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CROSSBOWS TO BOMBERS: THE MILITARY HISTORY OF MULLET KEY

by Alicia Addeo and Bart Moore

The rustic campgrounds and beaches of today’s Fort DeSoto Park belie a priceless legacy in southern Pinellas County. According to legend, the first European act of war in Florida occurred on Mullet Key, the W-shaped island on which the fort now stands. In 1513, Juan Ponce de Leon supposedly beached his ship there to scrape off barnacles and pump the bilges. While preparing to continue his pursuit for gold and “the Fountain of Youth,” his expedition withstood an attack by Timucuan Indians. The crew’s crossbows and cannons repulsed the attackers, but one soldier was killed. The story eulogizes that nameless Spaniard as the first European battle casualty in North America and depicts the first use of artillery in the Tampa Bay area. The legend less credibly cites Mullet Key as the locale where Ponce de Leon returned in 1521, to start a settlement and seek revenge on the Indians. Scholars do agree, however, that somewhere on the west Florida coast an arrow prematurely ended Ponce de Leon’s life – an ironic fate for one seeking eternal youth. Equal controversy shrouds Hernando DeSoto, noted for his alleged landfall in Tampa Bay and brief sojourn on Mullet Key during 1539. Areas from Apalachicola to Sanibel Island vie for the honor of claiming DeSoto’s beachhead.1

Considering its location near the mouth of Tampa Bay, the verdant island of Mullet Key was long regarded as a strategic point for coastal defense. With little doubt, a succession of conquistadores, pirates and colonial explorers sighted Mullet Key and perhaps made unrecorded landings. As permanent settlements were established along Tampa Bay and on the Pinellas peninsula during the nineteenth century, the need arose to protect local inhabitants from foreign navies which expanded their size and their range of maneuvers.2

Three centuries after Spanish caravels probed Florida’s coastline, another small ship, the schooner *Phoenix*, sailed into Tampa Bay. On board, four U.S. Army engineers visually surveyed Mullet Key and nearby Egmont Key. They may have rowed ashore for further scrutiny. The board of engineers on this 1849 coastal survey of Florida included Brevet Colonel Robert E. Lee, who served as recording officer. In his report to his superior, General Joseph G. Totten, Colonel Lee recommended both the construction of fortifications at Egmont Key and the preservation of other keys in the mouth of Tampa Bay for additional study as possible sites for defense works. His document constituted the first formal recognition of Mullet Key’s strategic importance. General Totten, the Army’s Chief Engineer, had helped start a program of U.S. coastal fortifications which dated back to 1817. Once Florida was admitted to the Union in 1845, defense of its coast became Totten’s responsibility. On March 23, 1849, a few weeks after Lee’s observations, an executive order reserved Mullet Key for military purposes, thereby preventing its sale for private development. The government did not, however, take steps to fortify the keys at the mouth of Tampa Bay even after the advent of the Civil War.3

A small detachment of Confederate troops occupied Egmont and Mullet Keys after hostilities commenced, but they soon withdrew to concentrate their strength in Tampa. Union forces controlled the islands as early as July 15, 1861. The Confederates removed equipment essential to the operation of the Egmont Key lighthouse, but its tower served as an observation point for
Map by William M. Murray and Miles Pennington.
the Union blockading fleet. Ships in and out of Tampa Bay had to sail through narrow channels near Egmont and Mullet Key, and several would-be blockade runners were captured in the attempt. Northern sympathizers also found a haven in the keys, under the guns of blockading union vessels. In February 1862 troops from the federal encampments attacked the homestead of Abel Miranda, near current southeast St. Petersburg. This, the only military engagement in Pinellas County during the Civil War, resulted in a one-sided battle. Miranda, an ardent secessionist and a pioneer to the area, suffered the destruction or confiscation of his property by the Union invaders, and he soon left the region. Miranda did not return until the war ended. In 1864, the *U.S.S. Sunflower*, a blockade vessel stationed in Egmont Channel, aided an expedition from Key West under Brigadier General Daniel P. Woodbury. Together, they attacked and occupied Tampa on May 6 and 7, 1864. After failing to locate all the Egmont lighthouse equipment, the northern troops withdrew from Tampa.5

During Reconstruction, the Board of Engineers for Fortifications advocated the continued reservation of Mullet Key. The island was officially surveyed in January 1876. An executive order assured permanent reservation of the keys in November 1882.6

An influx of new Pinellas residents in the 1880s encouraged Peter Demens, co-founder of St. Petersburg, to seek a seaside terminal for his Orange Belt Line Railroad. He and Thomas Hoge, the Orange Line representative, planned a bridge to Mullet Key for that purpose. The ninety-foot Egmont Channel, they concluded, could accommodate civilian passenger ships arriving at the terminal. In 1885 Hoge wrote Secretary of War William C. Endicott, requesting a railroad right-of-way, or the transfer of Mullet Key to the Department of the Interior for sale. However, Endicott reiterated the defense status of Mullet Key, and he pointed out that Congress alone had-authority to grant the desired right-of-way.7

The same year, 1885, Endicott headed a special board of Army, Navy and civilian personnel assembled by President Grover Cleveland. The board was to review the entire coastal defense situation and suggest revisions based upon newer weapons and fortification design. Endicott’s studies led to extensive work on new coastal fortifications and the up-dating of old ones, around 1890.8

Forts of pre-Civil War days were usually constructed with vertical brick or stone walls and armed with smooth-bore, cast-iron, muzzle-loading cannons. Fort Sumter adhered to this design. Direct fire from rifled artillery heralded the obsolescence of such architecture and weapons. Fort Sumter suffered severe damage later in the Civil War from rifled bombardment. Other forts, though not destroyed in combat, fell into disrepair thereafter. General Totten’s death in 1864 curtailed efforts to maintain the old fortifications. The Endicott Board called for a system of modern fortifications at an eventual expenditure of over $126,000,000.9

The new fortifications reflected late nineteenth changes in weaponry. By the 1890s primary artillery pieces were steel, rifled, breechloading weapons that fired cylindrical projectiles. In the case of mortars, the method of loading and high-trajectory aim enabled gun crews to remain behind thick walls unexposed to enemy gunfire. Coastal fortifications of this period usually made a low profile on the shoreline. The structures were built of concrete, sometimes reinforced by a barrier of sand with battery walls up to twenty feet thick.10
Construction of the Mullet Key batteries did not begin until 1898, prodded by the increased likelihood of war with Spain. Temporary batteries were erected on the southwest comer of the island even before the declaration of war in April. Lt. Colonel W.H.H. Benyaurd, the district engineer, received orders on June 7 to plan permanent batteries. On July 25, 1898, Benyaurd submitted plans from his headquarters in St. Augustine. He chose the general site of the temporary batteries, facing the Gulf of Mexico, just south of due west, in order to guard the shipping channel. Benyaurd estimated the batteries’ total cost at $200,000. The Chief of Engineers in Washington amended and approved Benyaurd’s plans on July 30, 1898, appropriating $150,000 for construction.\textsuperscript{11}

Half a century after Lee’s proposals, the strategic potential of Mullet Key became a reality. The location was selected as a site for a class of armament comprising 12-inch mortars, designed to be fired simultaneously in a battery. The principle behind this concentration of fire entailed throwing large projectiles in high arcs, for a vertical descent on the thin armor of ships’ decks, in a shotgun-type pattern.\textsuperscript{12}

Between November 1898 and March 1899 the battery site was cleared and several preliminary wooden structures built. The construction plant, a 275-foot wharf, stables, workmen’s quarters, mess balls and an office were finished during this time. A small railway ran between the wharf and construction plant. Although the Spanish-American War had ended in December 1898, work...
continued. However, delays in receipt of stone and cement, shipped by sail from New York and New Jersey, postponed the completion of mortar emplacement and magazines until the early months of 1900. With an additional $5,000 allotment, construction proceeded. Workmen cut parapets, completed the sandfill and installed mortar carriages, observing stations, access stairs and electrical equipment. The battery was completed on May 10, 1900. Captain Thomas H. Rees, the engineering officer in charge of construction, reported a surplus balance of $16.73 from the $155,000 allotment.13

The 613 acres on which the military installation stood was named Fort DeSoto, by order of the War Department, on April 4, 1900. By venerating the young conquistador who died while exploring the southeastern United States, the naming of the fort celebrated his supposed landfall in Tampa Bay. The day before the battery’s completion Fort DeSoto officially became a sub-post of Fort Dade, a larger post which had been developed on Egmont Key.14

Fort DeSoto’s eight mortars, manufactured at the Watervliet Arsenal in West Troy, New York, were mounted on their carriages between May and August 1902. However, military red tape delayed their trial firing over a year after their installation. Technicians used that time to convert the unassembled breech locks from the lanyard-activated percussion firing mechanisms to newer
electric devices. The mortars were test fired on November 19 and 20, 1903, five years after the fort’s foundations were laid. The mortar emplacement was officially designated as Battery Laidley, in honor of Colonel Theodore T.S. Laidley, who had served in the Mexican and Civil Wars and died in Florida.\(^{15}\)

The eight mortars, most powerful of the fort’s armament, were model M1890. Like most large ordnance of the period, they were rifled and breech-loading. However, the 12-inch M1890 was the first American mortar molded entirely of steel, with no cast-iron core. In case of a power failure, the M1903 electric-firing mechanism could be converted back to a lanyard-activated primer. Whether percussion or electric, a safety device prevented activation of the firing mechanism until the breech was securely locked and the weapon elevated to at least 45 degrees. The highest obtainable trajectory was 70 degrees. The mortar could lob a shell about seven miles. The mortar’s carriage, model 1896M, limited the recoil by means of two hydraulic piston-operated recoil cylinders and large counter-recoil springs in the mortar pit. The circular steel base plate could revolve to aim the mortar in any direction.\(^{16}\)

Despite electric detonation and safety features, the aiming and loading of the mortars was still done manually. Trajectory and direction were set by handwheel. The projectile, weighing either 700 or 1,046 pounds, was retrieved from the shot room, round-per-round, on a hand-operated shot truck, designed to the precise level necessary to insert the shell at the mortar’s horizontal loading position. Two soldiers delivered the 48-to-65 pound powder charges, sealed in silk bags, to the gun crew on a litter-like tray. Although some other weapons of the early 1900s were loaded by an electric ram, the twelve-man crew of the M1890 used muscle, like artillerymen of previous centuries, to load the round.\(^{17}\)

With additional funds, another battery was completed in early 1902. It was designated Battery Bigelow, in honor of First Lieutenant Aaron Bigelow, killed in the War of 1812. Two three-inch Driggs-Seabury rapid-fire guns were mounted about a year after Battery Bigelow’s construction, and they were test fired with the mortars. Designed for close range defense against anti-torpedo boats, the Driggs-Seabury Model of 1898 rested on a smaller, elevated Barbette Carriage, with a steel shield to protect the crew. The carriage allowed an elevation of 12 degrees. The gun could hit a target with a fifteen-pound projectile four and half miles away. Unlike the 12-inch mortars, the propelling charge of the Driggs-Seabury was sealed in a metal casing, the primer being activated by a firing pin. The three-inch weapon operated in a manner similar to a modern rifle or pistol.\(^{18}\)

Artillery spotters in towers at opposite ends of the reservation directed the firing. They relayed, by visual signals (and later by telephone), readings to the relocation room; then the information was transmitted to the data booths just behind the gun pits. The pertinent data were interpreted there and posted to the mortar crews by slate boards. A floating target was pulled by a small ship during practice firings at Fort DeSoto.\(^{19}\)

Construction of post buildings progressed from 1900 to 1906. Quarters for three married officers, two non-commissioned staff officers, one hospital steward and 120 men were completed first. The hospital was capable of treating six in-patients; the mess hall and bake house, once completed, served the entire garrison at one time. An administration building provided office
space for one officer and two clerical personnel. The guardhouse could accommodate six prisoners. Additional facilities built during this period included a woodshed (all buildings were heated by stoves or fireplaces) and an oil house to supply fuel for the mineral oil lamps. A storehouse served the commissary and quartermaster. The blacksmith and carpenter shared one workshop, and a stable sheltered eight animals and several wagons. In 1903, a private company established a small ice house on the reservation. All buildings outside the battery were wood frame with slate roofs. A pump house installed over an artesian well provided water for bathing and flushing the sewer system into the gulf or bay, while cypress cisterns, with a total capacity of nearly 80,000 gallons, collected rainwater from the roofs for drinking. Prior to completion of these systems in 1902, a water shortage postponed the quartering of a full garrison. In late 1901, only one officer in command of forty-three men manned the complex. The first full garrison, comprising the 1st Company, Coast Artillery (formerly Company A, 1st Artillery) became effective on February 5, 1902. From April 18, 1907, until June 8, 1910, the 39th company of the same regiment manned the fort.

As with most isolated army posts, Fort DeSoto was not a preferred duty assignment. Only one boat a day served the post, and there were no telephones to the mainland. Since the closest
sizable town, Tampa, was over thirty nautical miles away, the lack of recreational pursuits intensified boredom for the off-duty artillerymen. Egmont Key’s Fort Dade, when completed, had a movie theater, tennis court, baseball diamond, gymnasium and bowling alley. No records indicate any such diversions at Fort DeSoto, but in 1904 an inspecting general recommended the sale of beer and wine at the fort to enhance morale.

Besides its unique drawbacks, Fort DeSoto presented its personnel with the usual discomforts associated with a southern climate. The humid Florida summers posed a threat of sunstroke and dehydration to soldiers pursuing their duties. Until the early 1900s uniforms were made of flannel, kersey or other woolen fabrics, deviating very little from thick Civil War clothing. During summer drills, the Fort DeSoto garrison endured untold misery as a result of wearing heavy uniforms in the stifling heat. Mosquitoes also bred in the sector of the island near the fort. Various officers at the post addressed the problem, but the biting insects prevailed, in spite of screens and mosquito nets (then called mosquito bars). The insects rendered an already undesirable outpost intolerable in warmer weather and ruined the charm of Mullet Key’s beaches which provide such excellent recreation today.\(^{22}\)
Although isolation and boredom might have undermined discipline at Fort DeSoto, the post’s very isolation discouraged absence without leave and prevented undisciplined soldiers from escaping punishment. However, it also discouraged re-enlistments. All the problems notwithstanding, the command at Fort DeSoto was described as well-instructed and well-disciplined.23

Between 1904 and 1910, the fort changed classification several times. First it became independent of Fort Dade, while remaining under joint state and federal jurisdiction. The governor of Florida soon ceded sole authority to the U.S. government. Fort DeSoto attained its highest responsibility as temporary headquarters for three years for the Artillery District of Tampa, while construction was underway at Fort Dade, but upon completion Fort DeSoto reverted to a sub-post of Fort Dade on June 2, 1910.24

Florida militiamen trained with the fort's coastal artillery in three joint maneuvers on the island. In theory, the militia was to reinforce the batteries during an attack. Part of the 1st and 2nd Infantry, Florida State Troops, participated in ten-day war games at the fort during October 1907 and May 1908. The fort's original garrison, the 1st Company, Coast Artillery, substituted for the state troops in a twelve-day maneuver in October 1909. The 1st Company at that time was part of the Florida National Guard.25

Fort DeSoto reached its zenith during Theodore Roosevelt's presidency. Roosevelt acknowledged the importance of coastal fortifications, as part of his “big stick” philosophy. In 1905 he assigned a board under Secretary of War William Howard Taft to update the programs of the Endicott Board. The Taft Board did not suggest any major changes for Fort DeSoto, but it confirmed the fort’s role in coastal defense.26
Improved ships’ weaponry and a change in administration foretold the decline of Fort DeSoto. The reservation was inactivated when it returned to its sub-post status on June 2, 1910. Six days later, the 39th company shipped out for re-assignment at Fort Morgan, Alabama. Caretaking detachments from Fort Dade occupied the fort until 1914. The only personnel at Fort DeSoto that year were a sergeant and a Department of Agriculture game warden.27

With the approach of American involvement in World War I, another caretaking detachment was assigned to the fort. The detail reached a maximum of two officers and twenty-two enlisted men in October 1917. Earlier that year, the detachment disassembled four of the mortars for shipment to Fort Rosecrans, California.28

During the “War to End All Wars,” new battleships with improved aiming techniques and higher trajectory weapons steamed into combat. Their guns’ range surpassed that of the coastal armament in most of the American coastline fortifications. Their higher firing angle voided the protection of concrete walls and hidden gun crews. The concept of protecting the coastline during this era shifted to railroad artillery, dispatched to different areas as needed. As a result, Fort Dade was inactivated in 1921, and on May 25, 1923, both Tampa Bay forts were abandoned except for one caretaker each. Neither fort had ever fired a shot at any foe.29
The period between world wars witnessed the gradual deterioration of Fort DeSoto’s batteries and buildings. Hurricanes wrought significant damage to the post buildings in 1921, 1926 and 1935. By October 1932 Battery Bigelow had collapsed because gulfside waves had eroded its foundations. Some inspecting officers even suggested that the batteries be razed. Fortunately, this recommendation never became official.

Fort DeSoto was briefly up for sale. In 1926, Congress authorized the Secretary of War to sell surplus military reservations, but no negotiable transaction materialized for either Fort DeSoto or Fort Dade. Both were withdrawn from sale in 1929 and reserved for future defense purposes. From 1929 through 1930, the rusting mortars and carriages were refurbished by a detachment from the Pensacola Harbor Defense. They pumped out the flooded mortar pits and placed all moveable parts in storage.

During the 1930s much of Mullet Key passed temporarily into the hands of civilian agencies. In 1938, the War Department transferred the greater part of Mullet Key to the Department of Agriculture for use as a wild bird refuge. Twenty-seven acres, site of a former quarantine station, were purchased by the Pinellas County Board of Commissioners. In 1939, due to departmental changes, the Department of the Interior assumed control of the bird refuge.

The outbreak of World War II in 1939 revived military interest in Fort DeSoto as neutral America prepared for possible involvement in the fighting. The War Department negotiated the return of the entire island for anticipated use as a sub-post, this time allied to the new air base at Tampa’s MacDill Field. Fort DeSoto was activated with MacDill on April 16, 1941. A token force camped on the island to maintain a bombing range and to improvise an auxiliary landing strip.

Mullet Key found itself in the shadows of another type of fortress during the war years. The B-17 bomber, the famous “flying fortress,” became a common sight in the skies of Tampa Bay. Both Captain Paul W. Tibbets and Second Lieutenant Thomas W. Ferebee, who later flew the B-29 which dropped the atomic bomb on Hiroshima, trained on B-17’s that practiced “bombing” Mullet Key with “bombs” that contained sand in February 1942. Wartime production later enabled rookie bomber crews to use armed ordinance in their practice runs over the Mullet Key Bombing Range. Several unexploded bombs were discovered years later on Bonnie Fortune Key, at the eastern sector of Fort DeSoto Park.

The introduction of nuclear weapons in 1945 changed the nature of warfare forever. Harbor forts, an essential part of U.S. defense policy since 1794, had no military role in the cold war years. By 1948 the United States government had abandoned coastal fortifications as a defense alternative, and most of the guns were scrapped by the following year. Fate intervened on Fort DeSoto’s behalf. In 1948 with no further need for a bombing range in Tampa Bay, Congress approved the sale of Mullet Key to Pinellas County. The transaction, completed on August 11, was celebrated with formal ceremonies on September 8, 1948.

The establishment of a museum at Fort DeSoto Park seemed a viable possibility in 1956. Backed by the St. Petersburg Chamber of Commerce, Spanish-American War veterans from a local Florida encampment passed a resolution to use the rooms at Battery Laidley for that
Noted St. Petersburg historian Walter P. Fuller endorsed the project, and he offered the aid of the St. Petersburg Historical Society to assist in displaying Fort DeSoto and Spanish-American War memorabilia. In October 1957, the Pinellas County Park Authority consulted architects and engineers and drew up plans for a separate museum building. In spite of preliminary approval and ongoing promotion by columnists and county employees, the museum has not as yet been established. However, in 1977 the Bureau of Historic Preservation placed Fort DeSoto on the National Register of Historical Places.

Today Battery Laidley and the ruins of Battery Bigelow display the only evidence of Mullet Key’s martial heritage. The four remaining 12-inch mortars are the only surviving M1890’s in North America. They miraculously escaped the dismantling of 1917 and the large scale scrapping program in 1949. The only other known models are in the Philippines. Two refurbished 6-inch guns seem to guard the grounds facing the battery. The quick-firing Armstrong guns were salvaged from Fort Dade’s Battery Burchsted in 1980, after almost sixty years of neglect. Refurbished over a two-year period, they were installed near Battery Laidley on March 19, 1982. The Armstrong, like the Driggs-Seabury, rested on a shielded Barbette carriage allowing an elevation of 16 degrees. It detonated with a firing pin on a metal-cased powder charge; however, like the mortars, the breech-lock contained an interchangeable percussion and

Two 12-inch mortars as they appear today at Fort DeSoto.

Photograph by Alicia Addeo.
electric-firing mechanism. The guns, manufactured around 1898 by the W.B. Armstrong Company in England, were each capable of launching a 106-pound projectile about nine miles. 37

A reminder of Fort DeSoto’s contribution to America’s role in World War II came to light in 1968, and again in 1980 and 1988, when park employees discovered live bombs. Rangers evacuated the park, and the bombs were detonated by explosives experts. 38

As in the past, the fate of Mullet Key today remains linked to outside developments, especially those in the Tampa Bay area. The popularity of Fort DeSoto Park required the building of urban structures, such as bridges, causeways, parking lots and concession stands. However, as a Pinellas County park, Mullet Key should be safe from the encroaching condominium craze on nearby keys. Environmental factors, including pollution, beach erosion and killing frosts, have taken their toll, but Battery Laidley appears secure from advancing tides and tempests which destroyed other post buildings.
Fort DeSoto still awaits its long-delayed museum. Nevertheless, the fort remains a silent reminder of the military past of Mullet Key. From the time when Spanish explorers encountered Timucuan Indians in the sixteenth century to the bombing of the key by B-17 crews during World War II, Mullet Key has served as an arena and testing ground for various forms of combat from crossbows to bombers.


7 Rita Slaght Gould, Pioneer St. Petersburg (St. Petersburg: Page Creations, 1987), 26; William C. Endicott to Thomas G. Hoge, October 24, 1885 (Land Papers, Florida, Brooke and Tampa Bay), RG 77, National Archives, Washington, D.C.

8 Lewis, Seacoast Fortifications of the United States, 77.

9 Ibid., 3-9, 77.

10 Ibid., 79.


12 Lewis, Seacoast Fortifications of the United States, 79.


14 Quartermaster General’s Office, Military Posts and Reservations, 115.


16 War Department, “Technical Manual No. 9-456: 12-Inch Seacoast Material” (Washington, October 17, 1942), 4-6, 24, 28-29.

17 Lewis, Seacoast Fortifications of the United States, 79.
19 Dick Bothwell, “From Fort to Port,” *St. Petersburg Times*, November 2, 1975.

20 War Department, *Military Posts and Reservations*, 115-16.


23 Inspection Report, Major General Adna R. Chaffee, April 16, 1903 (Document File), RG 94, National Archives, Washington, D.C.


25 Ibid., 24

26 War Department, General Orders No. 101, June 2, 1910 (Document File) RG 94, National Archives, Washington, D.C.


28 Post return, Fort Dade, 1917-18 (Returns, Coastal Defenses of Tampa, Fort Dade, Florida, 1921-23), RG 98, National Archives, Washington, D.C.

29 Lewis, *Seacoast Fortifications of the United States*, 101; 7th Ind. to Hq. 4th C.A.Ag602 (23-26).


31 *United States Military Reservations, National Cemeteries, and Military Parks, Title, Jurisdiction, Etc.*


33 Interview with Chris Karas (Lieutenant Colonel, USAF, retired), July 14, 1989; *St. Petersburg Times*, February 18, 1988.

34 Lewis, *Seacoast Fortifications of the United States*, 125; Public Law 666, June 17,1948 (BLM Miscellaneous File No. 33623), RG 49, National Archives, Washington, D.C.


36 Phil Melfi (Curator, Harbor Defense Museum, Brooklyn, New York) to Alicia Addeo, February 23, 1989. (In possession of author.)

37 Hines and Ward, *The Service of Coast Artillery*.