Amphibious Warfare since World War II

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I. INTRODUCTION

The development of amphibious warfare during World War (WWII) has changed the nature of warfare to the present day. In general, the development is significant because it has enabled a modern military organization to launch, or pretend to launch, a ground offensive from the sea against a shoreline, whether or not the shoreline is defended. During WWII, the United States' and the United Kingdom's advanced methods of amphibious warfare in the offense allowed them to establish a western war front, which led to decisive victory against Germany. Japan's advanced amphibious warfare in the defense significantly affected the United States' decision to use the atomic bomb to obtain a decisive victory. Since WWII, both the United States and the United Kingdom have continued to use amphibious warfare successfully.

II. PRE-WWII DEVELOPMENT OF AMPHIBIOUS WARFARE

Amphibious warfare can be defined as the employment of combined land and sea forces to take or defend a military objective. The term "amphibious" was coined by the United States in the early 1940s.\(^1\) The method of warfare dates back nearly 3,000 years to the legendary attack of the Greeks upon the city of Troy,\(^2\) but it was neglected as a viable method of modern warfare until after WWI.\(^3\) During WWI, the use of amphibious warfare at Tanga and Gallipoli proved to be disastrous.\(^4\)
However, the United States Marine Corps believed that the unsuccessful use of amphibious warfare in WWI was due to poor techniques and coordination.\textsuperscript{5} In 1933, the Marine Corps created an organized landing force at Quantico, Virginia, known as the Fleet Marine Force.\textsuperscript{6} By 1940, they had developed doctrine,\textsuperscript{7} and by March 1942, they had created the Atlantic Fleet Amphibious Force.\textsuperscript{8}

The Marine Corps concluded, at that time, that the fundamental prerequisites of an amphibious operation are secure lines of communication from rear bases and command of the sea and air around the objective.\textsuperscript{9} They found that amphibious warfare required new combat techniques and a high degree of combined-arms coordination, as well as special landing craft and weapons.\textsuperscript{10}

III. APPLICATION OF AMPHIBIOUS WARFARE DURING WWII

A. INTRODUCTION

Perhaps the Allies learned their greatest lesson early in the war at the failed raid at Dieppe, France, on August 18, 1942.\textsuperscript{11} The mission was to land, destroy a number of targets, capture prisoners, re-embark and return to base. However, the mission was stymied by a number of anti-tank guns and a mass of machine-gun nests hollowed out in the chalk cliffs.

Afterward, failure of the amphibious mission was blamed on a number of things, including inadequate fire support, especially during the approach of crafts to the beaches,\textsuperscript{12} the failure to use parachutists, the failure to clear obstacles for the
amphibious tanks, the need for better piloting, and the need for
a headquarters ship for command and control. The lessons
learned at Dieppe resulted in "Force J Fighting Instructions"
which the United States adopted for use in the Pacific.

B. THE UNITED STATES' CAMPAIGNS AGAINST JAPAN

Early in the war, Japan's coordinated land, sea, and air
attacks in the Southwest Pacific met with little opposition. In
1942, Japan used amphibious warfare to take New Guinea,
Singapore, Java, Sumatra, Solomon Islands, Philippines (Manila),
and Aleutian Islands of Attu and Kiska.

In more than eighty amphibious landings, United States army
troops with land-based air and naval support demonstrated
successful amphibious assaults in retaking islands that Japan had
captured. Among the more significant assaults were those at
Tulgai (1942), Guadalcanal (1942), Tarawa (1943), the Kwajalein
atoll of the Marshall Islands (1944), Saipan (1944), Iwo Jima
(1945), and Okinawa (1945).

The United States' assaults were mounted against heavily
defended coasts, requiring the construction of landing craft
capable of allowing tanks and fully equipped infantry to
disembark in shallow water. Such landings were preceded and
accompanied by continuous air and naval bombardment of coastal
defenses.
To defeat Japan, however, the United States ultimately needed to launch an amphibious assault against Japan itself. The United States had the advantage in the Pacific islands, because the defending Japanese army garrisons were frequently isolated from their naval and air support and supply. Amphibious defense, like amphibious assault, demands close coordination of ground, sea and air units. The United States could expect a much more tightly coordinated defense on Japanese soil. Furthermore, Japan had learned through its own mistakes how best to defend against amphibious assaults. Specifically, they learned that an effective defense against landing assaults backed by overwhelming naval and air firepower was to develop interlocking positions rather than to expend their forces at the beaches. By the time of the Okinawa campaign, they had mastered this defensive technique.

C. UNITED KINGDOM’S CAMPAIGNS AGAINST GERMANY

During WWII, the United Kingdom espoused the “peripheral” approach in a war of attrition and stressed Mediterranean operations. In the process, they successfully employed and developed amphibious warfare in their operations against Germany in North Africa, Italy, and Greece.

When the United States proposed a cross-Channel attack which would require a target date, surprise, mass and concentration, the United Kingdom was reluctant. It criticized the approach as too direct and blunt, too intent on military victory and not
mindful enough of the political objectives. Eventually, however, the United States persuaded the United Kingdom to conduct the invasion jointly.

The United States had applied and refined amphibious warfare through trial and error in its war against Japan in the Pacific Islands during WWII. During the same period of time, the British refined their operations in campaigns in the Mediterranean against Germany and Italy. From lessons learned, both countries were able to combine their efforts to launch the largest amphibious invasion in history at Normandy on June 6, 1945.

D. ALLIED INVASION AT NORMANDY

As early as November 1940, Admiral Harold R. Stark, chief of naval operations, concluded that large-scale land operations would be needed to defeat Germany. Germany was land-minded, which explains why it failed to exploit its possession of the Baltic Sea against the Soviet Union. Although Germany anticipated an amphibious assault, it expected the Allies to attempt to take the ports directly at Dunkirk or Calais. The Allies confirmed Germany’s expectations by having General Patton’s Army stage preparations for an amphibious invasion that appeared would take place near Cherbourg or Calais.

Instead, after extensive gathering of intelligence, the Allies surprised Germany with a prime example of combined movements of naval craft, land forces, and aircraft at the beaches of Normandy. They further surprised Germany by rapidly
constructing their own artificial harbors (code-named Mulberry 1 and Mulberry 2) to assure a constant flow of men and supplies onto the beaches until a port could be captured. The successful amphibious assault enabled the Allies to establish a war front from the Atlantic and, through mass and concentration, to defeat Germany decisively. Still, Allied losses during the Normandy invasion were heavy given the extensive fortifications that the Germans had built along the entirety of the coastline.

After the Allied invasion at Normandy, it became clear that a massive amphibious invasion of Japan, a country much more experienced than Germany in defending against amphibious assaults, would extract an extremely high cost in human lives and war materials. United States leaders concluded that it should use the atomic bomb to avoid such costs.

IV. IMPORTANCE OF AMPHIBIOUS WARFARE SINCE WWII

Since WWII, the United States and the United Kingdom have continued to employ amphibious warfare successfully to achieve significant objectives in Korea (1950), Egypt (1957), Vietnam (1972), Cambodia (1975), the Falkland Islands (1982), and Kuwait (1991).

The United States' invasion of Inchon in 1950 during the Korean War and the United Kingdom's and France's invasion of Egypt during the Sinai crisis in 1957 were conducted using the same basic tactics used in WWII except that the Franco-British assault added the use of helicopters.
The 1982 British recapture of the Falkland Islands from Argentina showed "that the deployment and use of armed force to protect its interests overseas was not a thing of the past." 41

And, most recently, the United States demonstrated in Desert Storm that a threatened amphibious assault can be an effective deception maneuver at the operation level. 42

V. CONCLUSION

The development of amphibious warfare has added a significant avenue of approach to the battlefield. After WWI it was discarded as unworkable in modern warfare. Fortunately the United States Marines disagreed and developed a doctrine that would soon be needed to challenge Japan in the Southwest Pacific. After building experience upon doctrine, the United States was able to launch a large-scale amphibious assault, the largest in history, to turn the tide of the war against Germany. After experiencing the cost of a large-scale amphibious invasion, the United States decided that the cost of launching one against Japan, which was much more experienced than Germany in the art of amphibious warfare in the defense, justified the use of the atomic bomb to defeat Japan decisively.
ENDNOTES


2/ The Greeks are also known for the Athenian attack on Sicily in 415 B.C. In 535 A.D., Belsarius attacked the Gothic garrison at Palermo from the sea by placing his archers on boats and then hoisting the boats to the mast-heads where the archers could fire down onto the defenders on the shore. Fergusson, p. 16.

3/ The first classic amphibious operation in modern times was in 1758, during the Seven Years' War, when British General James Wolf led 9000 British regulars and 500 New England rangers in a successful amphibious assault from the St. Lawrence River against the French to take Louisbourg for the purpose of ultimately taking Quebec. Id., pp. 18-19; Nihart, Brooke, "Amphibious Operations in Colonial North America," in Bartlett, Merrill L., Assault from the Sea: Essays on the History of Amphibious Warfare, Annapolis: Naval Institute Press, 1983, 53-56. 

4/ The Tanga fiasco in 1914 "embodies almost every conceivable error in the theory and practice of amphibious operations." Fergusson, p. 24. "[F]rom the point of view of Combined Ops, the techniques employed [at Gallipoli in 1915] were amateurish beyond belief." Id., p. 34. After Gallipoli, military strategists believed that offshore mines, torpedoes, and land-based weapons would prevent naval gunfire support. Isely, J.A., & Crowl, P.A., The U.S. Marines and Amphibious War, Princeton: Princeton University Press, 1951, p. 5 [hereinafter Isely & Crowl]. In 1939, Liddell Hart pessimistically wrote:

A landing on a foreign coast in the face of hostile troops has ... become almost impossible, because of the vulnerable target which a convoy of transports offers to the defender's air force as it approaches the shore. Even more vulnerable to air attack is the process of disembarkation in open boats.

Id., p. 5 (quoting from Hart, Liddell, The Defence of Britain, London, 1939). See also Fergusson, p. 35 ("In the twenty years between the wars, Combined Ops took a back seat").
5/ Isely & Crowl, p. 5.


7/ Isely & Crowl, p. 6.

8/ Id., p. 4; Burton, p. 36. As Isely states:

The most important contribution of the United States Marines to the history of modern warfare rests in their having perfected the doctrine and techniques of amphibious warfare to such a degree as to be able to cross and secure a very energetically defended beached.

9/ James, p. 730.

10/ The operation was to be conducted in two phases: Assault convoys would divide into fast and slow groups of major landing craft, each with an escort. The headquarters ship and the infantry landing ships (LSIs) would be in the fast group. The tank landing craft and ships (LCTs and LSTs) would be in the slow group. The fast group, supported by warship fires, would lead the assault. After passing a navigational mark, usually a submarine stationed off the landing beach, the LSIs would be lowered, about seven miles offshore. The LSIs would then advance in flotillas. After unloading the infantry, the LSIs would return to the ships to embark more troops. Then the LSTs and LCTs would be lowered about one mile from shore to conduct the assault. Fergusson, pp. 186-87.

Also, compare what Antoine Henri Jomini enumerated as the precepts of amphibious warfare: to deceive the enemy as to the point of debarkation, to select a beach with favorable hydrographic and terrain features, naval guns to prepare the way, land artillery as soon as possible and seize high ground to secure the beachhead. Burton, p. 4.


13/ Id., p. 184. Eerily predicting the use of an artificial port at Normandy three years later, Vice-Admiral John Hughes-Hallet, the naval force commander for the failed raid at Dieppe, is quoted as saying, after the raid, "Well, if we can’t capture a port we will have to take one with us." Id., p. 182.

14/ Id., pp. 184-85.
15/ See Ladd, J.D., Assault from the Sea, 1939-45: The Craft, the Landings, the Men, New York City: Hippocrene Books, Inc., p. 236 [hereinafter Ladd].

16/ The Tarawa invasion of November 1943 showed that Nimitz’s navy and marine forces still had much to learn, but they had mastered the intricacies of amphibious warfare by the time of their assaults on the Marianas in the summer of 1944.

17/ Burton, p. 205 (taken at a bloody price”).

18/ Id., p. 204.


20/ James, p. 719.

21/ Id., p. 718.


23/ The first combined Army-Navy, joint United States-United Kingdom assault was a massive amphibious assault in North Africa on November 8, 1942. Burton, p. 16.

24/ In 1943, the British were the first to use specially trained commandos to take the beaches in Sicily and Salerno. See Fergusson, p. 261.

25/ Island of Pantelleria in 1943. Ladd, p. 236

26/ The American theory of war during WWII was one of mass and concentration. Matloff, p. 685.

27/ Id., p. 691.

28/ Id., p. 685.

29/ Isely & Crowl, p. 4. However, on Germany’s plans to invade the United Kingdom, see Ladd, pp. 59-64.

Fergusson, p. 335.

See Ladd, pp. 133-45, on the two years of planning and intelligence work conducted in preparation for the Normandy invasion.

The artificial harbor included an underwater petrol pipeline from the United Kingdom to the beaches and beyond. See Ladd, p. 145. For more on artificial harbors, see Stanford, Alfred B., Force Mulberry: The Planning and Installation of the Artificial Harbor Off U.S. Normandy Beaches in World War II, New York: Morrow, 1951. A good description of the artificial harbors at Normandy is found in The Longest Day:

The harbors, called "Mulberries," consisted first of an outer breakwater made up of great steel floats. Next came 145 huge concrete caissons in various sizes which were to be sunk butt to butt to make an inner breakwater. The largest of these caissons had crew quarters and antiaircraft guns and, when it was being towed, looked like a five-story apartment building lying on its side. Within these man-made harbors freighters as large as Liberty ships could unload into barges ferrying back and forth to the beaches. Smaller ships, like coasters or landing craft, could dump their cargoes at massive steel pierheads where waiting trucks could run them to shore over floating pontoon-supported piers. Beyond the Mulberries a line of sixty concrete blockships was to be sunk as an additional breakwater. In position off the invasion beaches of Normandy, each harbor would be the size of the port of Dover.

Ryan, p. 55. Although there are many historical examples of artificial harbors, their purpose was primarily commercial, not military. One of the most significant of the early examples is the artificial harbor that Herod the Great built between 37 and 4 B.C. at Caesarum Maritima, an ancient port along the Mediterranean coast between Haifa and Tel Aviv. Herod built a breakwater approximately one-third mile out and 200 feet wide. Blocks of stone were used 50' x 18' x 10' and then let down and secured 120' into the Mediterranean. See Bailey, C.B., Biblical Truths Confirmed by Archaeological Findings, reprinted at: http://faculty.acu.edu/~armstrongl/geography/bib.htm.

An early example of an artificial harbor built for military purposes is the one that Agrippa built for Caesar on the Bay of Naples in the year 38 to gather a great fleet while it trained for invasion of the island Pompeius. See: http://www.ualberta.ca/~csmackay/CLASS_366/Eary.30s.html.
For a description of the defenses, see Ladd, pp. 227-33.

President Truman and Secretary of War Stimson maintained that the bombing would end the war quickly and would save many times the number of lives lost at Hiroshima and Nagasaki. See id., p. 730. The Supreme Commander of the planned assault, General Douglas MacArthur, had estimated privately that the invasion of Japan "would cost the US over a million casualties". Devan, Janadas, "Atomic bomb destroys Hiroshima," The Straits Times (Singapore), December 31, 1999, p. 4. The total casualties of the United States in WWII is calculated to be 1,079,162. The number of Japanese civilians killed by the atomic bomb in Hiroshima and Nagasaki is estimated to be 92,000 and 40,000 respectively.


Fergusson, p. 388. First the Egyptian air force was put out of action on the ground by long-range bombing of its airfields. Then two British marine battalions landed from tracked amphibians, followed by a battalion of helicopters and the rest of the British parachute brigade in landing craft. Carter, pp. 804-05.

42/ The deception tied down two divisions of Iraqi soldiers. Note that the final decision by the United States to conduct an envelopment of Iraqi defenses, rather than a direct assault, and to use amphibious operations only as a deception were due in part to the risk of high casualties and associated concerns about national support. See McCausland, Jeffrey D., “Governments, societies, and armed forces: What the Gulf War portends,” 29 Parameters 42 (U.S. Army War College), July 1, 1999; Cancian, Mark F., “Where is CMFTS going?”, in Marine Corps Gazette, June 1, 1999, p. 22.
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