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Battle Cry deadline is 1:00PM Wed. two weeks before the regular meeting. Items can be given the editor by hand, mail or e-mail.

Battle Cry

Founded 1961,
Newsletter of the Sacramento Civil War Round Table
P.O. BOX 254702
Sacramento, CA 95865-4702
http://sacramentocwrt.com/

President's Message: A very common reason that launches people's interest in the Civil War is genealogy. Sebastian Nelson again reminded me that this is a great way to become involved. We all won't find interesting folks like Captain Henry Green, or will we? Finding Civil War ancestors for me is an easy task – I don't have any. My ancestors were all still in Norway during the 1860's. Many thanks to Sebastian for a most interesting presentation. Don't forget his reminder to "remember the archives" when you are chasing the details of your historical dream!

Have you checked the Sacramento CWRT web site lately? Go to **<www.sacramentocwrt.com>**, enjoy the music, find out when the next meeting will happen, what upcoming programs are, read some past Battle Crys, ride a link over to "The Friends of Alcatraz," or whatever. If you have ideas or suggestions, just mention them to Don Hayden, who is our channel to the web master.

I feel much more comfortable as the president of the SCWRT if, when I look out to the meeting crowd, I see people who I know, with names that I remember. I typically hang out in the meeting room for the 20-30 minutes leading up to the gavel to greet everyone as they arrive. When you see me there, please come up and speak; particularly, if we haven't met or have only briefly visited. I also invite you to hang out a few minutes after the meeting to get better acquainted.

I circulated sign up lists at the last meeting to get volunteers to assist at Gibson Ranch on May 16th. The response was encouraging, but I do need more people. If you didn't get a chance to sign up, please sign up at our next meeting or send me an email or give me a call. This is one of the few "community outreach" activities that we have – take advantage of it! The day typically starts with an eight o'clock meeting and winds up about 1 PM or slightly later if you take advantage of the free lunch.

As you read this Battle Cry, George Beitzel is busy shaping his talk for Wednesday night, March 12th, at 7:00 PM. His subject is "The Rubber Room!" **Are you already familiar with the title? Could it be a room where people or proposals bounce in and out? I can't wait to hear! I'm excited - bring your neighbor! Come early, stay late! See you at the Hofbrau!**

Paul Ruud, President

Treasurer's Report
The cash balance following the February 13, 2008 meeting was $2,235.24. Thanks to John Zasso, other members, and guests, the raffle brought in $88.00.

George W. Foxworth, Treasurer

MINUTES
SACRAMENTO CIVIL WAR ROUND TABLE
FEBRUARY 13, 2008
HOF BRAU RESTAURANT, WATT AVE, SACRAMENTO

Attendance-40

Members-38
Paul Ruud, President
Dennis Kohlmann, Vice President
George Foxworth, Treasurer
Edie Keister, Secretary
John Beitzel
George Beitzel
Ken Berna
Fred Bohmfalk
Terry Bowen
Harry Cain
Lydia Donaldson
William Donaldson
Brad Friedman
Alan Geiken
Kyle Glasson
Bob Hanley
Scottie Hayden
Donald Hayden
Nancy Hayden
Pam Hubbard
Chuck Hubbard
Marsha Jutorsky
Grace Long
Cressie Mendes
Phil Mendes
Jim Middleton
Betty Mitchell
Maurice Mitchell
Horst Penning
Brad Schall
Kris Scivoletto
Nicholas Scivoletto
Richard Sickert
Drew Van Winkle
Robert Williams
Silver Williams
Maxine Wollen
John Zasso
Guest-2
Sebastian Nelson
Robert Schroeder

1. Meeting started at 7:00. Members and guest welcomed by President Ruud. Sign-up sheets for docents for the reenactment at Gibson Ranch in May were passed around for volunteers. In honor of President Lincoln's birthday, President Ruud read a few famous quotes attributed to Abe.

2. Our guest speaker was Sebastian Nelson, an archivist for the State of California. He spoke on his Civil War relative "Capt. Henry Green, Calif. Infantry." Mr. Nelson covered his uncle's journey to California and his exploits in the west, in Nevada and Arizona. He had photos to accompany his presentation. A question and answer session followed. Thank you Sebastian, for sharing your family history, it was great.

3. Raffle was held, and meeting adjourned at an early 7:50.

Welcome new members Marsha Jutorsky and Harry Cain!

Edie Keister
Secretary

Coming Programs 2008		
Date	**Speaker**	**Topic**
March 12th	George Beitzel	"The Rubber Room"
April 9th	Ray Bisio	"Retreat from Gettysburg"
May 14th	Silver Willams	"Civil War Spies"
June 11th	Bob Hanley	"General Barlow"
July 9th	Don McCue	"Abraham Lincoln"
August 13th	Harvey Cain	"Bicycling the Underground Railway"
Sept. 10th	"Ted Savas"	"Lincoln and Davis at War"

e-mail received

From: Norman Patrick Doyle
To: ruud@starband.net
Sent: Friday, February 22, 2008 10:25 AM
Subject: San Francisco Civil War Round Table

FYI, the SFCWRT has finally entered the 21st century!
Our initial attempt at a web site can be found at www.sfcwrt.com .
Please let your members know about it, and remind them that they are always welcome at our meetings.
Best regards.
Patrick Doyle, Default Webmaster.

Book Review by Walt Bittle

Military Ballooning During The Early Civil War

by F. Stansbury Haydon (The Johns Hopkins University Press)

This book was copyrighted in 1941, updated in 1968, and reissued in 2000. It is a fascinating account of "what might have been", had the art and science of ballooning not been so primitive. The author obviously did extensive research, and the book is footnoted as well as indexed.

This well-written book covers one of the lesser known aspects of the time period generally, and its minimal effect on the war specifically. Because ballooning was so primitive, its practitioners were rarely given a chance to prove their effectiveness in actual combat situations. The balloon corps was relegated to civilian status, and at times they had to beg, borrow, and steal military supplies and personnel just to stay aloft.

I think we can all picture situations later in the war when an observation balloon might have saved the day, but unfortunately, there were none.

BOOK REVIEW

Small Arms at Gettysburg, by Joe Bilby

Review by Ken Hansgen, Savannah, TN

Bilby, Joseph G. 2008. *Small Arms at Gettysburg, infantry and cavalry weapons in America's greatest battle*. Westholme Publishing, Yardley, PA. ISBN: 978-1-59416-054-7

Also by Bilby: *A Revolution in Arms, a history of the first repeating rifles*. 2006. Westholm, Yardley, PA. ISBN: 1-59416-017-1, and

Civil War Firearms, their historical background, tactical use and modern collecting and shooting. 1996. Combined Books, PA. ISBN: 0-938239-79-9

I just finished reading Joe Bilby's latest book, *Small Arms at Gettysburg*. Just my "cup'a tea," very interesting. Bilby, also known for his columns, "Black Powder, White Smoke" in the *Civil War News*, is an acknowledged expert on the subject. He personally shoots many of these weapons competitively as a member of the 69th NY Infantry team in the North-South Skirmish Association. In addition to these, he has authored many other books and articles; his day job is Assistant Curator of the National Guard Militia Museum of New Jersey.

Gettysburg was an especially interesting and illustrative battle for arms "techies" such as myself because it came during the middle of the Civil War, when some soldiers still carried and used the old obsolete percussion smoothbore muskets, many others carried the minie ball-firing rifled and rifle-muskets, others used percussion breechloaders and still others were armed with self-contained cartridge-firing repeaters. Bilby not only describes the arms but uses many examples of their effectiveness when units armed with these various weapons opposed each other on the Gettysburg Battlefield. Chapters cover not only these, but also sharpshooters, revolvers and sabers. (The chapter on repeating rifles he freely admits is based on his earlier book, *A Revolution in Arms*.) The only other major small arms type used in the war, the very obsolete flintlock smoothbore musket, although used by some Confederates in the early-war Western Theater Battle of Shiloh, was no longer seen a year later at the Eastern Theater Battle of Gettysburg.

Read this book. You won't fully understand the Civil War, and Gettysburg in particular, without it. Heck, if you have a strong interest in the weapons of the period, get all three! You won't be sorry.

The graphics for the following article on Civil War Artillery on pages 5-8 will be in the April 2008 issue.

A Short Primer on Civil War Artillery

Civil War artillery was classified as “Light” or “Heavy”, which was a function of size, weight and mobility. The “Light” category included all “Field” artillery, the highly mobile units of four to six guns known as a “Battery”, which accompanied the infantry and cavalry. “Heavy” artillery was of two types: the larger and much heavier “Siege” guns which were less mobile; and the very large cannons which were more or less fixed mounted in permanent forts and coastal or river defense locations. “Cannon” was a generic name for all firearms larger than shoulder-fired weapons. The smallest that saw general use was the 6-pounder Napoleon gun; and the largest that saw no use, being made late in the war, was the 1000-pounder, 20-inch Rodman gun.

The basic field artillery piece on both sides was the French designed bronze “Napoleon”, a 4.67 inch smooth-bore, 12-pounder muzzle loader; which fired spherical shot, shell and case ammunition. Rifled cannon actually played a secondary role in field artillery operations, the principal piece being the 3 inch bore diameter “Ordinance” Rifle, which fired a cylindrical shaped projectile weighing in the order of 10 pounds. Another common rifled artillery piece was the “Parrott”, having a wide range of bore diameters, and made of cast iron with a unique wrought iron reinforcing sleeve over its breech, the point of greatest stress. (See *BattleCry* article of 8-04 for a discussion of the advantages of rifling) It was the Napoleons; however, that probably inflicted more casualties than all others combined, with the 3-inch rifles, the Ordinance and Parrott guns running a distant second.

In addition to the Napoleon, there were eight other standard types of artillery pieces that were used in varying degrees during the Civil War. These were the 3 inch and 4.5 inch Ordinance, the Parrott, James, Columbiad, Rodman, Wiard, Dahlgren and Brooke American made guns. Also used to a limited extent were the Armstrong, Blakely and Whitworth cannon, which were imported from England. Some of the above could be either smooth bored or rifled, and they came in a number of different calibers. These will be discussed further below. Also, included in Civil War artillery was a variety of “Howitzers” which were shorter barreled guns that could be fired with a higher trajectory to land projectiles beyond topographic obstructions; and “Mortars”, with extremely short barrels, but up to 13 inch bore to do the same even at much higher arc for closer ranges.

Concerning ammunition, there were many types and styles of artillery rounds manufactured during the Civil War. Smoothbore guns such as 12-pounder Napoleons and howitzers fired round cannon balls. Elongated or conical-shaped shells were used in rifled cannon. The four basic types of artillery round included solid shot for use against large infantry formations or opposing artillery, and shell which was a hollow iron shell filled with black powder and ignited by a length of paper fuse or a percussion fuse. Case shot was similar to a shell- hollow inside and filled with black powder with the addition of iron balls. The fourth type of artillery round was canister, a tin can filled with iron balls and used against infantry and cavalry formations at close range. When fired, canister turned the cannon into a large shotgun. Maximum effective field artillery range was about 1500 yards for smooth bores and 2500 yards for rifles Rate of fire of field pieces was between two and three rounds a minute, depending upon crew efficiency. A very rough organizational rule of thumb was that there should be one artillery gun per 1000 infantrymen, or one four to six gun artillery “Battery” per Infantry Brigade.

As mentioned, the basic organizational unit in the Field Artillery was designated a "Battery", which approximately corresponded to an infantry company, i.e. 100± men, and was generally commanded by an Artillery Captain, and three subalterns. A battery was an intricate organization of men, horses, and ordnance. There were multiple duties for each soldier to perform when not in battle including care of the horses, gun and carriage maintenance, and routine stock duties required. One battery in the Union army generally consisted of four to six cannon, usually all of similar type and caliber. Each gun was mounted on a two wheeled iron rimmed "Carriage", pulled by a two wheeled cart called a "Limber" plus a similar cart carrying ammunition known as a "Caisson". Teams of six horses were used to pull the cannons, limbers and caissons that held ammunition chests containing the different types of shells used in each gun. Once in position, the gunners would disconnect the cannon and the limber would move to a position directly behind the gun. The caisson team would move to a location further behind to await further orders.

On paper four or more artillery batteries were grouped together into Battalion size organizations under command of a field-grade artillery officer; but in actual practice this was seldom the case, and Battery commanders would end up reporting directly to general officers commanding infantry units at Brigade or higher levels. There was a great deal of experimentation with the organization of the artillery. There might also be a separate artillery reserve, commanded by a general officer who had at least theoretical supervision over the artillery forces of the entire army. Those who recall the conflict between Generals Hunt and Hancock over the use of the Second Corps artillery at Gettysburg will note that the resulting chain of artillery command was not always perfectly clear. (See *BattleCry* article of 12-04)

Material used in cannon manufacture included cast bronze (a copper-tin alloy), some brass (a copper-zinc alloy), cast iron, wrought iron, semi-steel and later; steel (an iron, carbon and other stuff alloy). All were muzzle-loaders except a very few of the later model 6 and 12-pounder Whitworths, which were breech-loaders. A very brief discussion of each of these civil war-era artillery pieces, in both the light and heavy categories follows: (Note: The vast majority of Civil War artillery was of two main types. They were the Napoleon and the 3" rifles. Together the two types constituted 80 to 90 percent or more of the field artillery of the major armies by the middle of the war. The rest of the stuff was an odd assortment of types.)

1. The **Napoleon** Guns M1857 were the basic field pieces on both sides during the war. Initially there were two sizes; a 6-pounder with 3.67 inch bore, which was phased out early on, in favor of a 12-pounder with 4.62 inch bore. These smooth bore guns were made of bronze, a fairly ductile material, and provided lengthy service with minimum failures. Developed under the auspices of Napoleon III, they appeared in 1856, and had been adopted by the U.S. Army before the Civil War. They were made at various armories in the Union and at the Tredegar Iron works in Richmond for the Rebels. Early attempts to rifle some of these smooth bores were a failure since bronze was too soft a metal for the grooves to hold up and too rapid wear occurred.

2. The **3-inch Ordinance** Rifle was a sleek appearing wrought iron weapon designed by John Griffen, superintendent of the Safe Harbor Iron Works in PA. This iron gun was similar in length to the Parrott Rifle, fired an elongated shell, and was deadly accurate up to a mile. Much lighter than the Napoleon, the gun weighed an average of 800 pounds and could be easily transported and manhandled by its crew. Only a limited number of copies of the Ordnance Rifle were produced at Confederate arsenals.

3. The **Parrott** Rifled muzzle loading guns varied in sizes from a 3-inch, 10-pounder to a 10-inch, 250 pound projectile. To make the cast iron barrel strong enough to withstand the

added pressures in rifled artillery, Parrott's approach was to heat shrink a heavy wrought iron band around the breech, where the pressures were greatest. This proved to be highly successful and the larger sizes of the Parrotts proved particularly effective in destroying masonry fortifications; the prime example being Fort Pulaski near Savanna. The very popular 20-pounder, 3.67 inch bore Parrott had a maximum range of 3500 yards (with solid shot and a 10-degree elevation); and the 30-pounder, 4.2 inch bore gun a 4400 yard maximum; although the effective range for rifled guns was about 2500 yards. The 20-pounder Parrott was the smallest artillery piece considered to be "Heavy".

4. The **James** Rifle was a bronze rifle similar in shape to the 3-inch Ordnance Rifle. It fired a 14 pound projectile which was initially accurate up to 1700 yards; but saw very little long term use because the rifling in the softer metal did not wear well.

5. The **Wiard** Rifle was a unique design that was mounted in a carriage that allowed elevation of up to 35 degrees. The Wiard rifle came in two sizes, a six pounder and a 12 pounder with bores of 2.6 inches and 3.67 inches. Made of semi-steel, a low carbon and iron alloy just then being pioneered, it possessed a high tensile strength much stronger than wrought iron. The guns were therefore much lighter. Highly thought of by their union users, but only eleven batteries were so equipped during the war.

6. The **Whitworth** gun was imported from England by both North and South, but only the Confederacy actively used these unique guns in the field. Designed by Sir Joseph Whitworth its bore was hexagonal in cross section and fired an elongated 12-pound, 2.75 inch iron shell which fit snuggly into the fine rifling of the tube. It was also unusual in that it was a breechloader. A locking ring around the breech allowed the end of the gun to be opened so that the shell and powder charge could be loaded through the breech. The gun's unusual shape and distinctive shells were a curiosity when compared to other ordnance, though they were extremely accurate and could fire a solid shot beyond 2,800 yards... Though the Whitworth cannon was very accurate, it had a myriad of problems with the breech mechanism. According to Colonel E.P. Alexander, the Whitworth was not as desirable a weapon as the 3 inch Ordinance Rifle.

7. The **Blakely** was an English rifled gun used by the confederates in limited numbers. These guns were available in 3.5 inch and 4.5 inch field pieces, plus a 7.5 inch navy gun, and 9 and 12 inch sea coast cannons. Wade Hampton imported four guns at his own expense, and it is said that Major John Pelham used these weapons during his outstanding artillery exploits at Fredericksburg and elsewhere.

8. The **Armstrong** was also an English-made rifled gun manufactured in various calibers up to 13.3 inch, 600 pounders. Mainly muzzle loaders, but some breech loaders were made at the smaller calibers. The rifles required special ammunition with brass studs to take the grooves, which was very costly and limited their use. The confederates had two of these larger guns, 8-inch, 150-pounders, at Fort Fisher, but it is said that they only had 12 rounds of ammunition.

9. The **Columbiad** was a generic name for the large heavy artillery smooth bore U.S. sea coast protection guns first used during the War of 1812. Most common sizes for the older Columbiads were 8-inch, 64-pounders and 10-inch 128-pounders. Beginning in the late 1840's these guns mutated into the **Rodman** system of cannon manufacturing. T. J. Rodman graduated from the military academy in 1841 and was assigned to the Ordnance Department. Studying the properties of gunmetal, he theorized that a cannon cooled from the inside would be stronger than those manufactured by the current method; that internal cooling would cause the outer molten metal to compress against the bore and create enough tension to resist the pressure of large

powder charges. Basically, he brought back the hollow casting process but instead of a solid core he used a hollow tube. Water circulating through the tube cooled the bore while coals were piled against the mold to keep the outer surface hot. Rodman's manufacturing method, now known as the "wet chill process", forced the impurities outward while the outer metal shrank against the hardened interior. Upon testing his 15-inch prototype gun, it was found that 130 pounds of black-powder created 25,000 pounds pressure in the chamber and at 20 degrees elevation the gun could send a 440-pound shell over 3½ miles. At 1,000 yards the round-ball projectile could pierce 10 inches of iron. No warship at that time could afford to trade shots with a 15-inch Rodman at close range. The largest of the Rodman smooth bores was a 20 inch monster which fired a ball weighing 1080 pounds.

10. The **Dahlgren** guns, invented by Admiral John Dahlgren, were used mainly by the Union Navy. Principal sizes were 9- and 11-inch smooth bores. The larger 15-and 20-inch guns were cast using the Rodman cooling method. The Union Monitors carried the guns generally in pairs**.** They are readily identified by their "soda bottle" profile.

11. The **Brooke** rifled gun was invented by J. M. Brooke for primary use by the Confederate Navy. It resembled the Parrott in shape and construction, but frequently had more than one reinforcing band. It was made in various calibers, including a 3-inch, 10 pounder field artillery piece that weighed 900 pounds, and had a range of 3500 yards. The Brooke rifles proved to be very competent weapons.

In addition, there were a large number of experimental weapons introduced during the war. Two artillery-type pieces may be of some interest. They are the Vandenberg multi-barrel "Volley Gun" (120 & 450-0.50 caliber barrel models); and the Gilleland dual barrel 6 pounder "Chain" Gun.

At the start of the war, the U.S. Army had nearly 2,300 cannons on hand, but only about 10% of these were field artillery pieces. By the end of the war, the army had over 3,300 guns, of which 53% were field pieces. The army reported as "supplied to the army during the war" the following quantities: 7,900 guns, 6,336,000 artillery projectiles, 2,862,000 rounds of fixed artillery ammunition, 45,300 tons of lead metal, and a 13,300 tons of gunpowder. The South was at a relative disadvantage to the North for deployment of artillery. The industrial North had far greater capacity for manufacturing weapons, and the union blockade of Southern ports prevented many foreign arms from reaching the Southern armies.

Confederate cannons built in the South often suffered from the shortage of quality metals and shoddy workmanship. Another disadvantage was the quality of ammunition. The fuses needed for detonating shells and cases were frequently inaccurate, causing premature or delayed explosions. The Confederacy had to rely to a significant extent on captured Union artillery pieces, either on the battlefield or armories such as Harper's Ferry.

It is estimated that two thirds of all Confederate field artillery was captured from the Union. All union cannons had U.S. stamped on their breech. A popular story is that a recently captured confederate soldier was observed closely inspecting the guns of a nearby Union battery. He would look at the U.S. stamped on the top of each gun barrel then simply nod his head in acknowledgement. When a Union soldier asked him what he was looking at, he replied, "Ya'll have about as many of them thar "US" guns as we have!"

Bob Williams: 2-21-08

References: "Civil War Field and Heavy Artillery, 1861-65 by P. Katcher, 2001; "Civil War Dictionary" by M. Boatner, 1988; "Artillerist's Manuel" by J. Gibbon, 1859; "Introduction to Civil War Artillery" by D. Thomas, 1996.