

Cornwallis Cave

Lord Cornwallis Cave



Yorktown
Colonial National Historic Park
York County, Virginia

Rick Lambert

Abstract

Cornwallis Cave is a small cave with a history larger than the cave itself. Being almost entirely manmade, it was reputed to be the hiding place of the British General Charles Cornwallis during the Yorktown siege. It was a commercial operation by 1848 and into the early 1900s. Now owned by the National Park Service, visitors are prevented from entering the cave and it is no longer believed to be the hiding place of General Cornwallis.

Contributors

Russ Carter, Dave Hubbard, Richard Shisler, Meredith Hall Weberg, and the Virginia Speleological Survey

The Early History

Cornwallis Cave is one of the approximately 50 caves in Virginia found outside the traditional 26 limestone counties. It is also the cave farthest from the traditional cave-bearing limestones and the easternmost cave. The traditional cave-bearing limestones are located in the western part of the state in the Valley and Ridge physiographic province and Cornwallis Cave is in the eastern part of the state on the York River in the Coastal Plain.

Cornwallis Cave is very different from most of the caves in Virginia. It may be the only cave that is entirely manmade. It is one of the few caves in Virginia that is less than 40 feet in length, which the Virginia Speleological Survey has two maps of. All this, plus its location and circumstances, have allowed it to assume a history larger than the cave itself.

Cornwallis Cave is in a bluff along the York River in Yorktown, Virginia. The Town of York was established in 1691 by an Act of Ports passed by the Virginia House of Burgesses. This legislative act provided for the creation of several port towns where customs were to be paid on all trade goods. Land was purchased from Benjamin Read next to the York River and surveyed into 85 half-acre lots. By the early 1700s the town was a major port. The waterfront was full of wharfs, docks, storehouses, and businesses. The town itself had between 200 and 250 buildings.

Stone was quarried from the bluff along the waterfront and used to build Grace Episcopal Church in 1697.

The remains of two smooth quarry walls can be seen in the early 1900s post card in **Image 1**. Also note the undercut in the right side of the bluff by waves from the York River.



Image 1. Cornwallis Cave, Yorktown, Virginia. Early 1900s post card of Cornwallis Cave showing smooth quarry walls and the bluff undercut by the York River on the right. The lattice gate in the undercut prevented animals from entering Cornwallis Cave from the undercut. (from the Lambert Archives, Monterey, Virginia)

Grace Episcopal Church was burned in the fire of 1814. The fire destroyed everything except the oyster shell marl blocks making up the foundation and walls. A stucco finish in **Image 2** has been applied to the outside of the church. The stucco was lined to make the church look like it was made of much bigger blocks.

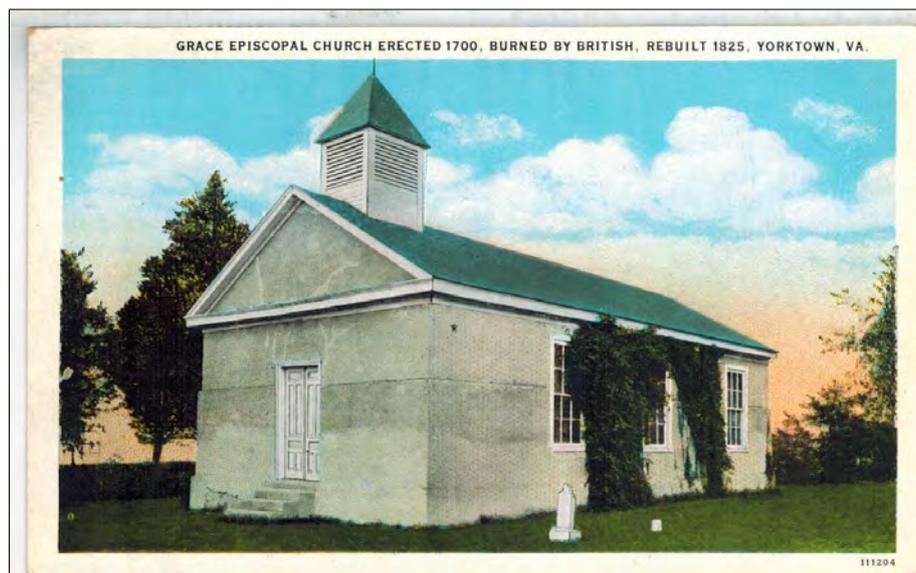


Image 2. Grace Episcopal Church. The walls and foundation are made of marl taken from the bluff at Cornwallis Cave. (from the Lambert Archives, Monterey, Virginia)

It has been assumed that the cave was enlarged and used for storage during the colonial period since it was located in the middle of the business and shipping area of the colonial port. Another report suggests that those who enlarged it were smugglers.



Image 3. Yorktown in 1781 before the siege. The entrance of Cornwallis Cave is located in the bluff just left of centre in the painting. The date of the painting is unknown. (from the collection of Richard Shisler)

The Revolutionary War

During the Revolutionary War, the cave offered a high degree of safety. Residents of Yorktown sheltered under the bluff at the cave from Continental cannon fire. The British used it to store powder and ammunition. Some reports suggest the cave was constructed in 1781 during the closing days of the Revolutionary War to shelter the British commander from the fierce bombardment kept up by the Continental troops and their French allies. It is these reports of Lord Charles Cornwallis, the British commander, “hiding,” “taking refuge,” “living,” “holding staff meetings,” and making the cave his “last headquarters” as the war intensified that have caused the most controversy. It is from these stories the cave gets its name.



Image 4. General Cornwallis (from an English print in *Pictorial Field-Book of the Revolution Volume II*)

Arguments that counter these cowardly suggestions are many. Cornwallis Cave while being described as “roomy,” is actually small, less than 350 square feet. General Cornwallis would have had many people coming and going and the cave is too small to serve as a headquarters. It is also out of sight of the main battlefield, which would hinder making decisions based on how the battle was progressing. Also, General Cornwallis was a career soldier. It would not have been inspiring to have him hiding cowardly in a cave as his troops were being bombarded.

A Natural Resources Specialist with the Colonial National Historical Park at Yorktown said they do not believe Cornwallis Cave is the “grotto” General Cornwallis used during the siege. The Park Service sign at the cave refers to Lord Cornwallis moving his headquarters to “a cave” but does not specifically say it was this cave. The placement of the sign here only suggests it. See **Image 5**. This is a puzzle which still needs to be solved by historians.

Though he was defeated by a combined American and French army, General Cornwallis continued to have the support of successive British governments. He was knighted and appointed Governor General of India in 1786. He was appointed Lord Lieutenant and Commander-in-Chief of Ireland in 1798, and in 1805 he was reappointed to India where he died shortly after arriving.

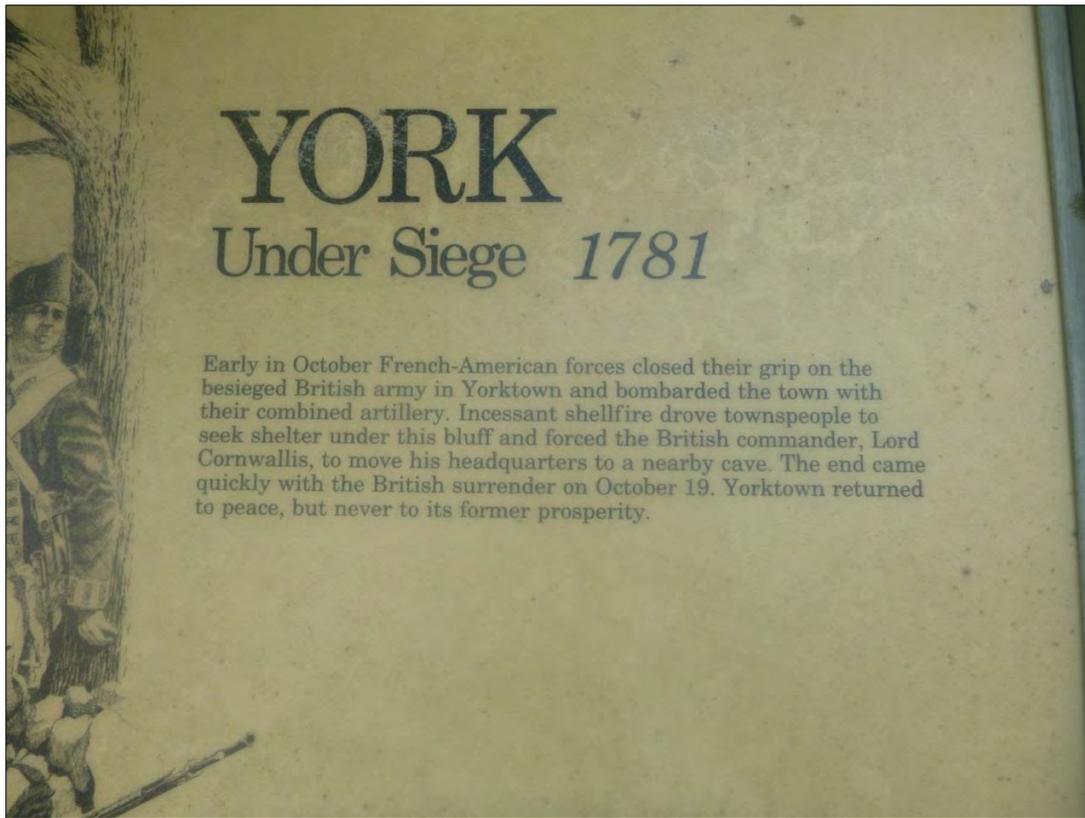


Image 5. National Park Service sign at Cornwallis Cave (Photo by Rick Lambert)

The siege of 1781 reduced Yorktown to fewer than 70 buildings and a fire in 1814 destroyed the waterfront district. In December of 1848 Benson J. Lossing visited Yorktown and Cornwallis Cave. He recorded his visit in a book published in 1859. His account is reproduced here in its entirety.

“I arrived at Yorktown at twilight^a [a Dec. 20, 1848.] and passed the night at the only inn in the place, which is owned by William Nelson, Esq., grandson of Governor Thomas Nelson, one of the signers of the Declaration of Independence. To the kindness and intelligence of that gentleman, I am indebted for much of the pleasure and profit of my visit there. We supped together upon far-famed York River oysters just brought from their oozy bed, and it was near midnight before we parted company. Mr. Nelson resides in the fine old mansion which belonged to his grandfather, and which yet bears marks of the iron hail poured upon it during the siege of Yorktown.”

“Early the next morning I strolled over the village. It is situated upon a high bluff of concrete or stone marl, covered with a sandy soil, on the south side of the York River, about eleven miles from its mouth. The peninsula on which the town stands is level, and is embraced upon each side by deep ravines, which almost meet in the rear. The ground is the highest upon either the York or James Rivers, below Richmond. Being the shire town of the county, it contains the public buildings. These, with about forty dwellings, some of them decaying, compose the village, which formerly was one of the most flourishing towns on the peninsula. It contained about sixty houses at the time of the siege in 1781. A fire which occurred in 1814 destroyed much property there, and from that blow the village seems never to have recovered. At that time the old church, built a century and a half before, was destroyed; nothing but its stone-marl walls

were left standing. In this picturesque condition it remained for thirty years, when it was repaired, and is now used as a place of worship.”

“After breakfast, accompanied by Mr. Nelson in his carriage, I visited the several localities which make Yorktown historically famous. We first descended the river bank and visited the excavation in the marl bluff, known as Cornwallis’s Cave. It is square, twelve by eighteen feet in size, with a narrow passage leading to a smaller circular excavation on one side. It is almost directly beneath the termination of the trench and breastworks of the British fortifications, which are yet very prominent upon the bank above. Popular tradition says that this excavation was made by order of Cornwallis, and used by him for the purpose of holding councils with his officers in a place of safety, during the siege. Taking advantage of this tradition, cupidity has placed a door at the entrance, secured it by lock and key, and demands a Virginia ninepence (12 ½ cents) entrance fee from the curious. I paid the penalty of curiosity, knowing that I was submitting to imposition, for I was assured, on the authority of an old lady who resided at Yorktown at the time of the siege, that this excavation was made by some of the people wherein to hide their valuables. A house stood directly in front of it, the foundation of which is yet there. The building made the spot still more secluded. A quarter of a mile below, Lord Cornwallis did have an excavation in the bank, which was lined with green baize, and used by the general for secret conferences during the siege. No traces of his council are left.”

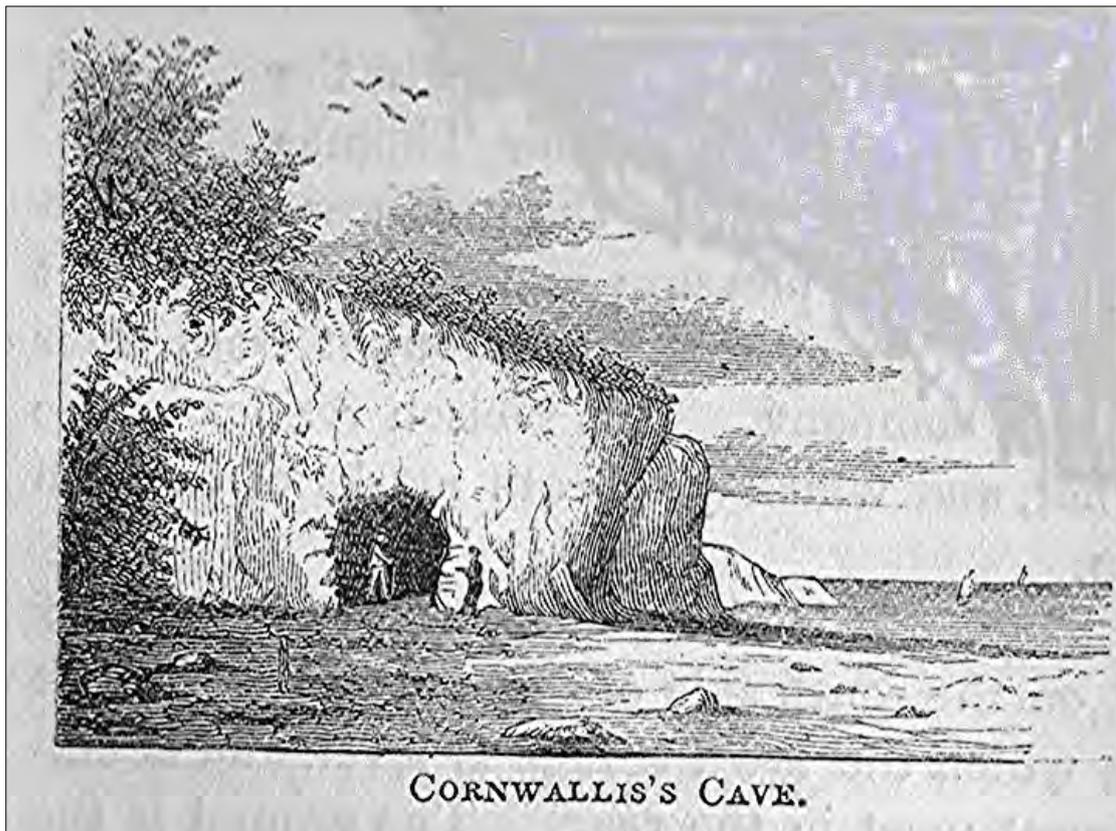


Image 6. Cornwallis Cave. (from Benson J. Lossing’s *Pictorial Field-Book of the Revolution Volume II*)

Russ Carter, in his excellent article on Cornwallis Cave in the Virginia Speleological Survey's magazine, *Virginia Cellars*, points out that Lossing's sketch of the bluff (**Image 6**) containing Cornwallis Cave does not match his description of the entrance. There is no door on the entrance and the house foundation in front of the cave is missing. He also has the York River coming up to the bluff and Yorktown missing north of the cave. Despite these criticisms, we are indebted to Lossing for recording Cornwallis's "cave" or "grotto" was a bunker a quarter of a mile south of the current cave.



Image 7. Surrender of Lord Cornwallis. (from the Lambert Archives, Monterey, Virginia)

The Civil War

Like the British, the Confederate command, in the spring of 1862, found the cave useful to store munitions. The Confederates carved out five rectangular, almost square, depressions into the quarry wall of the bluff (**Image 8**). Into these depressions they inserted timbers that were covered with planks, which were then encased with clay. This allowed the Confederates to use both the inside and outside of the cave for storage. The clay hid and protected the munitions from Union gunboats on the York River.

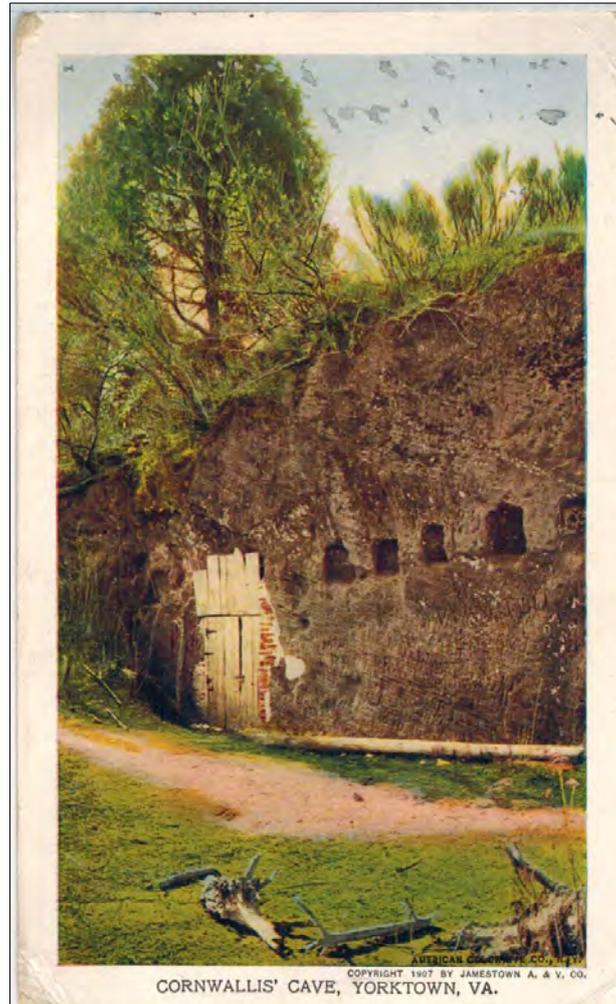


Image 8. Cornwallis's Cave, Yorktown, Virginia. 1907 post card showing the five depressions carved into the face of the quarry at Cornwallis Cave by the Confederate Army. (from the Lambert Archives, Monterey, Virginia)

The cave was turned over to Union forces in May of 1862 after the Confederates withdrew. The Union army continued to guard the Confederate supplies. We are fortunate to have photographs in the Library of Congress of Cornwallis Cave and the Yorktown area from that time. See **Images 9, 10, 11 and 12.**



Image 9. 1862 Cornwallis Cave, showings Captain Perkins and “Secesh.” The officer on the right is raising his hat to get the horse’s attention for the photo. Secesh was captured at Cornwallis Cave. The noun “secesh” means secessionist, a supporter of the Confederacy during the United States Civil War. Secesh was a captured Confederate horse. Notice the thick mound of clay, on the right, covering the timbers and planks of the munitions storage area. The clay both protected and hid the ammunition from Union gunboats on the York River. (from the Library of Congress)



Image 10. 1861 Cornwallis Cave with the Confederate improvements. Confederate officer and sentry guarding the powder magazine. (from the Library of Congress)

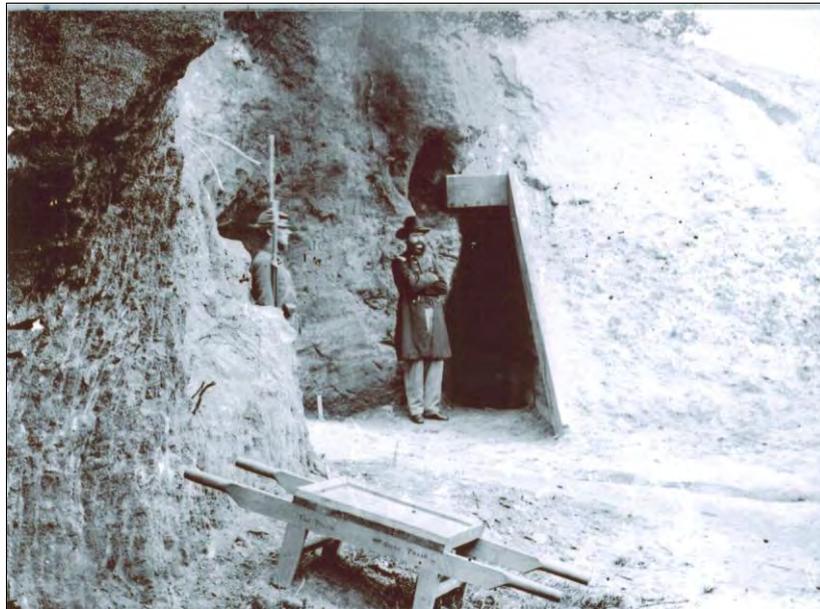


Image 11. Cornwallis Cave showing the Confederate improvements. Union officer and sentry guarding the Confederate powder magazine after the Confederates withdrew. (from the Library of Congress)



Image 12. View of the Confederate Water Battery from the bluff above Cornwallis Cave. The munitions for this battery were stored at Cornwallis Cave. (Photo by G. N. Bernard, June 1862, after the Confederate Army withdrew; from the Library of Congress)

In the 1874 issue of the *Home Mail*, a fanciful account of Cornwallis Cave appeared written by O. M. Thayer on February 4, 1864. This account is quite a stretch from what remains of Cornwallis Cave today. David A. Hubbard, the Virginia Speleological Survey director, who found the Thayer article wrote, “Either it is a loud mouth Yankee tale or did some significant addition to the cave or man-made additions previously exist?” For you conspiracy theorists—Is this the reason the National Park Service has placed a barrier in the entrance of the cave that prevents us from viewing the southwest corner of the smaller room? The article with Thayer’s account has been reproduced in its entirety below.

“The following was written for publication at the time it bears date, but for some reason never was published. The writer was one of the many missing in that terribly fatal battle of Fair Oaks, Va., Oct.27, '64, in which the 148th N. Y. Regiment lost every other man that went into the engagement—one half of the whole number. Many of whom were never accounted for or heard of thereafter, and among them the author of this:”

*“Camp of the 148th Regiment,
Yorktown, VA., Feb. 4, 1864.*

Mr. Editor:—Thinking perhaps some of your readers would interest themselves in reading a sketch of Yorktown and its surroundings, I respectfully submit the following:

“Yorktown is a small place and contained less than three hundred inhabitants at the breaking out of the rebellion; at the present time but very few of the citizens are to be found who were here during the time rebel forces held this place. The village stands on the south bank of the river York, and some forty or fifty feet above high water mark. The fort contains some two hundred acres and is one of the most formidable structure of modern time.

“Just outside of the fort and a few rods south of the south gate stands a monument which no lover of his country and the old flag can pass without paying tribute to the memory of the Father of his Country; there stands this historical structure with its tall spire pointing proudly towards heaven, as a guide (it would seem) to the hardy soldiers who have sacrificed the luxuries of home to defend this sacred spot from its country’s destroyers. It is a monument erected on the very spot where General Cornwallis surrendered his sword to General Washington, and was erected in memory of that event.



Image 13. Spot where Cornwallis surrendered. The first monument at this site mentioned by O. M. Thayer was erected by the Gloucester 21st Virginia Militia in 1860. It was a 13-foot-tall obelisk, made of white marble on a layered base of James River granite. This monument disappeared and was replaced in 1895 with this second obelisk. (from the Lambert Archives, Monterey, Virginia)

“Here it is Cornwallis had his cave, and perhaps a description of it would be as interesting as I could pen. Many a curious story is told relative to this cave. We are told no one dares to enter it, that it was inhabited by some supernatural being or spirits of men who have perished therein. After hearing these stories and many others I resolved to visit the cave and abide the result. I made my determination known to a

few of the 148th boys, whose experience before the cannon's mouth had well fitted them for just such an excursion.

"We employed as guide an old negro, who, if he had died fifty years ago, might have inscribed upon his slab died of old age, he assured us that he had visited the cave many a time during the Revolutionary war and was familiar with all its departments.

"But," said he, "that was a long time ago, since that time no one dares to enter it.

"When asked if he would be afraid to go into the cave with a few Union soldiers, replied: "Golly, I'se dun gone in many time; spect I'se wouldn't be afraid to go anywhere with Massa Lincum's men.

"After satisfying ourselves with the truthfulness of his statement we promised him the protection of "Massa Lincum's" government, together with a small amount of money and the title of guide if he would accompany us, all of which he readily accepted.

"It was a lovely day, passing through a long ravine towards the beautiful York, with its surf dotted with sails gliding rapidly over the majestic waters, we soon came to the entrance of the cave, where each one was provided with a lighted candle. Our old guide now began to exercise the full authority of his office, and taking the lead we followed through a long subterranean passage seeming a quarter of a mile in length, we came out into a large room which our guide said had been used as a reception room when officers called. It was a very large room, arched overhead with brick. Here we found the old table used by Cornwallis; and from which, as the guide told us, many a good drink of whisky had been taken. The top of the table was marble, pillars of bricks constituting the legs; this being pretty much all the furniture left we were not long in satisfying our curiosity.

"From this department we descended a winding stairs, at the bottom of which found ourselves surrounded by massive walls of rocks which seemed ready to fall on us. We were now told by our trusty guide that we were below the river a great ways, and said he, pointing to a closet which we had not before discovered,

"Here is a room no one was ever allowed to enter."

"Why not?" we inquired.

"Oh," said he, "bad place in there."

"But to satisfy our curiosity we forced the door open and went in; we very soon began to think what the guide had told us was true, for we found a large quantity of human bones. I must confess that my curiosity was quickly satisfied and was the first to lead the way back to the hall.

"On we went winding our way through a crooked passage until we came to a large room which is said to be the one used by a gang of robbers as late as 1820; how this may be I do not pretend to say. From this opened several doors to other apartments which we visited and picked up a relic in almost every room. In one we found an old-fashioned English pistol, in another a five-franc piece, which looked as though it might have lain there a hundred years.

“Here we left the main hall and descended another flight of stairs, which brought us to a room through which ran a stream of pure water and from which we were told the inhabitants of the cave were supplied. This we were inclined to believe as we found carved in the solid rock a long trough which was evidently made by hands. From this we passed through a winding alley which opened to several stairways, one of which we ascended and found ourselves in a room which opened to four halls. By this time we found ourselves lost, as the guide had forgotten which of the alleys led to the outlets of the cave.

“This placed us in a predicament not very pleasant, but one thing was evident we had become somewhat exhausted and decided to take a rest for a few moments and partake of some rations we had been thoughtful enough to provide ourselves with. We determined on what alley to take and resumed our journey but had not gone far when we discovered that we were on the wrong road. After holding another consultation it was thought advisable to take from the old negro the title of guide and reduce him to the ranks unless he was able to pilot us safely through, in which case we promised him all the emoluments which his office entitled him.

“This may have been instrumental in refreshing his memory as it was not long before we were on the right track, but in what direction we were traveling we could not tell; we tried the pocket compass but it refused to do its office; but we trudged on viewing the rocks that encircled us until we found ourselves in a room about forty feet square. Passing through it we found the channel which it was evident we must pursue. On, on we went, hoping soon to see the dawn of day, but imagine our feelings when brought to a standstill—we had arrived at the end of the road. What was to be done! to retrace our steps was an undertaking not very desirable to think of. Our guide could not entertain the idea that he had taken us astray.

“While consulting as to the course to be pursued one of the party espied on the right side of the passage way, what he thought looked as though a door had been hung there which opened to some apartment and called the attention of all to it; we at once fell to work cleaning away some loose earth and soon found a wooden structure containing a slide door and had been filled up with earth on both sides; but what was our surprise when we found ourselves in a room containing a fire-place in which at the time was a lively fire, a few old chairs, a table, and many other articles which satisfied us that the room was inhabited; nor did we care to halt to ascertain any particulars who the inhabitants were, but continuing our journey through a narrow alley for some distance at length we saw daylight ahead. Pressing on we were not long in finding ourselves in the open air, at the bottom of a large gully and about a half a mile outside the fort.

“As we came out we discovered a number of negroes just below us and inquired of them to know where we were. After a short conversation we learned they were fugitive slaves who had escaped from their masters in Princes Ann county, Va., about one year ago and had taken refuge in that end of the cave; they heard us digging and became frightened and ran out.

“When asked if they had been visited by any one during the time they had lived in there, they replied that no one excepting some fifty Union officers who took refuge there the night of the burning of the magazines at Yorktown, which was some time during the month of December. They seemed to understand that these officers did not

much like the flying shells and missiles of all kinds which the air was filled with at the time. Thus ends my account of Cornwallis' Cave.

O. M. THAYER"

While the oral histories of many of Virginia's caves have unbelievable parts, Thayer's account has several problems. It is doubtful the cave could be extended beyond twice its length much less the "long subterranean passageway seeming a quarter of a mile in length" which he reports. Lossing reported the existence of the British trench almost directly above the cave. The remains of the trench appear to be there today and it is deep enough the cave would intersect the trench if it were any longer than it currently is.

Thayer also reported passageways "below the river a great ways." This, without the use of continual pumping, seems impossible due to the shallow Cornwallis Cave aquifer under the sandstone containing Cornwallis Cave.

While O. M. Thayer's account shows he had too much time on his hands, it has some value. Thayer mentions in the fourth paragraph "a monument" on the spot where Cornwallis surrendered his sword to Washington. The first monument was erected by the Gloucester 21st Virginia Militia in 1860. It was a 13-foot tall obelisk, made of white marble on a layered base of James River granite. This monument disappeared and was replaced in 1895 with a second obelisk (see **Image 13**).

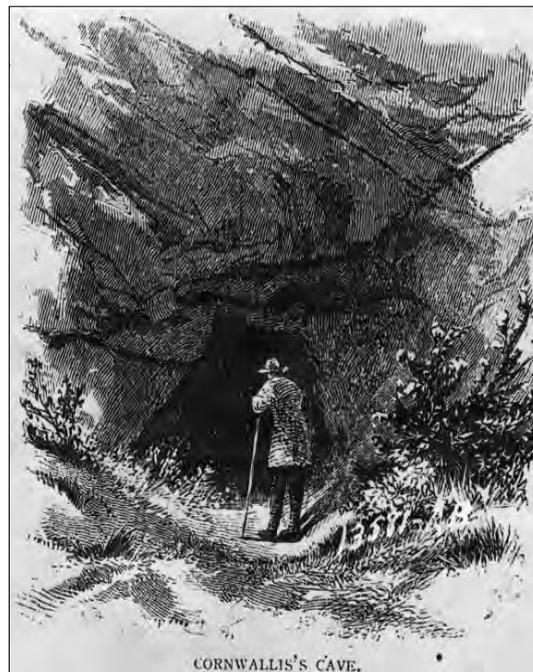


Image 14. Cornwallis's Cave. (from the Norfolk Southern collection at Virginia Tech)

20th Century

With Yorktown part of the 1607–1907 Jamestown Exposition, many post cards were produced showing the area outside Cornwallis Cave. The early post cards show the cave entrance without a commercial sign. Later post cards have a sign above the door

that reads “Lord Cornwallis Cave Admission 10c” (see **Image 15**). How long it took for this potato storage area to become a tourist attraction is unknown and how long it was a viable money-making operation is also unknown, but it was still open to the paying public in 1917 as sailors and troops were “sailing” from Yorktown to France during World War I (**Image 16**).



Image 15. “LORD CORNWALLIS CAVE ADMISSION 10c” (from the Lambert Archives, Monterey, Virginia)

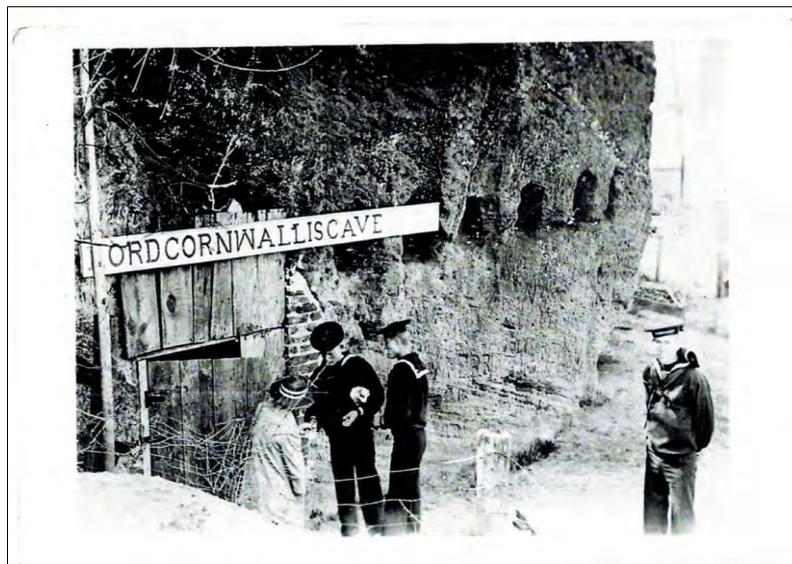


Image 16. Cornwallis Cave. Sailors visiting Cornwallis Cave in April 1917 before the fleet sailed for France in World War I. (from the collection of Richard Shisler)

Helen J. Campbell, in an article in the *Norfolk Virginian Pilot*, written prior to 1957, reported the cave fell into disuse prior to World War II. A National Park spokesman speculated the cave might be opened for the 1957 Jamestown celebration. It is unclear if this happened. The Virginia Speleological Survey records show that John J. Fisher visited the cave in 1963 and it was boarded up.

In 1965 Cornwallis Cave was opened to the public after being closed for a number of years due to its unsafe condition. In that year the side walls were repaired to restore the rectangular opening, a supporting concrete “knee wall” was poured inside the cave to support the cave wall to the right of the opening, an iron gate was installed so visitors may look into the cave, and an iron shield was installed on top of the metal gate to protect sightseers from rock falls. A recording was added that allowed visitors to push a button and hear the history, geology, and importance of the Yorktown cave from colonial times to the present.

While the metal barrier is still there, it cannot be referred to as a “gate.” There is no means to enter the cave without damaging or destroying the barrier. The recording is no longer there and has been replaced with a sign near the cave. What is believed to be a transcript of the recording follows:

Cornwallis Cave Audiostation Script

“Cornwallis Cave, located here in the Yorktown bluffs, is linked to many things—to military events of both the Revolutionary and Civil Wars, to Yorktown’s colonial days when commercial activity was heavy here on the waterfront, to potato storage in more recent years, and to millions of years of geologic time.

“About 1 to 15 million years ago, a shallow sea covered Tidewater Virginia. Currents and waves swept the sea floor and many forms of sea life flourished. Shells of dead sea animals, mostly broken in the wave-tossed sea, accumulated to form thick limy beds called coquina. After the sea receded, streams, such as the York River, fed by rain and melting snow began to carve channels into the shell beds. Locally the York River undercut the steep bluffs and formed overhangs. One of these overhangs was enlarged and later modified by man to form Cornwallis Cave.

“To make it usable and increase its capacity and to provide this room and the smaller one to the right, some shaping was necessary. It was then useful for good, safe storage. We can assume that it was used for storage in Yorktown’s colonial days, since it was amidst stores, houses, wharves, and shops; and the area was busy with the seafaring activity of Yorktown, which was a principal port, before the Revolution.

“In wartime, it offered a high degree of safety, and the British found it useful. It was excellent for powder and ammunition storage. As allied artillery moved closer and became more deadly, much British activity was transferred to the sheltered waterfront under the hill. Records show, too, that Cornwallis then was forced to meet with his staff in a ‘grotto.’ This, most likely, is the spot, being the only grotto of this kind in the area. From this it received the name “Cornwallis Cave.”

“Like the British, the Confederate command, in 1862, found the cave useful and stored ammunition in it to serve a battery nearby. For protection, the cave’s entrance was ringed by an earth and timbered structure (now largely levelled), which was roofed with heavy beams and then dirt covered. The square indentations in the face of the marl wall outside (to the right of the entrance) were for these beams.”

Cornwallis Cave and the Paranormal

Throughout history, witnesses have claimed to have heard strange voices and sounds coming from inside Cornwallis Cave. O. M. Thayer, in the previous 1864/1874 article said, *“Many a curious story is told relative to this cave. We are told no one dares to enter it, that it was inhabited by some supernatural being or spirits of men who have perished therein.”* Some insist that there is something evil inside the cave.

An internet search can produce many paranormal references to Cornwallis Cave. Most of the references re-report the observations of others. Men’s voices, panicked voices and screams, whispers, and moaning are still heard at night coming from the darkness. Some say it’s the voices of Revolutionary War soldiers, the moaning of the injured and dying hiding in the cave.

Others say it’s the sounds of a satanic cult thought to have used the cave in the 1970s, reciting incantations. It is difficult to understand how they could have used the cave with the metal barrier blocking the entrance.

Orbs have been photographed inside the cave. It should be noted several of my photographs of the inside of the cave contained orbs, but I attributed them to water droplets or dust floating in the cave air reflecting my camera flash back to the lens. While I have experienced visual paranormal events in other caves, I did not feel, hear, or see anything out of the ordinary on my visits to Cornwallis Cave.

Cornwallis Cave Description

Cornwallis Cave is a manmade cave in an old quarry, in a bluff, on the southwest bank of the York River, in Yorktown, Virginia. The entrance, which is owned by the National Park Service is now blocked by an iron bar barrier. It is six feet wide and six to seven feet high. This barrier allows visitors to walk three feet into the cave for viewing.

The cave has two chambers connected by a portal. The first chamber is a trapezoidal room approximately 23 feet long, 11 feet wide, and 6 to 10 feet high. In the northeast corner of the first room is a portal into the second room. The second, smaller room is 7 feet long, 5 feet wide, and 7 feet high. In the north wall of this room is a concrete plug that has closed an entrance to this room from under a ledge north of the cave. This ledge and the plugged entrance appear to have been cut by wave action of the York River against the bluff. The southwest corner of this room cannot be viewed from the entrance.

The wall separating the interior of the cave from the outside quarry wall is from 1 to 2 feet thick. It has been repaired around the door with rock and mortar. Additionally, a short wall has been poured inside the cave, to the right of the door, to reinforce the quarry wall. Other repairs are also evident in this area outside the cave.

Five recesses have been cut into the quarry wall approximately eight feet above the ground. These recesses are approximately one and a half to two feet wide and two feet high.

The Geology of Cornwallis Cave

The rock layers exposed at Cornwallis Cave are typical of the large-scale cross beds that are found in the Yorktown Formation. They represent the landward margin of an offshore shoal. Areas underlain by these high carbonate deposits typically have abundant large and deep sinkholes, known as coastal karst. Cave passageways or subterranean voids are known to exist on the Yorktown Battlefield. Most collapse, subside, or may be filled with the insoluble clay from the overlying Windsor Formation left over after the carbonate material has dissolved. Eight percent of the land area within the Colonial National Historic Park is karst.

Two lithic units of the Yorktown Formation are exposed in the bluffs at Cornwallis Cave. The lower unit, the Moore House Member, is composed of large cross beds made up of sand comprising shell fragments. The type section for the Moore House Member is along the shore line of the York River near Moore House within the Colonial National Historic Park boundary.

The upper unit is a flat-bedded sandstone composed of shell fragments with scattered disarticulated whole bivalves. The upper unit is poorly exposed because it is weathered in places or covered by colluvium and thick brush.

While collecting rock samples is not permitted around Cornwallis Cave or in the National Park, **Image 17** is a photo of the shell-fragment sand of the lower unit that was lying on the ground. The blue squares under the sample are a tenth of an inch in size. The photo was taken with a digital camera. The sand appears to be composed of carbonate shell fragments with little or no silica sand. Locally, it is weakly to well-cemented to form a relatively hard rock. This marl is easily quarried and erodes or dissolves easily.



Image 17. Photograph of Moore House Member sandstone at Cornwallis Cave. The blue squares under the sample are one tenth of an inch. (Photograph by Rick Lambert)

The Future of Cornwallis Cave

It has been estimated that five tons of material have crumbled from the cave since the 1790s. This has led to concerns about the cave's stability. The roof of Cornwallis Cave is failing as moisture within the cave is increasing due to the sealing of the openings long ago.

Forty-one pages of documents exist dealing with the deterioration of Cornwallis Cave within the Integrated Resource Management Applications (IRMA) store of the National Park Service. The documents are listed as not sensitive and can be released to the public. The documents have never been scanned and put online. I could not get any of the National Park personnel to scan the documents for me and I was told I would have to file and pay for a Freedom of Information Act request to get them.

After much deliberation I decide to drop the issue. As a result, details of the deterioration and possible remediation are unknown.

References

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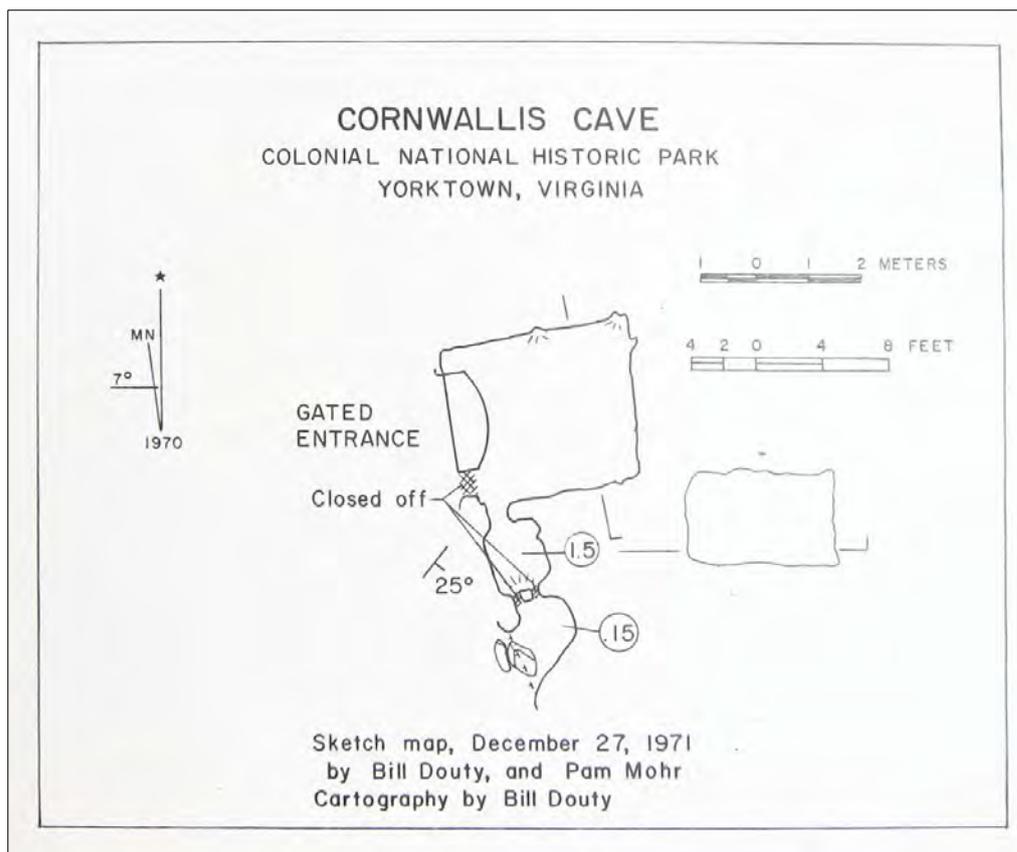


Image 18. Cornwallis Cave map by Bill Douty. The North arrow is reversed. (from the Virginia Speleological Survey)

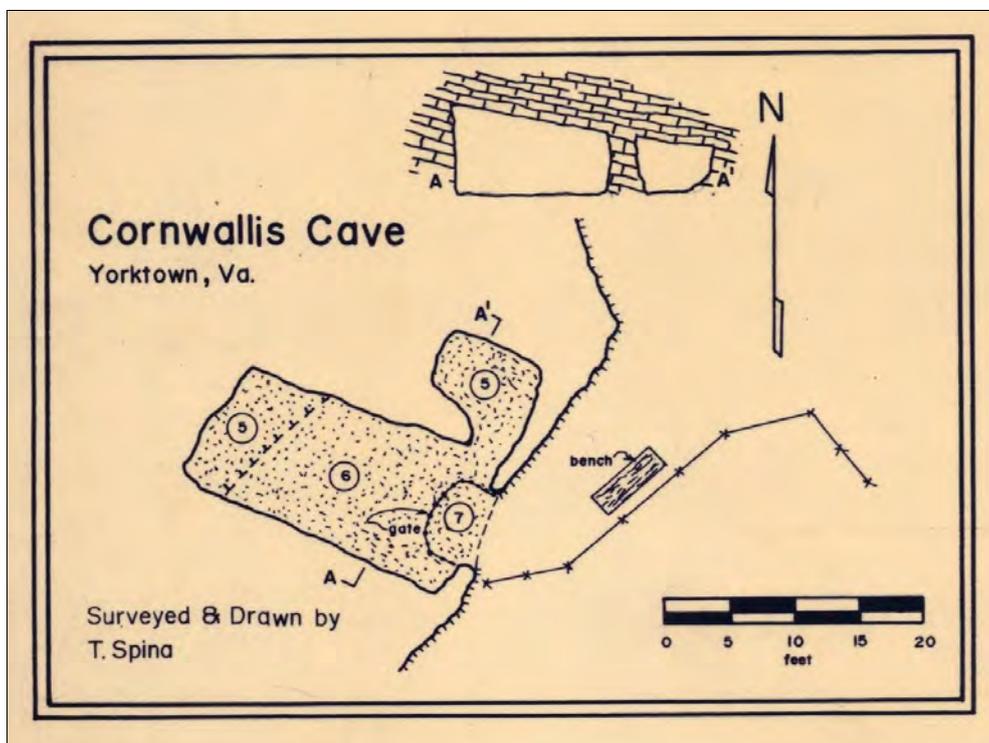


Image 19. Cornwallis Cave map by Tom Spina. (from the Virginia Speleological Survey)



Image 22. Cornwallis's Cave. (from the archival files of Gary K. Soule, Sturgeon Bay, Wisconsin)

Photographs of Cornwallis Cave Today

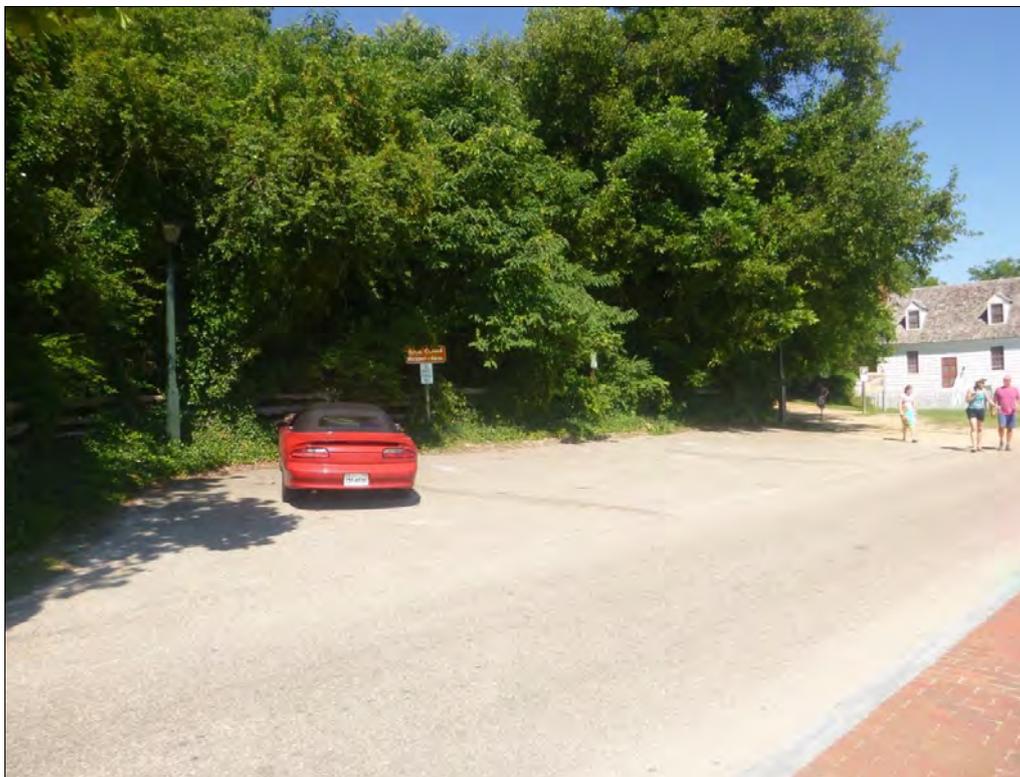


Image 23. Cornwallis Cave parking lot at 624 Water Street. (Photo by Rick Lambert)



Image 24. Cornwallis Cave area today. (Photo by Rick Lambert)



Image 25. Cornwallis Cave entrance showing metal barrier and repairs around the barrier and in the quarry wall. (Photo by Rick Lambert)



Image 26. Inside Cornwallis Cave. (Photo by Rick Lambert)



Image 27. Portal into smaller room showing knee wall protecting quarry wall. (Photo by Rick Lambert)

Additional Civil War Era Photographs of the Cornwallis Cave Area from the Library of Congress (Images 28 Through 30)

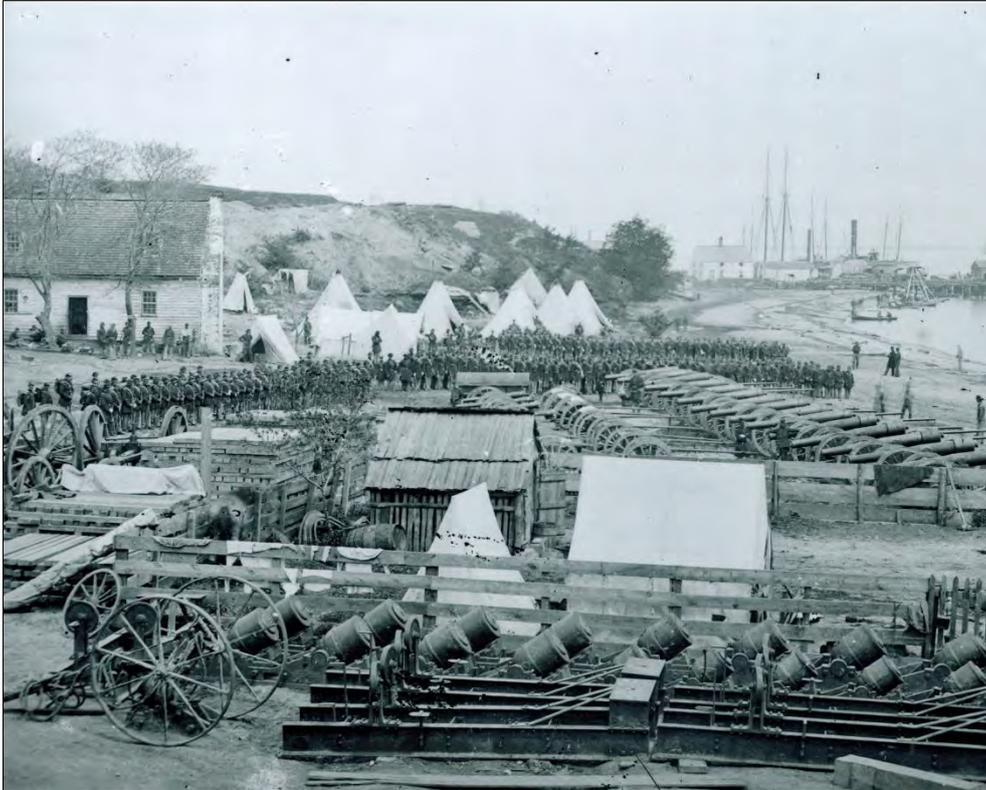


Image 28. Union cannons.



Image 29. Union wagons.

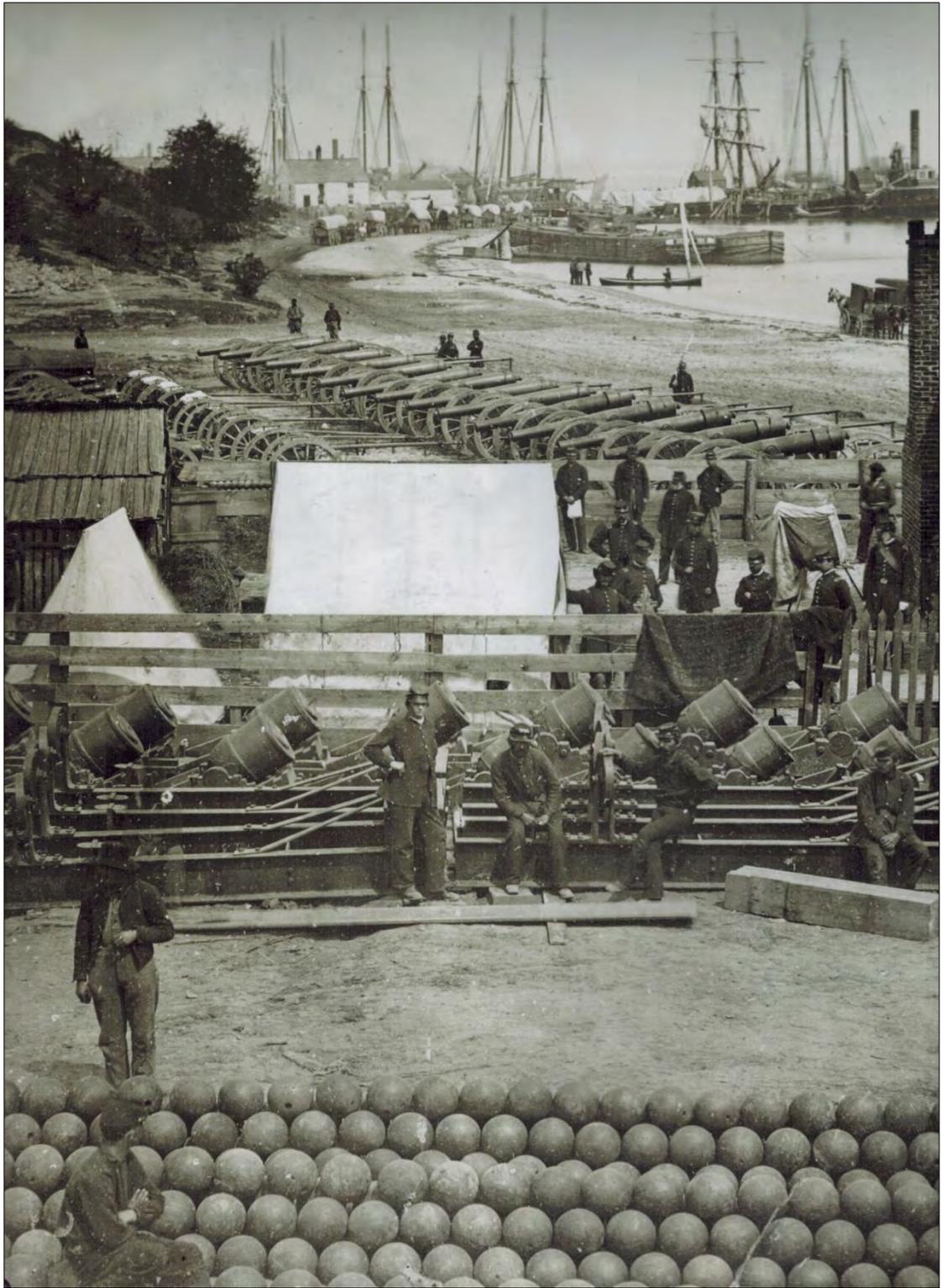


Image 30. Union supply dump.

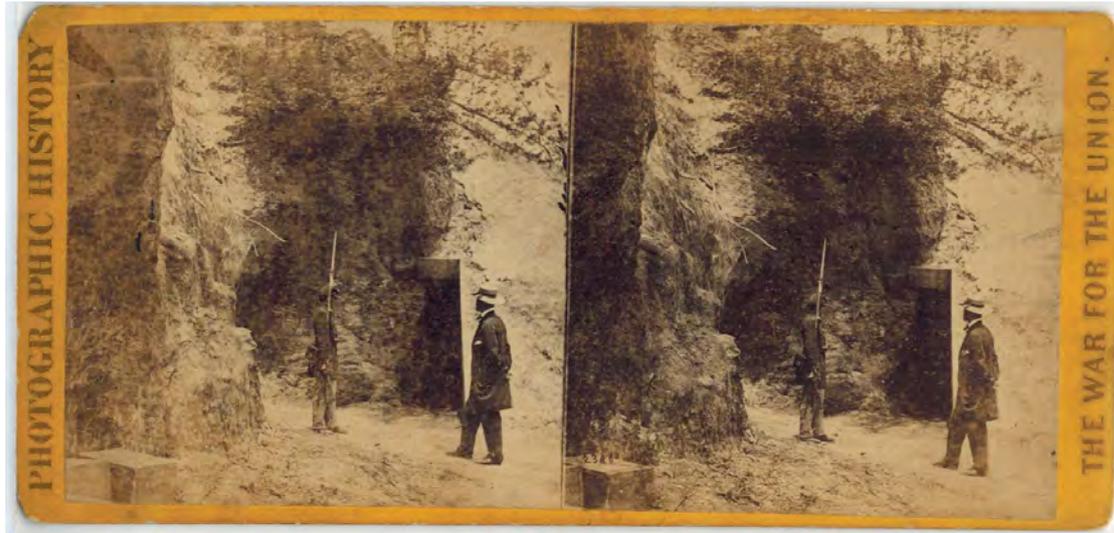


Image 31. Photographic History – The War For The Union. Front of stereo view. (from the Lambert Archives, Monterey, Virginia)

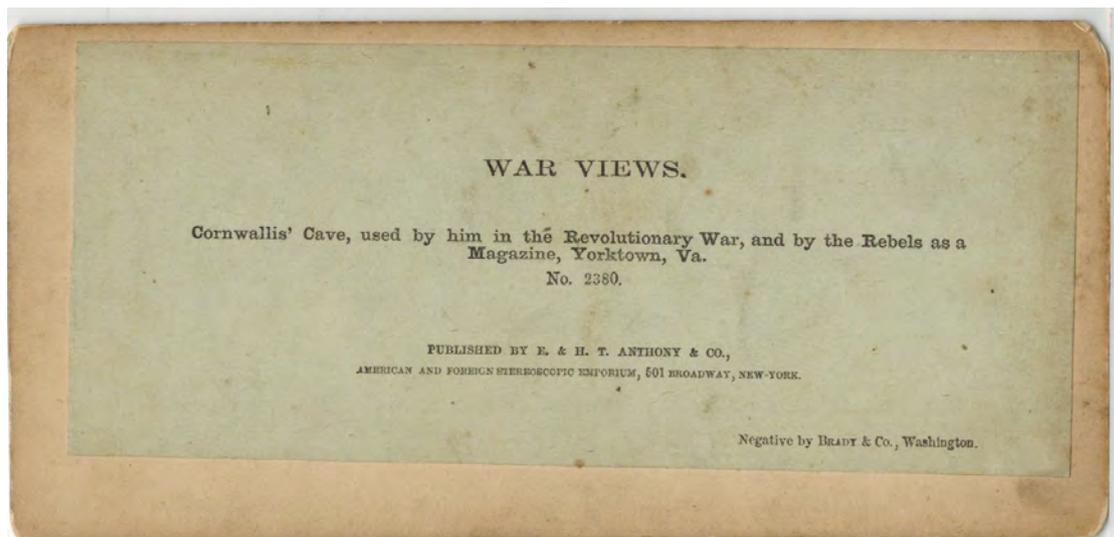


Image 32. Back of Stereo view. (from the Lambert Archives, Monterey, Virginia)