DELINEATION OF JERUSALEM CEMETERY

Ebenezer, Georgia

LAMAR Institute Publication Series Report Number 160

The LAMAR Institute
2010
Delineation of Jerusalem Cemetery,
Ebenezer, Georgia

*LAMAR Institute Publication Series*

*Report Number 160*

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The LAMAR Institute, Inc.

Savannah, Georgia

2010
Acknowledgements

First, I wish to thank Noble Boykin, President of the Georgia Salzburger Society (GSS), for his support of the project. Noble recognized that the location and delineation of the cemeteries at Ebenezer is an important part of the GSS’s mission. Vincent Exley, Vice-President of the society, reinforced Noble’s initiative and provided additional oral history about the cemetery, circa 1940s. I also wish to thank the other members of the board of directors of the GSS for their interest and support. Through the past two decades the GSS membership has encouraged the archaeological study of New Ebenezer and its dependencies. Many of those who were curious about the extent and location of the cemetery now rest with the dead at New Ebenezer.

Secondly, I wish to thank the Jerusalem Evangelical Lutheran Church and their pastor, Reverend John Barichivich, for their support of the project. The church graciously granted permission for the study and promise to serve as great stewards for the cemetery and its resources into the future. Also, I wish to thank Connie Bazemore and other staff with the New Ebenezer Retreat and Conference Center. Thanks also to the Trustees of the Lutheran Churches of Effingham County for their support. The Trustees, who are co-owners of the cemetery with the Jerusalem Church, granted access to their land for this study. This resulted in an expansion of the cemetery, as reflected in this report. The cultural influence of the Lutheran Church in Effingham County cannot be overstated and it provided satisfaction to assist their community through their project.

Last but certainly not least, I wish to thank the crew who assisted in our field survey. They included P.T. Ashlock, Jr., Rita Folse Elliott, Dawn Chapman Guest, Maggie Needham, and Kim Wescott. Their aid was vital in completing the project throughout the several days of intense summertime heat.
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In 2010, the LAMAR Institute contracted with the Georgia Salzburger Society to delineate the boundaries of the Jerusalem Lutheran Church Cemetery at New Ebenezer, Georgia. This report presents the results of this undertaking. This work is the latest installment in a long-standing research association at New Ebenezer between the LAMAR Institute, the Jerusalem Evangelical Lutheran Church, and the Georgia Salzburger Society. The study combines modern archaeological techniques and historic research to establish the cemetery’s perimeter. The primary product is a revised cemetery map with a newly defined boundary, which more accurately reflects the spatial distribution of human interments on this hallowed ground. By relocating some of these lost burials, this study strives to reestablish Jerusalem Cemetery in its entirety. Cemeteries serve an important role in helping people remember the past and to honor those who helped to shape the future. This effort will enable future generations to appreciate their sense of place in history while preserving the past.

Jerusalem Cemetery was the primary burial site for the colonial and early federal era town of New Ebenezer. The cemetery was an important focus of the New Ebenezer community. The cemetery is located south of the town, which was located on the Red Bluff of the Savannah River in present-day Effingham County, Georgia (Figure 1). This is historic ground where the foundation of early Georgia was established. New Ebenezer was settled by German speakers who practiced Lutheranism (Jones 1984, 1990b). The pietist Lutherans of colonial New Ebenezer expressed modest burial practices and no graves from this period have been conclusively identified. The ravages of time, two wars, and neglect have taken away some landmarks of the mortuary landscape at New Ebenezer.

Figure 1. Jerusalem Cemetery Location Map (Google Earth 2010).
Many of the earliest graves may have been marked with simple wooden markers, which have since been destroyed by the hand of man or decay. Other graves in the cemetery may never have been marked. It is not until the second decade of the 19th century that stone markers make their appearance in the cemetery. As the 19th century progressed, grave markers became more numerous and more substantial. Wooden markers continued to be used. Approximately 60 of these remain today. None of the wooden markers bear any legible epitaphs, however.

By the mid-20th century the need for expansion of the cemetery became apparent. The cemetery was expanded to the west and this area continues to receive new burials from the congregation to the present. In the early 1990s a large brick and iron wall was constructed around the perimeter of the cemetery. The footprint of this wall followed the cemetery boundary, as recorded on plats and deeds in the Effingham County courthouse. From this process, however, a certain number of the cemetery’s population was located outside of the wall. This study seeks to locate these excluded graves so that their grave plots may be recognized for future generations and to delineate the likely extent of the extant graves and cemetery.

The report is organized into five chapters. Chapter 2 details the research methods used in this study, including the research design, field methods, and laboratory methods. The multi-disciplinary research effort is a blend of history, archaeology, and historical geography. Chapter 3 provides historical background information about the Jerusalem Church cemetery at New Ebenezer. The cemetery may have been established as early as 1736 and it remains in use today. We explore the history of burials at New Ebenezer and develop a historical context for the Jerusalem Cemetery. Chapter 4 presents the results of the 2010 mapping project. Mapping included topographic mapping, Ground Penetrating Radar (GPR) survey, surface inspection and historical research. Chapter 5 contains an interpretation of the mapping data. Composite maps of the updated Jerusalem Cemetery and its outer boundary are presented here. This map reflects our new understanding of the cemetery’s periphery. The survey evidence demonstrates that the cemetery extends beyond the brick cemetery wall on three sides. This discussion incorporates information from an earlier 2002 study of portions of the cemetery (Elliott 2003). The raw data from that study was reprocessed using improved GPR software. Chapter 5 concludes with a brief summary of the project and its findings. The report is followed by a bibliography of references cited.
**II. Research Methods**

**RESEARCH DESIGN AND METHODS**

The research design for this study was basic—to delineate the outer extent of human burials at the Jerusalem Cemetery at New Ebenezer, Georgia. This delineation was to be accomplished with non-intrusive, non-destructive technologies. The resulting plan map of likely human burial locations could then be used to mark the cemetery limits on the ground with a permanent datum allows the cemetery to be protected from ground disturbance now and in the future. The project goals were accomplished through:

- Historical background research,
- Ground surface inspection,
- Detailed topographic mapping, and
- Ground penetrating radar (GPR) survey.

The LAMAR Institute research team has been researching historical documents and compiling information on New Ebenezer and its archaeological manifestations since 1987 (Elliott 1988). The author’s familiarity with Salzburger cemetery sites on the Ebenezer Mill District dates to 1984 (Elliot and Mitchell 1984; Elliott 1984, Smith 1986). Historical and archaeological study at New Ebenezer by the LAMAR Institute continues to the present. This scientific work is documented in a series of research reports (Elliot 1984, 1986, 1988, 1989a, 1990, 1995, 2000, 2002, 2003; Elliott and Elliott 1990, 1991, 2002). Other reports of the archaeological research at New Ebenezer by the institute are currently in preparation. New historical information was gathered for the present study.

The ground surface inspection component of the project consisted of surface walkovers in areas surrounding the cemetery that were not accessible to GPR survey coverage because of heavy understory vegetation. The inspection was assisted by raking of loose leaves and twigs from burial areas located south of the fenced cemetery enclosure. Depressions in the ground, particularly linear, grave-sized depressions, were exposed for topographic mapping. The land surface over most of the cemetery, including the areas east and north of the fenced enclosure has been landscaped (or covered by soil accumulation) so that no visible traces of grave depressions exist.

Archaeologists prepared a topographic map of the cemetery. The topographic mapping project was accomplished with the aid of a Sokkia total station and TDS Recon data collector (Figure 2). The present topographic information was integrated with previous mapping data collected in 2002 by the LAMAR Institute during a

![Figure 2. Topographic Mapping in Progress.](image)

Ground Penetrating Radar (GPR) is an important remote-sensing tool used by archaeologists (Conyers and Goodman 1997). The technology is particularly effective in mapping historic cemeteries. The technology uses high frequency electromagnetic waves (microwaves) to acquire subsurface data. The device uses a transmitter antenna and closely spaced receiver antenna to detect changes in electromagnetic properties beneath them. The antennas are suspended just above the ground surface and are shielded to eliminate interference from sources other than directly beneath the device. The transmitting antenna emits a series of electromagnetic microwaves, which are distorted by differences in soil conductivity, dielectric permittivity, and magnetic permeability. The receiving antenna records the reflected waves for a specified length of time (in nanoseconds, or ns). The approximate depth of an object can be estimated with GPR, by adjusting for electromagnetic propagation conditions.

The GPR samples in this study area were composed of a series of parallel transects, or traverses, which yielded a two-dimensional cross-section or profile of the radar data. These samples are termed radargrams. This two-dimensional image is constructed from a sequence of thousands of individual radar traces. A succession of radar traces bouncing off a large buried object will produce a hyperbola, when viewed graphically in profile. Multiple large objects that are in close proximity may produce multiple, overlapping hyperbolas, which are more difficult to interpret. For example, an isolated historic grave may produce a clear signal, represented by a well-defined hyperbola. A cluster of graves, however, may produce a more garbled signal that is less apparent.

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![Figure 2. Topographic Mapping in Progress.](image)

National Park Service, American Battlefield Protection Program research project (Elliott 2003).
GPR has been successfully used for archaeological and forensic anthropological applications to locate relatively shallow features, although the technique also can probe deeply into the ground. The machine is adjusted to probe to the depth of interest by the use of different frequency range antennas. Higher frequency antennas are more useful at shallow depths, which is most often the case in archaeology. Also, the longer the receiving antenna is set to receive GPR signals (measured in nanoseconds, or ns), the deeper the search. The effectiveness of GPR in various environments on the North American continent is widely variable and depends on solid conductivity, metallic content, and other pedo-chemical factors. Generally, Georgia’s coastal soils have good properties for GPR application.

GPR signals cannot penetrate large metal objects and the signals are also significantly affected by the presence of salt water. Although radar does not penetrate metal objects, it does generate a distinctive signal that is usually recognizable, particularly for larger metal objects, such as a cast iron cannon or man-hole cover. The signal beneath these objects is often canceled out, which results in a pattern of horizontal lines on the radargram. For smaller objects, such as a scatter of nails, the signal may ricochet from the objects and produce a confusing signal. Rebar-reinforced concrete, as another example, generates an unmistakable radar pattern of rippled lines on the radargram.

The equipment used for this study consisted of a RAMAC/X3M Integrated Radar Control Unit, mounted on a wheeled-cart and linked to a RAMAC XV11 Monitor (Firmware, Version 3.2.36). A 500 megahertz (MHz) shielded antenna was used for the data gathering. MALÅ GeoScience’s Ground Vision software (Version 1.4.5) was used to acquire and record the radar data (MALÅ GeoScience USA 2006). The radar information was displayed as a series of radargrams. Output from the survey was first viewed using GroundVision. This provided immediate feedback about the suitability of GPR survey in the area and the effective operation of the equipment. The same RAMAC X3M GPR system as that used in the present study has been used successfully by the author on numerous other historic cemeteries in the southeastern United States (Elliott 2003, 2005, 2006a-f, 2008, 2009a-c; 2010).

The time window that was selected allowed data gathering to focus on the upper 1.5 meters of soil, which was the zone most likely to yield archaeological deposits. Additional filters were used to refine the radar information during post-processing. These include adjustments to the gain. These alterations to the data are reversible, however, and do not affect the original data that was collected.

Upon arrival at the site on June 17, 2010 the RAMAC X3M Radar Unit was set up for the operation and calibrated. Several trial runs were made on parts of the site to test the machine’s effectiveness in the site’s soils. Figure 3 shows the GPR equipment in operation. Machinery settings and other pertinent logistical attributes included the following:

- Time Window: 80.7 ns
- Number of Stacks: 4
- Number of Samples: 632
- Sampling Frequency: 7,462 MHz
- Antenna: 500 MHz shielded
- Antenna Separation: 0.18 m
- Trigger: 0.04 m
- Radargram orientation: Blocks 1, 2, 4 & 10—East-West; Blocks 3, 8 & 9—West-East; Blocks 5, 6 & 7—South-North
- Radargram progress: Blocks 1, 2, 4 & 10—South to North; Blocks 3, 8 & 9—North-South; Blocks 5, 6 & 7—West-East
- Radargram Spacing: 50 cm
- Total Radargrams: 431
- Linear coverage (m): 22,127 m (22.1 km)

Ten sample GPR blocks were collected by the survey team. Additional area was covered by GPR in 2002 and is included in this report. The specific details of the data collection for each sample block are presented in the following. Figure 4 shows the areas covered by GPR survey at Jerusalem Cemetery.

**GPR Block 1**

GPR Block 1 was located immediately north of the Jerusalem Cemetery’s northern brick wall. It measured 100 m east-west by...
The southeast corner of Block 1 was located at 651.74N, 1026.29E. It was comprised of 152 radargrams that covered 8,740 m of ground. Radar data was collected from East to West with progress from South to North. This block was collected on June 17 and 18 with partly cloudy conditions and temperatures in the 90s Fahrenheit. Vegetative cover was mostly grass with scattered trees and exposed ground. On its western end Block 1 connected to Blocks 2 and 4 and these three samples were combined for later mapping purposes. A plan of the radargrams collected in Blocks 1, 2 and 4 is shown in Figure 5. Grid North is to the right of the page in this view. Scattered large trees dot the area of this GPR sample, which is shown by the coverage gaps in the radargram plan map.

**GPR Block 2**

GPR Block 2 was located north of the Jerusalem Cemetery’s southern brick wall. Block 2 connected with Block 1 on its eastern end. It measured 60 m east-west by 3.5 m north-south. It was comprised of eight radargrams that covered 384.5 m of ground.
GPR Block 3

GPR Block 3 was located south of the Jerusalem Cemetery’s southern brick wall. Its northeast corner was at 586.78N, 966.51E. Its axis followed the town grid. Block 3 measured 46.5 m east-west by 13 m north-south. It was comprised of 33 radargrams that covered 1082.65 m of ground. Radar data was collected from West to East with progress from North to South. This block was collected on June 19 with partly cloudy conditions and temperatures in the 90s Fahrenheit. Radargram collection of Block 3 was interrupted by an afternoon thunderstorm. Collection of radar data further to the south was resumed with GPR Blocks 8 and 9. Blocks 3, 8 and 9 were later combined for mapping purposes. A plan of the radargrams collected in Blocks 3, 8 and 9 is shown in Figure 6. Grid North is to the left of the page in this view. As this figure shows, many trees and other obstacles were encountered by the GPR survey team in this vicinity owing to its wooded condition.

GPR Block 4

GPR Block 4 was located immediately north of the Jerusalem Cemetery’s north wall. The southeast corner of Block 4 was at 655.23N, 927E. Its axis followed the town grid. Block 4 measured 104 m east-west by 12 m north-south. It was comprised of 25 radargrams that covered 2,318 m of ground. Radar data was collected from East to West with progress from South to North. Block 4 connected with Block 1 on Block 4’s eastern end. This block was collected on June 21 with partly cloudy conditions and temperatures in the 90s Fahrenheit.

GPR Block 5

GPR Block 5 was located at the western end of the Jerusalem Cemetery. It included areas west and east of the existing cemetery’s west wall. The southwest corner of Block 5 was at 586.72N, 821.46E. Its axis followed the town grid. Block 5 measured 10 m east-west by 73 m north-south. It was comprised of 23 radargrams that covered 1,348.35 m of ground. Radar data was collected from South to North with progress from West to East. This block was collected on June 21 with partly cloudy conditions and temperatures in the 90s Fahrenheit. A plan of the radargrams collected in Block 5 is shown in Figure 7. Grid North is to the top of the page in this view. The radargram gaps in Block 5 resulted from the presence of the cemetery’s brick wall.

GPR Block 6

GPR Block 6 was located immediately south of the Jerusalem Cemetery’s southern brick wall, immediately east of the wooded area and immediately west of a split log fence that parallels Georgia Highway 275. The southeastern corner of Block 6 was at 487.0N, 965.52E. The block’s southwest corner was at approximately UTM Zone 17S, 4822684E, 3581539N and its northwest corner was at approximately 482758E, 3581601N (NAD 27). The long axis of
this block was oriented east of Grid North. This was done in order to follow the available greenspace that was suitable for survey. Block 6 measured 10 m east-west by 100 m north-south. It was comprised of 21 radargrams that covered 2,100 m of ground. Radar data was collected from South to North with progress from West to East. This block was collected on June 22 with partly cloudy conditions and temperatures in the 90s Fahrenheit. A plan of the radargrams collected in Block 6 is shown in Figure 8. Coverage of Block 6 was complete with no interruptions by large trees or other obstacles.

GPR Block 7

GPR Block 7 was located immediately east of the Jerusalem Cemetery’s eastern brick wall. The block’s southwest corner was located 50 cm east of the southeastern outer corner of the cemetery wall at 585.93N, 1012.20E. The block was oriented at a bearing of approximately 37 degrees east of magnetic north. Its southeast corner was at 585.93N, 1032.7E. It measured 20.5 m east-west by 78 m north-south, although most of the radargrams extended only 66 m north-south. It was comprised of 43 radargrams that covered 2,781.6 m of ground. Radar data was collected from South to North with progress from West to East. This block was collected on June 22 with partly cloudy conditions and temperatures in the 90s Fahrenheit. A plan of the radargrams collected in Block 6 is shown in Figure 8. Coverage of Block 6 was complete with no interruptions by large trees or other obstacles.

GPR Block 8

GPR Block 8 was located on the south side of the Jerusalem Cemetery and is a southern continuation of Block 3 in the presumed “African-American” section of the cemetery. Block 8 was later combined with Blocks 3 and 9 for mapping purposes. The block’s southwest corner is at grid point 554.08N, 966.49E and its northwest corner was at 572.08N, 966.49E. Block 8 measured 46.5 m east-west by 18 m north-south. It was comprised of 63 radargrams that covered 1,591.8 m of ground. Radar data was collected from West to East with progress from North to South. This block was collected on June 26 with clear, humid conditions (following two days of heavy rains; approximately 3 inches of precipitation) and temperatures in the 90s Fahrenheit. The block is heavily wooded in maritime hardwood forest except for its western end which runs perpendicular to a grass and dirt roadway.

GPR Block 9

GPR Block 9 was located on the south side of the Jerusalem Cemetery and is a southern continuation of Block 8. Block 9 was later combined with Blocks 3 and 8 to form a single block for mapping purposes. Block 9’s southeast corner was at 540.03N, 1012.94E. Block 9 measured 46.5 m east-west by 14.5 m north-south. It was comprised of 49 radargrams that covered 1,313.15 m of ground. Radar data was collected from East to West with progress from South to North. This block was collected on July 10 with overcast conditions and temperatures in the upper 80s Fahrenheit. The block is heavily wooded in maritime hardwood forest except for its western end which runs perpendicular to a grass and dirt roadway.

GPR Block 10

GPR Block 10 was located in the interior of the old section of the Jerusalem Cemetery. It was collected to serve as a control sample for an area of known (marked) graves. Its southeast corner
is at 628.5N, 999.20E. The sample was oriented with the town grid and was perpendicular to the orientation of marked graves. It measured 36 m east-west by 6 m north-south. It was comprised of 14 radargrams that covered 467 m of ground. Radar data was collected from East to West with progress from South to North. This block was collected on August 26 with clear conditions and temperatures in the 90s Fahrenheit. A plan of the radargrams collected in Block 10 is shown in Figure 10. Grid North is to the right of the page in this view. Gaps in the coverage were limited to a single instance, where a large grave marker was encountered. Although many other grave markers were contained within the GPR sample block, these were negotiated by carefully pushing the GPR cart and slightly veering to either side to avoid these potential obstacles.

The present GPR information from GPR Blocks 1-10 was integrated with previous GPR data collected in 2002 by the LAMAR Institute during a National Park Service, American Battlefield Protection Program research project (Elliott 2003). Five samples from the 2002 season bear relevance to the present study and these are, Blocks B, C, D, E, and F. The location of these samples is shown in Figure 11. The collection parameters for the 2002 GPR samples differ from the 2010 samples in two primary ways. The 2002 radargrams were collected using an 800 MHz antenna with transects spaced at 20 cm intervals. This configuration allowed for a more detailed view of shallower cultural deposits than with the 500 MHz antenna. The drawback is that the data collection was more time consuming than with the 50 cm transect spacing. As will be seen in the analysis, both 500 MHz and 800 MHz coverage proved satisfactory for mapping the grave-related radar anomalies at Jerusalem cemetery.

Figure 7. Radargram Plan for Block 5.

Figure 8. Radargram Plan for Block 6.
Overall, the 2010 GPR survey for the delineation of the Jerusalem Cemetery at New Ebenezer collected 431 radargrams of data, which represents approximately 22.1 kilometers of collection. This is a very large GPR dataset with coverage of approximately 1.14 hectares, or 2.8 acres (Table 1).

**LABORATORY METHODS**

The GPR data from the present study was processed with GPR-Slice (Version 7.0). Dean Goodman’s GPR-Slice program is recognized as the world leader in GPR imaging and it has proven quite effective in mapping historic cemeteries (Goodman 2010). Mapping in 3D entailed merging the data from the series of radargrams for each block. Once this was accomplished, horizontal slices of the data were examined for important anomalies and patterns of anomalies, which were likely of cultural relevance. These data were displayed as plan maps of the sample areas at varying depths below ground surface. These horizontal views, or time-slices, display the radar information at a set time depth in nanoseconds (ns). Time-depth can be roughly equated to depth below ground. This equivalency relationship can be calculated using a mathematical formula.

**REPORTING**

Products generated from this study include the present technical report and a set of GPR plan maps of the cemetery. Copies of the materials from this project were deposited with the Georgia Salzburger Society, the Jerusalem Evangelical Lutheran Church, the Trustees of the Lutheran Churches of Effingham County, the New Ebenezer Retreat Center, the Georgia Archaeological Site File, and the Georgia Department of Natural Resources, Historic Preservation Division. The survey plan map shows the horizontal extent of suspected human burials at the Jerusalem Cemetery. The interior of the cemetery, or that area contained within the brick wall, was only partially mapped. No artifacts were generated by the project. No excavation, or ground-truthing, was done as part of this project.
Table 1. GPR Block Coverage, Jerusalem Cemetery, 2010.

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Figure 11. GPR Coverage in 2002 Study. (Grid North is to top of page.)
III. History of Jerusalem Cemetery

The settlers of the Ebenezer colony experienced death among their group even before they set foot on North American soil (Jones 1984). Sicknesses contracted while en route on the ships from England were compounded by malaria and other local viruses and diseases, which were rampant once the colonists arrived in Georgia (Wilson 2000). Of the first two shiploads of German colonists arriving before March 1736, a number were dead before the town of New Ebenezer was founded in the spring of that year. Most, if not all of these people, were probably buried in a cemetery at Old Ebenezer. Although the location of these graves has not been established absolutely, a monument there commemorates those who died at Old Ebenezer.

The Ebenezer settlers were buried in at least six different public cemeteries in Effingham County, Georgia, as well as several dozen private family plots. Several early cemeteries that were part of the Ebenezer colony have been identified by archaeological surveys. These include the Zion Church Cemetery and the Plantation Cemetery, which are located on Mill Creek, and Bethany Cemetery, which was located north of Ebenezer Creek (Smith 1986; Elliott 1989; Elliott 1990a and 1990b). Since 1990 the Georgia Salzburger Society has erected memorials in honor of the German colonists at the sites of Bethany, Old Ebenezer, and Zion. Cemeteries are documented historically at each of these settlements and have been confirmed by archaeological research.

HISTORICAL DOCUMENTATION OF SALZBURGER BURIALS

The largest collection of burial data for Jerusalem Cemetery is found in The Ebenezer Record Book, which lists burials of the New Ebenezer congregation at Jerusalem from 1755 to 1781. This book, which was discovered in a local family’s attic, is missing large sections from the early years of the colony, particularly the period from 1734 to 1754. The Ebenezer Record Book represents a fragment of an original handwritten church ledger that was maintained by the pastors at New Ebenezer. The original manuscript is curated by the Library of Congress, Manuscript Library. This book includes members of the church congregation buried at the Jerusalem Church Cemetery at New Ebenezer, the Zion Cemetery, the Plantation Cemetery, and the Bethany Cemetery. It is important to note what is not found in this fragmented volume. Two English translations of this volume have been published. The first version, by Voight (1929), contained numerous errors but a more accurate version, compiled by George Jones and Sheri Exley (1991), corrected many misspelled names and erroneous dates in Voight’s version.

The Ebenezer Record Book contains interment records for 90 persons who were buried in cemeteries other than Jerusalem Cemetery. It lists 44 persons buried at Bethany Cemetery from 1756 to 1775. Surnames in Bethany Cemetery include: Bexle, Bidenback/Bidenbach, Bollinger, Eppinger, Fincke, Fischer, Francke, Gerber, Gnann, Gravenstein, Gress, Harret, Huber, Leitner, Mackh, Meyer, Michler, Mohr, Ochs, Oechsle, Rieser, and Schubdrehn (Jones and Exley 1991). Bethany later was known as the Crews Cemetery and archaeological work there confirmed the existence of graves from the middle 1800s (Elliott 1990). Hand wrought nails, which were uncommon in Georgia after 1800, support the identification of this site as the colonial Bethany cemetery. No other colonial period items were specifically identified. In 1988 an area of 1.76 acres, which encompasses the entire Bethany Cemetery site, was deeded by the landowner, Mrs. Daisey Bell Rahn, to the Georgia Salzburger Society (Wilder 1988).

The Ebenezer Record Book lists 32 persons buried at Zion cemetery from 1756 to 1781. No colonial-era graves have been identified at Zion. Surnames in Zion cemetery include: Burgsteiner, Eichsperger, Eigl, Fetzer, Flerl, Geiger, Heinle, Keiter [Reiter], Koergter, Kornberger, Kraus/Krause, Lackner, Lange, Remshardt, Rubenhorst [Rabenhorst], Schleich, Schneider, Schubdrehn, and Steiner. This cemetery was later used by the Bird family and their epitaphs were recorded in 1984, prior to the construction of the Fort Howard Paper Company’s mill. Historical research for that project identified a two acre exception on property formerly owned by the Leimberger family, which likely corresponds to the Zion Cemetery site (Smith 1986). A plat for the Zion Cemetery, which was prepared soon after the archaeological and historical study, delineates an area of only 0.38 acres.

The Ebenezer Record Book also lists 14 persons buried from 1756 to 1771 at the Plantation cemetery, which was located southwest of the original Zion Cemetery (Jones and Exley 1991). Plantation Cemetery also lies within an industrial development tract and it was investigated by archaeological survey and historical research in 1985 (Smith 1986). Surnames in Plantation cemetery include: Geschwandel, Grier, Heintz, Honold, Ihle, Krause, Maurer, Riedelsperger, Schneider, Schweiger, Straub, and Unseld. None of the colonial-era graves in this cemetery have been identified. This cemetery also continued in use after the colonial period and was used as late as 1918, based on one of the few tombstones. This cemetery contains many grave depressions but a complete inventory has not been attempted.

The cemetery at Goshen Methodist Church, formerly the Goshen Lutheran Church, has not been studied archaeologically but some of its epitaph data was published in the Historic Effingham Society’s inventory (Freeman and Renfro 1994).

The most extensive archaeological work on cemeteries in Effingham County was conducted at the Bethany cemetery (Elliott 1990). Historical research by Reverend Raymond Davis and Milton Rahn identified the suspected location of the Bethany Cemetery. This was verified by exploratory excavations by the LAMAR Institute and local volunteers conducted over two field seasons. This work was a collaborative effort by the LAMAR
Institute, Historic Effingham Society, Georgia Salzburger Society, and the Effingham County Commission. The first work examined the two acre tract with a variety of techniques (including surface inspection, systematic shovel testing, metal detector transect survey, and backhoe trenching) to narrow the search for the cemetery. Once graves were identified, an area was stripped and a total of 11 graves were mapped. The following season a second field project was mounted and an adjacent area was stripped. Archaeologists uncovered 11 more graves bringing the total of mapped graves at Bethany Cemetery to 22. Following that project, a large stone memorial was erected on an unexplored section of the cemetery and the 22 graves, which were located by archaeological survey, were marked with replica wooden markers.

No comprehensive list or complete record appears to exist of whose remains lie buried in the Jerusalem cemetery at New Ebenezer. The following discussion pulls information about New Ebenezer’s dead from a wide range of primary and secondary sources.

The Georgia Department of Archives and History has on file microfilmed tombstone inscription records (birth and death dates), collected by the Church of the Latter Day Saints, for 38 cemeteries in Effingham County. Many of these may represent eighteenth century German family cemeteries. A search of the U.S.G.S. Geographic Name Information Server (GNIS) identified 29 cemeteries in Effingham County that are identified specifically by name on federal government maps. Information was recorded in the middle twentieth century from epitaphs in the Jerusalem Lutheran Church cemetery, which was published by the Daughters of the American Revolution (1950, 1951). More recently, an extensive survey of Effingham County cemeteries, including the Jerusalem Church cemetery at New Ebenezer, was compiled by the Historic Effingham Society (Freeman and Renfro 1994). Their work cites 107 cemeteries in the county and includes abstracted tombstone records for 101 of these. No location maps are provided in that volume. The Jerusalem Lutheran Church cemetery is among the cemeteries included in the Historic Effingham Society’s cemetery compendium.

**BURIALS AT NEW EBENEZER**

Burials of the dead began in New Ebenezer soon after the Salzburgers arrived there in the Spring of 1736. Reverend Boltzius briefly described a burial in the “church yard”, which may or may not be the same location as the current cemetery. Early accounts of burials in the cemetery are found only in The Detailed Reports..., edited by George Fenwick Jones in 18 volumes (Jones 1968, 1969, 1985, 1988, 1989a-d, 1990a, 1991, 1995; Jones and Savelle 1983, Jones and Wilson 1980, 1981).

Burials after the American Revolution at New Ebenezer are poorly documented—a few scattered references exist. Mortality statistics for the Revolutionary War years at New Ebenezer are listed in annual reports submitted by the Pastors to the Society for the Promotion of Christian Knowledge in London. Occupation of the town by British and American troops and the associated construction of military earthworks in the vicinity of the cemetery may have erased or covered up some graves. Grave markers with legible epitaphs do not appear until the second decade of the 1800s. About 60 simple wooden markers survive but are in poor condition and none appear to have names on them. The Jerusalem Cemetery is now enclosed by a brick and iron wall and within these confines are an old and a new section.

Maps of Jerusalem Cemetery are scattered in several original sources. The earliest depiction of a cemetery at New Ebenezer is shown on Matthias Seutter and Thomas Lotter’s map of the town, where it appears outside of town on the southeastern corner (1747). Neither Seutter nor Lotter ever visited New Ebenezer, so they were working with cartographic information provided by others. Many features on their map are fanciful, however, and the cemetery is likely plotted incorrectly. A portion of the Seutter and Lotter map containing the graveyard is shown in Figure 12.
DeBrahm’s New Ebenezer town plan (1757) presents controversial data concerning the cemetery at New Ebenezer (Louis DeVorssey 1971). His map shows fewer town lots than are depicted on the Seutter and Lotter map and he places the cemetery immediately south of town at its center. A portion of DeBrahm’s map showing the “Burying Ground” is reproduced in Figure 13. Paul Wilder, an Effingham County surveyor, noticed cartographic errors made by DeBrahm. Wilder drafted a more accurate version based on DeBrahm’s handwritten measurement notation (Wilder n.d.b). DeBrahm places the cemetery at the south end of Center Street south of the two 6th Tythings, East and West Wards. If this placement were accurate, then it would place the cemetery within the active areas of the New Ebenezer Retreat Center.

DeVorssey (1971) has demonstrated that DeBrahm possessed superlative surveying skills for his day and it seems unlikely that he would have drafted a shoddy map of New Ebenezer. Indeed, DeBrahm’s plan map of the Ebenezer Mill District, which was used by archaeologists and historians in relocated the Ebenezer Mill District settlement, corresponds closely to the modern day topography and far more detailed than most maps of the period (Smith 1986). Archaeological exploration by the LAMAR Institute from 1992-1999 in the southern end of New Ebenezer, where DeBrahm indicates the cemetery to be located, has not encountered any human remains.

In 1771 a British Crown grant was issued to John Wertsch and others in trust for church lots and a cemetery in St. Matthews Parish (Hemperley 1974; Colonial Grant Book H: 56). Although a fragmentary plat of the church lot is known, no associated plat of the cemetery from this period has survived (Anonymous 1775).

A land warrant and plat (dated 1790 and 1791, respectively) for the Common of Ebenezer Town, issued to Christopher Cramer and Mathias Rahn, Trustees, places the cemetery in its present location immediately south of town at the town’s center (Effingham County Plat Book B:166). This plat is reproduced in Figure 14.

A 1797 plan of New Ebenezer drafted by surveyor W. Gardner is recorded in the Effingham County courthouse (Effingham County Plat Book B:429-430). Gardner’s plan shows an additional row of town lots on the south end of town. The cemetery, while not identified as such, is shown as a large rectangle aligned on its east-west axis on the center of town. It is separated on the south by approximately 180 feet from the southernmost row of town lots.

Figure 13. Portions of DeBrahm (1757) Plan of Ebenezer with Burying Ground in Inset.
A portion of this plat showing the cemetery location is reproduced in Figure 15.

Effingham County surveyor Z. Powers drew an 1822 plan of New Ebenezer after the town was almost completely abandoned (Powers 1822). Powers’ map was probably copied from earlier plans of the town by Seutter and Lotter, since by that time many lot boundaries had merged with neighboring lots or had been forgotten. The cemetery is shown on Powers’ map at its present location and its dimensions were, “295 feet by 295 feet”. A portion of Powers’ plan of New Ebenezer showing the cemetery is reproduced in Figure 16.

An undated town plan of New Ebenezer (Figure 17) shows the cemetery in the same location as that shown on the previously described Powers’ plan (Anonymous n.d.a.). While the cemetery’s dimensions are unspecified on this plan, they were estimated (by using several known distances to create a scale) at 340 feet east-west by 320 feet north-south. The northern edge of the cemetery is an estimated 80 feet from the southern boundary of the town lots.

The Ebenezer Record Book lists 54 people buried at New Ebenezer from 1755 to 1781. It also contains another 250 persons whose burial site is unspecified. We suspect that most of those unspecifieds also were buried at New Ebenezer (Jones and Exley 1991).

Salzburger burial customs were briefly noted by Boltzius in the 1730s. Boltzius mentions that shrouds were used to wrap the dead and coffins were not used, except in cases where women died in childbirth (Jones 1984).

Burials in New Ebenezer prior to 1755 are not listed in the Jerusalem church records. Only one burial is recorded in the record book after 1781. It is an entry from 1800. Only one burial is recorded for 1765, despite the death of Reverend Boltzius and others in that year. Reverend Boltzius’ burial is not listed in the record book. Furthermore, the few recorded burials in 1774, 1779, and 1781 attest that incomplete records were maintained during the Revolutionary War period.

Apparently New Ebenezer had no formal cemetery sexton, but Reverend Lemke, who served the congregation until his death in 1768, was responsible for the entries during his period of service. As is the case at Old Ebenezer, Bethany, Plantation, and Zion cemeteries, no marked colonial-era graves have been identified at Jerusalem. The earliest marked grave in Jerusalem cemetery dates to 1813. Additional unmarked graves, located in the woods south of the cemetery have since been recognized by the community and commemorated by a small stone marker. Many of these graves are that of African-American members of the community.

Information from the New Ebenezer gravestones has been recorded at least three times, but none of these include the
complete wording from every tombstone. The recorded data consists of names, dates, and maybe a few other remarks. Early recordation was conducted by Pearl Rahn Gnann and others (Daughters of the American Revolution 1950, 1951). Other information was recorded by the Mormons and is available on microfilm. The most recent version is in Effingham County Cemeteries, by the Historic Effingham Society (Freeman and Renfro 1994).

Survey in the West Ward of New Ebenezer located a small cluster of approximately seven rectangular depressions, which were tentatively identified as graves, but none of these were excavated (Elliott 1990). These suspected graves are located on what was formerly a part of the New Ebenezer orphanage lot may represent graves of deceased persons (primarily children and widows) who had lived at the orphanage. Two alternative explanations are that they represent military graves from the Revolutionary War period, or that they are a later family cemetery plot that is unrelated to colonial New Ebenezer. A fourth explanation is that they are not human graves at all. The answer to this question awaits further archaeological study.

Some mortality statistics for New Ebenezer are contained in the annual reports of the Society for Promoting Christian Knowledge. The LAMAR Institute researchers have conducted a partial review of these reports, although more work remains to be done on this subject (SPCK 1732-1785, 1733, 1738, 1740, 1741, 1743, 1753, 1755, 1761, 1764, 1773, 1774, 1776, 1777, 1778, 1779, 1784, Barder 2001 [SPCK 1767-1815]; Halifax 1789; Marsh 1811; Boltzius and Gronau 1739; Allen and McClure 1898). The SPCK reports are not specific in regards to where the burials took place for the dead who are enumerated.

Thirteen people (2 men, 4 women and 7 children) were buried by the New Ebenezer congregation in 1763 (SPCK 1763:87). Eighteen people (5 men, 2 women, 6 boys, and 5 girls) were buried in the New Ebenezer settlement in 1764 (SPCK 1764:81). The only deaths reported to the SPCK for 1765 were that of Reverend Boltzius and his widow. The November 21, 1765 edition of the Georgia Gazette contained this obituary for Reverend Boltzius, “Died...Tuesday Nov. 19th, at Ebenezer, the Rev. Mr. John Martin Boltzius, the first minister sent out by the late Trustees and the
sole charge of the Ebenezer mission. From December 20, 1767 to December 14, 1769, Rabenhorst noted that 19 members (including 9 adults and 10 children) of the congregation were buried. Reverend Christopher Frederick Triebner arrived in New Ebenezer on February 26, 1769 as Reverend Lemke’s replacement (SPCK 1768:89-90).

Unfortunately, the 1769 annual report from the pastor at Ebenezer to the SPCK was lost at sea. Reverend Triebner was very ill the following year and was unable to submit a report (SPCK 1769:84). In 1771, Reverend Triebner reported to the SPCK that 28 members of the congregation (11 men, 6 women, and 11 children) had died in Ebenezer (SPCK 1771:126). The following year 21 persons (undifferentiated) were reported to the SPCK as buried in the Ebenezer community, although a letter from Triebner to the SPCK dated February 2, 1773, stated that only 14 people, seven of whom were children, had died during 1772 (SPCK 1772:82-83). Twenty-two members of the New Ebenezer congregation were reported by Triebner to the SPCK as buried in 1773 (SPCK 1774:97-98).

The period from 1774 to 1785 was a time of great turmoil and upheaval at New Ebenezer, as well as most of colonial Georgia. The Jerusalem cemetery was not immune from this activity and it experienced negative impacts as a result. The Revolutionary War period was also a time of many deaths in the New Ebenezer community, including both military personnel and civilians. No report from New Ebenezer, and consequently no mortality statistics, was received by the SPCK for 1774 (SPCK 1774:93). In 1775 Reverend Triebner reported to the SPCK that “upwards of 50” members of the congregation had died that year, including Mrs. Lemke, who was Reverend Lemke’s widow, and her son, Timothy, aged 24. Triebner attributed many of the deaths to “violent epidemical Pleurisy, dry cough and burning fever” (SPCK 1775:91-92).

In 1779 the town was occupied by hundreds of British and allied loyalist troops. The British troops included a large contingent of Hessian mercenaries, who no doubt felt a kindred bond with the Germans at New Ebenezer. Given the large garrison of Hessians at New Ebenezer, it is likely that a number of deaths occurred there and their corpses may have been buried in the Jerusalem Cemetery.
Alternatively, a separate military cemetery may have established immediately outside of the town. If so, this cemetery has not been located. New Ebenezer also was used briefly in September and October, 1779 by the Americans. After a devastating defeat at Savannah on October 9, the Patriots retreated upstream to New Ebenezer for a few days before withdrawing to South Carolina. No doubt, some of the casualties from their ill-fated attack on Savannah in the Fall of 1779 succumbed at New Ebenezer and may have been buried in Jerusalem cemetery.

Reverend Triebner’s report to the SPCK for 1779, if it existed, has not survived. In a letter to the SPCK from Triebner, dated March 4, 1779, the Reverend Triebner noted that 40 members of the congregation were buried in the previous two and one-half years (SPCK 1778:89).

Writing to the SPCK on May 22, 1780, Triebner noted that 36 members of the congregation had died within a three month period (presumably during the first part of the year 1780 (SPCK 1779:96). After 1780 the burial records for New Ebenezer fall silent until the early decades of the 19th century, when tombstones begin to appear.

The Georgia Gazette published this in its February 6, 1800 edition:

The following is a statement by the rev. Mr. Bergmann of Ebenezer, of the deaths in his congregation, (supposed to contain about 700 inhabitants) from the 11th of November, 1787, to 14th December, 1799, a period of about 12 years, in a place usually accounted the most unhealthy of any in Georgia:

10 deaths from 60 to 70 years of age.
13 ditto from 70 to 80.
3 ditto from 80 to 85 (Georgia Gazette 1800:2).

From Reverend J.E. Bergmann’s tally, only 26 people died in the New Ebenezer congregation in the 12 years from late 1787 to late 1799. He makes no indication of any infant or child mortality, which was rampant. The lack of any mention of young adult or middle-aged adults is also curious, and unlikely. Also, it is not clear from this article whether the New Ebenezer congregation includes any of
the satellite congregations at Zion, Bethany, or Goshen, where he also preached to the German-speaking Lutherans. Such inclusion should have resulted in larger mortality counts. Nevertheless, the information provided in this short Savannah newspaper article is an important piece of the Ebenezer puzzle during a period where few written records about Jerusalem Church have survived. If Bergmann’s count is accurate, then the annual death rate at New Ebenezer declined precipitously from the Revolutionary War years—declining from about 32 per year in 1775-1778 to about 2 per year in 1787-1799.

The location of the graves of the clergy from Jerusalem Church is not known. Reverend P.A. Strobel, a former pastor of Jerusalem Church and a church historian, wrote in 1854 on the death and burial of Pastors Gronau and Boltzius, “On the following day [Pastor Gronau, who died January 11 and was buried Jan 12, 1745] his remains were interred in the cemetery connected with Jerusalem Church”. Regarding Boltzius, Strobel noted: “The day after his death (November 20th) [Pastor Boltzius, died Nov 19, 1765], his remains were buried in the cemetery connected with Jerusalem Church, amidst the unfeigned lamentations of his parishioners, to whose best interests he had so long been devoted. It is painful to reflect that no monument marks the place where the ashes of this venerable father repose; but whether this was in consequence of his own direction, or the neglect of those on whom the duty should have devolved, I have never been able to ascertain” (Strobel 1969:1, 4; Strobel 1953).

When Bolzius’ widow Gertraut died at New Ebenezer in 1766, she was, “interred...in the town cemetery” (Jones and Exley 1991:122; Georgia Gazette 1766:2). Presumably, she was buried along side her husband. In 1768, Reverend Lemcke was buried in the “town cemetery, and was “laid to rest by the ministers’ burial marker”. In 1770, Christopher Triebner’s infant son was buried, “here in the cemetery in the ministers’ burial place”. When Reverend Lemcke’s widow Catharina died in 1776, she, “was buried in the cemetery at Ebenezer” (Jones and Exley 1991:122, 125:130, 138). Interestingly, the Ebenezer Record Book contained no entries for Reverend Rabenhorst, who also died in 1776, and this may reflect that no monument marks the place where the ashes of this venerable father repose; but whether this was in consequence of his own direction, or the neglect of those on whom the duty should have devolved, I have never been able to ascertain” (Strobel 1969:1, 4; Strobel 1953).

Reverend Strobel also remarked on the resting place of Reverend John Ernst Bergmann, who died in 1824, noting, “His remains were buried in Ebenezer Cemetery, and there, with hundreds of the pious Salzburgers, he rests in hope of a better resurrection” (Strobel 1969:248). Bergmann’s eldest son, Christopher Frederick Bergmann, who also served as pastor to the Jerusalem congregation, died and was buried in the cemetery in 1832 (Bernheim 1872:505).

The Revolutionary War brought widespread death and destruction to New Ebenezer. In addition to the documented deaths among New Ebenezer’s residents, of whom about 126 died between 1775 and May, 1780, New Ebenezer received many military burials as a result of the British and Patriot occupation of the town. The military death and burial records on both sides for this period is horribly incomplete.

The British army occupied New Ebenezer beginning on January 3, 1779 and that occupation continued, with some interruptions, until its retreat to Savannah in December, 1781. The British garrison strength at New Ebenezer varied wildly. It may have reached as many as 3,000 in early 1779. When the town was invaded by Pulaski’s Legion in September, 1779, the number of soldiers in garrison was less than a dozen (Cashin 1989).

After October, 1779, New Ebenezer was again under British control and British and Hessian troops continued to be garrisoned in the town until December, 1781. The number of British troops in New Ebenezer during the period 1779-1781 varied. Robert Jackson, a surgeon attached to the 71st Highland Regiment, conducted medical experiments on the fever-stricken British troops at New Ebenezer. The Hessians particularly suffered from fever and many deaths resulted (Jackson 1791).

When American Major General Anthony Wayne arrived to occupy New Ebenezer in early 1782, his ranks were thin. By April, his army numbered only about 770 men. Mortality statistics for most of the regiments under his command have not been located. Some records for the Virginia Battalion, however, have survived and provide some insight into the deaths experienced in General Wayne’s ranks while stationed at New Ebenezer. During a three-month period in 1782, the Virginia Battalion lost 18 men out of a total force that numbered about 280 men. If the same death rate is projected for the other three months of the Virginia Battalion’s service at New Ebenezer, then an estimated 36 Virginian soldiers died and were buried at New Ebenezer. This comprised about six percent of the battalion. If this same projected death rate is applied to the rest of General Wayne’s army, then at least 60 other patriot soldiers died and were buried at New Ebenezer in the first half of 1782. And if the two estimates are combined (Virginia Battalion and the balance of Wayne’s forces), an estimated 96 patriot soldiers lie entombed at New Ebenezer (Elliott 2003).

Sexton records of 11 people who were probably buried at New Ebenezer were found in the Records of the Lutheran Church of the Ascension, Savannah, Georgia. Records included interments for the period 1829 to 1926 (Daughters of the American Revolution 1926). These people, who were presumably members of the Ebenezer congregation at the time of their death, were buried between 1832 and 1909. These included:

- Bergmann, Rev. C. F., 39 years, Ebenezer, March 26, 1832
- Seckinger, Mrs., 27 years, from Ebenezer, October 7, 1835
- Wiley, Elisha, 78 years 4 months, Ebenezer, November 21, 1875
- Clark, Mrs. Sophronia, 32 years, interred at Ebenezer, February 15, 1879
Weitman, Mrs. Naomi, 83 years, interred at Ebenezer, January 25, 1879
McCormick, Louisa, 70 years, Ebenezer, Georgia, October 29, 1883
Gnann, Marg. E., buried at Ebenezer, March 10, 1886
Seckinger, Charles D., 37 years, Ebenezer, Georgia, September 12, 1886
Gnann, Elbert, 73 years, Ebenezer Church, October 31, 1892
Morgan, Mrs. Sarah, 40 years, Ebenezer Church, November 1, 1892
Zithauer [Zittrauer], Mrs. Louise Olivia, 82 years, Ebeneza, Georgia, January 27, 1909

Two of the surnames in this list (Wiley and Clark) are not of common German surnames, but the Wileys, spelled Wyly, were intermarried with Ebenezer’s Salzburgers in the 18th century. Comparison of the 11 names shown above with epitaph data for Jerusalem cemetery showed correlation with nine of them. No marked tombstones for Mrs. Seckinger (died 1835) or Charles D. Seckinger (died 1886) are known to exist in the cemetery.

Another source of nineteenth century mortality information for Germans in Effingham County is found in the 1850 Federal Census Mortality Schedule, which lists 31 persons (excludes African-Americans) who died in Effingham County that year (U.S. Census 1850; Ancestry.com 2010). Comparison of the 31 names in the 1850 mortality list with Jerusalem Cemetery tombstone epitaphs revealed only one person, Gideon Dasher, whose grave is marked with an inscribed tombstone in Jerusalem Cemetery. Reverend Ephraim Keiffer and Susannah Margaret Wilson, both of whom died in 1850 and were buried in Jerusalem Cemetery, were not listed in the 1850 Mortality Schedule (Freeman and Renfro 1994:96, 103).

The Jerusalem Church records for the period 1850-1904 were reviewed for any details pertaining to the cemetery. No mention of the cemetery is recorded until 1893, when the fence surrounding the Jerusalem cemetery was repaired and painted by the church congregation. Further repairs were made to the “fence around graveyard” in 1901 (Jerusalem Lutheran Church 1850-1875; 1876-1904:18, 84).

On December 8 and 9 the Jerusalem Cemetery was badly damaged by U.S. Army troops in William T. Sherman’s 14th Army Corps. A belated federal court settlement awarded compensation for damages to the cemetery in 1906. The court records list the destruction including the cemetery fence. Apparently the fence wood was burned by the soldiers during their brief stay at New Ebenezer enroute to Savannah (Austin 1906).

The 1880 Federal Census Mortality Schedule, which recorded all persons, includes 69 persons who died in Effingham County in 1880 (U.S. Census 1880; Ancestry.com 2010). Comparison of 69 persons, which included 41 whites and 28 African-Americans, in the 1880 mortality schedule showed no correspondence with Jerusalem Cemetery epitaphs for 1880. For example, William H. Helmly, who died and was buried in the cemetery in 1880, does not appear in the 1880 Mortality Schedule. Gravestone epitaphs indicated that Julia C. Waldhough and an unnamed infant child of J.B. and M.V. Gnann were buried in Jerusalem cemetery in 1880 (Freeman and Renfro 1994:93, 102). Their names are not listed in the 1880 mortality schedule.

No records pertaining to the cemetery were located for the period from 1881 to 1952. In 1953 the Jerusalem cemetery was expanded westward, as shown on a recorded plat by Effingham County Surveyor Paul Weitman (Weitman 1953). The “Old Cemetery” is shown as a square that was located immediately west of the public road on Weitman’s plat and the entire cemetery, including the old and new, and an undedicated triangular tract west of the New Cemetery, encompassed 1.5 acres. A map of interments in the new section is maintained by the church, although no detailed map of the old section exists (Ralph Ziegler personal communication 1990).

Sometime in the late 20th century (after the creation of the new (western) section of Jerusalem cemetery), a map was prepared for additional expansion of the Jerusalem cemetery (Wilder n.d.a). A substantial brick and iron fence was built surrounding the Jerusalem cemetery, replacing the hog wire fence that had formerly surrounded the cemetery. This new fence encompassed portions of the older cemetery and western expansion.

An informal interview was made in 1996 with an unidentified grave digger, an older African-American man, who worked for Strickland’s Funeral Home in Springfield, Georgia. He stated that he frequently encountered human remains when digging graves in the old section. This suggests that the cemetery contains many corpses with no obvious surface indications.

The African-American cemetery is located in the mixed pine forest, south of the old part of the cemetery in New Ebenezer’s town commons (Effingham County Plat Book B: 166; Weitman 1961). Older members of the church remember it being used for burials in the early 1900s by local African-Americans (Alice R. Ferrell, Charles Gnann, Pauline Seckinger personal communication March 12, 1992). Archaeologists recognized numerous rectangular to oval depressions and several old bottles (possible grave offerings) in 1989. A few years later a small stone monument was erected at the cemetery and its approximate boundary was denoted by cement corner markers. Later examination of this cemetery in the early 1990s by LAMAR Institute archaeologist revealed that the cemetery had been “cleaned up” by well-intentioned individuals and some of the bottles and other grave items that were not recognized as grave offerings were removed. Spoil dirt from the established Jerusalem Cemetery also has been thrown on the adjacent cemetery, which likely obscured some of the surface evidence. No specific deeds pertaining to this cemetery have been located but African-Americans attended Jerusalem Church from its earliest days. As noted by the 1791 plat, this cemetery is within New Ebenezer’s town commons. This cemetery is possibly older than the 20th century and may have served as a traditional burying ground for African-Americans throughout Ebenezer’s history.
Alternatively, this area may contain some of the military burials from the American Revolution and was later used by the African-American community.

**FORTIFICATIONS AT THE CEMETERY**

New Ebenezer was a fortified place in the American Revolution and portions of its fortifications were located near the Jerusalem Cemetery. The fortifications were constructed by the British forces in early 1779 (Wilson 1779; Campbell 1981; Elliott 2003). These were likely reoccupied by Major General Wayne’s Patriot forces in early 1782. When Wayne and his men left the headquarters at New Ebenezer to claim Savannah from the British in July, 1782, his men leveled most of the forts at New Ebenezer. Wayne was following advice from Major General Nathanael Greene, who had written Wayne stating,

> It is my advice to the people of Georgia to have all the fortification in and about Savannah levelled, except one or two batteries, just sufficient to protect the town from insult from single vessels of force or small parties, unless we had a regular force to garrison the town: fortifications can be of no use; but on the contrary, will serve to enable the enemy to repossess themselves of it with more safety, and a less force and less loss than if they were levelled. This may appear a paradox but it is true, for militia will not defend works, but would annoy the enemy greatly while they were constructing them (Greene 1782, in _The Casket_ 1830:13).

Archaeological test excavations at New Ebenezer in 1999 confirmed the existence of ditch work in the vicinity of British Redoubt Number 3, as depicted on Wilson’s 1779 plan of British fortifications (Figure 18). Excavation data from Test Unit 118 (692-694N, 1020-1021E) and Test Unit 119 (688-690N, 1020-1021E) revealed the existence of a massive deep ditch in this area. These test units are about 18 meters north of the cemetery. The ditch was filled with brick rubble, artifacts and soil. Artifacts in the fill dated to the 18th century. This excavation data tentatively confirms that the British ditch work at New Ebenezer was backfilled in the 18th century. These data corroborate the historical information that suggests that the forts were leveled by the American troops (or the civilian and enslaved population of New Ebenezer) in late June or early July, 1782.

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**Figure 18. Plan of Ebenezer with Cemetery (Wilson 1779).**
IV. Results of the Mapping Project

TOPOGRAPHIC MAPPING

Topographic mapping data from 2002 was merged with the 2010 mapping data in order to create a topographic map of the Jerusalem Cemetery and surrounding areas, as shown in Figure 19.

GPR Blocks 1, 2 and 4

GPR Blocks 1, 2 and 4 were located immediately north of the Jerusalem Cemetery north wall. It measured 204 m east-west by 44.5 m north-south, although the bulk of the sample examined an area measuring 100 m east-west by 44.5 m north-south. Blocks 1, 2 and 4 were comprised of 183 radargrams that covered a total distance of 10,639.75 m. Figure 20 shows three overlay views of GPR Blocks 1, 2 and 4 in the upper time depths. Grid North is to the right of the page in these views. At 31 ns time depth the octagonal British fort is recognizable. Numerous probable graves are observed at the same depth beginning about 50 meters west of the fort. A second cluster of probable graves is apparent approximately 130-155 m west of the fort.

Figure 21 shows three GPR overlay maps of Blocks 1, 2 and 4 at increased time depths. The disturbance created by a road leading to the cemetery becomes apparent in these views. This road heads on a southwest course. The antiquity of this road is unknown, but its substantial GPR footprint suggests that it is an ancient portion of the Augusta Road that may have flanked the western edge of the cemetery on its exit from New Ebenezer towards Augusta. No grave signatures were observed north of this road, although many possible cultural features are displayed.

This sample of radar from Blocks 1, 2, and 4 contained a complex distribution of strong radar reflections. The most recognizable cultural feature was the large octagonal outline, 30 meters in diameter, located in the northeastern section of the sample. This octagon represents the subsurface remains of British Redoubt Number 3, which dates to 1779-1782 (Wilson 1779). Many features nearby are likely associated with this fort. A possible ditch may run nearly east-west along the south side of this sample. This ditch may have disturbed some graves along its route but this could not be fully determined without excavation. This suspected ditch feature is quite close to the brick cemetery wall, which makes its definition difficult. Figure 22 shows Blocks 1, 2 and 4 in relation to the brick cemetery wall.

GPR Block 5

GPR Block 5 was located on the western side of Jerusalem Cemetery. The sample flanked both sides of the brick wall and extended from the woods line on the southwestern side of the cemetery to the northwestern corner of the brick wall. Figure 26 shows three GPR overlay maps of Block 5 at increasing time depths. Grid North is to the top of the page in these views. Figure 27 shows the relationship of Block 5 to the Jerusalem Cemetery brick wall.

GPR Block 6

GPR Block 6 was oriented off of the New Ebenezer grid and was located south of the extant southeastern cemetery wall corner. The eastern edge of Block 6 followed along a wooden fence line and the western edge was dictated by the woods line. The block’s southern end was near an electrical pole and guy anchor wires, just north of the Augusta Road and Ebenezer Road intersections. Figure 28 shows three GPR overlay maps of Block 6 at increasing time depths. Figure 29 shows the relationship of Block 6 to the Jerusalem Cemetery brick wall.

GPR Block 7

GPR Block 7 was a sample located immediately east of the eastern brick wall of Jerusalem Cemetery. This sample included a portion of Georgia Highway 275. It also included a section of the old Ebenezer Road, which is no longer in use. Figure 30 shows three GPR overlay maps of Block 7 at increasing time depths. Grid North is to the top of the page in these views. Figure 31 shows the relationship of Block 7 to the Jerusalem Cemetery brick wall.

GPR Block 3, 8 and 9

GPR Blocks 3, 8 and 9 were located immediately south of the Jerusalem Cemetery’s south brick wall. This sample examined an area considered by senior members of the New Ebenezer community to be an “African-American” graveyard. Figure 23 shows two GPR overlay maps of Blocks 3, 8 and 9 at upper time depths. Grid North is to the left of the page in these two views. Figure 24 shows two GPR overlay maps of Blocks 3, 8 and 9 at increased time depths. Figure 25 shows the relationship of Blocks 3, 8 and 9 to the Jerusalem Cemetery brick wall.

GPR Block 10

GPR Block 10 was a sample within the old section of the extant Jerusalem Cemetery. Figure 32 shows three GPR overlay maps of Block 10 at upper time depths. Grid North is to the right of the page in these views. Figure 33 shows three GPR overlay maps of Block
Figure 19. Topography of Jeruslem Cemetery Vicinity. (Orange line denotes cemetery brick wall. Blue line denotes cemetery limits). (Grid North is to the top of the page.)
Figures 20 & 21. GPR Overlay Maps of Blocks 1, 2 and 4 at Upper Time Depths (Top) and Lower Time Depths (Bottom).
Figure 22. GPR Blocks 1, 2, and 4 Plan View. (Grid North is to the top of the page.)
Figure 23. GPR Overlay Maps of Blocks 3, 8, and 9 at Upper Time Depths.

Figure 24. GPR Overlay Maps of Blocks 3, 8, and 9 at Lower Time Depths.
Figure 25. GPR Blocks 3, 8, and 9 Plan View. (Grid North is to the top of the page.)
Figure 26. GPR Overlay Map of Block 5 at Increasing Time Depths.
Figure 27. GPR Block 5 Plan View. (Grid North is to the top of the page.)
Figure 28. GPR Overlay Maps of Block 6 at Increasing Time Depths.
Figure 30. GPR Overlay Maps of Block 7 at Increasing Time Depths.
Figure 31. GPR Block 7 Plan View. (Grid North is to the top of the page.)
Figure 32: GPR Overlay Maps of Block 10 at Upper Time Depths.
Figure 33. GPR Overlay Maps of Block 10 at Increased Time Depths.
RE-ANALYSIS OF 2002 GPR DATA

British Redoubt 3 and vicinity were sampled by GPR in five locations in 2002. These include Areas B, C, D, E, and F, which cover a total surface area of 497 square meters. Each of these sampled areas is described below. Area B transects were collected North to South. Areas C through F transects were collected East to West. This orientation was selected to best intersect the anticipated cultural features within each of these areas.

By far, the best GPR evidence from the 2002 season for British Redoubt 3 was observed in Area B. Area B measured 20 m North to South and 12 m East to West. It covered an area from 675 to 695 m North, 1014 to 1026 m East. Transects were spaced at 20 cm intervals and were traversed from North to South. The survey progressed from East to West. A total of 61 transects was recorded in Area B. The 800 MHz antenna was used to survey this area. The data from Area B was reprocessed in 2010 using GPR-Slice software. One resulting overlay plan image is shown in Figure 35. Grid North is to the top of the page in this view. No radar anomalies characteristic of human burials appear in this view. The ditch of Redoubt 3 is clearly visible as a dark blue band spanning the entire block. Also visible are traces of Ebenezer Road, which...
runs west-northwest near the center of the block. This image is more refined than the images collected using the 500 MHz antenna in Block 1, although the two images essentially reveal the same radar anomalies.

Three previously excavated 2 m by 1 m archaeological test excavations are contained within GPR Area B. Large Revolutionary War-era features were identified previously in each of these tests. The two northern test units sampled what was interpreted as the northern palisade ditch for the British Redoubt 3. The other test unit sampled a feature of unknown function. The vicinity of Area B also was sampled archaeologically in the 1990s with a series of small shovel tests (approximately 30 cm in diameter and excavated to sterile soil). These shovel tests were spaced at 10 m intervals.

Areas C, D, and E were resurveyed by GPR Block 1 in the 2010 GPR Survey. Area C measured 11 m North to South and 10 m East to West. A total of 57 transects was recorded in Area C. Transects were placed on an area suspected to be the Old Augusta Road. The Augusta Road was the earliest road built in Georgia during the British colonial period, begun in the 1730s and linking Savannah with Augusta. The northeastern corner of Area C is at site grid point 676.25 m North, 1006.29 m East. It measured from 665.25 to 676.25 m North, 996.29 to 1006.29 m East. The area had once been a more pronounced road rut (of the Savannah to Augusta Road) but fill dirt was brought in during the 1950s or 1960s to level out the terrain (Milton Ziegler personal communication January 15, 2002). Today, a slight trace is visible of a portion of this old road.

Transects within GPR Area C were spaced at 20 cm intervals and were traversed from East to West. The survey progressed from North to South. A portion, or possibly all, of Area C was probably within the walls of British Redoubt 3. This area was slightly undulating and approximately 60 percent vegetated in grass. Area C is located just west of the former route of Ebenezer Road (previously described) but likely was not impacted by this road. The map of Area C exhibits several large anomalies that may represent large objects or features. Conversely, these also may represent natural tree disturbances. A linear East-West zone of radar anomalies also is visible in this map, which may relate to the British fortifications. No clear evidence is apparent of the route of the Savannah to Augusta Road, which was described by oral informants as trending southwest-northeast in this general vicinity. No obvious human graves were detected by the GPR in Area C, although some of the larger anomalies bear further investigation in this regard. One plan map example of Area C is shown in Figure 36.

Area D measured 3 m North to South and 10 m East to West. It was placed 5 m south of Area C to avoid a large water oak tree growing between the two areas. This 5 m gap corresponds to the old road trace that was described by Milton Ziegler. The northeastern corner of Area D is at site grid point 660.25 m North, 1006.29 m East. A total of 16 transects was recorded in Area D. Transects were spaced at 20 cm intervals and were traversed from East to West. The survey progressed from North to South. This area was slightly undulating and approximately 60 percent vegetated in grass. A pronounced anomaly is exhibited in Area D, which may represent one or two human graves in the approximate vicinity of 658 North 1005 East. These possible graves are located north of the brick cemetery wall. One example plan map of Area D is shown in Figure 37.

Area E measured 2 m North to South and 6 m East to West. The northeastern corner of Area E is at site grid point 657.25 m North, 1006.29 m East. It covered an area from 655.25 to 675.25 m North and 1000.29 to 1006.29 m East. It was located immediately south of Area D, but its East-West dimension was shortened to avoid a heavily landscaped area flanking the entrance to the Jerusalem Church cemetery. A total of 11 transects was recorded in Area E. Transects were spaced at 20 cm intervals and were traversed from East to West. The survey progressed from North to South. Several anomalies were observed in the field in Area E and possibly relate to the military construction or human graves. Some of the anomalies in Area 3 may be related to a large live oak tree that was growing a few meters southeast of Area E. This area was nearly level and approximately 60 percent vegetated in grass. Area E appears to contain a concentration of human burials. At least seven probable grave anomalies are apparent in the GPR plan view at 80 cm depth and others can be recognized at other depths. As with Area D, Area E is located north of the present cemetery wall. Archaeological confirmation of these suspected graves was not attempted in the present study. One example plan map of Area E is shown in Figure 38.
Figure 36. GPR Area C Reprocessed with GPR Slice Software.

Figure 37. GPR Area D Reprocessed with GPR Slice Software.
Area F was located within the Jerusalem Cemetery. This area is predicted to be southeast of Redoubt Number 3 and no major anomalies associated with the fort’s architecture were anticipated. Area F measured 7 m North to South by 15 m East to West. The northeastern corner of Area F is at 638.51 m North, 1002.83 m East. The GPR sample block covered an area from 631.51 to 638.51 m North and 987.83 to 1002.83 m East. A total of 36 transects was recorded in Area F. Transects were spaced at 20 cm intervals and were traversed from East to West. The survey progressed from North to South. Eleven marked graves are located within this sample area, although more than 50 percent of the sample area contains no surface indications of any burials. None of the marked graves exhibit any signs of soil depressions. None of the wooden grave markers contained any legible markings. Many of the radar transects in Area F were modified slightly to avoid headstones and footstones. All of the marked graves within this area were oriented with their long axis aligned to the town grid, or approximately 35 degrees East of Magnetic North. Headstones were located south of the footstones. The grave markers included simple marble slabs and heart pine slabs. All of them were standing vertically, or nearly vertically. Many radar anomalies were observed in this area and many of these are suspected to be human burials. For example, Line 61 crossed no marked graves but contains at least seven anomalies that are similar to the radar signature for marked graves. Line 31 crossed a marked grave approximately 4 to 5 m from the begin point, which gave a typical grave radar signature. Dozens of similar anomalies were observed in the field, which suggest that the number of burials within the cemetery is far greater than the number of tombstones or tomb sticks (heart pine or cypress plank markers). The topography of Area F was nearly level and completely vegetated in grass. The GPR survey in Area F yielded many anomalies, most of which represent human burials or grave shafts. This view in Figure 39 exhibits at least 16 anomalies that probably represent human graves. GPR “time slices” at various depths revealed other probable grave anomalies.

The survey of this area provided an opportunity to corroborate the GPR data by comparing radargrams with other grave evidence, particularly grave markers. These survey data also provided an opportunity to ascertain the frequency of other, unmarked graves within this area. Quite possibly some of these graves in GPR Areas D, E and F may represent military burials. Figure 40 shows the relationship of Areas B, C, D, E and F to the cemetery’s brick wall.
Figure 40. GPR Areas B, C, D, E, and F Plan Map. (Grid North is to the top of the page.)
V. Interpretations

Burial records exist for New Ebenezer from 1736 through the 1800s but are inconsistently documented. The earliest marked grave in the Jerusalem Cemetery dates from 1813 and very few engraved markers dating prior to 1830 have survived. Many of the burials at New Ebenezer from this period may include soldiers and civilians killed in the American Revolution. The African-American community at New Ebenezer is underrepresented in the written burial records and epitaphs for New Ebenezer. Consequently, for all of these reasons it is reasonable to expect that hundreds of unmarked graves exist at New Ebenezer but their precise whereabouts are not known.

As shown by this study, GPR survey represents one nondestructive avenue for locating lost graves. GPR proved quite effective in locating suspected burials at Jerusalem Cemetery. As an example, Figure 41 shows two GPR plan views of Block 10. In the upper view the GPR map is shown. In the lower view the GPR map is shown with 40 predicted graves marked by magenta rectangles and only 17 stone or wooden grave markers, indicated by green “T”s.

The archaeological data collected by the Jerusalem Cemetery mapping project revises the known extent of the cemetery. GPR information indicates probable human graves are located north, east, and south of the existing cemetery wall. Surface depressions also indicate the likelihood of human remains south of the cemetery wall. Generally, however, surface depressions are not present in the graveyard as the ground has been kept level by landscapers in recent memory. While the present project was mainly concerned with defining the outer limits of the cemetery, three areas were sampled within the cemetery wall. These included one sample collected in 2002 (Block F), Block 10, and portions of Block 5. More than 250 probable graves were identified in the GPR samples.

GPR survey on the north side of the cemetery wall examined a portion of New Ebenezer’s town commons. Coverage in this area included GPR Blocks 1, 2 and 4, as well as several small grid squares surveyed in 2002 (B, C, D, and E). The 2002 samples were combined with the present GPR Block 1 data. The 2002 data indicated that graves were likely present in this area and more were expected in the present survey. More potential graves were located, but not as many as previously predicted. GPR survey on the east side of the cemetery wall located additional graves immediately outside of the wall and extending approximately 15 meter to the east. Survey on the south side of the cemetery wall located potential graves extending about 60 meters south of the wall through GPR survey and surface topographic mapping. GPR survey on the west side of the cemetery wall did not locate any potential burials. The portion of Block 5 located within the cemetery wall also encountered no potential burials. This vicinity appears to be outside of the historical boundaries of the cemetery. The area within the wall is intended for future burials by Jerusalem Church.

Figure 41. Grave Evidence From GPR Block 10.
Figure 42 shows a composite view of GPR plan maps from the survey. Figure 43 shows a view of potential graves based on the GPR survey data. Figure 44 shows a view of potential graves south of the cemetery wall based on surface depressions.

Figure 45 shows a composite view of marked graves and suspected graves from the survey, with the addition of Block F from the 2002 work. Tombstones and wooden grave markers are shown in green in this view. GPR-identified graves (N=250) are shown as magenta rectangles. Likely grave depressions (N=28) are indicated by blue rectangles. Please note that the survey of the tombstones within the cemetery is incomplete and graves continue to the south and west. Comprehensive mapping of the graves within the cemetery wall was beyond the scope of the present effort.

Figure 46 is a boundary map of the Jerusalem Cemetery based on the results of this project. This view reflects the expansion to the north, east and south. The cemetery boundary is indicated in blue in this view.

Figure 47 shows a recent aerial photograph of the Jerusalem Cemetery location with additional information superimposed (Google Earth 2010). The orange line shows the location of the brick wall that surrounds most of the cemetery. The blue line forms a perimeter around the projected total expanse of the cemetery, based on this study. The cemetery covers an irregular area from 527-670N and from 825-1030E. Its maximum extent is 143 m north-south by 205 m east-west.
Figure 43. Potential Graves Based on GPR Survey Data, Jerusalem Cemetery. (Grid North is to the top of the page.)
Figure 44. Potential Graves Based on Surface Depressions, Jerusalem Cemetery. (Grid North is to the top of the page.)
Figure 45. Graves and Potential Graves at Jerusalem Cemetery. (Grid North is to the top of the page.)
Figure 46. Revised Jerusalem Cemetery Boundary (in Blue). (Grid North is to the top of the page.)
The LAMAR Institute’s research team conducted a mapping project at the Jerusalem Cemetery at New Ebenezer in Effingham County, Georgia in June and July 2010. This effort was supported by the Georgia Salzburger Society and with the authorization of the congregation of the Jerusalem Evangelical Lutheran Church. This research effort focused on that portion of the cemetery not included within the large brick and metal wall that surrounds the core of the cemetery. Archaeologists examined a total of approximately 11,372 square meters (2.81 acres), traversing this area by 50 cm transects across it with the GPR cart. The team mapped the site’s topography, made careful surface observations, and conducted GPR mapping of large sample areas of the walled cemetery’s peripheral landscape. The cemetery forms a portion of the New Ebenezer (now commonly called Ebenezer) town site, which is recorded in the Georgia Archaeological Site File as site 9Ef28. New Ebenezer is also listed as a historical site on the National Register of Historic Places.

The findings from this study confirmed several predictions about the spatial distribution of suspected graves and it also provided several new discoveries. The survey identified unmarked potential graves in areas North, East and South of the extant cemetery wall. Archaeologists identified more than 250 unmarked potential graves through GPR and 28 likely grave depressions. Because the project included no ground disturbance, none of the GPR signals were verified by ground-truthing. Consequently, some questions remain as to whether some radar reflections represent human burials or some other cultural or natural manifestation. Extensive prior experience with GPR grave signatures, however, suggests that many of these anomalies are, in fact, unmarked graves. Limited GPR samples within the brick wall of the cemetery revealed dense deposition of probable burials. When these spatial distributions were compared with the distribution of tombstones and wooden grave markers, the GPR data suggest that fewer than one half of the interments in this part of the cemetery are indicated by surface markers.

SUMMARY

The LAMAR Institute’s research team conducted a mapping project at the Jerusalem Cemetery at New Ebenezer in Effingham County, Georgia in June and July 2010. This effort was supported by the Georgia Salzburger Society and with the authorization of the congregation of the Jerusalem Evangelical Lutheran Church. This research effort focused on that portion of the cemetery not included within the large brick and metal wall that surrounds the core of the cemetery. Archaeologists examined a total of approximately 11,372 square meters (2.81 acres), traversing this area by 50 cm transects across it with the GPR cart. The team mapped the site’s topography, made careful surface observations, and conducted GPR mapping of large sample areas of the walled cemetery’s peripheral landscape. The cemetery forms a portion of the New Ebenezer (now commonly called Ebenezer) town site, which is recorded in the Georgia Archaeological Site File as site 9Ef28. New Ebenezer is also listed as a historical site on the National Register of Historic Places.
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