A Potential Threat to Archaeological Sites

Metal detectors are now sophisticated enough to identify a deeply buried Civil War bullet. Many hobbyists who use metal detectors are lobbying to get access to more public lands, some of which have archaeological sites.

Though most of these hobbyists are law abiding, metal detectors have been used to loot archaeological sites. Consequently, some archaeologists are concerned about these developments.

By Elaine Robbins

This painting, titled "The Capture of Rickett's Battery," depicts the struggle on Henry Hill during the First Battle of Manassas on July 21, 1861, in Virginia. This was the first of two major Civil War battles that took place here. They are also referred to as the Battles of Bull Run.

MANASSAS NATIONAL BATTLEFIELD PARK

Many archaeologists are concerned about the threat posed by metal detectors. But in some cases these instruments are used in the service of archaeology. At Arkansas's huge Pea Ridge National Military Park, a group of volunteers uses metal detectors to find archaeological evidence. The volunteers work under the supervision of Doug Scott, an archaeologist with the National Park Service.

ROBERT STILL

On a humid evening in August a car with Pennsylvania plates pulled into a church parking lot on the edge of Virginia's Manassas National Battlefield Park. Two men got out, gathered their knapsacks, and walked into the woods. When they reached a spot deep in the woods a few hundred yards off of a park trail, they set up a base camp and waited for darkness to fall.

A few hours later they changed out of their shorts and T-shirts and put on camouflage. They pulled the components of two metal detectors out of their knapsacks and duct-taped them to walking sticks they had found on the ground. Making their way with small flashlights, they crept through the woods to an area of the park known as the Unfinished Railroad—a spot where Confederate troops hid behind the mounded grade of an unfinished rail line and ambushed Union troops. Poring over the ground with their metal detectors, they dug a hole with their buck knives whenever they got a promising hit.

Manassas park ranger Scott Ryan had been on the

lookout for the car with the Pennsylvania plates that night. The last couple of days he had noticed the vehicle parked suspiciously on the shoulder of a county road that ran through the park. The previous night he had peered into the parked car and noticed a telltale price guide to Civil War artifacts opened in the backseat. So when he spotted the car in the church parking lot, he parked, pulled on his night-vision goggles and headed into the pitch-black woods. By the time he caught up with the men and led them out of the woods in handcuffs, they had already dug more than 30 holes. Later, back at their base camp, he found night-vision goggles and a knapsack containing a .69-caliber Minié ball made in Austria, a piece of a military button, and an ornamented brass object that came from the cover of a soldier's box.

Historic sites across the country are under siege by looters wielding metal detectors. Military battlefields are the most frequent targets, since metal bullets, belt buckles, and bayonets from the Revolutionary and Civil Wars are easily detectable by these devices. Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park in Virginia, for example, suffered nine looting incidents last year—and a record 17 in 2001. "About 98 percent of the looting at Civil War sites is done with metal detectors," says Stephen Potter, regional archaeologist for the National Park Service in the National Capital Region, an area popular with Civil War buffs that includes Manassas, Antietam National Battlefield, and Harpers Ferry National Historical Park.

Although military battlefields are the hardest hit, other archaeological sites are also targets. In 2001, a park interpreter at Texas's Goliad State Historical Park discovered 24 freshly dug holes surrounded by metal fragments near the Spanish mission and along the nature trail. In the months before the incident, old metal buttons "from the Goliad area" had been offered for sale on eBay—presumably collected during earlier forays into the park.

Looting on public lands with metal detectors is not a new phenomenon: It's been going on for as long as these gadgets have been around. But in recent years, the damage has become more pronounced because the devices are increasingly sophisticated. While the early metal detectors couldn't tell a gold coin from a pull tab, today $900 buys a device complete with LCD graphic target analyzer and microprocessor-controlled operating system. The latest devices can also detect items buried deeper in the ground. "A few decades ago, an instrument might be able to find a bullet buried six inches in the ground," says Potter. "But today the best machines can discriminate a .58-caliber conical lead bullet—the most common bullet from the American Civil War—at 10 inches. Depending on soil conditions, some of the new generation of detectors can even pick up a small, lightweight brass hat cap [a firing mechanism on a rifle or musket] at six to eight inches."

With the creation of Internet sites like eBay, looters have easy access to a ready market of collectors. Cartridge cases fired at the Battle of Little Big Horn, for example, might fetch $100 to $200 each. An artillery gunner's quadrant from the Revolutionary War recently sold on eBay for $1,300.

As managers of public lands grapple with the looting problem, they are now facing an even bigger threat: a campaign by metal detector groups to open more public lands to their hobby. In a movement that echoes the arguments of off-road vehicle groups and others calling for access to public lands, organizations like the Federation of Metal Detector and Archaeological Clubs (FMDAC) have pressured state park departments and state legislators to loosen the rules governing the use of metal detectors in state parks.

"People vacation, and if they're metal detecting people, they like to metal detect wherever they can," says James Beyers, national vice president of the FMDAC and secretary of the Seiders Springs club in Texas. "We're not asking for [access to] whole parks. We're just asking for public-use areas—a beach area, a picnic area, a camping area. We pay our taxes, we pay for these parks, and metal detecting is the only hobby banned from the parks." Hobbyists feel unfairly targeted by rules that allow other forms of recreation that can have equal or greater impact on resources. "Metal detecting is a hobby, just like fishing, hunting, camping, or playing volleyball," he says. "We clean up the parks as we go along. Everything we dig up we dispose of if we don't keep it."

GARRETT ELECTRONICS, INC.

(Top and above) This popular and sophisticated metal detector uses LCD color graphics to show the size and depth of buried objects. It also indicates whether the objects are coins, pulltabs, bottle caps, cans, or bigger items.

Last year representatives from the FMDAC, a confederation of 140 local clubs, met with state park directors in Texas and Arkansas to request that they loosen regulations that prohibit metal detecting in state parks. When the parks departments in both states decided to maintain their current policies, Beyers collected hundreds of signatures for petitions to state legislators. So far no legislation has been changed.

In a preemptive move to protect their resources, several states are tightening laws governing metal detecting in their parks. In December, New Mexico implemented a new regulation prohibiting metal detecting in state parks. A few months ago South Dakota expanded its restriction against metal detecting to encompass not just parks but public hunting areas as well.

Last May, after Michigan tightened its policy—it now prohibits metal detector use except at designated swimming beaches, day-use areas, campgrounds, parking lots, and boat-access areas—the parks department was besieged by a virtual rally held by angry hobbyists. "I was inundated with the metal detecting clubs and communities from around the country," says Harold Herta, operations unit supervisor of Michigan's Parks and Recreation Bureau. "It was really bad. They flooded me with over 400 e-mails, and they locked up my voicemail. They said we were ruining their sport, and that they're never coming here again. One of the letters even said this policy was unpatriotic, because the president has asked everyone to be on the lookout for al Qaeda, and how are they going to find terrorist groups if they're not welcome in the woods?" he relates exasperatedly. "Well, we're not discouraging you from looking for terrorist groups if you want to do that. Just don't take your metal detector."

MANASSAS NATIONAL BATTLEFIELD PARK

This landmark, known as the Stone House, is found at the center of Manassas National Battlefield Park. Originally a tavern, it's believed to have been built sometime between 1828 and 1850. Wounded soldiers from both the Union and Confederate armies were housed there during the two battles at Manassas. Manassas, along with other Civil War battlefields, attracts looters using metal detectors.

Working Together

"What's the difference between a Northern fairy tale and a Southern fairy tale? A Northern fairy tale begins 'Once upon a time.' A Southern fairy tale begins 'Y'all ain't going to believe this.'

That's how Don Long, then president of the Northern Virginia Relic Hunters Association, described how he felt the night he got a call from project director Matthew Reeves inviting his members to participate in an archaeological dig at Manassas National Battlefield Park. "The first thing I thought was, 'Yeah, right. Dig on Manassas Battlefield. This guy has to be nuts.'"

In fact, he wasn't. The National Park Service has sought metal detector hobbyists on a number of occasions to help with their surveys. "It's been very successful," says Bob Sonderman, a National Park Service archaeologist. "If you're working in a larger place where you have a huge survey area, we can do our work in one-third the time using volunteer enthusiasts. And we provide them with an opportunity to understand why we do what we do, and why it's important to do it that way."

Archaeologist Stephen Potter, who is also with the National Park Service, agrees. "They've had a tremendous positive effect on our archaeological programs and research. Most of these folks are Civil War buffs, so you're getting people who are well-read about their passion."

To a hobbyist like Malcolm Price, the Manassas dig offered the chance of a lifetime. "I found Civil War bullets, artillery shell fragments, and buttons from Louisiana, Virginia, and New York." But for Price, it was the experience, not the treasures, that was the bigger thrill. "I got to metal detect in a place I never thought I'd get access to in my life." —*Elaine Robbins*

DOUGLAS SCOTT

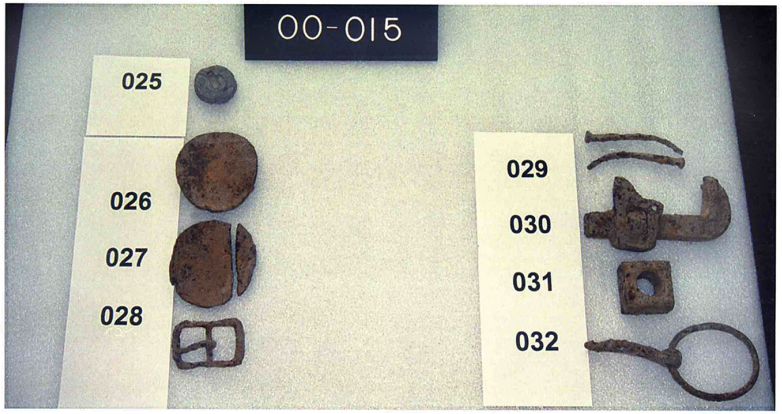
The crew who worked at the Little Bighorn battlefield in 1999 consisted of professional archaeologists, retired government employees, a scrap metal business owner, a professional archivist, a housewife, a Native American, and a house painter. This volunteer crew also used metal detectors to recover archaeological evidence.

This grass-roots campaign has had its greatest victory to date in Washington State, where a law was passed in 1998 requiring the parks department to open an additional 50 acres of parkland a year for five years to metal detecting. A few years ago metal detector groups launched a more frontal attack: They found a sponsor for a bill that would have opened all state parks to metal detecting except in areas known to have historical resources. Although the law didn't pass, the campaign has left archaeologists in Washington concerned that it will be reintroduced in the future.

The proposed rule change would force resource protection staff to survey its 220,000 acres of parkland and identify areas that should remain off-limits. "The problem with that, from our standpoint, is it puts the onus on managing agencies to not only protect these resources but to identify all those areas where archaeological and historical sites are," says Washington State Parks archaeologist Dan Meatte. "And of course the problem with that is that we as a management strategy do not go out and identify where all these historic and prehistoric sites are. One of the tools of managing these sites is, in many cases, not advertising their presence."

One of the problems with greater access to public lands is that legalized metal detecting gives looters a good cover. "If you open public lands to metal detecting, you put the law enforcement people in an untenable position," says Potter. "How are they going to know if someone is out there looking for lost jewelry or coins, or if they're really out there looking for archaeological resources? It's going to put a tremendous burden on an already overburdened law enforcement organization, whether at the local, county, state, or federal level. Those people already have enough to do, with crimes that once occurred only in our inner cities now happening in our parks—and now with homeland security concerns. It seems to me that it's irresponsible of public lawmakers to put law enforcement people in that situation."

Archaeologists are quick to point out that most metal detector users are simply enjoying a harmless pastime and are certainly not looters. "What the majority of people are doing is simply using it as a tool for finding lost items, jewelry, and coins," says Meatte. "They prefer to go to day-use areas and campgrounds, where people are most likely to lose things." In fact, many clubs post codes of ethics on their Web sites, and last spring, after reports of looting at Harpers Ferry and Gettysburg, FMDAC offered a $500 reward for information leading to the arrest of looters on federal property.



ROBERT STILL

These artifacts were taken from Pea Ridge National Military Park by a looter using a metal detector. A park ranger apprehended the looter. The artifacts in the left row, from top, are a time fuse for a cannon ball, two base plates for cannon projectiles, and a harness buckle. The artifacts in the right row are nails, the head of an adjustable wrench, a square nut, and a fragment of a watering bridle bit. The artifacts in the right row are associated with a 19th-century occupation.

But even law-abiding users can inflict damage to a site without realizing what they're doing. "Say someone wants to metal detect an 18th-century farmstead in Virginia, or an 1880 soddie in Nebraska, or a Colorado mining camp," says Douglas Scott, a National Park Service archaeologist. "They're looking for coins or marbles, bottles, jewelry, or tobacco tags. They go in and they say, 'Oh, it's just a bunch of nails here,' and pick them up and throw them away and kind of clean up the site. What they've done is begin to destroy the record of how that house was built, what people did in that house—they played marbles or checkers or chess. And if they picked up the door hinges and the window-sash weights and things, we begin to lose the context of what was there, how the place was built, what their social and economic status in life was."

Scott, one of the nation's leading battlefield archaeologists, experienced the devastating effects of destruction of an archaeological site a few years ago at Pea Ridge National Military Park in Pea Ridge, Arkansas. Just weeks before he was to begin the first archaeological survey ever made of Clemens Field, an important Civil War battlefield, park ranger Robert Still caught a man in broad daylight looting the battlefield with a metal detector, his 12-year-old daughter in tow. The man had dug up 18 artifacts, most of them Civil War bullets. When his wife later arrived to pick up their daughter, she voluntarily returned 81 other artifacts he had stolen from the park, including bullets, cannonball fragments, artillery pieces, and an 1858 Brass Eagle button.

Although the man was convicted and sentenced to jail—"the sentencing judge had five relatives who fought at that battle," says Scott—the damage had already been done. "When we went out and surveyed that field," he says, "we came up with over 200 additional objects, which we precisely plotted in patterns to help us understand how the battle took place. We were using the position of the cannonball fragments to do a reverse view-shed analysis using GIS to determine where the gun positions were. But the fact that this gentleman had collected another 99 artifacts, which we no longer have as part of our record, meant that we've lost the context. We've lost one-third of our data set, and it has hampered our interpretation to some degree.

"This is our combined heritage," Scott says. "If private landowners want to let their historic sites be destroyed, that's their business. Don't like it, but it's their business. But public lands may be the only place where we can preserve our national heritage in a reasonably intact way. This is what people go to the national parks to see."

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