

Naval Integration through History: Five Case Studies

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Abstract

This report is a historical examination of naval integration through the lens of five case studies. The cases span 150 years of history and include US and non-US examples. From these case studies, we derived a number of findings and recommendations to support ongoing US Marine Corps efforts to integrate with their Navy partners. Our findings focus on the tactical level, and include the need for unified command, effective training and planning, and a close examination of the littoral geographic space. We recommend that II MEF's current integration efforts reflect these consistencies: Marines should continue to plan and train with their Navy partners, organize effectively, and seek advantage in the littoral space.

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Cover image credit: J. Keble Bell, *The Zeebrugge Affair*, New York, The George Doran Company, 1922

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Executive Summary

Naval integration has been an important element of US Marine Corps (USMC) efforts to evolve the force in recent years. However, navy and marine forces have long histories of working closely together. In this report, we seek to examine these historical relationships and draw out important themes for today's naval integration efforts. As II Marine Expeditionary Force (II MEF), the study sponsor, works toward greater integration with its US Navy (USN) partners, examining the tactical employment of naval infantry throughout history affords helpful insights.

To study this history, we assembled and examined a series of case studies in naval integration to draw out useful lessons from history. The cases extend back as far as the US Civil War and include US and non-US examples.

The cases included in this report include the following:

1. The Battles for Fort Fisher, North Carolina (December 1864 and January 1865)
2. Royal Marine Operations in the Gallipoli Campaign (1915) and the Zeebrugge and Ostend Raids (1918)
3. Operation Ironclad, Madagascar (May 1942)
4. Operation Walfajr-8, Al Faw Peninsula Landings (1986)
5. Combat at Sea in the 19th and 20th century: The Marine gun turret on battleships and cruisers

Findings

We found consistent themes and useful outliers in the five cases, including the following:

- **Unified command proved key to success in several instances.** The cases that demonstrated the greatest success—both in terms of overall achievement of objectives and effective naval integration—had clear command relationships, consistent communication, and/or organizational cohesion with effective leadership. This finding is consistent with well-established and widely accepted warfighting concepts, including unity of command and unity of effort.

- **Shared doctrine, training, and planning among naval forces improved integration in operations.** Though not surprising, this finding is especially important, as it was consistent across all cases. Battles and operations where naval forces invested time to train and plan together prior to execution fared better (in terms of operating as integrated units) than those that did not.
- **Planned, rather than ad hoc, organizations operated more effectively together.** As with the previous finding, when units organized in intentional ways prior to an operation, a smoother and more logical execution ensued. Organizing effectively and in consistent ways helped drive cohesion and create well-understood structures.
- **Time in service *together* had an impact.** Regardless of specific doctrinal or training cooperation, some of the cases show that achieving a level of comfort in operating together can produce benefits on the battlefield. In some cases, marines and sailors were practiced in training and operating together, and had an established naval culture.
- **The littoral space presents unique challenges and opportunities for service integration.** Marines aboard ships, in ship-to-shore movements, in operations in challenging terrain near and along coastal areas, and other dynamics represented in these case studies reveal the distinctiveness of the littoral space. Operating effectively in that space, if challenging, can add unique value to a larger campaign.

Implications

From the findings above, we derived a set of implications for II MEF and the broader Navy-Marine Corps relationship to facilitate greater integration between the forces. They include the following:

- ***Train together*** – Navy and Marine Corps forces should maximize opportunities to train together. History bears out what many on the US naval team have advocated: the forces must train as they fight; and if they will fight together, they must train together. Though ideally Navy and Marine Corps forces will have opportunity to train together extensively, history shows that any amount of combined training prior to executing an operation or campaign demonstrates value.
- ***Plan together*** – Similarly, Navy and Marine Corps forces should conduct planning efforts jointly, where appropriate. The case studies showed that planning contributes in similar ways to training together. It helps to create effective execution, manage uncertainty, and mitigate risk.
- ***Deliberately organize the force for cohesion*** – Navy and Marine Corps forces should be intentional about how they organize to create cohesion and flexibility. Today's

- operating environment presents unique challenges in this regard, given its complexity and high levels of risk.
- ***Study littoral terrain (landward and seaward)*** - The littoral space is unique; Marines should continue to invest in understanding it and developing skills to exploit its advantages and mitigate the challenges it presents. This recommendation reinforces what is already the Marine Corps' geographical focus area. The case studies highlight its uniqueness and the value of cooperative sea- and ground-based forces in gaining advantage in that space.

Conclusion

We can draw important lessons from these case studies on naval integration, while recognizing the limits of their utility. The operating environment today and in the future will present significant challenges. Therefore, the Marine Corps' application of these historical lessons must be in context. Still, there are persistent themes, including the need to invest in training and planning as a naval force and the importance of the littoral space, that have applications today. Applying these lessons will grow the naval force's ability to meet the challenges of the maritime domain and produce advantages for joint and partnered efforts.

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Introduction

Naval integration has been an important element of US Marine Corps (USMC) efforts to evolve the force in recent years. Significant changes to Marine Corps focus and structure, signaled in the USMC Commandant's Planning Guidance (CPG) in 2019, and manifested in subsequent and ongoing efforts, revolve around a renewed relationship with US Navy (USN) partners. However, we recognize that these services—and others like them—have worked closely throughout their histories. In this report, we examine these historical relationships and draw out important themes for today's naval integration efforts.

Naval forces have cooperated to achieve military objectives for hundreds of years. The tactical employment of “soldiers of the sea” has evolved, and with it the relationships between sailors and the infantry-trained forces aboard their ships. As II Marine Expeditionary Force (II MEF), the study sponsor, works toward greater integration with its Navy partners, examining the tactical employment of naval infantry throughout history affords helpful insights for modern-day forces. Although we focus on the tactical level in this report, we include broader arcs of the developing roles of marine and amphibious forces, where appropriate, to provide context.

To leverage historical lessons, we developed a series of case studies to illustrate useful examples of naval integration—or the lack thereof. This report does not provide a comprehensive history of each case; rather, we focus on important issues relevant to tactical integration, including organization, command and control, and training. The cases include US and non-US examples, and span 150 years of history to provide a diverse set of insights and to derive important implications for the future of the II MEF.

Approach

Our analytic approach involved several steps. First, we asked historians to identify, describe, and assess a broad set of historical examples of naval integration. Although we include US forces, we also found useful examples in other nations' experiences bringing naval forces together to achieve objectives.

Once we gathered a useful set of integration cases, we culled the list to a subset assessed to be most valuable to the sponsor. Our criteria for inclusion in the set included a demonstrated attempt at naval integration (i.e., navy and naval infantry forces cooperating toward the same objective in the same geographic space); variety in example types (i.e., timeframe, conflict, nations involved); and lesser-known, rather than widely known, examples. This last criterion

was important because there are instances of naval integration that are probably very familiar to our audience (e.g., Guadalcanal in World War II), but we sought to mitigate the effect of preconceived ideas and opinions about particular cases by selecting less well-known examples.

We built brief case studies for each example in the subset, including an overview of the events, a discussion of the organization of forces, a description of the integrated force structure and training, the approach to command and control, and the level of success or failure in achieving intended objectives. Finally, we assessed the cases to draw out consistent themes. We leveraged subject matter expertise and recent analysis on similar topics to contextualize those themes and develop implications for today's Marine Corps.

Organization

This report is organized into two major sections: case studies, and findings and implications. In the first section, we examine the following case studies:

1. The Battles for Fort Fisher, North Carolina (December 1864 and January 1865)
2. Royal Marine Operations in the Gallipoli Campaign (1915) and Zeebrugge and Ostend Raids (1918)
3. Operation Ironclad, Madagascar (May 1942)
4. Operation Walfajr-8, Al Faw Peninsula Landings (1986)
5. Combat at Sea in the 19th and 20th century: The Marine gun turret on battleships and cruisers

In the second section, we summarize major findings and identify implications and recommendations.

Integration Case Studies

In this section, we discuss five case studies. Two cases involve US forces, and we include two examples from the United Kingdom's Royal Marine experience working with the Royal Navy. Finally, one case covers an operation from the Iran-Iraq War in the mid-1980s.

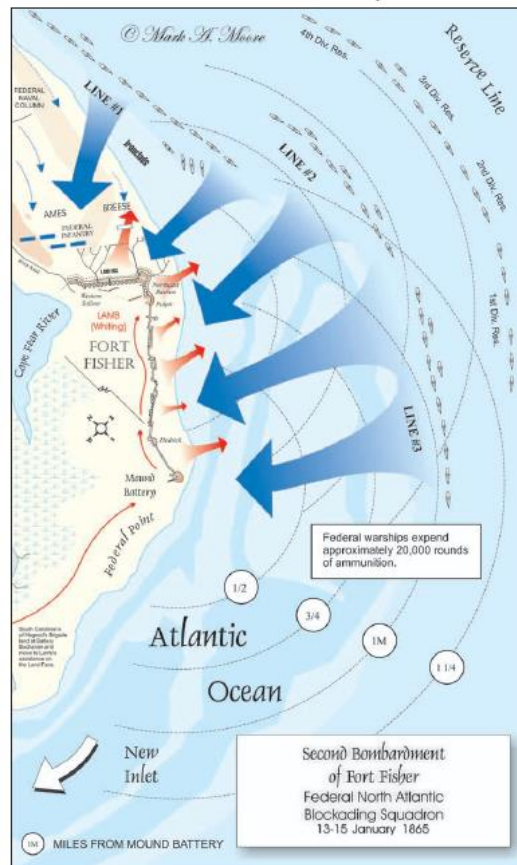
The Battles for Fort Fisher (December 1864 and January 1865)

Our earliest example of naval integration, the Battles for Fort Fisher, took place during the US Civil War. At that time, Marine Corps forces typically operated in small detachments on board Navy ships and, less often, ashore. This example highlights the importance of several factors, including advanced planning and training as unit size and composition changes.

Overview

In December 1864 and January 1865, Union forces conducted joint operations (Navy/Marine Corps and Army) against Fort Fisher, a Confederate fort guarding the seaward approaches to Wilmington, North Carolina, the last open Confederate port on the East Coast. The December 1864 attack was a failure. In January 1865, the Federal naval component commander, Rear Admiral David Porter, wanted naval forces to participate as part of the land component attacking the fort. Lack of integrated training and poor planning contributed to heavy naval force casualties and the failure of the naval assault. However, the naval effort did serve as an enabler in splitting Confederate forces. Ultimately, the Army assault on the landward side succeeded in capturing Fort Fisher.

Figure 1. Second bombardment of Fort Fisher, North Carolina



Source: Kummer, David W. U.S. Marines in Battle, Fort Fisher, December 1864-January 1865, Washington D.C., The United States Marine Corps, History Division, 2012.

Organization

The joint naval force was poorly organized compared with past cooperative efforts. Shipboard Marine detachments comprised anywhere from 15 to 50 men. Twenty of these Marine detachments (nearly 400 Marines) deployed together for the second attack on Fort Fisher, but they were not a coherent unit, having never trained or operated in such a large group. There

were few, if any, attempts to organize the overall Marine force to operate as a battalion-sized unit.¹

Major Jacob Zeilin, who would go on to serve as commandant, said in 1863:

The Marine Corps is accustomed to act in small detachments on board ship and ashore, and opportunities rarely offer to have more than one company together, and therefore when several detachments are united, it is absolutely necessary that they should have time to become organized and drilled as a battalion and to know their officers and their duties on a larger scale. . . . [I]t would be very dangerous to attempt any hazardous operation requiring coolness and promptness on their part; and no duty which they could be called upon to perform requires such perfect discipline and drill as landing under fire.²

The Marine Corps once had a battalion-level training and supply formation to support landings and help generate cohesion, but it was disbanded in 1862, as it had become a burden on the naval supply system.³

These organizational challenges were also frustrating because such large formations of Marines were not entirely new. A Marine battalion of almost 400 led by Major Zeilin participated in operations against the Confederate-held Fort Sumter in September 1863.⁴ A lack of intelligence about the strength of the rebel garrison in the fort and poor coordination with a concurrent Army attack ultimately led to defeat, but the sailors and Marines who participated in the attack operated as a cohesive unit.⁵

Integrated force structure and training

During the Civil War, Navy and Marine Corps forces were generally well integrated afloat. Marines often served as naval gun crews on ships because of a shortage of sailors. Marine gunners served on USS *Hartford*, the flagship of Flag Officer David Farragut in his successful attack on the forts guarding New Orleans in 1862, and on the cruiser USS *Kearsarge* in her

¹ *Fort Sumter, Anvil of War*, Washington D.C.; The Department of the Interior/The National Park Service, 1984, electronic resource, <https://www.gutenberg.org/files/55254/55254-h/55254-h.htm>, last accessed, 20 April, 2020, and Allan R. Millett, *Semper Fidelis, The History of the United States Marine Corps*, New York, Simon and Schuster, 1991, 96.

² David W. Kummer, *U.S. Marines in Battle, Fort Fisher, December 1864-January 1865*, Washington D.C., The United States Marine Corps, History Division, 2012, 30.

³ Ibid.

⁴ *Fort Sumter, Anvil of War* and Millett, 96.

⁵ Ibid.

successful 1864 battle against the Confederate raider *Alabama*.⁶ By late 1864, Marines had integrated into many Navy ships' gunnery organizations.⁷

At Fort Fisher, integration of forces afloat was successful, but integration broke down once forces went ashore. There was little coordination between Navy and Marine Corps leaders. Naval officers untrained in ground combat operations commanded the naval attack force of 1,600. The 400 Marines came from different ships and did not have the appropriate leadership to create unity of command and effort.

Command and control

Not surprisingly, poor organization and training led to challenging command and control. The naval "brigade" of 1,600 sailors and Marines was an ad hoc organization led by Lieutenant Commander Kidder Breese, who had no training or experience in ground combat. Most of the other naval personnel were volunteers and similarly unfamiliar with ground operations, let alone assault of fortifications. Fire support from Navy ships conducting naval gunfire support of the ground attack was not well coordinated, and key parts of the fortifications were not destroyed before the ground attack.

Level of success or failure

The US Army's January 15, 1865, landward attack on Fort Fisher ultimately succeeded with fire support from ships at sea, but the naval assault was a disaster. Many of the Marines, equipped with the superior Spencer repeating rifle, were designated as sharpshooters, but the combined naval force was so disorganized that Marines with these weapons were never employed effectively to protect the naval force as it advanced along the beach toward the rebel fortifications. The naval brigade became disorganized and bunched against the wooden palisade wall in front of the fortifications, becoming conspicuous targets. The brigade was eventually repulsed with 124 casualties.⁸ The Marines suffered 60 casualties of 400 men engaged.⁹

⁶ Millett, 97.

⁷ Ibid, 110-118.

⁸ *Fort Sumter, Anvil of War*.

⁹ Ibid.

Royal Marine operations in the Gallipoli Campaign (1915) and Zeebrugge and Ostend Raids (1918)

The British Royal Marines began as a seagoing police force to keep unruly sailors in line. However, as the need for limited shore-based operations as a function of naval campaigns became apparent, Royal Marines started to deploy as the core of naval landing parties for raids, or for the seizure of coastal towns and fortifications. By the middle of the 19th century, Royal Marines performed roles that included “sometimes landing to secure and hold forts etc., battered down by the Fleet; sometimes to storm places under cover of the ships’ fire; at others to assist and reinforce the Army in its operations.”¹⁰

The Royal Marines served in similar roles in the First World War. We provide two contrasting cases that demonstrate the benefits of effective pre-conflict training and organization. Royal Marine operations in conjunction with the Royal Navy *at the outset of the Gallipoli campaign* returned favorable results as they were within the Marines’ training and operations standards and the opposition ashore was minimal initially. By contrast, the Zeebrugge and Ostend Raids of 1918 were ad hoc events, and although Royal Marines did train, that training was separate from their Navy counterparts, contributing to the challenges the force encountered. However, forces at Zeebrugge and Ostend also met with greater adversary resistance, which potentially had more influence on the ultimate outcome.

Overview

The Royal Marines had a nominal strength of 16,900 men in 1914.¹¹ Early in the war, ad hoc, ill-prepared units were deployed for combat. British naval historian and strategist Sir Julian Corbett later described them as “wholly unfit for active service,” and “still only in process of development from the original idea of a small flying force for the occupation of advanced naval bases.”¹²

However, Royal Marine forces began to show improvement as the war progressed. In February 1915, elements of two Royal Marine battalions (the Plymouth and Chatham units) embarked

¹⁰ H.E. Blumberg, *History of the Royal Marines, 1837-1914*, Devonport, United Kingdom, Swiss and Company, 1927, 77.

¹¹ *Ibid*, 132.

¹² Julian Corbett, *History of the Great War, Naval Operations, Volume 1*, London, Longmans, Green and Company, 1920, 185.

for operations on the Gallipoli peninsula in support of Royal Navy and French Navy surface fire support missions against the Turkish fortifications guarding the entrance to the Dardanelles.¹³ These units landed at the forts of Kum Kale and Seddi al Bahr on March 4, 1915, after both fortifications had been heavily damaged by close-range battleship gunnery.¹⁴ Both marine units conducted demolition operations against abandoned Turkish ordnance and successfully advanced some distance before retiring in the face of stiffening Turkish Army resistance.

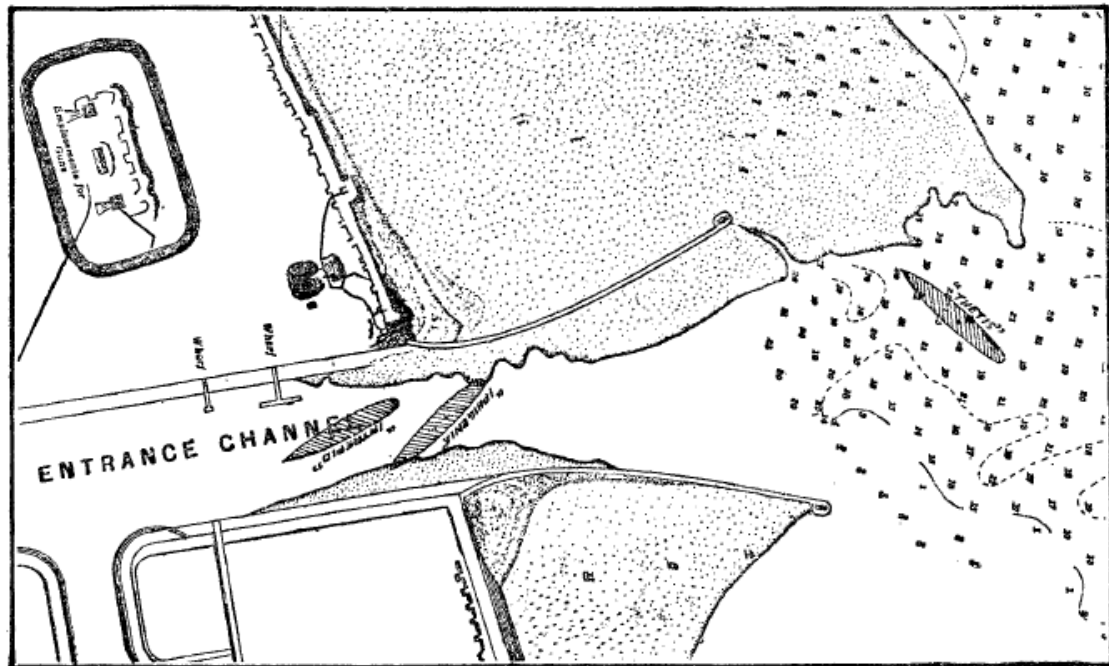
Later in the war, the Royal Marines again fought alongside volunteer Royal Navy personnel in raids against German installations on the occupied Belgian English Channel coastline. The German Army captured the Belgian ports of Zeebrugge and Ostend at the outset of the war, and, soon after, the German Navy began developing the ports into advanced bases for littoral operations in the English Channel. Ad hoc combinations of British sailors and Marines raided both ports on April 23 in an attempt to block their entrances by sinking obsolete warships in the port channels and destroying parts of a concrete barrier called “the mole” that protected the entrance to the Zeebrugge port channel. The secondary mission was to destroy the German shore batteries covering both ports. Royal Marines and Royal Navy sailors would form the landing party to attack port facilities and silence the shore batteries. The effort met with limited success and relatively heavy British casualties.¹⁵

¹³ Chris Baker, “The Royal Marine Deployment to Gallipoli,” from *The Long, Long Trail, Researching the Soldiers of the British Army in the Great War, 1914-1919*, electronic resources, <https://www.longlongtrail.co.uk/army/order-of-battle-of-divisions/63rd-royal-naval-division/royal-marine-deployment-to-gallipoli/>, last accessed, 16 April, 2020.

¹⁴ Geoffrey Sparrow and J.N. Macbean-Ross, *On Four Fronts with the Royal Naval Division*, London, Hodder and Stroughton, 1918, 34, 35.

¹⁵ “The raids on Zeebrugge and Ostend,” London, Her Majesty’s Government’s Foreign Office, The History of Government Blog, 23 April 2018, electronic resource, <https://history.blog.gov.uk/2018/04/23/the-raids-on-zeebrugge-and-ostend/>, last accessed, 16 April 2020.

Figure 2. Entrance channel at Zeebrugge



ENTRANCE CHANNEL AT ZEEBRUGGE
Showing Position of Sunken Block-ships

Source: Keble Bell, J. *The Zeebrugge Affair, with the Official Narratives of the Zeebrugge and Ostend Operations*, New York, The George Doran Company, 1922.

Organization

In the Gallipoli raids of March 1915, the Royal Marine Corps operated under an expeditionary command structure developed and exercised before the outbreak of war in 1914. Royal Marine units at both the shipboard detachment and larger battalion level had been trained and exercised in attacks on fortresses and in demolition work in support of Royal Navy operations since the mid-1880s.¹⁶ Although organized in nominal battalions, most Royal Marine actions in the middle to late 19th century had been in combinations of shipboard detachments (much like the US Marines in the Fort Fisher assault). While overall command of ground operations was in the hands of Royal Navy officers, company and field grade Royal Marines served as the ground component tactical commanders in joint Navy-Marine operations. Unlike their US

¹⁶ Blumberg, 102, 103.

counterparts, however, the Royal Marines accumulated a great deal more combat experience during this period—including the mid-1850s Crimean War; the 1900 Boxer Rebellion, where multiple Royal Marine detachments combined for operations; and the 1899–1902 Boer War, where Royal Marine artillery units operated inland with the British Army. Although often combined with Royal Navy sailors in ad hoc formations, nearly all of these sailors and Marines were long-service professionals with extensive experience, which improved coordination.

The rapid expansion of the Royal Navy after 1911, however, diluted the pool of sailors who had experience working as naval infantry with the Royal Marines. This would not have an impact in the early Gallipoli operations of the Royal Marines, but it did affect operations at Zeebrugge and Ostend in 1918, when less-experienced sailors formed the bulk of the Royal Navy contingent.¹⁷

Integrated force structure and training

Royal Marine and Navy organization for joint operations up to this point was not formalized and often not well planned. This arrangement did not significantly change until later in World War I. Although Royal Marines operated in the traditional manner¹⁸ with Royal Navy sailors in the early Gallipoli raids of February and March 1915, the two services benefitted from a more formalized training program for the Zeebrugge and Ostend operations of 1918. That training came with significant limitations, however, which we discuss next.

Marines and sailors began training for the operations in January 1918, almost four months in advance. Vice Admiral Sir Roger Keyes, the overall commander, recognized that the sailors recruited for the operation would have little experience in ground combat and that past Royal Navy landing party training would be “of little use in storming a German strongpoint or countering an enemy bayonet charge.”¹⁹ The Royal Marines devised a training program for the sailors with the stated objective, “To get the men physically fit, full of dash, and accustomed to short, sharp raids at night, equipped in the lightest order.”²⁰ However, the sailors and marines did not train together in an integrated manner, leading to challenges when the operation began.

¹⁷ Sparrow, and Macbean-Ross, 7-12.

¹⁸ Traditional command and control during that time typically included a field grade Navy officer in overall command of landing force operations, with company or (if available) field grade Royal Marines leading tactical ground combat operations.

¹⁹ E.C. Coleman, *No Pyrrhic Victories, The 1918 Raids on Zeebrugge and Ostend, A Radical Re-Appraisal*, Cheltenham, U.K., The History Press, 2014, 77.

²⁰ *Ibid*, 78.

Other training for the sailors included a shooting course, machine gun training with the Lewis lightweight machine gun, bayonet and close quarter combat training, and trench warfare. Forces also trained at the port of Dover using a mock-up of the Zeebrugge piers and the concrete mole, but they did not rehearse the complex disembarking of troops from ships. It would involve ascending 45-degree ladders to the side of the pier, and then a 16-foot drop to the main level of the port where the troops would engage German guns and positions.²¹

Overall, this training effort was a significant improvement in naval training designed to bring the Navy volunteers up to the standards of the Royal Marines. Unfortunately, the Navy and Marine forces trained separately and, therefore, failed to take full advantage of the opportunity to train in an integrated fashion.

Command and control

As described above, forces exercised traditional command and control of Royal Marines and attached Royal Navy sailors in the early stages of the Gallipoli operation. Vice Admiral Sackville Carden commanded the overall naval force with company grade navy and marine officers commanding the raiding and demolition parties ashore. These raiding operations were similar to those conducted by both services over the previous century, and existing command and control was sufficient to the task.

Unlike the early Gallipoli raids, the joint Royal Navy and Marine formations landed against active opposition and in difficult urban terrain for the Zeebrugge and Ostend raids. Leaders exercised command and control locally from converted troopships such as the HMS *Vindictive* and offshore from flag officers in high-speed destroyers. Admiral Keyes previously led minesweeping and inshore operations as both a captain and rear admiral during the Gallipoli campaign, making him a wise choice to command the operation. Command at the tactical level at Zeebrugge was split between Navy Captain Henry Halahan, in charge of the Naval landing parties for demolition work, and Lieutenant Colonel Bertram Elliot, who led the Marine contingent. Captain Henry Carpenter, who would lead the local naval operations at Zeebrugge, commanded the HMS *Vindictive*.²² With a total force of almost 2,000 Marines and sailors, the command structure was essentially the traditional one from the past century, but with higher-ranking officers commanding the separate Navy and Marine contingents.²³

²¹ Philip Warner, *The Zeebrugge Raid*, London, Pen and Sword re-published version, 2008, 31.

²² Coleman, 54.

²³ *Ibid*, 55.

Level of success or failure

In the Gallipoli raids, the Royal Marines and sailors assigned to group force operations operated as they had for a century prior. The Marines initially provided force protection to the sailors engaged in demolition of Ottoman artillery inside the deserted fortifications. On February 26, groups of 50 Marines who were covering sailors engaged in demolition work destroyed 19 heavy coast defense guns and 12 Krupp howitzers that had been especially threatening to the ships conducting close in fire support.²⁴ One Marine formation was able to advance four miles inland to the village of Krithia, before meeting significant Turkish resistance. Casualties were light, with only nine Marines killed or wounded.²⁵ The Royal Marines held the fortifications at the entrance to the Dardanelles on both the European and Asian side until March 4, when overwhelming Turkish numbers caused their evacuation. These operations killed 22 Marines and sailors and wounded another 27, but destroyed more than 50 Turkish coast defense weapons of various sizes.²⁶

The Royal Navy and Marines conducted attacks on Zeebrugge and Ostend in April and May 1918, but the April 23, 1918, assault on Zeebrugge is the best documented of these operations. The chemical smokescreen those forces had planned to conceal their approach failed because of stronger than expected winds.²⁷ The Germans quickly identified the approaching vessels and began firing on the *Vindictive*, other transports (two converted ferries), and three old cruisers that were to be sunk to block the channel.²⁸

Vindictive managed to get alongside the pier to land her sailors and Marines, as did the two ferries, but the warship attracted especially heavy German fire. Nearly all of her anti-infantry guns and machine guns were destroyed, and the two commanders, Lieutenant Colonel Elliot and Captain Halahan, along with a number of their senior subordinates, were killed either waiting to disembark *Vindictive* or in the fighting that followed.²⁹

Despite these heavy losses, the three blockships were all sunk in various locations in the Zeebrugge channel. The survivors of the raid managed to re-embark the shattered *Vindictive*

²⁴ Robert K. Massie, *Castles of Steel, Britain, Germany and the Winning of the Great War at Sea*, New York, Ballantine, 2004, 43, 47.

²⁵ Ibid.

²⁶ Ibid.

²⁷ J. Keble Bell, *The Zeebrugge Affair, with the Official Narratives of the Zeebrugge and Ostend Operations*, New York, The George Doran Company, 1922, 21.

²⁸ Warner, 35.

²⁹ Ibid, 32.

and the two ferries and return to England. Casualties were heavy, with 227 killed and 356 wounded out of the 1,700 engaged in the fight.³⁰ Sources vary on the success of this raid. The Germans were able to remove the sunken blockships and repair the damage to the mole, but the official British Naval History of the war suggests that U-boat and destroyer traffic decreased because of the raid.³¹

Operation Ironclad, Madagascar (May 1942)

We now move to World War II to look at naval integration. As indicated earlier, we searched for lesser-known examples to offer new insights. We now discuss Operation Ironclad, a Royal Navy, Marine, and Army operation in Madagascar in 1942. Despite some disagreement among historians on the extent to which the Royal Marines contributed to British success in the operation, it is clear that the force benefitted from effective planning and training, successful command and control, and general cohesion and flexibility.

Overview

During World War II, the United Kingdom conducted joint operations (Royal Navy, Marines, and Army) across all the domains to seize the deep-water port of Diego Suarez from the control of the Vichy regime in Madagascar. Diego Suarez was a large and naturally well-defended deep-water port close to crucial British lines of communication through the Mozambique Channel. In the wake of the attack on Pearl Harbor, British Prime Minister Winston Churchill grew concerned that the leadership in Madagascar would not be able to fend off Japanese attempts to use the port. While Churchill needed to mitigate this risk, he also could not afford to divert forces from the reinforcement of India. The result was to be a well-planned and limited operation to seize Diego Suarez and thus deny its use to the Japanese.³²

³⁰ Paul Kendall, *The Zeebrugge Raid 1918: The Finest Feat of Arms*, Cheltenham, U.K. The History Press, 2009, 11.

³¹ Henry Newbolt, *Naval Operations. History of the Great War Based on Official Documents by Direction of the Historical Section of the Committee of Imperial Defence.*, London, Longmans Press, 1931, 265.

³² Winston Churchill, *The Second World War, Volume IV: The Hinge of Fate*, London, Folio Society, 2000, 189.

Figure 3. Operation Ironclad, Madagascar



Source: Winston Churchill, *The Second World War. Volume IV: The Hinge of Fate*. London, Folio Society, 2000.

The British sent a formidable combined force package of ships (Force F) and ground forces (Force 121). The plan was to land troops ashore in Courier and Ambararata Bays on the western side of the isthmus that formed the inner wall of Diego Suarez bay, seize the coastal batteries, and secure a bridgehead. The No. 5 Commandos, part of Force 121, would seize Diego Suarez port facilities while the regular ground forces would advance on Antsirane naval base from the West. The western approaches were choked with reefs, islands, and sandbars and were mined heavily. The British fleet approached under cover of darkness on the night of May 4 and early into the following morning and successfully caught the French by surprise as they assumed that “night passage through the reefs was impracticable.” As amphibious landings

took place on western shores of the peninsula, the fleet's air arm attacked the shipping in the main harbor of Diego Suarez, along with French aircraft, also catching them by surprise.

The beachheads and defending coastal gun batteries were seized almost without casualty, and by 0620 the morning of May 5, more than 2,000 troops were ashore. By 1700 that day, forces had secured the Andrakaka peninsula. The assault on Antsirane itself, however, ran into a line of embedded fortifications that threatened to draw British forces into protracted operations that they were under explicit orders to avoid. On the afternoon of the invasion's second day, forces were confronting casualties, equipment losses, and the inability to neutralize defensive guns along the "Joffre line."³³ Major General Robert Sturges, a veteran of Gallipoli, went to his senior officer with a plan for a frontal night assault on the Vichy defensive positions, and a request for a diversionary maneuver in Antsirane itself while the assault was underway.

A detachment of 50 Royal Marines from the HMS *Ramillies*, under the command of Captain M. Price, embarked upon the destroyer HMS *Anthony* to steam around the north point of the peninsula and attempt to run the gauntlet of the Oronjia Pass, past the formidable coastal batteries, into Diego Suarez from the East. The *Anthony* made it almost all the way to the town's harbor before the coastal batteries recognized the threat and opened fire. Some problems quayside resulted in the unconventional tactic of backing the destroyer into the pier to unload from the stern, yet Price and his men made it onto the docks unharmed.

With orders to create a "diversion," the Royal Marines experienced a surprising amount of difficulty even starting a fight. They captured the Artillery Command post with ease and liberated 50 British prisoners. Meanwhile, the nighttime assault from British ground forces south of town was also meeting with surprising success. It was later discovered that an outflanking maneuver the first night, assumed to have been lost, captured, or overwhelmed, had only been delayed and successfully enabled some of the first British infantry soldiers to create a good deal of chaos to the rear of Vichy positions. The next day, Capitain de Vaisseau Paul Maerten, the Vichy naval commander and Colonel Pierre Clarebout, head of the military garrison, surrendered.

Organization

As we have already identified, the British force involved in Operation Ironclad was substantial, with Admiral Syfret in place as overall combined commander, Maj Gen Sturges in charge of the Royal Marine Force 121, and Captain Garnons-Williams responsible for overseeing the landings. Force 121 was composed of the 29th Independent Brigade Group, the No 5

³³ The Joffre line was a series of defensive fortifications that straddled the isthmus below Antsirane.

Commando, the Royal Armoured Corps' Special Service B Squadron, and the 13th and 17th Brigades of 5th Division.

Naval forces included Force F under Admiral Syfret, plus two aircraft carriers capable of launching approximately 86 aircraft. Additionally, two cruisers, nine destroyers, six corvettes and six minesweepers completed the Navy complement. One historian writes, "when their convoy set out it was the biggest to leave Liverpool since the war began."³⁴ Together, the fleet numbered more than 50 ships. It was a notable demonstration of maritime power, concentrated on a single objective.

Integrated force structure and training

The Royal Marines and the Royal Navy were still deeply integrated as institutions at this time. Although a Royal Marine Brigade/Division had been organized and raised at the outset of World War II—separate from the Royal Navy—it remained in Britain, over-trained and under-utilized.

Captain Price and the 50 Royal Marines involved in the raid on Antsirane were drawn from a regular battleship ship's detachment, 147 strong. Although they had all received basic infantry training, most of them manned the ship's guns. Given 45 minutes of warning to organize his landing party, Price decided to select "all the 6-inch gun crews with him, reasoning that Syfret would probably prefer his main armament to be fully manned."³⁵ The Marines quickly cross-loaded onto the destroyer HMS *Anthony* and endured four hours of choppy seas. Their seasickness was a testament to the limits of naval integration at the time, even among the sea-service, as Marines rarely served on anything smaller than a cruiser and most served on battleships.

Churchill's history includes a detailed description of the final preparations for the operation. After the whole expedition had assembled at Durban on April 22, he noted that the following:

Strenuous days followed. Cargoes in many of the ships had to be restowed to meet assault conditions, final details of the plan had to be perfected, orders distributed, the troops exercised after the long sea voyage and rehearsed in their specific and for the most part unaccustomed tasks. This was our first large-scale amphibious assault since the Gallipoli campaign twenty-seven years before, and the whole technique of such events had meantime been completely revolutionized. The commanders and staffs of both Services as well as the troops lacked experience in fighting this most difficult type of battle.³⁶

³⁴ Colin Smith, *England's Last War Against France: Fighting Vichy, 1940-1942*, Weidenfeld & Nicolson, 2009.

³⁵ Ibid.

³⁶ Churchill, 189.

While paying respect to the notable distance between Gallipoli and Madagascar in time, geography, and outcome, Churchill fails to give Force 121 appropriate credit for the advanced state of their training, which—relative to the rest of British forces at the time—was virtually unparalleled, and not just because of the inclusion of No. 5 Commando. The 29th Independent Brigade had been specially trained for amphibious operations for over a year in Scotland, “undergoing the kind of intensive training for combined operations normally confined to the Commandos. Its men had spent months living on ships and getting in and out of landing craft and to all intents and purposes were marine infantry, though the Commandos sometimes tended to be a bit sniffy about their boat handling skills.”³⁷ Finally, the ground force commander, Maj Gen Sturges, was a Royal Marine whose first battlefield experience was Gallipoli. It is very clear that the forces, organization, training, and command decisions that went into Operation Ironclad had the implicit, if not explicit, intent to advance British amphibious capabilities beyond the challenges encountered in World War I.

Command and control

Command and control for what, under any circumstances, was a large and complicated combined operation seems to have been surprisingly good. One historian assessed that “the attack was thoroughly prepared, well executed and built upon a close liaison between Rear Admiral Syfret and Maj Gen Sturges leading the assault force (Force 121).”³⁸

Navy signals detachments were embedded with each of the ground force formations allowing them to call in supporting fires almost seamlessly both from the ships and supporting aircraft.

Still, the invasion was not without its surprises and challenges. The first proved not to have a negative impact though it easily could have. When the 29th Brigade originally was brought to a halt by Vichy defenses south of Antsirane, Brigadier General Francis Festings deployed half of one of his battalions to attempt to outflank the line of defensive fortifications along the coastal mangrove swamps. However, this group did not set out with the proper communications equipment. When they encountered problems with the terrain and failed to make their rendezvous at the appointed time, they were unable to update their commander. Festings had to assume their loss, which made the situation on the invasion’s second day appear much grimmer than it was in reality. Late the next day, the battalion returned across the line, having wreaked considerable havoc behind Vichy lines.

There is little mention of the No. 5 commando unit in Operation Ironclad beyond its presence as part of the original landings on the western bays. The initial plan had been that 5 Commando,

³⁷ Smith.

³⁸ Martin Thomas, “Imperial Backwater or Strategic Outpost? The British Takeover of Vichy Madagascar, 1942,” *The Historical Journal*, Vol. 39, No.4 (December 1996), 1060.

“having captured Diego Suarez, would seize whatever small boats were available to cross the narrow strip of water and be hammering at Antsirane’s back door while 29th Brigade was kicking in the front. But Commando HQ had insisted that they could not find anything suitable.” Even as late as the Royal Marine raid, nothing was seen of the commandos across the bay, though the *Anthony* had requested a “welcome party” at the quay. In later years, a member of the unit testified that “...two serviceable boats had been located and blamed the alcoholism of their commanding officer for their failure to act. When the facts came out the culprit was eventually sent home in disgrace, a rare thing in the British military where heavy drinking was often tolerated as a good man’s fault.”³⁹

Level of success or failure

Churchill described the operation in glowing terms, noting the successful secret planning, precision of execution, and low number of casualties to secure “full military control over an island of high strategic importance.”⁴⁰ Other historians highlight the rapidity of planning to execution, overcoming obstacles such as distance, and employing maritime power flexibly. Additionally, the operation demonstrated emerging techniques in combined (naval and air) operations.⁴¹ More recently, a historian examining the decision-making and various relationships of the political leaders concerned noted that, in response, the French reorganized command structures in North and West Africa to allow for more flexible responses to surprise attacks such as Operation Ironclad.⁴²

At the same time, disagreement persists as to the particular role of the Royal Marines in securing this victory. Naval accounts almost universally credit the daring raid. The official history argues that “the landing in the enemy’s rear, made in the finest tradition of the Royal Marines, certainly contributed greatly to the sudden collapse of resistance.”⁴³ The conceptualization of the raid itself sailed the line between bold and too bold. Syfret later recalled, “the *Anthony*’s chance of success I assessed as about 50 per cent, my advisers thought 15 per cent and, of the Royal Marines, I did not expect a score to survive the night.”⁴⁴ Others argue that even if the *Anthony* had failed entirely, the ground forces had already penetrated

³⁹ Smith.

⁴⁰ Churchill, 196.

⁴¹ S. W. Roskill, *United Kingdom Official History of the Second World War: the War at Sea, 1939-1945, Volume II: The Period of Balance, 183-192.*

⁴² Thomas, 1060-1061.

⁴³ Roskill.

⁴⁴ Smith.

behind the Joffre line and their night-assault would have overcome the defenses with reinforcements on the way. Of the Royal Marines' performance, one historian concludes "Bluffing with bumps in the night and inserting a mere fifty marines, while it could not be anything else must have contributed to Vichy disarray, but... it was a needless risk."⁴⁵

Operation Walfajr-8, Al Faw Peninsula Landings (1986)

We now turn to a more modern example of naval integration from a conflict likely less familiar to readers than the two World Wars covered above. We examine Operation Walfajr-8, an Iranian amphibious operation during the Iran-Iraq War, which lasted for most of the 1980s. The case has interesting insights for naval forces, including effective training, the development of specialized skillsets, and the advantages afforded by terrain such as wetlands and marshes.

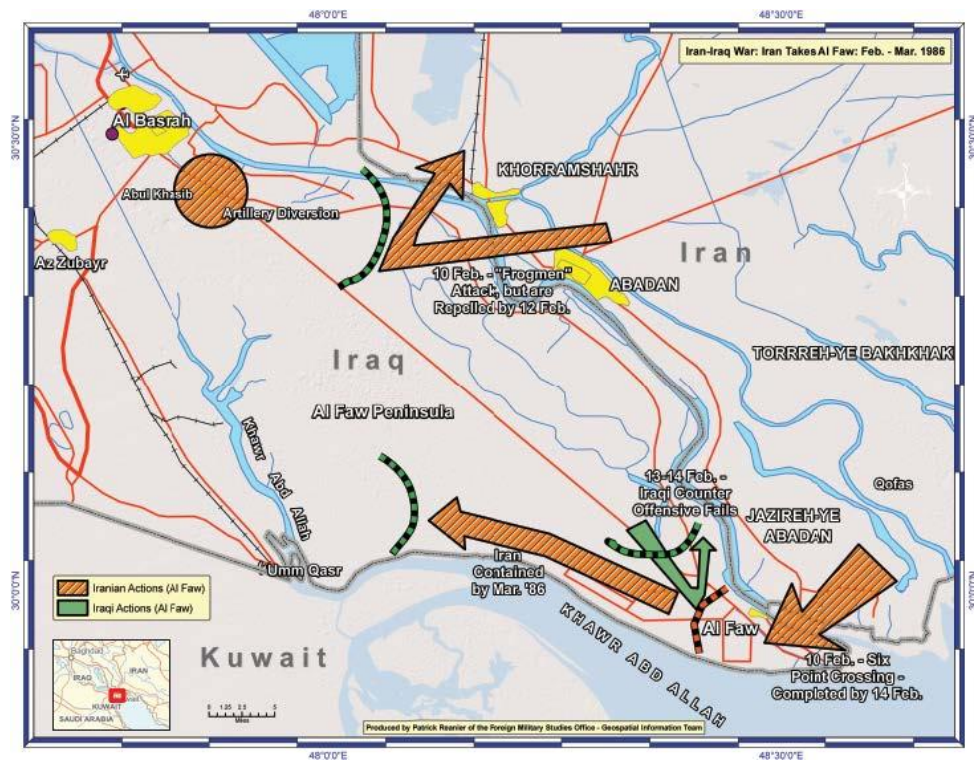
Overview

This battle was a crucial turning point five years into the Iran-Iraq War. Iran's primary objectives were to seize the Al Faw peninsula in Iraq and cut Baghdad off from its access to the sea. This would not only deprive Baghdad of oil revenue but would also drive up the price of oil, benefitting Iran. The operation consisted of two thrusts: a large and carefully planned diversionary push toward Basrah, and the main attack on the al Faw Peninsula in the far south. The diversionary effort consisted of three lines of attack beginning February 9, 1986, near Qurnah, again on February 11 in open terrain south of Hawizah marshes, and a final push on February 14 in the Hawizah marshes themselves, "where the Iranians mounted an amphibious assault to capture the northernmost Majnoon island."⁴⁶ Iraqi forces were able to repel all lines of attack and inflict heavy Iranian losses, but the operations successfully distracted the Iraqis from what was happening to the south.

⁴⁵ Ibid.

⁴⁶ Michael Connell, "Iranian Operational Decision Making: Case Studies from the Iran-Iraq War," Center for Naval Analyses, COP-2013-U-005291, July 2013, 26.

Figure 4. Operation Walfajr-8, Al Faw Peninsula



Source: Ben Wilson, "The Evolution of Iranian Warfighting During the Iran-Iraq War." *Infantry* (July-August 2007): 27-32.

There, on the night of February 10, Iran conducted a two-pronged amphibious assault across the Shatt al-Arab. Establishing six separate beachheads, and having secured the Umm al-Rassas Island in the middle of the Shatt, the Iranians erected a pontoon bridge and began transporting tanks and heavy artillery onto the peninsula. The peninsula was only lightly defended and Iranian forces successfully surprised its garrison. The town of Faw fell on the first day of attack. Within two days, the Iranians had moved 20,000 troops onto the peninsula, reached the Kuwaiti border, and captured Iraq's main air control and early-warning center covering the Gulf.⁴⁷ Significantly, Iranian forces failed to capture Iraq's naval base at Umm Qasr, but consolidated their gains and dug in. The initial Iraqi counterattack was poorly organized, confronted major terrain and weather challenges, and failed after one week. On February 24, the Iraqis initiated a new counterattack and after flying almost as many air sorties in a month as conducted in the whole of the prior year, they halted the Iranian advance and stabilized their

⁴⁷ Ibid, 27.

front line. However, Iraq did not manage to recapture the al Faw peninsula until 1988, largely precipitating the end of the conflict.

Organization

The Iranians assembled a large force—about half the Artesh (Iranian Army) and two-thirds of the Iranian Revolutionary Guard Corps (IRGC)—to deploy to the south.⁴⁸ The deployments totaled almost 200,000 troops and “included nearly two thirds of its elite Pasdaran Corps, including the Karbala 25th division, Najaf-Ashraf 8th division, Ashoura Division, and Special Martyr’s brigade, and nearly half of the regular Army, including the Bakhtaran 81st Division, Mazandaran 30th Division, and the Khorassan 77th division.”⁴⁹

Prior to this time, the IRGC and the Artesh were not structured to support a specialized focus on amphibious operations. The amphibious commando units they had developed and deployed early in 1986 were trained in amphibious assault and fighting in wetlands. The marshes proved valuable terrain, as Iranian forces employed light infantry and small unit tactics to take advantage of the concealment the marshes provided and the impediment they proved to Iraqi armor and other mechanized forces.⁵⁰ Iranian forces also staged small boats and bridging equipment in advance of the operation and deployed “frogmen” to conduct certain operations, such as seizing the island in the middle of the Shatt al-Arab.⁵¹

Integrated force structure and training

For this operation, the integrated force structure proved effective. The recent establishment of a new joint operational headquarters, Khatam al-Anbiya, improved coordination between the IRGC and Artesh. Commanders demonstrated flexibility to capitalize on successes.⁵²

In contrast to earlier campaigns, the Iranians carefully trained their forces in the lead up to Walfajr, including in amphibious and combined operations. Forces conducted simulated assaults and amphibious exercises, and Iran brought special commando units with marsh training into rotation.⁵³ As one historian writes, “the Guard started five to six months before

⁴⁸ Ibid, 25.

⁴⁹ Anthony Cordesman & Abraham Wagner, *The Lessons of Modern War, Vol. II: The Iran-Iraq War*, London, Westview Press, 1990.

⁵⁰ Ben Wilson, “The Evolution of Iranian Warfighting During the Iran-Iraq War,” *Infantry* (July-August 2007), 32.

⁵¹ Cordesman, Chapter 8.

⁵² Connell, 30.

⁵³ Ibid, 25.

the attack to provide specialized training for SCUBA and amphibious operations. More than three thousand [IRGC members] were trained as combat divers to conduct extensive reconnaissance of the Iraqi shore and form special commando units to spearhead the coming attack.”⁵⁴

Command and control

Traditionally, coordination between the IRGC and conventional leaders was poor. So much so that “it may have been one of the largest contributors in the initial failures in Iraq.”⁵⁵ However, as mentioned above, extensive planning and training made for more effective command and control during this operation.

Operation Walfajr-8 was “the first time that the Iranians had successfully mounted simultaneous offensives on multiple fronts.”⁵⁶ This is all the more impressive given that the buildup to the operation and initial assault featured Iranian use of couriers instead of radio communications to conceal their intent and maintaining the deception that the main effort was aimed at Basrah.

Level of success or failure

Operation Walfajr-8 “constituted the high point of Iran’s war effort and has generally been hailed as its most successful operation.”⁵⁷ The operation was a major blow to their Iraqi adversaries, both materially—Iran captured or destroyed large numbers of weapons and Iraqi troops, along with key terrain—and to Iraqi prestige.

From a strategic perspective, the operation failed to achieve the critical milestone (Umm Qasr) that would have enabled Iran to truly isolate Baghdad from the ocean and potentially complete its economic blockade of Iraq. While many “final offensives” using the seized territory of al Faw were planned, none was successful. The invasion was enough of a challenge that it helped engender a patriotic renewal of support for Saddam Hussein’s government in Iraq, in addition to the second major expansion of the Iraqi military forces.⁵⁸ It also frightened neighboring

⁵⁴ Stephen Ward, *Immortal*, Georgetown University Press, 2009, 274.

⁵⁵ Wilson, 30.

⁵⁶ Connell, 30.

⁵⁷ *Ibid*, 29.

⁵⁸ Ephraim Karsh, *The Iran-Iraq War: 1980-1988*, Oxford, Osprey Publishing Ltd, 2002.

countries sufficiently that Gulf monarchs deepened their support for Hussein's government, helping finance new equipment purchases.

Somewhat surprisingly, one of the most skeptical voices with respect to Iranian achievements at al Faw comes from a 1990 US Marine Corps "Iran-Iraq War" Lessons Learned Report. The report characterizes the Al Faw Peninsula campaign as a fluke and a publicity stunt. "Iran's capture of Al Faw in 1986 seized the imagination of the international news media, to whom it seemed a brilliant stroke of strategy. In our view, Al Faw was a fluke. . . We believe that the Iranians seized Al Faw for its publicity value, nothing more. Scoring a strategic advantage had nothing to do with it."⁵⁹ It also suggests that Iran does not really deserve much credit for its amphibious operation, no matter the intensity of the Iraqi counterattack and the durability of their defense of the seized ground, on the basis that "...the Iraqis barely had garrisoned [the peninsula]; it was up for grabs, so to speak."⁶⁰

Combat at sea in the 19th and 20th centuries: The Marine gun turret on battleships and cruisers

The previous case studies focused on events and operations. We thought it useful to include an integration example that covers a longer period and centers on a capability that highlights a role for Marines aboard ships. Given the variety in its application over the decades, this gun turret example does not follow the same structure as previous case studies (e.g., organization, training, command and control). Instead, we provide a summary of its employment and highlight its usefulness as an example of successful naval integration. We examine US and British examples.

In the middle of the 19th century, it became common to assign marines in the British Royal Navy and in the US Navy to serve as gunners in the course of the transfer from sail to steam power and longer ranged artillery.⁶¹ In British service, the Royal Marines were officially inducted into naval artillery schools in 1849 following an order of Parliament.⁶² In the US, the

⁵⁹ Department of the Navy, US Marine Corps. Lessons Learned: the Iran-Iraq War, volume I, FMFRP 3-203, December 1990, 34.

⁶⁰ USMC, 35.

⁶¹ Adrienne Sasche and Wesley Moody, editors, *The Diary of a Civil War Marine; Private Josiah Gregg*, Lantham, Md., The Fairleigh Dickinson Press, 2013, xii.

⁶² Blumberg, 23, 65.

addition of Marines to shipboard artillery came through a combination of Navy personnel shortages and a perceived need to prevent the Marine Corps from being absorbed by the Army during the Civil War.⁶³

Royal Marine gunnery experience

In 1877, the Royal Marines further entrenched themselves in Royal Navy gunnery crews through a Parliamentary order that Marine gunners receive similar instruction and pay as seaman gunners.⁶⁴ The Royal Navy dropped the requirement for shipboard Marine cutlass and bayonet training in the same decision. In 1885, the Royal Marines were awarded incentive pay for qualification and service as a gun captain/gunlayer. The official historian of the 19th- and early 20th-century Royal Marines, Brigadier General Henry Blumberg, referred to 1885 as the point where Royal Marines were firmly part of Royal Naval gunnery organization.⁶⁵

By the First World War, the Royal Marines were entrenched in the gunnery department of large ships. Royal Marines received gunnery training similar to that of sailors and often manned one of a battleship's main gun turrets as an integrated part of the ship's gunnery team. Royal Marines distinguished themselves in gunnery combat in the First World War, most notably at the May 1916 Battle of Jutland. Royal Marine gunners served into World War II as turret crews, scoring hits in combat against the German warships *Graf Spee* and *Bismarck*. The Royal Marine turret on the battleship HMS *Rodney* fired the shells that were likely responsible for destroying *Bismarck's* forward main battery turrets and her command bridge, thus significantly reducing her combat capability at the outset of her final battle. Clearly, integrated gunnery training for sailors and Marines in British service produced successful combat results.

US Marine gunnery experience

In the USN, Marines also joined the gunnery departments following the Civil War. By the early 20th century, they primarily manned battleship and cruiser secondary guns in addition to the traditional duties of security and landing party assignment.⁶⁶ The experience of the Spanish American War, however, altered the Marine Corps' traditional roles in gunnery and security.

⁶³ Kummer, 16, 18.

⁶⁴ Blumberg.

⁶⁵ Ibid, 86.

⁶⁶ William S. Dudley, "Director of Naval History Testimony Before the House Armed Services Committee on the Concept of a Secretary of the Navy and the Marines Corps," Washington D.C., The Department of the Navy, 2004, electronic resource, <https://www.navy.mil/navydata/testimony/history/dudley040318.txt>, last accessed, 19 April 2020.

In 1900, the Naval General Board decided to give the Marine Corps the mission of “seizure and defense of advanced naval bases.” This reasoning, given by the Director of Navy History and Heritage Command in Congressional testimony in 2004, was as follows:

The experience at Santiago convinced many naval leaders that the Navy could not rely entirely on the Army and needed its own land force to capture and secure territory. For example, the Navy sent the Marines to seize and occupy the land surrounding Guantanamo Bay in order to obtain a secure base for a coaling station. From this time forward, they looked to the Marine Corps to accomplish similar missions.⁶⁷

This official change in mission sent the Marine Corps from shipboard gunnery assignments to eventual amphibious and expeditionary operations. The Royal Navy did not make a similar choice for the Royal Marines until just before World War I. US Marines continued to serve as weapon gunners from 1900 through the end of the Cold War. Notable examples include the last heroic Marine gunners on the cruiser USS *Houston*. During the Battle of Sunda Strait in 1942, Marines continued to fire the ship’s anti-aircraft weapons at Japanese destroyers seeking to torpedo the ship at close range.⁶⁸ The era of trained Marine gunners on USN warships ended with the decommissioning in 1991 of the last of the *Iowa* class battleships, whose Marine detachments manned some of the ship’s five-inch secondary guns.

⁶⁷ Ibid.

⁶⁸ James Hornfischer, *Ship Of Ghosts, The Story of the USS Houston, FDR's Legendary Lost Cruiser, and the Epic Saga of Her Survivors*, New York, Random House, 2006, 78.

Findings and Implications

These case studies in naval integration offer a number of insights, findings, and implications to consider when planning for present-day integration of US Navy and Marine Corps forces.

Findings

Our analysis of the historical cases in amphibious and other naval operations yielded the following insights:

- **Unified command proved key to success in several instances.** The cases that demonstrated the greatest success—both in terms of overall achievement of objectives and effective naval integration—had clear command relationships, consistent communication, and/or organizational cohesion with effective leadership. This finding is consistent with well-established and widely accepted warfighting concepts, including unity of command and unity of effort.⁶⁹
- **Shared doctrine, training, and planning among naval forces improved integration in operations.** Though not surprising, this finding is especially important, as it was consistent across all cases. Battles and operations where naval forces invested time to train and plan together before execution fared better (in terms of operated as integrated units) than those that did not.
- **Planned, rather than ad hoc, organizations operated more effectively together.** As with the previous finding, when units organized in intentional ways prior to an operation a smoother and more logical execution ensued. Organizing effectively and in consistent ways helped drive cohesion and create well-understood structures. Operation Ironclad shows that this planning can be rapid, but it remains crucial.
- **Time in service *together* had an effect.** Regardless of specific doctrinal or training cooperation, some of the cases show that achieving a level of comfort in operating together, as demonstrated at Gallipoli, can produce benefits on the battlefield. Marines and sailors were practiced in training and operating together, and had an established culture of working alongside each other. However, subsequent operations in WWI show that value can diminish quickly with the introduction of less-experienced leaders who lack the benefit of time spent with naval partners.

⁶⁹ See, for example, Joint Publication 3-0: Joint Operations (October 2018), which lists unity of command as an important principle of joint operations and unity of effort as one of its common operating precepts.

- **The littoral space presents unique challenges and opportunities for service integration.** Marines aboard ships, in ship-to-shore movements, in operations in challenging terrain near and along coastal areas, and other dynamics represented in these case studies reveal the distinctiveness of the littoral space. Operating effectively in that space, if challenging, can add unique value to a larger campaign.

These findings are useful, but it is also important to note that there are limits to the breadth and applicability of historical lessons. Today's Navy and Marine Corps are exploring ideas that our case study review did not cover, even conceptually. The cases did not show, for example, Marine Corps leaders tactically in command of any Navy assets and forces in support of sea control. The present-day Navy and Marine Corps may well embark on "uncharted territory" as they move toward integration.

Implications for naval integration today

Based on our findings, we have drawn up a number of implications for present-day naval integration. They include the following:

- ***Train together*** – Navy and Marine Corps forces should maximize opportunities to train together. History bears out what many on the US naval team have advocated: the forces must train as they fight; and if they will fight together, they must train together. Though ideally Navy and Marine Corps forces will have opportunity to train together extensively, history shows that any amount of combined training prior to executing an operation or campaign demonstrates value.
- ***Plan together*** – Similarly, Navy and Marine Corps forces should conduct planning efforts jointly, where appropriate. The case studies showed that planning contributes in similar ways to training together. It helps to create effective execution, manage uncertainty, and mitigate risk.
- ***Deliberately organize the force for cohesion*** – Navy and Marine Corps forces should be intentional about how they organize to create cohesion and flexibility. Organizing for cohesion and flexibility will be challenging for today's naval forces, as the operating environment presents complex dynamics they have not encountered recently.
- ***Study littoral terrain (landward and seaward)*** – The littoral space is unique; Marines should continue to invest in understanding it and developing skills to exploit its advantages and mitigate the challenges it presents. This recommendation reinforces what is already the Marine Corps' geographical focus area. The case studies highlight its uniqueness and the value of cooperative sea- and ground-based forces in gaining advantage in that space.

Conclusion

Although history offers important lessons about naval integration, there are limits to the utility of those lessons. Today's operating environment is complex, expansive, and involves significant risk. As II MEF and the Marine Corps seek to integrate with Navy partners to address these challenges, they should understand historical cases in context. In this report, we sought to draw out aspects of success and failure in naval integration that still apply today. Unified action and investment in training and planning in advance of operations will remain persistent factors important to any naval fight. The maritime domain, including the littorals, presents unique challenges. History shows that naval forces, operating as an integrated team, have distinct advantages in meeting them.

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