General Millard F. Harmon criticized the planning for this contingency because "the plan did not have as its first and immediate objective the seizure and development of Guadalcanal as an air base."[30] This appreciation grew after the first fighter planes landed on 20 August and quickly began supporting the Marines only four hours later. Use of air in the pre-landing bombardment as well as its continued role as a platform for close air support throughout the campaign proved essential to the Allies. As in the beginning phase of Operation Watchtower, aircraft played a central role in the continuing battles on both land and sea.

The failure of initial Japanese attempts to repel the Allied forces from Guadalcanal created a race between each side to determine which could reinforce its forces quicker in order to gain superiority on the island. The first Japanese assault by the Ichiki detachment in mid-August misjudged the Marine defensive capabilities due to a lack of adequate intelligence on the part of the Japanese and a sense of cultural superiority.[31] This failure was followed by two more attacks in September and October, with increasingly larger forces committed by the Japanese 17th Army. In both cases the attacks were repulsed due in part to disjointed Japanese operations plagued by poor communication between elements and logistical shortages, not to mention the physical weakness of the soldiers due to malaria and malnutrition.[32] Vandegrift's chief of staff, Colonel Gerald C. Thomas, described the Japanese propensity to attack "on a narrow front at rather widely separated points. These were mass attacks, and although . . . they

were to be simultaneous attacks, this was never the case."[33] This predictable technique proved extremely detrimental to the Japanese.

The defeat of the Japanese Army mirrored the gradual attrition of the Japanese Navy in a series of sea battles with the Allies. The continued depletion of Japanese naval vessels and the increasing dedication of naval support by Vice Admiral William F. Halsey, who replaced Ghormley in October, combined to slowly expand Allied control of the sea. Despite the best efforts of the Japanese to resupply their troops by ship using the "Tokyo Express," the operational requirement to use destroyers because of the Allied threat limited the capacity of supplies and equipment that could be transported.[34] As a result, Japan's ability to effectively support its troops declined as the capacity of the Allies increased, resulting in gradual superiority in the air, on the sea, and on the island of Guadalcanal itself.

The Army's Americal Division reinforced the 1st Marine Division and eventually relieved them in December, four months after the Marines first came ashore. With fresh troops to contend with the combat-weary Japanese forces, the Army's XIV Corps gained the initiative by launching an offensive to secure the island. The Army gradually pushed the Japanese off Guadalcanal, with the last of the Japanese forces evacuating by destroyer transports in the middle of the night on 9 February.

The four months of fighting on Guadalcanal by 1st Marine Division brought out the problem of the command relationship between the landing force commander and the amphibious force commander. The subordination of Vandegrift to Turner was in accordance with Navy and Marine Corps doctrine as stated in FTP 167, which remained the authoritative amphibious manual for this operation. This command structure followed

the doctrine and the practice as seen throughout the FLEXs of the 1930s as well as the amphibious exercises conducted by then Major General Holland Smith as the Commander, Amphibious Training Force. The positive and negative aspects of command relationships during these exercises highlighted potential issues of operations ashore as experienced on Guadalcanal.

However, the concept of short duration amphibious assaults did not meet the reality of the operation on Guadalcanal. During the extended shore campaign, Turner maintained control over the Marines, including Vandegrift's reserve force, the 2nd Marine Regiment. Throughout the operation, Turner reserved his right, as he interpreted it, to employ Marine forces in accordance with higher directives, which stated that "[d]irect command of the tactical operations of the amphibious forces will remain with the Naval Task Force Commander."[35] His continued attempts to concurrently commit the 2nd Marines to a landing on Ndemi (a secondary objective of phase I) exemplifies this point. This caused conflict with Turner, leading Vandegrift to recommend a change in the command structure, stating that once command and control was established ashore by the landing force, its commander should be equal to the amphibious force commander, both reporting to a higher commander. The change was effected by Vice Admiral William Halsey, shortly after assuming command, and was also incorporated into FTP 167 as change 3 in October 1943.[36]

Guadalcanal remains a pivotal battle in the war against Japan as the first major land, air, and sea victory. When combined with the Battles of Midway and Coral Sea, one can see how the Japanese juggernaut was stymied. The drain in Japanese manpower, equipment, and naval vessels could not be replaced as readily as those of the United

States. Consequently, the Japanese not only lost control of the Solomons, but also transitioned to the strategic defense until the end of World War II. Guadalcanal allowed the U.S. to wrest the initiative away from the Japanese and gain the offensive momentum necessary to drive across the Pacific in a series of amphibious operations that greatly contributed to the eventual capitulation of Japan.

North Africa

To meet the intent of the "Europe First" policy adopted by the U.S. and the United Kingdom at a conference shortly after the Japanese attack on Pearl Harbor in December 1941, war planners from each country agreed to an Allied attack on continental Europe during the summer of 1943. As planning developed, war events began to favor a shift in effort in order to isolate German Field Marshal Erwin Rommel's Afrika Korps (located in eastern North Africa) from the east by British Lieutenant General Bernard Montgomery's 8th Army and from the west by a combined amphibious force landed in French North Africa. On 14 August 1942, Lieutenant General Dwight D. Eisenhower assumed responsibility for this offensive as the Commander-in-Chief, Allied Expeditionary Force. With unity of command vested in him, he established a combined headquarters in London to plan, coordinate, and supervise the execution of the invasion of North Africa. In his view, "the difficulties and complexities of the proposed operation were such that anything less than complete integration of effort would spell certain disaster."[37] The joint and combined planning determined the objectives, which involved three separate task forces, conducting simultaneous amphibious assaults.[38] Departing the U.S., the Western Task Force would sail directly across the Atlantic Ocean to attack and capture Casablanca, Morocco. The other two task forces staged in the United Kingdom

with the Center Task Force assigned to capture Oran and the Eastern Task Force to seize Algiers (see Appendix D). Follow-on operations were directed against Rommel in Tunisia to extend Allied control throughout most of the Mediterranean area. Planners named this invasion of Africa Operation Torch, with 8 November eventually being the date assigned for execution.

The Western Task Force was led by Major General George S. Patton as the commanding general and Rear Admiral Henry K. Hewitt as Commander, Western Naval Task Force. Both Hewitt and Patton possessed amphibious experience from past assignments. Hewitt previously served as Commander, Amphibious Forces, Atlantic Fleet in charge of supervising the joint amphibious training of Marine and Army units on the East Coast during 1941-1942, many of which participated in Torch. Patton previously served as the G-2 for the Hawaiian Department and was involved in a defensive assessment of the island against a possible Japanese invasion. This examination served as an impetus for completing a study of amphibious warfare, which culminated in the publication of his 1935 U.S. Army General Staff Study, *Historical Study of Landing Operations*--an analysis of a series of past amphibious operations, including Gallipoli, to determine the necessary ingredients for success.[39] He concluded that "Daylight landings, an absence of surprise, landing on a narrow front, the failure of naval fire support, inflexible plans, inept leadership, and poor Army-Navy cooperation led to defeat."[40] As a prescient piece of work, many of his conclusions were driven home approximately four years later in Japan's attack on Pearl Harbor, especially with respect to service cooperation. Additionally, the lessons ascertained during his study and observations

carried with him through the years, playing out during the execution of the North African invasion.

The concept of unity of command for Operation Torch extended from Eisenhower to each of his task force commanders. For the Western Task Force, Hewitt was in command until Patton established his headquarters ashore, at which time command was transferred for the continuation of land operations. The transfer of command was also planned for and executed by the other task forces involved in the operation. This same unity of command was achieved for the Central Task Force between British Commodore Thomas Troubridge and American Major General Lloyd Fredendall and likewise for British Rear Admiral Sir H. M. Burrough and American Major General Charles Ryder for the Eastern Task Force.[41] Command of naval forces extended from Eisenhower through British Admiral Sir Andrew Browne Cunningham, and for the air forces through American Brigadier General James Doolittle for the Western Air Command and through British Air Marshal Sir William Welsh for the Eastern Air Command. Each of the air component commanders reflected the nationality of the predominant forces within their assigned areas. When command was transferred ashore to the land forces, those commanders reported to Eisenhower located at the British base in Gibralter.

The operational unity also became evident during both the Eastern and Central Force planning taking place in the combined headquarters in the United Kingdom. Major General Allen, 1st Infantry Division Commanding General, described it as the "one single factor which contributed most to the success of the operation . . . where the Army Staffs and Navy Staffs worked side-by-side throughout the whole planning stage. The capabilities and limitations of each service were made known to the other with a result

that the final plan as executed had not only the confidence of all but also the complete understanding of both services."[42] This operational unity did not, however, necessarily take place in the planning process for the Western Task Force, which, as an all-U.S. force, was more a reflection of the mutual cooperation directed by *Joint Action*.[43] The geographical separation of the two headquarters (Patton in Washington and Hewitt in Norfolk) only reinforced this approach to joint planning. Nevertheless, the parallel planning was eventually integrated during a series of planning meetings involving the commanders and the staffs of the two headquarters. All of the task force plans reflected the same basic scheme of maneuver, which was to isolate the main objective by executing a three-pronged attack with landings on each side of the city. The center prong of the assault was directed at the port itself to quickly seize it in order to prevent damage to the facilities.[44]

One of the limitations General Allen may have been speaking about in his description of the operational planning process was the planning and preparation of supply for Operation Torch.[45] The requirements of establishing a supply network overseas and the rapidity with which supplies began to arrive in the United Kingdom combined to overwhelm the limited number of inadequately trained supply service personnel. The poor marking and inventorying of arriving equipment along with the inability of British ports and depots to handle the influx of material, caused many items to be misplaced. This lack of organization created critical shortages for many units and required them to reorder many items already shipped, increasing strain on available shipping. Units also added to this dilemma by "failing to report their levels of supply, omit[ing] priorities for classes of supply, were remiss in properly justifying their

requisitions, and in some cases even fail[ing] to submit requisitions."[46] By the end of September 1942, these complex supply shortages ultimately impacted the composition of the Western Task Force. Instead of lowering the overall level of troops, over half of the equipment was cut, resulting in an acute shortage of available trucks for the first three months of the operation.

The uncertainty of supply and the subsequent delay in finalizing operations plans impacted Patton's ability to conduct full-scale rehearsals for embarkation and disembarkation.[47] After arriving from the West Coast just days prior to the main rehearsal, the 3rd Infantry Division contended with the hurried requirements of assimilating hundreds of new soldiers and attached units as well as incorporating new and special equipment within a compressed timeline to conduct an exercise in partially filled transports.[48] The training in the United Kingdom also faced many challenges. Each task force had to deconflict receipt and preparation of gear and equipment with training. A rotational approach to training resulted, dispersed at multiple locations and focused at the regimental level.[49] This allowed units to rotate between training and preparation for deployment, but detracted from accomplishing higher level training and synchronization. Additionally, the boat crews that trained with specific units did not necessarily deploy with them, thereby losing the advantages gained through familiarity and understanding of standard operating procedures.[50] Despite the many challenges to adequately supply, equip, and train forces, the Allies managed to provide a formidable force capable of overcoming the many obstacles in the coming operation, which allowed them to ultimately succeed in North Africa.

Western Task Force

Patton organized the scheme of maneuver for the attack on Casablanca to include three subordinate objectives: the city of Safi with its port located 120 miles to the southwest, which was needed to offload the armored vehicles and prevent a reinforcing French attack from Marrakech; Fedala located just 14 miles north of Casablanca; and Port Lyautey with its airfield, 70 miles northeast of Casablanca (see Appendix E). Each attack commenced prior to daybreak on 8 November and achieved overall surprise. U.S. forces landing before light found little opposition at Safi. During the attack, two destroyers rushed into the port and offloaded approximately 400 soldiers on the pier to secure the harbor. Suppressive fire from naval gunfire silenced the coastal batteries. Safi was under U.S. control before noon when the first Allied tanks began offloading.[51]

The attacks on Fedala and Port Lyautuey experienced greater French resistance from shore batteries and air support. French defenses at Port Lyautey were more formidable, with a reinforcing armor attack from nearby Rabat. The combination of Allied air and naval gunfire support, along with the ground attack, eventually proved too much for the French on 10 November. At Fedala, the French maintained their naval forces, which were considered a significant surface threat. The French Navy engaged the U.S. ships, but was readily dispatched by the superior strength of the U.S. Navy. With the naval threat neutralized and the shore guns silenced predominantly by air and naval gunfire support, the landing force quickly secured the city and advanced toward Casablanca. However, by the evening of 11 November the French surrendered, preventing the need to conduct the final assault of Casablanca.[52]

Central Task Force

After a slight delay, the Central Task Force conducted four landings surrounding Oran, completing them by 0300 (see Appendix F). Despite a failed paratroop mission, the surrounding airfields were captured and put into use immediately by planes flown in from Gibraltar. These airplanes provided support for the remainder of the attack. The coastal batteries offered the most significant opposition during the landings, but were each neutralized with air and naval gunfire support. The advance on Oran Harbor by two British cutters, with two companies of U.S. Rangers onboard, received withering fire from shore batteries and French naval vessels. The ships were destroyed and the soldiers either killed or captured. The successive advances toward Oran on 9 November were met with continued French resistance. By the morning of 10 November, the 1st Infantry Division encircled the city of Oran and launched its final attack, capturing it by 1100. The French officially surrendered to Major General Fredendall at 1230.[53]

Eastern Task Force

The attack on Algiers suffered an initial setback, but ended up being the easiest objective to secure (see Appendix G). As in Oran, two British destroyers sailed directly into the harbor of Algiers prior to dawn and met strong resistance from shore batteries. One of the ships was disabled causing both to retire quickly, abandoning many of the soldiers and preventing the harbor from being secured. The scheduled landings went well although once again with slight opposition from the coastal defense units. As soon as the surrounding airfields were captured, the Allied air force immediately established a detachment of aircraft to provide continuous support for successive attacks on assigned objectives. However, hostility gradually dissipated following the landing of Major

General Charles W. Ryder, who succeeded in negotiating a surrender of French forces by 1900 on 8 November.[54]

Arguably, the ship-to-shore movement of the landing forces proved the most challenging, often with unfortunate consequences. The hasty preparation involved in gathering gear and personnel prior to embarkation did not afford the opportunity to adequately combat load the transports or train the Navy operators for the landing craft. These shortages in landing craft and personnel only afforded limited time to instruct boat operators and caused many crews to be trained on different craft than they actually used during the operation.[55] As a result, competence and navigation skills suffered greatly, which adversely impacted the execution of operations.

During the landing phase, every task group dealt with this lack of proficiency by boat operators to some degree but the ramifications of this deficiency were most strongly felt by the Western Task Force. These shortcomings became manifest during execution when many of the assault waves were landed at the wrong beaches--at times up to 12 miles away. Additionally, during the landings, the hastily trained Navy operators proved severely lacking in adequate boat handling skills, more often than not, capsizing the landing craft in the rough surf or grounding the craft so they could not be retracted. As a result, the Western Task Force lost 219 out of 320 landing craft the first day, mostly due to inadequate boat handling.[56] The initiative and quick thinking of one beachmaster, Commander Red Jamison, helped contain the negative impact of this trend by redirecting the small boat traffic to other beaches in order to prevent even further loss. Although, his actions upset assault unit plans for landing, in Patton's words, he "saved the whole Goddamned operation."[57]

The loss of these craft had a significant impact on the offloading capability for the landing force, causing it to direct the subsequent landings to the port at Fedala. With fewer boats to offload personnel, landing schedules quickly went awry. The time necessary for disembarking continually increased due to the ever-diminishing number of landing boats available, the slow movement of overburdened soldiers, and the constant reprioritization of gear to be offloaded. In addition, the shore parties assigned could not handle the amount of gear at the beaches, requiring working parties from the ships to assist.[58] The increased time required to offload personnel and equipment further slowed down the execution of the schedule to get assigned gear to units--especially the already reduced numbers of available vehicles for transportation--which required the 3rd Infantry Division to halt the advance on Casablanca until adequate supplies could be distributed.[59] Differences between British and American priorities also exacerbated the offloading at beaches.[60]

Unlike the debarkation and offloading, the use of air and naval gunfire support proved effective overall. The transition from naval air to land-based air occurred at the earliest opportunity, resulting in uninterrupted air support for follow-on operations. The suppression of shore batteries by naval gunfire also prevented effective interference with the landings. In addition, it destroyed the French Navy's ability to interfere with continued Allied operations. However, fires directed against on call targets were far from responsive, taking up to an hour to execute on some occasions. Naval gunfire also slowed the assault at various times during the advance on Fedala, and inflicted casualties on friendly units.[61] Despite these drawbacks, "the mistakes and errors which were made were corrected by brute strength and awkwardness and the initiative and resourcefulness

of the troops."[62] In other words, the absence of strong resistance most likely prevented the numerous problems experienced by the Allies from becoming insurmountable, allowing the landing forces to correct deficiencies in-stride and eventually overcome the French.

The amphibious assault of North Africa was a strategic and tactical surprise. At that time, Germany's attention was drawn to the east and its fight with the Soviets. Germany did not expect the Allies to risk this type of operation in the Mediterranean. The rapid capitulation of the French in North Africa and the introduction of thousands of Allied forces determined to expel the Axis powers created a turning point for the war in Europe. The combined effects of the Allies in North Africa and the Middle East and the constant drain of resources necessary to continue fighting the Soviet Union ultimately proved too much for the Germans. Consequently, Hitler not only lost control of North Africa, but also lost the initiative in Europe, transitioning to the strategic defense until the end of World War II. The amphibious operations in North Africa opened the door to Europe through which the Allies continued to pour personnel and resources. The offensive momentum allowed the Allies to slowly constrict German expansion and, through continued amphibious operations, force the eventual demise of Hitler and the surrender of the Germany.

Europe Versus Pacific Tactics

Although both the Army and the Marine Corps followed the basic tenets as set out in FTP 167, the operational problems presented by the enemy and the particular geography in each theater required different approaches.[63] In the Pacific, exemplified by Guadalcanal, the Marine Corps and Navy strove to isolate the objectives located on

islands in order to establish advanced bases in support of the U.S. Fleet. This usually eliminated the possibility of tactical surprise. The limited number of beaches and the required preparatory naval gun and carrier-based air support (as well as land-based when possible) dictated daylight landings to facilitate tactical coordination. The Navy played a central role in providing the necessary fire support and in isolating the objective from an enemy fleet. The undeveloped Pacific islands required the construction of all necessary infrastructure, gear and equipment supplied once again by the Navy. Land operations were relatively short in duration and distance--limited to the extent of the islands. This allowed the Marines and soldiers in the Pacific to carry lighter loads since the Navy supported the shorter lines of communication, as long as it achieved local naval superiority. Geographical dispersion of forces on the ground and at sea, coupled with a similar separation of the Navy and Marine Corps command elements, only permitted consolidation just prior to execution, and mitigated against joint planning and a strong unity of command. However, the continuous operations, growing familiarity of commanders with each other, and maturation of their roles, as well as an appreciation of what each brought to the effort, helped alleviate this drawback.

For operations in Europe, the ability to establish joint headquarters, co-located with each other, supported planning and unity of command better than in the Pacific. However, unlike in the Pacific, the objectives for the Army in Europe and the Mediterranean Theaters precluded isolation. The large landmasses with their subsequent extended shorelines allowed the Army to choose from a larger number of beaches on which to land forces. This permitted the Army to introduce troops at lightly or undefended beaches instead of assault across a few densely defended ones. Surprise,

then, was much more achievable with the Army executing its landings during the cover of darkness with little, if any, preparatory fires--as seen during Operation Torch. The Navy played a less significant role in Europe since isolation of the objective proved more problematic than in the Pacific. The enemy reinforced its units from many locations, some of which were outside the immediate area of operations. Furthermore, the Navy's role during subsequent operations reverted to providing logistical support since the battle progressed further inland away from shore. The other significant difference was the need to conduct follow-on operations in the form of extended land campaigns. This required large quantities of gear to the extent that it overloaded soldiers as well as equipment, especially motor transportation, unlike in the Pacific.

Conclusion

The Battle of Guadalcanal and the introduction of Allied forces in North Africa highlighted many important lessons for the various services and nations that participated. The impact of issues associated with command relationships appears to be the most prevalent throughout the campaigns and had the greatest impact on the developing landing doctrine. Transition of command between the naval task force commander and the landing force commander, not only worked, but proved to be necessary to more effectively execute continuing operations. At any given time, the combined effects of unity of command and unity of effort were felt by the forces employed at Guadalcanal and in North Africa. This was especially the case with the limited time for planning and the consolidation of disparate elements of personnel and equipment across continents to project amphibious forces prepared and capable of seizing an objective. The foundation

provided by these operations allowed the participants to realize the critical need to have both in order to achieve success.

The many issues that seemed to plague the Guadalcanal and North African operations did not contradict the doctrinal foundation followed when executing the various landings during these two campaigns. The landings in the face of weak opposition from the enemy, allowed the U.S. and Allied forces an opportunity to put the past lessons of amphibious operations to practice and succeed despite errors in technique. Unlike past amphibious failures such as Gallipoli, these operations and the doctrine that supported them proved sound. However, there still existed a need to improve the methods involved. With the amphibious groundwork and the general principles established, the continued application of individual initiative and personal leadership would hone amphibious skills and help drive the Allies across many more beaches bringing them ever closer to victory over their adversaries.

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[1]Ronald H. Spector, *Eagle Against the Sun: The American War With Japan* (New York: Vintage Books, 1985), 155-156.

[2]Ibid., 155.

[3]MacArthur had the 32nd and 41st U.S. Infantry Divisions and the 7th Australian Division available for his offensive. However, none of these units were amphibiously trained. The lack of land-based aircraft that could support the attack also required the dedication of aircraft carriers and other naval vessels for their protection.

[4]Jeter A. Isely and Philip A. Crowl, *The U.S. Marines and Amphibious War: Its Theory, and Its Practice in the Pacific* (Princeton, NJ: Princeton University Press, 1951), 90-92; John Miller, Jr., *United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive* (Washington, DC: Center for Military History, United States Army, 1949), 9-19

[5]Thomas B. Buell, *Master of Sea Power: A Biography of Fleet Admiral Earnest J. King* (Boston: Little, Brown, 1980), 214-217.

[6]Isley and Crowl, *The U.S. Marines and Amphibious War*, 89-95; Miller, *Guadalcanal: The First Offensive*, 16-21.

[7]Vice Admiral George Carroll Dyer, *The Amphibians Came to Conquer: The Story of Admiral Richmond Kelly Turner* (Washington, DC: Government Printing Office, 1969), 303.

[8]Isley and Crowl, *The U.S. Marines and Amphibious War*, 108.

[9]General A. A. Vandegrift and Robert B. Aspery, *Once a Marine: The Memoirs of General A. A. Vandegrift* (New York: W. W. Norton & Company, Inc., 1964), 110.

[10]Dyer, *The Amphibians Came to Conquer*, 303-304. Dyer explains this absence as reflective of Ghormley's understanding of Nimitz's previous direction on his authority within the South Pacific Area. Ghormley interpreted his authority to be non-interference in task force commander's tasks assigned by Nimitz unless unforeseen circumstances arose requiring adjustment based on changing circumstances.

[11]Vandegrift, *Once a Marine*, 120.

[12]Dyer, *The Amphibians Came to Conquer*, 384-385.

[13]Ibid., 303-305. In discussing this matter, Dyer postulates that Ghormley's presence would probably not have changed the decision to provide limited air coverage because of Ghormley's perception of his own limited operational control based on Admiral Nimitz's guidance.

[14]Lieutenant Colonel Frank O. Hough, Major Verle E. Ludwig, and Henry I. Shaw, *Pearl Harbor to Guadalcanal: History of the U.S. Marine Corps Operations in World War II, Volume I* (Washington: Historical Branch, G-3 Division, Headquarters, U.S. Marine Corps, 1958), 240.

[15]Vandegrift, *Once a Marine*, 122; Department of the Navy, *Combat Narratives: Solomon Islands Campaign: I, The Landing in the Solomons, 7-8 August 1942* (Washington, DC: Publications Branch, Office of Naval Intelligence, 1943), 21-22.

[16]Dyer, *The Amphibians Came to Conquer*, 344-345.

[17]Department of the Navy, *The Landing in the Solomons*, 34.

[18]Dyer, *The Amphibians Came to Conquer*, 386.

[19]Ibid., 344-345.

[20]Vandegrift, *Once a Marine*, 118; John L. Zimmerman, *The Guadalcanal Campaign* (Washington Historical Division, Headquarters, U.S. Marine Corps, 1949), 43.

[21]Zimmerman, *The Guadalcanal Campaign*, 43.

[22]The coast watchers were Australian volunteers that lived and worked with the local inhabitants on the islands in the Pacific. They served as a source of vital intelligence by reporting enemy activity in their area.

[23]Zimmerman, *The Guadalcanal Campaign*, 46-47; Howe, Ludwig, and Shaw, *Pearl Harbor to Guadalcanal*, 257-258.

[24]Dyer, *The Amphibians Came to Conquer*, 352.

[25]Many find fault with Fletcher's decision to remove the carriers from Guadalcanal. See Spector, *Eagle Against the Sun*, 192; Samuel B. Griffith II, *The Battle for Guadalcanal* (Philadelphia: Lippincott, 1963), 9; Isely and Crowl, *The U.S. Marines and Amphibious War*, 128-129. However, when judging Fletcher, one must consider Ghormley's emphasis on the "protection of surface ships against land based aircraft attack" and Nimitz's guidance on "the principle of calculated risk." When viewed in light of this guidance, it is possible to find fewer faults in Fletcher's decision. Dyer, *The Amphibians Came to Conquer*, 384-385.

[26]Dyer, *The Amphibians Came to Conquer*, 383; Vandegrift, *Once a Marine*, 129-130.

[27]Dyer, *The Amphibians Came to Conquer*, 369-372.

[28]Ibid., 402.

[29]Cactus was the codename for Guadalcanal.

[30]Quoted in Louis Morton, *United States Army in World War II, The War in the Pacific, Strategy and Command: The First Two Years* (Washington, DC: Office of the Chief of Military History, Department of the Army, 1962), 353; Isely and Crowl, *The U.S. Marines and Amphibious War*, 108; H. F. Harmon, "The Army in the Southwest Pacific," Memo to Assistant Chief of Staff, Operations Division, War Department, 6 June 1944.

[31]John Toland, *The Rising Sun: The Rise and Fall of the Japanese Empire 1936-1945* (New York: Random House, 1970), 365-367. Colonel Kiyono Ichiki led the first large size Japanese reinforcement of Guadalcanal. His reinforced battalion was defeated in a disorganized attack on the airfield on 20 August.

[32]Ibid., 375-385, 398-404. The Marines also suffered from the debilitating effects of malaria and fungal diseases as well as a reduced caloric intake based on its often sporadic supply situation.

[33]Colonel G. C. Thomas, Chief of Staff, 1st Marine Division, "Notes on Jungle Warfare from the U.S. Marines and U.S. Infantry on Guadalcanal Island," 12 December, 1942.

[34]Samuel Eliot Morison, *History of the United States Naval Operations in World War II, Volume V: The Struggle for Guadalcanal* (Boston: Little Brown & Co., 1949), 113-114; Griffith, *The Battle for Guadalcanal*, 113. The Tokyo Express was the name used to describe the nightly resupply convoys travelling down the East Solomon Islands to Guadalcanal. Destroyers and submarines were used to limit exposure to enemy retaliation, conducting the resupply run to and back from Guadalcanal during the night in order to avoid exposure to Allied air and naval attacks.

[35]Joint Chiefs of Staff 00581 of 2 July 1942 as quoted in Dyer, *The Amphibians Came to Conquer*, 219.

[36]Vandegrift, *Once a Marine*, 183-185; Dyer, *The Amphibians Came to Conquer*, 448-452; Howe, Ludwig, and Shaw, *Pearl Harbor to Guadalcanal*, 341-342; William F. Atwater, "United States Army and Navy Development of Joint Landing Operations, 1898-1942" (PhD diss., Duke University, 1986), 175-178.

[37]Dwight D. Eisenhower, Commander-in-Chief, Allied Expeditionary Force, *Commander-in-Chief's Dispatch, North Africa Campaign* (La Crosse, WI: Brookhaven Press, 2004), 1.

[38]These Western and Center Task Forces were all-American forces and the Eastern Task Force was British with also included some American troops.

[39]Leo J. Dougherty III, *Pioneers of Amphibious Warfare, 1898-1945: Profiles of Fourteen Amercian Military Strategists* (Jefferson, NC: McFarland & Company, Inc., 2009), 371-372; Martin Blumenson, *The Patton Papers: 1885-1940* (Boston: Houghton Mifflin Company, 1972), 912-916.

[40]Blumenson, *The Patton Papers*, 914.

[41]British Lieutenant General Kenneth A. N. Anderson was designated to relieve Major General Ryder following the capture of Algiers in order to lead the Eastern Task Force in the seizure of Tunisia during follow-on operations.

[42]Terry Allen, Commanding General, 1st Division, "Lessons from Operation Torch," Memo to Commander-in-Chief, Allied Force Headquarters, 25 December 1942, in *Lessons of Operation Torch* (La Crosse, WI: Brookhaven Press, 2003), 31.

[43]Charles E. Kirkpatrick, "Joint Planning for Operation Torch," *Parameters* 21, no. 2 (Summer 1991): 80.

[44]Due to Casablanca's more formidable defenses, the Western Task Force's middle prong attack was at Fedala just north of Casablanca.

[45]Information on supply for Operation Torch was derived from Roland G. Ruppenthal, *United States Army in World War II, The European Theater of Operations, Logistical Support of the Armies, Volume I* (Washington, DC: Center of Military History, Department of the Army, 2000), 87-99; George G. Howe, *United States Army in World War II, Mediterranean Theater of Operations, Northwest Africa: Seizing the Initiative in the West* (Washington, DC: Center of Military History, Department of the Army, 2002), 63-67; John D. Millet, *United States Army in World War II, The Army Service Forces, The Organization and Role of the Army Service Forces* (Washington, DC: Center of Military History, Department of the Army, 1985), 60-62.

[46]Ruppenthal, *Logistical Support of the Armies*, 93.

[47]Millet, *The Organization and Role of the Army Service Forces*, 61.

[48]Donald G. Taggart, *History of the Third Infantry Division in World War II* (Nashville; The Battery Press, 1987), 8-10; Howe, *Northwest Africa: Seizing the Initiative in the West*, 61-62.

[49]Howe, *Northwest Africa: Seizing the Initiative in the West*, 62-63.

[50]Lieutenant Colonel J. W. Sisson, Jr., "Experiences in Amphibious Landings in the Mediterranean Theater of Operations and the European Theater of Operations: Personal Experiences of an Infantry Commander" (Lecture provided to School of Combined Arms, Regular Course, 1946-1947, Command and General Staff College, Fort Leavenworth, KS).

[51]Howe, *Northwest Africa: Seizing the Initiative in the West*, 97-115; John Gordon IV, "Joint Power Projection: Operation Torch," *Joint Forces Quarterly* no. 4 (Spring 1994): 64-65.

[52]Howe, *Northwest Africa: Seizing the Initiative in the West*, 116-170; Gordon IV, "Joint Power Projection: Operation Torch," 65-66.

[53]Howe, *Northwest Africa: Seizing the Initiative in the West*, 192-225.

[54]Ibid., 229-249.

[55]Norman Gelb, *Desperate Ventures: The Story of Operation Torch, The Allied Invasion of North Africa* (New York: William Morrow and Company, Inc., 1992), 136.

[56]Hugh A. Scott, *The Blue and White Devils: A Personal Memoir and History of the Third Infantry Division in World War II* (Nashville: The Battery Press, 1984), 6; Taggart, *History of the Third Infantry Division in World War II*, 33.

[57]Combat Studies Institute, Battlebook 3-A, *Operation Torch, North Africa Campaign: Offensive Deliberate Assault, Amphibious, 8 November 1942* (Fort Leavenworth, KS: Combat Studies Institute, 1984), 59.

[58]Howe, *Northwest Africa: Seizing the Initiative in the West*, 134-137.

[59]Scott, *The Blue and White Devils*, 11; Taggart, *History of the Third Infantry Division in World War II*, 33; Arthur R. Wilson, Chief of Staff, Headquarters Services of Supply, *Report of Operations in North Africa*, 12 December 1942 (La Crosse, WI: Brookhaven Press, 2003), 7, 17.

[60]Chass W. Ryder, Commanding General, Eastern Task Force, Memo to Commander-in-Chief, Allied Force Headquarters, "Lessons from Operation Torch," 26 December 1942, 6.

[61]Wilson, *Report of Operations in North Africa*, 5; Scott, *The Blue and White Devils*, 6-8.

[62]Wilson, *Report of Operations in North Africa*, 22.

[63]Holland M. Smith, "The Development of Amphibious Tactics in the U.S. Navy, Part VI," *Marine Corps Gazette* 30, no. 11 (November 1946): 34, 38, 47. Smith further discusses the tactical similarities and differences between the two theaters.

CHAPTER 6

CONCLUSION AND RELEVANCY

Conclusion

The ad hoc manner in which the U.S. conducted the Spanish-American War in 1898 revealed much to be improved in the way it carried out future operations. The country was ill-prepared to carry out joint, coordinated attacks against an enemy. Absent doctrinal guidance, the services drew from past experience--however limited--to formulate a plan of execution. Although ultimately successful, the U.S. experienced many issues in the preparation, transportation, and command of the expedition to Cuba. The command relationship between the Army and the Navy became the most obvious of these areas for improvement. On the positive side, the Marine Corps reinforced its role as a force-in-readiness by forming a task organized expeditionary unit to seize an advanced base for the Navy's use during the short campaign. Fortunately, some recognized the need for change and began to identify a course of action to rectify these problems. The advanced base and command relationship challenges during the Spanish-American War began an evolutionary journey to develop a doctrine that harmonized U.S. capability, ingenuity, and conduct of amphibious operations.

The recognition and interpretation of the prevalent problems involved in expeditionary operations varied for each service. However, inter-service rivalry seemed to provide not only the source of friction but the impetus for resolution. Command relationships became the focus for the Army and the Navy in order to distinguish the roles of each service during the movement, landing, and conduct of expeditionary operations. This interaction occurred between two separate and distinct services with

traditional roles that formed a relationship among relative equals. The publication of *Rules for Convoy of Military Expeditions* in 1906 addressed the function of each service during the movement phase, advocating mutual cooperation between commanders. The promotion of collaboration leading into World War I varied only in emphasis of which commander supported the other.

Despite being assigned the task to create the Advance Base Force following the success during the Spanish-American War, few Marines seized upon it as a means to provide them a mission distinct from that of the Army. However, inter-service rivalry overcame this initial lack of enthusiasm and foresight. Threats to the Marine Corps' existence finally motivated it to prove the advanced base concept during the successful exercise of 1914, thereby thwarting the Navy's effort to alter the traditional roles and future direction of the Marine Corps.

Following World War I, the Marine Corps, having acknowledged the advance base mission, seized the initiative in developing the concept into a unique task that distinguished its role from the Army. Major General Commandant John A. Lejeune's vision tied the Marine Corps' future relevancy to the Navy by embracing and actively promoting its newfound and distinct mission. While advocating the defensive mission of the Advanced Base Force, Lejeune introduced an offensive focus to meet the growing need to seize an advanced base from an enemy during a likely naval campaign against Japan in the Pacific. To incorporate the offensive characteristic of expected operations, Lejeune redesignated the Advanced Base Force as the East and West Coast Expeditionary Force.

With this broadened focus, the Marine Corps encouraged the professional development of its officers to meet the challenges involved in their new mission. By studying amphibious operations like Gallipoli, the Marines analyzed past failures to develop the necessary requirements for success. The offensive amphibious mission gradually gained advocates, its enculturation fostered by an ever-increasing proportion of the curriculum at Marine Corps Schools devoted to its study and development. Practical application during landing exercises contributed to this process and exposed an ever-greater number of Marines to the challenges of amphibious landings. The Marines confronted the inadequate equipment and, at times, lack of dedication by the Navy toward amphibious training with directed zeal to refine its capability to support the U.S. Fleet in offensive amphibious operations.

The viability of the offensive amphibious mission, although held back by equipment deficiencies, continued to improve. The acceptance of this mission and the increased exposure of and proselytizing by key leaders in the Marine Corps helped generate momentum to shape the organizational structure of the Marine Corps. The formation of the Fleet Marine Force in 1933, a dedicated force to execute amphibious operations, gave the Marines the means to seize an advanced base from the enemy. It only lacked the ways, the doctrine that prescribed the necessary methods.

The Army and the Navy, through the Joint Board, collaborated to produce the *Joint Action of the Army and Navy* in 1927 and *Joint Overseas Expeditions* in 1933. Unlike past publications, these addressed amphibious operations and seizing an enemy objective from the sea--although not in overly explicit detail. For the first time, though, doctrine included common definitions and key steps of amphibious operations. The

doctrine also assigned roles to each service--directing special preparation of landing operations to the Marine Corps and delineating command relationships between the Army and the Navy centered on the ideas of unity of command and paramount interest. The concept of paramount interest was modified from the 1920 version contained in *Joint Army and Navy Action in Coastal Defense*. Instead of being focused on which service had superior strength when compared to the enemy, it relied on which service had the greater importance in the operation. The commander with either unity of command or paramount interest possessed the authority to direct the actions of other supporting commanders. This joint doctrinal development by the Army and the Navy marked a distinct advance in conceptualizing the framework necessary to conduct effective amphibious operations.

With the general amphibious concept and joint responsibilities as background, the Marine Corps developed the *Tentative Landing Operations Manual* in 1934. This manual provided the Marine Corps and Navy with a document that combined the general information in *Joint Overseas Expeditions* with the growing "Marine Corps science," fine tuned through trial and error during past exercises. With the Marine Corps viewed as an adjunct of the Navy, amphibious operations dictated a command relationship that favored the Navy. The landing force commander was responsible to the Navy commander during execution of a landing, as well as follow-on operations ashore. The Fleet Landing Exercises (FLEX) conducted annually from 1935 to 1940 provided the venue for continued progress in validating the principles presented in the *Tentative Manual* in order to determine the best methods for executing amphibious operations.

Participation in the FLEXs was approached differently by each service. As a means to prove the viability of its mission and validate its doctrine and procedures, the

Marine Corps fully devoted itself to participating in these exercises. The FLEXs offered opportunities to assess different capabilities and equipment such as naval gunfire and air support procedures along with potential landing vehicles, discarding that which did not prove useful and further developing what did. During this process, problems were identified and solutions were offered for additional testing. The series of exercises served to indoctrinate Marines in the principles and techniques of amphibious operations and allowed opportunities to exercise individual initiative and leadership in order to overcome the deficiencies. Most importantly, these small successes worked to gradually encourage acceptance of the amphibious mission and greater participation from the Army and Navy.

The interest in amphibious operations for the Army tended to fluctuate with its limited involvement in only two FLEXs prior to 1941. The last FLEX was the largest exercise up to that time. In response to world events and America's recently formulated "Germany First" policy, the Army realized it needed to increase its involvement in amphibious training in order to prepare for potential operations in Europe. As a result, the Army designated a number of divisions to specifically train in amphibious operations and devoted more attention to this mission, demonstrated by its participation in FLEX No. 7.

In 1941, the establishment of the First and Second Joint Training Force, later redesignated as Amphibious Force, Atlantic and Pacific, exemplified the progression of amphibious thought and practice up to that time. The relative monopoly on amphibious training that the Marine Corps and Navy maintained during the 1930s loosened to specifically incorporate the Army. The growing importance of amphibious training for the Army reflected its plans for operations in Europe, which required amphibious

operations. Additionally, the increasing significance of amphibious operations for the Army's future operational success directly correlated to its greater level of dissatisfaction in the support (more specifically, lack of support) provided by the Navy.

To prepare for the landing exercise in the summer of 1941, the Army requested a copy of the Navy's doctrinal publication for amphibious operations, FTP 167, *Landing Operations Doctrine, U.S. Navy 1938,* which had superseded the *Tentative Landing Operations Manual*. The Army then approved it with only minor additions as Field Manual 31-5, *Landing Operations on Hostile Shores*. Based on the amphibious concepts in *Joint Overseas Expeditions* and the practical experience gained from the many exercises during the 1920s and 1930s, the Marine Corps' *Tentative Manual* provided the doctrinal foundation concerning specific techniques of amphibious operations for both the Navy and the Army leading into World War II.

The Army's dissatisfaction with the Navy's ability to effectively train ever-larger units caused it to establish its own amphibious school, while still maintaining its manpower commitment to the joint training with the Amphibious Forces on each coast. The Army also altered its organization, creating amphibious engineer units to meet the requirements for small boat operators used to transport its soldiers to the shore. The closeness of the war and service expansion caused great fluctuation within the Army. The experienced leadership and soldiers were pulled from units to help form new ones, while overseas assignments drew an ever-increasing portion of the Army's available forces. All of these factors contributed to a turbulent amphibious training cycle for its divisions. The great flexibility and initiative displayed to overcome the challenges of a new mission in

the face of equipment shortages, guaranteed the specialized training of numerous Army divisions prior to commitment overseas.

By 1942 and the advent of World War II, each service had experienced and overcome numerous obstacles to its amphibious training, although others still remained. The growing comprehension that the upcoming war necessitated the effective execution of amphibious operations to overcome enemy resistance motivated individuals, units, and services to test the amphibious doctrine and, in the process, improve understanding and procedures. This process proved successful during the interwar period and contributed to the continuing success of amphibious operations in the opening phases of World War II.

The Marine Corps' efforts during the interwar period proved critical to the success of the U.S. during World War II, shaping its focus and future development to meet the requirements of the country's war plans. To thwart Japanese aggression and ensure the country's strategic interests in the Pacific meant that the U.S. must effectively control the sea lanes by conducting a naval campaign over several thousands of miles. Within this context, the Marine Corps tailored its organization by forming the Fleet Marine Force and training it for amphibious operations. This force guaranteed great flexibility in meeting short-notice missions by providing a specifically-organized unit designed to seize and defend advanced bases while serving with the fleet. Without these bases to support the Navy during extended offensive operations in the Pacific, the U.S. could not successfully prosecute a war against Japan. By tailoring its organization to meet the Navy's offensive need to seize bases from an enemy determined to repel these efforts, the Marine Corps--with the assistance of the Navy and eventually the Army--furnished a

ready-force that allowed the U.S. to achieve its operational objectives during the Guadalcanal campaign.

The Army continued to develop doctrine in support of its primary role for the defense of key U.S. possessions in the Pacific, such as the Philippines. This focus retarded its full participation in the development of amphibious doctrine until much later than the Marine Corps. Unlike the Marine Corps, its very existence as a separate service and operational role as a participant in national defense was never in question during the interwar years. That being the case, the main concern of the Army lay with its prerogatives as a separate service related to joint expeditions with the Navy. Prior to the war, the imperative to develop the best command relationship between the two services began and ended with mutual cooperation, but also introduced unity of command. Cooperation, then, was the underlying factor of its relationship with other services and allies. However, unity of command developed as the predominant form of command during the war, although with variations in each theater. This foundation in command relationships and the amphibious skills gained during exercises prior to World War II assured the Army's success as it led the Allied forces during Operation Torch in North Africa.

Relevancy

As with studying history in general, by examining the inter-service doctrinal development of amphibious operations prior to World War II one can inductively identify the inherent truths or lessons present in the process and then deductively apply them to present conditions. Study of this development reveals an evolutionary process of innovation that provides insights on how to develop new concepts in an atmosphere of

budgetary constraint, like that which may again be prevalent. As military historian Williamson Murray states, “Successful innovation is not a linear, but rather a complex, multi-layered, synergistic process.”[1] The intricacies of this statement become apparent when examining the progression toward a workable amphibious doctrine during the 1920s and 1930s.

Each service worked to secure its share of limited resources, to safeguard its service position, and to guarantee its command prerogatives in amphibious operations. These motivations sometimes opposed other services or even factions within a single service, but ultimately contributed to the process and spurred progress toward workable solutions that were tested first in training and then in combat. The examination of the effects of inter-service rivalry, stemming from distinct service cultures and priorities so prevalent during the interwar period, builds an appreciation of similar forces at play in current inter-service relations and can lead to better awareness for today’s leaders. This appreciation offers techniques to help transform negative aspects of inter-service rivalry into positive results that encourage a unity of effort, while promoting individual service strengths for the current operational environment. In this way, leaders can overcome service pettiness to help formulate constructive approaches to problems and identify workable solutions that best meet the needs of the nation.

The analysis of the development of amphibious doctrine and its relation to innovation reveals “The most important elements in this [innovation] process are professional thinking, coherent and realistic training, and sensible doctrine based on thorough examination of past experience.”[2] Each of these key factors played a role in the effective execution of amphibious doctrine during World War II. As a case study, the

development of amphibious doctrine provides valuable insight into the best means to foster intellectual thought through professional development and education. Likewise, such an examination reveals different methods of applying and testing ideas during exercises that can be applied to current training. The combination of knowledge gained through education and practical experience achieved by participating in exercises cultivated the leadership and initiative necessary for innovation. By understanding these concepts, leaders can apply similar techniques to best prepare their units for the unknown contingencies of the future.

Past as Prelude to the Future

In today's uncertain world, the U.S. does not benefit from knowing its most likely adversaries ahead of time as it did in the years leading up to World War II. The regions of instability in the world that pose a threat to this country require a unique strategic vision that demands flexibility and the capability to rapidly respond to emerging contingencies. Joint expeditionary forces are critical to providing the flexibility necessary to meet the dynamic threats this country will face in the future.

In meeting the current operational challenges, the U.S. has increasingly stressed the expeditionary preparedness of each service in meeting its requirements to support the joint defense of this nation. Each service has embraced this concept in its own way, but all have improved, and continue to improve, their abilities to respond to the joint demands of future conflicts. This cultural shift has affected many aspects of joint planning and execution, fitting together cooperative teams reminiscent of those during operations on Guadalcanal and North Africa. Security cooperation between the U.S. and its allies is increasingly necessary to effectively meet U.S. strategic goals. The command

relationship problems and successes experienced throughout past campaigns serve as examples from which lessons can be drawn that enhance current command relationships and support interoperability among the services and allies.

Although some question the feasibility and importance of amphibious operations in the future, they have been and will remain critical to projecting U.S. power abroad in order to ensure this country's security. In the past twenty years, the services have conducted over 100 amphibious operations.[3] As a global power responsible for guaranteeing open and free sea lines of communication, this nation faces both suspected and unknown adversaries that will threaten its prosperity by interfering with free access to these areas. The U.S. must retain and continue to develop the means to overcome potential enemies intent on constraining U.S. capability and influence. To meet this challenge, present "strategies address the requirement to maintain a robust forcible entry capability: the ability to maneuver from the sea, gain and maintain access anywhere in the littorals as well as transition to operations ashore and sustain the force from the seabase."[4] This critical capability allows the U.S. to establish lodgments or advanced bases as a means to introduce additional forces. As in the past, the ability to conduct amphibious operations will prove essential to securing American interests.

The present shortages--due to budgetary constraints--of amphibious ships and landing craft needed to meet current operational challenges are similar to those in the past. The question of the most appropriate mission for the services also resonates today, especially for the Marine Corps. The employment as a second land force during current operations meets the present needs of the nation but does not necessarily guarantee the viability of the Marine Corps as a separate service in the future. The examination of the

services' approach to the development of amphibious doctrine leading into World War II offers critical insight for developing a strategic vision. That vision can provide an undeniable purpose for transforming parochial service cultures into joint cultures that foster the initiative and leadership needed to spur creative innovation and drive the doctrinal development required for future missions.

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[1]House, *Statement of Williamson Murray to the House Sub Committee on Modernization,* 105th Cong., http://armedservices.house.gov/comdocs/testimony/105thcongress/11-6-97murray.htm (accessed 6 May 2010)

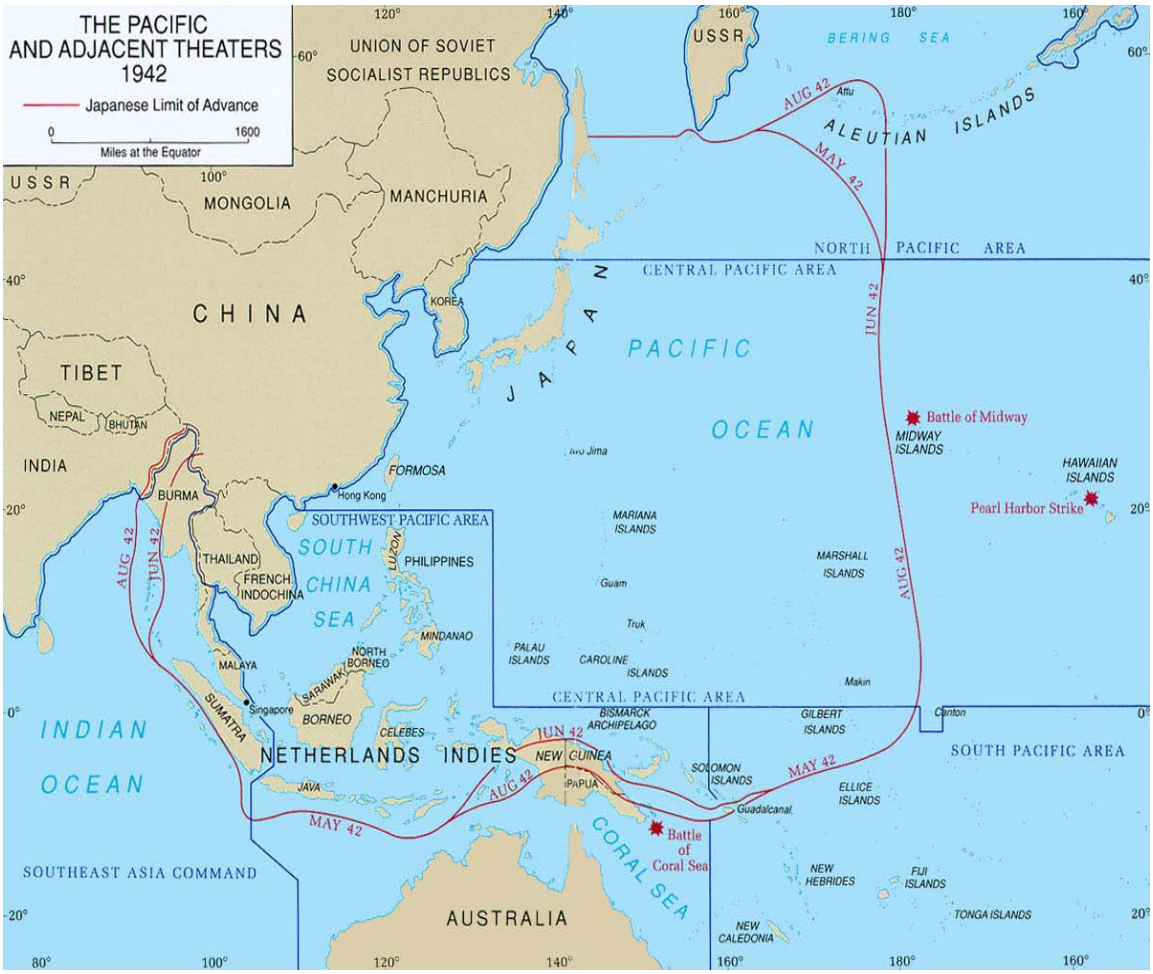
[2]Ibid.

[3]United States Marine Corps, *Amphibious Operations in the 21st Century* (Washington, DC: Marine Corps Combat Development Command, 2009), 3.

[4]Senate, *Statement of General James T. Conway, Commandant of the Marine Corps, Before the Senate Armed Services Committee on the Posture of the United States Marine Corps,* 28 February 2008, http://www.marines.mil/unit/hqmc/cmc/ Documents/CMCTestimonies20080228SenArmServComm.pdf (accessed 14 May 2010).

APPENDIX A

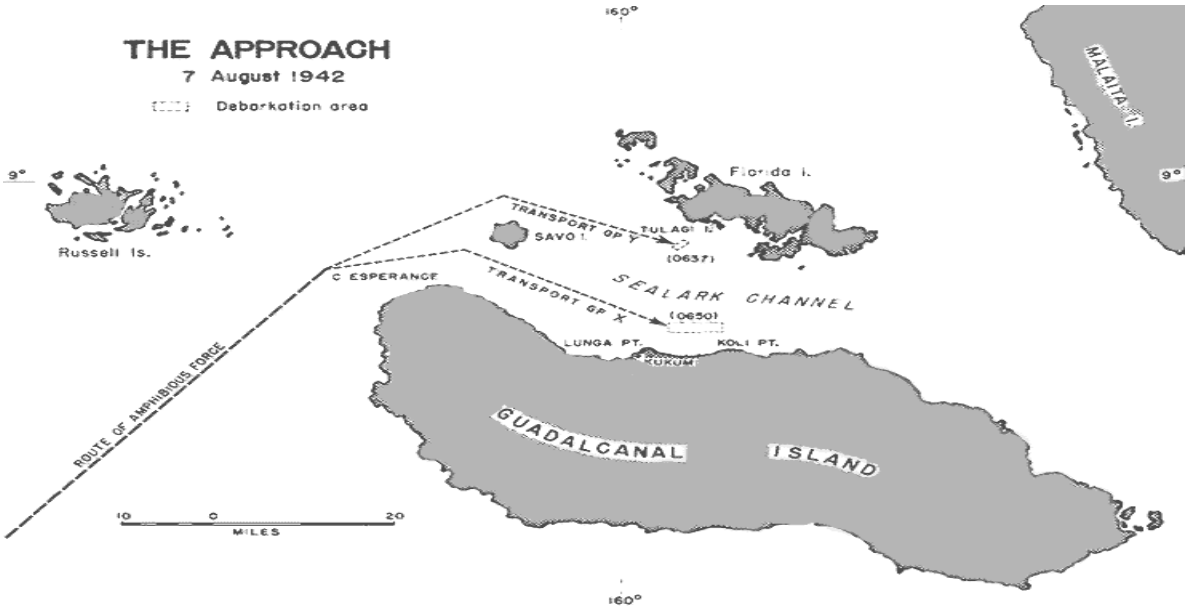
JAPANESE LIMIT OF ADVANCE AND U.S. PACIFIC THEATER BOUNDARIES



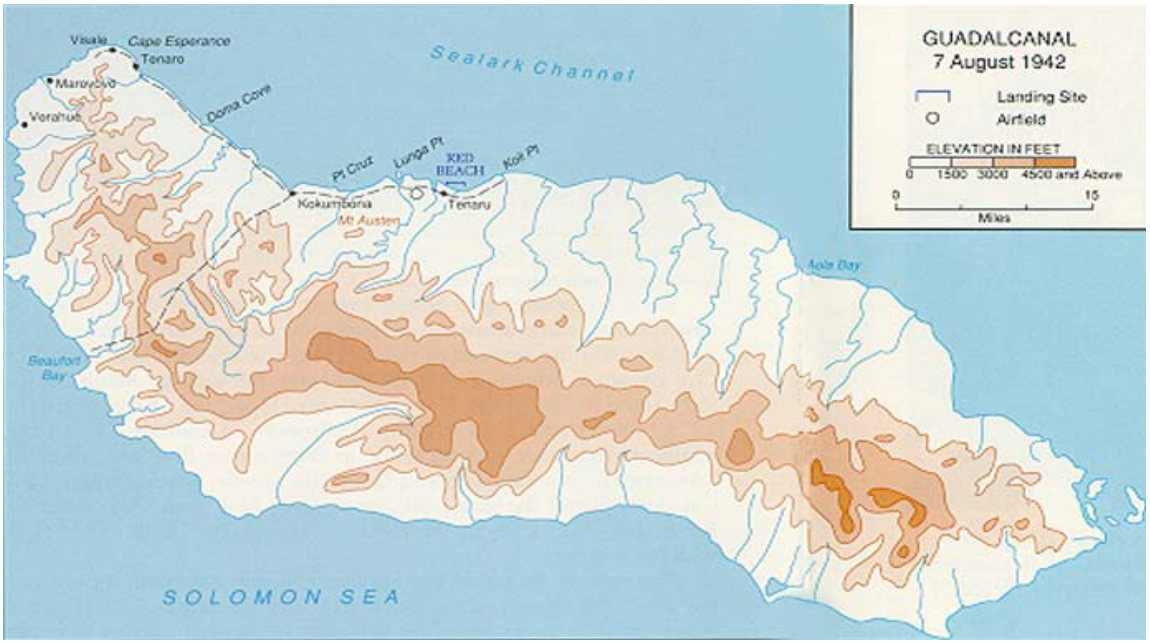
Source: U.S. Army Center for Military History, http://www.history.army.mil/brochures/72-4/map1.JPG (accessed 15 May 2010).

APPENDIX B

GUADALCANAL AND FLORIDA ISLANDS



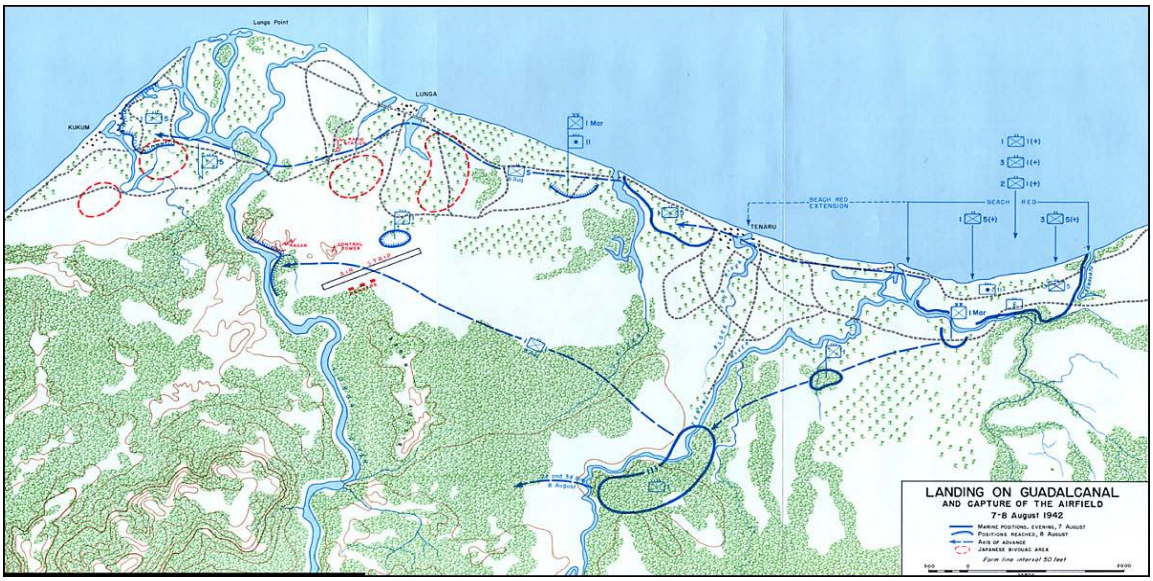
Source: U.S. Army Center for Military History, http://www.history.army.mil/books/wwii/GuadC/p060.GIF (accessed 15 May 2010).



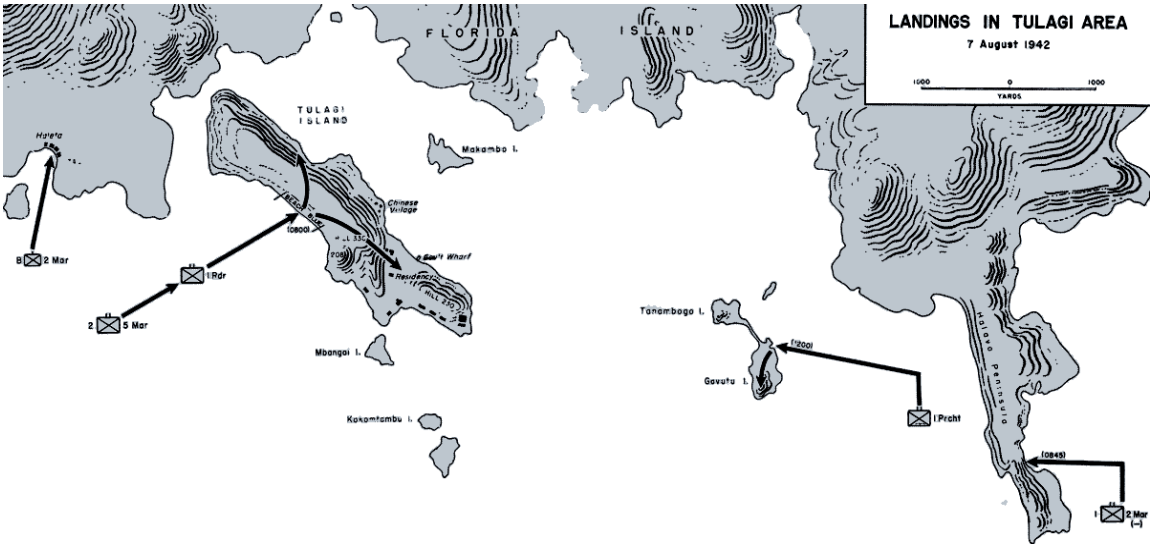
Source: U.S. Army Center for Military History, http://www.history.army.mil/brochures/72-8/map2.jpg (accessed 15 May 2010).

APPENDIX C

GUADALCANAL AND FLORIDA ISLANDS SCHEME OF MANEUVER



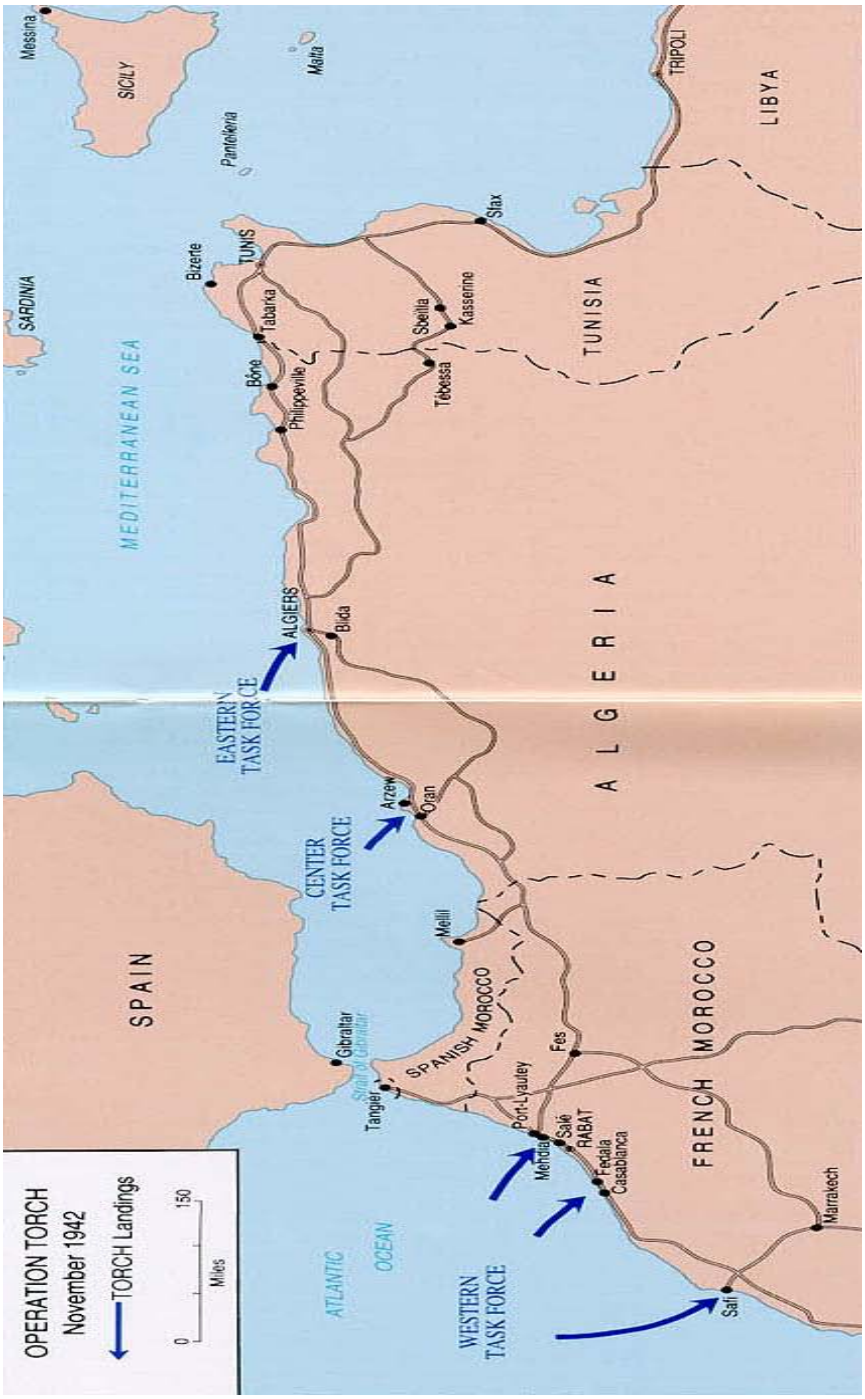
Source: John Miller, Jr. United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive, http://www.history.army.mil/books/wwii/guadC/lmap-v.gif (accessed 15 May 2010).



Source: U.S. Army Center for Military History, http://www.history.army.mil/books/wwii/GuadC/p062.GIF (accessed 15 May 2010).

APPENDIX D

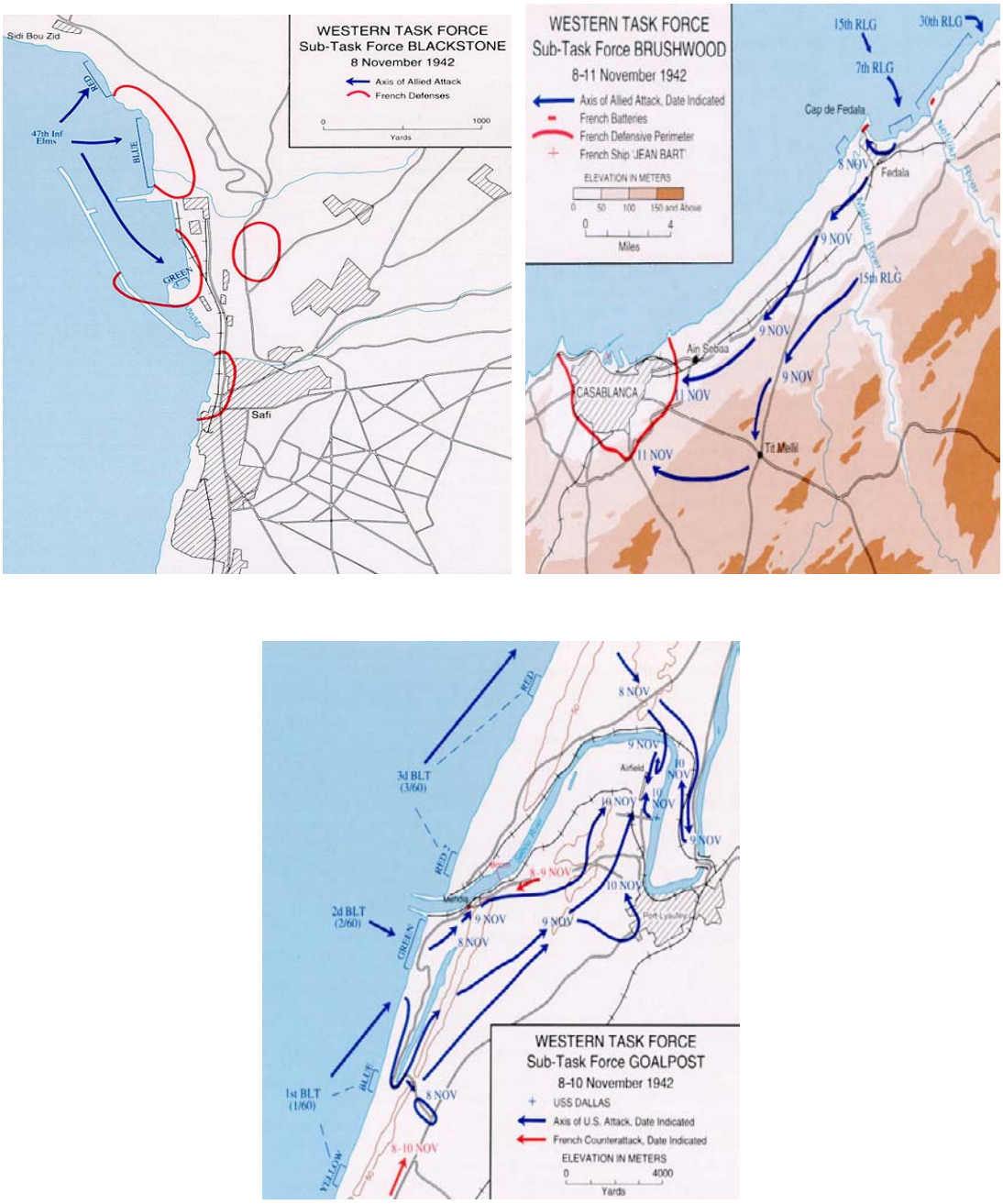
OPERATION TORCH SCHEME OF MANEUVER



Source: U.S. Army Center for Military History, http://www.history.army.mil/brochures/algeria/p06-07(map).jpg (accessed 15 May 2010).

APPENDIX E

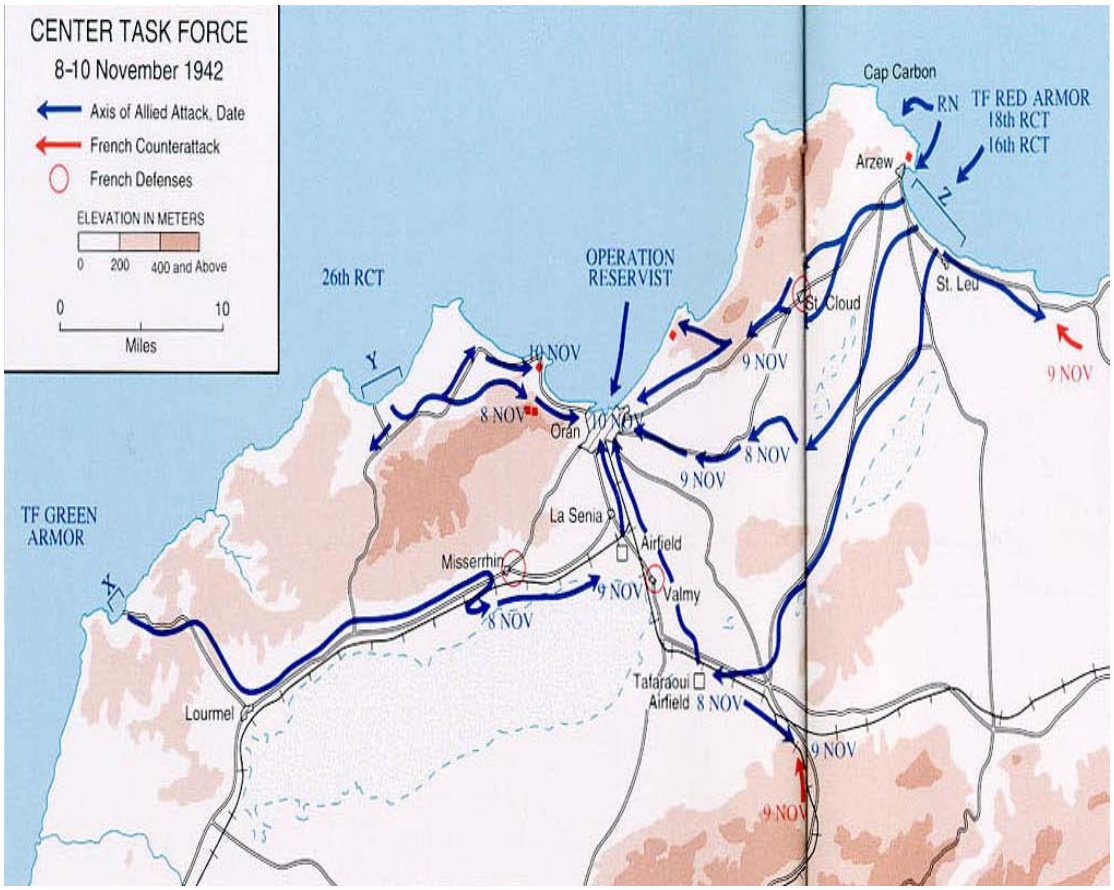
WESTERN TASK FORCE SCHEME OF MANEUVER



Source: U.S. Army Center for Military History, http://www.history.army.mil/brochures/algeria/p08(map).jpg; http://www.history.army.mil/brochures/algeria/p14(map).jpg; http://www.history.army.mil/brochures/algeria/p12(map).jpg; (accessed 15 May 2010).

APPENDIX F

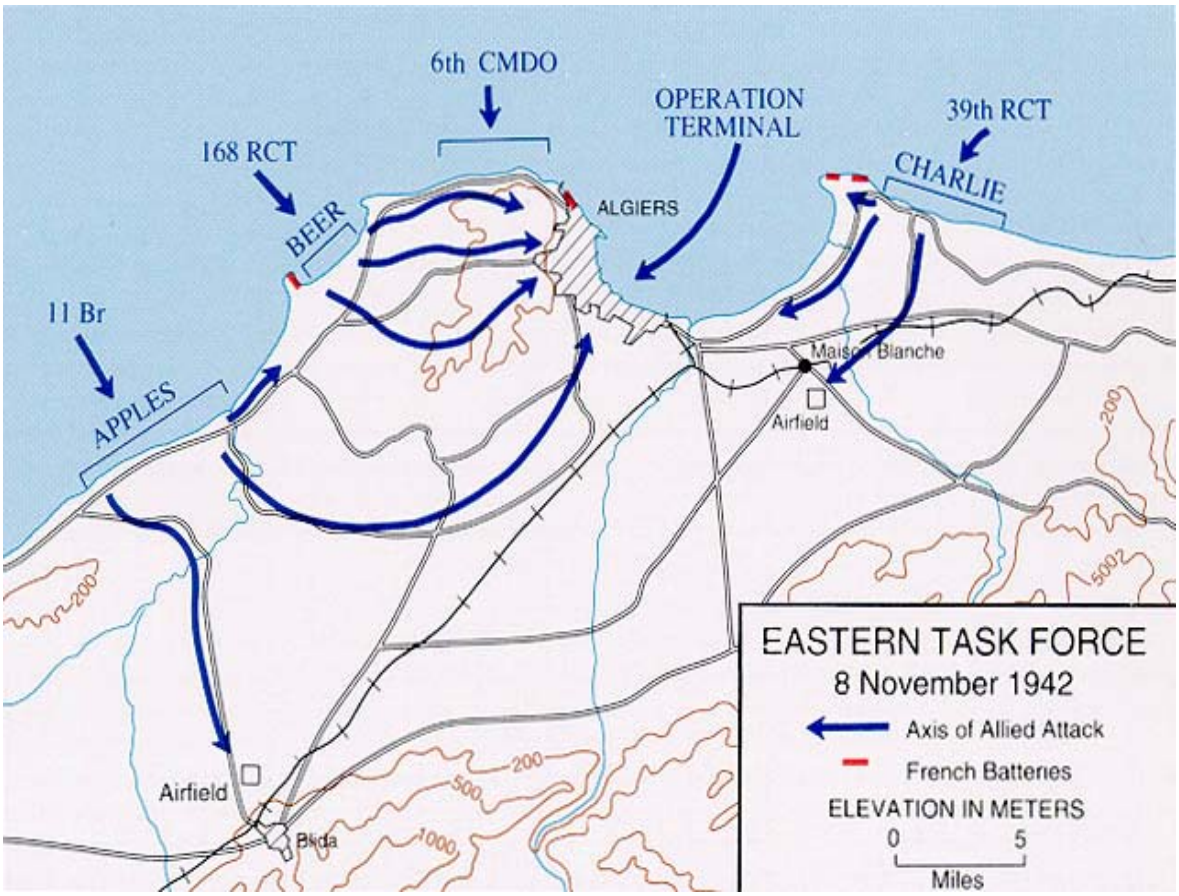
CENTER TASK FORCE SCHEME OF MANEUVER



Source: U.S. Army Center for Military History http://www.history.army.mil/brochures/algeria/p20-21(map).jpg (accessed 15 May 2010).

APPENDIX G

EASTERN TASK FORCE SCHEME OF MANEUVER



Source: U.S. Army Center for Military History, http://www.history.army.mil/brochures/algeria/p24(map).jpg (accessed 15 May 2010).

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