WASHINGTON’S PROVIDENTIAL ESCAPE FROM BROOKLYN HEIGHTS IN AUGUST 1776

J. David Rogers and Conor M. Watkins
Department of Geological Sciences & Engineering
University of Missouri-Rolla

Presentation for
History of Geology Division and History of the Earth Sciences Society Anniversary Celebration
Annual Meeting Geological Society of America
Philadelphia, Pennsylvania
Tuesday October 24, 2006
At the Second Continental Congress in 1775 John Adams nominated George Washington to serve as Commander-in-Chief of the ragtag American Army fighting the British in Boston.

He promptly set off for Boston, where he oversaw the American effort to keep the British bottled up in Boston. After occupying Dorchester Heights with troops and canon, the British abandoned Boston and regrouped in Halifax, Nova Scotia.

Washington correctly surmised that the next British objective would be New York City, and moved his Army to New York to make preparations for the English onslaught.

The ensuing Battle of Long Island and retreat from Brooklyn Heights would be the first time Washington commanded Continental forces in actual combat operations against the British.
Between late June and early August 1776 the British landed on Staten Island with the largest amphibious force ever assembled in the 18th Century: 30 battleships with 1200 cannon, with 300 support vessels manned by 10,000 sailors, and embarking 32,000 ground troops.
Between August 22-25, 1776, 20,000 English and Hessian troops moved to Long Island.

Washington was told the number of enemy troops was closer to 9,000, and feared this was a diversion and that the main British trust would come up the Hudson River, cutting off New York City.
Washington deployed 3000 men in forward positions on the Heights of Gowan and on Brooklyn Heights, overlooking Flatbush, Flatlands, and Jamaica Bay.

He retained 6000 troops in the Brooklyn forts, three miles behind the ridge. The Americans were out-numbered three-to-one.

British General Henry Clinton proposed to Howe that they outflank the American positions by marching 3 miles north of the Bedford Road and climbing the ridge through the unguarded Jamaica Pass.
Battle of Long Island - 27 August 1776

Crossing Site

The Defense:
Gen. George Washington based his defense on a series of hills in Brooklyn (the Heights of Guan) that had passes running through them. Washington chose to defend the western passes and left the eastern pass, the Jamaica Pass, lightly defended.

The Attack Plan:
The British planned to keep the Patriot forces guarding the western passes occupied while the main force used the Jamaica Pass to sneak up on the Patriots' eastern flank. Once the main body force was in position, the British forces on both flanks would attack and attempt to trap the rebels.

The Toll

Patriots (est.)
Dead: 300
Wounded: 650
Captured: 1,100

British
Dead: 83
Wounded: 310

1,600 with Gen. William Alexander (Lord Stirling)
5,000 with Maj. Gen. James Grant
800 with Gen. John Sullivan
5,000 with Lt. Gen. Leopold Philip von Heister
10,000 with Gen. Lord William Howe
600 with Col. Samuel Miles

Night march of British from Flatbreads
Govanirs Channel
Ruttenkill Channel
Bedford Pass
Gowanus Bay
Gowanus Creek
Johnston’s 1878 Map

- The most authoritative map of the Battle of Long Island and Retreat from Brooklyn Heights was compiled and published by Henry P. Johnston in 1878.
Using GIS to view the battlefield

- We scanned Johnston’s 1878 map and selected various landmarks as points of registry we could lay over present day maps and charts.

- We used the program ArcGlobe within ArcGIS 9.1 to overlay Johnston’s 1878 map on a present-day USGS 10 meter Digital Elevation Model (DEM).

- This can then be rotated in space to provide a bird’s eye view of the battlefield topography.
Bird’s eye view of the American’s forward positions – spread out over 6 miles.
The British flanking maneuver involved 10,000 troops, which set out on a 9 mile night march from Flatlands, just after dark on August 26th.
The British troops marched silently, four abreast, keeping to existing roads. Their column of march was 2 miles long.
The British column reached the Jamaica pass at 2 AM, sending an advance party up the narrow rocky path to clear out any American pickets. They easily captured the five militia men guarding the pass, who mistook the riders for other Continentals.
The nearest American positions were along the Bedford Road, three miles south of Jamaica Pass.
It took the British 2 hours to climb through Jamaica Pass in the pitch darkness, keeping as silent as possible, using saws in lieu of axes to widen the path.
Howe’s forces reach Bedford behind the American lines at 9 AM, after marching 9 miles.
British forces deploy behind the American lines commanding the ridgeline.
The American lines begin to collapse and are essentially compromised by 10 AM.

Sullivan’s line of retreat along the Flatbush Road is intercepted by Cornwallis.
At an elevation of 220 feet, Battle Hill is the highest point in Brooklyn, now occupied by Greenwood Cemetery in Sunset Park.

This is where the sacrifice of the Maryland 400 occurred during the Battle of Long Island. Only 2 men managed to return to the American lines.

By holding their positions and sacrificing their lives, the Maryland regiment bought time for Washington's army to retreat and fight another day.

The Delaware Regiment fended off a much larger British force and protected the Continental’s right flank.
British General Grant threw 7000 men at the American positions on the Heights of Gowan, outnumbering the Americans 6 to 1. By 11 AM, the remnants of Sterling’s battered forces retreated across Gowanus Marsh.
On August 27th, the British lost 63 killed and 337 wounded and missing, while the Americans lost about 970 men killed, wounded or missing, and 1,079 taken captive.

The Continental Army had lost almost a quarter of his entire strength.
Alerted to the attack, Washington crossed over to Brooklyn around 9AM on the 27th. He remained cool and confident, as the battle raged out in front of his position, in the Brooklyn forts.

The next day he ordered additional troops brought across the East River, giving him a force of 9,000 men against a British and German force of 14,600.

The British now occupied the high ground, allowing them to look down slightly on the American forts in Brooklyn.
During the afternoon of the 27th the weather turned sour. A serendipitous downpour made further British attacks unlikely. American troops found it hard to cook their food or to keep their powder dry (open pan flintlocks). But, unfavorable northeast winds also prevented Admiral Howe from moving his ships into New York Bay into the mouth of the East River, preventing encirclement.
Washington withdrew the remnants of Putnam’s force to Manhattan Island during the night of 29–30 August.

The British crossed unopposed on 22 August.
Reeling from the American’s embarrassing and lopsided defeat, Washington realized that he was now trapped between General Howe’s forces and Lord Howe’s fleet.

He had split his troops between Manhattan and Long Island, with the Hudson River, East River, and Long Island Sound all controlled by British warships.
Admiral Richard Howe, the brother of General Howe, could cut off Washington’s forces if he moved his ships from the New Jersey Shore to the East River.

Lord Howe was known as "Black Dick" because he seldom smiled.
The mile wide channel was Washington’s only possible path of retreat.
Though threatened, the American position provided topographic screening of Brooklyn Ferry by enemy forces.
Rain, lightning, thunder and vicious winds continued intermittently throughout August 29th.

The poor weather forestalled further attacks, and Howe’s forces busied themselves digging approaches towards the American positions.

That evening it began raining again, but with an unusual northeast breeze.
Washington turned to the seagoing soldiers of John Glover's 14th Massachusetts, known as “the Marblehead Regiment” to ferry the American troops across the East River to Manhattan that evening.

- Troops were ordered to form up for a night attack, beginning at 9 PM on August 29th.
The mile wide route across Brooklyn Ferry used by Glover’s men to ferry 9000 troops in one evening.
A northeast wind, followed by calm, then a southwest breeze

- The river was too choppy to cross until 11 PM, when the northeast wind died down.

After an hour of calmness a gentle southwesterly breeze erupted, which allowed the Marblehead men to hoist sails, allowing transport of 4 times as many troops per hour.
The entire retreat was carried out in strict silence. By this time the sky had cleared and the moon was shining brightly. British forces were close enough to see all the American defenders, but none of the British sentries noticed anything unusual!
When first light appeared, the evacuation of 9,000 American troops was far from complete, **the oarsmen needed at least three more hours**. The soldiers occupying the front line trenches and huddled along the beach worried that they would be spotted or left behind.

Then, rising out of the wet ground and off the East River came a **dense fog**, and **the fog covered Brooklyn side of the river**. When the sun rose the miraculous fog did not lift!
The fog began to disperse around 8 AM on the 30th. The entire Army was extracted, except for the heaviest caliber canon. Washington took the last boat across, just as the fog was lifting. It was seen as a miracle by the troops and providential by Washington. 9000 men had been saved from certain capture or destruction, and the American cause preserved.
The British were astonished

- When the British advanced on the American positions around 11 AM they could hardly believe their eyes. There in the brilliant sunlight was the abandoned American fortifications and camp – totally deserted!
- Some of the British soldiers ran down to the shore and shot at the last of the departing boats, but the Americans were safely out of range. Washington's army had escaped their grasps to fight another day.
- The unusual combination of darkness, fog, the northeast wind blowing down the East River, and bad weather immobilized Admiral Howe's fleet and blinded British sentries.
- Washington's cool and firm command exacted superb discipline from green troops, who remained quiet and disciplined throughout the ordeal.
One of the greatest retreats in military history

“Those who are best acquainted with the difficulty, the embarrassment, noise and tumult which attend even by day, and with no enemy at hand, a movement of this nature (the crossing)…will be the first to acknowledge that this retreat should hold a high place among military transactions.”

- British military critic
Nearly 1000 Hessian soldiers surrendered after an hour of fighting, while the Americans Washington suffered only six wounded. The victory provided a much needed boost to the morale of the Continental Army.

COL John Glover’s Marblehead Mariners also ferried Washington’s forces across the Delaware River in one of the greatest surprise attacks in history up until that time.
British Strategy fails

Washington’s forces were sounded defeated by superior British forces attacking and occupying New York City in 1776, which they kept until 1783.

But, British designs on severing the Colonies along the Hudson River Valley failed at Saratoga and Oriskany, where General Burgoyne was soundly defeated by Nathaniel Greene’s American forces.

Kosciusko’s defense of the Hudson River at West Point succeeded in blocking the British advance upriver.
This lecture will be posted at

www.umr.edu/~rogersda/umrcourses/ge342
Under heading “Revolutionary War”
in .pdf format for easy downloading