

Once More the Guns Roar in Petersburg's Historic "Crater"

By Elmo Scott Watson

THE guns of the War Between the States have been stilled for nearly three quarters of a century, but on April 30 of this year the quiet little city of Petersburg, Va., will echo once more to their roar. There on that date blue-clad "Yank" and gray or butternut brown-garbed "Johnny Reb" will fight again one of the most spectacular engagements in the whole four years of the Civil war—the Battle of the Crater.

Of course, this time it will be only a sham battle, staged by the National Park Service, with the "Devil Dogs" of the United States Marine corps representing the Union troops and cadets from the Virginia Military institute and national guardsmen from the Old Dominion playing the part of the Confederates. But to the thousands of spectators who are expected to gather in Petersburg for the re-enactment of this battle there will be a thrill of reality to it as they see the 1937 prototypes of the 1861-65 warriors swing into action and hear the voice of Dr. Douglas Southall Freeman, editor, historian and biographer of "Marse Robert" Lee, describing through a loud speaker system the battle as it progresses.

With his description supplying such parts of the battle as must necessarily be omitted from the re-enactment, they will hear in memory the gigantic roar of the explosion of four tons of powder as it hurled a mountain of earth, artillery, planks of wood and other debris high up in the air, taking nearly 300 Confederate soldiers to their death. They will see the Union storm troops rushing down into the huge hole in the ground, and then, slipping and sliding, trying vainly to climb up the other side, while Confederate rifles and cannon reap their harvest of death in that inferno below them. And when the gray-clad soldiers with a series of brilliant charges recapture the broken lines, they will realize anew the full horror of this terrible fiasco which cost the lives of nearly 4,000 boys in blue and gained not a single yard of disputed terrain in the long-drawn-out fight for possession of Petersburg—"the longest siege on American soil."

Back of the story of this engagement is the history of the stalemate which existed in the fourth year of the Civil war. The genius of Robert E. Lee had balked every attempt of Ulysses S. Grant with his host of blue-coats to crush the ragged men in gray in the long series of battles that had raged north and east of the Confederate capital. So the Union commander decided to swing around that beleaguered city, cross the James river and strike Richmond from the south through Petersburg, "the back door of the Confederacy."

The result was a protracted siege of nine months. In this time skirmishes occurred almost daily, totaling some 150 minor engagements.

A Tragic Climax.

But all of them were leading up to a tragic climax—the Battle of the Crater. That it was to



Lieut. Col. Henry Pleasants.

turn out thus was no fault of the man who had the original idea for attempting the most spectacular coup of the whole war. He was Lieut. Col. Henry Pleasants of the Forty-eighth Pennsylvania Volunteers, a part of the Ninth corps, commanded by Gen. A. E. Burnside. Pleasants had been a mining engineer and most of the men in his regiment were Pennsylvania coal miners.

During the attacks on Petersburg in June, 1864, Pleasants "sized up" the terrain with the practiced eye of the engineer. The Union troops were behind high earthworks within 400 feet of the Confederates' defensive trench system and nearly opposite a strong point called Elliott's salient, which was well fortified and almost impregnable. Pleasants had noted, however, that although the Union earthworks were lower than the Confederate, the land sloped very sharply behind the position of the Ninth corps. Thus what went on behind their lines was concealed from Confederate observers over a considerable area.

So he conceived the idea of tunneling under the Union lines and the "no man's land" between them and the Confederates and laying a mine under the position held by the men in gray. His proposal was sent through the usual military channels to his division commander, Gen. Robert B. Potter, his corps commander, General Burnside, both of whom approved of it, to General Grant, who saw in it an opportunity to crack the Confederate line and pour enough troops through the crevasse to capture Petersburg. So he ordered Burnside to go ahead with the project.

Carrying out those orders was an epic achievement for which Pleasants deserves more credit than history has yet given him. With his regiment of about 400 miner-soldiers he did the job despite lack of co-operation from his superiors. General Meade and Major Duane, chief engineer of the Army of the Potomac, said the thing could not be done—that it was all "clap-trap and nonsense"; that such a length of mine had never been excavated in the history of military oper-

ations and could not be. But when it was completed at last, the "impossible" had been accomplished. From the steep slope the shaft ran in for the more than 500 feet with a clearance of about five feet. It was about four feet wide at the bottom and three at the top.

The whole length was shored and braced with timbers against the countless tons of sand and clay above. The tunnel ran a third of its length at a slight pitch upward, then took a steep pitch for another third, to regain the proper distance from the curving surface above, and thence ran nearly level to a point below the Confederate fort. Here the main gallery branched into two laterals about 38 feet long for placing the magazine.

Into the side galleries, on the eve of the projected attack, were carried 8,000 pounds of powder, the amount to which the requisition was cut by General Meade. The various magazines thus made were linked by fuses in tubes, the fuse led down the gallery and tamped with tons of earth. While this was going on, those working in the big tunnel could hear the Confederates above. Sounds of digging led them to believe their enterprise had been suspected and was about to be countered. Moreover, the shock of discharge of Confederate guns overhead led to fears of a cave-in. Everything argued for speedy shooting the mine, and preparations for the effort to take advantage of the certain breach in the lines were hastened. But it was here that the brilliance of Pleasants' achievement was nullified by the blundering of higher-ups.

A Fatal Choice. While Pleasants was busy with his operations a division of negro troops were being trained by Burnside to lead the assault through the breach to be caused by the mine. But at the last minute Meade and Grant disapproved of their use for this duty lest they be criticized for selecting colored men to be the "batallion of death." So Burnside had the storm division chosen by drawing straws. As it turned out, this foredoomed the enterprise to failure because the lot fell to Gen. James H. Ledlie, commander of the First division of Burnside's corps.

It was brought out then and by a congressional investigation later, that Ledlie's "bad habits" and consequent unreliability were well known in the Union army. It was disclosed that Ledlie stayed behind in a dug-out drinking throughout the Crater action and could not be induced to go out and try to extricate the remnants of his division from the deathtrap in which they were caught.

When the tunneling operations had been completed on July 23 a total of 18,000 cubic feet of earth had been excavated. The four tons of powder were placed in the laterals on July 27 and the next day the miners' tamping had been completed. Pleasants was then ordered to explode the mine early on the morning of July 30. He lighted the fuse at 3:15 o'clock in the morning. The minutes ticked away—and nothing happened! So Lieut. Jacob Douy and Sergeant Henry Rees volunteered to risk their lives and go into the tunnel to see why. They found that the fire had stopped where fuse lengths had been tied together, so they



The Explosion of the Federal Mine (From a contemporary drawing).

ones, twos and groups could be seen running toward the smoking Crater.

Burnside and Ledlie had failed to clear their own defense obstacles and to prepare passages out of and over their own deep trenches. So their storm troops were disordered and delayed accordingly. Not a shot was fired from the Confederate side at first, but by the time the Crater was filled by a huddled mob of foremost men, the Confederate rifles were cracking from flanks and front, hostile guns were throwing gusts of canister, and it was fatal to go beyond that scene of hideous death.

Out of the Death Pit. Gallant officers of the Union line sprang out of the death pit and led a few of their bravest men as far as 100 yards beyond the Crater's lips, but forward of that none went and nothing could live. Survivors raced back for what shelter the pit could give them. There one after another they fell, torn by rifle balls and shell fragments.

Men started despairingly to dig a trench from the Crater back to the Union lines. Men in the lines began to dig a hasty ditch toward the Crater to save what life they could from certain death if the men remained there. Toward noon orders were gotten into the Crater for the men to withdraw as best they could. They dashed for their lines, but only a part of them reached safety.

The Confederate loss had been 276 officers and men, and this "stupendous failure," as Grant called it, had cost him 3,798 killed, wounded, captured or missing. In the afternoon the Confederates swept forward to drive away the last straggling Union troops and that night Mahone's division "held the Crater and all the horrors that lay in and about it."

Years later a farmer clearing land near Petersburg discovered by accident a tunnel under the ground. Further investigation revealed the fact that it was only one small part of an elaborate system that had been dug by the Confederates during the long siege of Petersburg, many of



The Crater of the Mine Exploded on July 30, 1864, Showing the Entrance to the Federal Tunnel.

spliced fresh ends, lighted the fuse again and dashed hastily out of the tunnel. For a few minutes the waiting Union troops stood shivering in the cool dawn and then—

A Gigantic Upheaval.

They felt the earth shake under them but the only sound they heard was a dull grumbling roar. Their eyes, however, told them the story of what had happened. Over across "no man's land" they saw a section of the Con-



Part of the Confederate tunnel system as it is today. Apparently forgotten since shortly after the Civil war, this tunnel constructed during the long siege of Petersburg, was discovered by accident about ten years ago by a farmer clearing land. In the photograph are shown the entrances to two branches of the passage. The one on the right is nearly a mile long. The left one is 1,700 feet long. Both are about 5 feet wide and 12 feet under the surface of the ground at the entrance.

federate trenches rise up in a gigantic upheaval. The air above the spot was filled with a mounting cloud of earth, men, guns, planks and fragments. Confederates near the Crater ran in every direction. The waiting Union legions shrank back, to escape the shower of debris. Both sides gazed astounded, appalled. A great hole appeared in the ground, 200 feet long, 60 feet wide, 25 feet deep, smoking, dust-shrouded, horrible.

The Union artillerymen recovered from their surprise first. Almost immediately they began laying down a fiery barrage on both sides of the breach. Five minutes later, blue soldiers in

them no doubt, to prevent any repetition of Pleasants' feat.

Today the visitor can walk through those tunnels and marvel at the engineering skill which has made it possible for these underground passages to remain but little changed through the 70 years since they were in use.

Different, however, is the case with the Crater. Today it is little more than a depression in the ground. Shaded by the surrounding trees, grass-carpeted from top to bottom, it little resembles that place of horrors where on a hot July day in 1864 nearly 5,000 Americans died in vain.

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Keeping Up With Science

By Science Service
© Science Service.—WNU Service.

Clue in Geography to Tooth Decay Found by Research

Effects of Latitude and Drinking Water

Baltimore.—Dentists seeking ways to prevent caries or tooth decay took a lesson in geography at the meeting here of the International Association for Dental Research.

Latitude, hardness of drinking water and nearness to mining regions all seem to have an effect on tooth decay, Dr. Clarence A. Mills, professor of experimental medicine at the University of Cincinnati, told the dentists.

The amount of tooth decay in American school children increases steadily throughout the United States as the distance from the tropics increases, Dr. Mills said. The increase is roughly 15 more decayed teeth per 100 children for each added degree of latitude, "or well over 200 per cent from Gulf to Canadian border."

Effects of Ultra-violet Light.

Dr. Mills explains this as being due to the decreased amount of ultra-violet light reaching inhabitants of the more northern latitudes. The only exception to the increase of tooth decay toward the north is found in the northern plains section, where the sunlight is more plentiful than in other northern regions of the country. The part played by ultra-violet light in stimulating development of strong bones and teeth has already been shown, Dr. Mills pointed out.

Hard water is good for the teeth, even though it makes dishwashing, laundering and other household chores more difficult and presents a serious problem to factories. Dr. Mills found almost 30 per cent more caries among the children of cities using river and lake water than among those using water from wells or springs, even though the mean latitude of the two groups was the same. The reason for this, he believes, is the degree of hardness of the water. His data show that caries diminishes as hardness increases. Animal studies have already shown that the calcium and magnesium supply in the drinking water and food affect bone and tooth formation and tooth decay.

Caries and Soil Leaching.

Another relation between geography and tooth decay is the finding that children living near the headwaters of a river have less caries than those living near the same river's mouth. This is probably related to soil leaching, Dr. Mills suggests.

A high caries rate is found in mining regions in Pennsylvania and on down the Ohio river. This may be accounted for by the millions of tons of sulphuric acid which seep each year from the mines into Pennsylvania streams and on down the Ohio. Besides corroding boilers, metal pipes and river craft, Dr. Mills believes this acid may lead to tooth decay in persons drinking the water. Sulphuric acid will liberate calcium from bones and teeth in large amounts, studies on lead poisoning treatment have shown. This point and a possible relation between amount of tooth decay and amount of oxidized sulphur from coal combustion in the air of smoky cities need to be investigated further, Dr. Mills suggested.

Children's Problems Solved by Study of Puppet Shows

New York.—Children's worries about love, marriage and even sex are being solved for a group of little patients at Bellevue hospital here by puppet shows. These puppet shows represent for children the problem plays which parents see on Broadway.

This use of puppet shows was described to members of the American Orthopsychiatric association meeting here by Dr. Leurettia Bender and Adolph Woltman of the psychiatric division of Bellevue hospital.

Just as the grown-up audience discusses the problem of John and Mary on the stage, the children discuss with each other and the psychiatrist the problems of the puppet characters. Through such discussion, by children or grown-ups, comes better understanding of their own problems. With a little help from the psychiatrist, the children are then able to find the best way out of their difficulties. The puppet shows are designed to include all the problems that worry children and keep them from growing up happily.

Intermarriage for Generations Doesn't Weaken the Stock

Results of Study of Japan Fishing Village

INTERMARRIAGE for several generations is popularly supposed to weaken the stock and produce a race or people physically and mentally degenerate. Evidence to the contrary appears in a report to the American Medical association of a study of conditions in the small fishing village of Usuki on the coast of western Japan.

The inhabitants of this village have strictly kept the custom of intermarriage for hundreds of years. According to tradition the village was settled in 1605 by the descendants of a noble family forced to flee in a civil war. The biologic effect of intermarriage has been studied in the village since 1933 by Dr. Takeshi Ikemi. His findings are summarized in the following report: "There are 135 families having 1,786 members in all (904 men and 882 women). They have never mingled with other villagers or townsmen except in business transactions; consequently their habits and customs are quite different from other Japanese.

Children Do Well at School.

"Although the children are not regular attendants at school, an investigation of the school records shows that they generally do well at school. Thus intermarriage never affected their intellectual faculties.

"Crime is rare. During the last ten years seven violated the fishing law, four injured others, four did some stealing, four broke the law of weights and measures, eight were charged with gambling, one cheated others, two were robbers, five interfered with government officials in the execution of their duty, and three other derelictions brought the total instances of malfeasance to thirty-eight. Judging from this, it may be affirmed that intermarriage does not bring about the degeneration of mental control.

Normally Healthy and Strong.

"The sanitary knowledge of the people is meager; they have epidemic diseases, such as dysentery and cholera, but there is never any serious hereditary disease. Leprosy, syphilis and elephantiasis at present are not seen among them. Neither color blindness nor insanity occurs. The constitution of the people is strong and they are good wrestlers in spite of their taking very simple food. In the physical examination for conscription, these villagers have always ranked first, in that prefecture, with respect to health and constitution.

"Divorce is rare. The birth rate, in comparison to that of the two neighboring villages, shows that intermarriage does not affect the birth rate. Stillbirths are uncommon.

"There are now twenty-seven couples who married cousins." Information about the offspring of these couples shows that "when the excellent are married, no bad results are to be found."

225,000,000-Year-Old Reptile Bones Found in Texas

Cambridge, Mass.—A complete fossil specimen of a long-spined Dimetrodon, one of the earliest of reptiles and apparently the commonest animal on earth about 225 million years ago, has recently been brought to Harvard university by Robert Witter of the Museum of Comparative Zoology.

It was found in the "red beds" of northwestern Texas, which have previously yielded numerous skeletons of the early Permian period, of which the Dimetrodon was characteristic. This flesh-eating creature had its day and ceased to be, long before the rise of the dinosaurs.

Most spectacular feature of the eight-foot animal is a series of long, bony spines extending two feet upward from its back. There is evidence that in life these spines were connected by a web of skin to form a sort of sail along the middle of the back.

The function of this sail, if any, is still a scientific puzzle.

England Has Colored Fabrics of Asbestos

New York.—Vari-colored asbestos fabrics are now being produced in England with the aid of a new dye which gives fast colors, states a report to the American Institute of Mining and Metallurgical Engineers here.

The dye opens up a new field of fireproof cloths including aprons, rugs and table covers. Previous artificial dyes have not been successful on asbestos.

My Favorite Recipe

By Helen Twelvetrees

Creamed Eggs With Chili and Rice

To two cupsful of well-seasoned medium white sauce add one teaspoonful chili powder and six hard-cooked eggs, cut in quarters. Meanwhile, cook one cupful of rice, season it to suit the taste and arrange in a border around a platter. Pour the egg mixture into the center. Serves six.

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A Reminder

"Well, dear," said Blair after tea had been cleared away, "what are you planning to do tonight?" Mrs. Blair shrugged her shoulders. "Nothing special," she replied. "I'll probably write a letter or two, read, listen to the wireless, and so on." "I see," he replied. "And when you come to the 'so on,' don't forget my shirt buttons."

SMART FELLER



Sunday School Teacher—Now children, Samson was safe as long as he kept what? Bright Pupil—The key to his locks.

How Old Are Be?

"Yes, sir, these are the ruins of a building that was in existence 2,500 years ago," declared the guide.

"What rubbish!" one member of the tourist party answered. "Why, it's only 1937 now."

And So He Did

Judge—Why did you steal the woman's carpet? Tramp—I did not steal it. Judge—She says you stole it. Tramp—She said, "Take that carpet and beat it."



biliousness, sour stomach, bilious indigestion, flatulence and headache, due to constipation. 10c and 25c at dealers

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Hasten in the morning so that by evening thy work for the day be accomplished.

FROM GIRL TO WOMAN

Mrs. J. A. Hagler of 172 Wilkinson St., Charlotte, N. C., said: "I owe much to Dr. Pierce's Favorite Prescription for the help it gave me when I was just a girl. I would have a great deal of suffering, due to minor functional disturbances. My mother had me take Dr. Pierce's Favorite Prescription and its tonic effects proved to be what I needed to stimulate my appetite and to relieve my disturbances. Buy now of your dealer."



THE CHEERFUL CHERUB

I'm studying astronomy. It rests my mind somehow. To think about those far-off worlds—Ours own's so muddled up now.

