WHERE THE CHILDREN LIE: A DEMOGRAPHIC AND SPATIAL ANALYSIS OF TWO SANTA ROSA COUNTY CEMETERIES

by

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ABSTRACT

WHERE THE CHILDREN LIE: A DEMOGRAPHIC AND SPATIAL ANALYSIS OF TWO SANTA ROSA COUNTY CEMETERIES

Allison Corinne Hawley

Carnley is a small, rural, family cemetery near Chumuckla in Santa Rosa County, Florida (site #8SR844) that was in use from the late 1884 to the early 1936. At Carnley cemetery, fifty percent of the identified graves are juveniles between the ages of 0 and 5 years. A number of explanations are possible for this high percentage of child burials. In this paper, I test the hypothesis that children were buried more frequently in family cemeteries than in community cemeteries, possibly due to social concepts of childhood and child mortality, and that creating a burial ground for children was one of the primary roles of the family cemetery during this time period. In order to test this hypothesis, I compare the mortality structures of Carnley Cemetery to that of a contemporaneous community cemetery, and use Fisher's Exact Test to measure the statistical significance of the differences in ages 0 to 5 mortality rates between the cemeteries. I then create GIS maps of the two cemeteries to analyze the spatial structure of these cemeteries in order to detect patterns in burial location that would indicate age-based mortuary choices.

CHAPTER I

INTRODUCTION

A visit to Carnley cemetery begins with a long drive past expanses of wheat, soy, and peanut farms flanked by lush forests and dotted with the occasional private residence. One passes Ebenezer Church (which overlooks its own small cemetery) and continues down a rough dirt road, bordered by green, fragrant, mixed deciduous forest. The final leg of the journey is best traversed on foot due to the deep pits in the dirt path and overgrown vegetation that promises to wreak havoc on one's vehicle. After approximately a half mile, the forest opens to reveal a small clearing with old cement and marble headstones peering through the tall grasses. One's initial impression is that of being transported to another era, one in which death was ever present and treated without pretense. Somehow, despite its isolated location, the graves appear to be more honestly presented than the manicured acres and neat rows of tidy tombstones we find in contemporary cemeteries. Upon further inspection of the graves, some of which are marked only with uninscribed ironstone, one is struck by the biographical data inscribed on some of the marble and cement headstones. Over half of the identifiable graves are those of children.

Carnley is a small, rural, family cemetery near Chumuckla in Santa Rosa County, Florida (site #8SR844), used as a burial ground by the Carnley family from 1884 to 1936 (figures 1 and 2). The southwestern section of the cemetery is marred with deep ruts and uneven surfaces caused by past logging activities, which could have destroyed or obscured earlier burials in this section of the cemetery. The northeastern portion of the cemetery contains the graves of Carnley family ancestors. Eight of the fourteen graves that have discernable biographical data are juveniles (ages 13 or younger). A number of explanations are possible for this large proportion of child burials. One possibility, and my hypothesis, is that children were buried more frequently

in family cemeteries than in community cemeteries, possibly due to social concepts of childhood and child mortality, and that creating a burial ground for children was one of the primary roles of the family cemetery during this time period. Alternatively, the primacy of child burials at Carnley may reflect a general pattern of disease and mortality risk in the rural, post-bellum South, or the Carnley family in particular may have experienced an unfortunately high number of juvenile deaths. I will explore these possibilities in order to determine the cause of the large proportion of child burials at Carnley and to get a better understanding of the role of family cemeteries.

In order to answer this question, I will compare Carnley Cemetery and the nearby contemporaneous, larger, community cemetery of Coon Hill. Each of these cemeteries flanked a small community established by timber workers in the 19th century. However the community bordering Carnley Cemetery (called Nora) was smaller and established later than the community near Coon Hill Cemetery (called Coon Hill). The goal of this comparison is to determine what the differences and similarities between the cemeteries reveal about mortuary choices and mortality risks during the study period. Analyses of these two cemeteries will show whether people were making different burial choices based on the type of cemetery (i.e., burying children in family cemeteries more frequently than in community cemeteries) or whether the mortality structures of the cemeteries are better explained by general disease pathways and local health risks.

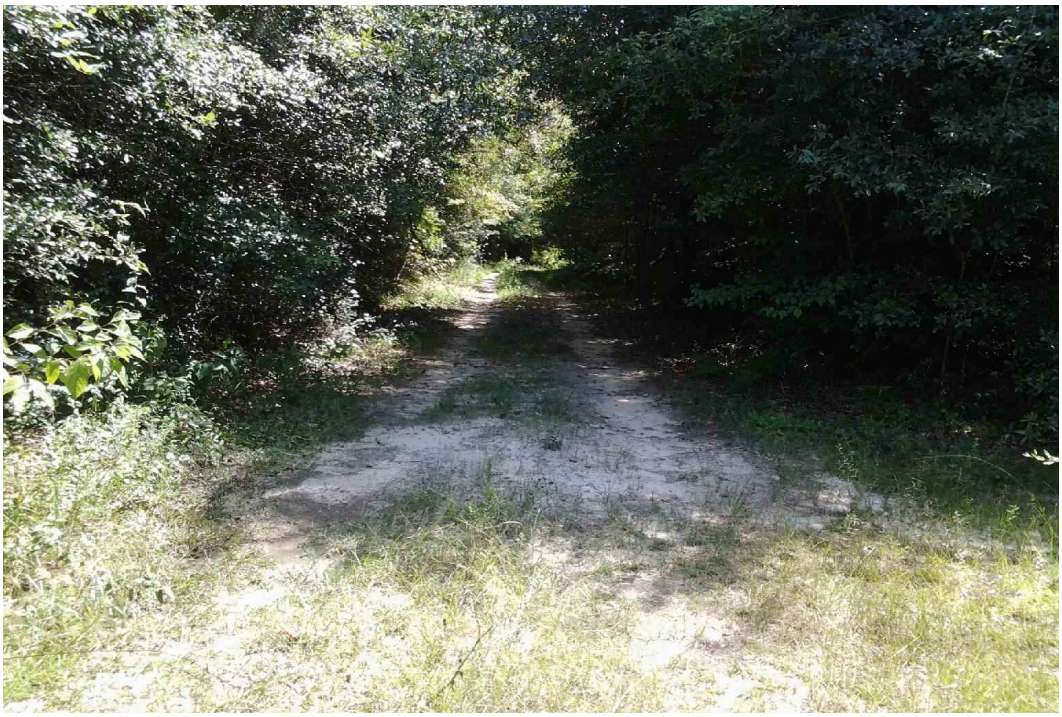

Figure 1. Pathway leading to Carnley Cemetery.

Figure 2. South view of Carnley Cemetery.

I will undertake three main lines of research in my examination and comparison of Carnley and Coon Hill Cemeteries. First, it is important to understand the context in which Nora and Coon Hill were founded and to get a glimpse into the socioeconomic and cultural climate of these communities. Economic opportunity and familial relationships impact population structure, which can influence mortality and mortuary practices. Through census records, published and unpublished documents, and interviews with descendants, I will investigate cultural origins, occupations, recreation, land ownership, access to resources, and the living environment of the people of Nora and Coon Hill. These details dictate lifestyle, social interaction, and daily activity, which influence patterns of disease and trauma in addition to cultural constructs of illness, death, and proper mortuary practices. These demographic and economic data therefore form the foundation for understanding local mortality and mortuary practices.

Second, I will conduct a demographic comparison of the two cemeteries. Age based mortality structures (in which data of the number of deaths in age groups divided into 5 year increments are compiled) will be created for each cemetery as a whole and for each decade according to dates of death. This will reveal differences in mortality based on age between the two cemeteries. In addition, these data will be compared to national mortality statistics in order to recognize any notable deviations. If my hypothesis proves correct, results should show a pattern of higher child mortality in the family cemetery than in the community cemetery and the child mortality should be noticeably lower than the national average in the community cemetery, while child mortality in the family cemetery should be higher. Since these communities would have experienced similar health risks and therefore would have had similar mortality patterns, such differences in cemetery demographics would be best explained by mortuary choice, thereby supporting my hypothesis. If, however, the demographic comparison reveals no significant

disparity (a consistent difference in the number of child burials within corresponding time periods) between the cemeteries' mortality structures, and no consistent deviations from the national averages, then the large proportion of child burials at Carnley is more likely explained by general patterns of disease and chance (resulting from a small sample size).

Finally, I will reconstruct the chronological formation of each cemetery using a Trimble GPS unit to create maps of Carnley and Coon Hill cemeteries, and then use ArcGIS software to conduct spatial analysis based on dates of death, age, and surname. This information will reveal where people chose to bury their loved ones based on age and/or surname during different periods in the development in the cemeteries. Evidence of separate burial location choices for children and adults would indicate that the burial place of children held special significance, thereby providing support for my hypothesis. If, on the other hand, the burial location choices appear to be based on criteria unrelated to age (such as kin affiliation or radiation around a central point), my hypothesis would be weakened.

The first chapter provides background information on previous studies of contemporaneous family cemeteries and mortality data (including national child mortality rates and general patterns of disease). The following chapter on site history begins with a general overview in order to establish broad, historical context and subsequently narrows its focus to the study area. It includes a brief history of Florida, a glimpse into life in the rural south during the 19th and early 20th centuries, and finally, a detailed description of the study domain including narratives of the life and heritage of the people of Coon Hill and Nora communities. The next chapter includes demographic data in the form of age-based mortality structures, spatial data in the form of GIS maps, and preliminary analyses of these data. In the final chapter, I give an in-

depth interpretation of these data, and draw conclusions as to whether the evidence supports my hypothesis, or whether an alternative explanation is more likely.

The Carnley family identifies strongly with this location and with their deceased ancestors buried at Carnley Cemetery and has made efforts to preserve and maintain the burial grounds. Members of the Carnley family, such as Larry and Amanda Hudson, and Melvin Carnley, have been exceptionally helpful in assisting my research efforts. In addition, descendants of some of the earliest founders of Coon Hill community, such as Jim McCaskill and Bob Boutwell, have provided valuable information about local history, and have generously granted me access to Coon Hill Cemetery. This project is undertaken with their enthusiastic support, and with the support of Margo Stringfield and Dr. Kristina Killgrove. Access to necessary resources and equipment has been provided by the University of West Florida Archaeology Institute.

CHAPTER II

PROBLEM BACKGROUND

In order to investigate potential explanations for the large proportion of juvenile burials at Carnley cemetery, previously examined areas of research must be drawn upon. These topics include previous studies of rural family cemeteries in the southern United States, the context of health, medicine, and disease in which the communities of Coon Hill and Nora were established, and an assessment of national child mortality in the late 19th and early 20th centuries. It is also useful to explore the relationship between cemetery, space, and culture; specifically, the way in which culture influences the choice of location and placement of graves within the cemetery. Previous studies on this topic help to lay the foundation for such an exploration.

Previous Studies of Southern Rural Family Cemeteries

Some previous studies examining the structures of small rural cemeteries in the South have been conducted (Stokes 1991; Davidson and Mainford 2008), but these have focused mainly on the relationships between ethnicity and grave markers/grave offerings. Sherri Stokes (1991) conducted a study of rural cemeteries in the South in terms of identity expression revealed in gravestone materials and iconography. Stokes found that both blacks and whites of lower socioeconomic status used locally available material or "found" items for gravestone construction and adornment. These 'found' or homemade materials are typical characteristics of smaller, family cemeteries during the 19th and early 20th centuries. For instance, homemade wood and cement grave markers were common elements of Southern family cemeteries in the 19th century and earlier. Fieldstones were often used in lieu of formal grave markers (Davidson and Mainford 2008). Grave marker inscriptions in rural cemeteries have also become a topic of interest in studies of vernacular architecture. Anne Stance, for example, traced grave-marker

inscriptions in two cemeteries in Marion County, Georgia, to templates hand-made made by a single artist (Chance 2010). During times of economic duress, using the work of local artists was a more cost-effective way of preserving the memory of loved ones in script than buying commercially inscribed gravestones. Tracing the origins of styles in the vernacular architecture of cemeteries is a valuable way to shed light on socio-economic conditions, as well as cultural and ethnic ties in a community, and also to understand the evolution of style and ideology reflected in these inscriptions and designs (see Appendix A). In 1981, Gorbon and Diblasi conducted a study correlating grave marker inscriptions in the 18th and early 19th century South to demographic categories such as age, socio-economic status, and religion. This study demonstrated a complex interplay of these demographic factors and changes in gravestone iconography. For instance, they determined that the replacement of motifs on children's graves (e.g., the replacement of the cherub with the urn and willow) resulted from a complex interplay of economic status and socio-religious values, wherein certain motifs were introduced on imported grave markers by the upper class and imbued with religious status. The popularity of these motifs then spread to the lower socioeconomic classes in the community who imitated the designs on more economical, locally-made gravestones. Examining such correlations and noting variations in grave marker styles and materials will be useful in my study, although I will examine these features to compare age-related differences in mortuary choices and overall ideological and socio-economic differences between family and community cemeteries. I will now turn my attention to the state of health and medicine during the 19th and early 20th centuries as it aids the understanding of the mortality structures of Carnley and Coon Hill cemeteries. Local disease pathways and health practices influence community mortality, which is reflected its cemetery structures.

Health in the 19th and early 20th Centuries: The Intersection of Culture, Illness, and Mortality

The practice of medicine in the Southern U.S. prior to the early- to mid-1800's more closely resembled a vocation than the institutionalized profession that it is today. Stowe (2004: 18-32) discusses apprenticeship as the primary method of medical study at the time, which I summarize in the following paragraph.

A fledgling doctor began his career as an apprentice under the wings of a practicing physician, usually a member of the apprentice's own community. Just as graduate students often take on the theoretical philosophy of the professors under whom they study, so did the new doctors learn to operate within the variable paradigms of their teachers. These paradigms were generally constructed of a mix of local folk remedies (which varied depending upon the ethnic and cultural makeup of the community), shared knowledge within the medical community, values and expectations within the doctor's area of practice, and trial and error. Naturally, treatment choices, diagnoses, access to medicines, and bedside manner varied considerably among practicing healers. Since the apprenticeship method of training prevailed over the institutional learning that may have otherwise created more uniformity in practice, geographic spaces of medical paradigms covered the landscape, with no clear boundaries, but uniquely adapted to particular natural and cultural environments. In addition, the field of healing encompassed a variety of practitioners, including herbalists, slaves who employed traditional African remedies, midwives, and women to whom healing traditions had been passed on. After around the 1830's medical schooling started to become more commonplace and institutionalized learning started to gain esteem. Even so, the degreed MD did not become the primary type of healer until late in the century. The privilege of orthodoxy (the standardized medicine taught in

medical schools) lay exclusively with white males, thereby excluding other types of healers from the mainstream medical community.

Two main differences between institutionally trained doctors and those traditionally trained by apprenticeship stand out. First, the MDs employed standardized orthodox approach to medicine, whereas apprentice training varied considerably. Second, medical doctors worked within an allopathic paradigm as opposed to the largely homeopathic paradigm of locally trained healers (Stowe 2004:8). The allopathic approach seeks to combat the disease by administering treatment that produces the opposite effects of the disease, in contrast to homeopathy which is an attempt to cure by applying small amounts of a panacea that would produce mild symptoms similar to the disease in healthy people. However, even with the national influx of newly trained doctors of orthodox medicine in the mid to late 19th century, the force and momentum of tradition carried at least as much weight as the somewhat mysterious promise of medical science. So, when a new doctor re-entered his rural community to practice, he was faced with the difficult task of marrying orthodoxy with tradition (Stowe 2004: 3-4). He found that rather than replacing the existing paradigms with a new overarching orthodoxy, he would have more success working within the current paradigm while making structural changes from within. For example, a physician may prescribe his own allopathic treatment in addition to recommending traditional homeopathic remedies. In addition, the unique culture, environment, social and religious values, industry, and varying degrees of access to medicine worked to shape the practice of any individual doctor.

The health structure created by this intersection of culture, illness, treatment, and mortality in Coon Hill and Nora was in a sense typical of the rural South, as many of same health risks related to the weather, environment, and relative isolation were common to most of these

communities. A unique blend of cultural and religious associations, traditions, and concepts of illness and death influenced both health practices and mortuary choices. At the same time, the natural environment, local industry, and patterns of diseases posed specific health risks. These particular health risks and the choices made to prevent, treat, and conceptualize illness formed the distinctive health structures of Nora and Coon Hill communities.

Settlers began using the patch of land that is now Coon Hill Cemetery as a burial ground almost fifty years before the Carnley Cemetery came into being. Not surprisingly, understanding of health and disease changed significantly during the course of that half century. In fact, the 1870's and 1880's were pivotal decades in the medical world. Due largely to the work of Robert Koch and Louis Pasteur, for the first time, the scientific community achieved a breakthrough in the understanding of the agents of contagious disease. The medical community discovered that infectious diseases were caused by living organisms, which were collectively referred to as 'germs' (Tomes 1998: 31-32). Scientists would not distinguish between bacterial and viral infections for several more decades. Thus, germ theory emerged and became ubiquitous, displacing earlier perceptions of contagion. Throughout the nineteenth century, disease posed a constant threat to the livelihoods of city and country dwellers alike. Early mortality, particularly among children, was high. Naturally, health threats differed considerably from the threats we face today. Noncommunicable diseases, such as cancer, heart disease, and diabetes pose the greatest danger in today's society (Center for Disease Control and Prevention). However, communicable disease presented a much greater threat across the United States before modern medicine. Tuberculosis, malaria, scarlet fever, dysentery, smallpox, yellow fever, cholera, diphtheria, typhoid fever, infant diarrhea, parasites, infections, and the trials of childbirth all

endangered lives, particularly the lives of the young or infirm (Tomes 1998; Preston and Haines 1991).

The racial dimension of illness and healthcare cannot be overlooked either. Racial divisions pervaded all aspects of life in the American South, even after the Civil War. African Americans were subject to additional physical rigors, nutritional deficiencies, and often, abuses that threatened health in distinctive ways. Before the Civil War, treatment of slave illnesses lay in the hands of the owner, and at times was altered or withheld due to financial constraints. Partially as a response to unreliable formal medical care, and partially due to traditional African customs, many slaves turned to folk remedies when illness struck, and slave healers were engaged by blacks and whites alike to provide medical treatment (Stowe 2004). These traditions persisted after the Civil War, adding to the amalgam of medical practices in the 19th century South.

Except for the smallpox vaccine, introduced at the beginning of the 19th century, no reliable vaccines or cures existed for these diseases. Doctors treated symptoms of the illness, but the chances of survival depended primarily on the virulence of the particular disease, the individual's constitution, and luck. Without effective treatment, prevention was one's best hope. As such, people approached disease prevention with passionate rigor. In order to prevent disease, one must understand its methods of transmission. Before germ theory took hold, people gave credence to the zymotic theory of disease, or the idea that disease agents generated spontaneously in sources waste and decay, such as sewer systems, stagnant water, trash ridden areas, and other unsavory environments (Tomes 1998: 27). The chemical vapors exuding from these sources teemed with disease, and the inhalation of said vapors caused people to fall ill.

Prevention efforts, collectively known as "sanitation science," revolved largely around ensuring proper ventilation ridding homes of dirt, and attending to home plumbing (Tomes 1998: 9).

Rather than dispelling these previous notions of disease transmission, the introduction of the germ theory resulted in sanitation science in hyper-drive. While people now understood that microorganisms caused disease, they did not yet fully understand the means of germ transmission. Health organizations and governing bodies launched mass efforts to educate the public on the importance of hygiene and sanitation in order to prevent the attack of the ubiquitous germ. Sanitation efforts became a primary responsibility of the household, wherein women were prevailed upon to ensure the cleanliness of the house and its inhabitants, and the men were responsible for necessary structural adjustments, such as proper plumbing and ventilation. Both men and women adjusted their attire to avoid germ-catching hemlines, and halted the 'dangerous customs' of baby kissing and hand shaking. These efforts resulted in many modern staples of the home, such as the white porcelain toilet and tiled flooring in the bathroom, initially created to allow for the easy detection and scouring of germs (Tomes 1998: 10-11).

The types of sanitation advocated by health organizations and the media could not be easily implemented by all socio-economic classes. Only relatively moneyed families could afford to invest in refrigeration, flush toilets, and running water. Furthermore, attention to sanitation and cleanliness came to be associated with moral and religious piety, largely due to sanitation-based media campaigns (Stowe 2004: 205; Tomes 1998: 124-125). Thus, working class families who could not afford to comply with these numerous rigorous and expensive measures were deemed morally inferior to the uber-hygienic. These distinctions were most apparent in urban centers where several different socioeconomic classes resided in close proximity to one another. Rural Southern communities were less likely to be faced with such

divisions, having access to essentially the same resources, and were thus likely to share similar sanitation practices. Furthermore, families in rural, Southern communities had comparable access to healthcare, particularly in communities like Coon Hill and Nora with self-proclaimed dedication to assisting one's neighbors in their times of need. While the entire country was threatened by the infectious diseases mentioned above, rural communities and urban communities experienced different levels of susceptibility to particular illnesses (Preston and Haines 1990:168). For instance, outbreaks of tuberculosis, which spreads quickly in densely populated areas, and cholera, which is contracted from a contaminated water supply, were more likely to occur in urban areas, whereas when these diseases appeared in rural communities they were less likely to result in widespread outbreaks. Rural communities faced the additional risks of parasites, occupational hazards, infections, and more restricted access to health care professionals and medicine. Urban and rural children faced additional differences in health risks. While some city children were undoubtedly put to work, nearly *all* children in agricultural communities worked on the farm for a large part of the year (attending school only three to four months during the off-season) (Weekes 1999). This physical strain may have weakened the immune systems of some of these children, increasing their susceptibility to disease. Nevertheless, mortality data show the congestion and hygienic shortcoming of the urban environment to be riskier to juvenile health (Preston and Haines 1990: 167). This is the setting of disease, health care, and the related cultural entrenchments in which Coon Hill and Carnley cemeteries were formed.

While a dearth of local 19th century death records has prevented mortality studies from being conducted in the study area specifically, national mortality studies based on death registration records and available census data have been published (Preston and Haines 1990;

Shapiro et. al 1968). These data can be used as a benchmark with which to compare the mortality structures reflected in Coon Hill and Carnley cemeteries.

Child mortality data from the early 20th century South are limited and unreliable, and data from the late 19th century are even less conclusive. However, a few mortality studies have been published, most based on data from Death Registration Areas (DRAs), jurisdictions in which at least 90% of deaths are recorded (Hetzel 1997). By 1900, most states--including Florida--had begun establishing DRAs, but full compliance came much later in many cases. Florida did not fully comply until about 1920. Assessing mortality rates before this time involves dredging up spotty death records and utilizing static life table information. A static life table is a temporal snapshot of the structure of a given population from which mortality rates can be estimated. It is constructed by counting the number of people in different age groups in any given population. For example, if there are 500 infants and 250 one-year-old children in a given population, then the probability of dying before age one would be 50%. Of course, these life tables cannot be conclusive because several factors can skew the data (immigration or emigration between populations, varying birth rates over time, and unaccounted-for still-births).

Given the scarcity of reliable mortality data, researchers disagree about when and how life expectancy improved in rural America. For example, Higgs (1973) argues that mortality rates began to decline in the 1870's due to improvements in diet and living conditions, whereas Meeker (1976) claims that mortality rates decreased in urban America only as a result of better public health care and improved sanitation (Preston and Haines 1991). The limited data compiled by Haines suggests that by the 1890's mortality had declined in both urban and rural settings due to improvements in public health and better living conditions. Haines gathered life table information to create average mortality estimates in the United States from 1850 to 1900

(Preston and Haines 1991: 52-53). The chart below (figure 3) shows under-6 child mortality rates (the probability of dying before age 6) compiled by Preston and Haines for males and female for each decade from 1860 to 1920 (with the exception of 1900, as census records are not available for this year). Linder and Grove (1947: 161) determined that in 1930, the mortality rate dropped to 8.3% for males and 6.5% for females. Based on these figures, I would expect to see a high percentage of juvenile burials pre-1900 in both larger community and family cemeteries. However, if my hypothesis proves correct, family cemeteries should show a relatively higher percentage of juvenile burials. Post-1900, both types of cemetery should show a reduced percentage of juvenile burials, but family cemeteries should maintain a high ratio of child-to-adult interments. In the next chapter, I will discuss the historical, social, and economic contexts that unquestionably influenced the health structure of Coon Hill and Nora communities, resulting in the mortality structures reflected in these cemeteries.

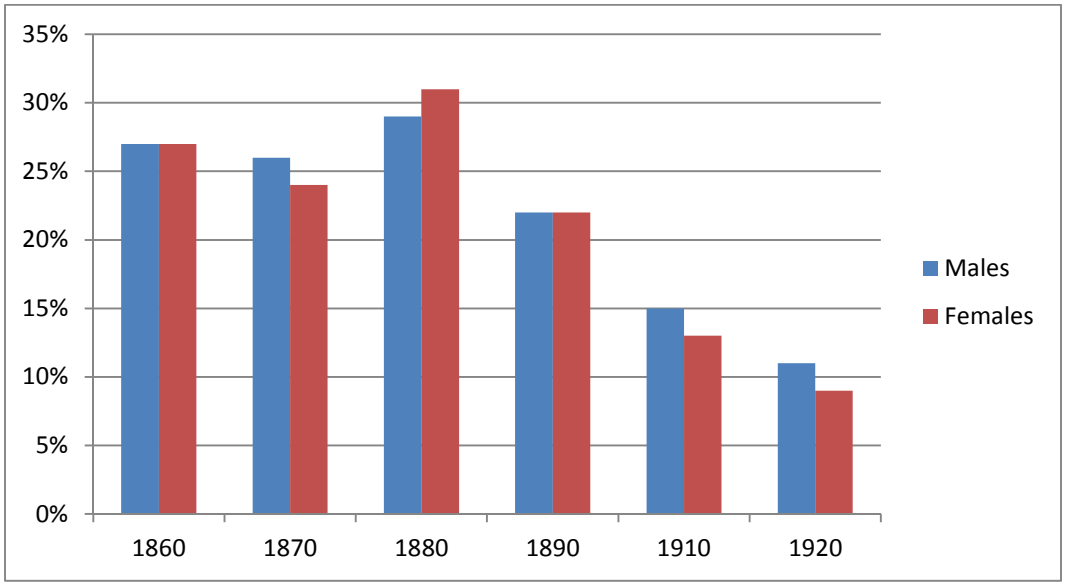

Figure 3. National Average ages 0-6 male and female mortality rates from 1860 to 1920 (Preston and Haines 1991).

Cemeteries, Space, and Culture

A number of studies exploring the relationship between cemeteries and space have been conducted (e.g., Francaviglia 1971; Johnson 2008; Herman 2010). This relationship often reveals underlying social and religious values, class distinctions, aesthetic tastes, and/or important issues of the time. For instance, analyses the cemetery reforms in England in the mid-19th century and the contemporaneous Rural Cemetery Movement in the United States have uncovered social, economic, and health-related stimuli behind changes in the location and layout of cemeteries. Agatha Herman (2010) conducted a study of Brookwood Cemetery during the reforms in which cemeteries were moved from inner-city parish yards to the outskirts of London. The mid-19th century was the height of the miasma theory of disease, in which it was believed the noxious gases from ill individuals, garbage and sewage, and the deceased carried disease-causing agents. Naturally, it was assumed that burial grounds within city limits posed a health risk to its residents. Herman determined that while the primary motivation for the reforms was disease-prevention, the result was a commercialization of death that intensified class distinctions in cemeteries. Previously parishes, which took moral opposition to monetary gain from death, had performed all funerary ceremonies. However, in response to the need to entice people to travel to these new, inconveniently located cemeteries, commercial contracts were offered to funerary entrepreneurs, who offered prime burial locations for top dollar. Because of these commercial ventures, cemeteries began to develop "neighborhoods" determined by socio-economic class. In his examination of John Claudius Loudon's cemetery reform proposals, Peter Johnson (2008) suggests that the separation of the burial ground from the space of the living and the grid-like layout of the cemetery not only served hygienic measures, but also bestowed

highly-valued control, structure, and aesthetic beauty on a previously untamed and uncomfortable space.

According to Thomas Bender (1974), a similar phenomenon was taking place in the United States in the mid-19th century known as the Rural Cemetery Movement. Like the cemetery reforms in England, cemeteries were moved from city churchyards to the rural peripheries. They were manicured and beautified so as to serve as both an honorable resting place for the dead and a tranquil recreation space for the living. The United States was experiencing the same miasma-related hygiene reforms as England, and the desire to separate the potentially harmful corpses from the living was certainly one cause of this movement. However, as Bender puts forth, there may have been more deeply seated social drivers at its heart. The glorification of the rural setting may have been a response to the challenges and demands of city life. Whereas urban living involved artificiality, corruption, and competition, the beauty and tranquility of the rural cemetery offered a physical and moral respite. On the other hand, Richard Francaviglia (1971) contends that, rather than offering a contrast to the urban environment, the cemetery mimics it. In his study of five Oregon cemeteries, he concludes that cemeteries were microcosms of larger settlement patterns. For instance, the simple, uniform grave markers from 1850 to 1879 reflected a relatively homogeneous class structure, while the opulence and diversity of grave markers in the 1880's and 1890's mimicked a more rigid social hierarchy.

What practical, social, economic, and religious factors influenced the location and spatial development of Carnley and Coon Hill Cemeteries? Most of the aforementioned studies have focused on cemeteries located on the peripheries of large urban centers. Were residents of rural communities influenced by similar pressures as were their urban counterparts when constructing cemeteries? A detailed analysis of the gravestone architecture at Coon Hill and Carnley

Cemeteries would be necessary to get a complete understanding of the connections between space, class, and social values. While neither an examination of changes in grave marker style nor a comparative analysis to other contemporaneous cemeteries is within the scope of this project, a spatial analysis of grave locations could provide insights into the motivations behind the mortuary choices made by the residents of the Coon Hill and Nora communities.

In order to explore the cultural, social, economic, and health dynamics of any community, one must understand its historical and regional context. The history of a place or a people, overarching political, economic, and cultural influences, as well as the natural environment of a particular community come together to create a unique set of values and way of life. For this reason, I will give a brief overview of Florida's colonial history and industry, followed by a closer examination of life in our study area during the 19th and early 20th centuries, and finally, an introduction to families that settled in the Coon Hill and Nora communities.

CHAPTER III

ENVIRONMENTAL AND CULTURAL HISTORY

Brief Historic Overview of Florida

Pre-Historic Period

When the first people reached Florida at least 12,000 years ago, ending their southerly migration down either the Pacific coast or the central ice-free corridor, Florida's land mass was more than twice its current size. Drastically lower sea levels exposed portions of the continent that are now hidden beneath the Gulf of Mexico and the Atlantic Ocean. These new inhabitants would have encountered several species of large mammal that are now extinct, such as the mastodon and saber-tooth tiger, but subsisted mainly on smaller game, marine life, and native plants. The first people likely traveled in small, highly mobile bands of hunter-gatherers. Over time, social structures and subsistence strategies diversified and became more complex (Milanich 1994).

Early Colonialism

Beginning in 1513 with the arrival of Ponce de Leon in St. Augustine, followed by his expedition leading 200 settlers to establish a Spanish colony in Florida 1521 (Cavanish 2013), several attempts at colonization were made by Spanish explorers, all of which were thwarted by natives, disease, and other misfortune. One of the most notable missions was that of Don Tristan De Luna of 1559, whose fleet was destroyed by a hurricane in Pensacola bay, thwarting the Spanish attempt to establish settlements in Pensacola and two locations further north (Clune Jr. and Stringfield 2009; King 1972:13). Meanwhile, the French were able to establish a settlement at the mouth of St. Johns River, called Fort Caroline, in what is now Jacksonville, Florida. These initial setbacks did not, however, deter the Spanish advance, and Pedro Menendez de Avilles

soon successfully removed the French from Fort Caroline. Even after a series of skirmishes with French and English competitors, the Spanish maintained control of Florida until giving it up to the British in 1763 in exchange for Havana, Cuba, which the British had won during the Seven Years' War (King 1972: 17). Just eighteen years later, Spain re-captured Pensacola from Britain, and received the rest of Florida three years later at the end of the Revolutionary War. During this second period of Spanish rule, many Americans began migrating to Florida from the north, motivated by Spanish land grants. Florida also attracted many runaway slaves, who were often able to find sanctuary in local Native America communities (King 1972; Varney 1963).

U.S. Territory and Statehood

This second Spanish colonial period (1781-1821) lasted almost a half century, until U.S. forces finally forced the Spanish to cede control of Florida in 1821. More people began to settle in the newly acquired U.S. territory, and the demand for rich agricultural land grew. Since Native American groups occupied some of the coveted fertile land, white colonists began to push for the removal of these Native Americans from Florida. This dispute led to the Second Seminole War (1835 to 1842), which ended with many Native Americans being driven westward. This was a time of much suffering and hardship for Native Americans living in the area, most of whom were forced from their homes to unfamiliar, less plentiful territory. For more than a century after this removal, Native Americans were not accepted by white communities. On the other hand, there were many instances of intermarriage between whites and Native Americans (typically a white male colonist and a Native American woman). In order to be accepted into a white community (and to avoid forced removal to the west), these women were obliged acculturate to the colonial lifestyle. This included changing one's name, religion, customs, and daily habits (Ellsworth and Dysert 1981:427, 432-433).

Florida became a state in 1845, and by 1850 its population reached 87,445, almost half of whom were slaves. Agriculture was the state's primary industry, and plantations drove the economy. Thus, most white males sided with the Confederate states as contentions over slavery began to divide the southern and northern states. With the rise of the Civil War, Florida joined the Confederacy. After the Confederacy lost the war, the slaves were freed, and many of the plantations were dismantled and leased to tenant farmers.

Post-Bellum West Florida and the Timber Industry

Much of the state experienced a long post-war depression but some areas, including the Jay/Chumuckla/Pensacola region, profited from the country's need to rebuild its cities. Timber had been a viable industry in and around Pensacola since the early 19th century, beginning during British rule and expanding during U.S. occupation (after experiencing a slump between 1837 and 1845 due to the diversion of labor and resources to the Seminole Wars) (Diamond 1949; Wells 1976). Despite the industry's prosperity (or perhaps because of it), Confederate General Braxton Bragg ordered the lumber and sawmills to be burned in 1862 so that they would not provide resources for Union forces (Wells 1976:31). After the war, lumber became a much needed commodity, and northwest Florida was rich with yellow pine. Sawmills were rebuilt, and the logging industry experienced a rebirth. Joseph Forsyth and his partners, Ezekiel and Andrew Simpson, constructed the earliest mill complex in Santa Rosa County at Arcadia in 1817. Forsyth bought the 800 *arpents* (about 29 square miles) from Juan de la Rua, who had received a land grant from the Spanish. Forsyth needed investors for his project, hence his partnership with the Simpsons. They built a sawmill and made the transport of logs from Arcadia to Bagdad possible by rerouting the creek with a new dam and constructing a log flume to bypass narrow, curved parts of the waterway (Weekes 1999:38-39). The Simpsons moved the main lumber

operation to Bagdad around 1840 to make use of steam power and eliminate the problems transporting logs from Arcadia to Bagdad, while Joseph Forsyth remained at Arcadia to develop a successful textile factory. While Bagdad boasted the most productive timber operation in the region, sawmills also lined the Escambia River and its tributaries, which stretched north through the Jay/Chumuckla region (Rucker 1990: 625). Timber was cut and shipped down the river to be sold at the port in Pensacola. Typically, loggers would deplete an area of its timber and then move on. Since waterways were the first and most readily available method of transporting logs, these riverside operations were also the first to be depleted of resources. Eventually, railroads became the standard method of transportation, opening up the interior regions of the county for exploitation. Emory Fiske Skinner, a timber prospector from Wisconsin, founded the first steam powered railroad in the late 1800's that connected Pensacola to Chumuckla, which greatly increased the productivity of his lumber operation. Skinner's arrival was either a blessing or a curse, depending on one's position in society. It undoubtedly provided many timber laborers with work, and stimulated the economy of the region. However, his purchase of 100,000 acres of government land, much of which had been seized from land owners after the civil war, caused great hardship for the local population. Timber was cut from the residents' land without compensation, houses were demolished, and these former land owners were unable even to pay the ten cents per acre to buy back their property, as their currency was rendered useless after the war (Wells 1976:35). Nevertheless, the timber industry prospered and even today, timber companies operate in the area that includes the communities of Coon Hill and Nora, which at the time was known as Pine Level (Rucker 1990: 58, 625). As I mentioned earlier, these logging activities have impacted Carnley Cemetery, and no doubt others, leaving deeply imprinted tire marks from logging trucks that may have damaged some of the early graves.

Life in Pine Level in the 19th and Early 20th Centuries

Natural Environment

Accounts of life in the rural South from the late 1800's to early 1900's attest to self-sufficiency, comradery, and cooperation necessary for survival in an undeveloped, isolated environment. Even so, it is not difficult to imagine how the natural richness and beauty of the region called Pine Level must have attracted these early settlers. Coon Hill and Nora were located in the heart of Pine Level, which stretched from the Alabama border to Milton and offered much in the way of valuable resources (Rucker 1990:58) (figure 4).

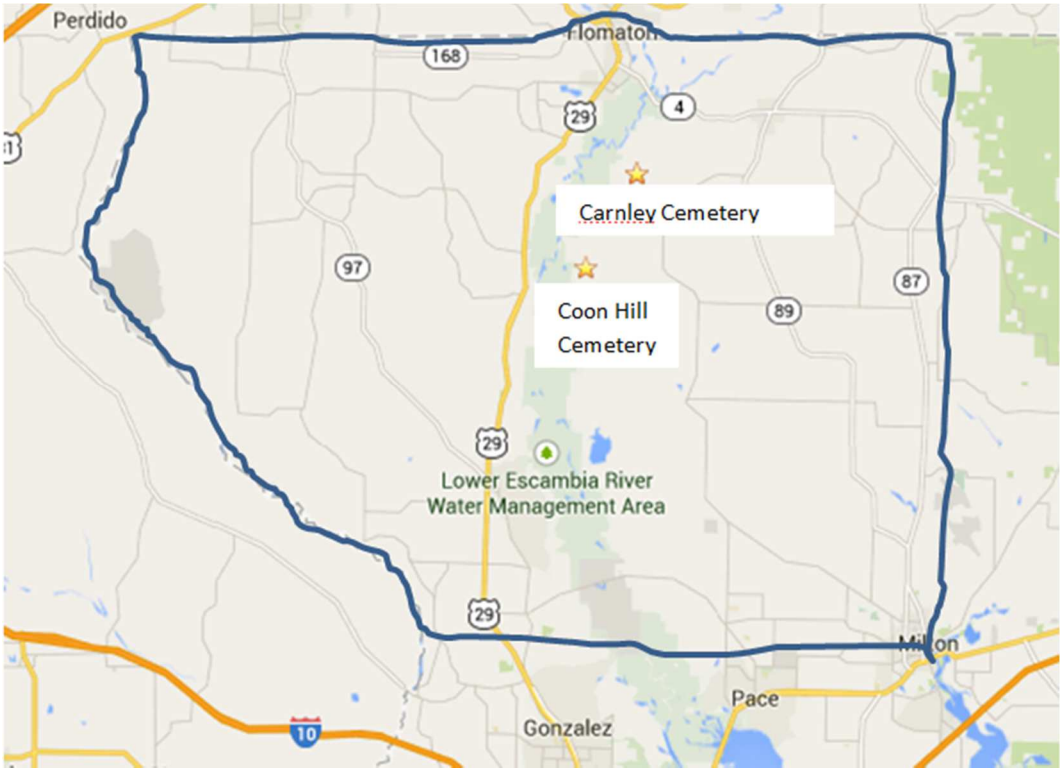

Figure 4. An approximation of the area known as Pine Level (Santa Rosa County, Florida) through the 19th century.

Cane breaks and swamp reed blanketed the low flood plains of the Escambia River, while forests of yellow pine, cypress, mahogany, white ash, white hickory, mulberry, oak, and

sycamore trees covered nearly all of Pine Level, with the exception of occasional clear meadows that dotted the landscape. Within these forests, acorns, chestnuts, chinquapins, wild berries, and wild oats abounded. Flowering trees and plants colored the landscape, vibrant against the lush green of the trees. Magnolia, tulip, dogwood, wild plum, yellow jasmine, woodbine, wild azaleas, and daisies stimulated the vision as the scent of sassafras produced an aromatic backdrop (Diamond 1949: 22-23). Fresh water springs and creeks meandered through Pine Level, providing a reliable supply of clean drinking water, which would have been of primary importance. One spring in particular, located in close proximity to Coon Hill Cemetery, drew the interest of both the Native Americans in the region and the first Spanish explorers as it was thought to have healing powers. According to a local legend, Ponce De Leon believed that this spring was the elusive fountain of youth. While the validity of this legend is questionable, the Native Americans indeed considered the waters effective in the treatment of minor illnesses. The Native Americans called the spring "Chumuckla," meaning "healing waters," and this reputation persisted through the centuries, drawing people from all parts of the country to the medicinal springs (Rucker 1990:59). A hotel was even erected and a water bottling operation maintained into the 20th century. In addition to clean water, the streams in Pine Level provided bass, river trout, bream, jackfish, catfish, and shellfish (Diamond 1949). The unique environment of Pine Level and the interesting cultural confluence of its inhabitants combined to create its distinctive character composed of specific activities, customs, values, modes of interaction, risks, disease pathways, and mortuary choices.

Local Industry and Subsistence Strategies

The first settlers in the early to mid-1800's acquired property through Spanish land grants or purchased it cheaply from the government through the Cash Entry Act, and they used the land

to cut and sell timber or to tap trees for resin that was in high demand in the turpentine industry (Wells 1976:93-96; Weekes 1999; Franklin 2003). Evidence of local sawmills and log landings in Pine Level provide further support for timber's primacy during these early days (Rucker 1990:625). The main log landing was Sunday Landing, located at the intersection of the "Winding River Road" (a historic road that followed an old Indian trading trail along the Escambia River, eventually extending from the Alabama-Florida state line to Florida Town) and McCaskill Creek (Diamond 1949; Franklin 2003). Here, the logs would be tied together into a raft and shipped to Ferry Pass for sale. This landing later came into the possession of William Harvey Carnley (known to locals as Uncle Harvey Carnley). According to Franklin (2003), a turpentine distillery (wherein tree resin was rendered into turpentine) could be found just below Carnley Cemetery "on a log ditch that was used to float logs down to the Escambia River" (2003: 8). Timber and turpentine labor entailed physically grueling, dangerous work at a time when no motorized saws or modern transport eased the efforts of the worker. In order to fell a tree, men worked in teams using a two-man crosscut saw, to cut trees usually around shoulder height. This method required close cooperation to establish a coordinated give and take rhythm in which the men alternated pulling the saw towards themselves. The logs then needed to be transported by means of ox-driven carts to log landings on the Escambia River for piece-meal sale to timber companies, who would then sell the timber for export to other areas of the country and abroad. Both loggers and turpentine workers faced the dangers of unanticipated tree fall, cuts that could become infected, sprained or broken bones, snake bites, malaria, infected mosquito bites, parasites, poison oak and ivy, and exposure to the elements.

Of course, a smattering of people worked as merchants or traders, but the range of occupations was narrow throughout the timber boom, which began to decline in late 1800's (U.S

Federal Census). Perhaps it was this shared experience that facilitated a jack-of-all-trades culture in which both resourcefulness and cooperation played an important role. People were at once isolated from the rest of the world, and even from neighboring communities to a degree, and inevitably part of tight knit social groups defined mostly by proximity. Mobility was limited to travel by foot, horse, or ox-cart on underdeveloped trails and roads. The main road linking these rural communities followed an old Native American trading trail and acted as the main route for merchants and suppliers (Diamond 1949: 2). Even so, several miles often separated neighboring communities, so people limited travel to special or necessary occasions. Since there were few specialists to build houses, bridges, or maintain roads, and there were few stores at which to buy food or clothing (and little money with which to buy it), the skillset of these early settlers became very versatile.

With the help of neighbors, people used downed yellow pine to construct their log houses and cut shingles for their roofs from cypress trees in the adjacent swamps (Weekes 1999:63). Typically, these early pioneers maintained small farms on which they grew corn, sweet potatoes, sugarcane, beans, and peas (Rucker 1990:50-53). These farms functioned mainly to feed the family, not to generate income. Corn, a dietary staple, was often ground down in order to make bread; therefore, grist mills (water-powered mills that were used to grind corn into meal) lined the rivers and streams. McCaskill Mill Creek contained at least one of these gristmills, remnants of which were visible until recently. According to the memoirs of J.C. Franklin (2003)--son of William and Annie Dykes and brother of two of the children buried in Carnley Cemetery--at least three more mills lined McCaskill Creek, presumably either sawmills or gristmills. Families also gathered berries, which they canned to preserve for the winter, and other edible plants to supplement their diets. Eventually, people were able to buy staples such as sugar, salt, flour, and

tonic for medicine from local merchants, but the majority of their diet was self-acquired (Franklin 2003). Nearly every family kept chickens, turkeys, guineas, goats, and hogs. In addition to providing eggs and milk, these animals were occasionally important sources of protein when fishing and hunting proved unsuccessful. Far more often than not, however, men both enjoyed and excelled in the hunt of white tailed deer, rabbits, possums, squirrels, gophers, and raccoons. Hunting was by and large a recreational activity in which men would trek into the woods with their dogs in search of possum, rabbit, or squirrel. The dogs would enthusiastically chase the animals up into a tree, where the hunters would either wait for it to emerge or chop down the tree. If it was time-consuming and physically taxing to obtain food, it was at least equally challenging for families to acquire fresh water daily. Luckily, plenty of fresh water springs dotted the landscape, so there was never any danger of running out of drinking water. However, the families were obligated to make frequent trips to these freshwater springs, which were often outfitted with wooden boxes to facilitate water collection, and return carrying heavy buckets of water.

Family and Social Life

Life in the 19th and early 20th centuries in Pine Level revolved around the family, the community, and the church. Typically, a settlement began with a few families and expanded as relatives migrated to the area to be near their families and to take advantage of employment connections. Therefore, it was not unusual for a village to be composed of only a handful of surnames. For this reason, and due to the absence of efficient transportation to neighboring settlements, marriages often occurred between neighbors, distant relatives, and occasionally first cousins. Perhaps this close intra-group kinship made reciprocity even more integral to the vitality of the village. Franklin illustrates this kinship in his memoirs (2003:17):

> People tried to live close enough together for social purposes and to be able to help in times of need, but far enough away to live their own life. There were no strangers in the community, everyone knew everyone else. They would visit and also help one another with hog-killings and barn-raisings and other such activities. No one had means of traveling very far; you could walk, ride an ox cart or perhaps a mule and wagon.

The hog killings to which Franklin referred were events in which a man would invite his neighbors to assist in the slaughter of his fattened hogs. He would then send each helper home with enough meat to feed his family a few times.

Of course, while everyone worked hard, socializing and leisure played a large role in rural life. In addition to offering assistance, families frequently walked to neighbors' houses to dine or chat over coffee. Sometimes during the summer, the community held picnics down by the ice cold creek, where they would chill watermelon and swim in the refreshing water. Disused sawmills made perfect sites for these picnics because fish tended to accumulate in the pool of water below the mill, making for a convenient fish fry. On special occasions, the owners of the mill set up a platform on which to hold a square dance with fiddlers providing the music (Diamond 1949:16). People in neighboring communities would walk miles to attend these festive events. Church services also drew the entire community, and offered a social as well as a religious experience. Initially, services were only held once a month and were usually followed by a meal and singing (Franklin 2003:19). An activity that did not garner the church's approval (along with the whiskey stills found creek-side in most communities), but nevertheless drew the attention and wallets of men from miles around, was horse racing. The famous race track at Coon Hill thrived from ante-bellum times to the decline of the timber industry in the 1870's (Diamond 1949:10). The economy, the women, and clergymen of the community all had a hand in the closure of Coon Hill Race Track. The decline in timber-related income further depleted already constrained budgets. Furthermore, the wives and church-goers deemed the drinking, rowdiness,

and particularly the loss of household income quite unacceptable. They preferred that precious time and resources be spent on wholesome, family activities, such as a trip to the circus or candy pulling. Everyone, but especially children, enjoyed 'candy pulling' events in which boiled down sugar syrup (possibly obtained from locally grown sugarcane) was stretched and pulled into the consistency of taffy candy (Franklin 2003: 19).

Along with candy pulling, children partook in activities like swimming in the creek, exploring the woods, making rope swings attached to the branches of trees, creating whistles from swamp reeds, rolling hoops along the road, walked on stilts, and spinning tops. Like most children, youths of Pine Level spent time laughing and playing. However, unlike children today, the majority of these youngsters' time was consumed by work. Children spent much time working alongside their family members on the farms, hauling in wood for the fire, caring for the farm animals, helping their fathers repair roads and haul logs, and doing chores around the house and yard. As farms expanded with the decline of the timber industry, children became more saddled with farm work. They attended school in one room schoolhouses, but the term lasted only 3-4 months per year in order to free the children up for planting and harvesting (Weekes 1999). Interviews with Jim McCaskill and Bobby Boutwell revealed that an old schoolhouse, possibly the oldest in the community (Franklin 2003:14), was situated just northeast of Jim McCaskill's home, about a mile from Carnley Cemetery. Children of all ages were taught in small schoolhouses by teachers who boarded with one of the families in the community. Despite the cold, children walked barefoot along trails through the forest to school in the winter months, inevitably crossing one or two creeks on the way. The schoolhouses were usually heated by a wood burning stove. Bare feet notwithstanding, children always dressed in a manner deemed appropriate according to the socio-religious value system of the community concerning gender

roles. Boys had short hair and wore trousers, while girls kept their hair long and wore dresses (Franklin 2003:14). Children were careful to be on their best behavior in the classroom, as a breach of conduct could result in a lashing with a switch. Concepts of proper dress and conduct were tenaciously instilled in children, as these behaviors reflected the structure of the community's value system.

Religious and Social Values

Religion formed the foundation of the value system in the Pine Level community, with the addition of certain customs carried over from their Scottish roots, and the necessary hard work, resourcefulness, generosity, and cooperation dictated by their way of life. The vast majority of settlers in Pine Level were Methodist Scots (Jernigan 1987; Rucker 1990:58). Religion permeated most aspects of life, and the Bible served as the primary moral compass. Some of the counsel found in Bible verses proved invaluable to survival in such a challenging environment. For example, the instructions to help one's neighbor, care for the family, and treat others with patience and kindness would have been crucial to the peace and harmony of the community. Modesty based on traditional gender roles appears to have been one of the core community values. It was socially unacceptable for women to wear anything but dresses of appropriate length (to the knee or longer) and maintain long hair, while men wore long sleeved shirts tucked into their trousers. One's fashion transgression exceeded mere social contempt if he/she had the audacity to wear shorts or a bathing suit in Pensacola, in which case the offender would be arrested (Franklin 2003:9). Labor division was gender based, wherein women were tasked with work associated with the home and childcare, and men labored outside the home to generate income. While women rarely acted as religious leaders, they were considered the more pious sex, and often took charge of the family's involvement in the church, and carefully

monitored the language, dress, and behavior of their children (and likely their husbands). In some areas, polite language and behavior were not just encouraged, but required. For instance, if an uncouth person was caught cursing in Milton, he would incur a fine (Franklin 2003:8). The community constructed this value system based on shared religious background and the necessity of creating a culture that best facilitated cooperation and growth in a tightly bound social group.

Carnley and Coon Hill Cemetery Sites

With a backdrop of the broader regional and historical context of Pine Hill, it is possible to discuss the lives of particular families and individuals who formed the communities of Coon Hill and Nora and were eventually laid to rest in Coon Hill and Carnley Cemeteries. I endeavor to answer the following questions regarding the demography of these cemeteries: What are the origins of the families interred in Coon Hill and Carnley Cemeteries? Who are their relations that resided in the community? Who owned the real estate on which the cemeteries and communities stood, and who held land patents in the immediate vicinity? What information is available relating to the occupations, personal lives, and community involvement of the people whose names mark the headstones of Coon Hill and Carnley?

Since Coon Hill Cemetery (figure 5) predates the first identifiable burial at Carnley Cemetery by approximately three decades, a discussion of the Coon Hill community and Cemetery is necessary in order to understand the context in which Carnley Cemetery was established. Following a discussion of Scottish heritage of the founders of Coon Hill community and cemetery, a description of the occupations and land acquisitions of the first and/or most ubiquitous families to be buried in the cemetery will be given. Next, an exploration of the origins of the Carnley family and the path that brought the Carnleys to Nora will be undertaken, focusing specifically on the family members interred in Carnley Cemetery. An understanding of

the lifestyle and social connections of the residents of the Nora community will shed light on some of the factors that could have affected mortuary risks and choices. I obtained this information from historical documents written by descendants of these residents, Santa Rosa County census records dating from 1850 to 1900, and from Santa Rosa County land patent records, and interviews with members of the Carnley family (see Appendix B for IRB consent forms).

Coon Hill Cemetery and Community

Figure 5. Coon Hill Cemetery (Santa Rosa County, Florida).

Site Description

Coon Hill is thought to have been one of the original settlements in Santa Rosa County, founded mostly by Scottish immigrants around 1820 (Watts 2013:60; Williamson 2007; Enfinger 2007). The town, now nonexistent, was a bustling little community with a hotel, sawmill,

commissary, stable, blacksmith shop, Pony Express station, church, several residences, and a post office established about 1845 (Enfinger 2007). Early pioneers chose this spot because of its ideal location on a hilltop flanking the fresh water of Diamond Creek. Coon Hill served as the main headquarters for loggers and farmers alike for receiving mail, acquiring supplies, attending church, and socializing. It provided a place to rest and restock supplies for travelers bound for Pensacola, in addition to supporting a small but growing local population. Most people who lived in this community were also buried in the adjacent Coon Hill Cemetery. Even after the town was demolished--according to Enfinger (2007) the last house was torn down around 1900 shortly followed by the destruction of the only remaining building, the church-- the surrounding communities continued to bury their deceased relatives in the cemetery.

Coon Hill Cemetery and the adjacent site of the former Coon Hill community are located in western Santa Rosa County, Florida, flanking Escambia River on the east side. They lie slightly to the northwest of Chumuckla and southwest of Jay in the eastern half of the SE quadrant of Township 4, Range 30W, Section 18. The cemetery is located on a plot of high ground, now surrounded by a cement wall and manicured lawn, adjacent to the former Coon Hill community. The earliest grave in the cemetery dates to 1836, and the latest interment was in 1975. However, the most intense use of the cemetery occurred in the 19th and early 20th centuries; only 14 of the 240 graves show a post-1950 date of death. The grave markers vary in size and material, and many original markers, some of which were constructed from heart pine, have either disappeared or been replaced. Unfortunately, until caretakers installed a gate about 15 years ago, this cemetery used to be a prime target for vandals who damaged many of the original grave markers. The remaining headstones are made primarily of marble, cement, and granite, ranging from simple, flat headstones to ornate obelisk monuments.

The People of Coon Hill

Since Coon Hill is composed of 240 identifiable graves, a genealogical study of each individual is both unrealistic and unnecessary. Carnley Cemetery (figure 6) is much smaller and, therefore, I was able to reconstruct the genealogy of the entire cemetery (figure 7). However, in order to better understand the dynamics of the community and its cultural roots, an overview of Coon Hill Cemetery's genealogy is useful. In addition, it is important to know who the earliest residents buried in the cemetery were, which residents owned land (and therefore likely had a prominent position in the community), and what the occupations were of the families are well represented in the cemetery.

Figure 6. Southwest view of Carnley Cemetery.

First: **George Christopher Kenline (unknown spouse):1723**

Second: John G. Kenline---John M. Kenline---Lewis Carnley---**Christian Cantaline(Anna):1753**

Third: George Carnley---Christian Cantaline---John Carnley---Dolly Cantaline---**Jeremiah Carnley(Mary Jane): 1800**

Fourth: **William Harvey Carnley (Martha): 1837**---**Milton Carnley (Sarah):1833**---(+ 4 children)

Fifth: Catherine (b. 1858) (s. George Diamond)
- *Sixth:* **Minne Diamond (b. 1888)** + 5 children

Fifth: **Georgianna (b. 1862)** (s. John Kirsher)
- *Sixth:* 4 children

Fifth: Annie (b.1864)(s. William Dykes)
- Sixth: **William (b. 1895), infant (b.1884),** and William

Fifth: Andrew

Fifth: William Harvey, Jr.(b. 1865) (s. Mary Capers)
- *Sixth:* Eula (b. 1895) **+ 2 infant daughters (b. 1889, 1901**)+ 5 children

Fifth: Drucilla (b. 1857) (James Ard b.1871)
- *Sixth:* Cammie**, George H. (b. 1894) and Arthur F. (b. 1898)**

Fifth: **George Albert Carnley (b. 1852)**(s. Mollie/Mary Anne Boutwell b.1870)
- *Sixth:* **John Albert (b. 1882)**(s. Eula)
  - *Seventh:* **Cecil (b. 1930), Addie (b. 1936)** + 11 children
- *Sixth:* Mamie Lee (b. 1902) (s. Frank Hudson)
  - *Seventh:* 11 children
- *Sixth:* Mattie, Ira, Allie, Gladys, Addie

Fifth: Eli N. (b.1856) (s. Nora)
- *Sixth:* 7 children

Fifth: Jeremiah L. (Jane)
- *Sixth:* 11 children

Fifth: Elijah Alonzo (b. 1858) (s. Saffronia and Elizabeth)
- *Sixth:* Robert Perry (b. 1888)(s. Ada), Eli Alonzo, JR (b. 1889)+ 8 Children

Fifth: Lydia, Milton (Emma), Mary Anne

Figure 7. The Carnley family tree. Bold, highlighted names represent people buried in Carnley Cemetery, and bold names are their direct ancestors. For unspecified reasons, some descendants of G.C. Kenline changed their surnames to Cantaline or Carnley.

A quick survey of surnames on the headstones at Coon Hill Cemetery suggests a community of primarily Scottish or Scotch-Irish descent (Campbell, McCaskill, McKinnon, McDavid, McMillan, Williams). The Scotch-Irish were Scots whom the King of England sent to live in Northern Ireland beginning in the 1300's in order to encourage integration, to no avail. Divisions in culture and religion (Irish Catholics and Protestant Scots) led to ongoing conflict that has continued until quite recently (Weekes 1999:8-9). The earliest churches in the Coon Hill and Nora communities were Protestant, which lends further support to their Scottish heritage. Indeed, one of the original inhabitants of Coon Hill, Edward Campbell, was born in Scotland in 1757. He originally settled in South Carolina but moved to Escambia County upon the death of his wife. While he is not buried in Coon Hill, several of his descendants are. The earliest grave (1836) is that of Margaret McMillan Williams, the first wife of William Larkin Williams, who emigrated from Georgia in 1819 to begin a logging operation. William was also buried at Coon Hill Cemetery, as was his second wife, Mary, and many of their children and grandchildren (Williamson 2007). W.L. and Mary Williams are listed on the 1850 census as having moved from Georgia and North Carolina respectively. William's occupation is noted as 'farmer', his real estate valued at $1,000. It is possible that his logging prospects dried up, pushing him to switch to farming.

The McMillans (whom Williams married) were some of the earliest residents of Coon Hill and also hailed from Scotland. The headstone of one Duncan McMillan reads "Born in Scotland, Came to North Carolina, Settled at Scotch Bend" (figure 8). Scotch Bend was the nickname given to Coon Hill community, clearly as a tribute to the large number of Scottish settlers. The primary occupations, unsurprisingly, are listed on the census as 'farmer', 'laborer',

or timber related occupation. For example, Neill McMillan, who appears to be one of the more prosperous residents with real estate valued at $1,500, declared himself to be a saw miller in 1850, and a farmer in 1860. He is noted as one of two senators buried at Coon Hill, along with E.V. McCaskill (Williamson 2007). Malcolm McMillan listed his occupation as a farmer but declared no assets. Campbells buried in Coon Hill Cemetery also appear on this early census, occupations of whom are listed only as "laborer," with no apparent assets.

Figure 8. A grave in Coon Hill Cemetery shows Scottish origin of Duncan McMillan, referring to Coon Hill as "Scotch Bend."

Allen McCaskill (buried at Coon Hill in 1856) appears on this census with his wife, Elizabeth, and son, Edward. He worked as a "wheelwright" who emigrated from North Carolina with his wife. The generation of residents in the 1850's apparently played an important role in founding the Coon Hill community, as all of the 'heads of household' buried in Coon Hill Cemetery that are mentioned in the 1850 census had emigrated from states to the north, such as North Carolina, Kentucky, Georgia, South Carolina, and Alabama.

This influx of migrants to the area probably resulted from Acts of Congress aimed at settling the rural South that offered low priced or free public land for entrepreneurial pioneers. Both Coon Hill and Nora were granted land patents under the Cash Entry Act of 1820, wherein public land was sold for $1.25 per acre. Alexander M. Caskill (possibly changed from

McCaskill, or recorded improperly) bought 40 acres in the NW corner of the NW quadrant of Township 4, Range 30W, Section 18 (the same section as Coon Hill Cemetery). William Larkin Williams also bought approximately 40 acres flanking Caskill's lot to the north in 1837 under the same Act, and Angus Nicholson bought the 40 acres just north of Williams two years later. Meanwhile, in the Carnley Cemetery area, James J. McCaskill bought two lots in 1860 in township 5, range 30W, section 34 under the Cash Entry Act. Joseph White purchased several lots in 1849, including one in section 34 and another in section 28 (just north of section 34).

All subsequent land patents in these communities were granted under the Homestead Act of 1862, which provided settlers with 160 acres of land in exchange for their residence on and care for the property. After residing on the land for six years, it then became the property of its caretaker. Alternatively, the land could be purchased from the government for $1.25 per acre after six months of residence. David T. Williams owned the earliest Homestead Act land patent in the Coon Hill community in the southern half of section 8 (NE of section 18), followed by the Diamonds (George S. and Walter H.), who owned much of section 4, which is NE of section 8. Notably, much of section 18, containing Coon Hill Cemetery and community, is shown as unpatented. According to Jim McCaskill and Bob Boutwell (personal interviews July 18, 2014), the 20 acres of land containing Coon Hill Cemetery was granted to the community in the late 1800's by the aforementioned timber prospector from Wisconsin, Emory Fiske Skinner.

Carnley Cemetery and the Nora Community

Like Coon Hill, Nora also likely began primarily as a logging community. Its proximity to several mills on McCaskill Creek and the prominence of the industry in these founding years support this hypothesis. Even so, the only evidence of this town is on historical maps (the earliest of which dates to 1897, see figure 9), a hand-drawn map by an ancestor of the living

Figure 9. Historic map containing Nora; upper left (Florida Map Pages).

Carnleys (see figure 10), and a record of an application to establish Nora Post Office in 1891 (see figure 11), and naming Robert D. Byrne the Postmaster in 1895, and Mamie McCaskill in 1896. According to these records, the post office was discontinued in 1906. In addition to a post office, a map of Nora that was hand drawn by a daughter of Mamie Lee Carnley shows a saw mill, a schoolhouse, and several residences (labeled "grave yard house," "grand pas [sic] house," "Uncle Alberts [sic] house," "Mr. Ed McCaskle [sic] old house," "Burns [sic] Place," and "negro

hut"). "Grand Pa" would have been George A. Carnley, and "Uncle Albert" would have referred to John Albert Carnley (see figure 7). Interviews with Larry and Amanda Hudson, descendants of the Carnley family and life-long residents of Jay, Florida (August 1, 2014), revealed that Nora also contained a church and commissary, which were located just outside the boundaries of the hand-drawn map.

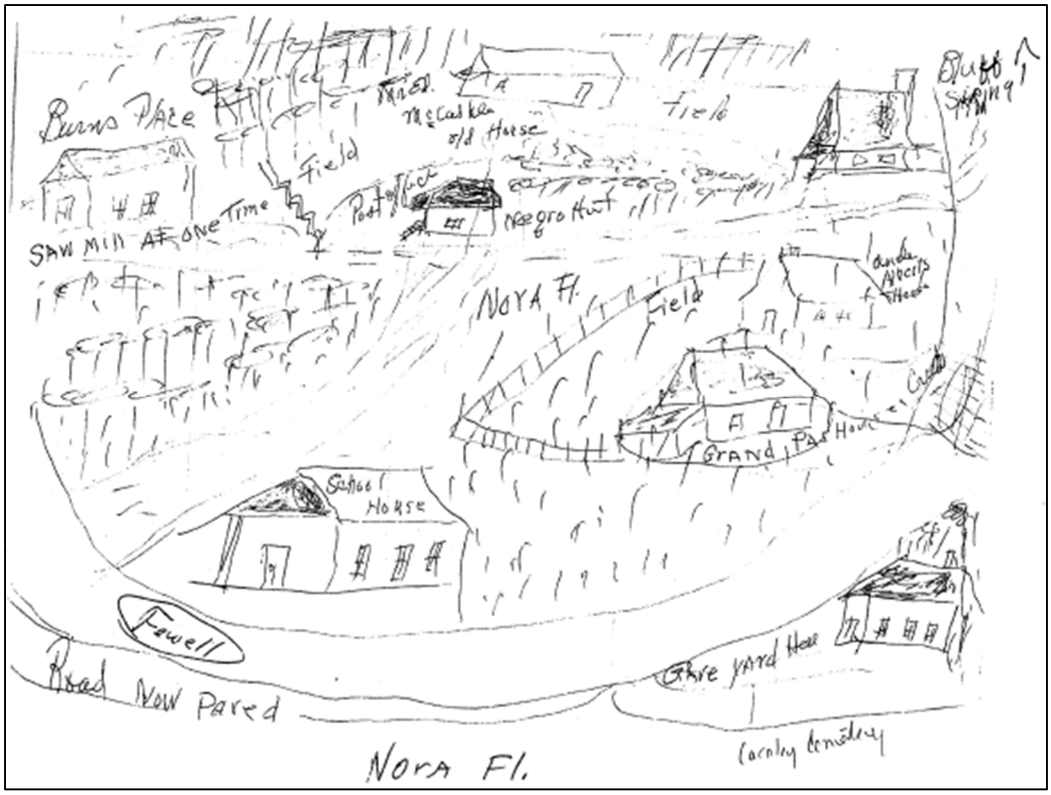

Figure 10. Map of Nora. Hand-drawn by grand-daughter of George A. Carnley.

Carnley Cemetery (figure 6) lies approximately five miles northwest of Coon Hill Cemetery in the NW quadrant of Township 5, Range 30W, Section 34. It consists of 20 marked graves and possibly several more unmarked burials, the majority of which contain deceased members of the Carnley family. Most of the graves are marked with marble tablet headstones that have been carved or concrete grave markers etched or stamped with biographical

64 POST-OFFICES AND POSTMASTERS. [JULY

Florida.

Post-office.	County.	Postmaster.	Compensation.	Post-office.	County.	Postmaster.	Compensation.
Mount Dora	Lake	A. F. Atterbury	$379 21	Palmview	Manatee	Habersham King	$44 28
Mountcocha	Alachua	George N. Valandingham	20 26	Panama Park	Duval	G. W. Arnold	66 44
Mount Pleasant	Gadsden	William G. Lee	176 92	Panasoffkee	Sumter	R. Drummond	385 61
Mount Tabor	Columbia	M. A. English	72 64	Paola	Orange	Edgar P. Harrison	208 21
Mulat	Santa Rosa	Hans H. Sivers	99 34	Paradise	Alachua	F. M. Hartman	33 54
Muscogee	Escambia	James Macgibbon	229 89	Parish	Manatee	Emma V. Paschall	68 62
Myers	Lee	E. L. Evans	743 21	Parker	Washington	Annie R. Parker	101 16
Myrtle	Pasco	Thos. C. Whitman	12 42	Parnell	Columbia	I. W. Parnell	15 04
Naples	Lee	Leora Ebney	188 74	Parrott (est. Dec. 9, '94)	Jackson	Daniel F. Neel	8 16
Narcoossee	Osceola	F. W. Hill	244 90	Parramore	do	J. C. Jordan	45 15
Narrows	Brevard	L. B. Dawson	45 60	Pasadena	Pasco	E. S. Karnegt	180 71
Nashua	Putnam	B. W. Bray	102 60	Pasco	do	Levi A. Vaughn	39 22
Nathan (est. Jan. 26, '95)	Brevard	Nathan N. Penny	3 65	Patterson	Putnam	Addie E. Patterson	93 20
Natural Bridge	Walton	George W. Miller	13 70	Patton (est. Nov. 9, '94)	Alachua	James A. Ward	8 72
Neals Landing	Jackson	Francis B. Liddon	80 15	Payne	Columbia	J. W. Payne	183 72
Nebo	Bradford	Stephen Brown	49 93	Pebble	Polk	B. H. Heyward	209 12
Needmore (est. June 21, '95)	Levy	Chas. L. McLeod	(*)	Peck (est. Dec. 22, '94)	Hillsboro	T. D. Peck	30 27
Nesbitt	Duval	George Velandies	14 97	Pemberton	Sumter	A. G. Hardee	100 83
New Augustine	St. John	Gen. H. Spencer	173 98	Penial	Putnam	Susan L. Webb	65 36
New Berlin	Duval	A. W. Lawless	102 24	Pensacola	Escambia	William F. Lee	2,500 00
Newberry (est. Sept. 11, '94)	Alachua	James M. Slater	480 72	Peoria	Clay	C. D. Miller	64 32
New Cadiz	Hillsboro	Ida Kimball	152 10	Perico	Manatee	Maggie P. Johnstone.	98 61
Newnansville	Alachua	Saml. T. Prescott	92 85	Perry	Taylor	M. W. Lundy	216 92
Newport (est. Mar. 20, '95)	Wakulla	Lavester Ladd	(*)	Peru	Hillsboro	Wm. M. Youmans	73 06
New River	Bradford	Marion F. Moore	197 97	Pettway	Jackson	Charles H. Lane	70 55
New Smyrna	Volusia	Florence Bryan	1,600 00	Phillips	Duval	Paul Palmer	71 68
New Troy	Lafayette	Mary A. Hill	50 05	Phoenix	Levy	J. S. Blitch	151 51
Nixon	Washington	A. G. Nixon	19 71	Phosphate	De Soto	A. G. Bigelow	9 01
Nocatee	De Soto	Jno. R. Windham	224 21	Phosphoria	Polk	James L. Close	168 65
Noles (est. Feb. 26, '95)	Washington	John H. Varnum	1 46	Picnic	Hillsboro	M. E. Colding	27 26
Nora	Santa Rosa	Robert D. Byrne	29 70	Pinolata	St. John	N. R. Fitzhugh	134 20
Norwalk	Putnam	John H. Peasley	130 27	Pierson	Volusia	H. Gunter	236 20
Norway	Gadsden	Ada B. Rogers	49 49	Pine (est. Feb. 25, '95)	Marion	James A. Perry	12 01
Novella	Clay	Daniel Padgett, jr	35 65	Pineaway	Walton	William Tyner	18 73
Oakdale	Citrus	Oliver P. Blaisdell	21 32	Pine Barren	Escambia	A. M. McMillan	202 06
Oak Grove	Santa Rosa	Michael King	23 17	Pinecastle	Orange	Isaac Aten	67 01
Oak Hill	Volusia	J. H. C. Howes	277 63	Pineda	Brevard	Virginia W. Parker	53 28
Oakland	Orange	J. R. Wise	598 07	Pine Level	De Soto	John Hagan	61 59
Oak Villa	Putnam	G. W. Shapley	31 73	Pinellas	Hillsboro	Mary E. Bethell	85 99
Obrine Station	Suwanee	J. W. Wells	158 49	Pinemount	Suwanee	J. M. N. Peacock	150 85
Ocala	Marion	John M. Martin	2,300 00	Pinhook	Jefferson	J. A. Morris	15 48
Oceanus	Brevard	T. F. Eberaldt	44 71	Pittman	Lake	Casper F. Hallenbeck.	203 07
Ocklawaha	Marion	John H. Carter	120 50	Pittsburg	Washington	N. W. Pitts	47 34
Ocklocknee	Leon	M. C. Butler	48 79	Pittston	Columbia	Byron P. Pitts	107 46
Ocoee	Orange	T. J. Miner	231 57	Plant City	Hillsboro	Chas. H. Shannon	704 48
Octahatchee	Hamilton	A. F. Taylor	13 41	Planter	Monroe	John W. Johnson	50 79
Okahumpka	Lake	Thomas Brewer	304 83	Plummers	Duval	James Rogers	80 14
Old Town	Lafayette	Lillie F. Felton	154 12	Plymouth	Orange	S. A. E. Chapman	177 93
Olive	Escambia	Louis Boley	108 16	Point Washington	Washington	Thomas McLeod	130 94
Olney (est. Apr. 6, '95)	Brevard	James T. Padgett	(†)	Pomona	Putnam	C. A. Knowlton	288 75
Olustee	Baker	James G. Henson	133 45	Ponce de Leon	Holmes	W. C. Mason	212 43
Oneco	Manatee	Almeda A. Saunders.	287 34	Ponce Park	Volusia	E. B. Hasty	90 27
Orange	Liberty	E. S. Gunn	77 60	Port Jackson	Jackson	Louis C. Messer	24 78
Orange Bend	Lake	George P. Lovell	218 74	Portland	Walton	Henry Jernigan	95 98
Orange Bluff	Nassau	W. C. Davis	63 31	Port Orange	Volusia	J. H. Wiese	302 31
Orange City	Volusia	G. N. Dozier	664 62	Port Richey	Pasco	J. W. Clark	26 51
Orange Dale	St. John	John H. Patterson	32 67	Port Tampa	Hillsboro	Lemar Sparks	1,000 00
Orange Heights	Alachua	Chas. A. Wirthle	190 67	Port Tampa City	do	J. W. Osteen	548 27
Orange Hill	Washington	Kate (f. Scarlett)	133 43	Potolo	Holmes	John J. Perkins	35 17
Orange Home	Sumter	D. F. Astor	98 35	Potsdam	Dade	Bessie Kitching	179 48
Orange Lake	Marion	J. S. Whitney	377 51	Prospect	Marion	Robert G. Allsup	229 86
Orange Mills	Putnam	S. S. Lloyd	80 26	Providence	Bradford	Robert G. Ware	87 95
Orange Park	Clay	E. N. Holt	344 60	Punta Gorda	De Soto	James F. Corbett	1,000 00
Orange Springs	Marion	L. L. Meggs	174 85	Punta Rassa	Lee	G. R. Shults	178 08
Orchid	Brevard	Frank Porle	71 24	Putnam Hall	Putnam	Nanuis L. Wall	59 20
Oriole	Hernando	I. N. Talley	118 64	Quigley (est. Jan. 9, '95)	Clay	Daniel P. Quigley	3 11
Orlando	Orange	David S. Shine	2,100 00	Quincy	Gadsden	J. E. Davidson	1,200 00
Orlana	Citrus	C. S. Young	45 22	Quintette (est. Dec. 11, '94)	St. John	Charles A. Harvey	43 74
Ormond	Volusia	J. H. Smith	931 52	Randolph (est. Apr. 10, '95)	Lafayette	Della Langston	2 58
Osceola	Alachua	Zach T. Smallwood	109 16	Raymond	Polk	Rosalie Dale	42 74

Figure 11. U.S. Register of Civil, Military, and Naval Services, 1863-1959, Post Offices and Postmasters. Shows Robert D. Byrne as the Postmaster of Nora in 1895. (ancestrylibrary.com).

information about the deceased (see Appendix C for photographs of all Carnley graves). The dates of death range from 1884 to 1936. Some of these markers also display engraved verse and/or symbolic designs. Most of the information regarding identities of the unmarked and poorly marked graves exists solely in the realm of the community's oral history, and is therefore difficult, if not impossible, to verify. According to oral accounts given by descendants of the

Carnley family currently living in the Jay, Florida, area, ironstone that has likely been retrieved from a nearby quarry marks the graves of at least one Native American associated with the Carnley family. Another anecdote passed on to Larry Hudson (a Carnley descendent) by his grandfather suggests that the cemetery contained the graves of five slaves, but the exact location of these alleged burial is unknown. While the first marked graves date to the 1880's, it is possible that earlier settlers could also have been buried in currently unmarked graves at Carnley.

The First Arrivals

According to land patent records, the Carnleys were not the first to claim territory in the vicinity of Carnley Cemetery and Nora. Very early patents attribute a significant amount of land, including lots in sections 34 and 28, to Joseph White, acquired through the Cash Entry Act, in 1849. Even earlier, Littleberry Mason acquired section 31 under the same act, but later purportedly granted some of this land to the McCaskills (interview with Jim McCaskill, July 18, 2014). A couple decades later, James J. McCaskill bought two lots in 1860 in township 5, range 30W, section 34 under the Cash Entry Act (Boyd 2009; U.S. Federal Census).

The Carnleys arrived by the 1860's and began to acquire land under the Homestead Act in the late 1800's. The parcel of land containing Carnley Cemetery, Nora, and adjacent plots (Sections 34 and 28) are almost completely patented by 1900. The earliest patents under the Homestead Act are held by Jeremiah Carnley (1884) and William Harvey Carnley (1896), followed by George A. Carnley (1899). William Harvey owned the eastern half of the NE quadrant of section 28, while Jeremiah occupied lot 2 and George had lot 4. Later, in the early 20th century, two more Carnley men (Eli and Perry) received patents for the western half of the NW quadrant of section 28. In fact, all of section 28 was owned by Carnley men, with the exception of very early patents purchased by Daniel McMillan (1841) and William Mitchell

(1850). Section 34, however, the site of Carnley Cemetery and Nora, was owned primarily by McCaskills (Boyd 2009). Based on this family's prominent presence, resources, and respected positions in the community (Evander McCaskill was a senator), it is fair to say that the McCaskills were quite influential in this region of the South. In fact, the aforementioned notice for the establishment of the Nora post office places its location in the "McCaskillville" community. The McCaskill patents in section 34 were issued in 1895 and 1896 to Allen L. and Evander V. In the late 1800's the McCaskills donated the plot of land that contains Carnley Cemetery to "Cantaline Church" (Cantaline being another variation of the surname Carnley), thereby transferring the ownership of Carnley cemetery into the hands of the Carnley family.

The only other family name to own a plot in this section was Robert D. Byrne, who obtained a patent in 1897 for the NW quarter of the SE quadrant of section 34, which happens to be where Nora (also called "McCaskillville") was located (U.S. Census Records). A map of Nora, drawn by Mamie Lee Carnley's daughter, likely based on descriptions from her mother, depicts the home of Mr. Byrne (which she spells "Burn") near the Nora post office. Oddly, Mr. Byrne does not appear on either the 1880 or the 1900 census records (none exist for 1890 due to the burning of these records in Washington). The only other documentation of his existence is on the register of civil, military, and naval services, on which he is listed as the postmaster of Nora Post Office in Santa Rosa County in 1895 (Figure 11).

The Carnley Family Legacy

William Harvey Carnley and his wife, Martha, were the first adult members of the Carnley family to be buried in Carnley Cemetery. However, they were not the first Carnleys to settle in the Nora community. The Carnley legacy began with the voyage of George Christopher Kenline and his two sons, John George and John Mathias, from Rotterdam (Netherlands) to

South Carolina aboard the ship Elizabeth. Little is known about George, but given the location of his departure and his surname, he was likely born in Germany around 1723. After arriving in South Carolina, he remarried and had two more children, one of whom was called Christian Cantaline. The name Kenline evolved from Cantaline to Carnley in a matter of two generations. Christian was born in 1753 in South Carolina. He married, although the name of his spouse is unknown, and he and his wife had five children. He named the youngest boy Jeremiah. While Jeremiah was born in South Carolina, something drew him to Alabama, perhaps promise of land or another employment opportunity, where he raised seven children with his wife Mary Jane. Two of those children, William Harvey and Milton, relocated to the Nora community. The names of these brothers, along with those of their wives and children, can be found on the 1860 U.S. census for Santa Rosa County, division 2 (which included Coon Hill and Nora communities). The names are listed subsequently, indicating that these family's lived next door to each other. Later in life (by the 1880's), Jeremiah and Mary would relocate to Nora to be close to Milton and William. Interestingly, Jeremiah held the first Carnley land patent in Nora. Milton and William may have resided in the community without official land rights for several years. The map drawn by Mamie Lee Carnley's daughter shows that "grand pas," i.e., George A. Carnley's, house was located in the heart of the Nora community. Land patent records do not show a listing for Milton, but William Harvey obtained a fair amount of property through the Homestead Act and is buried in the cemetery with his wife, Martha. Nearly every person buried in Carnley Cemetery, and nearly everyone who has owned land patents in section 28, descended from these two brothers (Boyd 2009). Milton and his wife, Sarah, had seven children, three of whom owned patents in this section. Jeremiah was the first to receive a patent, followed more than a decade later by George A., and then by Eli in 1905. Census data reveals that George A.

found a very young bride called Mary (referred to as Mollie in some documents), 18 years his junior, whom he married when she was just 14 years old. Mary was the daughter of a Scottish logger and a full Creek Indian woman, an example of the cultural complexity of the time period. The 1900 census list George's occupation as 'farmer', which had taken primacy over logging by this time. Together Mary and George had seven children, including John Albert, who is buried in Carnley Cemetery, as is George. Their daughter, Mamie Lee, married Frank Hudson and still has descendants in the area who act as caretakers of the cemetery. Another son of Milton and Sarah, Elijah Alonzo (born 1862), also remained in the area to farm and raise a family. According to the memoirs of J.C. Franklin, he also made quite a name for himself as the ferryman at Bluff Springs. The 1900 U.S. census confirms that Ely Carnley, also known as "Uncle Alonzo Carnley," was indeed the ferry operator. The term "ferry" may be a bit of an exaggeration, as it consisted of a boat that was attached to a cable which ran between two trees on each side of the Escambia River. The ferryman used a notched pole to pull the boat across the river on the cable (Franklin 2003: 8). He made an impressive $40 per month for this task, a wage that far exceeded the average salary. Alonzo was married twice, first to Saffronia, and next to Elizabeth. Both marriages produced a combined total of ten children, one of whom was Perry Carnley (born in 1888), who acquired land in section 28 in 1917.

William Harvey, the other son of Jeremiah and Mary living Nora, and his wife Martha A. Carnley raised five children and used the 160 acres of land acquired in the Homestead Act to farm. Several of their descendants continued to reside locally. Their son, William H. (aka Willie), stayed in the community to farm (U.S. Federal Census 1900) and married Mary E. Capers with whom he had several children. One of those children, Eula, married Albert Carnley, son of George A. and Mary Carnley, which would make the couple second cousins. Albert, like

many of the Carnley men, stayed in the community to farm. Albert is buried in Carnley Cemetery along with his infant son Cecil and infant daughter Addie. Albert and Eula had eleven additional children, some of whom survived and settled in Nora.

The Carnley family inevitably formed bonds of both friendship and matrimony with families of the neighboring Coon Hill community. For instance, the second daughter of William Harvey and Martha Carnley, named Catherine, married George S. Diamond, a logger whose family members were interred in Coon Hill Cemetery. They had five children, one of them being Minnie Diamond, who died at age three and is buried in Carnley Cemetery.

William Harvey and Martha's second daughter, Georgianna, is also buried in Carnley Cemetery. Georgianna married a German man named John Kirchear at a very young age. John worked as a blacksmith and was 21 years her senior. Georgianna died when she was just 30 years old in 1892, cause of death unknown. She and John did have several children before she died, but neither her husband nor her children were interred in Carnley Cemetery.

Another daughter of William and Martha, called Drucilla, obtained a large parcel of land directly south of section 34 (the NE quadrant of section 4 in township 4, range 30W), where she and her husband, James Ard, presumably lived and possibly farmed. However, on the 1900 U.S. census James Ard declares himself a "teamster" which was the term used for someone who drives a team of draft animals such as oxen or mules. Teamsters often worked for timber companies, leading a team of oxen that pulled timber to the river log landings for long distance transport. According to oral history, there was a "log ditch" next to Carnley Cemetery that was used to float logs to the Escambia River, which would then be tied to a raft and shipped down the river to Ferry Pass for sale (Franklin 2003:8). While there are no available public records to support the claim, it is possible that James and Drucilla may have leased a portion of their land to

a timber outfit for which James drove teams of oxen. Alternatively, they may have leased it to a turpentine company, which was a thriving industry locally through the 19th century. The turpentine industry did have a presence in the Nora area, as evidenced by a turpentine distillery near the creek that served as a log ditch (Franklin 2003:8). The third possibility, of course, is that the Ards managed the land independently, possibly farming and/or raising cattle. However, neither James nor Drucilla lists his/her occupation as farmer on U.S. census data.

Two infant sons of James and Drucilla were buried in Carnley cemetery. The grave markers of George and Arthur Ard both read "son of GA&DE Ard," although the reason for the mislabeled first initial is unclear. The Ards had several more children who survived to adulthood.

Another daughter of William Harvey and Martha, called Annie (born in 1864) lost two children, whom she laid to rest in Carnley Cemetery. William died at age 13 in 1898 and an unnamed infant daughter died in 1884, the first burial of the cemetery, their causes of death unknown. Their headstones read "Son of WN & AD Dykes" and "In memory of an infant daughter of WN & AD Dykes" respectively. The surname Dykes comes from Annie's husband, William Dykes, who worked as a teamster according to the 1900 U.S. census. It appears that during at this time, most teamsters spent at least a few months of the year unemployed. William Dykes had apparently experienced a particularly slow year, as he claimed to have been unemployed for six months in 1900.

Not surprisingly, the communities of Coon Hill and Nora appear to have followed the same chronological structure of economic development, beginning with logging as a foundation, and transitioning to farming by the late 19th century. The large land patents were obtained before the Civil War by Joseph White, Littleberry Mason, and later Skinner, who had their hands in the timber industry. Many of the initial settlers of Coon Hill arrived with the intention of

exploiting this opportunity. By the time the Carnleys arrived in the late 1800's, the timber industry had already started to decline due to overcutting, hence the switch to farming as the primary industry (later, in 1917, the remaining timber outfits in the region suffered a devastating blow due a hurricane that ripped through the forests of northwest Florida). The primary difference between Coon Hill and Nora was the greater presence of timber workers during the founding years. Nora appears to have been settled later than Coon Hill, which accounts for the primacy of farming even while the community was relatively new. However, there is no evidence to suggest that lumber workers were any better off financially than farmers, or vice versa. Census records reveal both value of real estate and personal assets, and while some families claimed more assets than others, there was no significant link between assets and occupation.

While some families may have been more prominent than others, and while there may have been some variation in the amount of land and resources people were able to acquire and develop, this was not a community built on great socioeconomic disparity. It was a community that survived on limited conveniences, in which one's livelihood depended on resourcefulness, hard work, and cooperation. It was a community in which interfamily ties were strengthened by marital bonds, shared heritage and/or religion, and improvised community recreation. Given that there was no significant socioeconomic disparity, and little variation in occupation, what could account for the differences in mortuary choice? Why were most people buried in Coon Hill Cemetery, but some buried in Carnley? Was it mere convenience? If so, then why were many residents of Nora buried several miles away in Coon Hill? In addition, how do the age and gender structures differ between the cemeteries and what could this difference signify? The

following chapter will explore these questions by comparing the mortality structures of Carnley and Coon Hill Cemeteries, and reconstructing the chronological and spatial formation of these sites.

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CHAPTER IV

DEMOGRAPHIC AND SPATIAL ANALYSIS

In order to understand mortuary choices and mortality, it is important to examine the demographic makeup and spatial formation of Coon Hill and Carnley Cemeteries. Therefore, in Part I of this chapter, I analyze and compare the mortality structures of both cemeteries. The purpose of this exercise is to better understand how the age structures of Coon Hill and Carnley differ, which may be indicative of mortuary choices. For example, if Coon Hill contains a much smaller proportion of juvenile burials than Carnley Cemetery, this would support the hypothesis that people preferred family cemeteries over community cemeteries when choosing a resting place for their children. Furthermore, if the proportion of child burials at Coon Hill proves to be notably lower than one would expect based on average mortality rates, this could reflect a choice to bury children in a different location (such as a family cemetery). However, if the age structures do not differ significantly and are not notably divergent from average mortality rates, this would indicate that age was not a primary consideration when choosing a burial place.

Mortality structures also reveal how age relates to mortality risk. Age and gender are often related to specific occupations or activities that differentially influence mortality risks. The goal is to determine what risk factors existed in these communities and whether these risks differed in Coon Hill and Nora. The first analyses are overall mortality structures of the cemeteries based on age at death. Next, I create an age-at-death graph for each decade for each cemetery.

In Part II, I analyze what the confluence of date at death, family name, and physical location of the grave markers reveals about the formation of the cemeteries. After mapping the cemeteries using a Trimble GPS unit, I created GIS maps of the burial locations in each

cemetery. I constructed various map layers based on relevant attribute information, such as date of death, age, and family name. In this section, I use this spatial analysis tool to determine how these cemeteries developed over time, and how burial locations were chosen.

Part I

The purpose of this section is to compare the mortality structures of Coon Hill Cemetery and Carnley Cemetery, first in totality, then chronologically by decade. The results will then be examined for differences in age-at-death. The difficulties of such a comparison must first, however, be brought to light. First, the cemeteries' size difference must be addressed. Coon Hill Cemetery has a total of 240 recorded graves (although only 208 graves contain discernable age information), as compared to a mere 20 burials (14 of which are identifiable) at Carnley Cemetery. The difference in sample size may affect the accuracy with which the mortality structure represents that of the population as a whole. With a larger sample size, Coon Hill is more likely to depict average age-based mortality risk. Second, the use duration of Coon Hill cemetery begins earlier than that of Carnley (1836 compared to 1884) and ends later (1969 compared to 1936). Disease pathways, activity patterns, and healthcare changes over time and directly affects mortality risks. The first graph represents overall mortality structures of the cemeteries as whole units, discounting these differences in use duration (figure 12). All is not equal when comparing these general mortality structures. The subsequent graphs (figures 13-21) offer a more direct temporal comparison, as each decade is treated separately.

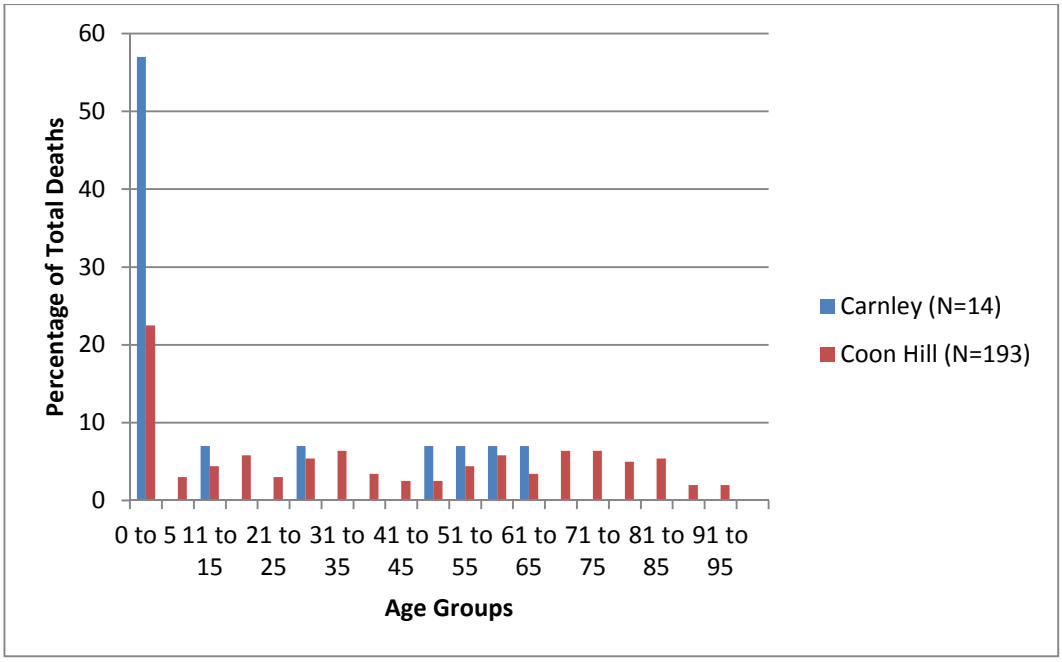

Figure 12. Overall mortality structures of Carnley and Coon Hill Cemeteries.

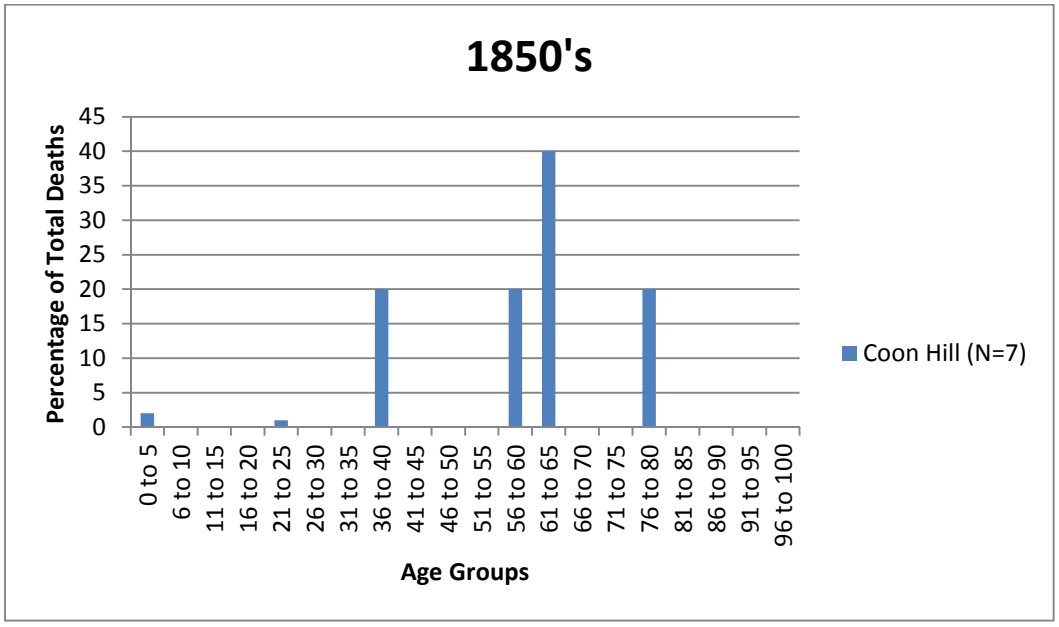

Figure 13. Mortality structure of Coon Hill Cemetery in the 1850's.

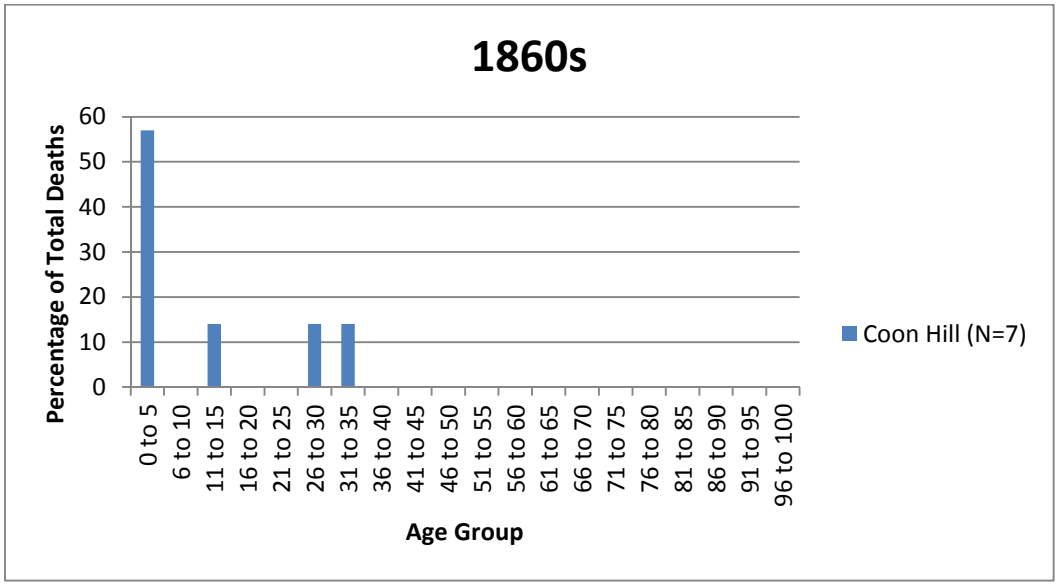

Figure 14. Mortality structure at Coon Hill Cemetery in the 1860's.

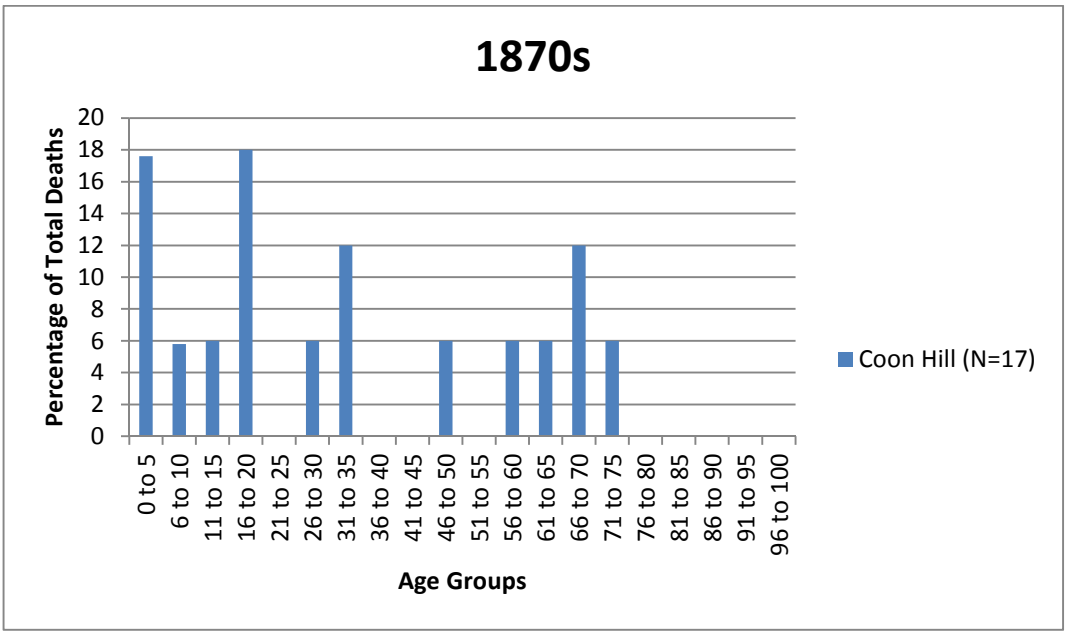

Figure 15. Mortality structure of Coon Hill Cemetery in the 1870's.

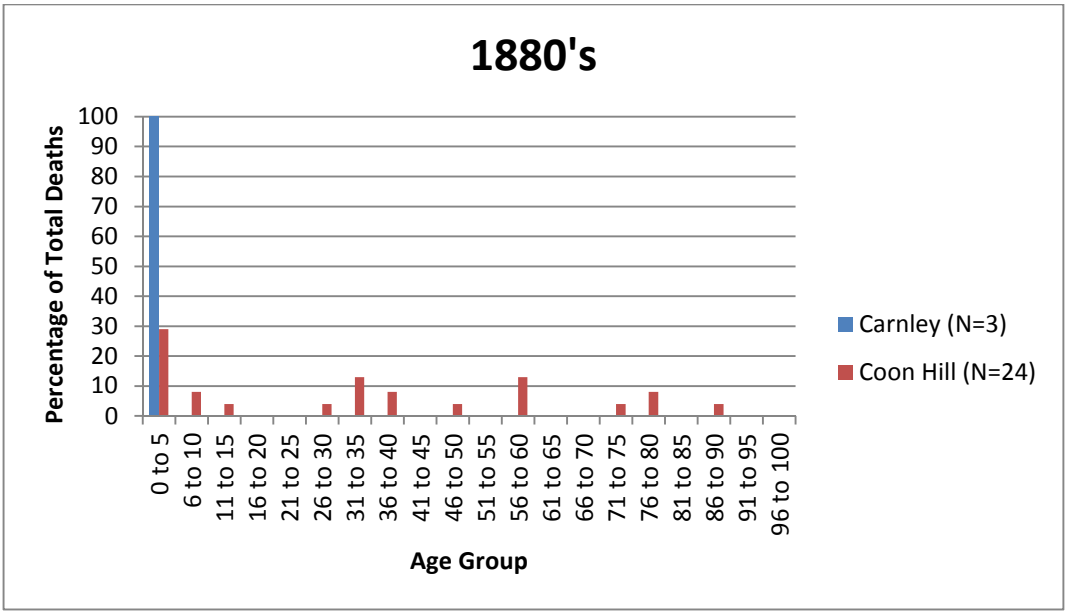

Figure 16. Mortality structures of Carnley and Coon Hill Cemeteries from the 1880's.

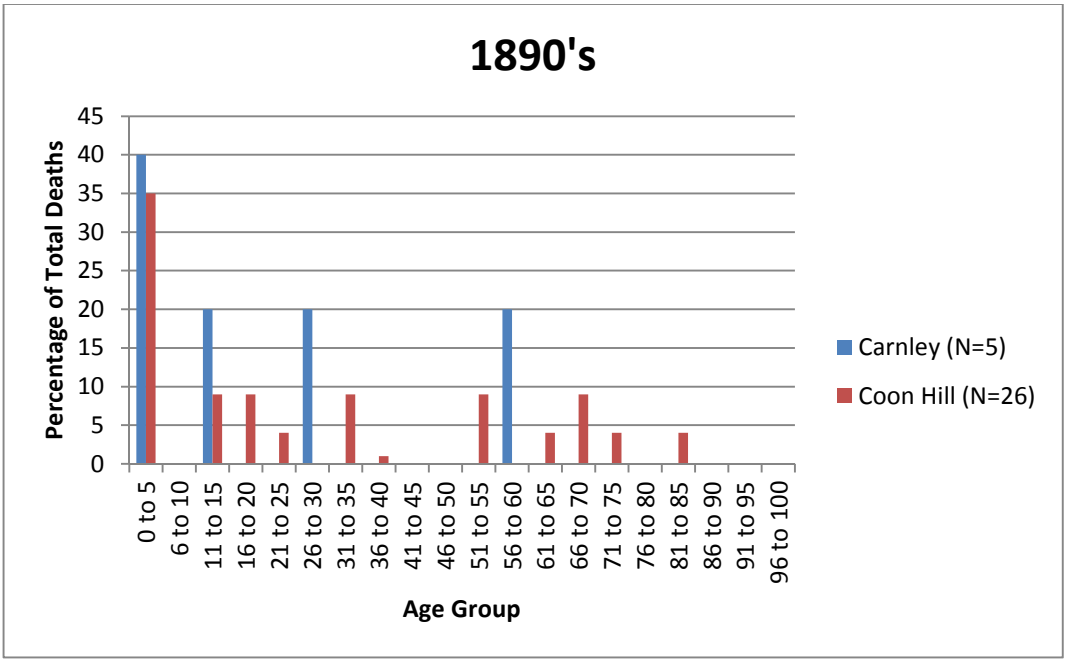

Figure 17. Mortality structures of Carnley and Coon Hill Cemeteries in the 1890's.

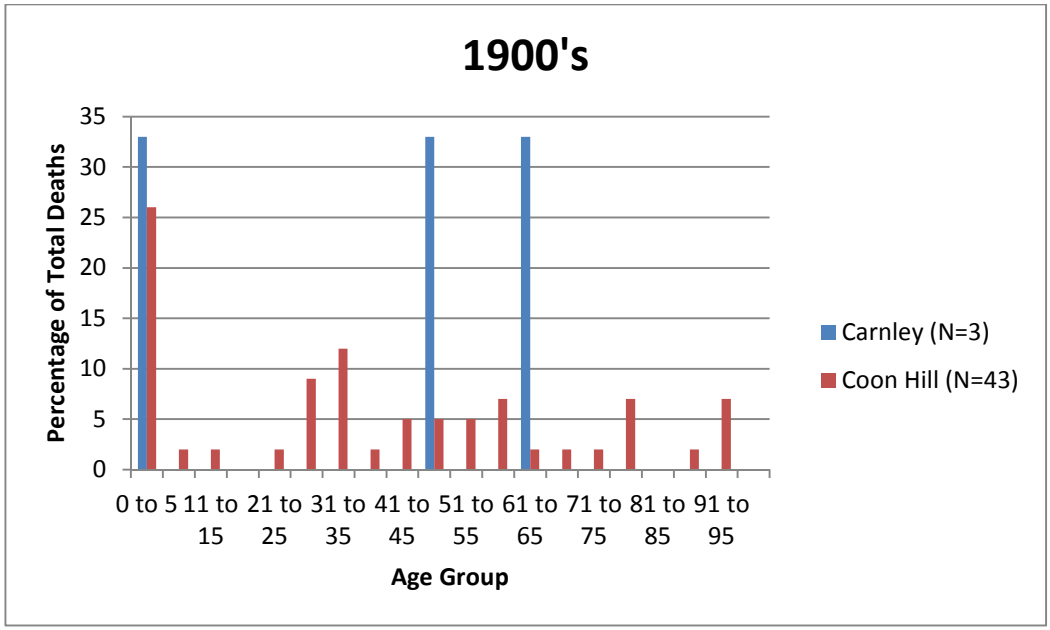

Figure 18. Mortality structures of Carnley and Coon Hill cemeteries in the 1900's.

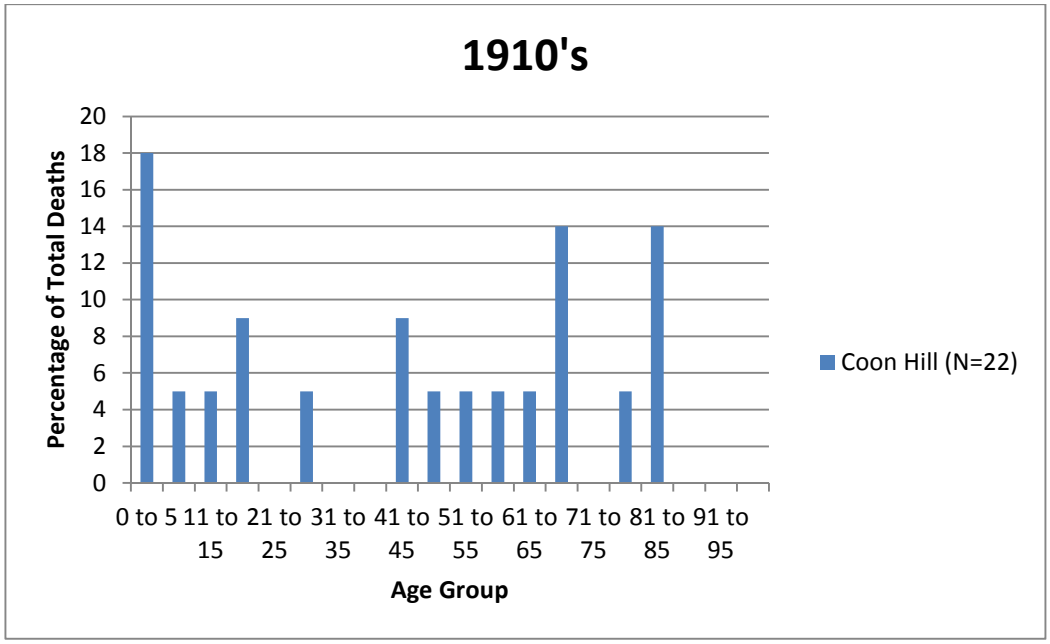

Figure 19. Mortality structure of Coon Hill Cemetery in the 1910's.

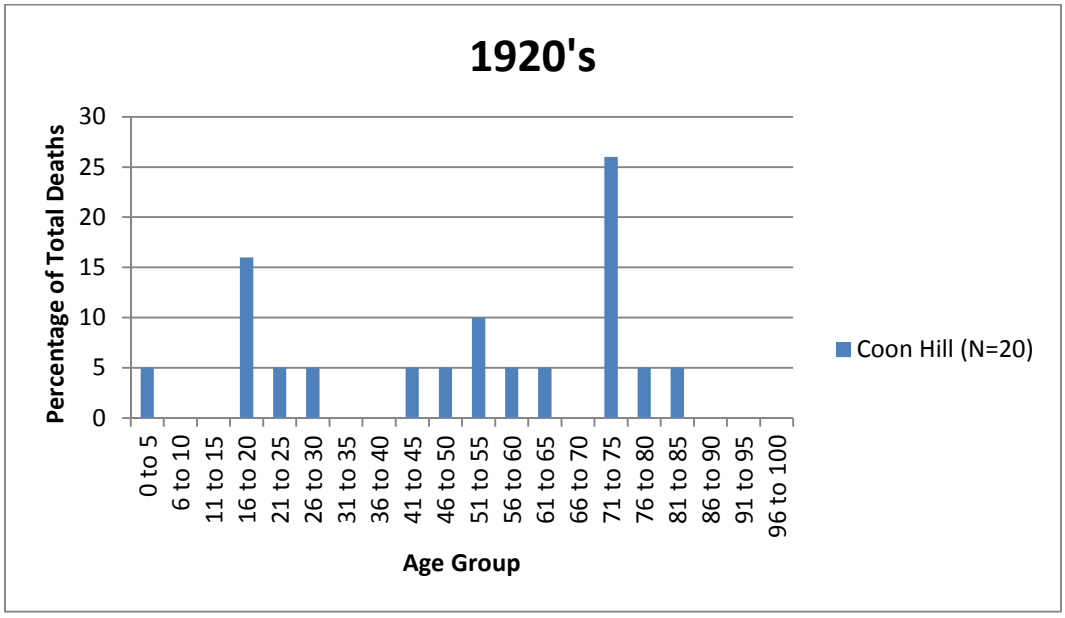

Figure 20. Mortality structure of Coon Hill Cemetery in the 1920's.

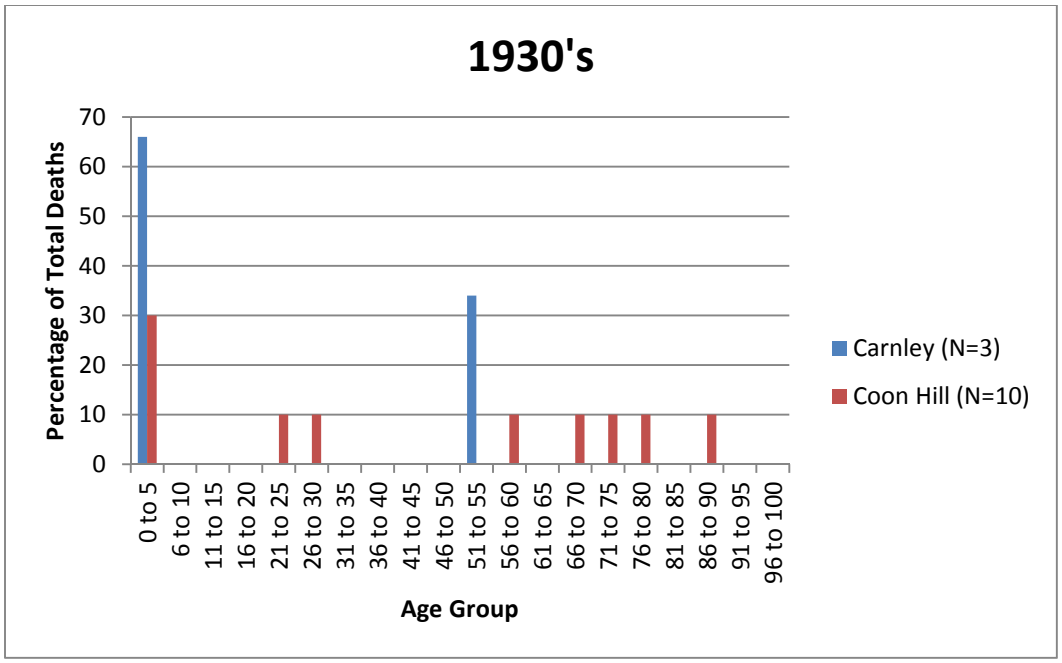

Figure 21. Mortality structures at Carnley and Coon Hill Cemeteries in the 1930s (the last decade of recorded burials at Carnley).

Analysis

The mortality structures of both cemeteries show significant peaks at ages 0 to 5. Coon Hill has also shows much smaller peaks in ages 31-35, 66-70, and 71-75, whereas there are either one or zero deaths in all age groups over five years at Carnley. In Coon Hill, 23.5% of overall deaths are children ages 0 to 5, 26.5% are under 10, 31.1% are under 15, and 37.2% of total deaths are aged 20 and under. In Carnley, 57.1% of deaths are between ages 0 and 5 years, and 7% aged 20 or under (one teenager). Clearly the overall mortality structures are strikingly different in terms of child mortality. However, the cultural significance of this difference is unclear.

The Fisher's Exact Test is a tool created by R.A. Fisher (1954) for researchers who wish to analyze the statistical significance of differences between distinct data sets. The test measures the deviation from the null hypothesis, which holds that any differences are due to chance. Fisher created an equation that calculates this deviation, defined as P. First, a contingency table is created as such:

Table 1. Fisher's Exact Test Tool

	Age 0 to 5	Other Age	Row Total
Carnley	A	B	A + B
Coon Hill	C	D	C+D
Column Total	A+C	B+D	A+B+C+D=N

Then, the following equation is used to calculate the value of P. I used the QuickCalcs GraphPad software for my calculations.

$$p = \frac{\left(\frac{a+b}{a}\right)\left(\frac{c+d}{c}\right)}{\left(\frac{n}{a+c}\right)} = \frac{(a+b)!\,(c+d)!\,(a+c)!\,(b+d)!}{a!\,b!\,c!\,d!\,n!}$$

P gives the probability of obtaining the data entered given that the null hypothesis is true. For example, if P is equal to .9, then there is a 90% probability of obtaining as least as large a difference in data sets given that that the differences are due to chance alone. There is a 10% probability that the difference would be smaller than the data entered given the validity of the null hypothesis. In this test, the threshold for statistical significance is set at P=.05. While this is an arbitrary value, it is a widely accepted threshold for measuring significance. I used Fisher's Exact Test to measure the probability that the differences in 5 and under mortality rates between Coon Hill and Carnley Cemeteries were due to chance. First, I compared the differences between the two cemeteries in overall number of deaths in the 0 to 5 age group to the number of deaths in all other age groups. This produced a P-value of .0021, which is considered very statistically significant. This result indicates only a 0.21% probability of obtaining a difference as large between the two data sets. I also compared the data for time period when both of the cemeteries were in use (from 1880's to the 1930's), which also produced a very statistically significant result (P=.0030). However, sample size is taken into account when measuring significance, a more accurate measure of the differences in child mortality rates between these cemeteries can be obtained by analyzing mortality data for each decade during which both of the cemeteries were in use. In the 1880's, the differences between Carnley and Coon Hill cemeteries in the number of child deaths aged 0-5 relative to deaths in other age groups produced a P-value of .0410, which is considered statistically significant. This was the first decade that the Carnley family used this cemetery as a burial ground, and the first decade in which members of the Carnley family acquired land in the vicinity. The first land grant was issued to Jeremiah Carnley

in 1884, cousin of the deceased infant buried in the cemetery the same year. Thus, it is likely that the first deaths among members of the Carnley family living in Nora were children. The data from the 1890's and the 1900's resulted in P-values of 1.00, which is not statistically significant. Finally, data from the 1930's produced a P-value of .5827, not statistically significant.

Now that the statistical significance of the child mortality differences between Coon Hill and Carnley Cemeteries has been measured, I will compare the child mortality rates at Carnley and Coon Hill Cemeteries to the national average. While statistical significance cannot be determined from percentages alone (and sample size information is not available for the national average mortality rates), the data can be analyzed for consistent deviations. As I have discussed in previous chapters, compiling historic mortality data is notoriously problematic. Death registration areas were not officially established until 1900 (and even then, included only 26.3% of the population over ten states primarily in urban areas) (Preston and Haines 1991:50). Prior to 1900, mortality information can be only be obtained from U.S. Census data. From 1850 to 1890, deaths reported to have occurred in the prior year were recorded. These data are doubtlessly incomplete as they are subject to misinformation and recording error. Nevertheless, the mortality information compiled by Haines (1979) provides an approximate measure to which the mortality data from Coon Hill and Carnley cemeteries can be compared.

I have not included graphs for the first two decades of Coon Hill Cemetery's use because there is no mortality data available for comparison, and there were very few burials during this time period (one in the 1830's, and two in the 1840s). Eight people were interred in the 1850s, 25% of whom were between ages 0 and 5, and 25% of whom were between ages 61 and 65. The national child mortality rate for ages 5 and under in 1850, as reported by Haines (1979) was 31%

(averaged to include both sexes). In the 1860s, 57% of all Coon Hill burials were under age 5, while the national was only 27%. In 1870, the national average dropped slightly to 25%, while juvenile burials at Coon Hill dropped to just 18.8%. These fluctuations in mortality at Coon Hill appear to be random, probably related to the small total number of burials during this time period.

In 1880, the national average mortality for children ages 5 and under jumped back up to 30%, nearly equal to Coon Hill's 29.2%, and its total number of burials climbed from 16 the previous decade to 24. Two much smaller peaks in mortality (at 12.5%) occur in age groups 31-35 and 56-60. All of the initial 3 interments at Carnley during the 1880's were in the 5 and under age group. In the 1890s, mortality rates of children under age 5 at both Carnley (40%) and Coon Hill (34.8%) exceeded the national average (which had declined to 22.6%). With five burials, the 1890s was the busiest decade at Carnley Cemetery. From 1900 to 1909, only three people were interred in Carnley Cemetery, including one child. Meanwhile, 43 burials made this the most active decade at Coon Hill Cemetery. Children under age 5 composed 25.6% of these burials, compared to the national average of 20%. Two smaller peaks are apparent in age groups 26 to 30 (9.3%) and 31 to 35 (11.6%).

During the next two decades, Carnley Cemetery remained unused, and the use of Coon Hill Cemetery declined to earlier levels. Child mortality began to decline (18% in the 1910's and only 5% in the 1920's). According to Glover's data from death registration areas, the average mortality for children 5 and under at the time was 16% in 1910 (Preston and Haines 1991: 55), 10% in 1920, and 7.4% in 1930 (average of male and female mortality rates) (Linder and Grove 1947: 161). Carnley Cemetery saw its last three burials in the 1930's, 66.6% of which were children under age 5. Only 10 people were buried in Coon Hill during this decade,

30% under age 5. The number of burials in Coon Hill declined to 10 in the 1940's, two in the 1950's, and finally, five in the 1960's. No children were buried in Coon Hill Cemetery after the 1930's.

When broken down by decade, there are no consistent deviations in mortality rates between the national average mortality rates and the mortality structures of Carnley and Coon Hill Cemeteries. While it is notable that juvenile burials comprised the first decade of Carnley Cemetery's use, this phenomenon is more likely explained by the specific circumstances related to the settling of the Nora community than by special mortuary practices regarding children. A detailed interpretation of the results of the Fisher's Exact Test data and the comparison to national average mortality will be given in the following chapter.

Overall, these mortality structures reveal high child mortality, generally in line with or slightly higher than the national average. Most of these juvenile deaths occur among children 5 and under, while the death rates of older children are fairly moderate. Another peak in mortality occurs in the age group 31 to 35, the majority (64%) of whom were female (in addition, at 65% of deaths in the 30-40 age range were female, while in the 40-50 age range, the percentage of female deaths drops to nearly zero). These data show the age groups that are most at risk, but understanding the specific risks that people of Coon Hill and Nora communities likely faced requires further investigation, and will be briefly explored in the following chapter.

Part II

Spatial analysis of Carnley and Coon Hill Cemeteries comprised the second phase of research. First I, with the assistance of Colin Bean, Lindsey Cochran, and Dr. Ramie Gougeon, used a Trimble6000 GPS unit to map the graves and perimeters of each cemetery. A Trimble GPS is a handheld global positioning system capable of recording the geographic location of

individual points, lines, and areas using a chosen geo-referencing system, such as UTM or State Plane. After completing the mapping, I used the data to create maps in ArcGIS (Geographic Information Systems), which is a tool for spatial analysis. It allows one to link spatial features and attribute information to explore the relationship of chosen attributes to geographic location. The attributes that I chose to analyze in the cemeteries in addition to surnames of the deceased and location of the graves, were age-at-death and date of death. The purpose of this exercise was to understand the way these cemeteries developed, specifically the choices that were made regarding burial placement in relation to other burials based on time, age, and kin relationships. If choices regarding the burial location of children differed from that of adults, then one might expect to see that reflected in the spatial development of the cemeteries.

The first maps illustrate the overall layout and orientation of each cemetery (figures 22 and 23), followed by maps that show the temporal development of each cemetery, with different colored icons representing each decade of use (figures 24-28). During the first five decades of Coon Hill Cemetery's use, there were no burials with identifiable biographical data at Carnley Cemetery. According to oral history, the ironstone graves were pre-Carnley, as were several burials, possibly of slaves, that have been destroyed from years of weathering. Nevertheless, the graves displayed in the chronology maps are only those that have identifiable date of death data inscribed on the grave markers. Figure 29 shows the locations of the brick and ironstone graves at Carnley that contain no biographical information. The next maps (figures 30 and 31) illustrate burial location based on age group in order to determine whether juveniles were treated differently from adults in terms of grave placement. The final maps (figures 32 and 33) show grave locations based on surname/kin affiliation. These maps reveal how familial relationships influence interment choices.

Figure 22. Map of Coon Hill Cemetery wherein each diamond represents a grave.

Figure 23. Map of Carnley Cemetery wherein each small circle represents a grave. Triangles mark the graveyard perimeter.

Figure 24. Grave locations at Coon Hill Cemetery through 1880. Red cross: 1830's; purple: 1840's; black: 1850's; yellow: 1860's; blue: 1870's. North is at the top of the map.

Figure 25. Graves at Coon Hill through 1900. Added cross icons represent the 1880s (brown) and the 1890s (green). North is at the top of the map.

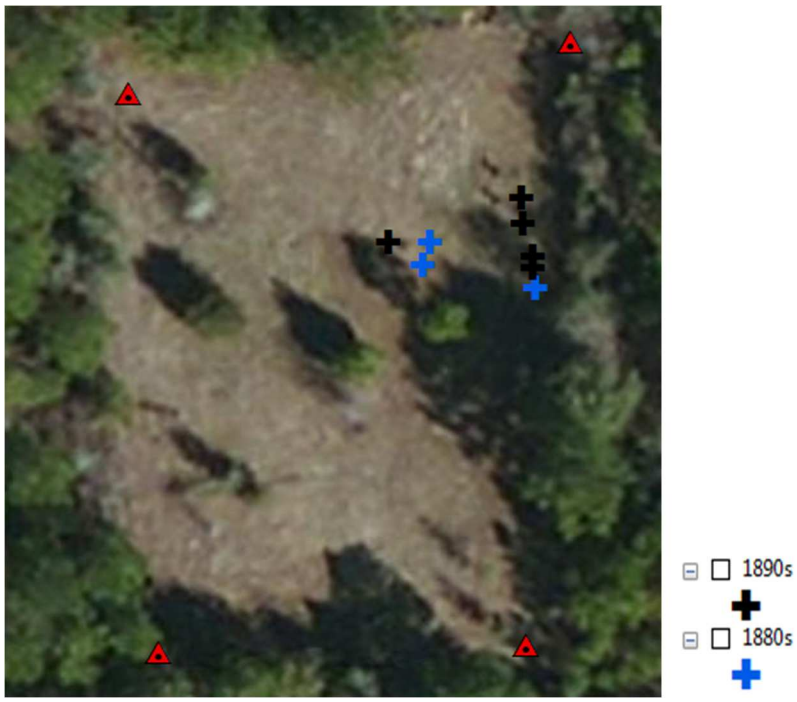

Figure 26. Graves at Carnley Cemetery through 1900. Red triangles represent the perimeter of the cemetery. Blue: 1800's; Black: 1900's. North is at the top of the map.

Figure 27. Graves in Coon Hill Cemetery throughout entire occupation period.

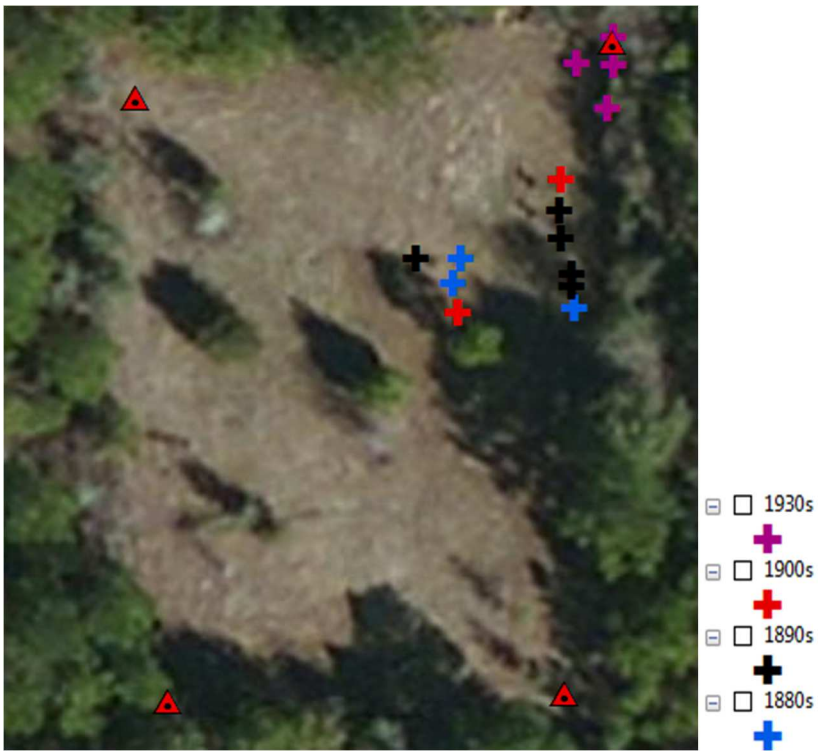

Figure 28. Graves in Carnley Cemetery throughout entire occupation period.

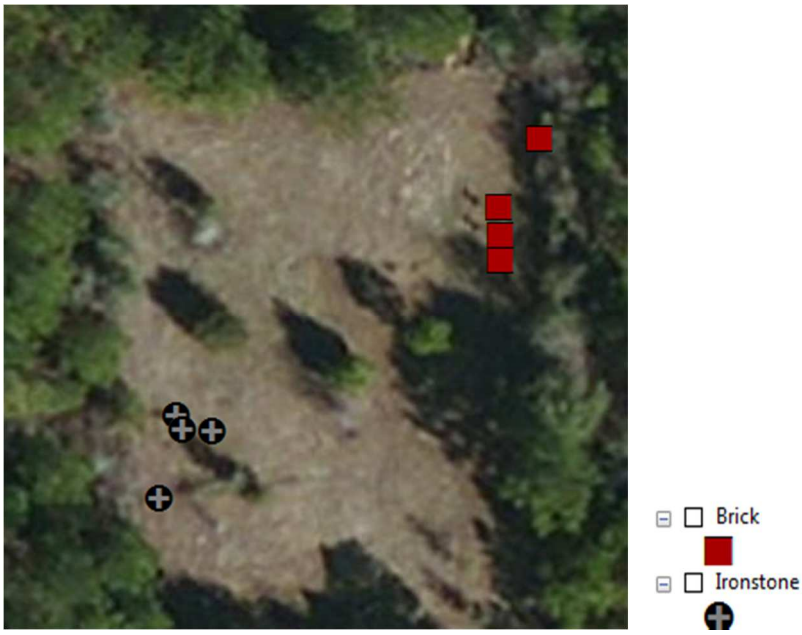

Figure 29. Graves at Carnley with unknown identity marked with brick (red squares) or ironstone (black circles). North is at the top of the map.

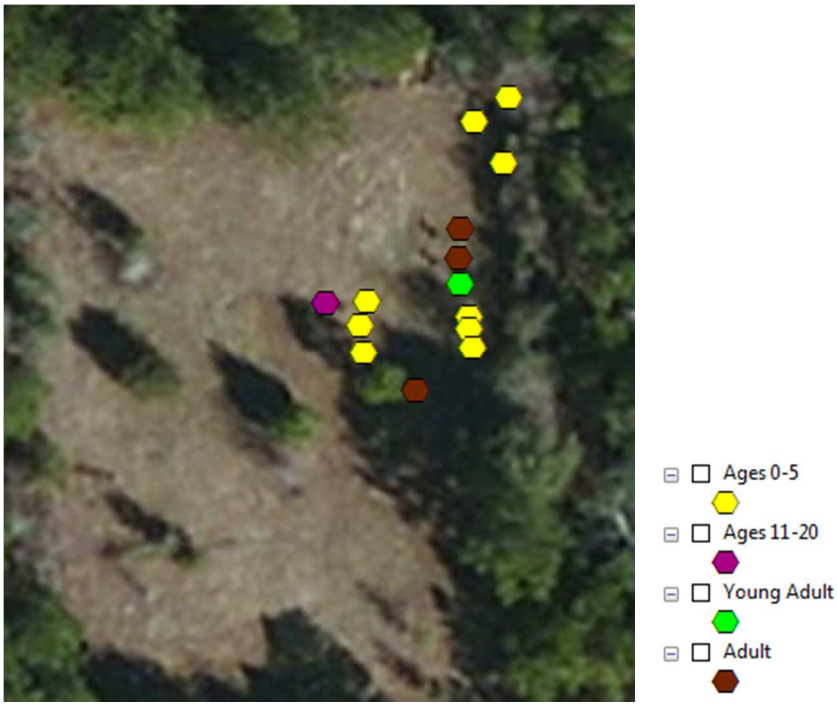

Figure 30. Grave location by age at Carnley. Yellow: 0-5 years; Purple: 11-20 years; Green: 21-40 years; Brown: 41+ years.

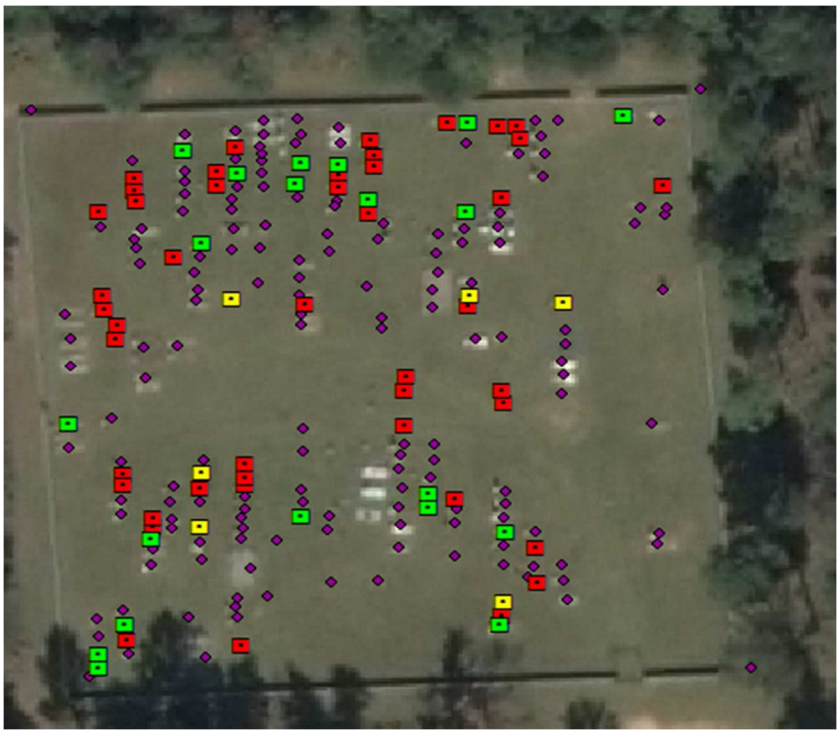

Figure 31. Grave locations at Coon Hill by age. Red: 0-5 years; Yellow: 6-10 years; Green: 11-20 years; Purple: 20+ years.

Figure 32. Grave locations at Carnley Cemetery by ancestry. Yellow diamonds represent descendants of William and Martha Carnley. Blue stars represent descendants of Milton and Sarah Carnley.

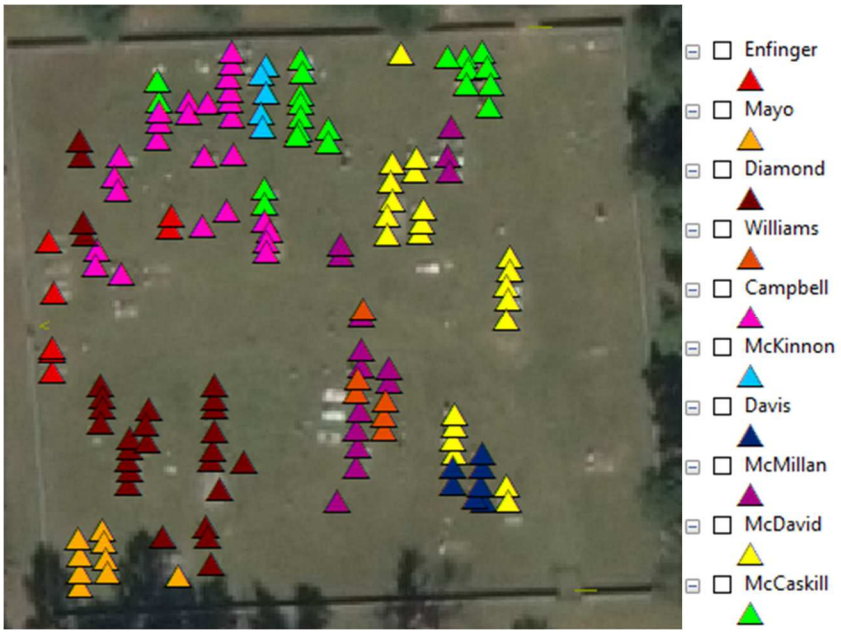

Figure 33. Grave locations at Coon Hill Cemetery by surname.

Analysis

First, some similarities in the formation and construction of the two cemeteries should be noted. Marble and cement were the primary materials used in both cemeteries to construct grave markers. However, according to oral accounts (interviews with Jim McCaskill, Bobby Boutwell, and Larry Hudson) and documentary evidence, in the past, both cemeteries also contained grave markers made from pine wood that have since deteriorated. The graves at both cemeteries are consistently oriented east-west, with the headstones facing east. This orientation is undoubtedly rooted in the Christian belief that Jesus will return from the east, and that the dead should be facing in this direction upon his return. The inscriptions on the tombstones also reveal this shared belief system. While many of the graves contain only biographical information, or brief inscriptions that emphasize familial relationships ("wife of …," for example), the content of the more elaborate inscriptions are unfailingly Christian in nature. Furthermore, the iconography decorating some of the grave markers, particularly those of juveniles, reflects similar notions of childhood espoused in the Judeo-Christian philosophy. For instance, one often finds lamb or dove icons carved into the headstones of children. In the Judeo-Christian tradition, these animals represent innocence and purity. These qualities were associated with children due to their limited exposure to the inherently evil and contaminating world (McKillop 1995).

The differences in the formation of Carnley and Coon Hill cemeteries lie mostly in scale, kin diversity, and duration. There also appears to be a difference in their spatial-temporal development. The chronological development of Coon Hill shows, basically, radiation out from a central point. The first burials are toward the center of the cemetery, and it expanded outward (imperfectly, of course) around this central point. The first identifiable graves at Carnley are toward the northeast corner of the cemetery. Subsequent burials were placed even further north

and east rather than radiating around the first graves. A couple of points must be considered when interpreting this formation. First, interments at Coon Hill represent various family groups, whereas Carnley burials represent a single extended family. For this reason, the graves may have been intentionally contained in a tight cluster. Second, the ironstone graves, and possibly other graves marked with heart pine, probably already occupied the southwest section of the cemetery. This would have drawn attention to the plot of land as a graveyard, but also likely had the effect of necessitating a separation of Carnley family burials from the pre-existing graves (with whom the Carnleys may or may not have had affiliation).

Subsequent maps reveal that family affiliation, rather than age, appears to have been the primary consideration when choosing burial location. Family groups appear in clusters, although more than one cluster with the same surname can sometimes be found. Juveniles and adults alike were buried within these family groupings, and not treated separately regarding burial location. In the following chapter, I will discuss how these data relate to my hypothesis, and what they reveal about the burial choices reflected in the demography of Carnley and Coon Hill Cemeteries.

CHAPTER V

INTERPRETATIONS AND CONCLUSIONS

In interpreting these demographic and spatial data, I aim to shed light on the mortuary choices that influenced the formation of the cemeteries, and to understand what these cemetery demographics reveal about local mortality risks during the 19th and early 20th centuries.

Interpretation of Demographic Data

In order to be considered significant, the child mortality rates in Coon Hill and Carnley Cemeteries must show a consistent deviation, either higher of lower, from the national average child mortality rates throughout the duration of the cemeteries' use. The variation in mortality in Coon Hill does not reveal a pattern of either higher or lower child mortality than the national average. Rather, the deviations from the national average fluctuate in a seemingly random fashion. For example, the 5 and under mortality rate at Coon Hill cemetery was less than the national average in the 1850s, almost twice the national average in the 1860's, lower again in the 1870's, and higher in the 1880's. Child mortality remained higher than the national average from the 1880's through the 1910's, then dropped again in the 1920's. In the 1930's the rate jumped to 30% at Coon Hill, while the national average declined to a mere 7.4%. However, these data probably do not accurately reflect child mortality in the Coon Hill community, because only 10 people were buried in Coon Hill Cemetery during the 1930's, and small sample sizes are often flawed representations of averages. For example, it is well-known that when flipping a coin, one has a 50% chance of it landing on either heads or tails. However, when the coin is flipped only 10 ten times, the results are much less likely to reflect this average than if the coin in flipped 100 times. As in the coin toss, a small sample size of burials is more subject to random fluctuations than a larger sample size.

Apart from a three-decade run of consistently higher than average child mortality at Coon Hill, there is no discernable pattern of difference between Coon Hill Cemetery and the national average. If juveniles had been disproportionately buried in smaller family cemeteries, we would expect this community cemetery to show consistently lower than average child burials. Since this was not the case for Coon Hill, these data do not support my hypothesis.

When comparing the mortality data of Carnley Cemetery to Coon Hill Cemetery, the differences initially appear to be significant. In first decade of Carnley's use, *all* the burials were juveniles, while only 30% at Coon Hill were 5 years or younger. In the 1890s, the two cemeteries had comparable child mortality rates (34.8% at Coon Hill and 40% at Carnley), both being higher than the national average. The following decade, both cemeteries continued to exceed the national average with 33% child mortality at Carnley and 25.5% at Coon Hill. There were no burials in Carnley Cemetery until the 1930's, at which point 66.6% were juveniles, while only 30% of the burials at Coon Hill were children (both percentages being much higher than the national average). Clearly, Carnley Cemetery consistently has a higher child mortality rate than Coon Hill Cemetery. However, when examining the numbers more closely, this difference is much less notable than it initially appears. As Fisher's Exact Test has demonstrated, the difference in child mortality (ages 5 and under) between the overall mortality structures at Coon Hill and Carnley cemeteries is statistically significant, as is this difference during the first decade of use at Carnley. However, as the statistical analysis has shown, a direct chronological comparison calls this significance into question.

First, let us examine the first decade of Carnley's use, in which juveniles comprised the entirety of the interments. We know that the first land patents on record held by Carnley family members date to the 1880's (though people had already been settled in Nora for some time, as

evidenced by earlier land patents held by McCaskills, McMillans and Joseph White)(Boyd 2009:68). By this time, people had been settling in the Coon Hill Community, and interring their loved ones in the cemetery for nearly 50 years. The 1880s was a decade of fairly high use at Coon Hill, during which time 24 people were buried. Meanwhile, William H. and Milton Carnley had moved to Nora with their family, probably sometime in the 1870's. They raised their children in the community, several of whom married and remained in Nora. Among these children were Catherine, Georgianna, and Annie who each had several children. Each of these sisters experienced the death of a child during the 1880's, not an atypical tragedy during this time period. No other Carnley death occurred during the 1880's, probably because most family members were between the ages of 15 and 47 (in 1880), in between the highest mortality risk age groups (very young and very old). The 5 and under age group suffered the highest mortality risk by far, so it is not surprising that the first three deaths experienced by the Carnley family after establishing residence in Nora were juveniles. Finally, no Carnley adults (or children) were buried in Coon Hill Cemetery, and no children of families outside of the Carnley family were buried in Carnley Cemetery, which strongly suggests that age was not a consideration when choosing burial locations. As I have previously mentioned, other families lived in the Nora community in addition to the Carnley family. In fact, several of those families already resided in Nora before William and Milton settled in the community. Even so, only Carnley family members are buried in this cemetery, despite its proximity to other family homes. A look at the names of the interred in Coon Hill Cemeteries reveals this to be the chosen burial place for most non-Carnleys living in Nora (primarily McCaskills). Since the McCaskills had many family ties in the Coon Hill Community, and several family members had already been buried in its cemetery, even family members living in Nora were also buried in Coon Hill Cemetery near

other family plots. It appears that family ties trumped convenience when choosing a burial location for a loved one. It would have been a feat of considerable difficulty to transport a body from Nora to Coon Hill (over 6 miles by modern roads, but considerably less using old logging roads and/or foot paths). A slow-moving ox-driven cart would have been the primary mode of transportation, and with no refrigeration, time would have been of the essence. Clearly, people went to great lengths to keep families together in death. This desire appears to have been the primary consideration when choosing a place to bury loved ones.

According to Fisher's Exact Test, child mortality rates in Coon Hill and Carnley cemeteries did not differ significantly from the 1890's to the 1930's. 2 out of 5 graves commemorate children under 6 years old in Carnley (in addition to one 13-year old), and 8 of 24 burials at Coon Hill represent children less than 6 years old. From 1900 to 1909, only 3 people were buried in Carnley, one of whom was under 5. Meanwhile, Coon Hill Cemetery saw 43 interments that decade, 11 of which were children under 5. In the next two decades, no children (or adults) were buried in Carnley Cemeteries while 5 children were interred in Coon Hill Cemetery. Only three Carnley family members were laid to rest in the family cemetery during its last decade of use, and two of those burials were children. This was a time of declining use at Coon Hill Cemetery as well, and three of the ten burials were children. Therefore, while differences in overall mortality rates between the two cemeteries initially appear to reveal a significant pattern, direct chronological comparison reveals that the data are consistent with expected results given the null hypothesis that the differences are due to chance alone. One notable trend, however, is the consistently higher than the national average child mortality rates in both Carnley and Coon Hill Cemeteries for a period of at least 3 decades (1880 to 1910). Beginning in the 1880's, mortality began to drop nationwide due to advancements in the germ

theory of disease, which led to new measures of preventing and treating disease. While average mortality dropped, mortality in Coon Hill and Carnley Cemeteries remained high, possibly due to limited exposure to information related to modern preventative measures, and even more limited access to professional medical care (discussed in more detail below). This would be consistent with previous mortality studies, which have concluded that while urban mortality declined significantly in the last two decades of the 19th century, rural mortality rates remained stagnant until the early 20th century when, presumably, both information and medical care were more widely disseminated (Preston and Haines 1991).

In the absence of actual death records relating the causes of death of the deceased in Carnley and Coon Hill Cemeteries, understanding the risk factors that resulted in these mortality structures is best approached by drawing upon analyses of mortality data obtained from Santa Rosa County census records. While the Coon Hill and Nora communities comprised merely a small segment of this larger population, the relative uniformity of environment, lifestyle, industry, and health care make for a logical parallel.

While many of the same diseases threatened populations across the country, each community had a unique epidemiological structure, in addition to different approaches to treating illness. The first step to deciphering the epidemiological structure is to determine which diseases were the most threatening to the survival in the community. Causes of death in small, historic populations like Coon Hill and Nora are extremely difficult, if not impossible, to come by. Historic death records are often sparse or non-existent, and rarely reveal the cause of death. Death registration areas, which are states that keep records of more than 90% of deaths in the state, including causes of death, began in the early 1900's, but many states (including Florida) did not comply for several decades after (Preston and Haines 1991). Between the years of 1850

and 1880, national census data did include a record of deaths that had occurred within a year of the census, and while this is a mere snapshot of the total number of deaths within this time period, it does give us a glimpse into the threats the rural population of Santa Rosa County faced. Mortality data from specific locales within the county is not available, so the following information covers Santa Rosa County in its entirety. Here, I break down the data by decade, and within each decade by age group, and relay causes of death among children (ages 0-12), teenagers (ages 13 to 19), young adult (20-39), and adult (40 plus).

As census data rely on the accuracy of the information produced by the residents being surveyed, on the translation of that information by the census taker, and on the transcription of the data from print to an online format, errors inevitably occur. The residents may have been misinformed about the cause of death, the census-taker may have misunderstood the residents, and the transcriber may have been unable to clearly interpret the census-taker's handwriting. To add to the confusion, the census data include unfamiliar historic and/or colloquial terms for diseases. In spite of these complications, these data provide a glimpse into mortality risks specific to this area that may have otherwise remained hidden.

The settlers of Santa Rosa County were subject to much of the same health risks that plagued the rest of the country. Tuberculosis, malaria, pneumonia, scarlet fever, cholera, typhoid, dysentery, croup and many more diseases threatened the entire nation. However, the severity of risk for certain diseases varied by location. For example, crowded urban centers experienced more frequent and severe cholera outbreaks than rural communities with ready access to fresh water springs (like Coon Hill and Nora). Yellow fever devastated many communities (along the Gulf Coast in particular), yet Santa Rosa County seems to have been less affected than larger cities like New Orleans, Jacksonville, and Memphis (Crosbey 2012). Still, the Santa Rosa

County mortality schedules produced an expansive list of diseases, ailments, and accidents named as causes of death during these five census years (spanning from 1850 to 1885). The list, when conveyed verbatim, includes both arcane terms such as brain fever, pernicious fever, bilious fever, consumption, flux, heberia/hiberia, minusmus, different dentition, Jamaican fever, mtn description, belarus fever, dropsy "bobehives"(probably a misprint, perhaps meant to be baby hives or another classification of hives), and apoplexy, as well as familiar names, such as flux, bowel disease, peritonitis, diphtheria, convulsions, croups, uremia, rheumatism, typhoid, typhus, abscess, hives, measles, dysentery, diarrhea, meningitis, pneumonia, cholera, scarlet fever, palsy, laryngitis, old age, and cancer. Some of these arcane disease names, such as heberia/hiberia, minusmus, and "mtn (mountain?) description" are absent from historical records, so it is possible that these names were either translated incorrectly by the census-taker or later by the transcriber. Alternatively, these could have been regional or local colloquialisms. The other disease names, however, have modern equivalents. In the 19th century, people used the terms brain fever and pernicious fever to describe either meningitis or typhus fever. These names aptly described the symptoms of the two bacterial infections, which had similar expressions. Both began with headaches, body aches and fatigue, and developed into persistent fever, rash, and eventually delirium and confusion. Bilious fever was often used to describe intestinal or malarial fevers, including typhoid (similar to typhus fever, except spread via lice and ticks rather than by person to person airway emissions through coughing and sneezing). Belarus fever may have been a misprint, originally meant to read "bilious fever." Consumption, of course, referred to tuberculosis, a bacterial infection spread from person to person through airway emissions. The historic name describes the later stages of the disease in which the victim experiences severe weight loss and appears to have been consumed by the illness. Flux was another term for

dysentery, as was the generic name 'bowel disease'. Different dentition may have referred to an infection of the gums or an abscess that spread fatally to the brain. It was not uncommon for a minor infection to become lethal before antibiotics were available for treatment. There are no records defining "Jamaican Fever," but in all likelihood, the name refers to yellow fever. On the Gulf Coast, yellow fever was carried by seamen returning from the Caribbean to port towns. Therefore, people associated the disease with this part of the world and may have named it accordingly. Dropsy refers to a swelling caused by abnormally large amounts of fluid often stemming from heart or kidney disease. Finally, apoplexy was another name for stroke-induced paralysis (Thorber 2014).

The 1850 U.S. Census Mortality Schedules for Santa Rosa County, Florida, lists the death of only one child in the previous year, the cause of death being diarrhea. However, it is important to note that this information is subject to reporting error. Two teenagers reportedly died, one from diarrhea and the other drowned. Four young adults passed away, two during childbirth, one from diarrhea, and the other of cholera. The causes of the reported five adult deaths are drunkenness (2), pneumonia, old age, and "fever."

The number of reported deaths increased in the 1860 census, no doubt as a result of Santa Rosa County's growing population. Seventeen children died that year from chest influenza, bowel disea[se], typhoid fever (2), brain fever, flux(2), burned to death, drowned, bilious fever, diarrhea, "Bobehives," liver abscess, hives, and four unidentified causes of infant death. Two teenagers died of diarrhea and typhoid fever. The six young adult deaths were attributed to consumption (3), heberia, drowning, and childbirth. A tumor, bowel disease, heart disease, and "hiberia" caused the four adult deaths.

In 1870, the U.S. census reported seven child deaths in Santa Rosa County, caused by croup (2), measles, dysentery, fever (3), and typhus fever. Pneumonia caused the one teenage death that year, and six young adults passed away due to childbirth, suicide, meningitis, drowning, pneumonia, and typhoid fever. Finally, adults reportedly died from pneumonia (2), childbirth, suicide, old age, heart disease, rheumatism, murder, diphtheria, apoplexy, and meningitis.

1880 was the last year that the U.S. census included mortality data. According to this census, three children died of pneumonia, cholera, and scarlet fever, and one teenager died of dropsy. Four young adults died of typhoid, convulsions, consumption, and "peritonitis." Ten adult deaths were caused by pneumonia, "general decline," uremia, cholera, palsy, old age, apoplexy, laryngitis, strangulation, and rheumatism.

In addition to the national census, the Florida State Census of 1885 also made note of deaths occurring within the previous year. The data for Santa Rosa County show that eight children died due to worms, heart disease, "minusmus," "different dentition," drowning, teething, and uncertain cause (2). One teenager died during childbirth, and five young adults died from pneumonia, pernicious fever (2), an accident (type not specified), and "mtn. description." This census records a much larger proportion of deaths among adults older than 40 than the previous censuses. There are seventeen total, most being adults above 60. The causes of death are heart disease (2), cancer, old age (5), Jamaican fever, pneumonia, "sudden" (perhaps referring to an accident), pernicious fever (3), belarus fever, dropsy of the chest, "mundend" (possibly meant to be "murdered"), and "mtn description."

In total, approximately 17% of the causes of death in children were unknown or unspecified. According the these census data, which are just a mortality snapshot of Santa Rosa

County during the selected census years, the top two causes of death in children during this 35-year period were dysentery-related illnesses (including diarrhea and bowel disease), which caused 17% of the child deaths, and typhus or typhoid fever, which caused between 11% and 19% of the deaths.

While far few fewer teenagers died than children (only 7 were recorded during these census years), the top causes of death among teenagers and children were the same: diarrhea and typhoid, which each accounted for 28.5% of teenaged deaths. 25 young adults died during the census years, the causes of which were varied. The three primary diseases, each causing 16% of young adult deaths, were childbirth, typhoid/typhus fever, and tuberculosis. Of the 48 recorded adult deaths (aged 40 or higher), 19% were attributed to old age, followed distantly by pneumonia, which caused about 8% of adult deaths.

Next, I will briefly discuss causes of death in relation to occupation (as noted on the aforementioned mortality schedules) in order to explore a possible connection between activity patterns and disease. However, it should be noted that many occupations of the deceased were not noted in the census records. Of course, youth would not yet have entered the work force, women seldom worked outside the home, and the elderly had retired from their previous occupations. Furthermore, even the occupations of men of working age went unmentioned, possibly due to illness-related cessation of work. The two primary occupations listed on these mortality schedules are laborer and farmer. The type of laborer is not specified, but almost certainly referred to either farm or timber labor. The causes of death within these professions are varied, and there appear to be no correlations between disease and occupation. It should be mentioned, though, that during these census years, only laborers and farmers reportedly experienced fatal accidents or committed suicide. The other fatal illnesses constituted a

representative sample of the causes of death in Santa Rosa County noted on the mortality schedules. This large proportion of farmer and laborer deaths may accurately represent the overall occupation structure of the region during the mid to late 19th century, but may also reflect a reduced immune response to disease due to the strenuous nature of the work.

Based on these data elucidating primary mortality risks in Santa Rosa County, main causes of death for specific age groups, and possible occupation-related health hazards, we can venture some interpretations of the mortality structures of Carnley and Coon Hill cemeteries. Like most of the rural South, the Coon Hill and Nora communities lacked even the inadequate infrastructure found in urban centers, such as plumbing, water filtration systems, and reliable maintenance of roads and bridges. This made for a community that was quite vulnerable to bacterial, viral, and parasitic infections. In addition, these people came into close and frequent contact with insects, rodents, and other wild animals, all of which had the potential to spread diseases such as malaria, typhus fever, and even rabies. By far, the most common occupations noted on census records for the occupants of Coon Hill and Nora were farmer and laborer (farm or timber). These lines of work entailed certain health risks, such as accidents, infections, increased exposure to disease-carrying wildlife, and taxing physical labor that may have led to immune-system deficiencies.

It is probable that a large proportion of the children commemorated in Carnley and Coon Hill Cemeteries died of dysentery or typhus/typhoid fever. These illnesses clearly presented a dire risk to children and teenagers in Santa Rosa County (and beyond), and the lack of understanding of the causes and proper treatments of these diseases exacerbated the problem. For example, a common treatment for dysentery-like ailments in Coon Hill and Nora was the administration of laxatives in order to “cleanse” the victim of the disease-causing agent

(interviews with Jim McCaskill and Bob Boutwell; Stowe 2004: 153-153) which, of course, intensified the mortality risk of the condition. A failure to recognize the vectors of these diseases as contaminated water, animals, and/or bodily fluids, but rather tending to the ventilation-related prevention measures espoused by miasma theorists, resulted in unhindered transmission of disease. On the other hand, before germ theory took hold in urban areas in the 1880's and the 1890's, rural areas fared quite a bit better in terms of infectious disease outbreaks. Small communities with low population density, in addition to clean water sources like fresh water springs and rivers, reduced the chances of widespread outbreaks of diseases like tuberculosis, cholera, and yellow fever. As the field of medicine progressed, and the bacterial origins and transmission pathways of these diseases became clear, mortality rates decreased drastically in the cities. However, the relative isolation, limited access to information and medicine, and reliance on home remedies in rural communities resulted in stable or only slightly reduced mortality rates in rural areas. Indeed, we see this pattern expressed in the above comparison of mortality rates of Coon Hill and Carnley Cemeteries with average national mortality rates, in which those of Coon Hill and Carnley Cemeteries were consistently higher than the national average from the 1880's through the 1910's.

The highest mortality rates were among children and the elderly, but the next highest risk was among women in their 20's and 30's. In Carnley and Coon Hill Cemeteries combined, 28 people died between the ages of 26 and 40, 20 of whom were female. According to Santa Rosa County mortality data, one of the primary causes of death in this age group was childbirth. This would have been particularly true in communities like Coon Hill and Nora, where medical care was typically provided by household members or older women who administered traditional remedies. Any complications during labor could have been life-threatening. Census records

show that women began having children much earlier than age 25 (often in their teens), however, the jump in childbirth-related deaths in the 25 to 40 age group may have been due to the physical toll of bearing more than one child, and giving birth at a more advanced age. Very few physicians resided in Santa Rosa County from 1850 to 1900, and it is likely that no physicians resided in the vicinity of Coon Hill or Nora (U.S. Federal Census). In the 1850's no person listed his occupation as physician, M.D., doctor, or healer or any sort in all of Santa Rosa County. In 1860, division 2 (which consisted of 215 families, including those residing in Coon Hill and Nora), included two men listed as "M.D." and "M. Doctor." Out of 379 families in 1880, only one woman was named a midwife, while no physicians were noted. 1890 census records are missing, and the 1900 census records (by which time Coon Hill was noted as a place of residence on the census) reveal that no doctors or midwives resided in the Coon Hill area at that time. This lack of medical providers would have affected not only sick children and childbearing women, but people of all age groups with serious illnesses or severe injuries.

In late middle age, between 40 and 50 years old, nearly all fatalities in Coon Hill and Carnley Cemeteries were male. Of the 9 deaths in the 40-49 age group, at least 7 were male, while the sex of the other two is unknown. These deaths may have been the result of work-related accidents, or diseases brought on by weakened immune systems and exposure to insects, animals, or contaminated water sources.

Mortality structures of Coon Hill and Carnley Cemetery reflect the health risks endured by these communities over time. These health risks varied depending on the age group, and were particularly dire for young children. The contributing factors to the particular health structure of the Coon Hill and Nora communities included the rural southern environment, the prominence of farming and logging industries, the rural lifestyle, and the relatively secluded location.

Interpretations of Spatial Data

Examining the spatial development of these cemeteries reveals some of the ways in which the people of Coon Hill and Nora perceived connections between physical space, relationships and death. The revelation is in the choosing of a burial ground before any have been established in a given area. In 1836 someone decided to bury Margaret McMillan Williams in the space of land now called Coon Hill Cemetery. While it is entirely possible that burials marked with yellow pine pre-dated Williams' cement headstone, we can only speculate on the existence of these long deteriorated graves. At any rate, the location would have been selected in much the same way: an elevated, well-drained clearing on the outskirts was transformed into the sacred space of the dead. The grave marker of Williams remained the lone structure in this space of land until a decade a later, when the grave of Peter Wilkinson, a man without familial ties to Williams, was erected in close proximity, but not immediately adjacent to, William's grave. The choice to seek out a location that had already been designated as a burial place expressed the long held conception that the dead are to be united and contained; visible, yet separated from the living (Francaviglia 1971). While cemeteries may be necessary today due to limited space, land ownership issues and prohibitive laws, the early pioneers faced no such constraints when choosing a burial location. Rather, cultural and religious (the Judeo-Christian tradition, in this case) concepts hold that people are united (and reunited) in death and that the spaces of living and the dead should be separate, wherein the place of the living is profane, and that of the dead is sacred. The sacred realm of the dead is to be both revered and feared, therefore the deceased are both commemorated and contained. The layout of the tombstones provides further support for this unity in death. In Coon Hill and Carnley cemeteries, as in most cemeteries rooted in the Christian tradition, all headstones face due east. According to Christian philosophy, this is the

direction from which Jesus will eventually return, and the graves are aligned to witness this arrival. Thus, these early settlers were united on at least one of the following levels: a shared belief system, community ties, and/or family ties, which played a large role in the spatial development of cemeteries.

Francavaglia (1971) asserts that the spatial organization of the cemetery is a microcosm of the contemporaneous settlement pattern, mimicking the habitation spaces of the living. I would counter that cemeteries reflect neither the organization of residences nor the physical layout of a community, but rather are microcosms of social and familial relationships within a given area. For example, Allen, Edward, and Evander McCaskill lived outside of Coon Hill community (directly adjacent to Carnley Cemetery, in fact) but were buried in Coon Hill Cemetery within a fairly large cluster (21 graves) of McCaskill graves, despite the aforementioned logistical difficulties. The McCaskills' prominence in the Coon Hill community also likely played a much larger role in the decision regarding the location of their final resting place. The cemetery was indeed a microcosm of the community, but reflected the social rather than physical community. Convenience was undoubtedly a consideration, particularly in rural, southern communities where roads were few and far between and often not well maintained and where improvements in transportation technology were slow to reach. However, these very same limitations guided social interactions. All members of a small rural community interacted with one another. As we have seen, in Coon Hill and Nora, a core cultural value and survival necessity was neighborly interdependence. People relied on the support of their communities in order to meet the challenges of life in the rural South. Thus, these relationships of mutual aid and friendship translated to a unity in death as well as life. Of course, the most tightly knit unit in both life and death was the nuclear family, followed by the extended family. People residing

within the same community and people who had ties to that community were laid to rest in proximity to one another, a community in death as in life. However, just as blood ties greatly influenced the level of closeness of relationships in life, so did they determine the physical proximity of their permanent resting places. The GIS evidence shows that family groups appear in clusters, generally radiating outward from the center of the cemetery. The fact that the first grave at Coon Hill is indeed nearly exactly in the geographic center of the cemetery is itself evidence of a radiation pattern of development. Generally, deceased bearing the same surname were buried in tightly knit clusters, spaced some distance from adjacent family clusters, a spatial reflection of social distance. Occasionally, multiple clusters of the same family name dot the cemetery. This occurs most frequently when a number of years divide the family members' deaths and therefore, presumably, their social connections. The formation of Carnley Cemetery proceeded in much the same way. The burial grounds had quite likely already been established as such by the ironstone graves in the southwestern region of the cemetery and by several grave markers made from yellow pine. Since the identities of these burials have not been documented (though anecdotal evidence alleges that the large ironstone grave is that of a Native American chief, possibly connected to the Carnleys in some way, and that the graves of five slaves lay on the perimeter of the cemetery), the connection of these graves to the Carnley family cannot be ascertained. Whether these early interments had been connected with the Carnley family or not, the Carnleys chose to bury their deceased children in this sacred ground where, in the Christian tradition, all Christians are united in death. Even a cursory glance at the GIS data reveals there to be a considerable distance between the Carnley graves in the northeast section of the cemetery, and the ironstone graves in the southwest section. If the ironstone grave did indeed pre-date the Carnley burials, the family followed the same principle of levels of unity reflected in the layout

of Coon Hill Cemetery. The deceased are united in death, and share the same burial ground, but family units form clusters, spatially separated from unrelated (or more distantly related) interments. This structural pattern would suggest that ironstone graves do *not* commemorate blood relatives of the Carnley family.

Conclusions

Mortuary Choices

Neither the demographic nor the spatial evidence support my hypothesis that children were more likely to be buried in family cemeteries than community cemeteries, or that a primary function of family cemeteries was to serve as a child burial ground. Rather, settlers chose a well-drained, conveniently located, relatively flat piece of land on high ground to initiate a burial ground. Locating the cemeteries on the periphery of town may have been in part due to the 19th century hygiene reforms in which a response to the perceived threat of disease-causing miasmatic gases from corpses prompted the relocation of cemeteries away from living spaces. The overall spatial organization of graves at Coon Hill Cemetery loosely followed a radiating pattern of clusters around the earliest grave, which now lies roughly at the center of the cemetery. Carnley burials progressed chronologically from southwest to northwest, occupying a relatively small area of the entire cemetery. An east-west orientation of the graves can be found at both Carnley and Coon Hill Cemeteries. This was a very common feature of Christian cemeteries due to the belief that Jesus will return from the east, that the dead will rise to greet him, and therefore should be facing the direction of his arrival. This shared faith is evidenced not only by the orientation of the graves, but also by the tombstone inscriptions, which often cite Christian verse, and the Methodist churches that existed in Coon Hill and Nora communities during the time of the cemeteries' use. Other than uniformity in grave orientation and a rough

directional progression of burials over time, the only spatial consideration for burials appears to have been familial affiliation. No spatial divisions based on socio-economic class, occupation, age, or group affiliation are apparent in the GIS analysis. The GIS results reveal that children were not designated to specific parts of the cemetery, and in fact, were not even buried in the corners of these cemeteries, which was sometimes the case. According to sources (Diamond 1949; Franklin 2003; Weekes 1999), these communities did not have a pronounced social hierarchy; rather, residents relied upon each other to overcome the challenges and isolation of life in the rural South. The formation of close social bonds is both a prerequisite and a result of such interdependence. The closest of these bonds was undoubtedly the familial connection. This was a time when families were very tightly knit and tended to form units within the larger community. The land plats from the Coon Hill and Nora communities clearly show large clusters of land parcels owned by residents with a shared surname. These family units were preserved in death, perhaps to recreate these social connections in death. The Christian concept of reunification after death likely played a large part in the desire to position deceased relatives closely, perhaps to facilitate this reunification. Whether non-kin social connections played a part in burial location choice remains a topic for future research. It is possible that the spatial distance between contemporaneous graves was proportional to social distance. For example, a tight cluster of graves at Coon Hill Cemetery is comprised of the Williams and McMillan families. Land patent maps reveal that the families own adjacent plots of land in the late 19th century. More research is necessary to determine whether proximity of residence correlates to grave location proximity, and whether residence proximity correlates to social connection.

Mortality Structures

Detailed analysis of the demographic data suggests that the high percentage of juvenile burials at Carnley Cemetery is not due to a pattern of burying children in family cemeteries, but rather, a function of local patterns of disease, high nationwide child mortality rates, and chance experiences of loss within the Carnley family. Fisher's Exact Test showed statistical significance in the difference in the total number of age 0 to 5 child burials at Carnley Cemetery and Coon Hill Cemetery. However, apart from the first decade of Carnley Cemetery's use (1880's) a direct chronological comparison of child mortality reveals that the difference between these two cemeteries is not statistically significant. The large proportion of child burials at Carnley Cemetery during its first decade of use is unsurprising given the circumstances. The Carnleys first appeared on the regional census in 1860, and did not acquire land in the Nora vicinity until 1884 (land patent purchased by Jeremiah Carnley, cousin of the deceased infant buried in Carnley Cemetery the same year). In the 1880's, the Carnleys had only recently become established in the community. It is likely that the deaths of the 3 children buried in the cemetery were the first losses experienced by the Carnley family after moving to Nora. With an average national age 0 to 5 child mortality rate of 30%, the chances of the first deaths in the family being children were high. Furthermore, no Carnleys were buried during this decade in the nearby community cemeteries of Coon Hill or Cora. Rather than designating this burial ground as a space to bury children while adults were buried in the closest community cemetery, the first Carnley family members to die were buried in the most conveniently located cemetery.

The child mortality rate expressed in the mortality structure of Coon Hill Cemetery shows no consistent deviations from the national average for most of its period of use, and deviations from the national average at Carnley Cemetery can most likely be attributed to small

sample size. The mortality structures in both Carnley and Coon Hill cemeteries did show higher than average 0 to 5 child mortality rates for approximately a three-decade period from 1880 to 1910. This may have been due to health improvements in urban environments owing to efforts to educate the public about germ theory related preventative hygiene measures. These education efforts did not reach the rural sectors of the country as quickly. In addition, neither new treatments for disease nor medical professionals were as readily available in rural areas.

The epidemiology of each place is unique, and particular patterns of disease, health care, occupational hazards, and lifestyle are reflected in the mortality structures of these two cemeteries. An analysis of the Santa Rosa County mortality schedules reveals that the most likely leading causes of death among children in the communities of Coon Hill and Nora during this time period were dysentery and typhoid fever, which were diseases that threatened children nationwide. The mobility limitations and relatively isolated locations of these communities affected access to medicine and health care providers, and occupation choices and the daily challenges of rural life influenced susceptibility to disease. All of these factors played a part in creating the mortality structures of the Nora and Coon Hill communities during the 19th and early 20th centuries, while family connections played the biggest role in the mortuary choices that are reflected in spatial structures of Coon Hill and Carnley Cemeteries.

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APPENDIXES

Appendix A

Vernacular Grave Markers

The study of vernacular grave markers has long been an area of interest among anthropologists and historians (Chance 2010; Stokes 1991; Gorman and Diblasi 1981). Gravestone iconography in the rural south, in particular, has drawn the focus of researchers for the wealth of cultural insights that can be gleaned from these inscriptions and designs. First, the content of the inscriptions and style of iconography provides information about the community's religious beliefs and the gravemarker content of the time. For example, "Gone but not Forgotten" was a typical inscription found on graves during a portion of the 19th and 20th centuries (Chance 2010). Lamb and dove icons were commonly found on the graves of children during this time period, symbolizing innocence and purity in the Judeo-Christian tradition.

Second, both the inscription style and grave marker material reflect socio-economic influences on mortuary choices (Chance 2010). Concrete rather than marble markers, and amateur rather than commercial inscriptions were both more economical and more personal choices for the people of the rural South. In addition to the more expensive material and standardized inscriptions, commercially made headstones had to be imported to these rural communities, sometimes long distances. Locally made grave markers often mimicked their commercial counterparts, adopting some of their designs and inscriptions. For example, the "helicopter" divider design can be found on expensive commercial headstones throughout the South (see figure 34), and has clearly been adapted for locally made, concrete gravestones in Coon Hill and Carnley Cemeteries (see figure 35).

Third, local iconography can be studied in order to trace the movements of iconographic styles and even of individual artists. For example, Chance (2010), traced grave markers from several cemeteries in Marion County, Georgia, during a time span of approximately three decades, to a particular set of wood block templates created and used by an individual artist

(Chance 2010: 12). Likewise, several grave markers in Carnley Cemetery were clearly created by the same artist. This is evident when one considers the identical block-letter templates, similar style of verse in which the first letter of each line of the verse is much larger than the rest of the letters, and in which the lines of the verses are often staggered. In addition, the "helicopter" divider design has been used by this artist in every instance to separate the dates of birth and death from the verse below. Another signifier of this artist is that the letters are occasionally askew and uneven. Figures 36, 37, and 38 show graves in Carnley cemetery created by this local artist. The same artist also designed grave markers found in Coon Hill Cemetery (figures 39 and 40). Further research is needed in order to determine who this local artist might have been, and in which other cemeteries his work can be found.

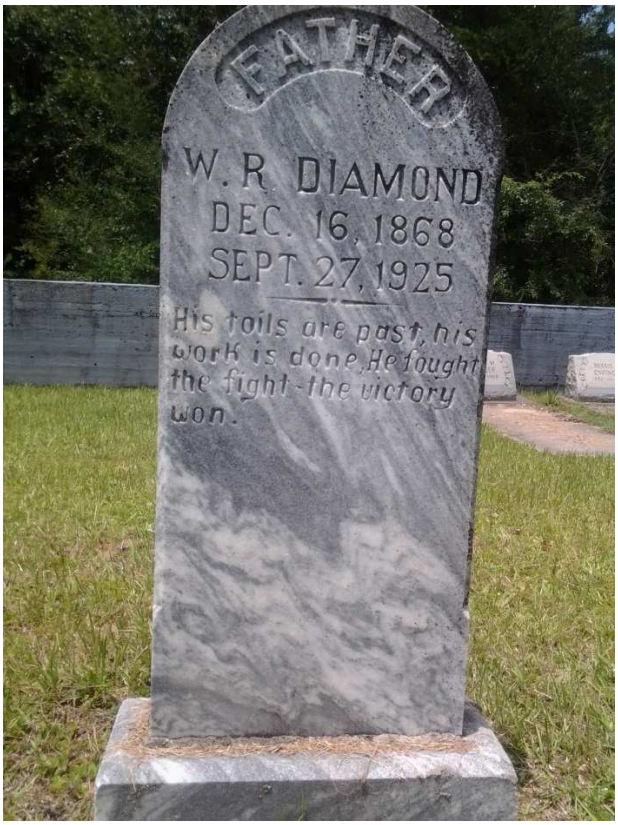

Figure 34. Machine carved marble grave marker with divider detail in Coon Hill Cemetery.

Figure 35. Example of vernacular concrete grave marker with impressed divider detail at Carnley Cemetery.

Figure 36. Carnley Cemetery grave.

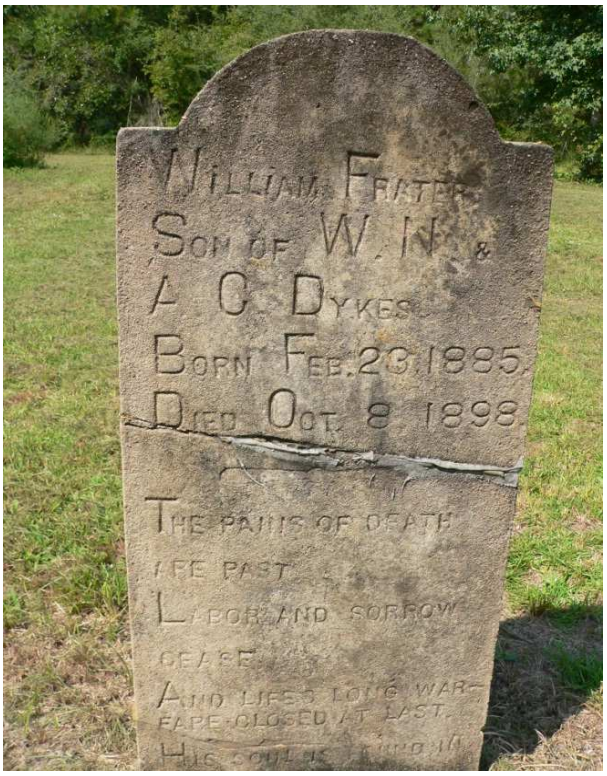

Figure 37. Carnley Cemetery grave.

Figure 38. Carnley Cemetery grave.

Figure 39. Coon Hill Cemetery grave.

Figure 40. Coon Hill Cemetery grave.

Appendix B

Adult Informed Consent Form

Adult Informed Consent Form

I. Federal and university regulation require researchers to obtain signed consent for participation in research involving human participants. After reading the statements below, please indicate your consent by signing and dating this form.

II. Statement of Procedure: Thank you for your interest and participation in this research project being conducted by University of West Florida Anthropology Department graduate student, Allison Hawley. The goal of her project is to explore the ways in which the iconography, layout, and landscape at Carnley Cemetery express the identity, customs, and traditions of the Carnley family and the local community. The interviews will help Ms. Hawley answer questions about the history of the Carnley family and the community, funeral practices at Carnley and other neighboring cemeteries, and individual ties to the cemetery and surrounding community. You will find a summary of the risks and benefits of participation in this study below. Carefully read the information provided. If you wish to participate, please sign and date where indicated. If you have any questions or concerns, please contact Allison Hawley at (240)422-5442 or ach36@students.uwf.edu.

I understand that:

1. I will be asked questions about family history, the lives and memories of the people buried in Carnley Cemetery, past and present funeral practices, information about the town of Nora, and about changes in the local landscape and economy. The information obtained from my interview will be used by Allison to write a Master's thesis about the use of the cemetery and the history of the Carnleys and surrounding community.
2. My interview will take place at a time and location that is convenient to me over the course of the next year.
3. My interview will be audio recorded for research purposes. The recording will not be released to any third party without my express permission to do so.
4. I may decline to answer any question(s), and I may discontinue participation in the study at any time.

III. Potential Risks of the Study:
There are minimal anticipated physical, psychological, financial, social or emotional risks to this study. The researcher may ask sensitive questions about funeral practices and/or memories of deceased loved ones. I am under no obligation to answer any question that I am not comfortable answering.

IV. Potential Benefits of the Study:

1. Information from the study will provide a better understanding of the history, iconography, and architecture of Carnley cemetery and of the identity and lives of the deceased ancestors buried within.
2. The project will attempt to provide a model for rural, family cemeteries in the region by comparing Carnley to other similar cemeteries, which will hopefully generate interest in preserving and maintaining these burial grounds.
3. Information from this study may lead to a better understanding of the location and identity of unmarked or poorly marked burials at Carnley Cemetery.

[ ] Option 1: I agree to release this information. My identity will be attached to the information.

[ ] Option 2: I agree to release this information but do not attach my identity or my family's identity to this information.

_____ X

Participants Name

_____ X

Participants Signature and Date

Appendix C

Images of All Identifiable Graves in Carnley Cemetery

Figure 41. Cecil B. Carnley. Etched, concrete grave marker.

Figure 42. Addie Carnley. Etched, concrete grave marker.

Figure 43. Albert J. Carnley. Granite grave marker (replacement).

Figure 44. Plain brick gravemarker with no biographical information.

Figure 45. William Harvey Carnley. Carved, marble grave marker.

Figure 46. Martha A. Carnley. Carved, marble grave marker.

Figure 47. Georgieanna Kirsher. Carved, marble grave marker.

Figure 48. George H. Ard. Carved, marble grave marker.

Figure 49. Arthur F. Ard. Carved, marble grave marker.

Figure 50. Minnie M. Diamond. Stamped, concrete grave marker.

Figure 51. Infant daughter of W.H. and M.E. Carnley. Stamped, concrete grave marker.

Figure 52. Infant daughter of W.H. and M.E. Carnley. Stamped, concrete grave marker.

Figure 53. Infant daughter of W.N. and A.D. Dykes. Stamped, concrete grave marker.

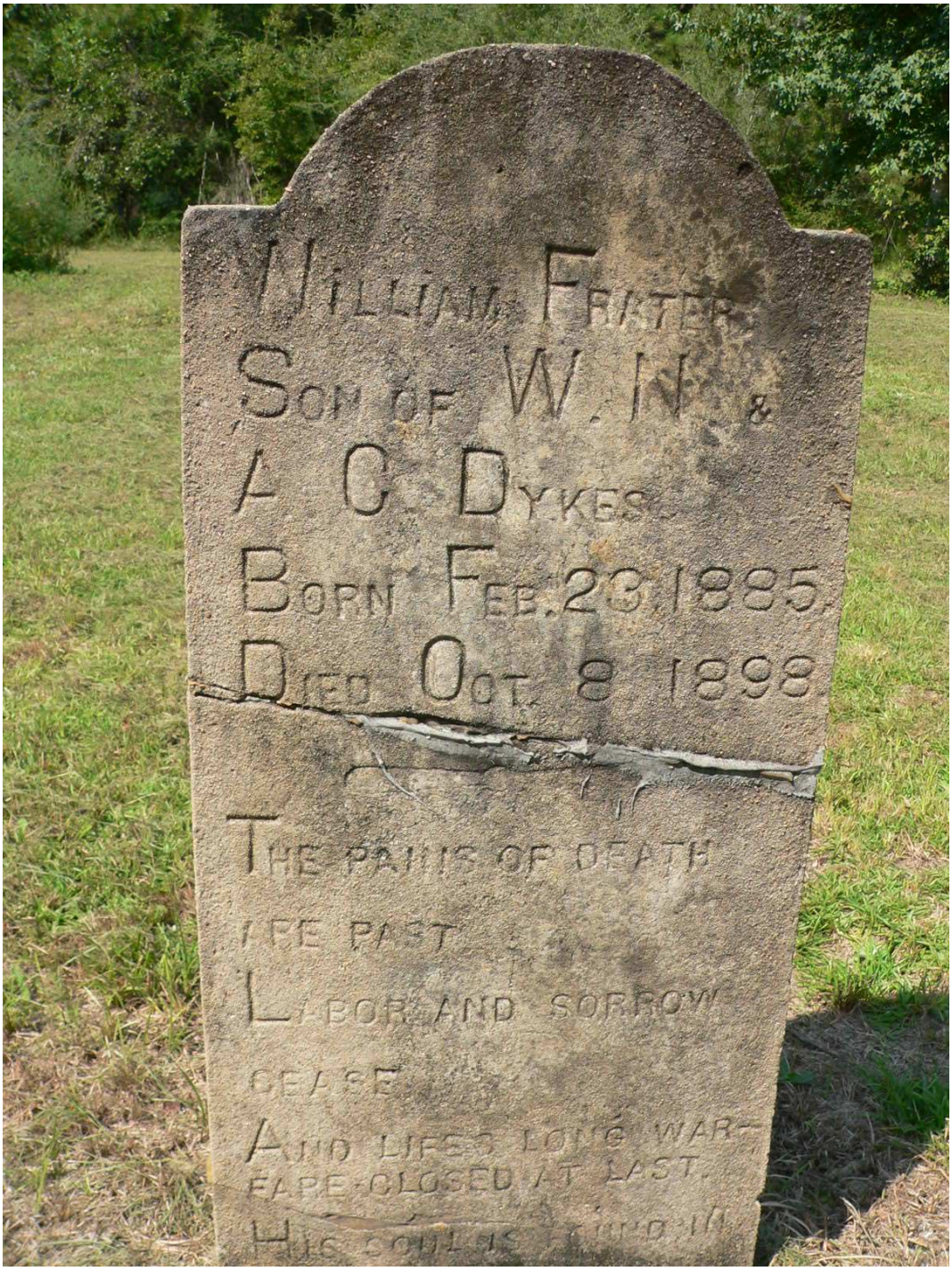

Figure 54. William Frater Dykes. Stamped, concrete grave marker.

Figure 55. G.A. Carnley (George A.). Stamped, concrete grave marker.