

# REDISCOVERING HISTORY

## Garrett Search Team Aids Archaeology Work at Famous Texan Battlegrounds

It was just after 4:00 p.m. on April 21, 1836, and the Mexican campground was blissfully unaware of the impending chaos that was about to erupt. More than 1,300 soldiers were taking their afternoon siestas, casually warming their meals or were otherwise engaged in activities other than maintaining a strict guard. Their commanding general, Antonio Lopez de Santa Anna, had retired to his private tent to rest.

At that inopportune moment, the right end of the Mexican campground suddenly erupted into gunfire. Clouds of gun smoke and a cacophony of shots filled the air as rifles, muskets and pistols began pouring havoc into the startled soldiers. Some 930 Texans were rushing upon Santa Anna's campground through the mossy oaks to the right and were emerging from the tall coastal grass on the plains dead ahead.

General Sam Houston's Texas Army, although outmanned and having spent six weeks largely in retreat, had accomplished the unthinkable by so completely surprising their foes. Shouts of "Remember the Alamo!"



*(Above) The battle of San Jacinto as completed in 1898 by artist Henry A. McArdle. The original painting, approximately 14 feet in length, hangs in the Senate Chambers of the Texas Capitol in Austin.*

and “Remember Goliad!” filled the air as the vengeance-seeking Texans swarmed over the Mexican breastworks. Their two cannon, dubbed the Twin Sisters, roared into action with devastating result.

The Mexican breastworks did little to stop the blood lust of angry Texans eager to take revenge for their comrades in arms who had been wiped out in recent weeks at the Alamo and at the Goliad Massacre. In only eighteen minutes of initial fighting, they managed to throw the superior Mexican Army into complete chaos and into flight. Texan leaders were unable to control their men during the next two hours as they pursued and cut down the fleeing Mexican soldiers. Mexican Colonel Pedro Delgado admitted that his men quickly became “a bewildered and panic-stricken herd.” Texan sergeant William Swearingen wrote the next day, “It was nothing but a slaughter.”

By dusk, more than 600 Mexican officers and men had been killed and 730 more had been taken as prisoners. Colonel Thomas Rusk wrote that their “brave band achieved a victory as glorious as any on the records of history.” Captain Robert Stevenson agreed: “Never was

there a greater victory according to the number of men engaged.” The battle of San Jacinto was so decisive, in fact, that only eleven Texans were killed and less than three dozen more wounded on April 21. This climactic finale of the Texas Revolution ensured Texian independence and was the beginning of a ten-year independent nation period before the Lone Star State joined the United States of America.

Today, the 1836 battlefields of San Jacinto are part of a State Historic Site which honors the heroes of both sides of the battle. The 1,000 acres managed by the Texas Parks and Wildlife Department is currently home to the battleship *Texas* and the towering 570-foot San Jacinto Monument. Completed in 1939, this cordova shell stone-faced structure tops the Washington Monument by 15 feet and is the world’s tallest war memorial. Atop the massive monument is a 220-ton, nine-sided star symbolizing the Lone Star Republic which can be seen as a star from any direction because of its unique construction.

The founders and co-owners of Garrett Metal Detectors were pleased to lend their support recently to the ongoing archaeological efforts to recover and preserve important historic

Note: Garrett metal detectors were used at San Jacinto Battleground State Historic Site in Texas during controlled archaeological investigations and under the supervision of professional archaeologists. Recreational use of metal detectors is prohibited by law at all Texas State Parks and Wildlife Management Areas.

artifacts from the San Jacinto battlegrounds. "Texas history is obviously something I cherish deeply," said Eleanor Garrett, a former educator who has spent many years of her life serving on such ancestral organizations as the Daughters of the Republic of Texas and was commissioned by Governor Rick Perry as a "Yellow Rose of Texas."

Eleanor and Charles Garrett have provided financial assistance, ground search metal detectors and *Pro-Pointer* pinpointer detectors to the Friends of San Jacinto Battleground to support the ongoing archeological work. In addition, Garrett detectorists have put in hours in the State Historic Site with their machines to help the archaeologists unearth important battle artifacts. A team of volunteer metal detector enthusiasts joined with Moore Archeological Consulting in June 2009 to search several areas in the vicinity of General Santa Anna's Mexican campground. Moore Archeological is an archeology consulting firm assisting TPWD with research on the battle of San Jacinto.

"I feel honored to have taken part in such historic work, particularly in the precise area where Sam Houston's Texas Army first engaged the Mexican Army on April 21, 1836," stated Charles Garrett. "In my books and videos, I have always advised hobbyists to follow a particular code of ethics when it comes to metal detecting. This was a wonderful opportunity for me to practice what I preach and work shoulder-to-shoulder with professional archaeologists and the Texas Parks and Wildlife Department."

Mr. Garrett was joined in the field by Michael Strutt, Director of Cultural Resources for TPWD, Roger Moore and Douglas Mangum of Moore Archeological Consulting Inc., Gregg Dimmick (M.D.), and Jan Devault of the Friends of the San Jacinto Battleground. The archeologists were assisted by volunteer archeological stewards trained in battlefield survey and excavation techniques. On this day, Mr. Garrett and I were joined by a group of fellow detectorists, all using Garrett equipment, who readily volunteered their services: Dr. Dimmick, Robert Jordan, Rusty Curry, Joe Hennig, Rick Anderson, Glenn Collins, Dave Totzke, Mike Skinner and Herman Denzler. Garrett engineers Bob Podhrasky and Brian Head were also on hand to field test a new high-end metal detector, the *Recon-Pro* All Metals



(Above) Charles Garrett detecting on the San Jacinto battlegrounds on June 6, 2009.

(Below) A San Jacinto battle reenactor fires his flintlock rifle.





*(Above) Charles Garrett and a dozen detectorists joined Dr. Gregg Dimmick, Roger Moore's archaeology team and volunteer stewards as they pose near the Mexican breastworks before the day's searching commences.*

Locator, a specialized detector designed for use in humanitarian and military countermining ordnance location. Michael Strutt and Texas State Parks Director Walter Dabney allowed Vaughan Garrett and Brian McKenzie to utilize their video and photographic equipment to document the day's recoveries.

In preparation for our field work, the Texas Department of Transportation mowed several grids of the battlefield which enabled the detectors to work close to the ground surface. All the work at San Jacinto is conducted under a Texas Antiquities Permit for archaeological excavation. These were all in the vicinity of the Mexican breastworks where Santa Anna's Mexican Army had built their defensive position. The work was challenging, searching under the junk metal that had accumulated over years of park visitors picnicking and walking through the area: pop tops, shredded aluminum cans, modern coins, and various other "trash" targets.

The detectorists worked in groups that included one detectorist, one volunteer steward and an archaeologist to collect the artifacts. When

a good historic item was unearthed, the steward carefully noted the depth and conditions where the item was found. The archeologists use a laser-guided total station to record the horizontal and vertical coordinates of each artifact recovered. The precise plotting creates a highly accurate database from which maps can be made of the site showing the distribution of all artifacts across the battle site. The 1836 artifacts found in these locations were pinpointed and recovered from an average depth of about six inches, some deeper and some slightly shallower depending upon the soil content.

Charles Garrett helped recover several Mexican musket balls and a buckle from a shot pouch. "I was using the *GTI 2500* in All Metal Mode when I detected the buckle," Garrett related. "It was a very weak signal due to the mineralized ground we faced this day. It was at 9-plus inches deep and it only made a *ssshhh* sound because it was approaching the maximum detection depth in this soil condition."

Several others, including myself and Rusty Curry, helped pinpoint musket balls. The



*(Above, left and center) Front and back of a flat button found near the breastworks. (Above right and immediate left) Many early square nails and other iron artifacts that were recovered are likely the remnants of the Mexican Army's deteriorated breastworks.*

*(Bottom left and bottom right) Charles Garrett shows his genuine enthusiasm as his recovery team excavates another musket ball at San Jacinto.*

*(Below) This early folding knife, badly decomposed after many decades in the soil, was recovered at about eight inches some 100 yards away from the area of the Mexican breastworks.*





(Left) Texan reenactors storm General Santa Anna's breastworks where the Garrett team would search in 2009. (Above) Mexican soldiers prepare to fire a replica of the Golden Standard cannon that was captured during the San Jacinto battle.

experience was one most will not soon forget. "I was able to recover a musket ball from the San Jacinto battlefield and even got to hunt with none other than Charles Garrett himself," related Curry. "Those things do not happen just every day in my life. Being native Texan only amplifies my gratitude and pride."

Gregg Dimmick was equally busy detecting artifacts and switching between several different brands of detectors to field test the abilities of various machines. He worked a known productive area, planting flags on good hits for the diggers. I followed up with a Garrett GTI machine to double-check the spots and plant flags where he received other good readings. Bob Podhrasky and Brian Head also worked over the field with a *Recon-Pro* countermine PI detector, noting other good spots.

One of the challenges this day for some detectorists was a layer of mineralization that lay about eight inches beneath the surface. This battleground sits on the edge of the Houston Ship Channel and is barely above sea level. The ground below was thus wet with moisture from recent heavy rains and the high water table, causing some conditions similar to wetted salt that might be encountered at the coast. The PI detector was great in helping to determine whether some "targets" were real targets or the phantom effect of the mineralized ground.

Roger's recovery teams were impressed with the ease in which the Garrett *Pro-Pointers* were able to speed recovery times of small metallic artifacts. In more than one instance,

these pinpointers enabled our teams to find an additional historic object in the side wall of the hole after retrieving the one that we had pinpointed. "We were all pretty impressed with how much easier they made the work and how much more functional they were than the one we'd used before," remarked Douglas Mangum.

Robert Jordan and several of the detectorists working where the Mexican breastworks was believed to have been recovered a number of iron items. Robert was understandably a little disturbed that his team continued to dig square nails and other metal items he was not expecting. Douglas Mangum quickly explained that these pieces were historically significant because they were believed to be the remnants of the breastworks that had long since disintegrated over time. By the time we took a lunch break, Douglas and Roger had already registered 62 items that had been sited in. The breastworks had been stacked high to form a defensive shield to the Texan rifles on April 21. Private James Hill noted the Mexican breastworks—stacked with "brush, blankets, sacks of corn, flour, camp equipage, aparajos [packsaddles]" and other goods—seemed initially to be "bulletproof."

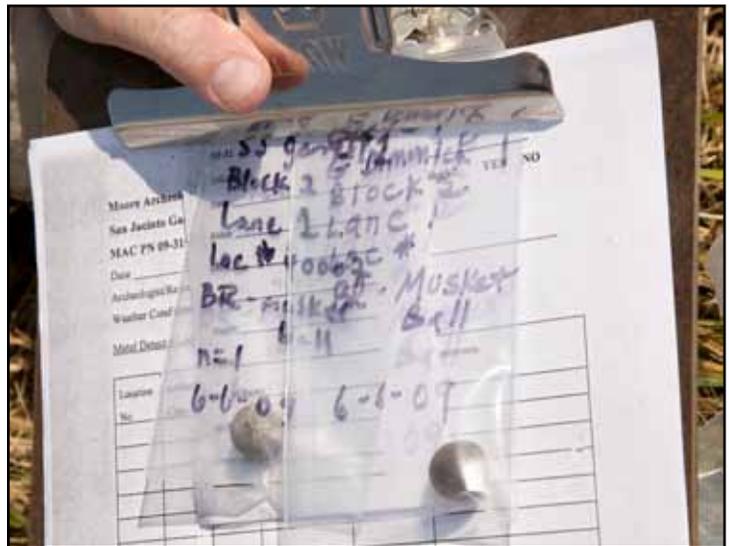
Another significant item excavated during the morning was a canister plate believed to have been used by the Texas artillerymen. This plate was thick, about the size of the top half of a softball, and had four holes drilled through it. Such canisters or stands of grape, used by both the Texan and Mexican cannon, created a shotgun effect when fired from a field piece.



(Left) Gregg Dimmick looks on with other detectorists as a Texan canister base is unearthed. This artifact (above) is only the third such piece recovered on the San Jacinto battlegrounds thus far.



(Left and right, above) A buckle from a Mexican soldier's shot pouch, found by Charles Garrett, is unearthed and examined. Garrett believes this shot pouch might have been used by a group of soldiers as they fired on the approaching Texans.



(Left and right, above) Volunteer steward Linda Gorski dutifully records the data for two more recovered musket balls.

Only two other such canister plates have been recovered from the battleground, making this an important discovery. Mapping where the plate was found, and working backwards from there, can help the archeologists locate where the Texas cannon stood when it fired the shot.

The clusters of grape shot fired at San Jacinto

had devastating results. Each ball was roughly one and a half inches in diameter or more than twice the size of a musket ball. General Sam Houston's first horse, a gray stallion named Saracen, was riddled with at least five balls from a volley believed to have been fired from the Mexican cannon, known as the Golden



*(Above) The author retrieves a Mexican musketball (see closeup above, center).*

*(Top, right) A brass ring fresh from the earth.*

*(Center image) Reenactors portraying Texan Army soldiers charge through the tall coastal grass toward the Mexican breastworks.*



Standard. His horse crumpled to the ground and the general was given another horse by one of his soldiers. Another Texan, Private Elijah Votaw, “was wounded by a canister shot in the breast” on April 21.

The Golden Standard, in fact, only managed to get off a small number of shots on April 21 before the Texans’ Twin Sisters scored a direct hit on the cannon team. The remaining gun crew under Lieutenant Ignacio Arenal was overwhelmed. The heroic General Manuel Fernando Castrillon was riddled with gunshots as he barked orders to the gunners. The Mexican cannon had been primed and was in the act of being made ready to fire again when it was seized.

We also recovered a folding pocket knife believed to have been carried into combat by a Texan. This aged utensil was badly corroded and in pieces, although the ground had actually preserved some of the original wood of the knife.

Following our Saturday recovery work, six of the Garrett detectorists—Glenn, Rusty, Robert, Joe, Rick and Mike—returned on Sunday to help survey an area where the Texan cavalry under Sidney Sherman had skirmished with an advance force of Mexican cavalry, artillery and infantrymen. Their finds were not as numerous, as this area had been previously surveyed.

The two-day work on the 1836 battlefield was significant in recovering artifacts because the battlefield is scheduled to soon be replanted in native grasses present on the day of the battle. This effort will help restore San Jacinto’s prairies to the conditions which existed on April 21, when Texans were able to take advantage of the cover and advance right on top of Santa Anna’s camp before being discovered.

We felt honored to have been part of such historic recovery work. Michael Strutt pointed out that it was good to unearth as much as



*(Above) This chain and its connectors are believed to have once been part of a Mexican officer's uniform.  
(Left) Michael Strutt of the Texas Parks and Wildlife Department thanks Charles Garrett for his team's assistance.*



*(Above) Archaeologist Roger Moore shoots in an artifact from the total station. (Below) The field team lines up the artifact by placing the reflector pole in the excavation as detectorist Herman Denzler takes a quick break from the midday heat.*



possible before the area is replanted. "The experienced volunteer detectorists and stewards are truly critical to this project," Strutt said. "The folks know the machines and how they react in the soils and various conditions we get at San Jacinto. Without them this project does not succeed nearly as well as it has."

Strutt praised the efforts of everyone involved as he spoke with Charles Garrett on the battlefield. "Texas Parks and Wildlife really appreciates Garrett Metal Detectors donating a number of instruments to us and a lot of their employees' time," he said. "You are helping us determine a lot more archaeologically about what happened at San Jacinto. You're taking part in a scientific excavation that we've been working on for almost six years now."

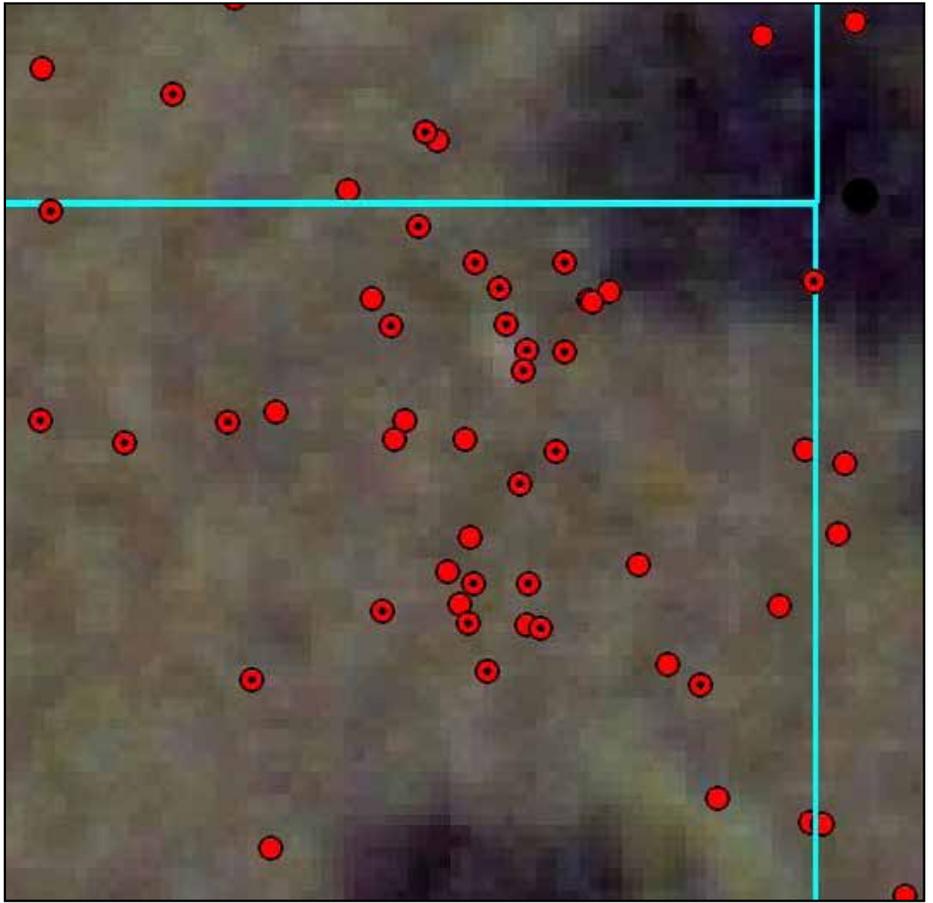
The Garrett team was further praised by Strutt for recovering artifacts that help tell the history of Texas as they come out of the ground. The types of items found, the numbers of items found and their precise locations are all carefully recorded by Roger Moore's archaeologists to help pinpoint where specific actions occurred.

Prior to this effort in June 2009, Gregg Dimmick had invited me along on a special project in May 2008 so that Roger Moore's recovery teams could help field test some of the first Garrett *Pro-Pointers*. We surveyed a specific historic area belonging to NRG Energy near the San Jacinto battleground, an area where many soldiers of the Mexican Army had fled following the chaos on April 21, 1836. The archaeology work in this

### **Patterns of History**

*This simplified image illustrates how the San Jacinto archaeologists learn from the recovered artifacts. The northeast corner of this search zone shows a heavy concentration of artifacts. The red dots with black circles indicate battle related artifacts recovered during the Garrett search. Those red dots with no inner circle represent artifacts unearthed during previous searches.*

*“This concentration appears to continue beyond the boundaries of this block,” noted archaeologist Douglas Mangum. “This concentration, and others we compiled this day, only look as solid as they do because of the combination of multiple investigations over more than five years. None of these investigations individually would have made these patterns as clear as they are now. Only because of careful excavation, the total station and the GIS software do we have such precision of artifact locations.”*



area led the team to announce in April 2009 that they had pinpointed a key area where the Mexican Army had surrendered en masse to Texan forces.

This “Mexican retreat” area was in heavy forest that required special land-clearing by machinery that literally mulched down the trees and undergrowth to create “zipper lanes” which zigged and zagged along the suspected line of retreat. During the course of many months of surveying this area (under exclusive permission by NRG), the archeologists found numerous items of historical significance, including clusters of bayonets where Mexican soldiers probably under Colonel Juan Almonte apparently laid down their arms and surrendered en masse.

As Gregg and I detected along the zipper lanes that day, we found surprisingly few “junk metal” targets—only a single crushed soda can and a shotgun shell. We found a piece of chain that would have held a Mexican officer’s sword to his uniform; a buckle from a shot pouch; and 44 Mexican .69 caliber musket balls.

All told, the survey work on the San Jacinto battlefields has recovered thousands of artifacts, including more than 600 pieces of shot, ranging

from Texan and Mexican musket balls to grape shot and the three canister plates. The recovered artifacts will be carefully cleaned and conserved by expert teams at Moore Archeological Consulting. Certain items in need of specific conservation will be passed on to Texas A&M University for special attention.

The location of each recovered artifact or cluster of artifacts becomes extremely meaningful when the archaeologists begin compiling their data. “The coordinates of the artifacts are downloaded from the Total Station data collector into a Geographic Information System (GIS) program back at our office,” Roger Moore explained. “This program, managed by Douglas Mangum, does more than simply make a map of our finds. Each artifact coordinate is a precise ‘real-world’ location that can be displayed accurately over many different maps—as long as the maps or aerial photos have been ‘georeferenced’—that is, overlain so that their feature locations correspond with the same points on a very accurate base map layer.”

Simply put, this means that Roger’s team can see the San Jacinto artifacts with considerable accuracy against the background of a 1920 U.S. Geological Survey Quadrangle map as well as plotting these items on the current version of the same map. “We



*Pro-Pointer in use pinpointing an artifact at San Jacinto, June 2009.*



*Douglas Mangum, seen directing the Garrett search teams, also manages the geographic database which allows the archaeologists to plot each of the recovered items.*

can also look at the artifacts in relation to a 1930 aerial photo as well as against a picture taken in 2009," Moore detailed. "We can easily add Garrett's 2009 artifact locations to those of the materials previously found in the breastworks area over five years ago."

The detailed GIS program allows the experts to determine where key events of the battle occurred. The location of the canister plates has helped to determine the firing locations of the cannons. "Also, the analysis of musket balls by Doug Scott Ph.D (an expert on Little Bighorn's battlefield artifacts) combined with GIS have allowed us to potentially determine small unit

locations, via the similar ball molds," said Mangum.

Some of the San Jacinto artifacts previously conserved are on display in the Sam Houston Museum in Huntsville. Many other Texas Revolution artifacts unearthed by Dr. Gregg Dimmick's teams during their tracking of the Mexican Army's retreat after San Jacinto can be seen at the Alamo in San Antonio, at the Bob Bullock Texas State History Museum in Austin or in the Fort Bend Historical Museum in Richmond.

#### **About the Author:**

Stephen L. Moore, Garrett Metal Detectors' marketing and advertising manager, is also the author of *Eighteen Minutes: The Battle of San Jacinto and the Texas Independence Campaign*. A sixth generation Texan, he has published nine other books on Texas and World War II history. In recent years, Steve has combined his passion for history with the use of metal detectors to promote responsible relic recovery.