ALASKA STATE MUSEUMS

CONCEPTS

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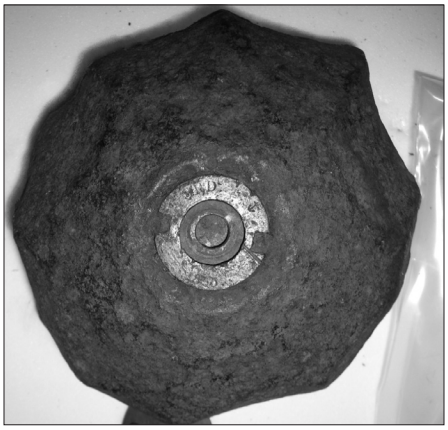
Is All Quiet on Your Museum Front? Ordnance in Museum Collections

by Rosemary Carlton

Collections curators are responsible for carefully documenting, storing, and protecting the irreplaceable and significant objects placed in museum collections; but they must also protect the museum staff, facilities, and the public from some of the objects themselves. One type of object that appears in collections as a passive and harmless item, but in reality can be potentially dangerous, is ordnance.

Ordnance (cannonballs, shells, grenades, etc.) at the Sheldon Jackson Museum have been in the collection since at least the early 1930s with most traceable to even earlier dates. In meeting minutes of the Alaska Society of Natural History and Ethnology, the founding organization of the museum, there is mention of cannonballs, grenades, bombs, and various guns being donated in the 1890s. For all the intervening years, it was assumed that potentially dangerous pieces were well documented and defused or dismantled, rendering them harmless.

However, it was recently brought to my attention that the ordnance in our collections had not been thoroughly evaluated for safety. Former curator Peter Corey asked if I had yet had the opportunity to have a particular piece in collection storage looked at by "someone who knows about those things." The piece had been cataloged as a valve handle, so I had not paid much attention to the harmless-looking object. After having a few other people with an interest in armaments look at the piece, the conclusion was unanimous—it was not a valve handle. But then, what was it?



Shell cap from 60-pounder Parrott type II shell.

Close-up of the fuse with ORD, 1860, and a naval anchor engraved on top.

THE 60-POUNDER

After an Internet search and email consultations with the staff of the U.S. Army Ordnance Museum at the Aberdeen Proving Ground in Maryland, it was positively identified as a shell cap from a 60-pounder Parrott type II shell used by the United States military during the Civil War period—not even close to being a valve handle. According to the Army Ordnance Museum staff, these were fired from the 5.3 inch (diameter of bore) Parrott rifled cannon. The term 60-pounder referred to

the weight of the shell. Parrott was the name of the cannon designer.

The base plate of the object did not contain any explosives. Its primary function was to grip the rifling of the gun and impart a spin on the shell as it traveled up the bore of the cannon. The points on the corrosion appear to match the rifling bans of the 60-pound Parrott cannon.

In the center of the piece is a fuse referred to as a navy watercap. The term meant the fuse was watertight, i.e. the shell would still explode even if it entered the water prior to detonating. This was very important for cannons firing at ships, whether the gun itself was mounted on a ship or on shore.

The 60-pound Parrott was a very successful naval gun and was widely used by the Union, both aboard ships and on shore to protect harbors. The fuses, which were produced from 1858 to 1872, saw the most action during the Civil War. Information on how the cap came to the museum has been lost but at least now we know what it is.

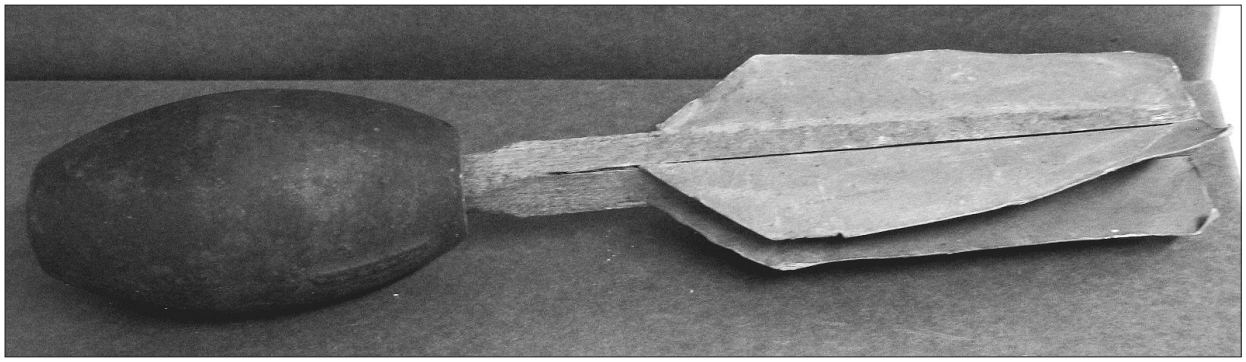
As I researched this piece, it made me think of the museum's ordnance on loan to Sitka National Historical Park. All materials thought to be Russian were loaned to the Park at the time the museum was purchased by the State of Alaska in 1984. I remembered some now suspicious-looking objects in that material and began investigating them as well.

My research raised as many questions as answers. For instance, the books I'd been reading said some armament fuses held powder. Did our cannonballs have fuses? Do they still contain powder? Does powder become less stable over the years? Are the cannonballs harmless lumps of solid cast iron or are they hollow and filled with powder? More images were emailed to the Army Ordnance Museum and some very interesting information came back.

After reading the catalog cards generated by the National Park Service at the time the museum loaned them the Russian materials, it was clear at least two of the pieces were American, not Russian. One of the pieces (V-A-46) had been cataloged as a whale bomb but the other object (V-A-26), identical except for paper fins, had been listed as a hand grenade. According to the Ordnance Museum, these pieces were rare, Civil War-era, Ketchum hand grenades. The curator of the Ordnance Museum said the metal body of the Ketchum hand grenade was not uncommon but having the paper fins attached makes it an extremely rare piece. The paper and wood fins are fragile and few have survived the century-and-a-half since the Civil War.

This raised more questions: Were these pieces still live? What about the cannonballs with plugged holes and mysterious stems coming out of them? And then there was the cannonball with a CAUTION note, which had been cataloged by the National Park's seasonal curator, a specialist in 19th century military materials. Were we housing potentially explosive objects?

After another search on the Internet it became clear that the ordnance stored at the Park with wood plugs and other appendages could very well be hollow and full of gunpowder. One cannonball (V-A-158) had been emptied of powder at an unknown date. The powder was stored in a plastic bag in the background files! Another cannonball (V-A-114) stored at the Park was very similar in appearance to those on the Internet and was described by the Park's



Ketchum hand grenade. V-A-26

seasonal curator as probably live. One source described similar projectiles as Adams hand grenades. Our two cannonballs were very similar in description to the Adams hand grenades.

Whether these were Adams hand grenades or not, they were very suspicious looking, and the only way to find out if they were dangerous was to have experts take a look at them.

Cannonball with the wood plug. V-A-114

Cannonball with small hook-like appendage. V-A-75.

WORKING WITH OTHER MUSEUMS

After discussing the problem of potentially harmful objects on loan to Sitka National Historical Park, the Alaska State Museum's chief curator, Bruce Kato, and curator of collections, Steve Henrikson, decided I should ask the Explosive Ordnance Disposal (EOD) team from Fort Richardson to do an evaluation of the various collections of ordnance in Sitka. Ten years ago, a team from Ft. Richardson had assisted Steve Henrikson in disarming a bomb in the Alaska State Museum's collection.

I alerted Sue Thorsen at the Sitka National Historical Park about our plan to have the Sheldon Jackson Museum's ordnance, currently housed in their collection storage, checked by an EOD team. I asked if she would like to check the park's armaments. She responded that this was the perfect opportunity. I also contacted the Sitka Historical Society to see if they had any materials needing evaluation. Bob Medinger, the director, confirmed they too had a cannonball, guns, and other suspect artifacts.

I contacted Sergeant First Class Jason Doty at the Department of Defense at Fort Richardson, Alaska, EOD, to make arrangements for a team to travel to Sitka. He made it clear that the Ft. Richardson team is trained to examine and detonate live armaments and not to manually disarm them.

After several discussions with our respective supervisors, the EOD officer agreed that important historical materials should be preserved and, if any of our important pieces were live, they would help find a safe place to store the munitions until they could be disarmed.

I was asked to send them copies of all information we had on the ordnance, along with photographs. Each of the three institutions in Sitka provided the team with the information they requested. As they began their research, we continued ours, developing a list of objects that we felt could be disposed of, if necessary, and a list of important objects (such as the Ketchum hand grenades) that we did not want destroyed.

If any of those pieces were determined to be live, they would have to be moved to a more secure place. The team would not leave them in museum storage. Sergeant Doty con-

tacted the Sitka Police Department to make arrangements for storage of any live ordnance and to obtain assistance with the transportation of the pieces. Any objects of historical importance would be stored safely until a team of manual disarmers could be flown to Sitka to render them inert.

THE TEAM ARRIVES

The team of two EOD personnel arrived with a portable X-ray machine and other equipment and began the examination of the objects we were concerned about. At the museum, Sergeant Doty and First Sergeant Brian Bess quickly examined the two pieces—the shell cap and part of a whale harpoon. As we had anticipated, these two pieces were pronounced harmless.

The next stop was the Sitka Historical Society. Their cannonball and rifles were given the OK as safe. Old guns sometimes have cartridges still in the barrel. Following the EOD's instructions, Bob Medinger carefully inserted a dowel into the gun barrel to see if the inside length was the same as the outside length, revealing if cartridges were present. None were detected. A pistol set that had belonged to General Jeff Davis, the first U.S. military commander in Alaska, contained a box of unopened percussion caps. Medinger was advised they could remain on display as long as they were exhibited under glass and out of the public's reach.

Curatorial Assistant Ramona East at Sitka National Park had set out additional objects for the two soldiers to examine. The ordnance from both collections was placed in two groups: those they could tell were inert and those that were questionable. The museum had two very suspicious cannonballs (V-A-75 and V-A-114) and the park had six. In 2006, two of those six had been unearthed from the fort site in the Park.

The portable X-ray machine was set up and the next step in the evaluation began. After many tries with the machine, it was evident they weren't punching through or getting a clear image. Either the objects were too dense or the portable machine not strong enough. We were advised that the next step was to attempt to blast a small hole in the cannonballs to remove any powder; however, an EOD group would have to fly down on a military flight from Ft. Richardson with their explosives—ASAP. Once the military identifies potentially explosive armaments, they take care of them immediately. Doty and Bess left to make final arrangements with the Sitka Police Department for a safe place for the procedure.

EOD TEAM IN ACTION

Around 1:30 p.m. the next day, Sergeant Doty and two other soldiers arrived with their explosives and equipment. The Sitka Police Department met us at Sitka National Historical Park where the cannonballs awaited their fate. Gene Griffin, chief of resources at the park, felt it important that the two cannonballs uncovered two summers earlier be kept back and examined by those trained in manual disarming.

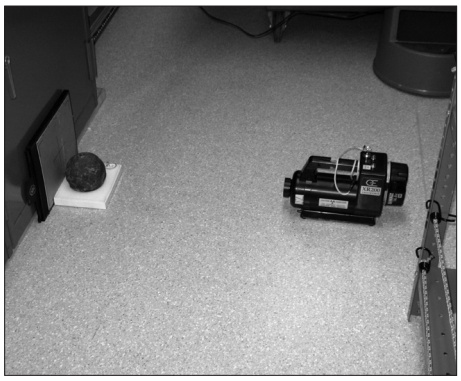
The EOD team agreed to leave them at the park, with the caution that they must be examined as soon as possible and neutralized if necessary. The six suspect cannonballs were loaded into the back of the police pickup and surrounded by sandbags for transport.

The site for the disarming was a local rock quarry. Immediately, the team set about preparing shaped charges in hopes of making a hole in the side

The EOD team pronounces the shell cap safe.

Bob Medinger checks for cartridges in the barrel of a historic gun by inserting a dowel.

Taking a closer look at the Ketchum hand grenade previously thought to be a whale bomb. V-A-46



Portable X-ray machine.

so that powder could be removed. Once the explosives were set, reporters from the *Daily Sitka Sentinel* began taking photographs and interviewing the EOD team and the museum staff present. No photos were allowed during the set-up process, for security purposes ("Ma'am, we are at war").

The cannonballs declared dangerous are loaded into a police pickup for transport to the quarry.

The pickup truck was moved down to the site where the procedure would take place. We were allowed to follow along and watch as the cannonballs were placed on the ground. Once this was done, we were told to leave while the team completed setting up the explosives. After twenty minutes, the team joined us, instructing us to move our vehicles further away. Sergeant Doty and Lts. Garry McCreary and Barry Allen of the Sitka Police did a final sweep of the quarry to make sure everyone was out of the area.

Six cannonballs await their fate on their way to be detonated.

When all was clear, one of the soldiers called out in a loud voice in three directions, "Fire in the hole… Fire in the hole… Fire in the hole." A remote device was used to initiate the blasts. One of the museum's cannonballs was the first in line. As the boom from the blast subsided, all I could think was, "How could anything survive that?" Five more blasts came shortly after—one for each of the remaining armaments. The team went back to the site along with one of the police officers. The police officer, who came back before the EOD team, disclosed that we shouldn't have our hopes up for having just a hole punched in the cannonball.

When Sergeant Doty returned he explained that when the shape charge had gone off, the first cannonball's powder had ignited and exploded the entire piece. This caused enough turmoil to affect the charges associated with the other five cannonballs, causing them to not detonate as expected. A different approach needed to be used to make sure they had all been rendered inert. Another series of blasts followed. The news didn't sound good for having any parts left. Doty was now saying, "They are really mad." In other words, there was enough powder left in the ordnance to make them extremely dangerous.

The final charge would have to "take care of them." The charge was to be so powerful we were all instructed to move our cars further away because of possible frag flying around. We were told what to do if we were outside our cars and heard whistling noises, "Get down next to the wheel well on your cars."

The reporters and curators all elected to move their cars and stay inside them. Indeed, the final blast was very impressive: a very loud boom that we could feel. All hope of salvaging any parts was now gone. Doty advised us to wait five minutes before following the team in, but suggested that there probably wouldn't be anything left to see. I asked, "Not even a few chunks?" "Well, if you want to drag a magnet through the area, you might find some particles," Doty said.

He was right. All that was left was a series of various-sized holes in the ground. He pointed out the hole where our cannonball V-A-114 had been, and how it was larger than the others because the ordnance had exploded itself after the initial shape charge went off. A huge hole was left where they had gathered the tough, mad little cannonballs together and finished them off with the last large explosion.

The cannonballs are carefully unloaded at the quarry.

An EOD team member readies the first of six cannonballs to be detonated.

A large hole is all that is left of cannonball V-A-114.

As we left, I kept thinking that maybe we could have just kept them in storage, as they have been for so many years. But I also thought, "No, what if someday someone didn't handle them correctly or there was a fire?"

DID WE DO THE RIGHT THING?

The day after our cannonballs were destroyed, I was searching the Internet for more information on Civil War ordnance for our background files. (Eleven pieces of ordnance remain at the park with one Ketchum hand grenade brought back to the museum for an upcoming loan.) I Googled *Civil War cannonballs* and a long list of links showed up. One caught my eye: "Blast kills Civil War relics dealer." At first I thought it was an old article and then I looked closely at the date: February 19, 2008—the day before the EOD team arrived in Sitka! The man had been trying to disarm a Civil War cannonball, something he had done many times before; but, for whatever reason, it exploded, killing him.

There was no longer any doubt in my mind about our cannonballs. Chances are good the pieces would never have been subjected to 500° heat or mechanically stimulated, but what if a fire erupted or someone decided to drill to determine if a cannonball was solid or not? Results of those scenarios are not something to dwell on. We had made the right decision to have our ordnance examined and to eliminate potentially deadly material. Artifacts teach us about our past and it is important that we preserve them, but not at the cost of human life. Very rare pieces can be dismantled and saved by the right team of experts.

Fortunately, both the park and the museum have a good selection of 19th century ordnance that is inert and available for researchers and exhibitions in the future. An official report was written by the EOD team outlining their examinations and their findings. Future museum staff will have a comprehensive record of how the ordnance in these collections was examined, and they will be assured the collections are safe.

A LEARNING EXPERIENCE

Not only did we learn about the process for having suspicious materials evaluated, we also gained a great deal of information about our ordnance. Our background files that were once empty, except for a small black and white photo, now have information on these previously overlooked artifacts.

WHAT WE LEARNED

1. Explosive Ordnance Disposal teams do just what their name says, they dispose of dangerous materials. They are not trained to dismantle ordnance but will attempt to save a piece if possible. Be prepared to part with an artifact if you contact an EOD team.

2. Cannonballs aren't all harmless lumps of metal. Many are hollow and filled with powder, or their fuse may even have powder in it.

3. Even experienced disarmers can make fatal mistakes. Never try to disarm anything yourself; there are experts to do so.

4. Armed cannonballs need either high temperature (500° F.) or mechanical stimulation to explode.

5. If you receive phone calls about, or visitors dropping in with, suspicious ordnance materials, they should be referred to your local police department.

6. Very significant and rare pieces should be saved if possible. But people's safety always comes first. If needed, contact a company with manual disarming capabilities. Remember, an explosive ordnance disposal team is just that—a DISPOSAL team.

ORDNANCE INFORMATION AND CONTACTS

Fort Richardson Alaska
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716th Ord Co (EOD)
Bldg 667 5th Street
Fort Richardson, AK 99505
Phone: 907.384.7601
Fax: 907.384.0068

U.S Navy Museum
Ed Furgol
Phone: 202.433.6901
Fax: 202.433.8200
www.history.navy.mil

Ordnance Museum
Ed Heasley
Jim Petrie
Aberdeen, Maryland
Phone: 410.278.3602
www.ordmusfound.org

Please note: when emailing the museum or foundation complete the subject line of your email or it won't pass their spam filters.

Ft. Sill Museum
Towana Spivey, director/curator
Phone: 580.442.5123
DSN: 639.5123
Fax: 580.442.8120
sill-www.army.mil

WEBSITES

Arsenal Artifacts, Inc.
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Phone: 828.586.1061
www.arsenalartifacts.com/default.asp

Civil War Artillery
Jack Melton
Phone: 770.633.4446
www.civilwarartillery.com

Ej's Ordnance Show & Tell Pages, 19th Century Grenades, U.S. & French
www.inert-ord.net/19cent/grenat/index.html

Wikipedia on Ketchum hand grenades
en.wikipedia.org/wiki/Ketchum_Grenade

The Smithsonian on Ketchum hand grenades
www.civilwar.si.edu/weapons_grenades.html

civilwarartillery.com on Ketchum hand grenades
www.civilwarartillery.com/fuzes/hotchkissparrottfuzes.htm

Fort Donelson Relics
John Walsh manually disarms Civil War artillery projectiles but he lives in Tennessee.
www.fortdonelsonrelics.com

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See The Civil War Artillery page *www.civilwarartillery.com* for a more comprehensive listing of Civil War ordnance books.