

# **Conduct and Support of Amphibious Operations from United States Submarines in World War II**

**A Monograph  
by  
LCDR Brian J. Haggerty  
United States Navy**



**School of Advanced Military Studies  
United States Army Command and General Staff College  
Fort Leavenworth, Kansas**

**AY 2010**

# REPORT DOCUMENTATION PAGE

*Form Approved*  
OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

<b>1. AGENCY USE ONLY (Leave blank)</b>	<b>2. REPORT DATE</b> 9NOV2010	<b>3. REPORT TYPE AND DATES COVERED</b>
-----------------------------------------	-----------------------------------	-----------------------------------------

<b>4. TITLE AND SUBTITLE</b>  Conduct and Support of Amphibious Operations from United States Submarines in World War II	<b>5. FUNDING NUMBERS</b>
--------------------------------------------------------------------------------------------------------------------------------	---------------------------

<b>6. AUTHOR(S)</b> LCDR Brian Haggerty, USN	
-------------------------------------------------	--

<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b>  School of Advanced Military Studies 250 Gibbon Ave. Fort Leavenworth, KS 66027-2314	<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>
------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------

<b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b>	<b>10. SPONSORING / MONITORING AGENCY REPORT NUMBER</b>
------------------------------------------------------------------	---------------------------------------------------------

<b>11. SUPPLEMENTARY NOTES</b>
--------------------------------

<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b> Approved for Public Release: Distribution is Unlimited	<b>12b. DISTRIBUTION CODE</b>
-------------------------------------------------------------------------------------------------------------	-------------------------------

<b>13. ABSTRACT (Maximum 200 Words)</b> The U.S. Navy is building <i>Virginia</i> class submarines, and recently completed the conversion of four <i>Ohio</i> class submarines from Trident Ballistic Missile Submarines (SSBN's) to Guided Missile Submarines (SSGN's). The <i>Virginia</i> class is the first nuclear powered fast attack submarine (SSN) that shipyards designed with SOF capability without requiring conversion. The SSGN conversion of the first four <i>Ohio</i> class submarines included substantial SOF capability. These construction and conversion projects represent a significant investment in SOF and amphibious capabilities, and they follow a long line of submarine conversions that began early in World War II. By analyzing three World War II operations, this monograph argues that knowing what actually happened in amphibious operations conducted and supported by American submarines in World War II provides valuable insight about the scope of capabilities, challenges and benefits of submarines for these kinds of missions in naval warfare. The first operation is an amphibious raid on Makin Atoll. The second involves the amphibious landings on the northwest Africa coast as part of Operation Torch. The final operation includes the landings on Attu Island in the Aleutian chain.
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>14. SUBJECT TERMS</b> Submarines, Amphibious operations, Makin Atoll, Raiders, Scouts, Attu, Operation Torch, Operation Landcrab, Karafuto, Nautilus, Argonaut, Narwhal	<b>15. NUMBER OF PAGES</b> 98
	<b>16. PRICE CODE</b>

<b>17. SECURITY CLASSIFICATION OF REPORT</b> UNCLASS	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b> UNCLASS	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b> UNCLASS	<b>20. LIMITATION OF ABSTRACT</b>
---------------------------------------------------------	------------------------------------------------------------	-----------------------------------------------------------	-----------------------------------

# SCHOOL OF ADVANCED MILITARY STUDIES

## MONOGRAPH APPROVAL

LCDR Brian Joseph Haggerty, USN

Title of Monograph: Conduct and Support of Amphibious Operations  
from United States Submarines in World War II

Approved by:

\_\_\_\_\_  
John T. Kuehn, Ph.D. Monograph Director

\_\_\_\_\_  
Joseph S. McLamb, LTC, IN Second Reader

\_\_\_\_\_  
Wayne W. Grigsby, Jr., COL, IN Director,  
School of Advanced  
Military Studies

\_\_\_\_\_  
Robert F. Baumann, Ph.D. Director,  
Graduate Degree  
Programs

Disclaimer: Opinions, conclusions, and recommendations expressed or implied within are solely those of the author, and do not represent the views of the US Army School of Advanced Military Studies, the US Army Command and General Staff College, the United States Army, the Department of Defense, or any other US government agency. Cleared for public release: distribution unlimited.

## Abstract

Conduct and Support of Amphibious Operations from United States Submarines in World War II by LCDR Brian J. Haggerty, USN, 85 pages.

The U.S. Navy is building *Virginia* class submarines, and recently completed the conversion of four *Ohio* class submarines from Trident Ballistic Missile Submarines (SSBN's) to Guided Missile Submarines (SSGN's). The *Virginia* class is the first nuclear powered fast attack submarine (SSN) that shipyards designed with SOF capability without requiring conversion. The SSGN conversion of the first four *Ohio* class submarines included substantial SOF capability. These construction and conversion projects represent a significant investment in SOF and amphibious capabilities, and they follow a long line of submarine conversions that began early in World War II. By analyzing three World War II operations, this monograph argues that knowing what actually happened in amphibious operations conducted and supported by American submarines in World War II provides valuable insight about the scope of capabilities, challenges and benefits of submarines for these kinds of missions in naval warfare. The first operation is an amphibious raid on Makin Atoll. The second involves the amphibious landings on the northwest Africa coast as part of Operation Torch. The final operation includes the landings on Attu Island in the Aleutian chain.

## **Acknowledgments**

I am thankful for the help provided by many people as I completed this monograph. I could not have completed this project without the help and support of my family, the Army Command and General Staff College (CGSC) faculty, the School of Advanced Military Studies (SAMS) faculty, and the staff of the Combined Arms Research Library (CARL).

My son James and my wife Lisa were patient through many hours of research and revision. Lisa also provided valuable help in editing early drafts. From CGSC, Dr. Scott Stephenson, my former Staff Group advisor and history professor fostered my interest in military history. Dr. John T. Kuehn, my monograph advisor, provided invaluable help and expertise with respect to naval history, as well as suggesting revisions along the way. On the SAMS faculty, I especially thank Dr. Stephen Bourque, Dr. Robert Davis, Dr. Peter Schifferle, Mr. Bruce Stanley and LTC Joseph McLamb, USA. Dr. Bourque and Dr. Davis spent many hours reading early drafts and providing me with valuable feedback that I was able to use to improve the final product. Dr. Schifferle and Mr. Stanley provided valuable assistance on communication and writing skills. LTC McLamb provided leadership by example as a warrior and scholar. The CARL staff was extremely helpful with my research. I am especially grateful to Ms. Joanne Knight, Mr. Rusty Rafferty, Mr. John Dubuisson, and Ms. Kelsey Reed. Ms. Knight found and convinced the library to purchase the complete collection of World War II submarine patrol reports. She and Mr. Rafferty helped me to find many of the other primary documents that I used for this monograph. Mr. Dubuisson and Ms. Reed were always helpful with other aspects of my research.

Even with all of the help I received, any mistakes or omissions within this monograph are my responsibility alone.

## Table of Contents

Introduction .....	1
USS <i>Argonaut</i> & USS <i>Nautilus</i> Landings on Makin .....	14
Five Submarines Assist Africa Landings .....	37
USS <i>Narwhal</i> & USS <i>Nautilus</i> Landings on Attu.....	60
Conclusion.....	79
BIBLIOGRAPHY .....	86

## List of Charts

Chart 1: Pacific operations addressed in this monograph.....	13
Chart 2: Landing sites for Operation Torch.....	13
Chart 3: Gilbert and Marshall Islands.. ..	35
Chart 4: Makin Atoll. ....	36
Chart 5: Butaritari detail.....	36
Chart 6: Five U.S. Submarines in Operation Torch. ....	38
Chart 7: Mehdia and Port-Lyautey.....	57
Chart 8: Fedala and Casablanca. ....	58
Chart 9: Safi.....	59
Chart 10: Aleutian Island Chain.....	77
Chart 11: Attu Island.....	78

## List of Photos

Photo 1: USS <i>Barb</i> 's Battle Flag and the Karafuto landing party.....	3
Photo 2: USS <i>Barb</i> (SS 220).....	6
Photo 3: V-6, V-4 and V-5.....	11
Photo 4: Raiders exercising on USS <i>Nautilus</i> (SS 168).....	23
Photo 5: Lieutenant Commander Brockman, Commander Haines, and Lieutenant Colonel Carlson. ....	33
Photo 6: Lieutenant Colonel Carlson, Major Roosevelt, and Lieutenant Commander Pierce.. ....	34

## Introduction

Eight sailors in a two rubber boats were silently paddling back to their submarine when they noticed the sounds of a train on the island they just left. They quickly replaced their silent paddle strokes with furious churning of the water. Knowing that the train was moments away from the explosive charge they had placed, they did not need to hear their skipper's order to —Paddle like the devil!" Then, just before the train reached its mark, the crews stopped in anticipation of its imminent destruction. First a flash, then the echoing explosion, and finally a spreading fireball that sent train wreckage flying. The engine's boilers exploded, and the train cars piled up in twisting fiery wreckage near the tracks. The train hurled sounds of explosions, and the grinding, snapping and crushing of tortured steel and wood across the water. As the stunning sight subsided, the boat crews resumed their frantic pace, returning to their submarine four minutes later.<sup>1</sup>

On July 23, 1945, just weeks before the Japanese surrender ended World War II, these sailors had gone ashore and placed explosive charges under a set of train tracks on the Japanese island of Karafuto (See Chart 1). These men were not specially trained commandos, but rather crewmembers of the *USS Barb* (SS 220) on the twelfth war patrol of the *Gato* class submarine (See photos 1 and 2). They made history as the only Americans to conduct an offensive landing on a Japanese home island, and as the first submarine crew in history to destroy a train. Medal of Honor recipient Admiral Eugene Fluckey made this account a permanent part of submarine lore in his book, *Thunder Below*, where he wrote about his five patrols as *Barb's* commanding

---

<sup>1</sup> Eugene B. Fluckey, *Thunder Below! The USS Barb Revolutionizes Submarine Warfare in World War II* (Urbana: University of Illinois Press, 1992), 383.

officer.<sup>2</sup> As bold and innovative as this attack was, it actually followed a long line of amphibious operations by American submarines during the war.

John B. Hattendorf, the Chairman of Maritime History at the U.S. Naval War College argued that, —Knowing what actually happened in the past is central to understanding the nature and character of naval power. It assists in knowing the limits to the usefulness of naval power as well as an understanding where we are today in the development and progression of the art of naval warfare.”<sup>3</sup> Since the early days of World War II, the United States has used submarines to conduct and support amphibious operations. Today’s submarines reflect the continued development of this mission area. The U.S. Navy has modified many *Los Angeles* class submarines to transport Special Operations Forces (SOF). In 2008, the United States completed the conversion of four *Ohio* class ballistic missile submarines (SSBN’s) to guided missile submarines (SSGN’s) with built in capacity for SOF personnel. Today shipyards are building the *Virginia* class of submarines, the first class designed with the delivery of SOF in mind.<sup>4</sup> These conversion and construction projects represent a significant investment of resources for this important mission area. This monograph argues that knowing what actually happened in amphibious operations conducted and supported by American submarines in World War II provides valuable insight about the scope of capabilities, challenges, and benefits of submarines for these kinds of missions in naval warfare.

---

<sup>2</sup> Ibid., 383-4.

<sup>3</sup> John B. Hattendorf, "The Uses of Maritime History in and for the Navy," *International Journal of Naval History* Vol. 2, no. 1 (April 1, 2003), 1.

<sup>4</sup> This monograph features five *Gato* class submarines, and three V-class submarines, but also addresses two *Balao* class submarines (*Burrfish* and *Perch*). Between these submarines and the submarines that are currently in operation, the U.S. Navy has converted two former Regulus missile submarines (SSG’s *Tunny* and *Growler*), five *Sturgeon* class nuclear fast attack submarines (SSN’s), two *Ethan Allen* class and two *Benjamin Franklin* class nuclear ballistic missile submarines (SSBN’s) for SOF and amphibious operations.



Photo # NH 103570 USS Barb crewmen with their battle flag, 1945



**Photo 1: *Barb's* Battle Flag and the Karafuto landing party: The flag shows an impressive war record, with a patch for every accomplishment of the war, including ships sunk, aircraft shot down, and rocket and gun attacks against shore facilities. *Barb's* battle flag is unique in its inclusion of a train (center, bottom). (Left to Right) Chief Gunners Mate Paul G. Saunders, Electricians Mate 3rd Class Billy R. Hatfield, Signalman 2nd Class Francis N. Sevei, Ships Cook 1st Class Lawrence W. Newland, Torpedomans Mate 3rd Class Edward W. Klingsmith, Motor Machinists Mate 2nd Class James E. Richard, Motor Machinists Mate 1st Class John Markuson, and Lieutenant William M. Walker. Source: Naval History Center. <http://www.history.navy.mil/photos/sh-usn/usnsh-b/ss220.htm> (accessed August 22, 2010).**

In the Pacific theater alone, the U.S. Silent Service conducted 111 submarine transport missions, including delivering commandos, raiders, military and civilian personnel, and conducting rescue operations in World War II.<sup>5</sup> More recently, in Operations Desert Shield and

---

<sup>5</sup> –Silent Service” refers to the submarine force because of its reliance on silent operations to maintain stealth. "World War II U.S. Submarine Transport Missions, the U.S. Silent Service in WWII (Pacific Theater 1941-1945)," Valor at Sea, <http://www.valoratsea.com/sptrans.htm> (accessed July 20, 2010).

Desert Storm, Navy SEALs conducted 270 mostly clandestine missions that included hydrographic reconnaissance, strategic reconnaissance, direct action, and combat search and rescue without sustaining a single casualty.<sup>6</sup> SEALs conducted many of these missions from submarines.<sup>7</sup> While not all of these transport or SOF missions constitute amphibious operations, they all demonstrate that stealth is the key reason that planners and commanders considered submarines for these kinds of operations.<sup>8</sup>

According to Alfred Vagts' *Landing Operations*, amphibious landings vary according to the intentions of the invaders, who may come as raiders, a diversion of enemy forces, or an invasion force for a hostile foray, or a prolonged occupation. He goes on to describe raids as operations where the raiders are prepared for re-embarkation after reconnoitering, providing a diversion to enemy forces, weakening the morale of the enemy, strengthening the population of enemy controlled lands, or destroying installations on or near the seaboard. Similarly, he expounds on invasions, which he describes as operations where forces come to stay and are prepared to accept battle.<sup>9</sup> This monograph will analyze three World War II operations that cover this spectrum. The first is an amphibious raid on Makin Atoll. The second involves the amphibious landings on the northwest Africa coast as part of Operation Torch. The final operation includes the landings on Attu Island in the Aleutian chain (See chart 1 and 2).

---

<sup>6</sup> John B. Dwyer, *Scouts and Raiders: The Navy's First Special Warfare Commandos* (Westport, CT: Praeger, 1993), ix.

<sup>7</sup> Many details of SOF missions after WWII are still classified. USS *John Marshall* (SSN 611) was one submarine deployed in support of Operation Desert Storm. Michael Wood, "Masters of the Deep, Submarines from a SEAL's Perspective," *Under Sea Warfare* 3, no. 4 (Summer, 2001) (accessed 22 September 2010).

<sup>8</sup> The first mission of Naval Special Forces from a submarine was not an amphibious (intentional ship to shore) operation. Underwater Demolition Team (UDT) personnel launched from USS *Burrfish* (SS 312) and conducted reconnaissance of Yap and Palau Islands in August 1944. Three men were lost during attempted reconnaissance of Gagil Tomil island on August 18. W. B. Perkins, *Photographic and Special Reconnaissance of YAP - PALAU Islands*. (San Francisco: USS *Burrfish* (SS 312), 1944).

<sup>9</sup> Alfred Vagts, *Landing Operations: Strategy, Psychology, Tactics, Politics: From Antiquity to 1945* (Harrisburg, PA: Military Service Publishing, 1946), 13.

The Second Marine Raider Battalion executed the raider role in their hit and run attack on Butaritari, the most significant island in the Makin Atoll. They launched from two submarines, the USS *Argonaut* (SM-1) and USS *Nautilus* (SS 168), and conducted one of the first completed operations against Japan (See photo 3). Their actions covered nearly every element that Vagts included in his definition of a raid. The mission was a public relations success that boosted American morale in a way that was similar to the bombing raid of Tokyo, led by Lieutenant Colonel James Doolittle, on April 18, 1942.<sup>10</sup>

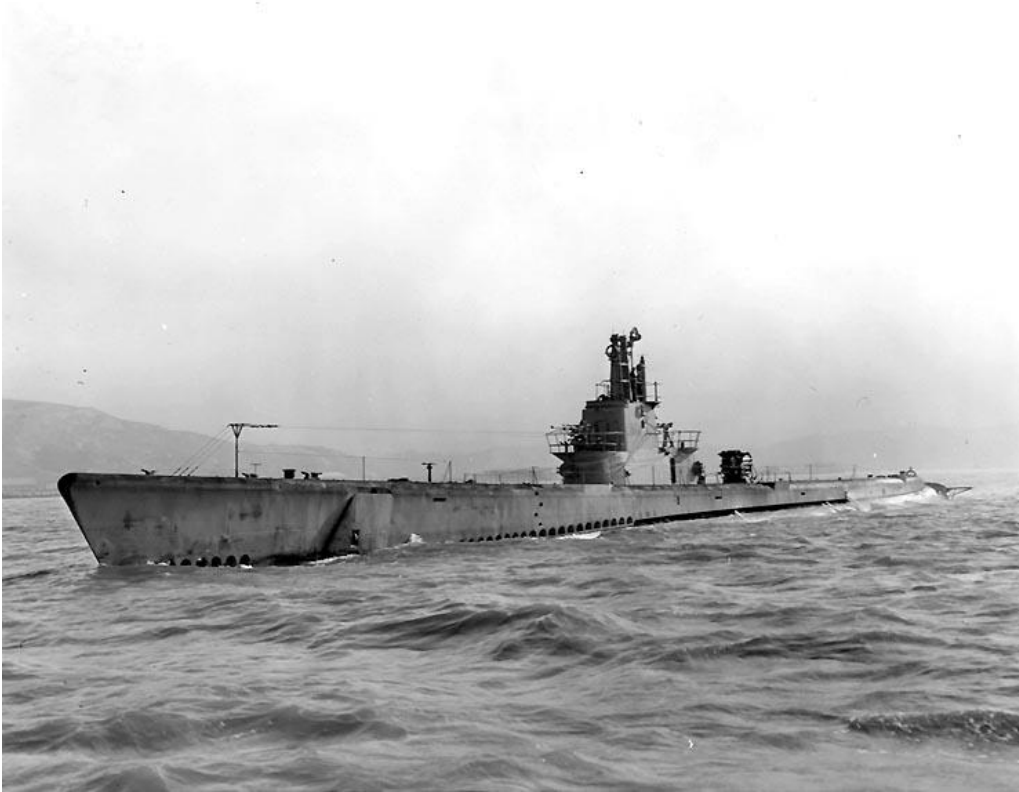
The submarines and scouts involved in Operation Torch in Africa and Operation Landcrab on Attu were there to support larger invading forces. Five submarines supported the amphibious landings on the West African coast as part of Operation Torch. One of the submarines, USS *Barb* (SS 220), even launched army scouts near the port of Safi in support of the operation.<sup>11</sup> In the final case study, two submarines, the USS *Narwhal* (SS 167) and USS *Nautilus* (SS 168), landed army scouts in advance of a larger assault force on Attu (See photo 3). This operation allowed the United States to reclaim Attu from Japan, whose troops had occupied Attu and neighboring Kiska Island in June 1942.<sup>12</sup>

---

<sup>10</sup> Chester W. Nimitz, *Report of Action in Connection with the Bombing of Tokyo on April 18, 1942*. (Pearl Harbor: United States Pacific Fleet, 1942).

<sup>11</sup> Everett H. Steinmetz, "USS BARB (SS-220) and SUBRON 50," *Polaris*, [http://www.subvetpaul.com/SAGA\\_6\\_98.htm](http://www.subvetpaul.com/SAGA_6_98.htm) (accessed July 20, 2010).

<sup>12</sup> Office of Naval Intelligence., *The Aleutians Campaign, June 1942 - August 1943*. (Washington: Naval Historical Center, 1993), 67.



**Photo 2: USS *Barb* (SS 220), representing the five *Gato* class submarines that participated in Operation Torch. *Barb*'s crew also conducted the landings on Karafuto, Japan. Source: Naval History Center. <http://www.history.navy.mil/photos/sh-usn/usnsh-b/ss220.htm> (accessed August 22, 2010).**

Various authors have written about each of these operations, but they usually focused on the marines or soldiers involved, or on the larger objectives. The most general sources of information include these operations as part of a summary of submarine operations, or within comprehensive World War II histories of the navy or army. Samuel Eliot Morrison's *History of United States Naval Operations in World War II* is an encyclopedic summary of nearly all naval operations in each theater of the war.<sup>13</sup> A comparable Army history is *U.S. Army in World War II*, of which George Howe's *Northwest Africa: Seizing the Initiative in the West* was especially

---

<sup>13</sup> Samuel Eliot Morison, *History of United States Naval Operations in World War II*, in 15 Volumes. (Boston: Little, Brown, 1984).

useful for the Army aspects of the Torch operation.<sup>14</sup> Also in this collection is Philip A. Crowl and Edmond G. Love's *Seizure of the Gilberts and Marshalls*, which contributes to various aspects of the Pacific War, including information about the Makin raid.<sup>15</sup> Clay Blair's *Silent Victory* is about the U.S. submarine war against Japan, and is useful for each of the Pacific operations.<sup>16</sup> Jonathan Parshall and Anthony Tully's *Shattered Sword* is about the Battle of Midway, but provides insight into operations in the Pacific theater.<sup>17</sup> In his article, "Reflecting on Fuchida, or 'A Tale of Three Whoppers,'" Parshall also helped to limit the influence of Mitsuo Fuchida's writings on this monograph by dispelling misinformation about Japan's conduct of the war as promulgated by a high ranking Japanese naval officer in World War II.<sup>18</sup> All of these secondary sources provide background information about the individual operations. The focus of this monograph is on the aspect of the amphibious operations specific to the submarines involved.

Numerous books add details that are specific to each case study. Michael Blankfort's 1947 book, *Big Yankee*, is a comprehensive biography about the life of Lieutenant Colonel Evans Carlson, the founding commanding officer of the Second Marine Raider Battalion. Blankfort conducted extensive interviews with Carlson, his family, and many of the raiders, and he had access to Carlson's personal papers, letters, orders, diaries and manuscripts.<sup>19</sup> George W. Smith's 2001 book, *Carlson's Raid*, uses some of the same primary sources and many newer secondary

---

<sup>14</sup> George F. Howe, *Northwest Africa: Seizing the Initiative in the West* (Washington, D.C.: Office of the Chief of Military History, Dept. of the Army, 1957), 748.

<sup>15</sup> Philip A. Crowl and Edmond G. Love, *Seizure of the Gilberts and Marshalls* (Washington, D.C.: Office of the Chief of Military History, Dept. of the Army, 1955), 414.

<sup>16</sup> Clay Blair, *Silent Victory: The U.S. Submarine War Against Japan*, 1st ed. (Philadelphia: Lippincott, 1975), 1072.

<sup>17</sup> Jonathan Parshall and Anthony Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Washington, D.C.: Potomac Books, 2005), 613.

<sup>18</sup> Jonathan Parshall, "Reflecting on Fuchida, Or 'A Tale of Three Whoppers,'" *Naval War College Review* 63, no. 2 (Spring, 2010), 127.

<sup>19</sup> Michael Blankfort, *The Big Yankee: The Life of Carlson of the Raiders* (Boston: Little, Brown, 1947), 380.

sources to address the marines' assault on Makin more specifically.<sup>20</sup> More recently, John Wukovits uses an extensive list of primary and secondary sources in his 2010 book, *American Commando*, which focuses on Carlson and his raiders' participation in the Guadalcanal campaign, but includes details of the Makin raid as part of the introduction.<sup>21</sup>

For Operation Torch, Rick Atkinson's 2002 Pulitzer Prize winning *An Army at Dawn* covers the war in Africa.<sup>22</sup> Atkinson writes from the perspective of a journalist, but provides a good historical overview of the war there. John Dwyer uses official documents, books and articles in his book, *Scouts and Raiders*, which provides background about the development of what Dwyer considers the Army and Navy's first special warfare commandos, and includes detailed accounts of their debut in the Torch landings.<sup>23</sup>

Three books that focus on the Aleutian campaign are Brian Garfield's *The Thousand-Mile War* and Donald Goldstein and Katherine Dillon's *The Williwaw War* and Otis Hays' *Alaska's Hidden Wars, Secret Campaigns on the North Pacific Rim*. The first provides a detailed account of the whole campaign.<sup>24</sup> *Williwaw War* is specific to the Arkansas National Guard's experience there, but provides excellent context about the often-overlooked aspects of the war in

---

<sup>20</sup> George W. Smith, *Carlson's Raid: The Daring Marine Assault on Makin* (Novato, CA: Presidio Press, 2001), 262.

<sup>21</sup> John Wukovits, *American Commando: Evans Carlson, His WWII Raiders, and America's First Special Forces Mission* (New York: NAL Caliber, 2010), 337.

<sup>22</sup> Rick Atkinson, *An Army at Dawn: The War in North Africa, 1942-1943* (New York: Henry Holt and Company, 2002).

<sup>23</sup> Graduates of the Scout and Raider School may have been the first graduates of a formal training program for scouts and raiders, but by the time they participated in the Torch landings, Carlson's Raiders had already conducted the Makin raid. Later, Willoughby's Scouts would also use similar techniques without the benefit of formal school training. Dwyer, *Scouts and Raiders: The Navy's First Special Warfare Commandos*, 189.

<sup>24</sup> Brian Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 1st ed. (Garden City, NY: Doubleday, 1969), 351.

Alaska.<sup>25</sup> Otis Hays, an intelligence staff officer during World War II, uses declassified archival sources to cover the campaigns in the Aleutian and Kurile Island chains, with an emphasis on Japanese-American intelligence specialists.<sup>26</sup>

Numerous primary sources provide important details of the submarine participation in these operations. Articles and memoirs written by participants, or those that included interviews with participants were useful. The most important details however, are from the patrol reports and boat histories of the submarines involved. Original plans and operations orders also allow for a comparison between intended action and what units actually accomplished. In general, each case study uses the information from the secondary sources to review the historical context of the operation, and planning documents and operations orders to review the plans. Patrol reports, after action reports and boat histories provide the details of execution, and the lessons learned from each operation. This pattern demonstrates the value added by submarines, as well as some of their limitations.

The three case studies demonstrate a wide range of amphibious operations that U.S. submarines conducted or supported in World War II. The Makin operation was a hit-and-run raid, launched and recovered from two submarines, and included successful employment of naval gunfire support from one of the submarines. Operation Torch demonstrated that navigational limitations of the period and poor communication prevented the submarines from being as effective as planned in an innovative, but marginally successful secret mission as navigational beacons. Some of the submarines were successful in sinking available targets, and they all conducted successful reconnaissance in advance of the landings. The Torch operation also

---

<sup>25</sup> Donald M. Goldstein and Katherine V. Dillon, *The Williwaw War: The Arkansas National Guard in the Aleutians in World War II* (Fayetteville: University of Arkansas Press, 1992), 416.

<sup>26</sup> Otis Hays, *Alaska's Hidden Wars: Secret Campaigns on the North Pacific Rim* (Fairbanks: University of Alaska Press, 2004), 182.

demonstrates the value of advance scouts in amphibious operations, but the same navigational challenges that hindered the beacon mission prevented the submarine-launched scouts from accomplishing their mission. Finally, the two submarines that landed scouts on Attu in advance of the main assault forces were successful from the submarine perspective. The scouts accomplished their mission, and while the overall operation took longer than planned, the landing force succeeded in clearing the island of Japanese forces and reclaiming the only territory that the U.S. lost to the Japanese.

Eight submarines supported these operations. Three of them, *Argonaut*, *Narwhal* and *Nautilus*, were “V-class” submarines (V-4, V-5 and V-6 respectively). Built between the World Wars, these three submarines were the largest submarines the United States built until constructing the nuclear powered submarine USS *Triton* (SSN 586) in 1956. *Argonaut*, at 381 feet long, 2,710 long tons surface displacement and 4,161 long tons submerged displacement, was the largest submarine in the world. She was the first U.S. submarine to have the high flat-sided bow derived from the World War I German U-boats. This aspect of submarine design would remain unchanged until the teardrop shaped USS *Albacore* (AGSS 569) after World War II.<sup>27</sup> Rear Admiral Richard “Dick” O’Kane, another World War II Medal of Honor recipient, served on *Argonaut* early in his career, and described her in his book, *Clear the Bridge*. “*Argonaut* was a monster, a continuous challenge, with twelve torpedoes forward, seventy-eight mines aft, and mounting two six-inch guns that could hurl hundred-pound projectiles nearly twenty miles.”<sup>28</sup> Although built as a mine laying submarine, *Argonaut* never deployed in that role.<sup>29</sup>

---

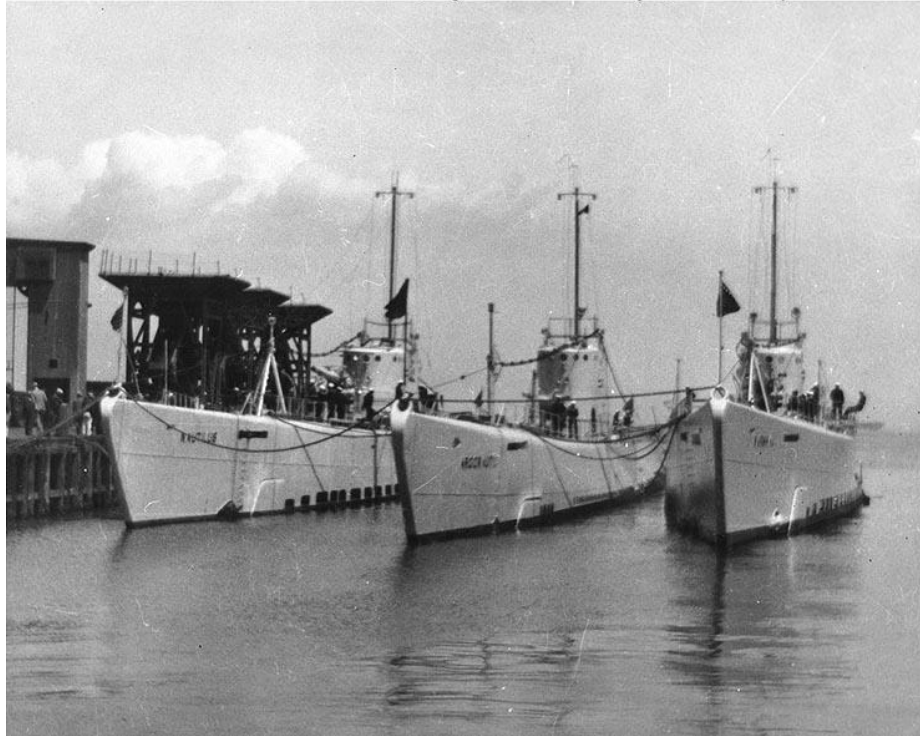
<sup>27</sup> Jeffrey Juergens, "The Impact of the General Board of the Navy on Interwar Submarine Design" (M.M.A.S., U.S. Army Command and General Staff College, 2009), 47-58.

<sup>28</sup> Richard H. O’Kane, *Clear the Bridge!: The War Patrols of the U.S.S. Tang* (Chicago: Rand McNally, 1977), 16.

<sup>29</sup> Juergens, *The Impact of the General Board of the Navy on Interwar Submarine Design*, 50.



Photo # NH 45667 Submarine Nautilus, Argonaut and Narwhal in port, circa the early 1930s



**Photo 3: (Left to Right) V-6, V-4 and V-5. *Argonaut* and *Nautilus* participated in the Makin raid. *Narwhal* and *Nautilus* participated in the landings on Attu Island. Source: Naval History Center. <http://www.history.navy.mil/photos/sh-usn/usnsh-a/sm1.htm> (accessed August 22, 2010).**

With the development of torpedo tube launched mines, the Navy built the next two *V-class* submarines for long-range independent operations. With the likelihood of war with Japan increasing, their endurance made them well suited for the types of missions envisioned in War Plan Orange. Shipyards did not build *Narwhal* and *Nautilus* to a common design, but they were both slightly smaller than *Argonaut*, and both still had two six-inch guns. Originally, intended as submarines that could operate at fleet speeds in advance of a battle fleet, the Navy's General Board determined that endurance and habitability were more important for long-range independent operations.<sup>30</sup>

---

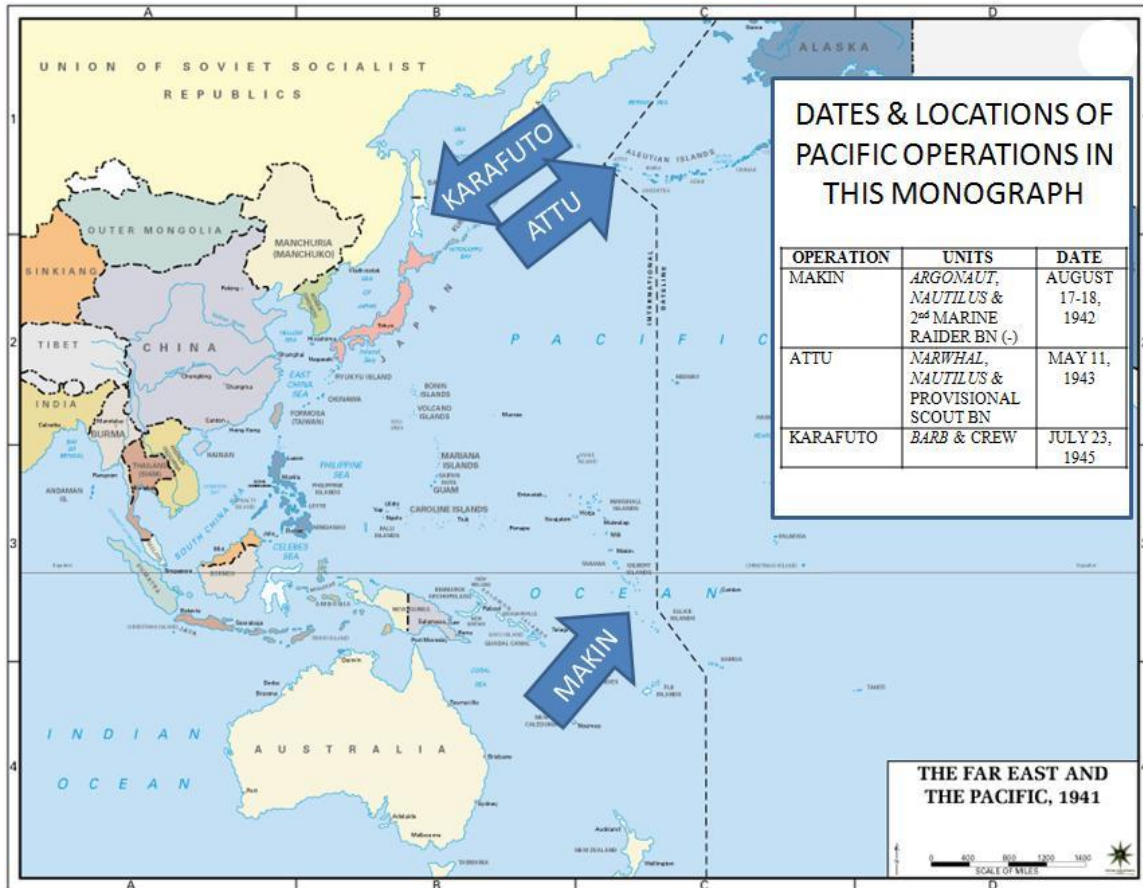
<sup>30</sup> Ibid., 6, 35, 54.

The other five submarines were from the highly successful, but significantly smaller *Gato* class, which provided the fleet a cheaper and standardized submarine that shipyards could build quickly and be capable of independent operations. Ironically, although much smaller than V-4, V-5 and V-6, *Gato* class submarines had ten torpedo tubes, as compared to only four on the larger submarines. The five submarines that participated in Operation Torch were USS *Barb* (SS 220), USS *Blackfish* (SS 231), USS *Herring* (SS 233), USS *Shad* (SS 235) and USS *Gunnel* (SS 253). At the time of the operation, they only had a three-inch deck gun, but by the time *Barb* conducted her attacks on Karafuto, she had a five-inch gun.<sup>31</sup>

The following case studies will examine three diverse examples of how American submarines conducted and supported amphibious operations in World War II, which will assist in knowing the benefits and limits of submarines in amphibious aspects of the art of naval warfare.

---

<sup>31</sup> Ibid., 107.



**Chart 1: Pacific operations addressed in this monograph. Source: Modified from West Point Atlas. <http://www.dean.usma.edu/history/web03/atlasses/ww2%20pacific/WWIIAsiaGIF/WWIIAsia01.gif> (accessed August 22, 2010).**



**Chart 2: Landing sites for Operation Torch. The Torch case study will focus on the Western Task Force. Source: Modified from West Point Atlas. <http://www.dean.usma.edu/history/web03/atlasses/ww2%20europe/EuropeanTheaterGIF/WWIIEurope38Combined.gif> (accessed August 22, 2010).**

## USS *Argonaut* & USS *Nautilus* Landings on Makin

On August 8, 1942, one day after the allies began their attack on Guadalcanal, 222 marines of the Second Raider Battalion, commanded by Lieutenant Colonel Evans Carlson, boarded the submarines *Argonaut* (SM-1) and *Nautilus* (SS 168) in Pearl Harbor and got underway for an unprecedented hit and run raid against Japanese forces.<sup>32</sup> Their destination was Butaritari Island, a part of Makin Atoll in the Gilbert Chain. (See charts 3-5.) This was the most ambitious special mission assigned to submarines during the war. While many hailed it as a huge success, others declared it a fiasco.

After nearly nine days of an overcrowded voyage on the submarines, these marines spent less than two days ashore, and cleared the island of all Japanese forces. The submarine involvement in this operation was not only crucial for the transportation, infiltration and exfiltration, but the *Nautilus* also provided naval gunfire support for the marines ashore. Based on the nature of this mission, submarines were essential. By tracing the historical context, the planning of the operation, and the execution, this chapter will demonstrate the value added by submarines to the operation, and will conclude with lessons learned from the submarines' participation.

The idea of a unit of marine raiders was born from Carlson's earlier military experiences. His unique career began with an underage enlistment in the Army as an artilleryman in 1912.<sup>33</sup> By 1917, he earned a commission in the Army, and arrived in France as the fighting of World

---

<sup>32</sup> There are discrepancies in the number of marines reported by different sources. Morrison (*History of U.S. Naval Operations in WWII*) and the Office of Naval Intelligence (*Miscellaneous Actions*) report 222 Marines. Admiral Chester Nimitz's report, "Solomon Island Campaign – Makin Island Diversion" also indicates 222 officers and men of the raider battalion. Blankfort (*The Big Yankee*) reports 215, while Blair (*Silent Victory*) and Roscoe (*U.S. Submarine Operations in World War II*) indicate 211. The *Nautilus*' report of second war patrol does not indicate the number of marines on board, but the report of her fifth war patrol states that she had 101 marines on the Makin mission. The *Argonaut* patrol report confirms 121 marines on that submarine. The totals from these primary sources confirm the 222 figure.

<sup>33</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 99.

War I was ending. At war's end, he transitioned to Germany where he worked on the staff of General John Joseph —Black Jack” Pershing, commander of the American Expeditionary Forces. Upon returning to the states, he was not excited about his prospects in the peacetime Army and he discharged in 1921. Not satisfied in the commercial world either, he enlisted in the Marine Corps in 1922. He earned a commission again within a year. His various assignments included two tours in China, combat duty in Nicaragua and a tour as the executive officer of the detachment of marines at President Franklin D. Roosevelt's retreat in Warm Springs, Georgia.<sup>34</sup> These four assignments were particularly influential for him.

Carlson's tour in Nicaragua was between his assignments in China. As the commander of a company of Guardia Nacional, he not only experienced his first taste of combat, but also witnessed firsthand the “magic of guerrilla warfare,” when the bandits his unit was fighting could strike and escape into the countryside. This was the seminal experience in his vision for developing guerrilla capabilities in American fighting units. Although Carlson was initially unimpressed by his time in Shanghai, China, he gradually developed a keen interest in Chinese affairs during his first tour in the country. One significant influence on him was the Commander in Chief of the Asiatic Fleet, Admiral Mark C. Bristol, who taught him a better appreciation for Chinese culture and people. Another influence was J.B. Powell, an American correspondent for the *Chicago Tribune*. Powell's anti-Japanese views contributed to Carlson's distrust of Japan.<sup>35</sup>

Ready to see parts of China that were mostly untouched by foreigners, Carlson was excited about his second tour to Peiping (formerly Peking), China as the Adjutant to the Legation Guard, a marine security detachment. While in Peiping, he continued to study Chinese language and culture. During this same period, he also came to realize that his marines had fewer

---

<sup>34</sup> John Kuehn, "Interview with Evans C. Carlson" (Unedited and unpublished transcript of interview), 1:2, 2:1.

<sup>35</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 146-147.

disciplinary issues when they had an understanding of what they were training for or doing in the military, because that gave them an increased sense of responsibility. This experience helped to shape his ideas on ethical indoctrination, which would become a vital aspect of training for his raiders. He left China the second time in 1935 for his assignment at Warm Springs.<sup>36</sup>

As executive officer of the marines at the president's retreat, Carlson built relationships that influenced his abilities to implement his ideas for change in the Marine Corps. He became close to the president's son, James. Before the war started, James commissioned in the Marine Reserve and he would become influential in the establishment of the Marine Raiders. He would even serve as Carlson's executive officer in the new organization. Carlson's interests remained in China, so he arranged for orders to return to China as a military student, where he would study the Chinese language in Peiping.<sup>37</sup> The president recognized that there were interesting developments in China. He was also concerned about not increasing Japanese feelings against the United States.<sup>38</sup> With those concerns in mind, the president asked Carlson to keep in touch and report to him what he observed in China during his third tour to the Orient.<sup>39</sup>

Japan commenced her 1937 campaign against China on the day Carlson arrived for his third tour there.<sup>40</sup> Based on the circumstances, Admiral Harry Yarnell, Commander in Chief of the Asiatic Fleet, gave Carlson the option to serve as a naval intelligence observer in China, rather

---

<sup>36</sup> Ibid., 163, 169.

<sup>37</sup> Kuehn, *Interview with Evans C. Carlson*, 2:2.

<sup>38</sup> Robert Dallek, *Franklin D. Roosevelt and American Foreign Policy, 1932-1945* (New York: Oxford University Press, 1995), 77.

<sup>39</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 173-175.

<sup>40</sup> Until Japan's full scale attack on China in 1937, the task of reshaping Chinese society while warding off threats from communists within and imperialist powers without was in the hands of the Nanking government and the Kuomintang Party dictatorship under Chiang Kai-Shek. John Hunter Boyle, *China and Japan at War, 1937-1945: The Politics of Collaboration* (Stanford, CA: Stanford University Press, 1972), 23.

than as a student.<sup>41</sup> He readily accepted this opportunity, and his experiences exposed him to Japanese methods of warfare, as well as operations by the Chinese Communist Army, the elite communist Eighth Route Army and other Chinese guerrillas.<sup>42</sup> His admiration for the Chinese grew as he encountered their courage, Spartan manners and efficiency.<sup>43</sup>

As his admiration of the Chinese grew, so did his criticism of the Japanese. He openly expressed his opinions against the Japanese, and the value of developing the hit and run capabilities that he observed in the guerrilla forces. He even criticized his own government for providing vast amounts of material that helped to sustain Japan's war fighting capability. He believed that Japan's dreams of conquest would eventually lead to war against the United States. Because the United States was officially neutral, the Navy Department did not welcome Carlson's opinions. As a result, he resigned his commission in order to be able to write and lecture on the topics without a conflict of interest.<sup>44</sup>

Captain Carlson left the Marine Corps believing that his country was unwittingly undermining its own chances for survival by selling supplies to Japan, even while she was at war with China. His resignation was effective April 30, 1939, and he spent the next two years writing and speaking out about his beliefs.<sup>45</sup> By January of 1941, the *Los Angeles Times* and *Los Angeles Daily News* reported Carlson's predictions of Japanese attacks on U.S. islands. Convinced that U.S. participation in the war was imminent, he asked the Commandant of the Marine Corps if he could return to service. The Commandant reinstated him at the rank of Major, as the Senate had

---

<sup>41</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 183.

<sup>42</sup> Wukovits, *American Commando: Evans Carlson, His WWII Raiders, and America's First Special Forces Mission*, 10-11.

<sup>43</sup> "Carlson of the Raiders," *New York Herald Tribune*, Saturday, August 29, 1942.

<sup>44</sup> Wukovits, *American Commando: Evans Carlson, His WWII Raiders, and America's First Special Forces Mission*, 15-16.

<sup>45</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 261, 266.

approved his promotion three days after his resignation became effective. As an operations and intelligence officer in San Diego, he wrote to the Commandant, volunteering for duty with commando units if any were established.<sup>46</sup>

While the Navy Department frowned on Carlson's recommendations for the establishment of commando units, Captain James Roosevelt wrote a proposal for establishing marine raider units and submitted it to the Commandant of the Marine Corps. The Marine Corps also had misgiving about such units, but the influence of a recommendation from the president's son was an important factor in the formal establishment of the marine raider battalions.<sup>47</sup> Soon after the Japanese attack on Pearl Harbor, the Marine Corps authorized the creation of two raider battalions. The Marine Corps assigned Lieutenant Colonel Merritt A. —RedMike" Edson to command the First Raider Battalion, which he activated on February 16. He had led marines on commando style operations as part of the Navy and Marine experimentation with amphibious techniques.<sup>48</sup> They assigned Major Carlson to command the Second Battalion, which formed three days later. James Roosevelt became his executive officer.<sup>49</sup> It seems that, ~~the~~ crusading zeal for the anti-Japanese cause, which was untimely when he was the agent of a neutral United States, was just what the marines wanted an officer on duty in the Pacific to display after Pearl Harbor.<sup>50</sup>

Just over two months after Japan's attack on Pearl Harbor, Major Carlson began the task of forming this new marine organization, specializing in guerrilla tactics, hand-to-hand combat

---

<sup>46</sup> Ibid., 266, 288, 290.

<sup>47</sup> "Creating the Raiders," United States Marine Raider Association, <http://www.usmarineraiders.org/creatingraiders.html> (accessed May 13, 2010).

<sup>48</sup> Joseph H. Alexander, *Edson's Raiders: The 1st Marine Raider Battalion in World War II* (Annapolis, MD: Naval Institute Press, 2000), 8-11.

<sup>49</sup> *Creating the Raiders*, 1.

<sup>50</sup> *Carlson of the Raiders*.



and amphibious techniques. With the expectation that raiders would be among the first to fight the Japanese, 3,000 men applied for the new battalion. Carlson and a few of his trusted officers, including Roosevelt, conducted interviews to determine the 1,000 most qualified men to man the battalion.<sup>51</sup>

After forming the new unit, Carlson ensured they received intense training that included emphasis on physical conditioning and cultural indoctrination. He worked with his staff to develop new tactics and force structure, and lobbied for special consideration for extra firepower. While controversial at the time, many of their new methods and ideas became standards within Marine Corps and Army doctrine. Establishment of a weapons platoon, and squads composed of fire teams are a few examples. His ethical indoctrination emphasized understanding why they were fighting, and included principles that he learned in China. Specifically, he wanted to show them how to find the will to sacrifice, and the desire to endure. He indicated that these were not Chinese ideas, but human ones.<sup>52</sup>

Carlson also introduced the term, —GungHo” in to the American military lexicon.<sup>53</sup> In Chinese, it means to work in harmony, and has come to mean that the unit can do more by putting their teammates ahead of personal issues. After three months of preparation in San Diego, the Marine Corps promoted Carlson to Lieutenant Colonel, and the battalion moved to Pearl Harbor for the next phase of their training.<sup>54</sup>

Because the Japanese attack on Pearl Harbor had devastated the battleship fleet, while leaving the submarine force untouched, submarines constituted a significant portion of United States combat power remaining in the Pacific. Still a relatively new capability, the Navy

---

<sup>51</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 8-12.

<sup>52</sup> *Ibid.*, 222.

<sup>53</sup> Kuehn, *Interview with Evans C. Carlson*, 1:2.

<sup>54</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 34.

employed submarines in a wide variety of missions that included coastal reconnaissance, anti-  
shipping warfare, and mine laying. Within hours of the attack on Pearl Harbor, Admiral Thomas  
C. Hart, the commander of the Asiatic Fleet Submarine Force, ordered submarines to wage  
unrestricted warfare.<sup>55</sup> Admiral Chester Nimitz Commander in Chief of Allied Pacific Forces was  
a submariner and advocated for their expanding capabilities.<sup>56</sup>

Another influential personality, whose writings had significant influence on the course of  
events in the Pacific, was Marine Major Earl —Pete” Ellis. He wrote Operation Plan 712,  
*Advanced Base Operations in Micronesia* in 1921. After World War I, he recognized that a future  
war with Japan would require amphibious assaults in order to capture island bases for subsequent  
fleet actions. This realization formed the basis for developing amphibious warfare doctrine and  
transforming the Marine Corps around a Fleet Marine Force (FMF) concept. This plan also  
formed the foundation for the island hopping campaign that the military employed in World War  
II. Within the plan, he describes submarines as —being a most dangerous enemy and  
comparatively little known to the Marines.” Consequently, Major Ellis wrote about Japanese  
submarine characteristics and their likely employment by the enemy to disrupt amphibious  
operations.<sup>57</sup> However, this —Amphibious Warfare Prophet,” appears not to have explored the  
exploitation of these tactics by U.S. forces, and he did not develop the option to use submarines to  
support amphibious warfare.<sup>58</sup>

---

<sup>55</sup> Joel Ira Holwitt, *Execute Against Japan: the U.S. Decision to Conduct Unrestricted Submarine Warfare*: Texas A&M University Press, 2009), 141.

<sup>56</sup> Samuel Eliot Morison, *History of United States Naval Operations in World War II, Coral Sea, Midway and Submarine Actions*, 1st ed., Vol. IV (Boston: Little, Brown, 1949), 187-190.

<sup>57</sup> Earl "Pete" Ellis, *Operations Plan 712-H: Advanced Base Operations in Micronesia*. (Intelligence Section, Division of Operations and Training, U.S. Marine Corps, 1921), iv, 55.

<sup>58</sup> Dirk Anthony Ballendorf and Merrill L. Bartlett, *Pete Ellis: An Amphibious Warfare Prophet, 1880-1923* (Annapolis, MD: Naval Institute Press, 1997), 150.

Instead, Carlson was the first to propose using submarines in conjunction with the raiders. Because the raiders belonged to the Navy Department, and did not require authorization through the joint chiefs, U.S. military leadership in the Pacific considered Carlson's Raiders to be Nimitz's private army. When Admiral Nimitz asked Carlson how best to employ them, Carlson suggested hit and run raids on Japanese held islands launched from submarines. When Nimitz asked how many submarines would be required for such an operation, he could not help but balk at Carlson's answer of twenty. Nimitz knew he would need his limited submarines for other missions, so if the raiders were to use submarines at all, it would have to be in significantly smaller numbers.<sup>59</sup>

They found the answer to their problem in the largest submarines available, the V-class submarines USS *Argonaut* and USS *Nautilus*. Lieutenant Commander John Pierce commanded *Argonaut*. The large submarine was patrolling off Midway Island when the Japanese attacked Pearl Harbor.<sup>60</sup> Upon completion of that patrol, she reported to Mare Island shipyard, where the Navy converted her to a troop transport based on the potential for Carlson's proposed mission capability.<sup>61</sup> Slightly smaller than *Argonaut*, *Nautilus* was undergoing overhaul when Japanese attacked Pearl Harbor. Commander Bill Brockman took her on her first war patrol, where she helped repel the Japanese attack on Midway in June 4-6, 1942. Brockman's crew survived multiple depth charge attacks, contributed to the sinking of a Japanese carrier, sank the destroyer *Yamakeze*, destroyed a sampan and damaged another destroyer during that patrol. Upon return to

---

<sup>59</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 36-37.

<sup>60</sup> *Skipper List, Results of U.S. Submarine War Patrols Listed Alphabetically by Name of Commanding Officer* (San Francisco: SORG, Office of Strategic Planning, COMSUBSPAC, 1946), 43.

<sup>61</sup> Naval History Division, "Argonaut," in *Dictionary of American Naval Fighting Ships*, ed. Office of Naval Operations, Vol. I (Washington: Navy Department, 1970).

port, *Nautilus* conducted repairs, removed all but ten torpedoes and installed temporary bunks to support embarking the raiders.<sup>62</sup>

Nimitz's staff considered hit-and-run raids on Wake, Tinian, Hokkaido, Tulagi and the recently seized Attu Island in the Aleutians, but in each case, other factors prevented full development of these plans. By July, Nimitz's headquarters decided on Makin Island in the Gilbert chain. Makin was a Japanese seaplane base, and the intelligence staff believed it was the Japanese headquarters in the Gilberts. Aerial photographs indicated that the Japanese focused the island's defenses on the lagoon side of the atoll. The marines used these photographs to prepare a mockup of the island that was complete with roads, buildings and wharves. By practicing landings on this full-scale training aid, the raiders knew the characteristics of their target by heart, even when their destination was a secret from them in order to maintain operational security.<sup>63</sup>

In order to stretch Japanese forces, Nimitz's staff developed a coordinated series of attacks. These included the landings on Guadalcanal and Florida Islands in the Solomons and the bombardment of Kiska in the Aleutians on August 7. The raiders' immediate objective was to destroy all enemy troops and installations, and if possible, secure documents and prisoners for further intelligence assessment. If circumstances permitted, they were to destroy any enemy installations that might exist on Little Makin to the north, and Apaiang and Maraki to the south. *Nautilus* was to arrive twenty-four hours before *Argonaut* in order to conduct preliminary periscope reconnaissance.<sup>64</sup>

Commander John Haines, the task group commander, embarked on *Nautilus*. The task group got underway from Pearl Harbor on August 8, one day after the landings on Guadalcanal

---

<sup>62</sup> Naval History Division (OP 0909), *History of Ships Named NAUTILUS*, ed. Ship's Histories Section (Washington: Navy Department, Office of the Chief of Naval Operations, 1962), 3-4.

<sup>63</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 38.

<sup>64</sup> United States, Office of Naval Intelligence., *Miscellaneous Actions in the South Pacific; 8 August 1942-22 January 1943* ([Washington, D.C.]: Office of Naval Intelligence, U.S. Navy, 1943), 1, 2.

commenced. Both submarine commanders were concerned about the ability to rendezvous on time near Makin after a nearly 2000 nautical mile voyage out of sight of land. Fortunately, the uneventful voyage provided opportunities for the raiders to work out on deck twice daily, as well as practice disembarking exercises (See photo 4). Both submarines arrived on August 16 and commenced photoreconnaissance of the potential landing beaches. Planners had selected the weather side of the island because Japanese defenses on the lagoon side made it clear that the enemy did not foresee the possibility of a landing force from anywhere other than the lagoon (See photos 5 and 6).<sup>65</sup>

Photo # 80-G-34493 Marines exercising on board USS Nautilus, while en route to raid Makin, August 1942



**Photo 4: Notice the six-inch gun, which provided naval gunfire support in the raid. Source: Naval History Center. <http://www.history.navy.mil/photos/images/g30000/g34493.jpg> (accessed August 22, 2010).**

---

<sup>65</sup> The weather side is the side from where the prevailing winds blow. *Ibid.*, 3.

Carlson planned to have the landing boats assemble alongside *Nautilus* so that they could get underway together and proceed to two different landing beaches. Heavy surf, however, resulted in noise that inhibited voice communications, and swamped most of the outboard motors. Based on these problems, Carlson decided to have all of the boats land together in order to minimize the risk of stragglers. The marines passed the word to as many boats as possible, but in the execution, only fifteen of the eighteen boats landed together on the beach on the side of the island opposite from the government wharf. Two of the boats landed about one mile to the north, and the other landed at their originally intended beach, which turned out to be behind enemy lines.<sup>66</sup>

Aside from the complications from the surf and change in plans, the raiders landed unopposed and they were able to overrun a number of Japanese installations before facing any opposition. Natives indicated that the Japanese anticipated a landing by Americans, and they strapped snipers to trees three days prior to the raider's arrival. Fortunately, the intelligence assessment that the Japanese would not expect an attack from the weather side proved true, which afforded the raiders the element of surprise. When the marines made contact with the Japanese forces, the tree-borne snipers proved the most troublesome. Natives informed Carlson of the location of enemy concentration, and armed with this information, he called for fire support from the submarines.<sup>67</sup>

In response to the call, *Nautilus* immediately commenced bombardment of the target on Ukiangong Point with her six-inch guns. The shells available to *Nautilus* and *Argonaut* at the time were not ideal for bombardment missions. Nonetheless, *Nautilus* used what she had, and achieved the desired results. While attacking the point, the submarine received another report that changed

---

<sup>66</sup> Ibid., 4.

<sup>67</sup> Ibid., 5-6.

the priority of fire. The marines reported a ship in the harbor. Private First Class James C. Green was one of the raiders in the boat that landed behind enemy lines. He described the scene, —During a lull in firing, upon looking out toward the lagoon side of the island, I noticed what appeared to be either a cargo ship or a troop transport. This caused me much consternation because I knew that if the Japanese landed reinforcements our small group would have very little chance to escape.’<sup>68</sup>

There were actually multiple vessels in the harbor. One was the apparent transport, one was a small gunboat, and another was an even smaller white vessel. Intermittent radio communications prevented the use of a spotter to guide the fires, but by changing range and deflection, the submarine succeeded in sinking the two larger vessels, which prevented Japanese reinforcements from coming ashore.<sup>69</sup> *Argonaut* never heard the original call for fire, and only received the call for fire against the ships because *Nautilus* relayed the fire order to her. As *Argonaut* prepared to fire her guns, she gained a radar contact and decided to dive.<sup>70</sup> *Nautilus* succeeded in hitting enemy forces, destroying a building and sinking two ships. *Argonaut*, however, never fired a shot.

The marines continued the fight throughout the day, and the submarines submerged because of Japanese planes in the area. Japanese aircraft based at a nearby island conducted at least three separate air attacks on the island and submarines, but failed to inflict any American casualties. The plan was for the raiders to leave the beach as early as 1930, but no later than 2100, so the submarines surfaced again in the evening and prepared to recover the boats. The surf was an even bigger challenge for the exfiltration. All of the boats attempted to reach the submarines,

---

<sup>68</sup> Commander Submarine Division FORTY-TWO, *U.S.S. NAUTILUS - Report of Second War Patrol* (San Francisco: Commander Submarine Division FORTY-TWO, 1942), D3.

<sup>69</sup> *Ibid.*, 4.

<sup>70</sup> Commander Submarine Division FORTY-TWO, *U.S.S. ARGONAUT- Report of Second War Patrol* (San Francisco: Submarine Division Forty Two, 1942), A2.

but they had great difficulty. Crashing waves overturned many of the boats, causing most of the weapons and all remaining radios to be lost or ruined. Fifty-three marines in four boats were able to reach *Nautilus*, and *Argonaut* recovered three boats.<sup>71</sup>

Exhausted, wet, unequipped and mostly unarmed, 120 marines had to remain all night on the rainy beach. At this point, Carlson was unsure of the enemy strength remaining on the island, and the sense of desperation was a spiritual low point of the expedition. The submarines remained on the surface in blinker communication with the men ashore. At daybreak, some of the remaining boats attempted the surf again. Each submarine was able to recover two boats in this effort. In addition, five volunteers from the marines who made it to the submarines the night before attempted to bring two reserve boats with motors to the beach in order to facilitate extraction of the remaining men. Japanese aircraft strafed this boatload of volunteers, and no Americans ever saw them alive again. This same air attack drove the submarines deep again, where they would remain until the afternoon.<sup>72</sup>

While waiting for the next opportunity to depart, the marines discovered the good fortune of their circumstances. During a search of the island, a patrol encountered and killed the only two surviving Japanese snipers. The raiders were unable to take any prisoners because they had eliminated all other forces in combat the day before. The Japanese conducted four more air attacks on the island, but again failed to inflict any American casualties. The raiders were able to collect documents and equipment, including some food and weapons, from the dead Japanese, which helped to sustain the men until their final extraction. Carlson coordinated with the

---

<sup>71</sup> Commander Submarine Division FORTY-TWO, *U.S.S. NAUTILUS - Report of Second War Patrol*, D4-5.

<sup>72</sup> United States, Office of Naval Intelligence., *Miscellaneous Actions in the South Pacific; 8 August 1942-22 January 1943*, 10-11.



submarines to recover the remaining seventy men by boat and outrigger canoe in the more sheltered lagoon that evening.

In less than forty hours on the island, the raiders and submarines eliminated all Japanese forces, and destroyed the island's main radio station, 700-1,000 barrels of aviation gasoline, Japanese military installations and food stores, two aircraft, and two ships. In contrast, the cost to the raiders was limited to eighteen killed in action, fourteen wounded in action, and twelve missing in action. Before leaving the island, Carlson personally identified the eighteen dead marines on the island, and paid to have the native police chief bury them. Many of the wounded marines underwent surgery onboard the submarines.<sup>73</sup> Carlson knew that five of the missing men were from the boatload of volunteers that the Japanese aircraft strafed. He assumed that the remaining seven were lost in one of the attempts to fight through the surf. His men had searched the island prior to their departure and confirmed that all surviving marines on the island were in the last five boats to depart from the lagoon.<sup>74</sup> They would later learn that at least nine missing marines were alive.<sup>75</sup>

Arguments against the success of the Makin raid center on the two main ideas. The first is the loss of the thirty men, especially the twelve that were missing in action.<sup>76</sup> The other is that

---

<sup>73</sup> Ibid., 11.

<sup>74</sup> Theodore Roscoe, R. G. Voge, and United States. Bureau of Naval Personnel, *United States Submarine Operations in World War II* (Annapolis: United States Naval Institute, 1949), 157.

<sup>75</sup> On May 22, 1946, an Associated Press dispatch from Guam stated that Japan beheaded nine U.S. Marines from the raid on Makin Island to celebrate a Japanese holiday on October 16, 1942. The source of the news was a Japanese defendant at a war crimes trial. Carlson's response to this tragic news was, "There can be no question about the eighteen that were killed in action, for I checked their bodies. The twelve 'missing' were presumed to have been lost in the surf during the first night attempt at evacuation and during the strafing of the boat the following morning. It is entirely possible that some or all of the twelve whom we listed as 'missing' men had reached the shore of an adjacent island, or of the southern tip of Butaritari. This is the only explanation I can offer for the A.P. dispatch from Guam. If I had knowledge that any Raiders remained on the island at the time we left, I would either have evacuated them or remained with them." Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 67.

<sup>76</sup> In December of 1999, members of the Central Identification Laboratory, Hawaii (CILHI) excavated the remains of twenty raiders on Makin. Eighteen were the raiders identified by Carlson prior to

the raid may have caused Japan to increase their fortifications and preparations on islands throughout the Pacific, which contributed to more U.S. casualties in the end. The kindest of the critics states that the “strategic results were probably nil.”<sup>77</sup> Marine General Holland M. Smith, “father of modern amphibious warfare,” referred to it as a “piece of folly.”<sup>78</sup> Naval historian Samuel Eliot Morison, claimed that the raid was “not to our ultimate advantage,” arguing that it caused the Japanese to increase their defenses, making the Pacific campaign more costly, especially on Tarawa.<sup>79</sup> One historian even referred to the raid as a “fiasco” that did more harm than good.<sup>80</sup>

Those who claim the Makin raid was a success use the following facts and assertions to justify their position. The raid was the first completed combined land and sea operation against the Japanese. The task group succeeded in the mission of clearing the island of Japanese forces and infrastructure. The raiders gained valuable lessons and experience, as well as valuable intelligence about Japanese operations in the Gilbert chain. In a general sense, the submarines’ experiences were useful for the numerous transport missions that followed. More specifically, *Nautilus*’ familiarization with the atoll was useful when she conducted additional photoreconnaissance with the Army’s 27 Infantry Division Assistant G-2 on board in preparation

---

his departure. The other two must have washed ashore after departure of the raider force. John McCarthy, *Gung Ho Raiders! Mission Accomplished*, February 2000 ed., Vol. Issue No. 71 (San Diego: U.S. Marine Raider Association, 2000), 3-19.

<sup>77</sup> Richard Compton-Hall, *Submarine Warfare: Monsters & Midgets* (New York: Blandford Press, 1985), 82.

<sup>78</sup> Samuel Eliot Morison, *History of United States Naval Operations in World War II, Aleutians, Gilberts and Marshalls*, 1st ed., Vol. VII (Boston: Little, Brown, 1951), 77.

<sup>79</sup> Morison, *History of United States Naval Operations in World War II, Coral Sea, Midway and Submarine Actions*, 235-240.

<sup>80</sup> Blair, *Silent Victory: The U.S. Submarine War Against Japan*, 309, 318.

for the Army's capture of Makin in November 1943. The intelligence the raiders collected was also useful for the November Army operation.<sup>81</sup>

The raid also had the desired effect of a diversion. The day after the marines departed, Japan sent a large Makin relief expedition of over 1,000 troops from the Marshalls. Without the Makin raid, Japan may have sent these troops to the ongoing battle on Guadalcanal.<sup>82</sup> Some of the critics above acknowledge both the public relations success of the raid and the diversion of troops from Guadalcanal.<sup>83</sup> Another historian that was critical of the overall effect of the operation still described the operation as the most ambitious submarine operation of the war, and reported that the news media hailed it as a great success upon its completion.<sup>84</sup> Contributing to the public relations success, Universal Studios produced the movie, "Gung Ho" to tell the story of Carlson's raiders on Makin.<sup>85</sup> The most generous assessment was that it was the greatest commando raid carried out in the Pacific during World War II.<sup>86</sup>

Submarines were vital to the successful aspects of this mission because they allowed the raiders to land on the island from a direction that the enemy deemed was impossible. This afforded the raiders the element of surprise, even though the Japanese forces expected an American invasion. One of the submarines provided valuable naval gunfire support. The

---

<sup>81</sup> Carl H. Fernstrom, *The Operations on MAKIN Atoll* (Fort Leavenworth: School of Combined Arms Regular Course, 1947), 5.

<sup>82</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 69.

<sup>83</sup> Blair, *Silent Victory: The U.S. Submarine War Against Japan*, 318.

<sup>84</sup> Morison, *History of United States Naval Operations in World War II, Coral Sea, Midway and Submarine Actions*, 235-240.

<sup>85</sup> Narrated: Chet Huntley, Starring: Randolph Scott & Robert Mitchum. *Gung Ho!: The Story of Carlson's Makin Island Raiders*, Film, directed by Ray Enright (Universal Pictures, 1943).

<sup>86</sup> Roscoe, Voge, and United States. Bureau of Naval Personnel, *United States Submarine Operations in World War II*, 157-158.

operation confused the enemy, as the Japanese soldiers did not know where these Americans came from, or the size of the operation.<sup>87</sup>

The leaders involved in the operation compiled their lessons learned in their after action reports. Two issues were common to Admiral Nimitz, Lieutenant Colonel Carlson, Commander Brockman and Lieutenant Commander Pierce. First, all agreed that there was considerable value in the experience gained by this operation. The military applied this experience to other operations later in the war, including the Attu landings, and many special transport missions by submarines. Second was that significant improvements were needed to increase the reliability of communications between ship and shore. Improved radios would have aided the naval gunfire support, and may have allowed for a better accounting of the marines prior to their departure. This lesson was so important to Carlson that when his raiders were conducting special patrol missions on Guadalcanal less than three months later, they accepted the burden of a radio system that required four men to carry because it was ~~–~~absolutely reliable.”<sup>88</sup>

In addition to these common remarks, Brockman made the most comprehensive list of recommendations, most of which related to his assessment that his submarine was not optimally configured for an amphibious operation. With respect to habitability issues, he and Pierce both reported that the air conditioning on the submarines was completely inadequate for the number of personnel on board, and it was only because they were able to transit on the surface for most of the time that they were able to avoid more adverse health issues. They both also addressed the challenges of feeding that many personnel with the limited facilities on submarines, and Pierce suggested additional galley and washroom facilities be added to if continued operations of this

---

<sup>87</sup> United States, Office of Naval Intelligence., *Miscellaneous Actions in the South Pacific*; 8 August 1942-22 January 1943, 3.

<sup>88</sup> Kuehn, *Interview with Evans C. Carlson*, Edited 1.

nature were to be conducted.<sup>89</sup> Brockman suggested that the berthing arrangement of *Nautilus* needed a different configuration, as there was no room for the marines to conduct necessary activities like gun cleaning and gear preparation, or even recreational activities such as playing cards or meeting for conversations. He also recommended that when land forces embark on submarines, they should be entitled to submarine pay.<sup>90</sup>

In his remaining recommendations, Brockman focused on the nature of the operation. He shared Carlson's recommendation that the commander should decide when to withdrawal forces based on the conditions ashore rather than a pre-arranged time. In addition, he pointed out that submarines should be able to launch their complement of raiders without requiring the landing boats from different submarines to rendezvous before heading to the beach. He also recommended that the submarines carry twice as many rubber boats as required for the mission, and that the submarines should carry a diesel powered motor whaleboat to provide reliable support to the smaller boats if required.<sup>91</sup> Nimitz included this recommendation in his after action assessment. Nimitz also suggested that forces could improve situational awareness about the conditions of a target island by landing advanced reconnaissance personnel prior to the assault forces for the purpose of gaining or confirming intelligence.<sup>92</sup>

Other issues addressed by Admiral Nimitz include the importance of radar for navigation close to the beach, the lack of bombardment ammunition for the six-inch guns, and the need to

---

<sup>89</sup> Commander Submarine Division FORTY-TWO, *U.S.S. ARGONAUT- Report of Second War Patrol*, A5-6.

<sup>90</sup> Commander Submarine Division FORTY-TWO, *U.S.S. NAUTILUS - Report of Second War Patrol*, 10-11.

<sup>91</sup> *Ibid.*, 10-11.

<sup>92</sup> United States, Office of Naval Intelligence., *Miscellaneous Actions in the South Pacific; 8 August 1942-22 January 1943*, 13.

train more on handling the rubber boats in heavy surf.<sup>93</sup> The submarine force and the Marine Corps both responded to these issues. Radar navigation continued to develop and improve over the course of the war. The navy provided *Argonaut*, *Narwhal* and *Nautilus* the bombardment ammunition that was not available at the time of this operation, and even made bombardment ammunition available to submarines with five-inch guns. *Barb* is one submarine that used bombardment munitions effectively in her Pacific war patrols. In the Korean War, the USS *Perch* (ASSP 313) followed *Nautilus*' example of launching and recovering amphibious forces, and providing naval gunfire support while they were ashore.<sup>94</sup> As the Marine Corps authorized additional raider battalions, their training included more landings and extractions in heavy surf conditions.

Many of Carlson's recommendations were consistent with those from the submariners, but he also emphasized the inadequacy of the outboard motors that were available to him and his men, and strongly suggested that the military provide better alternatives. As important as this problem was, it would take years for the military to fix it. He concluded with an important consideration for commanders by stating that his experience on Makin reaffirmed that no matter how bad a unit's condition seems it is always possible that the enemy's condition is worse.<sup>95</sup>

In summary, the Makin raid was the first completed combined land and sea operation against Japan. Like Lieutenant Colonel Doolittle's bombing raid on Tokyo, it was a public

---

<sup>93</sup> Chester W. Nimitz, *Solomon Island Campaign - Makin Island Diversion*. (Pearl Harbor: U.S. Pacific Fleet, 1942).

<sup>94</sup> *Perch* was a *Balao* class submarine, and a World War II veteran that the navy converted to a transport submarine. In the Korean War, *Perch* launched and recovered 41 Royal Marines for a raid in which they blew up a train tunnel. The submarine provided covering fire for the marines as they made their way back to the submarine while under fire. *Perch* was one of the last two submarines awarded with the Submarine Combat Patrol insignia. Leo J. Daugherty, *Train Wreckers and Ghost Killers: Allied Marines in the Korean War* (Washington, DC: U.S. Marine Corps Historical Center: Supt. of Docs., U.S. G.P.O., distributor, 2003), 5.

<sup>95</sup> Blankfort, *The Big Yankee: The Life of Carlson of the Raiders*, 68-69.

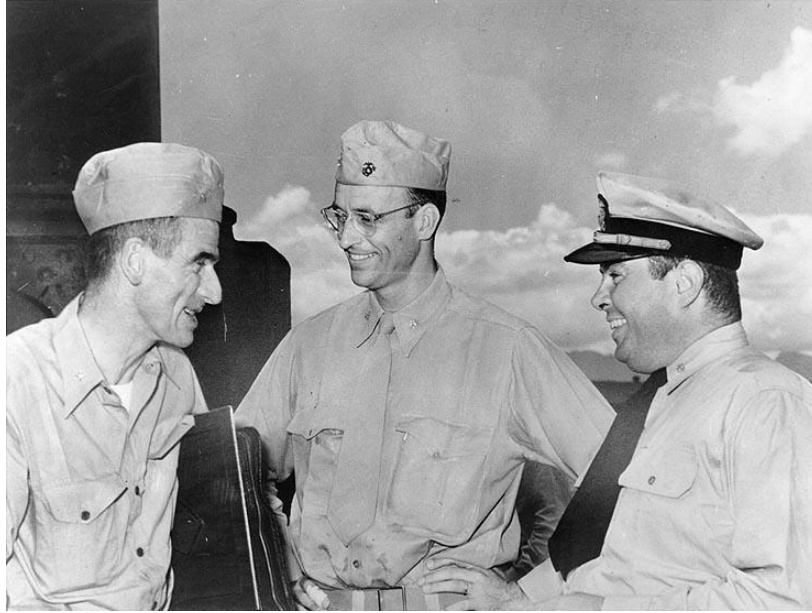
relations opportunity, and America took advantage of it. While far from perfect, the operation did make important contributions to the overall Pacific campaign. It confused Japanese plans by requiring them to stretch their forces throughout the theater. As the first operation of its kind, the military applied the lessons learned to future amphibious operations, specifically submarine borne operations that followed. Carlson's raiders never embarked on submarines for an operation again, but the commanders and crews of *Argonaut* and *Nautilus* used their experiences in numerous special transport missions, and their continued conduct of exercises with marine raider battalions. Commander Brockman applied some of these lessons to the Attu operation that is the subject of the third case study of this monograph. The raiders could not have accomplished the Makin raid without submarines.



Photo # 80-G-11737 Officers on USS Nautilus after Makin Island Raid, Aug. 1942

**Photo 5: (left to right): Lieutenant Commander William H. Brockman, Jr., Commanding Officer, USS *Nautilus*; Commander John M. Haines, Commander, Submarine Division 42, and Lieutenant Colonel Evans F. Carlson, USMC, Commander, Second Raider Battalion. Source: Naval History Center. <http://www.history.navy.mil/photos/images/g10000/g11737.jpg> (accessed August 22, 2010).**

Photo # 80-G-11736 LtCol. Carlson, Maj. Roosevelt & LCdr. Pierce on USS Argonaut after the Makin raid



**Photo 6: (left to right): Lieutenant Colonel Evans F. Carlson, USMC, Commander, Second Raider Battalion; Major James Roosevelt, USMCR, Executive Officer, Second Raider Battalion; and Lieutenant Commander John R. Pierce, USN, Commanding Officer, USS *Argonaut*. Source: Naval History Center. <http://www.ibiblio.org/hyperwar/OnlineLibrary/photos/images/g10000/g11736.jpg> (accessed August 22, 2010).**



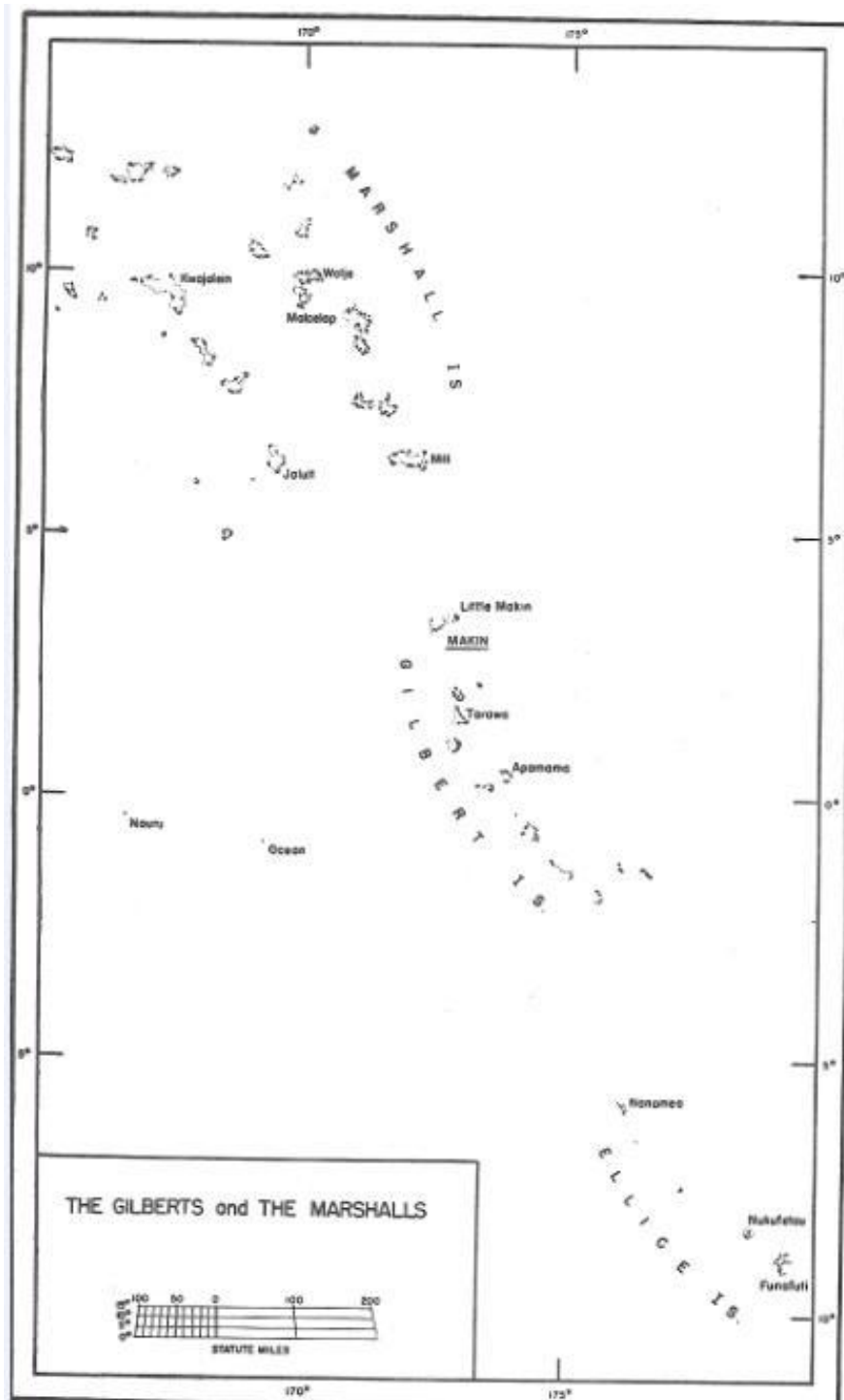


Chart 3: Gilbert and Marshall Islands. Note Makin, located near center of the chart. Source: Department of the Army.<sup>96</sup>

<sup>96</sup> Crowl and Love, *Seizure of the Gilberts and Marshalls*, 19.



Chart 4: Makin Atoll. Note Butaritari detail is on next chart. Source: Office of Naval Intelligence.<sup>97</sup>

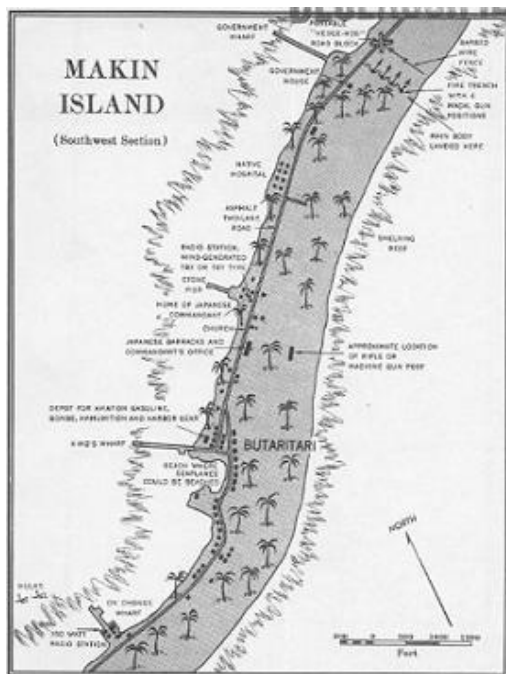


Chart 5: Butaritari detail from box indicated in chart above. Source: Office of Naval Intelligence.<sup>98</sup>

<sup>97</sup> United States, Office of Naval Intelligence., *Miscellaneous Actions in the South Pacific*; 8 August 1942-22 January 1943, Faces P.2.

<sup>98</sup> Ibid., Faces P.3.

## Five Submarines Assist Africa Landings

After the Makin raid, Lieutenant Colonel Carlson's Raiders engaged in the fighting on Guadalcanal. While this operation was still ongoing in the Pacific, the United States made its first massive commitment of American forces against the Axis powers in the Atlantic theater. On Sunday, November 8, 1942, Allied forces commenced Operation Torch, the largest amphibious operation conducted up to that point. The operation allowed the Allies to liberate Northern Africa from the Vichy French and established another front in the war. Ultimately, this gave them the access necessary to destroy the Axis military forces in Africa (See chart 6).<sup>99</sup>

Five U.S. *Gato* class submarines, the *Barb* (SS 220), *Blackfish* (SS 231), *Herring* (SS 233), *Shad* (SS 235), and *Gunnell* (SS 253) supported this unprecedented operation. In addition to the traditional submarine missions of coastal reconnaissance and seeking enemy ships to sink, these submarines conducted a new, secret mission. When the submarines departed New London, Connecticut between October 19 and 20, three of them got underway with a large wooden box and instructions to keep it closed until they reached their destination. One of the submarines also embarked additional crewmembers to support their mysterious assignment.<sup>100</sup> By tracing the historical context, the planning of the operation, and the execution, this chapter will demonstrate the value added by the submarines to the operation, while pointing out some of the limitations that reduced their effectiveness. It will conclude with lessons learned from the submarines' participation.

Allied leaders Winston Churchill and President Franklin D. Roosevelt agreed that they needed to conduct major military operations against Germany in 1942, but they struggled with

---

<sup>99</sup> David C. Emmel, *The Development of Amphibious Doctrine* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2010), 109.

<sup>100</sup> Steinmetz, *USS BARB (SS-220) and SUBRON 50*, 1.

identifying where, when and how to go about it. They knew they ultimately needed to attack Germany on the European continent, and that another front against Germany would help to draw Germans from their front against the Soviet Union, which would ease some of the pressure there. After much debate, both leaders came to accept that they did not yet have the resources to land in Europe and sustain the effort. The solution was to attack German forces in Africa, while continuing to build allied capacity for a sustainable European offensive.<sup>101</sup>

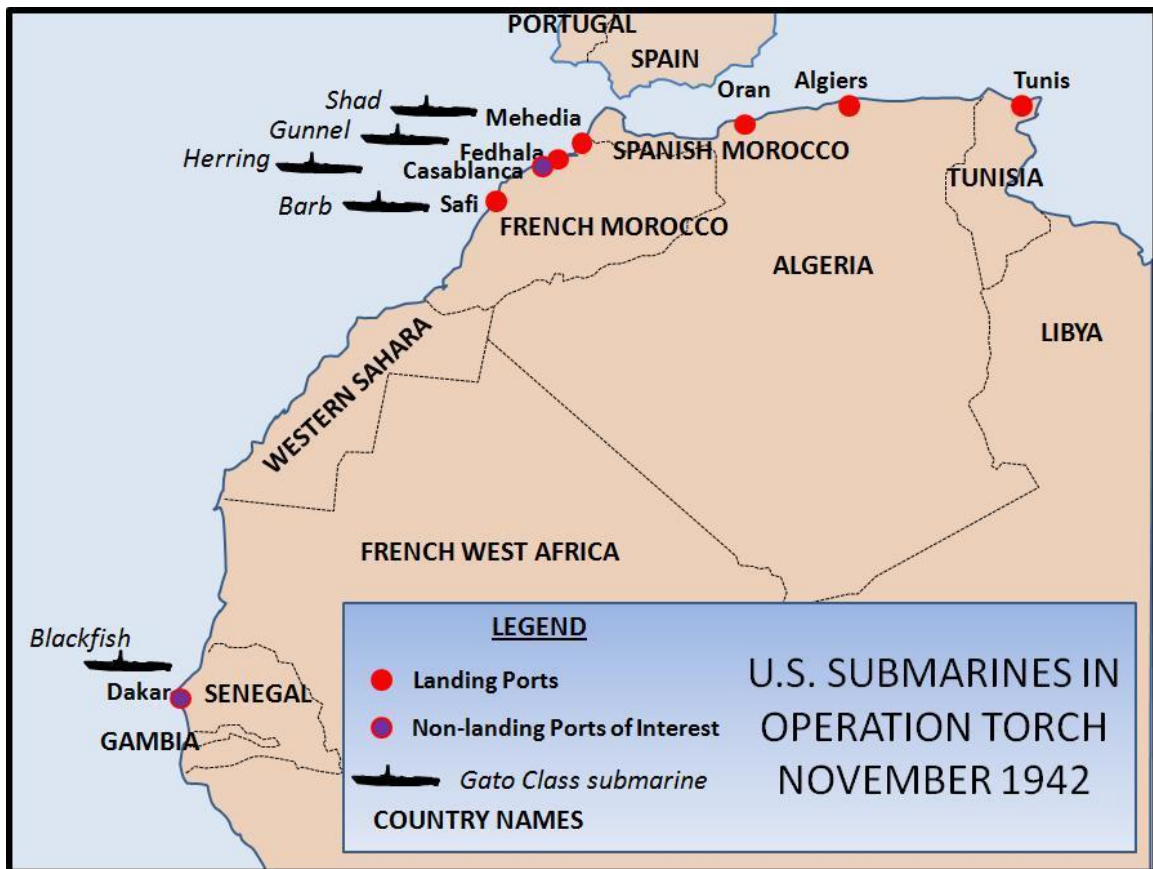


Chart 6: Five U.S. Submarines in Operation Torch. Compiled from multiple sources.

President Roosevelt committed the United States to a North African offensive and on July 23, 1942, and he directed the Joint Chiefs to make planning an operation in North Africa

<sup>101</sup> Dallek, *Franklin D. Roosevelt and American Foreign Policy, 1932-1945*, 321.

their top planning priority. Two days later, the Joint Chiefs named the prospective operation Torch. The plan ultimately consisted of three task forces. The Center Task Force would land in Algeria at Oran and the Eastern Task Force would land at Algiers, both of which are on the Mediterranean coast of Africa.<sup>102</sup> This chapter will focus on the Western Task Force, which would land in three different locations along Africa's Atlantic coast in French Morocco. The Western Task Force landings would be at Mehedia, Fedhala and Safi.<sup>103</sup>

The Western Task Force consisted of three attack groups, with each one focused on one of these ports. The Northern Attack Group would land at Mehedia, the Central Group at Fedhala, and the Southern group at Safi (See charts 7-9). The mission of the Western Task Force was to secure the port at Casablanca and adjacent airfields. In conjunction with the Center Task Force, they were to establish and maintain communications between Casablanca on the Atlantic and Oran in the Mediterranean. They were also required to build up land and air striking forces capable of securing Spanish Morocco, should that action become necessary. Because of Casablanca's extensive defenses, planners recognized that landing there was not feasible, so they selected ports that allowed the Allies to land adequate forces and equipment to take Casablanca, and continue the offensive.<sup>104</sup>

Based on limited information about these ports, and the importance of keeping the large invasion force a secret, planners recognized the value of sending submarines in advance of the main landing forces in order to identify evidence of minefields, swept channels, abnormal

---

<sup>102</sup> This monograph focuses on the Western Task Force and operations by U.S. submarines, but it worth noting that on October 21, 1942, Major General Mark Clark and four other American Officers went ashore at Algeria from the British submarine HMS *Seraph*, for a special mission to determine if the Vichy French would fight once the invasion began. Atkinson, *An Army at Dawn: The War in North Africa, 1942-1943*, 29-42.

<sup>103</sup> Howe, *Northwest Africa: Seizing the Initiative in the West*, 13-31.

<sup>104</sup> Hobart R. Gay, *Operation Plan no. 5-42* (Ocean View, VA: United States Atlantic Fleet Task Force Thirty Four (Western Naval Task Force), 1942).

activities and movement of shipping that could have a major effect on operations. While in position, they could also conduct observations of weather and sea conditions. Because planners were uncertain about how many submarines would be available, they prioritized their assignments. The first three available submarines would establish and maintain undetected reconnaissance patrols of the French Moroccan coast from Mehedia to Safi starting three days before the landings. One of the submarines was to pay special attention to the Safi area. One hour after dark on the evening before the landings, each submarine was to be at its assigned location for the new experimental mission of beacon duty, and have a reconnaissance report available for a task force boarding officer to receive. In order to prevent alerting the enemy, these three submarines were to avoid offensive action until completion of beacon duties unless necessary for self-preservation, and maintain radio silence unless they found something that would have a major impact on the mission.<sup>105</sup>

As the submarines arrived on station for beacon duty, the commanding officers would reveal the contents of their mysterious cargo. The wooden boxes contained an infrared light that was similar to a blinker tube. The crews would use this to signal the incoming allied ships in a way that would not be visible to the enemy. The inbound ships would be equipped with infrared telescopes in order to be able to detect the infrared signals from the submarines that were to be at pre-determined locations off their assigned ports. The submarines were to leave their beacon stations after daylight by following the coast to the north, and then turning seaward once clear of allied forces, at which time they were to commence offensive patrols until the prudent limits of their endurance, or otherwise ordered to head for the United Kingdom.<sup>106</sup>

---

<sup>105</sup> H. K. Hewitt, *Operation Plan no. 4-42* (Ocean View, VA: United States Atlantic Fleet Task Force Thirty Four (Western Task Force), 1942), 1,2.

<sup>106</sup> *Ibid.*, 2.

Each of the landing ports was significant for different reasons. Twenty-seven ships and 9,000 soldiers would conduct the landings at Mehdia. Their primary purpose was to seize the airport of Port-Lyautey in order to provide an airfield for land-based aircraft. Fedala was located just to the north of Casablanca. The landing force of 20,000 soldiers and seventy-seven light tanks under Major General George Patton was to envelope and capture Casablanca. The landing force for Safi consisted of twenty-six ships and 6,000 soldiers. Their primary function was to land fifty-four Sherman tanks.<sup>107</sup>

The submarine assigned to Safi had additional responsibilities that included special reconnaissance of the beach at Jorf El Yahudi, and the embarkation of five U.S. Army scouts.<sup>108</sup> The special reconnaissance was to pay particular attention to the surf conditions, evidence of outlying rocks, beach obstacles, fortifications, and any abnormal activity in the vicinity.<sup>109</sup> The Army and Navy trained the embarked scouts at the Amphibious Scout School in Virginia.<sup>110</sup> Based on the nature of the waters off Safi, these scouts were to proceed to a bell buoy off the northern end of the breakwaters to act as a beacon in the same way as the submarines. After launching the scouts, the submarine commander was no longer responsible for them, and the scouts were to report to U.S. forces when ashore.<sup>111</sup> Each attack group also had scouts embarked on surface ships that would go ashore in advance of the main forces to mark the landing beaches.<sup>112</sup>

---

<sup>107</sup> Atkinson, *An Army at Dawn: The War in North Africa, 1942-1943*, 104-114.

<sup>108</sup> While the *History of USS BARB (SS-220)* indicates seven soldiers were launched, *Scouts and Raiders, History of United States Naval Operations in World War II*, and the firsthand account in *USS BARB (SS-220) AND SUBRON 50* all agree that the scout boat included Lieutenant Duckworth, USA and four additional scouts.

<sup>109</sup> Hewitt, *Operation Plan no. 4-42*, A1.

<sup>110</sup> Dwyer, *Scouts and Raiders: The Navy's First Special Warfare Commandos*, 9.

<sup>111</sup> Hewitt, *Operation Plan no. 4-42*, A1.

<sup>112</sup> Gay, *Operation Plan no. 5-42*, A1-2.

If a fourth and fifth submarine were available for the operation, they were to establish offensive reconnaissance patrols starting three days before the invasion. The fourth would be off Casablanca, and the fifth off Dakar, Senegal, in that order of priority. The Casablanca submarine, starting the night before the invasion, was to maintain a position that avoided allied ships, and at dawn, destroy Vichy French and other possible enemy men of war. After the invasion commenced, this submarine was to attack any vessel departing from Casablanca. The Dakar submarine was not as constrained because it was further south than any of the landing forces, so her offensive operations could commence as early as three days prior to the assault.<sup>113</sup>

All of the submarines involved were to maintain radio silence until the landings begun, unless they had a report that might have a major effect on the operation. The plan permitted them to fire on darkened ships two days before the invasion, and any French Warship one day prior to the invasion. They were to treat any French submarine as hostile, and take periscope pictures of their assigned ports if their other tasks permitted.<sup>114</sup>

The Navy established Submarine Squadron Fifty (Subron 50) to fill the submarine requirements in this plan. Five of the six submarines assigned to the squadron made their first war patrols in support of Operation Torch.<sup>115</sup> *Barb* was designated the flagship of the squadron. For the top priority beacon assignments, the squadron commander, Captain Norman S. Ives assigned *Barb* to Safi, *Shad* to Mehdia, and *Gunnel* to Fedhala. For the offensive reconnaissance, he assigned *Herring* to Casablanca, and *Blackfish* to Dakar.<sup>116</sup>

---

<sup>113</sup> Hewitt, *Operation Plan no. 4-42*, 3.

<sup>114</sup> *Ibid.*, 3.

<sup>115</sup> USS *Gunnard* (SS 254) was the sixth submarine of the squadron, but she did not depart New London in time for participation in Operation Torch. She arrived in Roseneath on November 15, 1942, seven days after Torch landings. Steinmetz, *USS BARB (SS-220) and SUBRON 50*, 10.

<sup>116</sup> *Ibid.*



While Operation Torch was a well-guarded secret, the crew of *Barb* had a few indications that something new was about to happen. While they were still stateside, an Army lieutenant and four soldiers were undergoing training that required them to practice inflating, manning and paddling a rubber raft at night from a submarine. *Barb*, commanded by Lieutenant Commander J.R. Waterman, supported this training effort. Another indicator was an inspection that preceded the arrival of two officers who read a set of orders that established Subron 50 on September 3, 1942. The officers were the Squadron Commodore, Captain Ives, and the squadron secretary, Lieutenant Commander J. Corbus.<sup>117</sup> On October 20, 1942, when *Barb* departed New London, the five soldiers, Royal Navy Sub-lieutenant Bradley and a Royal Navy Chief Signaller were onboard. The Commodore and his secretary embarked on the USS *Augusta* (CL-31), a light cruiser that served as the Task Force's command ship.<sup>118</sup>

The Royal Navy passengers and the mysterious wooden box added to the mystery of the crew's destination. When *Barb* got underway for her first patrol, the crew expected to go to the Pacific. Instead of heading south, however, the submarine continued east.<sup>119</sup> After an uneventful transit, *Barb* arrived off the coast of Safi in heavy rain and rough seas on November 5. They had not had an accurate navigation fix in two days. The next day, they were able to fix their position as six miles northwest of Safi. *Barb* made multiple attempts to conduct periscope observations of the shore, but foul weather and reduced visibility prevented it. After dark, the weather cleared and the seas abated, allowing them to obtain another fix. The next day, *Barb* was finally able to take still and motion pictures of Safi harbor, but the loss of a day due to rain kept them from conducting her additional task of a close reconnaissance of Jorf El Yahudi. While she observed

---

<sup>117</sup> Ibid.

<sup>118</sup> Samuel Eliot Morison, *History of United States Naval Operations in World War II, Operations in North African Waters*, 1st ed., Vol. II (Boston: Little, Brown, 1984), 43.

<sup>119</sup> Steinmetz, *USS BARB (SS-220) and SUBRON 50*, 3.

no ships in the harbor, *Barb* watched vessels transiting in the vicinity, which allowed her crew to assess that the Axis powers had not mined Safi. That evening, *Barb* observed that Safi blacked out all navigational aids and the town, with the exception of searchlights.<sup>120</sup>

On the evening of November 7, the *Barb* assumed her station, and at 2238, she disembarked Army First Lieutenant Willard G. Duckworth and the other scouts, and commenced seaward transmission with the infrared lamp. *Barb* used her radar to track the rubber boats as far as she could. She also continued the infrared transmissions as allied ships established a bombardment formation in a semi-circle around the submarine at a distance of 200 to 6,000 yards. The bombardment commenced at 0427, and gunfire from the allied ships and return fire from the shore passed overhead. By 0530 *Barb* completed the infrared transmissions and began to maneuver out of the area. When the crew saw incoming tracer rounds from allied ships, they submerged for safety. They surfaced again five minutes later and exchanged recognition signals with the battleship USS *New York* (BB-34), who continued to bombard the shore. *Barb* transited to her patrol area, where she remained until directed to make her way to Roseneath, Scotland on November 14.<sup>121</sup>

While the remainder of *Barb*'s patrol was relatively uneventful, the scouts she launched had a more interesting time. Prior to disembarking, *Barb*'s commanding officer had told Lieutenant Duckworth that the submarine was in position, three and a half miles from Safi. After six straight hours of paddling, however, the scouts still had not reached their destination. They eventually found the buoy marking the entrance to the Jette Principal. Intelligence reports indicated that the buoy would have the capacity to support him and his crew, but instead, he found it was too small to hold even one man. He decided to paddle to the end of the breakwater

---

<sup>120</sup> J. R. Waterman, *U.S.S. Barb, First War Patrol - Report of*. (Scotland: U.S. Navy, 1942), 1, 2.

<sup>121</sup> *Ibid.*, 3-5.

with the intention of placing a light there, but they noticed a sentry and decided to move outside the breakwater. Soon, they sighted USS *Bernadou* (DD-153), one of the two stripped down destroyers loaded with troops that they were supposed to be guiding into port.<sup>122</sup>

Fortunately, another scout boat was in a position to provide the guidance that Lieutenant Duckworth's boat was supposed to give. Ensign John J. Bell's scout boat crew had left the attack transport USS *Harris* (APA-2) around 0200 to take a beacon position 250 yards west and 100 yards north of the Jette Principal. On the way, he kept an eye out for *Barb*, and signaled with his infrared light, but never established contact. Around 0410, while still about 1,500 yards from the end of the Jette, Ensign Bell noticed the lights on the breakwater went dark. He signaled to *Bernadou*, and when the destroyer was within 500 yards of the harbor mouth, he observed her infrared lights burning. Then he noticed an enemy signal sent from the breakwater to the gun battery on Point de la Tour. As she entered the harbor, a firefight ensued between the ship and shore.<sup>123</sup>

As the assault started, the machine gun fire passing just overhead forced Duckworth's crew over the side of their boat, which they clung to for half an hour before reboarding. Bell's crew maintained position, and at around 0450, he sighted the other destroyer, USS *Cole* (DD-155), off course and heading right for the seaward side of the breakwater. Bell hailed *Cole* by radio, and got her to reverse engines before she hit the breakwater. His boat was then able to help *Cole* enter the harbor and joint the firefight. Bell then assumed the task of redirecting the follow-on waves of boats towards the breakwater. Eventually, Duckworth's crew made it safely ashore

---

<sup>122</sup> Dwyer, *Scouts and Raiders: The Navy's First Special Warfare Commandos*, 16.

<sup>123</sup> *Ibid.*, 16, 17.

and linked up with other Americans. Bell's crew remained on station until around 0800, when they returned to *Harris*.<sup>124</sup>

*Shad*, commanded by Lieutenant Commander E.J. MacGregor, was underway from New London on October 19, heading for her first patrol off the Port of Mehedia, French Morocco.<sup>125</sup> Mehedia was the northernmost landing site for the Western Task Force. Without the challenging weather encountered by *Barb*, she arrived off Mehedia Light on the evening of 4 November, and took moving pictures of the coast the following day. On November 6 and 7, *Shad* moved closer for moving pictures of the harbor, breakwater and potential landing beaches. She also gathered sounding data, and observed the movements of shipping.<sup>126</sup>

At 2140, *Shad* gained a radar contact and submerged, because she did not expect the incoming force until 2300. After submerging, a destroyer signaled them with sound gear to commence making characters on "special light." *Shad* resurfaced and directed the special signals to all of the approaching vessels. At 0412, the task group commander informed them that a boarding officer was on the way to collect the reconnaissance package, but none ever reached the submarine. By 0523, landing operations commenced, and the task group commander ordered *Shad* to cease transmissions. Approximately forty minutes later, friendly forces began to receive fire from shore defenses, and the American destroyers returned fire. *Shad* observed the exchange of fire for a few minutes, until the task group commander ordered her to clear the area submerged. On November 10, while still in her patrol area, *Shad* received the order to attack all

---

<sup>124</sup> Ibid., 17-18.

<sup>125</sup> Office of Naval Records and History, *History of USS SHAD (SS 235)* (Washington: Ship's Histories Section, 1951), 2.

<sup>126</sup> E. J. MacGregor, *First War Patrol of the U.S.S. SHAD* (Scotland: U.S. Navy, 1942), 2.

French Naval Units she encountered, but over the next four days, she did not find any. On November 14, she received orders to proceed to Roseneath.<sup>127</sup>

*Gunnel*, commanded by Lieutenant Commander John S. McCain, Jr., also proceeded from New London on October 19.<sup>128</sup> With the same type of wooden crate that *Barb* and *Shad* had, the crew speculated about its purpose, calling it their secret weapon, while also cursing it as they maneuvered awkwardly around it in the performance of their duties.<sup>129</sup> On November 4, while approximately six miles off Casablanca, *Gunnel* was able to see that the city was still well lit, as there was a large glow from the coast. While avoiding fishing vessels, *Gunnel* used the nighttime to reposition fifteen miles to the north for a reconnaissance of Fedhala the following day. After the observations, she had a close encounter with two French destroyers, one on the port side at 2,000 yards, and the other off the starboard quarter at 1,500 yards. The captain ordered silent running, and *Gunnel* cleared the area undetected. The following day, she returned for more periscope observations of Fedhala. In the evening, as she was clearing the area again, she noted that the city was dark, but Fedhala Light, a navigation aid, was not. She also noted that Casablanca Light and the city remained illuminated.<sup>130</sup>

On November 7, *Gunnel* conducted navigation fixes down the coast near Fedhala, as she positioned herself for her beacon duties.<sup>131</sup> When she surfaced, she found herself under the guns of a passing cruiser. Too close to even exchange recognition signals, Lieutenant Commander

---

<sup>127</sup> Ibid., 3, 4.

<sup>128</sup> Lieutenant Commander John S. McCain, Jr. was the son of Admiral John S. McCain, and father of Arizona Senator and 2008 Presidential Candidate, John S. McCain, III. Both senior McCains attained the rank of Four-Star Admiral.

<sup>129</sup> James A. Lavelle, "U.S.S. GUNNEL SS 253, First War Patrol," Lavelle, James A., <http://www.jmlavelle.com/gunnel/patrol1.htm> (accessed July 29, 2010). On this website, Jim Lavelle integrates *Gunnel*'s First War Patrol Report with details from documents and interviews from *Gunnel* crewmembers.

<sup>130</sup> J. S. Jr McCain, *U.S.S. GUNNEL First War Patrol - Report of*. (Scotland, 1942), 2-5.

<sup>131</sup> Ibid., 5.

McCain yelled up to the cruiser with a megaphone and averted a possible disaster.<sup>132</sup> The crew finally opened the wooden crate that afternoon, satisfying their curiosity. At 2250, she heard the pinging of a large number of ships, and commenced transmitting her infrared signals. Twenty-five minutes later, she challenged the lead destroyer, and received the proper reply. As the allied ships passed, lightning flashes revealed a much larger force than Lieutenant Commander McCain anticipated. The bridge watch team observed the spectacular fireworks of American ships blasting the fortifications at Fedhala and Casablanca, as well as any enemy vessels they could find. Several of the one-ton projectiles from the battleship USS *Massachusetts* (BB-59) passed directly overhead as she engaged the French battleship *Jean Bart* and the shore defenses.<sup>133</sup>

By 0430 on November 8, *Gunnel's* beacon duties were complete, and she began to clear the area. While still on the surface three hours later, an Army P-40 plane strafed the submarine, so she submerged. When she surfaced again, she observed the bombardment of Casablanca as she made her way towards her patrol area. At 1202, *Gunnel* observed another American plane. It did not respond to recognition signals, so the submarine conducted a crash dive just in time. One minute later, as the submarine was passing 150 feet at a dangerous down angle, a bomb exploded over the conning tower.<sup>134</sup> After these incidents, *Gunnel* had a quiet few days in her patrol area before the commander of Subron 50 released her from duty.<sup>135</sup>

After an uneventful transit across the Atlantic, *Herring* surfaced off the coast of West Africa on November 5, without having had a fix for the previous twenty-four hours. Within an hour, they were in sight of land, and confirmed their estimated position as southwest of

---

<sup>132</sup> Roscoe, Voge, and United States. Bureau of Naval Personnel, *United States Submarine Operations in World War II*, 185.

<sup>133</sup> Lavelle, *U.S.S. GUNNEL SS 253, First War Patrol*, 2.

<sup>134</sup> *Ibid.*

<sup>135</sup> McCain, *U.S.S. GUNNEL First War Patrol - Report of.*, 5, 6.

Casablanca. Intent on identifying the city before dark, they headed to the northeast. When they surfaced seven miles off Casablanca, they had the impression that they “had come up in the center of Times Square.” Except for one of the expected navigation aids, the city was brilliantly lit up. They continued to operate in the area, but the authority to fire at any darkened shipping and on any French man-o-war came too late to capitalize on some escort and patrol vessels they encountered. Lieutenant Commander R.W. Johnson, the commanding officer, passed up subsequent opportunities to attack these vessels because of the prospect of larger men-o-war coming out of port. *Herring* took several pictures of Casablanca during the day, and maneuvered to patrol away from the city lights at night. This helped them to avoid detection by and interference with the friendly forces that would be arriving at dawn.<sup>136</sup>

At 2300, *Herring* detected the pinging sounds and radar of the approaching allied forces. At 2349, Casablanca extinguished its remaining prominent navigation light. At 0245, *Herring* intercepted communications that delayed the landing time by one hour. At 0320, Casablanca blacked out suddenly, except for a few scattered lights along the waterfront. At 0500, *Herring* commenced withdrawal from the area as directed. Like *Gunnel*, *Herring* observed the bombardment of the city by the Allied ships, including the *Massachusetts*. With the authority to destroy any vessel leaving Casablanca, she kept watch for potential targets. At 1003, with a merchant in sight, Lieutenant Commander Johnson ordered battle stations. After forty minutes of approach on the zig-zagging vessel, *Herring* identified her as the French *Ville Due Havre*, and proceeded to attack with two torpedoes. One hit, and the other passed underneath. They launched a third torpedo, but it never started up. One final shot was a direct hit, and the vessel launched lifeboats as the ship started to settle slowly. The sinking merchant alerted a French patrol vessel.

---

<sup>136</sup> R. W. Johnson, *Report of War Patrol - USS HERRING (SS233)* (Scotland: U.S. Navy, 1942), 1-6.

While trying to evade it, *Herring* ran into the operating area of other allied vessels and risked a friendly fire incident. When she finally cleared their position, *Herring* continued on to her assigned patrol area, where the remainder of her mission was uneventful.<sup>137</sup>

The final U.S. submarine involved in the operation was *Blackfish*, commanded by Lieutenant Commander J.F. Davidson. *Blackfish* was the southernmost unit, assigned to conduct an offensive patrol and attack any vessels that leave the port at Dakar. Like the others, *Blackfish* departed New London in October and made her way to the African coast, which she sighted on the afternoon of November 5. She began her patrol that same day. As the sun set, she observed that Dakar kept all of her navigation lights extinguished, but that the town and coast were not completely blacked out. The following morning, fog thwarted attempts at photoreconnaissance of the coast, but by late afternoon, the fog lifted and the crew took some pictures. While she saw various aircraft each day, she saw no shipping until November 7, when she observed a small steamer that she assessed to be a minesweeper. It never closed enough to present a good target.<sup>138</sup>

By November 8, Lieutenant Commander Davidson observed the tradeoff between the best position to observe the harbor, and the best location for attack opportunities. The best place to see the harbor also afforded enemy ships an unmolested passage by hugging the coast to the southwest. Ultimately, he opted for better hunting. The following morning, *Blackfish* earned her reward by finding four vessels on a southerly course. She began her approach, and by 1248, she fired two torpedoes from tubes #7 and #8 at the second cargo vessel in the formation. The second torpedo hit abaft the stack, and the *Ango* class cargo vessel's screw stopped turning. The hit prompted the destroyer in the formation to speed up. As the submarine commenced an approach on it, she began to hear depth charges, most likely from an aircraft. Instead of continuing the

---

<sup>137</sup> Ibid., 7, 9.

<sup>138</sup> J. F. Davidson, *U.S.S. BLACKFISH - Report of First War Patrol Period from October 19, 1942 to November 27, 1942 Area - Dakar Operation Order no. 2-42* (Scotland: U.S. Navy, 1942), 2, 3.



attack, she evaded to 300 feet. When she surfaced over five hours later, nothing was in sight, but the Lieutenant Commander Davidson assessed that the stricken vessel sunk from the damage she received.<sup>139</sup>

Like the other submarines, the next few days were uneventful for *Blackfish*. On November 13, foul weather and reduced visibility contributed to a close call. While operating on the surface, the lights of ships close aboard emerged out of the weather. The submarine dove to avoid a collision, and then positioned herself ahead of this convoy. Unfortunately, when she surfaced to wait for it, the poor visibility interfered with subsequent contact. Later that evening, radar picked up a convoy, but numerous small craft between the submarine and the convoy got in the way of an effective approach. The next morning, *Blackfish* received the dispatch that her duty was complete, so she began to clear the area and head for Scotland.<sup>140</sup>

According to Everett H. Steinmetz, an officer on board *Barb* during these operations, the beacon submarine concept fell short of expectations. He cites navigation errors from suspect charts, scarce topographic intelligence, and radar navigation being in its infancy as the main source of difficulty.<sup>141</sup> In their patrol reports, each submarine skipper offered amplifying information about their navigational challenges. Because of the war, it is not surprising that each submarine reported that the coastal inhabitants kept many of their main navigation aids extinguished at night. *Herring* reported that a prominent navigation aid in the Azores was the only light that remained illuminated normally. Both *Shad* and *Gunnel* reported that multiple charts and the light list disagreed on the plotted position of Mehedia Light, another prominent navigation aid. Out of the five submarines, only *Gunnel* and *Blackfish* reported consistent navigation fixes. *Shad* was fortunate to find her soundings consistent with the chart, but *Barb*

---

<sup>139</sup> Ibid., 4.

<sup>140</sup> Ibid., 6.

<sup>141</sup> Steinmetz, *USS BARB (SS-220) and SUBRON 50*, 1.

found her charted soundings unreliable, and silhouette sketches of the coast were out of date.

*Herring* had multiple unreliable fixes, and *Barb* went for days without accurate fixes.<sup>142</sup>

Even though the use of submarines as beacons fell short of expectations, Ensign Bell's scout boat proved the value of the beacon concept. The Southern Attack Group never saw *Barb's* infrared transmissions and the Northern Attack Group had to prompt *Shad* to commence transmissions, and had trouble spotting them at first. Only *Gunnel's* transmissions to the Central Attack Group were as useful as planned. Communications difficulties prevented the submarines from using the proper code, and navigation discrepancies and challenges resulted in confusion instead of clarification. Just as Ensign Bell's boat crew validated the beacon concept, they also demonstrated the value of the scout boats in general. Unfortunately, *Barb*, by launching her scouts from too far away, contributed to their failure to provide a beacon at the entrance buoy to Safi harbor. The same navigation challenges that hindered beacon duty likely contributed to this complication as well.

At the time of his report, Lieutenant Commander Waterman of the *Barb*, seemed unaware that he launched the scouts further from their intended location, and he even commended his navigator for doing so well in such challenging conditions.<sup>143</sup> *Shad's* commander, Lieutenant Commander MacGregor, offered a practical recommendation if the beacon concept was to be used again. He suggested that the beacon position be in relation to a known fixed location rather than coordinates, as this would prevent confusion over chart differences.<sup>144</sup>

Although the Subron 50 submarines did not serve as beacon submarines during the rest of their time in the Atlantic, at least four British submarines used the lessons from *Torch* to perform

---

<sup>142</sup> The navigation lessons are from the indicated pages of the associated patrol reports: *Barb* 7 & 11, *Shad* 6, *Gunnel* 10, *Herring* 13, and *Blackfish* 7.

<sup>143</sup> Waterman, *U.S.S. Barb, First War Patrol - Report of.*, 11.

<sup>144</sup> MacGregor, *First War Patrol of the U.S.S. SHAD*, 11.

this role successfully in allied landings on Sicily and Italy in July 1943. In one operation, a submarine put scouts ashore ~~without~~ "without a hitch." Morrison described another operation as smooth and successful because of the beacon submarine, and the only complaint for a third was that one submarine was insufficient. In a fourth landing, one submarine was not only a beacon, but also helped to direct minesweepers.<sup>145</sup> America did not abandon the beacon concept altogether. In the Pacific, submarines operated as reference vessels, but instead of relying on infrared beacons, they used radar. One example was when USS *Grayback* (SS 208) was a reference vessel for naval gunfire and approach for the bombardment of Munda on January 9, 1943 in the Solomon Islands campaign.<sup>146</sup>

In addition to the navigation challenges, all of the submarines reported problems with communications. *Barb* reported receiving dispatches thirty-six to forty-eight hours after the time of origin, and cumbersome codes prevented timely decoding of the messages.<sup>147</sup> Similarly, *Gunnel* reported that at least three messages were received too late to be acted on properly.<sup>148</sup> *Shad* observed that in addition to the difficulty all of the submarines had in receiving broadcasts, Gibraltar station was guarding a different frequency than was identified in the communications annex of the operations order.<sup>149</sup>

*Barb*, *Shad* and *Gunnel* all produced comprehensive reconnaissance packages for the landing force. They included photographs, motion pictures and written descriptions of the coasts near landing beaches. During the landings, the commander of the task group told *Shad* that a boat

---

<sup>145</sup> Samuel Eliot Morison, *History of United States Naval Operations in World War II, Sicily-Salerno-Anzio*, 1st ed., Vol. IX (Boston: Little, Brown, 1952), 72-74, 90, 152, 157, 253, 339.

<sup>146</sup> Chester W. Nimitz, *Solomon Islands Campaign from Fourth Battle of Savo, 30 November, 1942, to Munda Bombardment, 4-5 January, 1943*. (Pearl Harbor: U.S. Pacific Fleet, 1943).

<sup>147</sup> Waterman, *U.S.S. Barb, First War Patrol - Report of.*, 8, 11.

<sup>148</sup> McCain, *U.S.S. GUNNEL First War Patrol - Report of.*, 12.

<sup>149</sup> MacGregor, *First War Patrol of the U.S.S. SHAD*, 10.

officer was on the way to pick up her package, but he never showed. In the end, no one retrieved the packages from the submarines prior to the landing.<sup>150</sup> Even if the landing forces had received them, they would be a very limited value that late in the operation. The main value of the reconnaissance was passive in nature. In accordance with their orders, by not transmitting reports, the submarines effectively told the task group commander that they did not find anything that would interfere with the operation, and by assuming their beacon station, they demonstrated that the Axis forces did not mine the ports.<sup>151</sup> *Shad*'s commanding officer, Lieutenant Commander MacGregor suggested that three days was insufficient for adequate reconnaissance, and that more details about the planned assault would prevent surprising submarine skippers with aspects of the execution, such as the magnitude of the fleet involved.<sup>152</sup>

This last recommendation would not only allow submarines to make more detailed assessments of landing areas, but also would help the submarines identify shipping patterns in their assigned areas. Even though *Herring* and *Blackfish* both succeeded in sinking one French ship each, all five submarines experienced a general lack of potential targets in the days following the landings. This was because either the patrol assignments were too far from the coast, or trial and error was insufficient for the submarines to find the shipping lanes. *Gunnel* had the opportunity to attack French destroyers during her reconnaissance, but the restrictions on her offensive operations until completion of beacon duties prevented it.

Even though the offensive patrols did not afford the submarines as many targets as any of the skippers anticipated, these were the first war patrol for all five of the submarines, and the experience of the Torch landings was profitable for each crew. Shipyards had launched three of the submarines only seven months earlier, and the other two were younger still. *Barb* went on to

---

<sup>150</sup> *Ibid.*, 3.

<sup>151</sup> Waterman, *U.S.S. Barb, First War Patrol - Report of.*, 11.

<sup>152</sup> MacGregor, *First War Patrol of the U.S.S. SHAD*, 11.

conduct twelve successful war patrols, including the only landing of American service men on the Japanese homeland. *Blackfish* also had twelve patrols, *Shad* had eleven, and *Gunnel* had eight. Each of these four survived the war, but *Herring* was lost at sea during her eighth war patrol, in which she sank more tonnage than in any of her previous patrols.

The final challenge of the submarine operations was avoiding interference with the Allied operations, as well as preventing mistaken attacks on the submarines by the Allies. Allied aircraft attacked *Gunnel* on two separate occasions. In addition, *Herring* and *Gunnel* saw each other during the transit to Roseneath, and while *Herring* recognized that the other submarine was likely *Gunnel* or *Shad*, *Gunnel* reported *Herring* as an enemy U-boat.<sup>153</sup> Again, Lieutenant Commander MacGregor included recommendations for improving these operations. He suggested that plans include provisions for the withdrawal of submarines in order to prevent attack by friendly forces or interference with other operations. He specifically recommended withdrawing the submarines at the earliest possible opportunity, and providing them a surfaced escort.<sup>154</sup> In order to avoid mutual interference of submarines, *Herring*'s skipper, Lieutenant Commander Johnson recommended routing submarines in a way to prevent friendly contact where enemy contacts are probable. Specifically, he recommended at least a thirty-mile separation between allied submarines.<sup>155</sup>

In the end, the Torch landings were a success, and the Allies succeeded in opening another front in the war on Germany. Ultimately, the Allies liberated northern Africa from the Axis powers, and established better control over the Mediterranean Sea. Planners included submarines in the operation for good reason, and the five submarines that participated had mixed success. Each one of them was able to provide advanced reconnaissance of their assigned area

---

<sup>153</sup> Johnson, *Report of War Patrol - USS HERRING (SS233)*, 11.

<sup>154</sup> MacGregor, *First War Patrol of the U.S.S. SHAD*, 11.

<sup>155</sup> Johnson, *Report of War Patrol - USS HERRING (SS233)*, 17.

while remaining undetected in order to report to the Task Force if there were conditions that would have a major effect on the operation, such as mines, swept channels, or abnormal activities. While the landing forces did not retrieve any of the reconnaissance reports prior to the assault, the fact that the submarines maintained radio silence told the Task Force leadership that they were clear to continue. The Allies applied the lessons from this operation to improve landing operation techniques that they used successfully in Italy and Sicily, as well as in the Pacific theater.

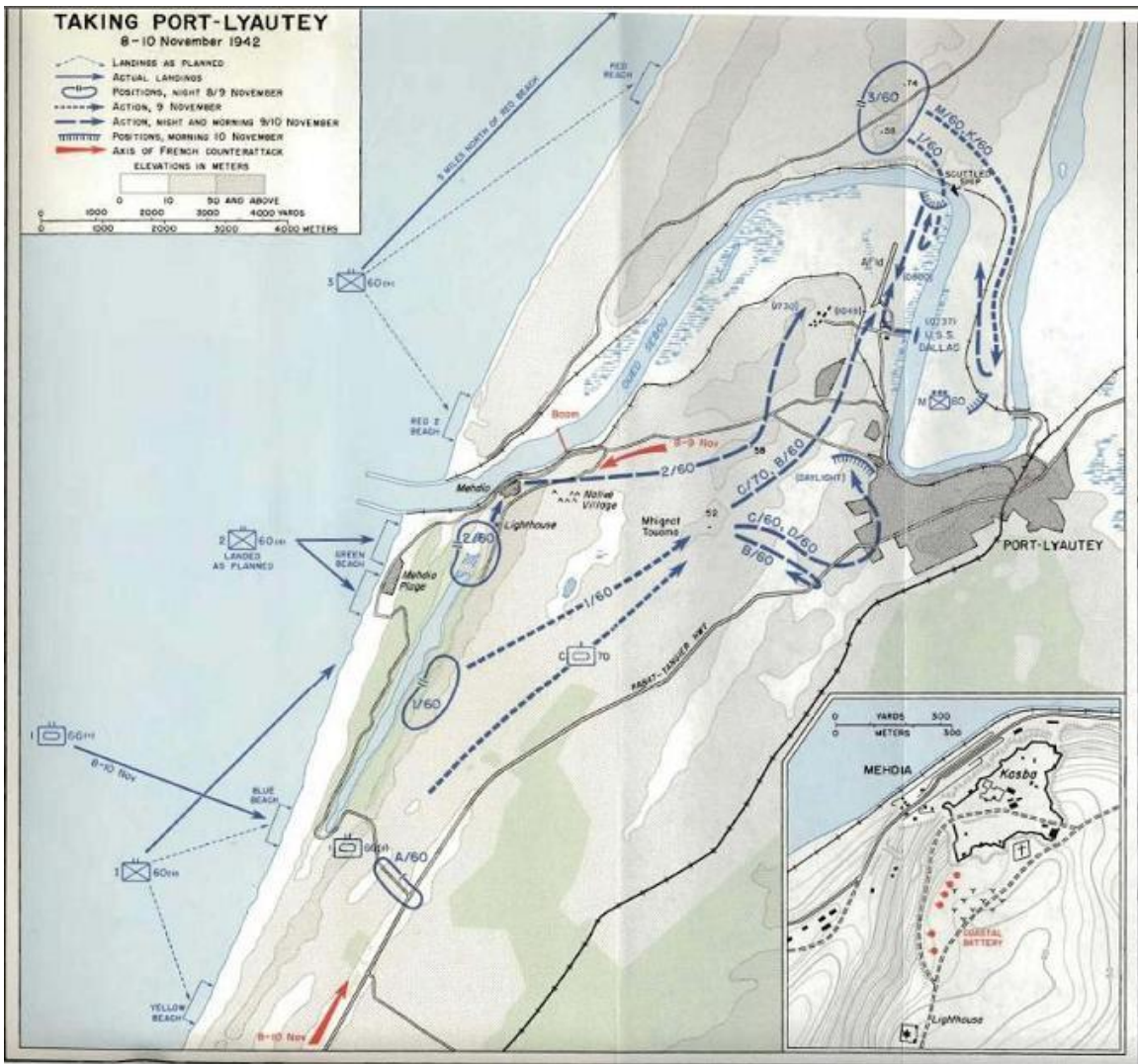


Chart 7: Port of Mehdia in inset. Port was essential for Airfield at Port-Lyautey. Source: U.S. Army in World War II.<sup>156</sup>

<sup>156</sup> Howe, *Northwest Africa: Seizing the Initiative in the West*, MAP IV.

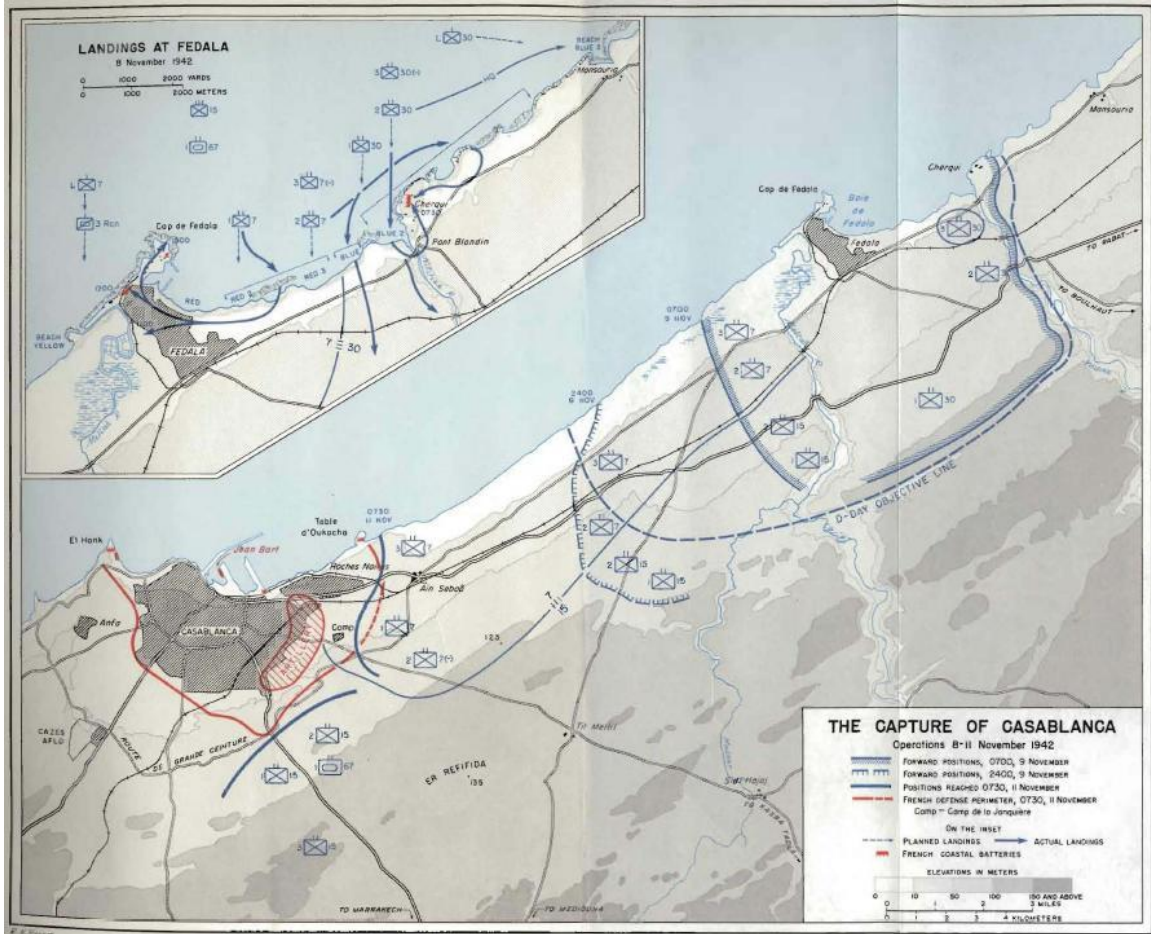


Chart 8: Port of Fedala in inset. Port allowed landings close to Casablanca without facing the more significant defenses of Casablanca. Source: U.S. Army in World War II.<sup>157</sup>

<sup>157</sup> Ibid., MAP III.



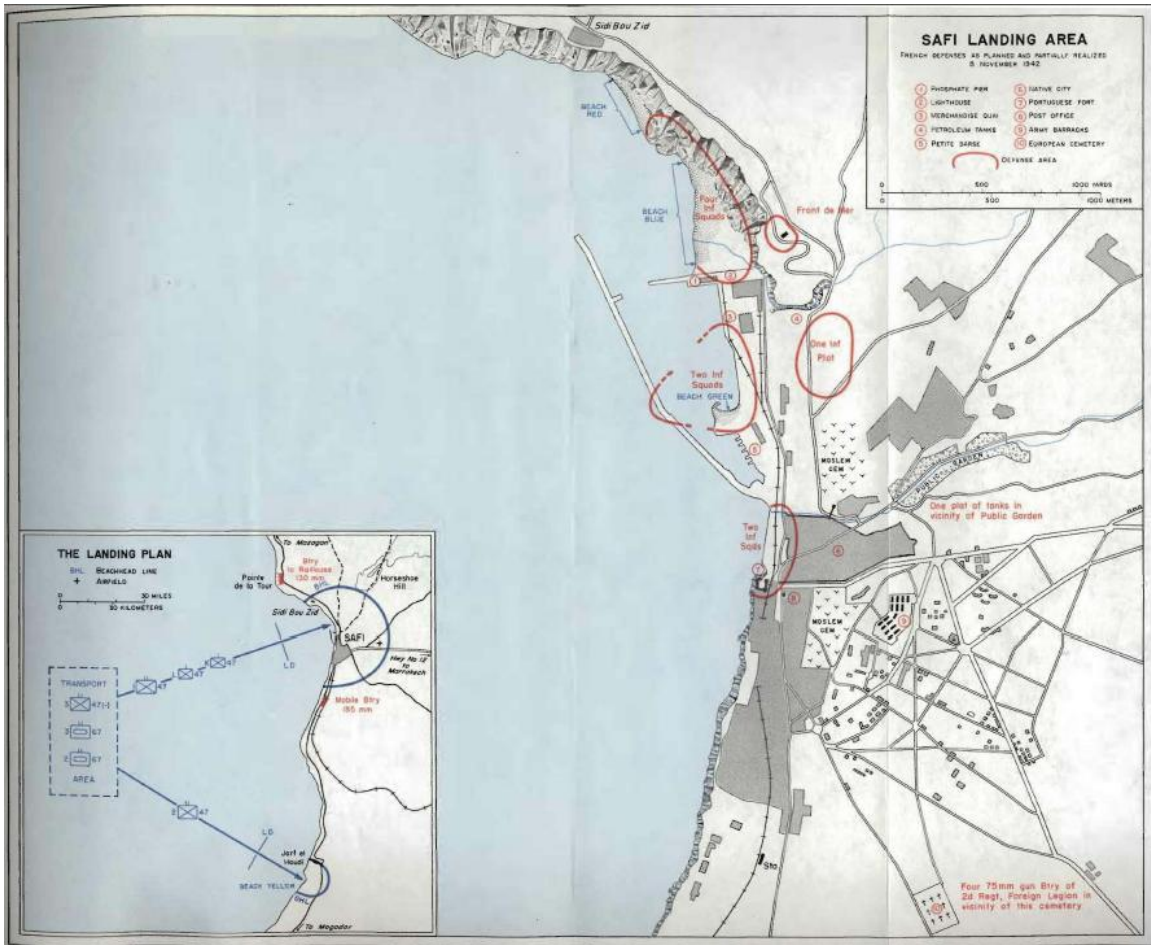


Chart 9: Port of Safi. *Barb* served as beacon submarine, and launched scouts in support of landing operations. Source: U.S. Army in World War II.<sup>158</sup>

<sup>158</sup> Ibid., MAP II.

## USS *Narwhal* & USS *Nautilus* Landings on Attu

On Tuesday, May 11, 1943, the U.S. Army Infantry commenced its first-ever amphibious landing on an island. Relative to the number of troops engaged, it was one of the most costly American battles in the Pacific.<sup>159</sup> Other than the defense of Pearl Harbor, reclaiming the Aleutian Islands was also the only time service members fought on American soil during World War II. Operation Landcrab, which included twenty-seven ships, an Army division and the associated Navy and Army Air Corps aircraft, was launched at 0300 when the submarines *Narwhal* (SS 167) and *Nautilus* (SS 168) used a new technique to disembarked 214 men of the Provisional Scout Battalion of the 7<sup>th</sup> Infantry Division.<sup>160</sup> With the men and equipment in rubber boats on their aft decks, the submarines submerged, leaving them to paddle ashore.<sup>161</sup>

In June of 1942, Japan captured the Aleutian islands of Attu and Kiska in conjunction with their plan for Midway. Operation Landcrab was a joint operation to take back the Attu from the Japanese, and preceded a subsequent operation to reclaim Kiska. As with the Africa landings, the submarine involvement in this operation was a relatively small aspect of the total plan, but their successful execution contributed to the American success in clearing the Aleutian Islands of Japanese invaders. By tracing the historical context, the planning of the operation, and the execution, this chapter demonstrates the value added by the novel use of submarines to the

---

<sup>159</sup> Multiple sources, including Garfield's *The Thousand-Mile War*, claim that Attu was second only to Iwo Jima as the most costly American battle in the Pacific. Enemy action and severe climate killed or wounded over 20% of the Americans who fought on Attu. The Attu operation killed a higher percentage of Americans than Iwo Jima, but the casualty rate (including killed and wounded) was higher on Iwo Jima. The battle on Peleliu had a higher percentage of Americans killed than both Iwo Jima and Attu, and a total casualty rate that was between the two.

<sup>160</sup> Sources differ on the time references used because Alaska spans four time zones and the Battle of Midway was fought across the International Date line. The Japanese were using East Longitude date and Tokyo time (Z-9). The U.S. was on West Longitude date, but time was either based on the location of Midway and Attu (Z+12), or the Alaska Headquarters (Z+10). For consistency, this monograph uses West Longitude date and Whiskey time (Z+12).

<sup>161</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 207-208.

execution of Operation Landcrab, and will conclude with lessons learned from the submarines' participation.

After Japan's initial success at Pearl Harbor, the Japanese military disagreed about what course of action to pursue. Ultimately, Japan decided to attempt to seize Midway Island with a simultaneous attack on the Aleutian Islands. The attack on Midway would be their main effort, with the goal of drawing the U.S. into a decisive battle. The Aleutian attack would serve as a diversion of American resources, while also closing off the opportunity for the U.S. to conduct offensives on northern Japan from Alaska.<sup>162</sup> The plan would simultaneously advance Japan's defensive perimeter to the east, to include Midway and the Aleutian Islands. Colonel Doolittle's raid on April 18 added a sense of urgency for the Japanese military commanders, which helped to put an end to further debate.<sup>163</sup> Even though the Midway attack became a disaster for Japan, they succeeded in capturing the undefended western Aleutians.

Because of the dynamics involved, it is important to understand the command relationships for the American forces associated with the Aleutian campaign. Admiral Nimitz was the commander of the Pacific Ocean Area (POA), including all allied forces in the theater. He divided the POA into the South, Central and North Pacific Areas. The Aleutians fell within the North Pacific Area, where the navy operated a Northern Task Force and the army maintained the Alaska Defense Command. The Northern Task force and the Alaska Defense Command attempted to work together to plan and conduct operations in Alaska. On the continental United States, the Fourth Army was a training army that was also responsible for defense of the Western States. In its role as a training army, the Fourth Army was also the force provider to other

---

<sup>162</sup> Parshall and Tully, *Shattered Sword: The Untold Story of the Battle of Midway*, 37.

<sup>163</sup> Mitsuo Fuchida and Masatake Okumiya, *Midway, the Battle that Doomed Japan, the Japanese Navy's Story*, ed. Clarke K. Kawakami and Roger Pineau (Annapolis: Naval Institute Press, 1995), 72.

operations in the war. When allocating forces to reclaim Attu and Kiska, the Fourth Army assigned the 7<sup>th</sup> Motorized Division to the operations.<sup>164</sup>

Allied code breaking efforts had given Admiral Nimitz advanced warning of the pending attacks on Midway and the Aleutians. He correctly assessed that the Battle of Midway would be a duel between aircraft carriers that were not in sight of one another. As such, he sent his two remaining carriers to Midway, and dispatched five cruisers and four destroyers to defend Alaska. Japan began the offensive on June 3, 1942 with the bombing of Dutch Harbor, Alaska. The forces at Dutch Harbor defended themselves for two days while the Northern Pacific forces searched for the Japanese carriers *Ryujo* and *Junyo*, and the American forces at Midway defeated Admiral Yamamoto's main force. Dutch Harbor was saved, but the western Aleutians were about to be lost (See chart 10).<sup>165</sup>

Through fog and foul weather, Rear Admiral Robert A. Theobald's Northern Force continued to search for the Japanese ships, and remained unaware of the operation that was unfolding. Before dawn on Sunday, June 7, Japan landed 2,500 troops on the beaches of Kiska and Attu. Neither island had a large population or a large military presence. Kiska had ten sailors stationed as weather observers in three tiny cabins, while Attu had a village of thirty-nine Aleut Indians, a white teacher and his wife. Fifteen of the Aleuts were children. Gunfire took out the radio on Kiska before the sailors could make a report of the landing. The Japanese captured two of the men immediately, seven more surrendered over the next few days, and one remained at large for fifty days before surrendering.<sup>166</sup>

---

<sup>164</sup> Morison, *History of United States Naval Operations in World War II, Aleutians, Gilberts and Marshalls*.

<sup>165</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 12-13, 24, 42-43.

<sup>166</sup> *Ibid.*, 79-80.

A few hours after the landing on Kiska, the Japanese landed 1,200 troops in Attu's Massacre Bay. When the troops made it to the village, the teacher, Foster Jones, attempted to run to the hills to hide, but the Japanese shot him, making him the only American fatality in the capturing of these two remote islands. The Japanese soldiers captured the remaining forty people, and the western Aleutians were in Imperial hands.<sup>167</sup>

Admiral Theobald and the commander of the Army's Alaska Defense Command, Brigadier General Simon B. Buckner, had endured a tense relationship since before the Japanese attack on Alaska. Their dysfunctional working relationship continued as they attempted to keep pressure on the Japanese with a naval blockade, and bombardment from the air and sea. By December, however, the basic strategic picture had not changed. In January of 1943, Admiral Chester Nimitz relieved Admiral Theobald with Rear Admiral Thomas Kincaid. This change not only improved the cooperation between the Navy and Army in Alaska, but also changed the outlook for operations in the Aleutians.<sup>168</sup>

Less than twenty-four hours after his arrival, Admiral Kincaid ordered a full scale landing on Amchitka, and bomber strikes on Attu and Kiska to keep the enemy pinned down there. The bombers sank two Japanese ships full of soldiers and supplies near the two islands. This set the tone of change. Amchitka would be the first step towards clearing the enemy out of the Aleutians. Upon taking stock of the Aleutian situation, Admiral Kincaid proposed a plan to invade Kiska in order to reclaim the western Aleutians. The Army assigned the 7<sup>th</sup> Motorized Division under Major General Albert E. Brown to the task. The "hoglass division" had been training in California for operations against German Field Marshal Erwin Rommel's forces in North Africa, and their trucks, tanks and tactics would not be useful in the Aleutians. Of the

---

<sup>167</sup> Ibid., 81.

<sup>168</sup> Ibid., 157, 191.

available units, however, they were the best prepared for combat. No Army unit had experience with amphibious operations against islands, and any soldiers that were prepared for the alien Aleutian environment were scattered throughout various Alaskan posts and lacked the training and command and control benefits that a formed division offers.<sup>169</sup>

Early plans to recapture Kiska and Attu focused on Kiska first. It was 200 miles closer to American forces than Attu, and was more important. Intelligence reports indicated the enemy strength was greater on Kiska than on Attu. Based on limited available shipping, Admiral Kinkaid proposed a change in plans to hit Attu first.<sup>170</sup> He predicted that by bypassing Kiska, occupation of Attu would leave the closer island cut off from Japanese supply and reinforcement. Lieutenant General John L. DeWitt, Commanding General of the 4<sup>th</sup> Army sold the plan to the Joint Chiefs with an estimated three days to success. General Brown's assessment was that the terrain alone would keep his men from crossing the island in less than a week. General DeWitt told Kinkaid and Buckner that he did not care for Brown and his pessimism, but could not have him relieved of command without cause. The early negative perception of Brown would manifest itself during the operation, when Admiral Kinkaid believed that General Brown was ineffective, and Generals DeWitt and Buckner convinced him to have Brigadier General Eugene M. Landrum relieve General Brown after only five days of fighting.<sup>171</sup>

The operation on Attu was codenamed Landcrab. Planners prepared five possible plans for the operation. Most of the plans involved one or two massed landings on the northeastern beaches. Four of the five plans called for a small unit of scouts to land in advance of the main force on the opposite side of the island with the mission of supporting the primary landings by

---

<sup>169</sup> Ibid., 165, 193-194.

<sup>170</sup> Dashiell Hammett, *The Capture of Attu: Tales of World War II in Alaska, as Told by the Men Who Fought there* (Edmonds, WA: Alaska Northwest Pub., 1984), 12.

<sup>171</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 195-197.

seizing a covering position along high ground north east of the main beach in the west arm of Holtz Bay.<sup>172</sup> General Brown favored plan “E,” which had the scouts land on Scarlet beach. The responsible commanders were not able to decide between the various plans until just before D-day.<sup>173</sup>

Believing that success might hinge on the small team, General Brown selected one of his battalion commanders, Captain William H. Willoughby, to lead this provisional scout battalion. He also empowered Willoughby to raid every platoon in the division to get the best available soldiers. Captain Willoughby selected his 410 men based on specific skills and tough physical condition. With the limited time they had, the scouts trained hard. They also equipped themselves with the highest per-man firepower of any battalion in the Allied armies.<sup>174</sup> Willoughby’s recruiting and training techniques, although abbreviated by urgency, were similar to those Carlson used in forging his raiders.

Pacific Fleet Amphibious Force planners selected submarines as the means to get Willoughby’s Scouts ashore in advance of the main landings without giving up the element of surprise. Of his 410 officers and men, 214 would go ashore from the submarines, with the remainder to land in a second wave from the destroyer, USS *Kane* (DD-235).<sup>175</sup> There were six to ten submarines already assigned to the Aleutian area throughout 1942 and into 1943, but they were small S-class boats that were at least twenty years old and built with World War I designs.

---

<sup>172</sup> F. W. Rockwell, *Commander Task Force Fifty-One, Operation Plan no. 3-43* (San Diego: United States Pacific Fleet Amphibious Force, 1943), 212.

<sup>173</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 199.

<sup>174</sup> *Ibid.*, 199.

<sup>175</sup> *Ibid.*, 201.

Seven fleet boats also made sorties into Aleutian waters. While they were considerably larger than the S-boats, they were still insufficient for the task.<sup>176</sup>

*Nautilus* and *Narwhal* were the logical choice for this operation. With the loss of *Argonaut* (SM 1) in January, these were the two largest submarines in the fleet.<sup>177</sup> While considerably smaller than the surface transports involved in the operation, they were the largest available stealth platforms for landing an advance party.<sup>178</sup> After two successful war patrols during which *Narwhal* sank six Japanese ships and survived a prolonged depth charge attack, she returned to the United States mainland for modernization. Mare Island Shipyard completed the modernization eleven days ahead of schedule, and with Lieutenant Commander F.D. Latta in command, she departed for San Diego on April 4, 1943 for a special mission.<sup>179</sup> While at the destroyer base, *Narwhal* installed 120 wood and canvas bunks for the mission. She then embarked soldiers of the 7th Scout Company, Infantry, U.S. Army for training, and they conducted exercise landings off San Diego and San Clemente.<sup>180</sup>

*Narwhal* and the scouts experimented with landing techniques during the day and at night, as neither the scouts nor the *Narwhal* had any experience with this type of operation. The technique consisted of putting the boats over the side of the submarine, then loading the troops and gear in. The method worked, but it was time consuming, potentially loud, and it would be

---

<sup>176</sup> Edward C. Whitman, "The Forgotten Theater, U.S. Submarine Operations in the Aleutians in World War II," *Under Sea Warfare*, no. 18. [http://www.navy.mil/navydata/cno/n87/usw/issue\\_18/forgotten.htm](http://www.navy.mil/navydata/cno/n87/usw/issue_18/forgotten.htm) (accessed 21 April 2010).

<sup>177</sup> *Argonaut* was lost with all hands on January 10, 1943 while attacking a convoy near Gasmata in the Solomons campaign. An American aircraft witnessed her final moments when Japanese destroyers brought her to the surface with depth charges, and then sunk her with gunfire. Chester W. Nimitz, *Solomon Island Campaign, from 6 January 1943 through Vila Bombardment, 23-24 January 1943* (Pearl Harbor: U.S. Pacific Fleet, 1943).

<sup>178</sup> Naval History Division (OP 0909), *History of Ships Named NAUTILUS*, 2.

<sup>179</sup> Office of Naval Records and History, *History of USS NARWHAL (SS 167)*, ed. Ship's Histories Section (Washington: Navy Department, 1951), 5.

<sup>180</sup> Charles A. Lockwood, *U.S.S. NARWHAL (SS167) - Report of Fourth War Patrol*, COMSUBPAC PATROL REPORT NO. 188 ed. (San Francisco: COMSUBPAC, 1943), A1.



very dangerous in rough surf. The ten-man rubber boats proved to be very effective. They were not only stealthy in close to shore, but were also satisfactory with respect to inflating, launching, handling and riding on the surf. The navy still had not resolved the technical problems with boat motors that Carlson's Raiders experienced, and Willoughby's Scouts lacked training on their proper use. Captain Willoughby decided that instead of relying on the inconsistent motors, his men would paddle ashore.<sup>181</sup>

On April 18, *Narwhal* departed San Diego for Dutch Harbor, Alaska with 202 men aboard, including 105 soldiers from Willoughby's forces, and ninety-seven crewmembers.<sup>182</sup> Lieutenant Commander Latta described the accommodation of 105 extra passengers as "less uncomfortable than anticipated," but the additional personnel posed many challenges. Soldiers in the submarines and on the five surface transports all endured cramped conditions. They slept in shifts, and there was not even sufficient room for them to walk the ship and break in their new boots. In addition to the obvious lack of space, however, the submarines faced additional challenges with sleeping accommodations, air, sanitation, ballast, and meals.<sup>183</sup>

In addition to the temporarily installed bunks, Lieutenant Commander Latta also gave up his stateroom to Captain Willoughby and the army medic by moving a rack to the conning tower. Another army officer made use of the additional rack in the executive officer's stateroom, and the remaining army officers had to hot bunk like their men.<sup>184</sup> More significant than the sleeping space, the troops and crew lacked space for activities other than sleeping.

---

<sup>181</sup> W. H. Willoughby, *Report of Composite Battalion (7th Scout Company and 7th Recon. Trp) (Attu Island, 1943)*, 1.

<sup>182</sup> Office of Naval Records and History, *History of USS NARWHAL (SS 167)*, 5.

<sup>183</sup> Lockwood, *U.S.S. NARWHAL (SS167) - Report of Fourth War Patrol*, 14.

<sup>184</sup> Hot bunking is the practice of sleeping in shifts when the number of racks (beds) on board is less than the number of people.

Due to air consumption and the lack of space, exercise below decks was out of the question, but the extra bunks did not even afford any room for lower impact activities such as weapons cleaning, card playing or storytelling. Soldiers learned not to take their air for granted. During long dives, carbon dioxide would reach up to 4%, and oxygen would get so low that it was impossible to light cigarettes. In these conditions, walking through the boat was comparable to running a 100 yard dash because of how winded it would make people feel. By bleeding oxygen from storage banks, employing carbon dioxide absorbent, minimizing crew activity and extinguishing the smoking lamp, the submarine was able to stay safely submerged when necessary.<sup>185</sup> Further complicating matters, aft sanitary tanks would fill up within four hours of submerging from use of the toilets, which meant that men would have to go forward to use the few remaining head facilities there.<sup>186</sup> Their constant use made it hard to keep the facilities clean, and the additional movement of personnel forward and aft affected the trim of the ship.<sup>187</sup>

While the soldiers were completely satisfied with the submarine food, feeding more than twice the normal crew also presented challenges with the limited galley facilities and dining spaces. On average, the soldiers consumed three times as much food per person than the sailors. Army cooks assisted the submarine cooks, and extended meal hours helped mitigate this challenge. On the surface, men went through the crew's mess in cafeteria style in about an hour. When submerged, however, the additional movement of personnel during meal hours affected the ship's trim. Limiting movement to fifteen men at a time reduced this affect on the boat's angle, but also doubled mealtime.<sup>188</sup>

---

<sup>185</sup> Ibid., 14.

<sup>186</sup> On a naval vessel, a head is a toilet or the bathroom facilities. Similarly, the army refers to them as latrines.

<sup>187</sup> Charles A. Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, ed. Pacific Fleet Submarine Force (San Francisco: COMSUBPAC, 1943), 14.

<sup>188</sup> Ibid., 14, 16.

*Nautilus* was a veteran of four war patrols, where her accomplishments included sinking eight ships and attacking eighteen others. In her first war patrol, she had been part of the submarine screen in anticipation of the Midway attack. In this capacity, she survived numerous depth charge attacks, and conducted a successful torpedo attack against the already damaged carrier *Soryu*. Her second war patrol included the ambitious raid of Makin Island, where *Nautilus* and *Argonaut* transported the marines of Carlson's Raiders to and from the fight. (See the first case study of this monograph.) The third war patrol was in Japanese waters and the fourth was in the waters of the Solomon Islands. Both were successful.<sup>189</sup> Commander Bill Brockman commanded the *Nautilus* for all of these patrols.<sup>190</sup>

Her most recent operations before the Aleutian assignment included training with marines to improve amphibious techniques over those used in the Makin raid. She also conducted exercises as a refueling platform for seaplanes. The marine exercises and the experience at Makin Atoll provided valuable understanding for the conduct of this operation. Without modification for additional berthing, she departed Pearl Harbor for Dutch Harbor on April 20 with only her crew embarked. The transition from tropical climate to the arctic contributed to higher than average sickness amongst the crew. She met her detachment of soldiers in Alaska.<sup>191</sup>

Both submarines arrived in Dutch Harbor on April 27. Willoughby's men spent the next day preparing equipment and conducting training with the submarines. This afforded them the opportunity to spend some time on land.<sup>192</sup> By April 29, both submarines were ready to conduct disembarkation and landing drills with the soldiers. Even though the *Narwhal* had conducted

---

<sup>189</sup> Ibid., 6.

<sup>190</sup> Office of Strategic Planning, COMSUBPAC, *Skipper List, Results of U.S. Submarine War Patrols Listed Alphabetically by Name of Commanding Officer* (San Francisco, CA: Commander Submarine Force Pacific Fleet, 1945), 8.

<sup>191</sup> Naval History Division (OP 0909), *History of Ships Named NAUTILUS*, 7.

<sup>192</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 201.

training off California earlier in the month, the commanding officer of the *Narwhal* observed daylight drills of disembarking soldiers from *Nautilus* in order to take advantage of that crew's experience. Once satisfied, he resumed similar training on his own ship. The day's training concluded with a night landing drill with excellent results.<sup>193</sup>

*Nautilus*, with the experience from the Makin raid, and other training exercises with raiders, completely revised the method of disembarking the boats that *Narwhal* and the scouts had trained to do. Instead of sending the boats over the side, loading them with gear and personnel, and then shoving off, they practiced loading the boats on the aft deck of the submarines, and then have the submarines partially submerge, leaving the boats afloat. This new technique cut the time of debarking in half, and was safer and quieter than the other method.<sup>194</sup>

The next day, both submarines continued to drill with the scouts on inflating boats and disembarking. By 2000 on April 30, *Narwhal* departed for Attu, while *Nautilus* remained one more day to stow for sea and afford the scouts some exercise ashore.<sup>195</sup> They departed with 109 soldiers twenty-four hours after the first submarine. For the Makin raid, *Nautilus* had temporary racks installed similar to those used by *Narwhal*. She did not install extra racks for this operation, which turned out to be preferable to both the soldiers and the submarine crew. They accomplished their berthing scheme by rigging each vacant torpedo storage to accommodate three people (thirty-six total). This decreased the number of crewmembers that hot bunked to twenty-nine. The remainder of soldiers that were off watch slept on mattresses on the torpedo room decks.<sup>196</sup>

May 1 was an uncomfortable day at sea for the scouts and submariners alike. In addition to the cramped quarters, the seas were heavy, which slowed the submarines' progress by five to

---

<sup>193</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A2.

<sup>194</sup> Willoughby, *Report of Composite Battalion (7th Scout Company and 7th Recon. Trp)*, 1.

<sup>195</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A3.

<sup>196</sup> *Ibid.*, 13-14.

six knots less than the ordered speed. Waves crashed over the bridges of the submarines. One column of water down *Narwhal*'s bridge trunk lasted about two minutes, and flooded the motor to the number-two periscope. She also frequently took on water through the air induction pipe, which made conditions for the throttle man in the engine room nearly as bad as those of bridge lookouts on calmer days.<sup>197</sup>

Fortunately, the seas calmed by May 2. *Nautilus* afforded her passengers one half hour topside for exercise on May 2 and 3.<sup>198</sup> *Narwhal* used the calmer seas to pick up speed and make up for lost time. Arriving off the coast of Attu on May 4, *Narwhal* commenced photographic reconnaissance of the landing beaches, beginning with Scarlet Beach in Austin Cove, which they had just been informed would become the landing beach for the scouts.<sup>199</sup> *Nautilus* had her opportunity for periscope reconnaissance of the landing beach on May 5.<sup>200</sup>

The rest of the division arrived at Cold Bay on the last day of April, but unlike Willoughby's Scouts, they did not have the opportunity to go ashore, as there were no facilities. They remained canned in port until May 3, when the commander of the landing force of twenty-seven ships and 11,000 troops, Rear Admiral Francis W. Rockwell ordered them to proceed to Attu. The surface transports encountered their roughest seas on May 4, while on the south side of the chain. They cut to the north of the chain through Amukta pass, and made a wide circle north of Kiska in order to avoid detection. They arrived at their launch point, 100 miles north of Attu on May 6 (See chart 11).<sup>201</sup>

---

<sup>197</sup> Lockwood, *U.S.S. NARWHAL (SS167) - Report of Fourth War Patrol*, 6, 14.

<sup>198</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A3.

<sup>199</sup> Lockwood, *U.S.S. NARWHAL (SS167) - Report of Fourth War Patrol*, A2.

<sup>200</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A3.

<sup>201</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 201-205.

For the next several days, both submarines repeated a routine of approaching their rendezvous points submerged, surfacing, and finding out that the Task Force commander delayed the landings again on account of severe weather. *Narwhal* used this extra time to conduct further reconnaissance of other beaches on the southeast of Attu.<sup>202</sup> *Nautilus* used it to allow the army officers to get additional looks at Scarlet Beach.<sup>203</sup> Cooped up in the crowded submarine for days, the soldiers suffered terribly from seasickness. Stan Hasrato, one of the scouts, wrote, —We all wondered how in the world we could fight when we had been vomiting for three weeks. We were damned weak and every man had lost an average of ten pounds.”<sup>204</sup>

On May 10, the submarines received the landing order. After seventeen hours submerged, they made their way to their rendezvous positions and surfaced. By midnight, the submarines were in communication with each other and proceeded towards the beach while the scouts enjoyed their last submarine meal, a big steak dinner.<sup>205</sup> By 0200, the hatches were open and the scouts went topside in the twenty-seven degree Fahrenheit air to prepare to disembark.<sup>206</sup> Just over an hour later, the submarines had submerged, allowing the scouts to float off their decks and begin paddling to the beach. First Sergeant Fenton Hamlin of the 7<sup>th</sup> Scout Company described the bitter cold conditions. —We were about 4,000 yards off Attu as the black water gurgled around the submarine and the rubber boats floated free. The men began to paddle and the little boats moved silently through the foggy night toward Scarlet Beach.”<sup>207</sup>

---

<sup>202</sup> Lockwood, *U.S.S. NARWHAL (SS167) - Report of Fourth War Patrol*, A3.

<sup>203</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A4.

<sup>204</sup> Goldstein and Dillon, *The Williwaw War: The Arkansas National Guard in the Aleutians in World War II*, 283.

<sup>205</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A5.

<sup>206</sup> Goldstein and Dillon, *The Williwaw War: The Arkansas National Guard in the Aleutians in World War II*, 284.

<sup>207</sup> Hammett, *The Capture of Attu: Tales of World War II in Alaska, as Told by the Men Who Fought there*, 38.

*Narwhal* began to maneuver out of the area, en route to Dutch Harbor. *Nautilus* remained in the area to monitor beach activity while moving to the west to allow *Kane* to position for her landing of the remaining members of the composite battalion. Commander Brockman described the scout activity: “The 7<sup>th</sup> Scouts went ashore with a will. All they wanted by that time was fresh air, plenty of it, at whatever the cost.” After reporting the success of the landing to the task force commander, *Nautilus* went deep and opened range from the island. When they surfaced again later that night, they received their order to return to Dutch Harbor.<sup>208</sup>

Soon after landing, American aircraft from the escort carrier USS *Nassau* (CVE 16) saw the rubber boats on Scarlet Beach and assumed they belonged to the Japanese. The plane strafed the boats, which eliminated any option for Willoughby’s Scouts to withdraw by sea if things were to go poorly. Three men that were guarding the boats barely escaped with their lives.<sup>209</sup> If this soured the scouts’ views of “supporting” aviation, a partially successful airdrop of food furthered their frustration. The airdropped supplies were their only supplement to the one box of K-rations per man that the scouts carried, but most of the supplies landed out of reach of the soldiers.<sup>210</sup>

Operation Landcrab required the commitment of over 100,000 men from all of the services. 11,000 soldiers landed on Attu, and of this number, Captain Willoughby’s 410 troops made a significant contribution to the success of the mission. They landed on Scarlet Beach without resistance, and were able to conduct a surprise attack on the enemy’s rear, keep the enemy contained in the west arm, and force the enemy to fight to the west.<sup>211</sup> By keeping the Japanese facing west, Willoughby’s soldiers kept them from focusing their efforts on the northern

---

<sup>208</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, A6-7.

<sup>209</sup> Goldstein and Dillon, *The Williwaw War: The Arkansas National Guard in the Aleutians in World War II*, 284.

<sup>210</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 351.

<sup>211</sup> Willoughby, *Report of Composite Battalion (7th Scout Company and 7th Recon. Trp)*, 1-2.

landing force. Three days into the battle, a Japanese medical officer described Willoughby's fighting in his diary, and assessed that the enemy strength must be a division."<sup>212</sup>

Other accomplishments of his provisional battalion include contributing to forcing Japanese soldiers to retreat from a large supply of guns, ammunition and food.<sup>213</sup> Four days into the battle, they also helped Colonel Frank Culin's regiment capture Holtz Valley, which permitted full use of the harbor. After eight days of fighting, Captain Willoughby assembled a volunteer patrol that succeeded in rendezvousing with Colonel Zimmerman's Southern Force, which completed the encirclement of the Japanese forces.<sup>214</sup> The men of his composite battalion fought extremely aggressively, even through severe cold and four days of continuous fighting without food.<sup>215</sup>

By May 22, Captain Willoughby filed a report that included an assessment of his unit's casualties. One officer and ten enlisted men were dead. Thirteen men suffered combat wounds that were not very severe. Approximately 90% of his scout company and 75% of his reconnaissance troop suffered severe exposure.<sup>216</sup> On May 29, Willoughby was in a forward observation post with fifteen others. A Japanese attack wounded Captain Willoughby with a machine gun round that cut across his face, and a grenade that left him with some shrapnel. Out of the sixteen at the post, only he and four others survived this attack.<sup>217</sup>

---

<sup>212</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 217, 226.

<sup>213</sup> Hammett, *The Capture of Attu: Tales of World War II in Alaska, as Told by the Men Who Fought there*, 40.

<sup>214</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 233, 237.

<sup>215</sup> Willoughby, *Report of Composite Battalion (7th Scout Company and 7th Recon. Trp)*, 4.

<sup>216</sup> *Ibid.*, 3.

<sup>217</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 253-254.



After eighteen days of fighting, the Japanese were defeated, and mopping up operations commenced. Imperial Headquarters conceded loss of Attu on 31 May.<sup>218</sup> Although the 1942 Doolittle raid on Japan had shocked the Japanese people, the Imperial leadership downplayed any setbacks their forces encountered in the following year. With their announcement about losing Attu, Tokyo revealed to her people that the war was not going as well as expected.<sup>219</sup>

While the battle of Attu did not meet General DeWitt's promised three day timeline, it was successful in removing Japanese forces from the island. American burial parties counted 2,351 Japanese bodies, and presumed that the Japanese buried several hundred more in the hills during the battle. Americans only captured twenty-eight Japanese prisoners.<sup>220</sup> Of the 11,000 Allied soldiers that landed on Attu, 550 died, and combat and the elements severely wounded several thousand more. By July 10, the Allies launched their first planes from Attu against the Japanese Kurile Islands at Paramushira.<sup>221</sup>

American attention turned to a plan to retake Kiska. On July 29, as Admiral Kincaid had predicted, Japan evacuated the island of its 5,000 soldiers without detection. Not believing a complete evacuation was possible, American forces invaded with nearly 35,000 troops on August 15, and they searched the island for eight days. Ninety-nine Allied soldiers were killed; twenty-four by fratricide, four by Japanese booby traps, and seventy-one when the destroyer, USS *Abner Read* (DD-526) struck a mine.<sup>222</sup>

The submarine participation in Landcrab demonstrated or reaffirmed some important lessons for both the submarine force and amphibious forces. This operation validated the efficacy

---

<sup>218</sup> Ibid., 258.

<sup>219</sup> Hays, *Alaska's Hidden Wars: Secret Campaigns on the North Pacific Rim*, 24.

<sup>220</sup> Garfield, *The Thousand-Mile War: World War II in Alaska and the Aleutians*, 256-258.

<sup>221</sup> Hammett, *The Capture of Attu: Tales of World War II in Alaska, as Told by the Men Who Fought there*, 6.

<sup>222</sup> Office of Naval Intelligence., *The Aleutians Campaign, June 1942 - August 1943.*, 102-105.

of the launching techniques practiced by the *Nautilus* and the 3<sup>rd</sup> and 4<sup>th</sup> Marine Raider Battalions at Espiritu Santo during training exercises. Willoughby's Scouts also demonstrated that if amphibious forces use rubber boat motors in the future, a greater investment in engine reliability and training in operation are required, which reinforced lessons from the Makin raid. If amphibious forces chose not to use motors, submarines should get closer than 4,000 yards from shore if possible, to prevent excessive fatigue of the landing party, which reinforced a lesson from the Torch landing at Safi.<sup>223</sup> In order to facilitate submarines getting closer to shore, Commander Brockman suggests the option of landing individuals with infrared navigation aids prior to the landing. This suggestion demonstrates the application of lessons from the Torch operation to operations in the Pacific. He also recommends that the senior land component representative be on the submarine with the senior submarine commanding officer to facilitate coordination.<sup>224</sup>

By having two similarly built submarines with different berthing arrangements, the soldiers and submariners were able to arrive at a common conclusion as to the optimum configuration. The experience helped the submarines to determine appropriate plans for feeding and required quantities for food. It also helped the submarines better plan for atmosphere controls, including oxygen supply, carbon dioxide absorbent, and air conditioning to accommodate the increased population.<sup>225</sup>

In an operation filled with disagreements between and within the different services, the teamwork between the scouts and the submariners demonstrated a positive example of cooperation. Commander Brockman reported that the army scouts responded to their training better than any other group they had ever had onboard. He even concluded his patrol report with the following statement: —It was a pleasure to have the Army Scouts on board. They cooperated in

---

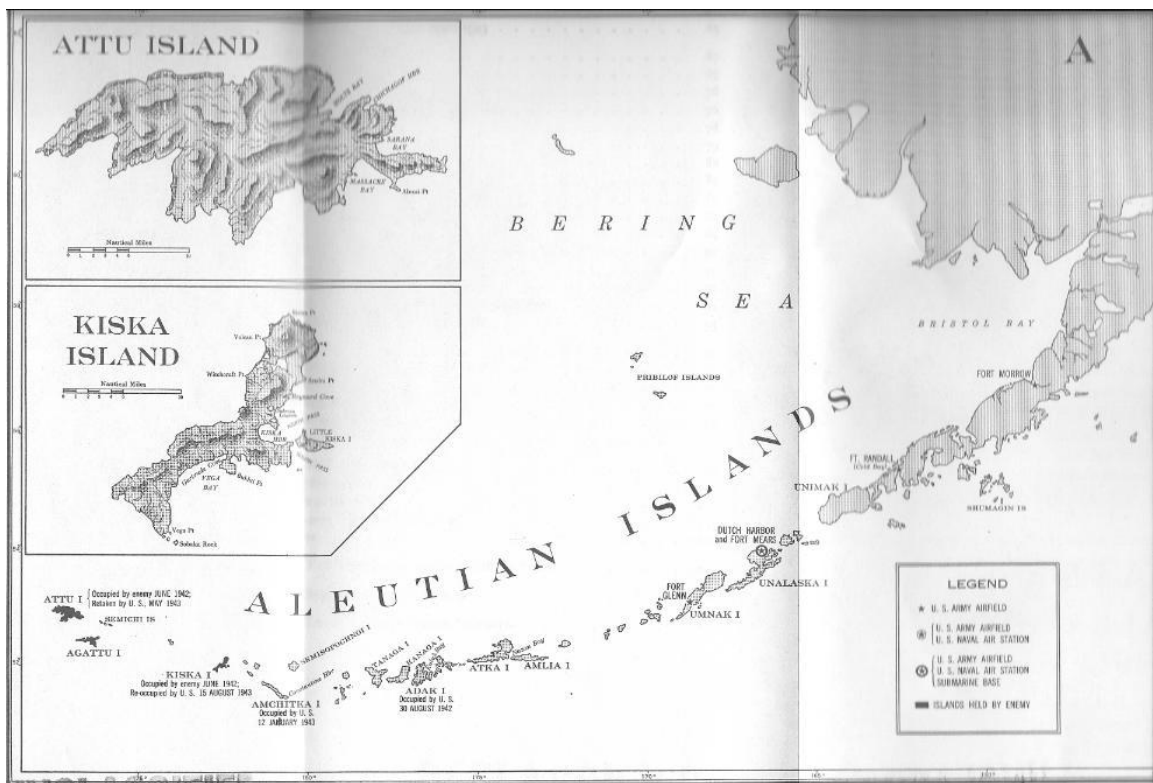
<sup>223</sup> Willoughby, *Report of Composite Battalion (7th Scout Company and 7th Recon. Trp)*, 1.

<sup>224</sup> Lockwood, *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol*, 14-15.

<sup>225</sup> *Ibid.*, 13-14.

every way with *Nautilus* personnel. This was one time when Army and Navy coordination could not have been better.”<sup>226</sup>

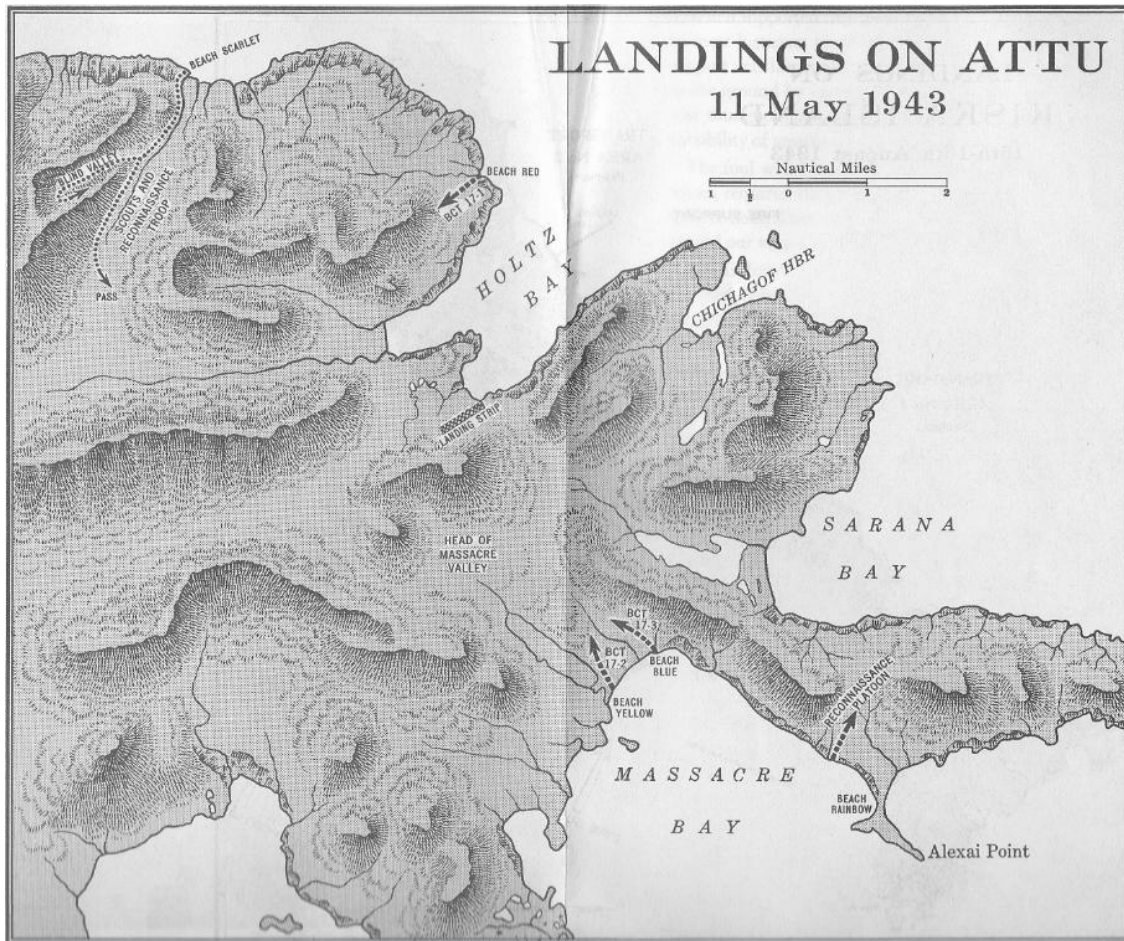
*Narwhal* and *Nautilus* were a relatively small part of this large operation, but their contribution was an important one. Planners incorporated submarines in the plan in order to provide a stealthy infiltration of specialized soldiers in advance of the main landings with improved landing techniques. They accomplished this objective with the unopposed landing by the scout battalion. The scouts also succeeded in their mission, which contributed to the elimination of Japanese forces from Attu, and subsequently from Kiska as well. The lessons learned are also valuable for incorporating into subsequent operations from submarines.



**Chart 10: Aleutian Island Chain. Japan captured Attu and Kiska Islands. Dutch Harbor is on the north side of the central portion of the chain. Source: Office of Naval Intelligence.**<sup>227</sup>

<sup>226</sup> Ibid., 16.

<sup>227</sup> Office of Naval Intelligence., *The Aleutians Campaign, June 1942 - August 1943.*, faces p1.



**Chart 11: Attu Island Detail. The Provisional Scout Battalion members launched from *Narwhal* and *Nautilus* landed on “Beach Scarlet” to the North. They were the first to land. Source: Office of Naval Intelligence.<sup>228</sup>**

<sup>228</sup> Ibid., faces p92.

## Conclusion

Each of these case studies is unique in its combination of submarines, landing forces, and missions. Two of the operations involved two large submarines each, while the other involved five smaller *Gato* class submarines. The Makin raid involved landing and retrieving hundreds of marine raiders for a hit and run operation against Japan as a diversion in a theater with other operations in progress. The submarines in the Torch operation landed only five army scouts in advance of a significantly larger operation of historic proportions in order to open another front in the war on Germany. The Attu operation included landing hundreds of army scouts prior to another large landing force to reclaim lost U.S. territory. *Barb*'s landing on Karafuto was also unique with respect to these aspects of the operation. It was a lone submarine, which landed and retrieved a small landing force consisting of eight of her own sailors in order to blow up a train on one of Japan's home islands. What made this operation truly unique, however, was that *Barb*'s crew planned and executed the landing by themselves, instead of as part of a larger operational or strategic plan.

Even with these significant differences, each of the amphibious operations conducted and supported by these submarines had common issues that are useful to understand the capabilities, challenges and benefits of submarines for these kinds of missions. The lessons fall into six categories: stealth, accommodations, boat reliability, communications, operational timing, and the experience gained. In addition to these categories, navigation challenges inhibited the effectiveness of the beacon mission attempted by three of the submarines, and the launching of advance scouts by one of them in the Torch landings on Africa.

With respect to the navigation challenges, these operations all predated electronic navigation, such as Global Positioning System (GPS) and common charts that came from

standardized world surveys. In addition, the primary means of navigation included visual fixes, celestial navigation, and dead reckoning.<sup>229</sup> Radar navigation was still in its infancy. Ironically, navigation challenges were part of the reason planners included a beacon submarine concept for the Torch landings. Additional time in the area prior to the invasion, as well as establishing beacon positions relative to known points on land instead of chart coordinates could have mitigated these challenges.

The most significant capability that each of the submarines brought to these operations was stealth. The submarines' ability to remain undetected is the primary reason that they were included in their portion of the associated operations. *Argonaut* and *Nautilus* were able to bring the marine raiders undetected to a beach on Makin Atoll that the Japanese did not believe a force could land on, which afforded Carlson's men the element of surprise. For the landings on Africa and Attu, there was nothing stealthy about a large amphibious operation once the main landings had commenced, but the submarines operated stealthily ahead of the main force in order prevent advance indication of the invasion to come. In Africa, the submarines conducted reconnaissance of the landing beaches, attempted to act as navigational beacons to the main forces, and *Barb* launched army scouts in order to be an additional beacon. On Attu, like Makin, the army scouts landed undetected at an unexpected location, and like the African operation, the landing preceded the main force. Even on Karafuto, the first indication of the landing was the exploding train. When stealth is required, there is no substitute for the submarine.

Ironically, while all of the submarines remained undetected by the enemy prior to the landings, this same stealthy nature presented some risk. Their low profile likely contributed to the difficulty that landing forces had in spotting the beacon submarines during the Torch operation.

---

<sup>229</sup> Dead reckoning is a navigation technique where ships plot estimated positions at time intervals based on their last known position, their course and speed. Vessels will correct for other factors such as wind, tides and currents, if know.

Also, because submarines are hard to find, ships and aircraft have a tendency to treat all submarines as hostile until proven differently. In the Torch operation, the enemy did not present a threat as significant as the allied aircraft and ships. Narrow escapes during both the Torch landings and the landings on Attu demonstrated a need for improved prevention of mutual interference. As the invasion started, *Gunnel* found herself literally under the guns of a passing cruiser, and had to use a megaphone to identify herself. *Herring*, after sinking a French merchant, risked entanglement with Allied ships as the submarine evaded a French patrol vessel. As the submarines began their transit out of the area, American planes attacked *Gunnel* twice. As the transit continued, *Herring* and *Gunnel* saw each other, and *Gunnel* reported *Herring* as an enemy U-boat. In Operation Landcrab, American aircraft shot up the rubber boats on Attu shortly after Willoughby's Scouts landed. These events highlight the need for close coordination in both amphibious and submarine operations.

The major tradeoff in using a submarine for amphibious operations is its capacity. Of those that launched servicemen, *Barb*'s landing on Karafuto was the only one not significantly affected by this, because the men involved in the landing were part of her own crew. The Makin and Attu submarines each made modifications to accommodate the additional forces, and the result was a manageable, but very uncomfortable, voyage. In addition to berthing arrangements, the submarines also had to be creative about meal preparation and serving, and be concerned about atmosphere controls, and available toilets. Fortunately, by trying different configurations on the submarines between the Makin and Attu landings, the submarine force learned valuable lessons to optimize the submarines for transport.

Another significant issue was the reliability of boat motors. Prior to the Makin raid, the submarine crews and Carlson's Raiders recognized that the motors for the rubber boats were not reliable. Unfortunately, they were not able to resolve this important problem prior to the raid, and in spite of strenuous recommendations by Evans Carlson, William Willoughby and the submarine skippers, it remained unfixed by the time of the Attu operation eight months later. Carlson's

Raiders had to adjust their plan when the motors failed, and they were not able to take advantage of propulsion to overcome the surf when they needed it most on egress. Willoughby's Scouts decided to paddle ashore rather than rely on the untrustworthy motors, and both of *Barb's* landings involved paddling the rubber boats. Submarines launched Willoughby's and Duckworth's Scouts further from their objectives than was ideal, which exhausted the men on Attu on their way in to combat, and prevented the scouts at Safi harbor from accomplishing their mission. Commander Fluckey launched his men close to shore, but put his vessel dangerously close to shoal water to do it.

Because of the various levels of coordination involved in amphibious operations, communications between landing forces and their support at sea are critically important. For the Makin raid, intermittent radio contact prevented the submarines from providing their full measure of available support. These raiders lost or damaged their radios in the surf, which could have proved catastrophic. Fortunately, one of the raiders still ashore knew how to use flashing lights to send and receive messages, and this allowed for subsequent coordinated rendezvous with the submarines. Flashing lights, while a very limited means of communications, were also effective for scouts involved in Torch, and for communications between *Barb* and her crewmembers on the Karafuto landing team. With the Torch landings, intermittent radio connectivity resulted in submarines receiving changes to tasking too late to take action on them. When coordination is required, so are positive communications. These operations show that it is important to have reliable radio systems, but simple backups can also be very effective.

Timing is another important factor at each level of these operations. Admiral Nimitz's staff planned the Makin raid to correspond with air raids on the Aleutian Islands of Attu and Kiska, and the operations on Guadalcanal in order to spread Japan's limited resources throughout the theater. The five submarines involved in the Torch operation arrived off the African coast three days prior to the main force in order to allow them to conduct coastal reconnaissance. In this case, the time was insufficient for optimal reconnaissance, but did allow the submarines to



confirm that conditions supported the landings as planned. Planners chose the time to land scouts on Attu so that they would be ashore, undetected behind the enemy lines prior to the main assault. In this case, they were not supporting the actual landing of the main force, but rather landing in a different location in order to link up with the main forces later in the operation. In each of these cases, tidal information affected the specific time in order to improve the chances for the best possible landing conditions.

At a tactical level, Carlson and Brockman, in their after action reports about the Makin raid recommended that commanders should make the decision to withdraw from a raid based on the assessment of the commander ashore, rather than a pre-arranged time. The assessment should include the status of mission accomplishment, enemy forces, and natural forces such as weather and surf. Timing of withdrawal is an important planning factor, but not accounting for these other factors can be catastrophic. On Karafuto, the sailors had a time limit, but left as soon as they placed their explosive charge. This aspect of timing was not an important factor in the other landings because in operations Torch and Landcrab, the submarines were no longer responsible for the scouts after they launched them.

The final factor in each of the lessons is the experience gained by the submarine crews and amphibious forces. The Makin raid was the first operation of its kind, so the lessons they learned were valuable for all future operations of this type. The *Nautilus* crew applied lessons from Makin to help prepare Willoughby's Scouts and *Narwhal*'s crew for Attu, and they improved their technique for launching rubber boats from submarines. Operation Torch was the first war patrol for all five of the submarines involved, and the operation built a foundation of experience that they carried forward into their remaining patrols in both the Atlantic and Pacific. This includes *Barb*'s final war patrol, where she conducted the Karafuto landings. Ensign Bell was able to take the good and bad lessons from the use of scout boats in Torch to improve the

curriculum of the Scout and Raider school, which ultimately provided the foundation for many aspects of Special Forces training that was still over the horizon.<sup>230</sup>

Each of the issues identified offer valuable insight about the benefits of using submarines to conduct and support amphibious operations, while also considering their scope of capabilities and challenges. Stealth is the most significant benefit that submarines bring to amphibious operations. Each operation that submarines participate in can provide valuable experience for the submarine crews and the forces they transport. Accommodations, especially the berthing capacity, are usually the limiting factor for how many amphibious operators submarines can deliver. It is crucial for landing forces to have reliable equipment, such as boat motors, and if they are not going to use boat motors, submarines must launch forces close enough to the beach so that they will still be combat effective when they get ashore. Good communications are critical to coordinated operations. Dependable electronic systems are most helpful, but a backup plan of simple communications such as blinker lights provides another layer of reliability. Finally, operational timing is important. Submarines must have sufficient time for adequate reconnaissance prior to an operation, and landing forces need to be able to base decisions about withdrawal on conditions ashore rather than timing alone.

While technology and procedures have improved over time, many of these lessons are still applicable for today's amphibious operations. The availability of electronic navigation may render the beacon submarine concept obsolete unless navigation satellites are compromised. Today, fast attack submarines such as the *Los Angeles* class and *Virginia* class are capable of carrying small teams of SOF personnel, and employing equipment such as Dry Deck Shelters (DDS) and Swimmer Delivery Vehicles (SDV), or the Advanced SEAL Delivery System (ASDS). These small teams are capable of a wide range of SOF missions, but in terms of

---

<sup>230</sup> Dwyer, *Scouts and Raiders: The Navy's First Special Warfare Commandos*, 189.

amphibious operations, they lend well to raids and infiltration of advance scouts as in the Karafuto raid and Torch case study. *Ohio* class SSGN's can accommodate a much larger embarked force, and have twice the capacity for DDS and SDV or ASDS systems. With this increased capability, the submarines can support larger raids such as the one in the Makin case study, or more complex amphibious operations such as the Attu case study. Even though no American submarine has deck guns anymore, with the call-for-fire capabilities of modern tomahawk cruise missiles, all three of these submarine classes have the capability to provide naval gunfire support that exceeds anything the Carlson's Raiders could have dreamed of.

These diverse case studies illustrate a range of amphibious operations conducted and supported by United States submarines in World War II. Each of them provides insight about the scope of capabilities, challenges and benefits of submarines for these kinds of missions. These lessons are valuable for understanding submarine potential in current and future amphibious aspects of naval warfare.

## BIBLIOGRAPHY

### Archival Sources

- Skipper List, Results of U.S. Submarine War Patrols Listed Alphabetically by Name of Commanding Officer.* San Francisco: SORG, Office of Strategic Planning, COMSUBSPAC, 1946.
- Commander Submarine Division FORTY-TWO. *U.S.S. ARGONAUT- Report of Second War Patrol.* San Francisco: Submarine Division Forty Two, 1942.
- . *U.S.S. NAUTILUS - Report of Second War Patrol.* San Francisco: Commander Submarine Division FORTY-TWO, 1942.
- Davidson, J. F. *U.S.S. BLACKFISH - Report of First War Patrol Period from October 19, 1942 to November 27, 1942 Area - Dakar Operation Order no. 2-42.* Scotland: U.S. Navy, 1942.
- Ellis, Earl "Pete". *Operations Plan 712-H: Advanced Base Operations in Micronesia.* Intelligence Section, Division of Operations and Training, U.S. Marine Corps, 1921.
- Gay, Hobart R. *Operation Plan no. 5-42.* Ocean View, VA: United States Atlantic Fleet Task Force Thirty Four (Western Naval Task Force), 1942.
- Hewitt, H. K. *Operation Plan no. 4-42.* Ocean View, VA: United States Atlantic Fleet Task Force Thirty Four (Western Task Force), 1942.
- Johnson, R. W. *Report of War Patrol - USS HERRING (SS233).* Scotland: U.S. Navy, 1942.
- Lockwood, Charles A. *U.S.S. NARWHAL (SS167) - Report of Fourth War Patrol.* COMSUBPAC PATROL REPORT NO. 188 ed. San Francisco: COMSUBPAC, 1943.
- . *U.S.S. NAUTILUS (SS168) - Report of Fifth War Patrol.* COMSUBPAC PATROL REPORT NO. 201. Edited by Pacific Fleet Submarine Force. San Francisco: COMSUBPAC, 1943.
- MacGregor, E. J. *First War Patrol of the U.S.S. SHAD.* Scotland: U.S. Navy, 1942.
- McCain, J. S. Jr. *U.S.S. GUNNEL First War Patrol - Report of.* Scotland: 1942.
- Naval History Division. "Argonaut." In *Dictionary of American Naval Fighting Ships*, edited by Office of Naval Operations. Vol. I. Washington: Navy Department, 1970.
- Naval History Division (OP 0909). *History of Ships Named NAUTILUS.* Edited by Ship's Histories Section. Washington: Navy Department, Office of the Chief of Naval Operations, 1962.
- Nimitz, Chester W. *Solomon Island Campaign, from 6 January 1943 through Vila Bombardment, 23-24 January 1943.* Pearl Harbor: U.S. Pacific Fleet, 1943.

- . *Solomon Islands Campaign from Fourth Battle of Savo, 30 November, 1942, to Munda Bombardment, 4-5 January, 1943*. Pearl Harbor: U.S. Pacific Fleet, 1943.
- . *Report of Action in Connection with the Bombing of Tokyo on April 18, 1942*. Pearl Harbor: United States Pacific Fleet, 1942.
- . *Solomon Island Campaign - Makin Island Diversion*. Pearl Harbor: U.S. Pacific Fleet, 1942.
- Office of Naval Intelligence. *The Aleutians Campaign, June 1942 - August 1943*. Washington: Naval Historical Center, 1993.
- Office of Naval Records and History. *History of USS NARWHAL (SS 167)*. Edited by Ship's Histories Section. Washington: Navy Department, 1951.
- . *History of USS SHAD (SS 235)*. Washington: Ship's Histories Section, 1951.
- Office of Strategic Planning, COMSUBPAC. *Skipper List, Results of U.S. Submarine War Patrols Listed Alphabetically by Name of Commanding Officer*. San Francisco, CA: Commander Submarine Force Pacific Fleet, 1945.
- Perkins, W. B. *Photographic and Special Reconnaissance of YAP - PALAU Islands*. San Francisco: USS Burrfish (SS 312), 1944.
- Rockwell, F. W. *Commander Task Force Fifty-One, Operation Plan no. 3-43*. San Diego: United States Pacific Fleet Amphibious Force, 1943.
- United States, Office of Naval Intelligence. *Miscellaneous Actions in the South Pacific; 8 August 1942-22 January 1943*. [Washington, D.C.]: Office of Naval Intelligence, U.S. Navy, 1943.
- Waterman, J. R. *U.S.S. Barb, First War Patrol - Report of*. Scotland: U.S. Navy, 1942.
- Willoughby, W. H. *Report of Composite Battalion (7th Scout Company and 7th Recon. Trp)*. Attu Island: 1943.

### Published Primary Sources, Articles and Memoirs

- Fluckey, Eugene B. *Thunder Below! the USS Barb Revolutionizes Submarine Warfare in World War II*. Urbana: University of Illinois Press, 1992.
- Fuchida, Mitsuo and Masatake Okumiya. *Midway, the Battle that Doomed Japan, the Japanese Navy's Story*. Edited by Kawakami, Clarke K. and Roger Pineau. Annapolis: Naval Institute Press, 1995.
- Hammett, Dashiell. *The Capture of Attu: Tales of World War II in Alaska, as Told by the Men Who Fought There*. Edmonds, WA: Alaska Northwest Pub., 1984.

Kuehn, John. Ed. "Interview with Evans C. Carlson." Unedited and unpublished transcript of interview, Transcript produced from "First Person Production" in concert with the Library of Congress' Honor Project.

O'Kane, Richard H. *Clear the Bridge !: The War Patrols of the U.S.S. Tang*. Chicago: Rand McNally, 1977.

Steinmetz, Everett H. "USS BARB (SS-220) and SUBRON 50." *Polaris*.  
[http://www.subvetpaul.com/SAGA\\_6\\_98.htm](http://www.subvetpaul.com/SAGA_6_98.htm) (accessed July 20, 2010).

Wood, Michael. "Masters of the Deep, Submarines from a SEAL's Perspective." *Under Sea Warfare* 3, no. 4 (Summer, 2001) (accessed 22 September 2010).

### Secondary Source Books

Alexander, Joseph H. *Edson's Raiders: The 1st Marine Raider Battalion in World War II*. Annapolis, MD: Naval Institute Press, 2000.

Atkinson, Rick. *An Army at Dawn: The War in North Africa, 1942-1943*. New York: Henry Holt and Company, 2002.

Ballendorf, Dirk Anthony and Merrill L. Bartlett. *Pete Ellis: An Amphibious Warfare Prophet, 1880-1923*. Annapolis, MD: Naval Institute Press, 1997.

Blair, Clay. *Silent Victory: The U.S. Submarine War Against Japan*. 1st ed. Philadelphia: Lippincott, 1975.

Blankfort, Michael. *The Big Yankee: The Life of Carlson of the Raiders*. Boston: Little, Brown, 1947.

Boyle, John Hunter. *China and Japan at War, 1937-1945: The Politics of Collaboration*. Stanford, CA: Stanford University Press, 1972.

Compton-Hall, Richard. *Submarine Warfare: Monsters & Midgets*. New York: Blandford Press, 1985.

Crowl, Philip A. and Edmund G. Love. *Seizure of the Gilberts and Marshalls*. United States Army in World War II. The War in the Pacific. Washington, D.C.: Office of the Chief of Military History, Dept. of the Army, 1955.

Dallek, Robert. *Franklin D. Roosevelt and American Foreign Policy, 1932-1945*. New York: Oxford University Press, 1995.

Daugherty, Leo J. *Train Wreckers and Ghost Killers: Allied Marines in the Korean War*. Marines in the Korean War Commemorative Series. Washington, DC: U.S. Marine Corps Historical Center: Supt. of Docs., U.S. G.P.O., distributor, 2003.

Dwyer, John B. *Scouts and Raiders: The Navy's First Special Warfare Commandos*. Westport, CT: Praeger, 1993.

- Garfield, Brian. *The Thousand-Mile War: World War II in Alaska and the Aleutians*. 1st ed. Garden City, NY: Doubleday, 1969.
- Goldstein, Donald M. and Katherine V. Dillon. *The Williwaw War: The Arkansas National Guard in the Aleutians in World War II*. Fayetteville: University of Arkansas Press, 1992.
- Hays, Otis. *Alaska's Hidden Wars: Secret Campaigns on the North Pacific Rim*. Fairbanks: University of Alaska Press, 2004.
- Holwitt, Joel Ira. *"Execute Against Japan" the U.S. Decision to Conduct Unrestricted Submarine Warfare*. Texas A&M University Press, 2009.
- Howe, George F. *Northwest Africa: Seizing the Initiative in the West*. United States Army in World War II. The Mediterranean Theater of Operations. Washington, D.C.: Office of the Chief of Military History, Dept. of the Army, 1957.
- Morison, Samuel Eliot. *History of United States Naval Operations in World War II, in 15 Volumes*. 1st ed. Boston: Little, Brown, 1984.
- . *History of United States Naval Operations in World War II, Operations in North African Waters*. 1st ed. Vol. II. Boston: Little, Brown, 1984.
- . *History of United States Naval Operations in World War II, Sicily-Salerno-Anzio*. 1st ed. Vol. IX. Boston: Little, Brown, 1952.
- . *History of United States Naval Operations in World War II, Aleutians, Gilberts and Marshalls*. 1st ed. Vol. VII. Boston: Little, Brown, 1951.
- . *History of United States Naval Operations in World War II, Coral Sea, Midway and Submarine Actions*. 1st ed. Vol. IV. Boston: Little, Brown, 1949.
- Parshall, Jonathan and Anthony Tully. *Shattered Sword: The Untold Story of the Battle of Midway*. Washington, D.C.: Potomac Books, 2005.
- Roscoe, Theodore, R. G. Voge, and United States. Bureau of Naval Personnel. *United States Submarine Operations in World War II*. Annapolis: United States Naval Institute, 1949.
- Smith, George W. *Carlson's Raid: The Daring Marine Assault on Makin*. Novato, CA: Presidio Press, 2001.
- Vagts, Alfred. *Landing Operations: Strategy, Psychology, Tactics, Politics: From Antiquity to 1945*. Harrisburg, PA: Military Service Publishing, 1946.
- Wukovits, John. *American Commando: Evans Carlson, His WWII Raiders, and America's First Special Forces Mission*. New York: NAL Caliber, 2010.

## Monographs and Theses

- Emmel, David C. *The Development of Amphibious Doctrine*. Fort Leavenworth: U.S. Army Command and General Staff College, 2010.
- Fernstrom, Carl H. *The Operations on MAKIN Atoll*. Fort Leavenworth: School of Combined Arms Regular Course, 1947.
- Juergens, Jeffrey. "The Impact of the General Board of the Navy on Interwar Submarine Design." M.M.A.S., U.S. Army Command and General Staff College, 2009.

## Other Articles

- "Creating the Raiders." United States Marine Raider Association.  
<http://www.usmarineraiders.org/creatingraiders.html> (accessed May 13, 2010).
- "Carlson of the Raiders." *New York Herald Tribune*, Saturday, August 29, 1942.
- Hattendorf, John B. "The Uses of Maritime History in and for the Navy." *International Journal of Naval History*. Vol. 2, no. 1 (April 1, 2003).
- McCarthy, John. *Gung Ho Raiders! Mission Accomplished*. Editor's Notes. February 2000 ed. Vol. Issue No. 71. San Diego: U.S. Marine Raider Association, 2000.
- Parshall, Jonathan. "Reflecting on Fuchida, Or 'A Tale of Three Whoppers'." *Naval War College Review* 63, no. 2 (Spring, 2010): 127.
- Whitman, Edward C. "The Forgotten Theater, U.S. Submarine Operations in the Aleutians in World War II." *Under Sea Warfare*, no. 18.  
[http://www.navy.mil/navydata/cno/n87/usw/issue\\_18/forgotten.htm](http://www.navy.mil/navydata/cno/n87/usw/issue_18/forgotten.htm) (accessed 21 April 2010).

## Websites and Other Media

- "World War II U.S. Submarine Transport Missions, the U.S. Silent Service in WWII (Pacific Theater 1941-1945)." Valor at Sea. <http://www.valoratsea.com/sptrans.htm> (accessed July 20, 2010).
- History Department at the United States Military Academy. —Our Alases.”  
<http://www.dean.usma.edu/history/web03/atlas/AtlasesTableOfContents.html> (accessed August 22, 2010).
- Lavelle, James A. "U.S.S. GUNNEL SS 253, First War Patrol." Lavelle, James A.  
<http://www.jmlavelle.com/gunnel/patrol1.htm> (accessed July 29, 2010).
- Narrated: Chet Huntley, Starring: Randolph Scott & Robert Mitchum. *Gung Ho!: The Story of Carlson's Makin Island Raiders*. Film. Directed by Ray Enright. Universal Pictures, 1943.



Naval History and Heritage Command. "Online Library of Selected Images."  
<http://www.history.navy.mil/branches/org11-2.htm> (accessed 22 August 2010).

INITIAL DISTRIBUTION LIST:

Combined Arms Research Library  
U.S. Army Command and General Staff College  
250 Gibbon Ave.  
Fort Leavenworth, KS 66027-2314

Naval History and Heritage Command  
Department of the Navy – Naval Historical Center  
805 Kidder Breese SE – Washington Navy Yard  
Washington, DC 20374-5060

Dr. John B. Hattendorf  
Naval War College  
686 Cushing Road  
Newport, RI 02841-1207

U.S. Naval Academy  
History Department  
107 Maryland Avenue  
Annapolis, MD 21402

Naval Postgraduate School  
Department of History  
1 University Circle  
Monterey, CA 93943

U.S. Army Command and General Staff College  
Department of Military History  
100 Stimson Ave.  
Fort Leavenworth, KS 66027-2301

U.S. Military Academy  
History Department  
Building 600  
West Point, NY 10996

Dr. Richard L. DiNardo  
Marine Corps University  
2076 South Street  
Quantico, VA 22134-5068

St. Marys Submarine Museum  
102 St. Marys Street West  
Saint Marys, GA 31558-4945

CAPT Michael G. Riegel, USN (Ret.)  
Executive Director  
Submarine Force Library and Museum  
Box 571  
Naval Submarine Base New London  
Groton, CT 06349-5571

Dr. Lawrence Schuette  
Office of Naval Research  
One Liberty Center  
875 N. Randolph Street, Suite 1425  
Arlington, VA 22203-1995

U.S. Army War College  
Attn: DMSPO  
122 Forbes Ave  
Carlisle, PA 17013-5234