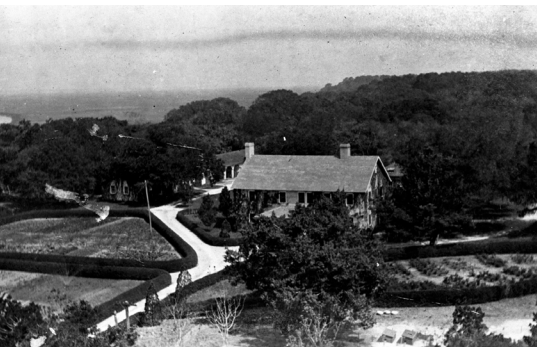
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Cumberland Island National Seashore
St. Marys, Georgia

Plum Orchard Historic District
Cultural Landscape Report









Cultural Resources
Southeast Region

Plum Orchard Historic District

Cumberland Island National Seashore

Cultural Landscape Report

November 2014

Susan Hitchcock

National Park Service

Southeast Regional Office

Cultural Resources, Partnerships & Science

This cultural landscape report exists in two formats. A printed version is available for study at the park, at the Southeast Regional Office of the National Park Service, and a variety of other depositories around the United States. For more widespread access, this cultural landscape report also exists in a web-based format through the website of the National Park Service. Please visit www.nps.gov for more information.

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Plum Orchard Historic District
Cumberland Island National Seashore
Cultural Landscape Report
2014

Approved by: _____ 1-27-2015

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Recommended by: _____ 3-4-15

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Foreward

We are pleased to make available this cultural landscape report, part of our ongoing effort to provide comprehensive documentation for the landscapes and historic structures of National Park Service (NPS) units in the Southeast Region (SER). A number of individuals and institutions contributed to the successful completion of this work. We would particularly like to thank the staff at Cumberland Island National Seashore for their assistance throughout the process. We hope this study will be a useful tool for park management in continuing efforts to preserve the cultural landscape and to others interested in the significance of the park's many cultural resources.

Dan Scheidt, Chief
Cultural Resources, Partnerships & Science
Southeast Region
Novemeber 2014

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Introduction

Management Summary

Cumberland Island National Seashore (CUIS) was established on October 23, 1972, to provide for public outdoor recreation use and enjoyment of significant shoreline lands and waters of the United States, and to preserve related scenic, scientific, and historical values. Cumberland Island was designated as part of the National Park System because it is one of the Atlantic Coast's most ecologically diverse barrier islands, including the beach and dune system on the east; through the interdune, freshwater wetland, and upland forest habitats in the interior; to the salt marsh on the west. In addition to the outstanding natural values, the archeology and history of Cumberland Island warrant special attention.

Cumberland Island is the southernmost and the largest of Georgia's offshore islands. The island is approximately 6.5 miles by boat from St. Marys, Georgia. It is bounded by Cumberland Sound/ Cumberland River (Intracoastal Waterway) on the west, St. Andrews Sound on the north, the Atlantic Ocean on the east, and by St. Marys River/Inlet on the south. The entire island is located in Camden County, Georgia.

The Plum Orchard Historic District lies along the Brickhill River on the west side of the island,



FIGURE 1. Location map, Cumberland Island.

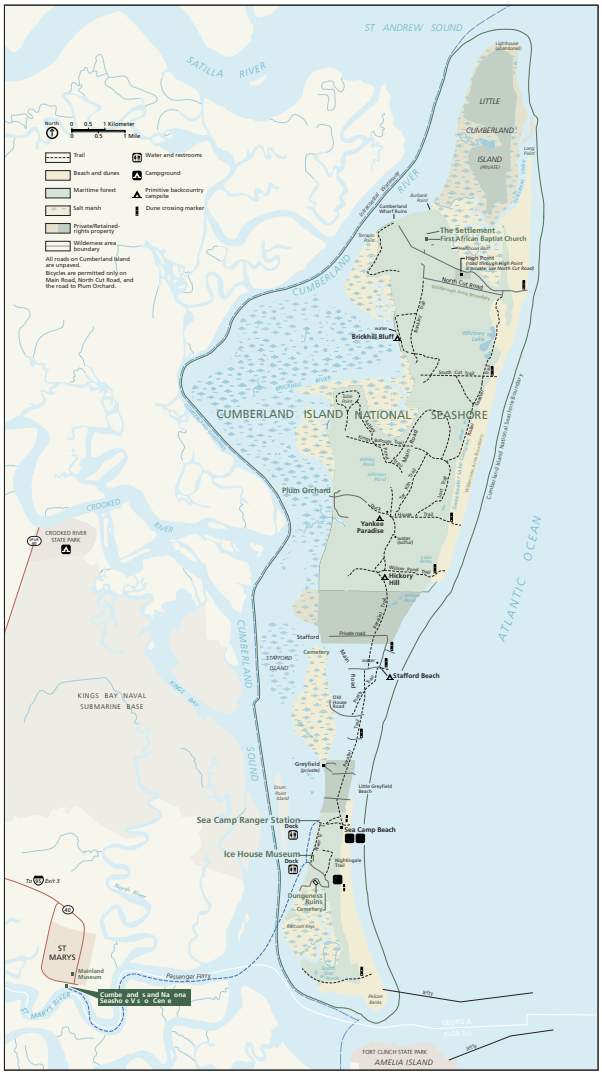


FIGURE 2. Cumberland Island National Seashore. (Harpers Ferry/NPS)

approximately 7 miles north of Dungeness. The boundary of the Plum Orchard Historic District encloses approximately 60 acres, all of which are west of the Main Road. In addition to National Park Service (NPS) fee simple properties within the historic district, there are two reserved life estate properties located immediately north of the mansion. The district is surrounded by Potential and Designated Wilderness, which in the past affected access to the estate and the ability to undertake maintenance work on the structures. However, recent legislation removed the Main

Road and the Plum Orchard Spur from Wilderness designation, which allows direct vehicular access to Plum Orchard. Boat access to the district is provided by a NPS maintained dock on the Brickhill River.[1]

The Plum Orchard Historic District was listed in the National Register of Historic Places (National Register) as part of the 1984 Multiple Resource Nomination for Cumberland Island. The Plum Orchard Historic District is significant in the areas of archeology under Criterion D (have yielded, or may be likely to yield, information important in prehistory or history) and architecture under Criterion C (embodies distinctive characteristics of a type, period, or method of construction, represents the work of a master, or possesses high artistic values). The centerpiece of the district is the Plum Orchard Mansion, a Georgian Revival style structure built in 1898 for Lucy Carnegie's son, George Lauder Carnegie. The mansion and an accompanying carriage house—the first ancillary structure built at Plum Orchard—were designed by the Boston firm of Peabody and Stearns. In addition to being the premiere architectural structure on the island, the mansion has many notable furnishings, including Tiffany lamps. At the time of the nomination, the district included seventeen structures, a small cemetery, ruins of an antebellum house, and three archeological sites.[2]

Cultural landscapes are settings that humans have has created in the natural world. They reveal fundamental ties between people and the land because of our need to grow food, give form to our settlements, meet requirements for recreation, and find suitable places to bury our dead. Landscapes are intertwined patterns of things both natural and constructed: plants and fences, waterways and buildings. They range from formal gardens to historic cotton fields and from cemeteries to community settlements. They are special places— expressions of human manipulation and adaptation of the land.

The purpose of this cultural landscape report (CLR) is to document the physical development of Plum Orchard beginning with the nineteenth-century occupation of the site to the present. A site history is followed by a description of the current condition of the site and an analysis of historical significance and integrity. This includes an evaluation of Plum Orchard's historic and contemporary landscape characteristics, such as changes in spatial organization, circulation, and vegetation. With an understanding of the historic fabric, character-defining features of the cultural landscape are identified. The report then presents treatment issues and recommendations to direct the active management of the cultural landscape.

Historical Summary

For more than 4,000 years, a variety of human visitors and residents have interacted with and relied upon the natural resources of Cumberland Island. Since ceramic cultures first emerged around 2000 BC, the island and its inhabitants have continued to play important roles in significant periods of American history and prehistory. By the time of the first contact with Europeans in the mid-sixteenth century, a Timucuan chiefdom called Tacatacuru occupied the island.[3]

Numerous shell middens throughout the island, in addition to serving as landmarks for early European explorers, provide important clues to a complex American Indian population that once prospered here. Soon after European discovery of the New World, the sea islands of North America's southeast coast were drawn into the larger Atlantic trading economy. In the sixteenth century, the natural abundance of Cumberland and other coastal islands attracted European galleons, which stopped long enough to load game birds, pelts, and naval stores. The sailors on these ships were drawn from various European and African trading areas, and these visits witnessed some of the first encounters between Africans, Europeans, and North American Indians.

The southeastern coast of North America, lying between Spanish Florida and the British settlements in Virginia, was contested ground from the early seventeenth to the early nineteenth century. Around 1600, Spanish priests and soldiers established a string of missions and related forts on the Georgia Sea Islands, including the missions of San Pedro de Mocama and San Pedro y San Pablo de Porturiba on Cumberland Island. The Spanish sought to Christianize the Indians and guard their more valuable holdings to the South. The

1. Reserved estate properties are located throughout Cumberland Island National Seashore. Their associated agreements are all life estates that establish rights of use and occupancy until they expire, whereupon they will revert to full government possession.

2. "Draft Cultural Resources Management Plan" (photocopy, NPS, 2001), 20.

3. John R. Swanton, *The Indians of the Southeastern United States* (Washington, D.C.: Smithsonian Institution Press, 1979), 187; Jerald T. Milanich, The Timucua (Cambridge, MA: Blackwell Publishers, Inc., 1996), 49;

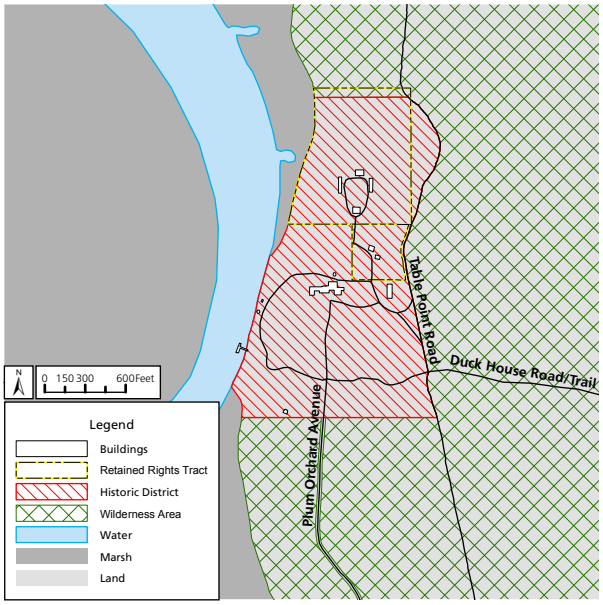


FIGURE 3. Plum Orchard Historic District Map, 2014. Note: Plum Orchard Avenue and Main Road have a 25-ft buffer that is not part of wilderness area. (Fielding Link/NPS)

settlement of Carolina in 1670 led to increasing conflict between the British and Spanish and their respective Indian allies. Indian raids instigated by the British pushed the Spanish farther and farther south. Beginning in 1736, General James Oglethorpe, founder of the Georgia colony, fortified Cumberland Island against the Spanish with Fort St. Andrew at the north end of the island and Fort Prince William at the southern end. The Battle of Bloody Marsh on St. Simon's Island in 1742 ended the near-term threat of Spanish occupation of Georgia, but the fate of the Georgia Sea Islands continued to be disputed in the French and Indian War, the American Revolution, and the War of 1812.

The plantation system began to take root on Cumberland in the late eighteenth century. Plantation agriculture, a capitalistic enterprise based on the use of enslaved African labor and the production of cash crops for export, soon put much of Cumberland Island under cultivation for cotton. Although timber, citrus fruit, and olives played some role on Cumberland, long-staple cotton, commonly known as Sea Island cotton, emerged as the most profitable crop. Major landowners included Catharine Greene Miller and her descendants, Peter Bernardey and his descendants, and Robert Stafford, Jr.

Plum Orchard's name shows up on a plat as early as 1793, but it was not mentioned in a deed until 1825, when Peter Bernardey purchased his second tract on Cumberland Island. Peter and his wife, Catharine Corb Bernardey, had one surviving child, Margaret Elizabeth Bernardey, born in 1825.

Peter Bernardey died in 1827. Catharine was remarried by 1829 to Captain William Laen. A division of plantation and enslaved property occurred between Peter Bernardey's mother, Mrs. Marguerite Bernardey, and Catharine Bernardey Laen, in January 1830. The tract known generally as Plum Orchard Plantation was to be divided so that one hundred acres from the Plum Orchard survey and the entire Table Point tract would be given to Catharine, who also received nine slaves. All the rest went to Mrs. Marguerite Bernardey, who received fifteen slaves. Catharine and her husband, William, sold all her share of Peter Bernardey's property north of Plum Orchard to Robert Stafford in 1841 and 1842.[4]

Agricultural production on Cumberland peaked during the two decades preceding the Civil War. Early in the war, most white plantation owners abandoned their lands and when it became apparent that Confederate forces could not defend the Sea Islands. Union troops occupied Cumberland and surrounding waters in March 1862, holding the area for the remainder of the war. Much of the African-American population of Cumberland sought refuge under Federal auspices on nearby Amelia Island, just across the sound in Florida. Following the war and short-lived efforts to redistribute confiscated land to freed slaves, the landholdings on Cumberland reverted to their pre-war owners.

In the 1870's, expanding railroad and steamship networks opened the coastal South to more intensive recreational use. By 1878, two hotels were operating at High Point on the northern end of Cumberland Island, served by steamers from Brunswick. Wealthy northern industrialist families were also drawn to the Sea Islands for winter homes.

In 1881, Thomas Morrison Carnegie—of the celebrated Pittsburgh family—purchased the Greene-Miller-Shaw-Nightingale plantation at Dungeness for his wife Lucy Coleman Carnegie and their growing family. Despite Thomas's death in 1886, Lucy went on to amass 90 percent of

4. Mary R. Bullard, *Cumberland Island: a History* (Athens: The University of Georgia Press, 2003), 108; Mary Bullard, *Pierre Bernardey of Cumberland Island* (St. Marys, GA: Cumberland Island National Seashore, 1983), 77-79; Mary Bullard, *Robert Stafford* (Athens: The University of Georgia Press, 1995), 98, 121.

Cumberland Island and proceeded to turn it into a complex of family estates, which included homes with extensive landscaped grounds for four of her children. During Lucy's lifetime, Cumberland Island was a highly organized, largely self-sufficient private preserve. It was staffed by some 200 employees, and through their labor the Carnegie complex was supplied with produce and livestock, supplemented by provisions brought daily from Amelia Island on the family yacht.

Beginning in 1898, Lucy Carnegie hired the Boston architectural firm of Peabody & Stearns to design a house at Plum Orchard for her son George Lauder Carnegie and his wife, Margaret Thaw Carnegie. George and Margaret expanded the mansion three times and developed a picturesque Country Place landscape that featured a park-like setting around the house, a naturalistic Duck Pond, and areas for growing vegetables and cut flowers adjacent to a service complex laid out around a circular drive. Plum Orchard had its own powerhouse and laundry, as well as a carriage house, dairy barn, and chicken house. Other support structures housed the large staff needed during the residence of George and Margaret Carnegie.

George Carnegie's health began to fail sometime between 1913 and 1915. By 1917, George and Margaret no longer came to the island, instead visiting numerous spas and health resorts they hoped would help George recover his health. He died at the Plaza Hotel in New York on November 15, 1921, without ever returning to Cumberland Island.

After George Carnegie's death, Plum Orchard became the island home of George's younger sister Nancy and her second husband, Marius E. Johnston, a doctor from Lexington, Kentucky, who had worked on the island. Nancy was the only living child of Lucy Carnegie without her own home on Cumberland Island. She had four children from a previous marriage, and Nancy and Marius had one child together.

Nancy Carnegie Johnston was the main architect of the formal gardens developed at Plum Orchard. She expanded the existing gardens and kept a garden journal in which she documented what was planted and what did well. She decided to install a formal garden and hired landscape designer Richard Forester for help with the plan, which was implemented in 1937. Shortly thereafter, Marius and Nancy were in a serious car accident on their way to Cumberland Island. Visits to the island became less frequent, and, in fact, they never returned following the long interruption in island use caused by World War II (WWII).

After the war, the third generation of the Johnston family eventually took over management of the house. Joe Graves (son of Lucy Johnston Graves and Joseph Graves) began returning to the island in the 1950s on a regular basis. By this time, the Johnston and Graves families were using caretakers for the upkeep of Plum Orchard. Gone were the days of full-time support staff, as Plum Orchard became more of a vacation home compared to its earlier use as a winter residence with all the comforts of home. Nancy Carnegie Johnston died in 1954.[5]

Meanwhile, the state of Georgia formed the Cumberland Island Study Committee to investigate the possibility of acquiring the island for development as a tourist resort. Also in the 1950s, the Avalon Foundation and the Old Dominion Foundation jointly financed a series of coastal surveys conducted by the National Park Service (NPS) to seek congressional support for the public acquisition of Cumberland Island.

In 1969, the Avalon and Old Dominion Foundations merged to form the Andrew W. Mellon Foundation (AWMF). In 1970, NPS Director George B. Hertzog approached the AWMF for money to acquire Cumberland Island. The AWMF subsequently donated $5.5 million to the National Park Foundation (NPF) and an additional $1.15 million in 1971. By November 1970, the NPF had acquired 75 percent of the island.

In 1971, Plum Orchard, twelve acres surrounding the house, and $50,000 were donated by the Johnston family to the NPF. Legislation was initially introduced in February 1970, and after two years of intense debate among the stakeholders, President Nixon signed Public Law 92-536 establishing Cumberland Island National Seashore on October 23, 1972.[6]

5. Sarah Olson, *Plum Orchard Historic Furnishings Report* (Harpers Ferry, WV: Harpers Ferry Center, 1988), 28-34.

6. Lary M. Dilsaver, *Cumberland Island National Seashore: A History of Conservation Conflict* (Charlottesville: University of Virginia Press, 2004), 101-109; Bullard, Cumberland Island, 284-85.

Study Boundary

The cultural landscape report is limited to a study of the Plum Orchard Historic District. The contributing resources listed in the Plum Orchard Historic District National Register nomination include archeological, structural, and landscape features dating to several periods. The National Register boundaries were drawn to encompass all of the associated historic structures and any archeological features related to or located within or reasonably near the historic complexes identified at that time. The boundaries do not represent historic boundaries of the property at any significant period. Other issues relate to the fact that many of the property's key structures and landscape features are in reserved life estates, which prevents the management of the district as a single entity and affects both its interpretation and its integrity.

The larger setting of Cumberland Island is the Georgia barrier islands. Scientists refer to them as barrier islands because they form a barrier between the sea and the land. The current configuration is only the most recent in a long series of changing shorelines. From north to south along Georgia's 100-mile-long coast, the barrier islands are Tybee, Little Tybee, Ossabaw, Wassaw, St. Catherines, Sapelo, Wolf, Blackbeard, Sea, St. Simons, Little St. Simons, Jekyll, Little Cumberland, and Cumberland.

On Cumberland Island, the sweeping beach lines on the east side of the island contrast sharply with irregular outlines formed by river, creek, and sound waters on the west. Building up from wind and ocean-borne sands on the east, dunes generally produce elevations that fall sharply toward the west. Occasionally, the land may drop abruptly into a salt marsh or fall sharply into the sound. Free-flowing streams generally drain to the ocean and sounds from freshwater wetlands and marshes west of the dunes.[7]

Several distinct ecological zones are found on Cumberland and include the beach and dune areas, swales, beach meadows, freshwater sloughs, maritime forests, and saltwater marshes, which are characterized by the presence of various plant communities. Within the Plum Orchard Historic District, pine-oak forest surrounds disturbed areas of lawns and pastures with salt marsh along the river. Most of the acreage was under cultivation during the height of the plantation system in the nineteenth century. The community represents secondary forest growth on old fields and pastures that have been logged extensively of the first generation of pine. Loblolly (*Pinus taeda*) and slash pines (*Pinus elliottii*) are most common from Plum Orchard south to Greyfield, whereas, longleaf pine (*Pinus palustris*) is common on the northern fields, particularly Terrapin Point Field.[8]

Scope of Work and Methodology

The Southeast Regional Office (SERO) Cultural Resources, Partnerships & Science Division (CRPS) completed the study, which is limited to the Plum Orchard Historic District and focuses on the cultural landscape of the NPS-managed section of the site. CRPS staff performed archival research, prepared the site history, documented existing conditions, and prepared comparative analyses, integrity evaluations, and treatment recommendations. The site history, existing conditions, and analysis and evaluation sections identify the historical values associated with the landscape, document extant landscape characteristics and features, and define the significance and integrity of the landscape. Treatment recommendations enable the park to better manage its cultural landscape.

Archival research for the CLR was undertaken at the Georgia State Archives in 2005 in conjunction with research for the Dungeness Historic District cultural landscape report. Additional archival research occurred at the CUIS archives in 2009 and 2011. Existing conditions documentation was undertaken during site visits in September 2009, April 2011, and March 2014 at Plum Orchard on Cumberland Island. During these site visits, CRPS staff met with key park staff to discuss management issues and treatment concerns regarding the cultural landscape, ground truthed and annotated base maps, and completed digital photography as part of the existing conditions survey. Field work completed in 2011 and 2014 resulted in updated information about the site but did not include the two reserved life estate properties.

7. *General Management Plan Cumberland Island National Seashore* (Atlanta, GA.: Southeast Regional Office, 1984), 5.

8. Hilburn O. Hillestad, *The Ecology of Cumberland Island* (Skidaway Island: Georgia Marine Science Center, The University of Georgia, 1975), 100; Wendy B. Zomlefer, David E. Giannasi, Kelly A. Bettinger, S.Lee Echols, and Lisa M. Kruse, "Vascular Plant Survey of Cumberland Island National Seashore, Camden County, Georgia," Castanea 73, no. 6 (December 2008): 264.

CRPS staff completed comparative analyses and integrity evaluations by comparing historical information—taken from the written site history and historic maps and photographs—to existing conditions data in order to understand how the landscape changed over time. The landscape characteristics and associated features, values, and associations that make a landscape historically significant were identified. Integrity evaluations used the seven aspects of historic integrity as described in *A Guide to Cultural Landscape Reports* and standards set by the National Register of Historic Places.

Appropriate treatment recommendations were developed from the condition assessments and the results of the comparative analyses and integrity evaluations. Recommendations responded to existing issues and offered suggestions that would preserve and enhance the site's historic landscape character, as well as improve interpretation efforts.

There are many historic landscape features still evident at Plum Orchard, but to date no assessment of the landscape's integrity or significance has taken place. The best documentation to date is contained in the 2004 historic structure report prepared by GWWO Architects, the 1988 historic furnishings report prepared by Sarah Olson, and a landscape study prepared by Jay Avriett in 1983.

Other park planning documents consulted include Louis Torres' historic resource study of Cumberland Island and several reports done by the Southeast Archeological Center (SEAC). In addition to park planning documents, historian Mary Bullard's books *Cumberland Island: A History*, *Robert Stafford of Cumberland Island: Growth of a Planter*, and *Pierre Bernardey of Cumberland Island* and Nancy Carnegie Rockefeller's *The Carnegies & Cumberland Island* were valuable resources for the CLR, as well as Lary Dilsaver's administrative history *Cumberland Island National Seashore: A History of Conservation Conflict*. Scientific studies included Hillburn Hillestad's "The Ecology of Cumberland Island National Seashore," Wendy Zomlefer's "Vascular Plant Survey of Cumberland Island National Seashore," and Cecil Frost's "Presettlement Vegetation and Natural Fire Regimes of Cumberland Island."

Summary of Findings[9]

Plum Orchard's name derives from an antebellum plantation at this location, whose eventual owner was Peter Bernardey. Little is known of the historic landscape during the nineteenth century, other than Sea Island cotton being grown in fields near the house. The ruins of the Bernardey house and two graves remain from the plantation era.

Beginning in 1898, construction began on the Plum Orchard Carriage House and Mansion, designed by Peabody and Stearns as a wedding gift from Lucy Carnegie to George Lauder Carnegie and his wife, Margaret Thaw. George Lauder and Margaret Thaw Carnegie also built a number of support buildings and an ornamental Duck Pond, which were sited north of the mansion. Three additions increased the original mansion by nearly threefold, and it stood as one of the finest country houses on the island.

The Plum Orchard complex of the George Lauder Carnegie era was a picturesque Country Place Era landscape with a winding approach drive of cabbage palms and Italian cypresses, massed plantings of azaleas, a lawn interspersed with native trees, a reflective water feature, and a piazza overlooking the entrance drive. The centerpiece of the landscape was the Georgian Revival mansion, which was linked by service roads to the carriage house east of it and to a cluster of support buildings arranged around a loop road. Canary Island date palms flanked the front entry, cabbage palms and southern magnolias lined the spur road to the east, and pindo palms flanked the piazza. The Duck Pond and rustic footbridge north of the mansion was a prominent naturalistic landscape feature, similar to the ones at Dungeness. North of the Duck Pond, hedge-lined spaces contained vegetable and cut flower gardens and greenhouses.

In the 1930s, Nancy Carnegie Johnston oversaw the installation of a formal garden just north of the Duck Pond. The garden design featured a central pool with fountain, around which grass paths radiated like spokes in a wheel. Beds edged with concrete laid out in a symmetrical pattern formed four quadrants on axis with the center, each terminating in a circle. Bulbs and annuals grown from seed in the greenhouse were heavily planted

9. Field work carried out in 2011 and 2014 did not include the reserved life estates. Therefore, a careful evaluation of the Bernardey-era resources and Carnegie-era support buildings, formal gardens, and cultural vegetation could not be done.

in the beds for bloom during the Carnegie's residence on the island. Mrs. Johnston kept careful notes of what was planted and what did well in her garden journal. She preferred a palette of pink, white, blue, and yellow with splashes of salmon or copper. After a car accident around 1937, her careful oversight of the garden ended, and she never returned to the island after WWII.

After the war, a lack of upkeep eventually took a toll on the historic landscape, especially the formal gardens. Moreover, the twelve acres around the house given to the National Park Foundation in 1971 by the Johnston family excluded some of the designed garden spaces, most of the support structures, and the plantation-era resources, which have remained in two reserved life estates. Nonetheless, there have been few changes to the layout of the historic landscape, and many of the features at risk could be restored. The 1984 National Register nomination noted that the Servants' Quarters (Caretaker's House) and the Stables/Dairy Barn had been extensively renovated, although they were included in the list of contributing structures.

Within the NPS-managed portion of the site, a multi-phased rehabilitation effort began in 2000 for the Plum Orchard Mansion. Phase I addressed most of the exterior envelope problems and the most pressing structural problems and included a new pine shingle roof. Phase II completed the exterior work and provided interior rehabilitation such as restoring historic finishes, accessibility modifications, and basic components of fire protection, electrical, and climate control systems. Nonetheless, the upkeep of the Plum Orchard Mansion continues to challenge the park's resources and has been a factor in past efforts to establish a Historic Property Lease.

Period of Significance

The Plum Orchard Historic District is primarily a landscape whose significance derives from the Carnegie Estate era, the centerpiece of which is the Plum Orchard Mansion. Around the mansion the Carnegies created a picturesque Country Place Era landscape that included a winding entrance drive, a lawn interspersed with native trees, a reflective water feature, spaces for vegetables and cut flowers, and support structures laid out around a circular road. The period of significance begins in 1898 with the construction of the carriage house and mansion and ends in 1917 when the last support structures were completed. Because the 1937 formal garden could not be fully evaluated for integrity and individual features are not listed in the List of Classified Structures (LCS), the period of significance does not include the Nancy Carnegie Johnston era ending in 1937. [10]

Although the site was occupied during the plantation era, this landscape was abandoned after the Civil War. Under National Register guidelines, historic properties must possess integrity for all periods of significance. The aboveground resources at Plum Orchard that represent the plantation era lack integrity and are not included in the period of significance.

Integrity

The design of the Carnegie-era landscape at Plum Orchard began with the picturesque, park-like setting around the Plum Orchard Mansion that included a winding, tree-lined entrance drive, clumps of azaleas, an open lawn with native trees, a terrace flanked by palms overlooking the front entrance, a reflective water feature, and sand shell roads that linked the estate support buildings. All of these features survive in the landscape and are character-defining, although some of the features are in need of restoration.

The Plum Orchard Mansion retains integrity of design following a multi-phase rehabilitation effort completed in 2008. The carriage house designed by Peabody and Stearns eventually collapsed after years of neglect and no intervention. Erosion along the Brickhill River threatens the octagon shed, boathouse, Duck Pond levee, specimen trees, and other features. Historically, a service road linked the carriage house and the rear of the mansion and continued west to the dock before exiting the site. This road retains much its original alignment and materials.

Neglect has diminished the formal garden developed by Nancy Carnegie Johnston in the 1930s. Encroaching vegetation and lack of maintenance threaten its integrity, although a survey of the site was not possible due to its location on a reserved life estate. It is likely that severe freezes in the 1980s killed many specimen

10. Structures listed on the LCS must meet one of the following criteria: either the structure is listed individually or is eligible for the National Register or the structure is a contributing element of an historic site or district that is listed or is eligible for the National Register. In addition, the LCS includes other structures, moved or reconstructed, commemorative structures, and structures which have achieved significance within the last fifty years that are managed as cultural resources.

plants, but some may survive.

The location of internal boundaries changed when only a portion of the Plum Orchard historic landscape was committed to full NPS management in 1972. The remainder was set aside in two reserved life estate agreements, bifurcating the property. Although many individual features of the historic landscape are threatened or missing, the overall spatial footprint is intact. Division of the site can be reversed when the reserved life estates expire, and the respective properties come under full federal management.

Treatment

The overarching treatment associated with the historic landscape is preservation. Restoration has been applied to a select number of features, primarily the restoration of historic spatial, circulation, and vegetation patterns. The park convened a team of experts in 2014 to analyze the ongoing erosion process along the Brickhill River and strategize best practices to mitigate further loss of resources. The park is in the process of gathering data that will result in a shoreline management plan.

Site History

Geologic History

Cumberland Island is the largest island along the Georgia coast and is part of a chain of barrier islands that extend along much of the Atlantic Coast. These islands, comprising mainly fine quartz sand, have been formed by accumulated silt and sand moved by ocean currents. Most of Cumberland Island proper is part of the Silver Bluff formation, a barrier island chain formed 35,000 to 40,000 years ago during the Pleistocene (50,000 to 5,000 years ago). The eastern margin, southern tip, and all of Little Cumberland Island arose approximately 4,000 to 5,000 years ago during the Holocene (c. 5,000 years ago to present) via glacial retreat and a corresponding rise in sea level.[1]

Native American Occupation

For more than 4,000 years, a variety of human visitors and residents have interacted with and relied upon the natural resources of Cumberland Island. Since ceramic cultures first emerged between 2500 BC and 1800 BC, the island and its inhabitants have continued to play important roles in significant periods of American history and prehistory.[2] Numerous shell middens throughout the island provide important clues to a complex American Indian population that once prospered here.

At some point between 526 AD and 1526 AD, aboriginal peoples on the island gradually lost their cultural affiliation with the upper Georgia coast. Grog-tempered ceramics (dating around 1430 AD to 1650 AD) and San Marcos Phase ceramics (1650 AD to 1700 AD) recovered from Cumberland Island indicate that Timucua Indians, part of the Muskhogean linguistic group, inhabited inland and coastal areas north of the St. Johns River and southeastern Georgia.[3] By the time of the first contact with Europeans in the mid-sixteenth century, a Timucuan chiefdom called Tacatacuru occupied the island.[4]

The eastern Timucua first encountered French explorers in 1562, when Jean Ribault chose the location for the settlement of Fort Caroline at the mouth of the St. Johns River, near present day Jacksonville, Florida. Ribault visited Cumberland Island at this time.[5]



FIGURE 4. Theodor de Bry's engraving of the Timucua, 1591. (Courtesy of the Florida Center for Instructional Technology, University of South Florida, in Exploring Florida at http://fcit.usf.edu/florida.)

The French Settlement at Fort Caroline

René Goulaine de Laudonniére, who had accompanied Ribault on the previous expedition, returned in 1564 and began a permanent settlement of 200 soldiers and artisans. The settlers began building a village and fort on the river's

1. Hilburn O. Hillestad, *The Ecology of Cumberland Island* (Skidaway Island: Georgia Marine Science Center, The University of Georgia, 1975), 26; Zomlefer, 251.

2. Milanich, 9.

3. John E. Ehrenhard, *Cumberland Island National Seashore: Assessment of Archeological and Historical Resources* (Tallahassee, FL.: Southeast Archeological Center, 1976), 6; Hillestad, 3; Carolyn Rock, "Artifact Surface Collection at Archaeological Site NPS 9CAM6, The Dungeness Wharf Site," 2004, photocopy.

4. Swanton, 187; Milanich, 49.

5. Dilsaver, 20; Bullard, *Cumberland Island*, 12; http://www.nps.gov/timu/historyculture/foca_history.htm.

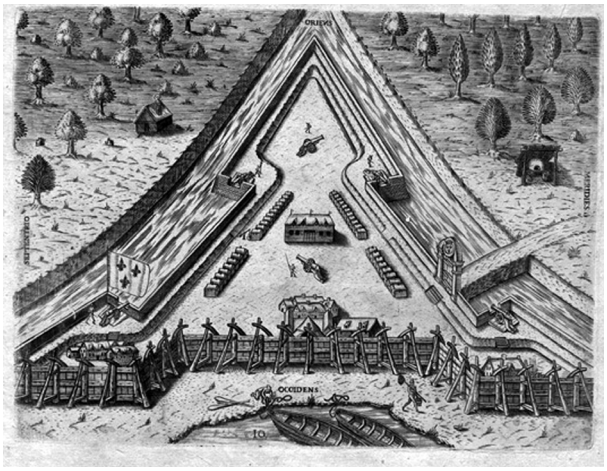


FIGURE 5. Theodor de Bry's engraving of Fort Caroline, 1591. (www.floridamemory.com)

south bank, naming the area La Caroline after their king, Charles IX. By the following spring the colonists were close to starvation and were ready to return to France when Ribault arrived with a relief expedition of supplies and 600 soldiers and settlers, including more women and some children.

French activity in the area immediately drew the attention of the Spanish, who already had a foothold in the Americas. In 1565, Spain sent Pedro Menéndez de Avilés to remove the French from Florida, at which time he established a settlement at St. Augustine. Having arrived at the same time, Ribault sailed down the coast and tried to attack St. Augustine, but his ships were scattered by a hurricane and beached far to the south.

Seizing the opportunity, Menéndez marched north with 500 soldiers to attack the weakly guarded colony at Fort Caroline. Forty or fifty French people, including Laudonniére, escaped and sailed for France. Out of the remaining 200 people, only about 60 women and children were spared.

Menéndez next marched south and captured the shipwrecked Frenchmen, Ribault among them. At a place later named Matanzas (slaughters), he executed about 350 men - all but those professing to be Catholics and a few musicians. France never again strongly challenged Spanish claims in North America.[6]

Spanish Missions

Pedro Menéndez de Avilés became the first Spanish governor of Florida, and his settlement at St. Augustine increased with presidios, fortifications, and later missions extending from South Carolina (referred to as Orista) and southward to Georgia (referred to as Guale). Guale and Orista became provinces of Spanish Florida, which, according to the claims of the Spanish king, included all the land between South Carolina and Florida and westward to the Mississippi River.[7]

Menéndez constructed a series of fortifications along the island provinces. In this group of fortifications, the island of Tacatacuru (Cumberland) was renamed San Pedro, and the fort established there around 1569 was given the same name. About the same time, Jesuit missionaries tried to establish a mission on the island but were met by hostile Timucua, who murdered them. The fort was also eventually abandoned, and by 1573, there were no settlers on San Pedro.[8]

The Spaniards felt that it was of prime importance to control the Indians, as many of them were friendly with the French. Around 1600, Spanish priests and soldiers established a string of Franciscan missions and related forts on the Georgia Sea Islands, including the missions of San Pedro de Mocama and San Pedro y San Pablo de Porturiba on San Pedro.[9] The Spaniards sought to Christianize the Indians in order to guard Spain's more valuable possessions to the south.

Franciscan monks established the mission of San Pedro de Mocama in 1587. It was located near a large Timucuan settlement whose chief, called Don Juan by the Spaniards, had been converted to Christianity. In 1597, Guale Indians, upset over efforts by some Franciscan monks to eliminate the practice of polygamy, attacked San Pedro de Mocama. Due to the loyalty of Don Juan and the arrival of Spanish infantry troops from St. Augustine, this attack failed. Although the rebellion was over, the Spaniards abandoned the missions until the early seventeenth century.[10]

6. http://www.nps.gov/timu/historyculture/foca_end_colony.htm

7. Michael V. Gannon, *The Cross in the Sand* (Gainesville: University of Florida Press, 1965), 29; Louis Torres, *Historic Resource Study Cumberland Island National Seashore* (Denver: Denver Service Center, 1977), 7.

8. Torres, 10.

9. Jerald T. Milanich, *Laboring in the Fields of the Lord* (Washington, D.C.: Smithsonian Institution Press, 1999), 109; Torres, 11; Ehrenhard, *Assessment of Archeological and Historic Resources*, 8-11.

10. Guale Indians generally inhabited inland and coastal areas north of the Altamaha River; Bullard, *Cumberland Island*, 13-19; Torres, 11-16; Milanich, *Laboring in the Fields*, 41.

In 1603, the Spanish governor Gonzalo Méndez de Canzo concluded that the church at San Pedro de Mocama needed to be rebuilt, probably a reward for the loyalty of the Timucuan converts on the island during the revolt of 1597. There are no descriptions of the church after it was rebuilt, but most scholars agree that Spanish outposts and missions on the coast of Georgia built before the middle of the seventeenth century were constructed of wood.[11] In 1608, Governor Ibarra stated that the church at San Pedro was as large as the one in St. Augustine.[12]

The Franciscan missions flourished until around 1670, when the settlement of Carolina led to increasing conflict between the British and Spanish and their respective Indian allies. A series of raids by Caribbean pirates from 1683 to 1684 led to the eventual abandonment of the Spanish missions on the island and the relocation of its mission Indians to the St. Marys Basin and further south down the coast. A long period of northern Spanish missions ended by 1686, and the Spanish-English border stood at the St. Marys River.[13]

Colonial Georgia and Cumberland Island

In 1733, General James Oglethorpe and 300 settlers founded Savannah and set the stage for what later became the English colony of Georgia. In order to defend Savannah and other settlements, Oglethorpe felt that the strategic location of San Pedro made it an ideal location for a fortification. In March 1736, Oglethorpe, accompanied by a party of Scots Highlanders and Creeks, including the Yamacraw chief Tomochichi and his young nephew Toonahowi, arrived on the island of San Pedro. Oglethorpe renamed the island the "Highlands," which one of the group described:

> That afternoon they saw an island, which the Indians formerly called Wissoo, in English, Sassafras. This is over against Jekyll Island on the south; the northwest end of it rises fifty foot or upwards above the water, like a terras, a mile in length, covered with tall pine trees. The western extremity of this hill commands the passage for boats from the southward as the northern end of the island does the entry for ships. Here they met with some bark-huts, which our friendly Indians had some time since built for their lodging when they hunted there. They saw a great many deer and a wide savannah lying at the foot of the hill, extending near two or three miles: so that from the western point they could discover any boat that came from the southward for several miles.[14]

While visiting the island, Toonahowi asked General Oglethorpe to rename the island "Cumberland" in honor of William Augustus, Duke of Cumberland, who had befriended Toonahowi during his trip to England in 1734.[15]

General Oglethorpe fortified Cumberland Island against the Spanish with Fort St. Andrews at the north end of the island and Fort Prince William at



FIGURE 6. Tomochichi and Toonahowi, c. 1734. (Courtesy Hargrett Rare Book and Manuscript Library, University of Georgia Libraries)

11. Torres, 12-14; Marmaduke Floyd, "Certain Tabby Ruins on the Georgia Coast," in E. Merton Coulter, ed., *Georgia's Disputed Ruins* (Chapel Hill: University of North Carolina Press, 1937), p. 24.

12. Swanton, 187.

13. Gannon, 71-72; Torres, 16; Bullard, *Cumberland Island*, 11-24.

14. Francis Moore, "A Voyage to Georgia Begun in the Year 1735," *Collections of the Georgia Historical Society* 1 (1840): 122-23; Torres, 17.

15. In 1734, Tomochichi and Toonahowi accompanied Oglethorpe back to England, where they met King George II at Kensington Palace. Torres, 18; *New Georgia Encyclopedia Online*, "Tomochichi," http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-689.

the south end. The War of the Austrian Succession, which broke out in Europe between England and Spain in 1739, gave Oglethorpe the opportunity to attack St. Augustine. His attempt failed, and the Spanish force retaliated in June 1742, moving against Fort Prince William. In the meantime, Oglethorpe fought his way onto Cumberland Island and decided to send the garrison from Fort St. Andrews to Fort Prince William. While Fort Prince William was being reinforced, Oglethorpe returned to St. Simons to prepare for the impending attack. Oglethorpe's repulsion of the Spaniards at the Battle of Bloody Marsh on St. Simon's Island in July 1742 and the ensuing defense of Fort Prince William ended the near-term threat of Spanish occupation of Georgia. In the process, however, the Spaniards burned Fort St. Andrews, and it was never rebuilt. References to it, as well as Fort Prince William, continued to appear in the Colonial Records of Georgia until the 1770s.[16]

The Treaty of Aix-la-Chapelle of 1748, which ended the War of the Austrian Succession, did little to settle differences between England and Spain. Both still claimed Georgia, and all land south of the Altamaha River became neutral ground. The Georgia colony did not encourage settlement here, and, as a result, the area became a refuge

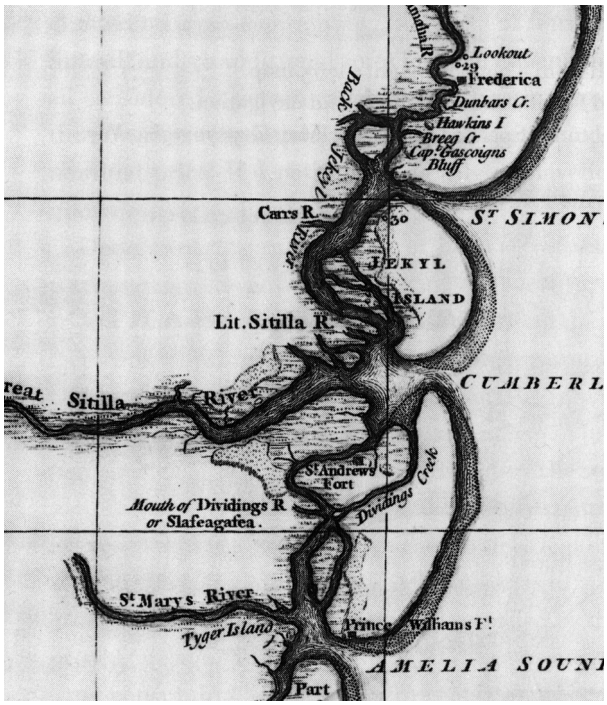


FIGURE 7. 1757 map of the Georiga Sea Islands showing forts on Cumberland Island. (Courtesy Hargrett Rare Book and Manuscript Library, University of Georgia Libraries)

16. Torres, 47-50; Bullard, *Cumberland Island*, 33-44.

for malcontents such as Edmund Gray, who was expelled from the Georgia Assembly and founded a settlement on Cumberland Island around 1757. Gray and his followers remained on the island as late as 1766, although the location of the settlement is unknown.[17]

Spain ceded Florida to England in 1763, ending the land disputes between the two and opening the island to applications for land grants. Fearing that royal land grants might take up the entire island, the governor and his council ordered the Surveyor General to set aside 100 acres where Fort St. Andrews formerly stood and 200 acres where Fort Prince William stood.[18]

Land Speculation

During this initial period of land speculation on Cumberland Island, Jonathan Bryan, a South Carolina planter who moved to Georgia when slavery was legalized in 1750, petitioned for and received a large land grant of 3,270 acres. Bryan acquired other tracts, and in 1768, he was able to put 7,500 acres up for sale. He advertised that the land was "very fit for corn, rice, indigo, and cotton, with a large quantity of live oak and pine fit for ship building . . ." Other early grantees on the island included James Bullock, James Cuthbert, James Habersham, John Smith, Thomas Williams, Lachlan McIntosh, and Peter Vandyke. Both James Cuthbert and John Smith were brothers-in-law of Jonathan Bryan, who purchased both of their land grants.

Lachlan McIntosh, a member of a prominent eighteenth-century Scottish Highland family that was among the earliest settlers of the Georgia colony, applied for 200 acres on Cumberland Island, which he received in September 1766. His grant consisted of a portion of a large peninsular extension of land on the west side of the island, which subsequent maps called Table of Pines (meaning a stand of pines). His plat was marked "oak land."

South Carolinian Peter Vandyke arrived in Georgia in 1761 and settled on Skidaway Island, near Savannah. In 1767, he received two tracts of land of 350 and 150 acres (500 acres total) on Cumberland

17. Torres, 51-55.

18. Allan D. Candler, ed., *The Colonial Records of the State of Georgia (1732-1782)*, 26 vols. plus 13 typescript vols. (Atlanta, GA: Franklin Printing and Publishing Company, 1904-1916), 10:82.

at Hester's Bluff. Vandyke's two tracts correspond to the present-day Plum Orchard area. In 1772, John Houstoun, son-in-law of Jonathan Bryan, purchased both tracts.

Jonathan Bryan continued to add to his holdings, amassing 10,700 acres. Thomas Lynch, a wealthy rice planter from South Carolina and Alexander Rose, his agent and factor, purchased all his holdings on the island in 1770. They bought what the deed called nine plantations, so called because they had been Crown grants. Most of this land remained largely unsettled until after the American Revolution. During his 1774 travels through Georgia, the botanist William Bartram described Cumberland and Jekyll as being "thinly inhabited."[19]

The American Revolution

During the American Revolution, Cumberland Island was largely used as a staging area for British military forces and as a source of supply for British vessels anchored nearby. Ordered to remove or kill cattle rather than allow the British to capture them, American militiamen stole livestock, resulting in many small-scale farmers of the Georgia Sea Islands remaining loyal to the British and ultimately leaving their homes.[20]

Although at the close of the Revolutionary War Cumberland Island remained relatively uninhabited, some landholders returned. The island offered a resource, live oak, which would soon be in great demand for shipbuilding, and the promise of such a market attracted Revolutionary War hero Major General Nathanael Greene to the island.

Nathanael Greene

On August 11, 1783, John Banks and Ichabod Burnet conveyed to Greene a half interest in nine tracts totaling 10,870 acres. The indenture referred to this land as having been transferred from Jonathan Bryan to Thomas Lynch and Alexander Rose in the 1770s. Although Greene's untimely death in 1786 prevented him from ever residing on the island, he made several trips to oversee his property and tried to sell his live oak timber to the French navy.

19. Bullard, *Cumberland Island*, 52-65, 73; Torres, 56-60; Francis Harper, ed., *The Travels of William Bartram* (Athens: The University of Georgia Press, 1998), 74.

20. Bullard, *Cumberland Island*, 84-86; Torres, 61.

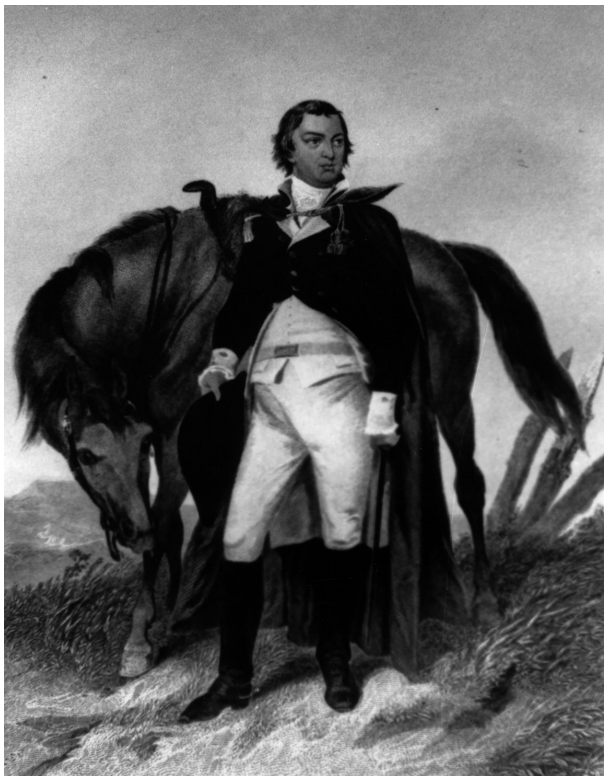


FIGURE 8. Nathanael Greene. (CUIS Collection)

At the time of Greene's death, Cumberland Island supported only twenty families, not many more than before the Revolution. Some of the more frequently mentioned residents were John H. McIntosh, Esther Lynch, Jacob Weed, Alen Thomas, Thomas and Robert Stafford, James Vincent, William McIntosh, Samuel Webster, Alexander Semple, John Houstoun, Henry Osborne, and the Redays. These residents were on land that had originally been granted by the Georgia colony in the 1760s.[21]

Plum Orchard Tracts

On January 1, 1801, Lachlan McIntosh conveyed a tract of land known as Table of Pines to his son-in-law, John Peter Ward. The tract was described as "live-oak land on Cumberland Island," which generally indicated that the land had been cut for live oak and that fields prepared for cotton cultivation had either been made or were to be made.

John Peter Ward and his wife, Ester McIntosh Ward, had three children (two sons and a daughter). Ward died on December 14, 1802. On September 5, 1804, Esther McIntosh Ward married Dr. Nicholas Serle Bayard on Cumberland Island.

21. Torres, 75-77.

They lived on the island and acquired an adjacent tract (the Plum Orchard tract) of land on August 2, 1805.[22]

Bernardey Era (1823-1853)

In 1821, Peter Bernardey signed a deposition indicating that he was a planter on Jekyll Island. It appears that he was living on Jekyll Island from at least 1815 to 1821. He was listed as head of his household in the 1820 census along with an older white female and fifteen slaves at his "visitation," which probably referred to his plantation.

On October 8, 1823, Peter Bernardey purchased two tracts of land on Cumberland Island from John Peter Ward and Charles H. Ward, sons of Esther McIntosh Ward Bayard. The first tract was 500 acres and was near Plum Orchard Landing. Cumberland Island historian Mary Bullard suggests that at this time Bernardey purchased not the plantation named Plum Orchard but rather the well-known landing place bearing that name. The second tract Bernardey purchased was Table of Pines, also containing 500 acres, an abutting tract northwest of the first tract. (These tracts are outside of 6, 7, and 8)

In 1825, Bernardey also purchased a previously undivided interest within the tract nearest Plum Orchard Landing from Charles H. Ward, who had just purchased it from Nicholas J. Bayard, his stepfather. This deed contains the first mention of "Plum Orchard," which may have referred to a family homesite or an orchard only. After making the purchase, Bernardey's tax report showed the addition of an "orchard." Mary Bullard suggests that his holdings included several houses or small settlements, with an orchard standing behind them, away from the creek margin and that this deed further establishes that Bernardey did not acquire a full interest in "Plum Orchard" until 1825. After all three tracts were resurveyed his holdings came to 1,240 acres.[23]

On August 16, 1824, Bernardey made two conveyances—one to his wife-to-be, Catharine Corb, and one to his mother, Marguerite Bernardey. A deed of gift to his wife-to-be included an undivided one-quarter interest in his plantation on Cumberland Island and a one-quarter interest in his enslaved labor. This amounted to 310 acres and 4 slaves. His mother received, in exchange for one dollar, one-half undivided interest—620 acres and 8 slaves. His marriage settlement listed 16 slaves, two more than he had in 1820.

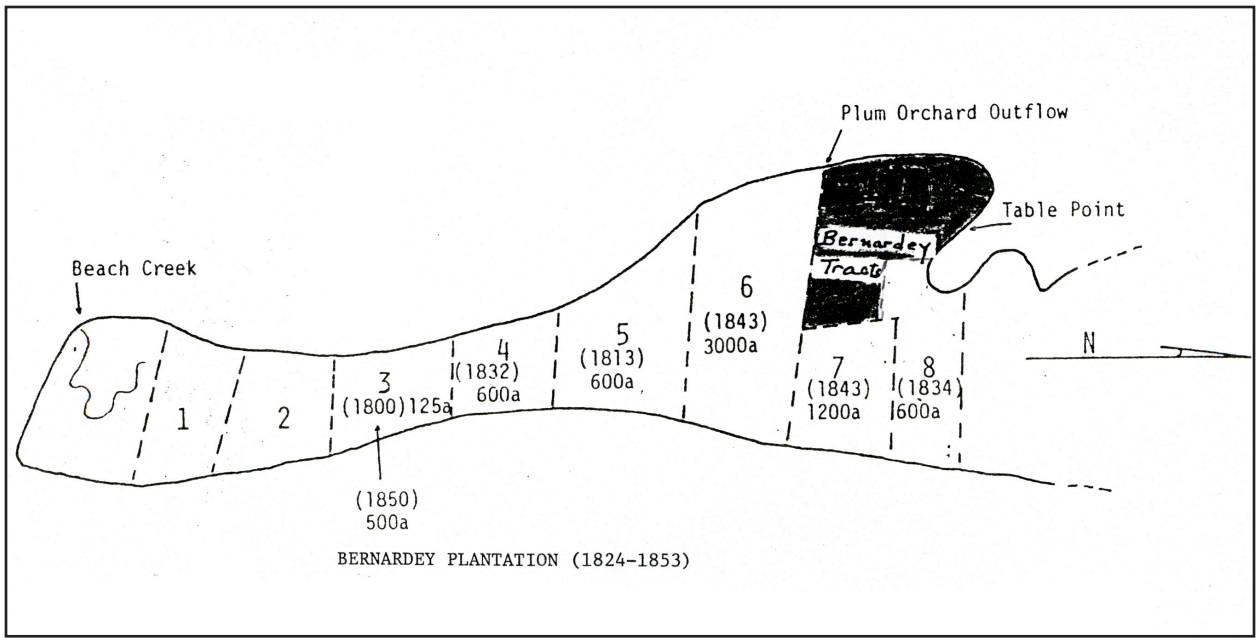


FIGURE 9. Sketch map of south Cumberland c. 1860 showing Peter Bernardey tracts. (Taken from *Pierre Bernardey of Cumberland Island*)

22. Bullard, *Pierre Bernardey*, 32-35; Bullard, *Cumberland Island*, 58; according to Mary Bullard, Esther McIntosh Ward and her husband acquired the Plum Orchard tract from "persons known to have dwelt on the tract for a very brief time."

23. Bullard, *Pierre Bernardey*, 27, 34-35; Bullard, *Robert Stafford*, 83.

Peter Bernardey died on March 5, 1827. Peter and Catharine Bernardey had one surviving child, Margaret Elizabeth Bernardey, born in 1825. Catharine was the executrix of Peter Bernardey's estate. She presented accounts to the probate court from 1827 to 1834. One of the receipts was paid to her father, Peter Corb, for "building houses on the plantation." Another was to Robert Stafford to build a wall around the grave of Peter Bernardey. [24]

Catharine was remarried by 1829 to Captain William Laen, an English seaman who emigrated to the United States in 1828. A division of plantation and enslaved property occurred between Mrs. Marguerite Bernardey and her daughter-in-law, Catharine Bernardey Laen, in January 1830. The two women agreed to arbitration. The tract known generally as Plum Orchard Plantation was to be divided so that one hundred acres from the Plum Orchard survey and the entire Table of Pines tract would be given to Catharine, who also received nine slaves. All the rest went to Mrs. Marguerite Bernardey, who received fifteen slaves. Catharine was to have the privilege of occupying the improvements on the Plum Orchard tract, valued at $1,200, until January 1, 1831.

Over the next few years, Robert Stafford assisted in administering Plum Orchard. By the mid-1830s, cotton sales for the Peter Bernardey estate at Plum Orchard were valued between $3,000 and $3,500, on par with the other large plantations on the island owned by Louisa Shaw and Robert Stafford. Catharine Bernardey Laen and her husband, William, sold all Catharine's share of Peter Bernardey's property north of Plum Orchard to Robert Stafford in 1841 and 1842.[25]

On December 28, 1841, Stafford received a mulatto girl named Elizabeth (Zabette) and her child, about two years old, named Mary, in a deed of gift from Mrs. Marguerite Bernardey. Zabette, who may have been the daughter of Peter Bernardey, was well-trained in nursing and household affairs. She had six children with Robert Stafford between 1839 and 1854.[26]

According to the 1850 Census, Mrs. Marguerite Bernardey owned 18 slaves. The Agricultural Schedule listed 140 acres of improved land and 210 acres of unimproved land at Plum Orchard. She listed 12 hogs, 250 bushels of Indian corn, 12 bales of ginned cotton, 30 bushels of peas and beans, 300 bushels of sweet potatoes, 30 pounds of butter, and 1 ton of hay. She listed the cash value of her farm as $500, with $12 as the value of farming implements and machinery. By this time, Robert Stafford owned almost all the land around Plum Orchard.

By 1851, Mrs. Bernardey needed a guardian because of advancing senility. Robert Stafford was appointed to the position but failed to qualify, possibly because he had an interest in the estate. James H. Downes, husband to her granddaughter, Margaret Elizabeth Bernardey Downes, served in his place.

Marguerite Bernardey died in 1853. Her estate was split between her granddaughter, Margaret Elizabeth Bernardey Downes, and her niece, Anne Archer Hayes. Robert Stafford received five acres of the Plum Orchard plantation, one enslaved African American named Jack, and one-third of all the money in her possession at the time of her death. He also retained $25 "to enclose with brick wall the grave of Mrs. Bernardey and her son." Her estate was valued slightly in excess of $12,000, of which the land was valued at $500 for 300 acres. At her death, Mrs. Bernardey owned 27 slaves, valued at $11,500.

Stafford, as executor of Mrs. Bernardey's estate, offered 300 acres of her land at Plum Orchard at public sale on July 12, 1853. James H. Downes, husband of her granddaughter, Margaret Elizabeth Bernardey Downes, bought the property for $250. Robert Stafford purchased the tract the same day for $250. In 1850, Robert Stafford reported ownership of 348 slaves.[27]

Civil War Era (1860-1865)

The period leading up to the Civil War saw many southern planters exploit the plantation system to make great fortunes. Plantation agriculture, a capitalistic enterprise based on the use of enslaved African labor and the production of cash crops for export, soon put much of Cumberland Island under cultivation for cotton. Long-staple cotton, commonly known as Sea Island cotton, emerged as

24. Bullard, *Pierre Bernardey*, 46, 92; Bullard, *Robert Stafford*, 83.

25. Bullard, *Cumberland Island*,108; *Pierre Bernardey*, 77-79; Bulllard, *Robert Stafford*, 98, 121.

26. Zabette was probably born on Jekyll Island. Her other children, except for the youngest, were born on Cumberland Island but raised in Connecticut; John Ehrenhard and Mary Bullard, *The Chimneys* (Tallahassee, FL: Southeast Archeological Center, 1981), 16-17; Bullard, *Pierre Bernardey*, 53; *Bullard, Robert Stafford*, 84.

27. Bullard, *The Chimneys*, 19-20; Bullard, *Pierre Bernardey*, 81; Bullard, *Robert Stafford*, 108-121, 130; Torres, 136.

the most profitable crop after the invention of the cotton gin in 1793, commanding as much as one dollar per pound in international markets. It was valued for its tensile strength and was preferred by spinning mills because the filaments did not break under the pressure of mechanical looms. Prior to the invention of the cotton gin, less than 140,000 pounds of cotton were exported from American ports. Only two years later, this figure had increased to 1,600,000 pounds, with the majority of production occurring in coastal areas of the Carolinas and Georgia.[28]

A financial panic in 1837 initiated an agricultural depression that lasted through most of the following decade. The last decade before the Civil War saw a return to prosperity for many, especially the largest land owners like Robert Stafford, who used enslaved labor to increase his fortunes. But not everyone made money. Plantations were highly capitalized, often with borrowed money.[29]



FIGURE 10. Artist rendition of Stafford Plantation. (CUIS Collection)

Between 1830 and 1860, land on Cumberland Island was consolidated among fewer planters. The number of households decreased from 17 to 9. By 1860, only 6 planters reported ownership of enslaved people: Robert Stafford with 110, Phineas Nightingale with 63, Margaret Bernardey Downes (Peter Bernardey's daughter) with 40, James A. Clubb with 15, Thomas P. Bunkley with 12, and Rachel Church with 6.[30]

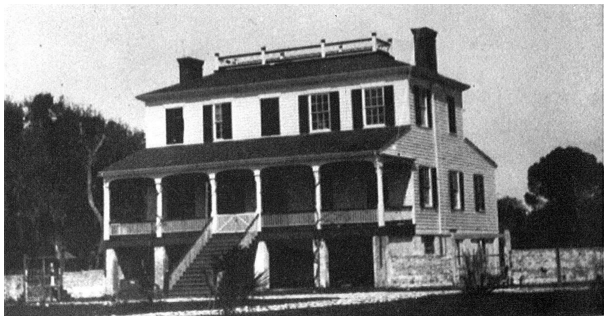


FIGURE 11. Stafford plantation house, c. 1888. (CUIS Collection)

At the outbreak of the Civil War, Phineas Nightingale wrote the governor of Georgia expressing concerns about his vulnerability should Union forces try to occupy the island. His concerns were not ill-founded, and by March 2, 1862, Union forces were in control of Cumberland Island, Amelia Island, and St. Marys. By this time, most of the occupants of Cumberland Island had abandoned their lands, with the exception of Robert Stafford and Rachel Church at the north end of the island.



FIGURE 12. Working in the cotton fields of a Georgia plantation, 1875. (Courtesy Vanishing Georgia Collection, Georgia Division of Archives and History)

According to the 1860 census, Robert Stafford had 2,500 acres of improved land and 5,625 acres of unimproved land. He valued his farm as $25,000 and listed 30 horses, 75 milk cows, 225 other cattle, 250 hogs, 4,000 bushels of Indian corn, 100 bales of ginned cotton, 500 bushels of peas and beans, 200 bushels of Irish potatoes, and 200 pounds of butter. He owned 110 slaves, having sold a large

28. James R. Cothran, *Gardens and Historic Plants of the Antebellum South* (Columbia: University of South Carolina Press, 2003), 2; Lewis C. Gray, *History of Agriculture in the Southern United States to 1860* (Washington, D.C.: Carnegie Institute, 1933), 678; Bullard, 104.

29. Ian Firth and Suzanne Turner, *Oakland Plantation Cultural Landscape Report* (Atlanta: National Park Service, Southeast Regional Office, 2003), 19.

30. Bullard, *Cumberland Island*, 136.



FIGURE 13. 19th-century work yard, Richmond County, Georgia. (Courtesy Vanishing Georgia Collection, Georgia Division of Archives and History)

portion of his enslaved labor in 1857. The value given for his personal estate was $99,334.00.[31]

Robert Stafford never abandoned his land on Cumberland Island during the Civil War, although he did leave for a few days in 1862, when freedmen from Fernandina were threatening his property:

> I have to report to you that at 8:30 p.m. on [1 September] I received a message from a Mr. R. Stafford, a resident of Cumberland Island, stating that his own and a number of strange negroes who had been for some time employed in Fernandina had returned and quartered themselves on his plantation. A number of them being armed, several of their number by authority of Colonel Rich, commandant at Fernandina (one of whose passes I enclose), their conduct being of riotous and threatening character, refusing to submit to any control, killing the cattle and overrunning the private dwelling with arms and clubs in their hands, induced him to think his life in danger and to request that immediate assistance might be sent him. I at once proceeded with the steamer up Brickhill River as far as possible, and then dispatched an armed party under command of Acting Masters West and Stimpson.

By 1863, most of Stafford's enslaved labor had left Cumberland, as he reported only 17 slaves for tax purposes in Camden County. Many went to nearby Fernandina, where work for freedmen could be found in the lumber sawmills and turpentine camps. There was no attempt by Confederate forces to retake Cumberland Island. Most white landowners left the island for the duration of the war. Robert Stafford and Rachel Church at High Point at the north end of the island were the exceptions. Freedmen's Bureau agent William F. Eaton reported in 1865:

> On Cumberland Id. I believe there are thirteen plantations, all of which have been abandoned except Robert Stafford's and Mrs. Church's. The names of former owners I will endeavor to forward next boat. Very few persons live upon this island, probably not a hundred black and white.

By 1866, Stafford reported the presence of only "2 hands." That same year a reporter visited Robert Stafford and wrote:

> I called on Mr. Stafford last Sabbath, and found him 'at home,' as he has been for the last fifty years. I really forget where he was born, but he went to school in New London, Conn., when quite a boy and got a 'right smart' Yankee education. Mr. Stafford is about 70 years old, as tall



FIGURE 14. Robert Stafford in his later years. (CUIS 5347)

31. Ehrenhard and Bullard, 20-21.

> as a chimney and has a voice like a trip-hammer. He fairly made the chairs move when he spoke. His only companions are an aged negress, a decanter of choice brandy, the Journal of Commerce, and thirty-four dogs … Mr. Stafford opposed the war from the start, and has been uniformly kind to Federal soldiers.[32]

By the end of the war, mansion houses were in ruins and cotton fields lay wasted. Much of the African-American population of Cumberland sought refuge under Federal auspices on nearby Amelia Island, just across the sound in Florida. The Bureau of Refugees, Freedmen and Abandoned Lands, created in March 1865, assumed custody of confiscated property in the former Confederate states and allowed freedmen to live on these lands. By 1868, however, the landholdings on Cumberland Island reverted to their pre-war owners, and landowners returned to Cumberland Island to recover their property. Many of the freedmen left the island to reside on the mainland, but others retreated to the north end of the island.[33]

During the course of the war, several accounts by Union soldiers described Dungeness, but Plum Orchard received only cursory mention, as in this 1864 report:

> Mr. Lesscere arrived at home this morning just before we reached the ship. The old man has had a hard time. Furber had three gallons of whiskey in the boat, and as it was circulated very freely, all hands became drunk as lords, and when the moon rose, they in their drunken stupidity, fancied it was just setting in the west, and swore that Lesscere was taking them into rebeldom and threatened to shoot the poor old fellow. Finally, they ordered him to land them somewhere, they did not care where, so he ran the boat ashore in a dry place on Cumberland Island, called the Plum Orchard, and … he struck across the island to the sea beach and followed it home, being obliged to swim one creek on the way.[34]

32. Ehrenhard and Bullard, 21-22; Mary Bullard, *Robert Stafford*, 226-27, 235-42, 249.

33. Torres, 154; Bullard, *Cumberland Island*, 163; for a more indepth discussion of land ownership, see Bullard, *An Abandoned Black Settlement on Cumberland Island, Georgia*, 1982.

34. Bullard, *Robert Stafford*, 241-42.

Intervening Years (1870-1881)

In the 1870s, expanding railroad and steamship networks opened the coastal South to more intensive recreational use. By 1878, two hotels were operating at High Point on the northern end of Cumberland Island, served by steamers from Brunswick.[35] Two magazine articles were written about Dungeness at the south end of the island during this time—the first appeared in 1878 in *Harper's New Monthly Magazine* and the second was Frederick Albion Ober's 1880 article in *Lippincott's Magazine*. The mansion ruins and gardens became a tourist attraction for vacationers

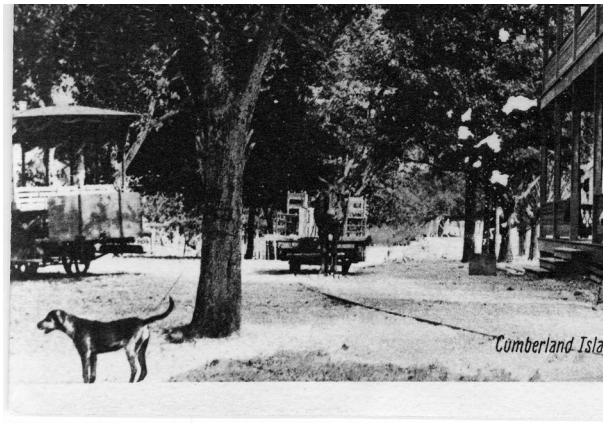


FIGURE 15. Hotel at High Point. (CUIS 4650)

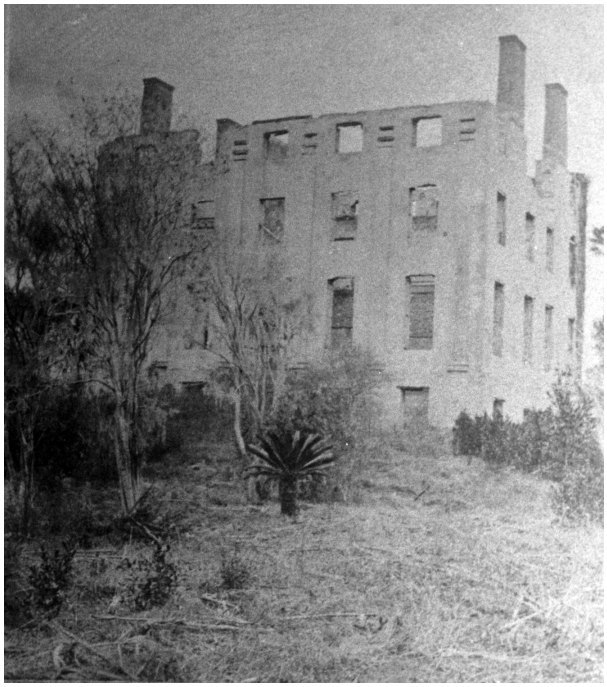


FIGURE 16. View of Dungeness house and grounds, c. 1880. (Courtesy Coastal Georgia Historical Society)

35. Torres, 192-93; Bullard, *Cumberland Island*, 173.

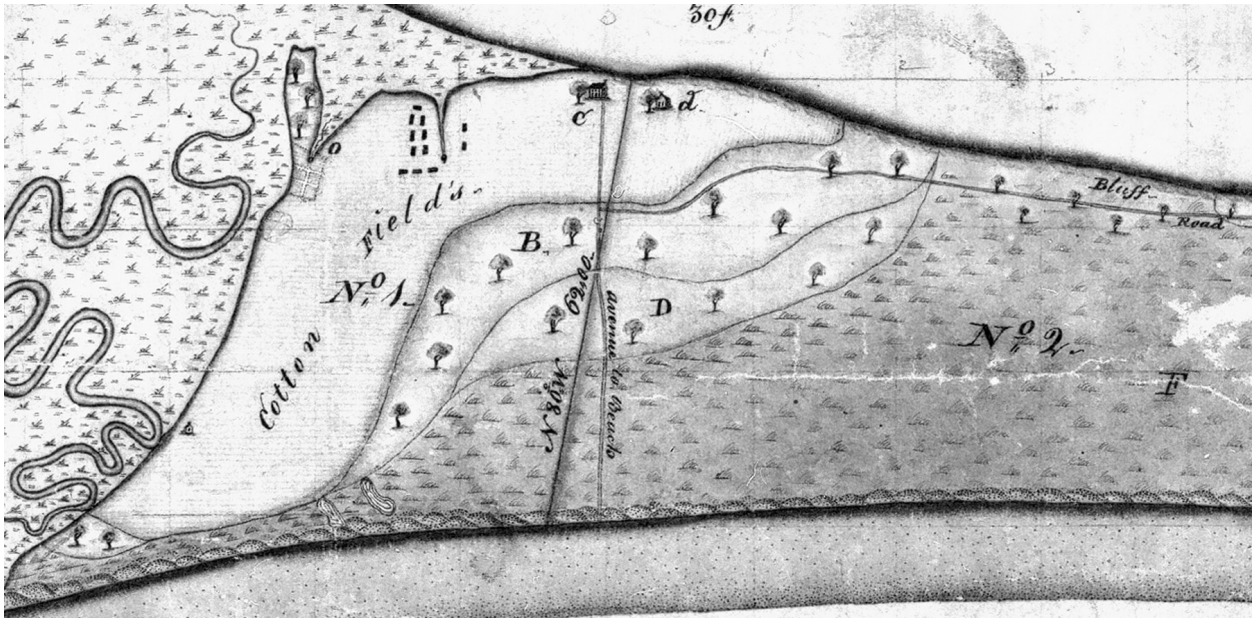


FIGURE 17. 1802 McKinnon map detail showing Dungeness tract. (Courtesy Georgia Division of Archives and History)

to Florida. Many of these vacationers were wealthy northern industrialists who wanted winter homes on the Sea Islands.

In the 1870 census, Robert Stafford declared himself a farmer, not a planter, of age 78, whose property of 8,000 acres was valued at $30,000, including the house. He described the 8,000 acres as woodland, of which only 6 acres was improved land, suggesting that most of his fields were undergoing succession. He reported 15 horses, 3 mules, 10 cows, and 40 hogs. His farm produced a $300 market garden, 50 gallons of molasses, and 50 pounds of beeswax. He grew peas, beans, Irish potatoes, sweet potatoes, and $500 of orchard products. He paid $500 in wages, presumably to those listed as living on his property or nearby.

Robert Stafford lived in the main house. In a second house lived Catharine Williams, black female of 65, housekeeper, and two black females, listed as servants. In a third house lived Elizabeth (Zabette) Bernardey, mulatto female of 55, housekeeper, with a black female named Maria Bernardey, age 35, apparently a deaf mute. As mentioned earlier, Robert Stafford had six children with Elizabeth (Zabette) Bernardey, the enslaved mulatto who may have been Peter Bernardey's daughter. Three children, Mary Elizabeth, Robert, and Armand, were sent to Connecticut to live, and Robert Stafford eventually acquired property there and built a house. Zabette took daughters Ellen and Ada north to Connecticut in 1852, where she lived until after the Civil War. The youngest child, Medora, was born in Connecticut in 1853. The children attended northern schools and did not live on Cumberland Island. Their eldest daughter Mary Elizabeth attended Wheaton College in Norton, Massachusetts.[36]

In 1874, he reported 8,125 acres valued at $25,000. Robert Stafford died on August 1, 1877, at 87 years of age. His will specified that all of his real and personal property in the north go to his daughters. Stafford's real estate in Georgia was not mentioned in his will. His nephew Thomas D. Hawkins was appointed by the court as administrator of his estate in Georgia. According to Georgia law, his holdings on Cumberland Island, valued at $40,000, went to his niece and three nephews when no one with a higher claim came forward.

In 1878, Hawkins reported 8,240 acres on Cumberland, valued at $25,000. Hawkins and his three cousins acquired from Margaret Bernardey Downes her 125-acre interest in Plum Orchard, which she inherited from her grandmother Marguerite Bernardey in 1853. In 1881, Hawkins advertised the land for sale:

> Thomas D. Hawkins of St. Mary's is now chief owner of the Stafford place on Cumberland Island. There is in the farm over 4000 acres of good land—some of which will bring 100 bushels of corn to the acre. The climate is fine all the year round, and game and fish of all kinds are abundant in all seasons. Brother Hawkins

36. Ehrenhard and Bullard, 11-24; Bullard, *Robert Stafford*, 63, 261-66.

wishes to dispose of it. It is a rare chance for the investment of capital that will in a few years greatly multiply.[37]

Carnegie Era (1881-1972)

On November 17, 1881, Thomas Morrison Carnegie, younger brother of Pittsburgh steel magnate Andrew Carnegie, purchased 4,000 acres of land "known as Dungeness," for $35,000 from William George Mackay Davis, a Confederate general who purchased the property in 1879. Davis had plans to build a hotel at Dungeness and cultivate oranges and olives for oil, but a series of tragedies persuaded him to sell.

Carnegie purchased Dungeness for his wife, Lucy Coleman Carnegie, and their growing family. In 1882, Carnegie and his cousin Leander Morris together acquired the adjacent 8,240-acre property of Robert Stafford from his Georgia heirs for $40,000. The deed described the land as eight tracts or parcels of land that appeared in the December 1799 partitioning map and a tract of land formerly belonging to Peter Bernardey.[38]

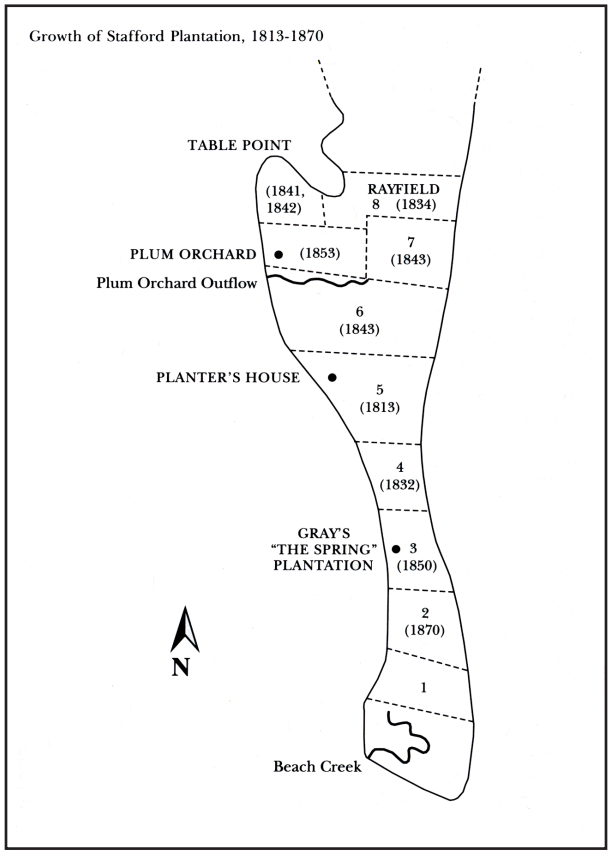


FIGURE 18. Robert Stafford's holdings. (Taken from *Robert Stafford of Cumberland Island*)



FIGURE 19. Lucy Carnegie and her children at Dungeness, c. 1900. (CUIS Collection)

Sadly, Thomas M. Carnegie died in 1886. Despite Thomas's death, Lucy Coleman Carnegie went on to amass 90 percent of Cumberland Island and turned it into a complex of family estates, which included extensive landscaped grounds. Beginning in 1896, she engaged the Boston architectural firm of Peabody & Stearns to expand the Dungeness Mansion house and grounds, as well as to design new support buildings and houses for four of her children. During Mrs. Carnegie's lifetime, Cumberland Island was a highly organized, largely self-sufficient private preserve. It was staffed by some 200 employees, and through their labor the extended Dungeness family was supplied with produce and livestock, supplemented by provisions brought daily from Amelia Island on the family yacht.



FIGURE 20. Tennis at Dungeness, c. 1900. (CUIS 4342)

37. Bullard, *Robert Stafford*, 293-96, 301; Ehrenhard and Bullard, 26

38. Torres, 160; Bullard, *Robert Stafford*, 302; Bullard, *Cumberland Island*, 182-86; Dilsaver, 38.



FIGURE 21. George and Margaret Carnegie at Plum Orchard, 1910. (CUIS 51592)

Lucy Carnegie played hostess to a sophisticated social scene, welcoming many well-known visitors to the island over the years. The house party was the preferred form of entertaining, with guests invited for long visits. Hunting, horseback riding, golf, tennis, croquet, sailing, and swimming kept guests occupied. Elaborate picnics were common. In the evenings, family members organized card games, masquerades, and dances.

George Lauder Carnegie Period (1898-1924)

George Lauder Carnegie was the sixth child of Lucy and Thomas Carnegie, born in 1876. He married Margaret Thaw of Pittsburgh, daughter of Pittsburgh railroad magnate William Thaw, in 1898. They traveled to Cumberland Island where they lived at Dungeness awaiting the completion of their home, Plum Orchard, on the Carnegie estate. As with the other homes Lucy Carnegie built for her children on Cumberland, she paid for the construction of the house, and George and Margaret paid for the furnishings.[39]

Beginning in 1896, Lucy Carnegie hired the Boston architectural firm of Peabody & Stearns to design several additions to her island home, Dungeness, and most of the major buildings on the Carnegie estate through 1907. At Plum Orchard, the carriage house was built first to house the workmen for the mansion, whose construction took place from 1898 to 1899. She told Peabody & Stearns that she proposed building a "simple house on this island,

39. Olson, 3; GWWO Inc. Architects, *Plum Orchard Mansion Historic Structure Report – Interior Update* (Denver: Denver Service Center, 2005), 17.



FIGURE 22. Plum Orchard Mansion, c.1900. (CUIS 51736)

on a site about eight miles from here [Dungeness]." Peabody & Stearns wrote to George Carnegie following a visit by William Page, the Carnegie's Cumberland Island estate manager:

> When Mr. Page was here we made various attempts at a more picturesque or varied exterior, using some gables or Mexican details but Mr. Page assured us that you wished everything absolutely simple and we have tried to catch the spirit he told us you wished.



FIGURE 23. Plum Orchard Mansion, c. 1905. (CUIS 51592)

On December 1, 1898, William Page described the project as "fairly launched."[40]

In 1902, George and Margaret began planning major additions to the house. This construction phase included a swimming pool/squash court wing on the east and a gallery and drawing room/ gun room wing on the west. Within the house, the small living room and gun room were converted to a library and the service stair expanded to accommodate an elevator. Upstairs, a new master

40. Bullard, *Cumberland Island*, 204; Olson, 15.



FIGURE 24. Plum Orchard entrance hall, 1970. (CUIS 51592)

suite above the west wing was three times the original, which was modified as guest quarters. These improvements, resulting in a much enlarged Plum Orchard, were largely completed by 1904. An additional expansion began in 1906 and was undertaken primarily to increase the service wing of the house.[41]

George and Margaret had their own horses and maintained a big stable. In 1921, George's nephew Oliver Ricketson brought thirty mares to the island from Arizona. These were bred with a Kentucky thoroughbred brought to the island by George's nephew Dr. Coleman Johnston (son of Nancy Carnegie Johnston). The offspring made excellent polo ponies.



FIGURE 25. Margaret Thaw Carnegie playing golf, c. 1900. (CUIS 511220)

41. Olson, 14; GWWO, 11.

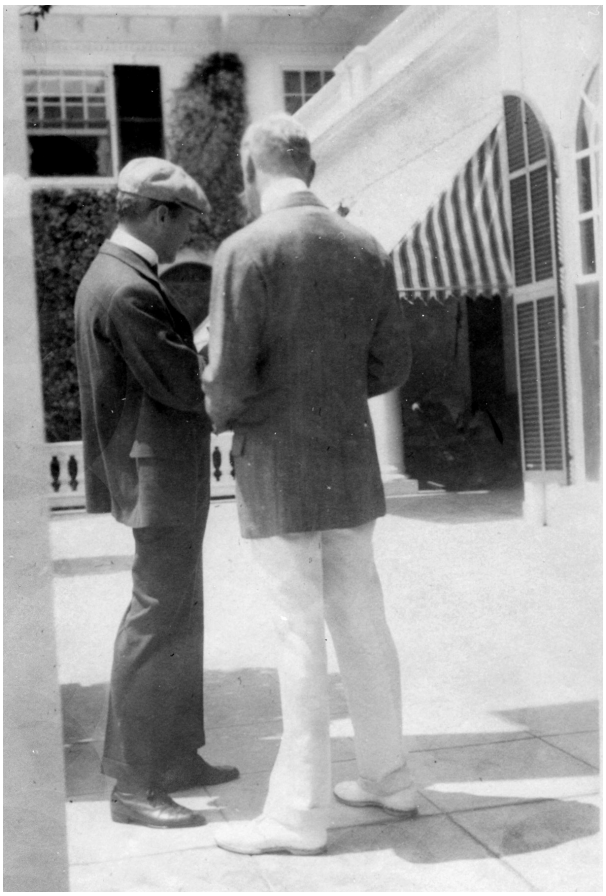


FIGURE 26. George Carnegie, c. 1913. (CUIS Collection)

Plum Orchard required a large support staff, whose manager was Frank MacLaren from around 1905 until he replaced William Page as island manager in 1922. William Page advised Margaret about the staff in a 1905 letter:

> I think the enclosed will be a sufficient indication to you and to McLauren [sic] of a proper ration for your colored hands. House and stable boys make up a considerable portion of your force, and with two or three other of your hands cannot be fed as roughly as we feed the great majority of our hands. The things I suggest will come a deal cheaper when cooled and served to the whole crowd than the arrangement which has obtained hitherto.

In addition to the house and stable hands, a captain was always needed for the Plum Orchard yacht Hornet. Page remarked in 1916 that the new boat captain that George hired was more promising than previous hires. The Carnegie lifestyle at Plum Orchard, like that at Dungeness, reflected an opulence and formality common to their echelon of society before World War I.

George Carnegie's health began to fail sometime between 1913 and 1915. In December 1915, William Page described George as "sorely disabled" and he spent the rest of his life in a wheelchair. By 1917, George and Margaret no longer came to the island, instead visiting numerous spas and health resorts in an effort to regain his health. They lived at the Plaza Hotel in New York City during this time. In 1917, Margaret had three boxes of furniture removed from Plum Orchard, probably indicating that they no longer planned to use Plum Orchard as a winter residence.[42]

In May 1920, George made plans to spend the coming winter at Dungeness. His nurse wrote William Page to find out how much it would cost to open part of the house, which was closed after Lucy Carnegie's death in 1916. He wintered at Palm Beach instead of Cumberland Island. He died at the Plaza Hotel in New York on November 15, 1921, without ever returning to Cumberland Island.

At George's death, Plum Orchard remained the property of Lucy Carnegie's estate. William Page asked Margaret Carnegie to itemize her husband's property, to which she responded:

> I am quite at sea about the value of George's personal belongings. He had practically nothing at Plum Orchard except books—many of which now at Plum Orchard were his own—but I should be at a loss to say which were his and which were mine … the guns were his, with the exception of my little Parker gun.

Margaret Carnegie visited Plum Orchard sparingly during the next few years. She traveled extensively abroad but remained in charge of Plum Orchard until 1924. In September 1922 she wrote her brother-in-law Thomas Morrison Carnegie II that she only wanted "a lick and a promise" in the way of facilities at Plum Orchard and someone to keep the accounts, payroll, and order supplies. In 1922, she made plans to stay at Plum Orchard for the coming winter, asking Frank MacLaren to get the coal from Jacksonville, but she changed her plans and the house remained empty.

In 1923, Margaret married Roger de Perigny and moved to Paris. In 1924, she signed a quit claim releasing any interest that she maintained under the terms of Lucy Carnegie's will in real or personal property at Plum Orchard and had her belongings removed from the house. She and her husband eventually moved to Kenya.[43]



Figure 27. Nancy Trovillo Carnegie standing next to Frederick Perkins and Florence Carnegie Perkins at their wedding, 1901. (CUIS Collection)



FIGURE 28. Virginia Beggs Carnegie, Nancy Carnegie holding Carter Carnegie, and Dr. Marius E. Johnston with guest, c. 1909. (CUIS 4598A)

Nancy Carnegie Johnston Period (1924-1972)

Plum Orchard eventually became the island home of George's younger sister Nancy and her second husband, Marius E. Johnston, a doctor from Lexington, Kentucky, who had worked on the island. Nancy had four children from a previous marriage, and she and Marius had one child together. Prior to George Carnegie's death, the Johnstons stayed at Greyfield, the island home of

42. Olson, 7-8.

43. Olson, 9-13

Retta Carnegie Ricketson and later her daughter, Lucy Ricketon Ferguson and her husband, Bob.

The Johnstons used Plum Orchard on a seasonal basis only. Their home base was Lexington, where horses were an important part of their life. They usually sent several horses and some milk cows in a freight car to the island before arriving. Marius Johnston, along with Bob Ferguson, managed the horses and cattle owned by the Carnegie estate on the island.

A less formal lifestyle characterized the Johnston years at Plum Orchard. Although the Johnstons maintained a household staff, it was far less than that maintained by George and Margaret Carnegie. Coleman Johnston recalled no large formal dinners during this family's residence. What had been servant's quarters in the second floor east wing became a nursery and children's rooms.

Recreation featured prominently in island life, especially riding, hunting, and fishing. Marius was an active sportsman and knew the island very well. Rodeos were held at Stafford, and Marius helped introduce track racing on the island. A golf course was located between the Stafford barn and the beach road.

Around 1937, Marius and Nancy were in a serious car accident on their way to Cumberland Island. Visits to the island became less frequent, and, in fact, they never returned following the long interruption in island use caused by WWII.

The years before WWII were one of the most heavily used periods in Plum Orchard's history. With Marius and Nancy Johnston's trips to the island less frequent, their children—Margaret Johnston Wright (Retta), Coleman C. Johnston,



FIGURE 29. Coleman Carnegie Johnston on the left at Plum Orchard, 1960s. (CUIS Collection)



FIGURE 30. Lucy Johnston Graves and husband Joe Graves at Plum Orchard, 1930s. (CUIS 4955)

Lucy C. Johnston Graves, Thomas M. C. Johnston, and Marius E. Johnston, Jr.—and their families often visited at the same time. Retta usually managed the house during this time. The caretaker during these years was Chester Holzendorf. He and his family lived in one of the existing two-story dwellings at the north end of the Plum Orchard compound.

During the years of WWII, Plum Orchard stood vacant. The U. S. Coast Guard, who ran beach patrols on the island, used the carriage house and other island structures to stable its horses.

After the war, the third generation of the Johnston family eventually took over management of the house. Joe Graves (son of Lucy Johnston Graves and Joseph Graves, Sr.) began returning to the island in the 1950s on a regular basis. By this time, the Johnston and Graves families were using caretakers for the upkeep of Plum Orchard. Gone were the days of full-time support staff, as Plum Orchard became more of a vacation home compared to its earlier use as a winter residence. Nancy Carnegie Johnston died in 1954 and was buried in Lexington, Kentucky.[44]

Meanwhile, the state of Georgia formed the Cumberland Island Study Committee to investigate the possibility of acquiring the island for development as a tourist resort. Also in the 1950s, the Avalon Foundation and the Old Dominion Foundation jointly financed a series of coastal surveys conducted by the NPS to seek congressional support for the public acquisition of Cumberland Island.

44. Olson, 28-34.

After the last of Lucy Carnegie's children died in 1962, the trust that she established to keep the family's holdings intact came to an end, and the estate was divided up among individual owners. Plum Orchard became Johnston family property.

Developer Charles Fraser began to buy land from Carnegie heirs, and by 1969, he had acquired a fifth of the island.[45] At the same time, state and national conservation groups wanted the island set aside for public use. Wanting to preserve its character, Carnegie and Candler descendants banded together to seek alternative ways to protect it from development.[46]



FIGURE 31. Gathering at Plum Orchard, 1971. (CUIS Collection)

In 1969, the Avalon and Old Dominion Foundations merged to form the Andrew W. Mellon Foundation (AWMF). In 1970, NPS Director George B. Hertzog approached the AWMF for money to acquire Cumberland Island. The AWMF subsequently donated $5.5 million to the National Park Foundation (NPF) and an additional $1.15 million in 1971. By November 1970, the NPF had acquired seventy-five percent of the island, including Charles Fraser's holdings.

In 1971, Plum Orchard, twelve acres surrounding the house, and $50,000 were donated by the Johnston family to the NPF. Legislation was initially introduced in February 1970, and after two years of intense debate among the stakeholders, President Nixon signed Public Law 92-536

45. Torres, 219; Dilsaver, 89.

46. In 1930, Coca-Cola magnate Howard Candler Sr. bought the High Point property at the north end of the island from the Cumberland Island Club and converted it into a family retreat, acquiring additional small parcels from surrounding neighbors over the years.



FIGURE 32. Porch repair, 1970s. (CUIS Collection)

establishing Cumberland Island National Seashore on October 23, 1972.[47]

National Park Service Era (1972-Present)

1970s

Cumberland Island National Seashore was opened to limited public use in June 1975. Visitors were brought to the island on a forty-passenger boat that docked at Sea Camp on two daily trips. A choice of a tour of the Dungeness ruins or an opportunity to visit the beach to the east of Dungeness was offered. Until the Dungeness Dock was repaired, the park operated a tram service from Sea Camp to Dungeness and back. Plum Orchard was not open to the public.[48]

In 1974, a series of archeological and historic resource surveys were begun that related in some way to Plum Orchard. In 1975, Robert Deutschle and Robert Wilson from the Southeast Archeological Center (SEAC) described the prehistoric and historic resources of the island, followed in 1976 by John Ehrenhard's assessment of archeological and historic resources eligible for the National Register of Historic Places. In 1977, David Henderson produced a historic structure report for the Plum Orchard Carriage House and a draft architectural data section for the Plum Orchard Mansion. Also in 1977, Louis Torres completed a historic resource study for Cumberland Island.

47. Dilsaver, 101-109; Bullard, *Cumberland Island*, 284-85.

48. "Cumberland Island National Seashore 1972-1979," 7; Dilsaver, 143; Plum Orchard may have been used as an operational/administrative base during the initial NPS years, personal communication, John Fry.

In 1975, a field review of the island's historic structures found most of the support structures at Plum Orchard in "an advanced state of decay." To further complicate matters, many of the Plum Orchard structures were part of the T.M.C. Johnston reserved estates. The report considered the Plum Orchard Mansion to be the most significant salvageable structure, whose needs included restoration of the porch roof, balustrades, and gutters. Although a park maintenance crew did some work on the porch in 1976 and 1977, there was much more needed to fully restore the building, which was estimated at $1,193, 280. Public tours of the mansion began in 1979.[49]

General Management Plan. Long-range planning efforts for Cumberland Island were underway by the time the park enabling legislation finally passed. A Master Plan outlining future development was released in 1971. It proposed a fleet of 100-passenger ferries that would dock at Brickhill Bluff, Plum Orchard, and Dungeness, with interpretive and concession facilities at each location. A jitney service would run the length of the island, connecting the three docks as well as three beach areas, six campgrounds, and destinations at the north end of the island. Stables for eighty horses and accompanying trails, some of which would be designed for biking and hiking, were planned. Each of the three beach areas would have bathhouses, shelters, comfort stations, and concessions. The park planned to lease Plum Orchard and Stafford for use as environmental conference and study centers. This plan suggested that 10,000 visitors per day could be accommodated.

Response to this draft plan revealed that there was a vast gap between what the NPS envisioned and what the public wanted. NPS planners returned to the drawing board. An Environmental Assessment was prepared and public hearings held in June 1976. As a result of these hearings, a draft General Management Plan was prepared that contrasted sharply with the 1971 plan. Day-use beaches for 200 people and five wilderness campgrounds and three improved ones for a combined maximum of 180 people were proposed. The plan reduced concession services to vending machines in the developed areas. The suggested daily visitation limit was reduced to 1,460. The jitney service remained in the plan but would operate primarily between Dungeness and Stafford, with occasional jitney tours to Plum Orchard and the north end of the island.

The NPS recommended wilderness designation for slightly over 20,000 acres north of Stafford. Planners excluded the Main Road, the High Point and Half Moon Bluff complexes, and the retained estates. 8,851 acres would receive immediate designation and 11,794 acres would be established as potential wilderness.

The new plan failed to convince both environmentalists and retained rights owners on the island. There was widespread opposition to the idea of jitney travel north of Stafford, and some opposed developing campgrounds near the island's lakes. The question of whether to include the roads and High Point and Half Moon Bluff in the wilderness was another point of contention.

In 1981, after many changes to the level of proposed development on Cumberland Island, the NPS released another draft General Management Plan for public comment. After ten years of debate, the Sea Camp facility built years earlier by Charles Fraser was the only developed campground on the island. No concessions, no beach facilities, and no stables for horseback riding had been built. At Dungeness, the park was using existing historic buildings for limited interpretation and resource management. All motorized transportation for visitors at the south end of the island ended in 1979.

The 1981 plan proposed reestablishment of transportation at the south end of the island to carry visitors between Sea Camp and Dungeness Dock, two developed campgrounds, the wilderness boundary near Stafford, several backcountry campsites, and a historic district for Dungeness. Very limited tours to Plum Orchard and High Point-Half Moon Bluff would be available. The proposed visitation limit remained 1,460.

Intense public opposition forced the NPS back to the drawing board once again. A decision was made to divide planning for the GMP and wilderness designation into two separate documents. Conservation groups wanted the Main Road north of Plum Orchard reclassified from potential wilderness to full wilderness and the portion south of Plum Orchard reclassified as potential wilderness. The bill passed on September 9, 1982, giving wilderness designation to 8,840 acres and potential wilderness to 11,718 acres. Small groups of visitors could be taken to Plum Orchard and High Point-Half Moon Bluff by vehicle over the Main Road.

49. Dilsaver, 180-83, 235.

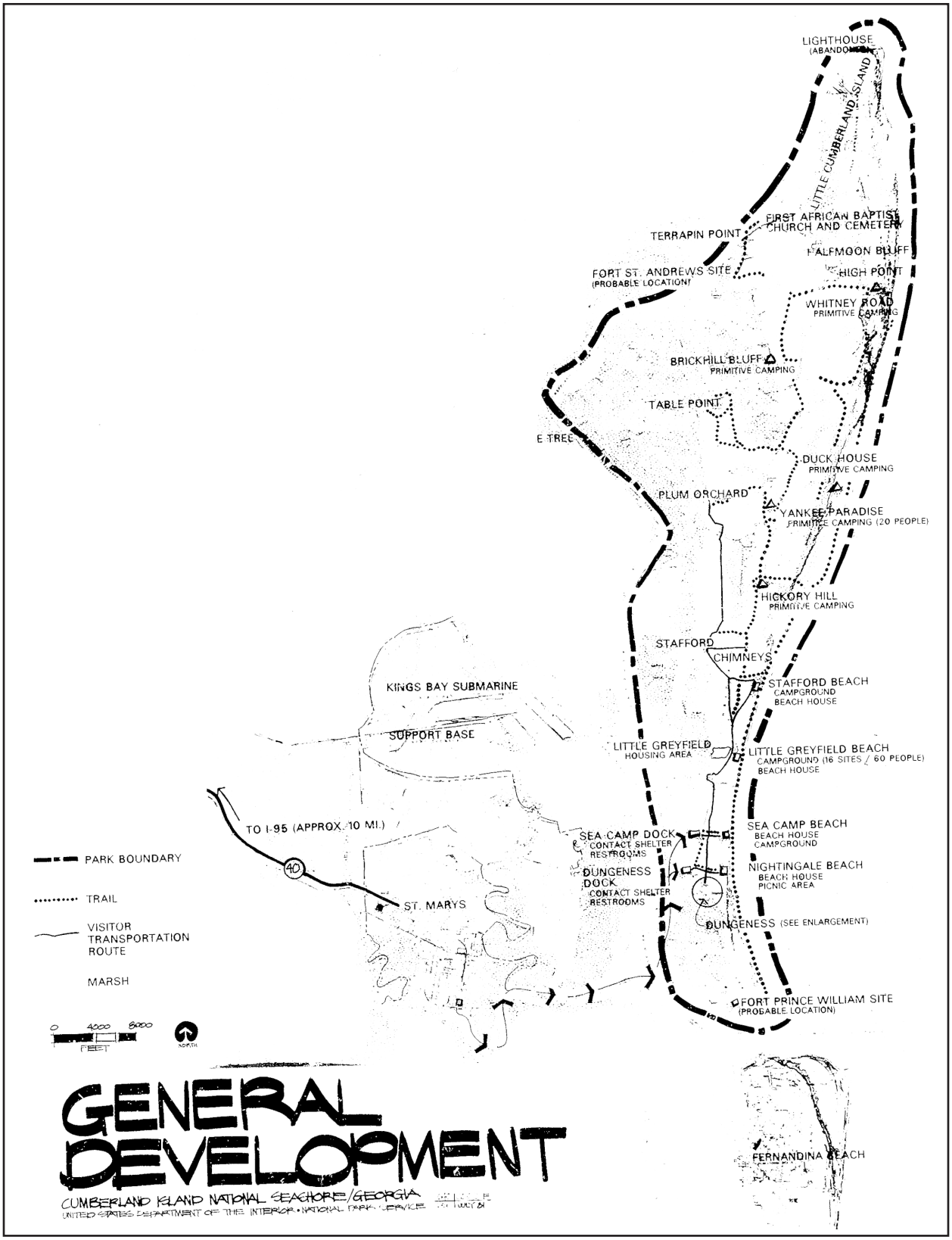


FIGURE 33. General Development, 1981. (Denver Service Center etic 649/20027F)

A revised GMP called for visitation limited to 300 per day. The lower visitation limit resulted in the abandonment of the Nightingale Beach day use area, scaled down plans for the Dungeness Dock, and limited island transportation to occasional tours to Plum Orchard in sixteen-passenger vehicles. Two new primitive campgrounds were proposed.

With few revisions, the NPS approved the plan in January 1984, with the elimination of the two new campgrounds at Lake Whitney and Duck House and the reclassification of all of the Main Road north of Stafford as wilderness. The revised plan essentially provided for a continuation of the natural character of the island, free from extensive development. The key features were:

- No change in the visitation ceiling of approximately 300 people a day.
- Camping to be provided at the improved campground at Sea Camp and at three primitive campgrounds. Semi-primitive camping to occur at Stafford and a small restroom provided.
- A day use area with a small restroom and picnic tables to be provided at Dungeness or Nightingale Beach.
- Limited transportation to be provided to Plum Orchard on a reservation basis for guided tours of the mansion.
- The mainland administration building/ visitor center to remain at St. Marys.
- With the visitation ceiling remaining at 300 people a day, no major modification proposed for the island docks or ferry boat operation. The Park Service to provide limited docking spaces for a few private boats.
- Independent studies on the impact of feral horses on the island to be conducted.

1980s

Reserved Estates. T.M.C. Johnston, Jr. leased his reserved life estate to Charles Hauser, who began modifying a historic structure into rental apartments in 1983. SEAC archeologist John Ehrenhard discovered that vista clearance and excavations for a sewer/septic system resulted in disturbance to an area that included part of a known Indian midden, as well as the Bernardey house ruins, although no direct impact to the Bernardey ruins occurred.

In July 1984, a team from the Southeast Regional Office inspected the midden site and the Bernardey ruins in order to make recommendations for their preservation. They concluded that although a great deal of vegetation was growing around the ruins, a radical intervention would expose the ruins to wind, rain, rising damp, and sunlight, which would radically accelerate decaying mechanisms. They provided a list of recommendations to gradually correct the problem over time by changing the environmental conditions affecting the ruins. The NPS allowed the removal of two collapsed sheds at this time.[50]

Development Concept Plan. In September 1983, the Cumberland Island Historic Foundation was formed to find money for interior repairs to the house and work with CUIS officials to craft a development concept plan (DCP) for the Plum Orchard Historic District, which was approved for listing in the National Register of Historic Places the following year.

The NPS released a draft DCP in November 1984. The initial preferred alternative proposed leasing the mansion to a corporation or organization who would assume the maintenance costs. The NPS would retain the right to bring visitors through the ground-floor rooms.

Public response forced the NPS to forge a new plan, calling for a delay in leasing the mansion until it became financially feasible, performing selective stabilization of the interior unless unexpected funds became available, and a continuation of very limited tours of the mansion. Part of the mansion would be rehabilitated by the NPS to house a ranger, who would have caretaking and security responsibilities. Nothing would be done to preserve the carriage house.[51]

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50. Charles Hauser to K.O. Morgan, November 17, 1983;Chief, SEAC to Associate Regional Director, Operations, SERO, December 16, 1983; K.O. Morgan to Charles Hauser, April 23, 1984; Deputy Regional Director, Southeast Region to Superintendent, Cumberland Island National Seashore, February 4, 1985; K.O. Morgan to Charles Hauser, March 15, 1985, CUIS archives.

51. FONSI Plum Orchard Development Concept Plan/ Environmental Assessment Cumberland Island National Seashore Georgia, 1985, Box 3, CUIS archives; Dilsaver, 235-237.

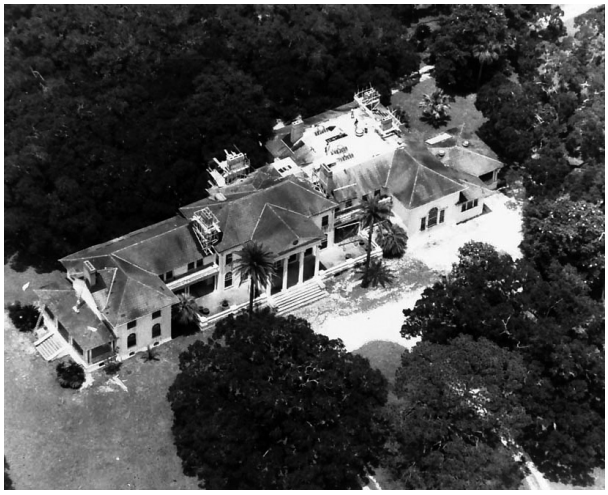


FIGURE 34. Plum Orchard Mansion rehabilitation, c. 1983. (CUIS Collection)

Mansion Preservation/Rehabilitation. Of all the historic structures on Cumberland Island, the most difficult and expensive to maintain was the 21,724-square-foot Plum Orchard Mansion, surrounded on three sides by wilderness. By 1983, a leaking roof, outdated electrical wiring, and rapid deterioration of the cement plaster on the outer walls plagued the structure. Congress appropriated $355,000 for what was considered the most necessary work to preserve the structure, and from 1983 to 1984, the NPS completed a $400,000 preservation project on the mansion's exterior.

A rehabilitation project occurred from 1987 to 1988 and included exterior painting, conversion of servants' quarters on the second floor to an apartment, partial dining room restoration, and construction of a handicapped accessibility ramp at the rear of the mansion. The dining room restoration was intended to further entice public support for interior restoration efforts by serving as a model of what could be done elsewhere in the mansion.[52]

The Cumberland Island Historical Foundation held a "Plum Orchard Gala" at the mansion in 1988 to raise money for the structure's preservation. The event raised $7,500, and another gala was held in 1989. From 1984 to 1994, the foundation raised more than $700,000 for the mansion and various outbuildings.

52. Completion Report, Preservation of the Plum Orchard Mansion, Contract No. CX 5000-3-0602; Historical Architect, Historic Architecture Division, Southeast Region to Chief, Historic Architecture Division, March 15, 1988, Box 1, CUIS archives; Dilsaver, 183.



FIGURE 35. Plum Orchard Gala, 1988. (CUIS Collection)

1990s

In 1992, the park completed a number of needed projects at Plum Orchard. These included roof repairs, termite treatment, exterior painting, installation of a new drainage system, and construction of a seawall along the bank of the Brickhill River.[53]

In 1995, the NPS attempted to develop a Memorandum of Agreement (MOA) with a non-profit organization known as the Plum Orchard Center for the Arts, but legal challenges to a Finding of No Significant Impact as part of compliance with the National Environmental Policy Act and a review of the authority for the proposed use and occupancy agreement stopped

53. Ken Wild, "An Archeological Research Design for Testing Prior too Installment of a Drain System and Seawall at Cumberland Island National Seashore," Tallahassee, FL: Southeast Archeological Center, January 1992; Deputy Associate Regional Director, Cultural Resources, Southeast Region to Superintendent, Cumberland Island National Seashore, December 31, 1991, Box 2 and 3, CUIS archives.

work on the MOA. Two items added to the difficulty of developing a historic lease for the Plum Orchard Mansion. First, it is surrounded by Wilderness except for its side on the Brickhill River. Second, residents on the island who either have retained rights or court defined rights to drive their vehicles on certain roads that run through the Wilderness and connect with Plum Orchard need unrestricted access to those roads.[54]

The Plum Orchard Center for the Arts was partly comprised of island residents who were Carnegie descendants. They wanted to develop a venture that would be compatible with the mansion and would generate a cash flow that could go into the maintenance of the mansion. However, they wanted to freely use vehicles on the roads through the Wilderness for the venture at Plum Orchard.

Their proposal was in conflict with the Defenders of Wild Cumberland and the Sierra Club, who did not want any additional vehicular traffic on the roads in the Wilderness surrounding Plum Orchard. The NPS withdrew from its MOA and opened the process up to competitive bid. The NPS was faced with trying to develop lease language that would allow public access to the mansion with certain restrictions; minimize or eliminate increased vehicular traffic on the roads in the Wilderness; and did not in any way restrict the retained rights of island residents.[55]

In 1997, a Request for Proposals (RFP) was issued for a long-term historic lease. The RFP outlined the special terms and provisions potential lessees must follow. Restrictions had been tightened to meet environmentalists' concerns, with access to Plum Orchard by boat only. Also, the potential lessee must allow public tours of the main floor at least one day per week. A proposal from the Georgia Council of American Youth Hostels was rejected because it failed to meet the standards set forth in the RFP.

On July 22, 1999, Denver Service Center (DSC) and park staff participated in a Choosing by Advantages session evaluating alternative uses for the Plum Orchard Mansion. Analysis of the ratio of NPS dollars to advantage importance showed alternative E— mixed adaptive use: historic lease authority— had the best ratio, and it was recommended as the preferred alternative.[56]

In 1999, tours to Plum Orchard increased from one Sunday a month to every Sunday. The first Sunday of each month the ferry went to Plum Orchard. All other Sundays a ranger departed from the south end of the island and drove visitors to Plum Orchard in a van. However, by 2002, tours had transitioned to being conducted the second and fourth Sundays of each month with all transport by concessioner ferry. This program ended in 2012 after the twice monthly ferry-based tours had been made obsolete by the daily Lands and Legacies Tours which include Plum Orchard.[57]

2000s

In December 2000, a contract was awarded for Phase I Plum Orchard Mansion Rehabilitation. Phase I addressed most of the exterior envelope problems and the most pressing structural problems and included a new pine shingle roof. This contract was completed in February 2002.[58]

Another Historic Property Lease RFP was issued in August 2001 that included taking on the cost of Phase II rehabilitation. Laurel Island Plantation LLC submitted a proposal on December 21, 2001 that included regular access on the Main Road and throughout the south part of the island, which was inconsistent with the RFP requirements. Also, the exact source of funds to finance Phase II rehabilitation was unclear.[59]

The NPS finally obtained congressional funding for Phase II Plum Orchard Mansion Rehabilitation, which completed the exterior work and provided interior rehabilitation such as restoring historic finishes, accessibility modifications, and basic components of fire protection, electrical, and climate control systems. Phase II required the historic structure report (HSR) to be updated to include interior details. GWWO Architects completed the HSR interior amendment in 2004,

54. National Park Service Briefing Paper, February 7, 1997, Box 3, CUIS archives.

55. Briefing Paper, Plum Orchard Historic Lease, Cumberland Island National Seashore, February 7, 1997, Box 3, CUIS archives.

56. Project Review Report, Preserve Plum Orchard Mansion, August 22, 1999, CUIS archives, Box 2, Folder 50.

57. Superintendent, CUIS to All Rangers and Other Employees, CUIS, February 8, 1999, CUIS archives, Box 2; personal communication, John Fry.

58. Completion Report, Rehabilitate Plum Orchard Mansion Phase 1, February 26, 2002, CUIS archives, Box 2.

59. Jerry Belson, Southeast Regional Director to Chip Drury, Laurel Island Plantation LLC, March 18, 2002, CUIS archives, Box 3.

and the contract award occurred in 2006. The work was completed in 2008.[60]

Cumberland Island Wilderness Boundary Adjustment Act. In 2004, Congress passed the Cumberland Island Wilderness Boundary Adjustment Act. This law increased the Wilderness acreage to 9,886 but excluded 25-foot right-of-ways along roadways known as Main Road, Plum Orchard Spur, and North Cut Road from Wilderness designation. It also called for a Management Plan to "ensure that not more than 8 and not less than 5 round trips are made available daily on the Main Road north of the Plum Orchard Spur and the North Cut Road by the NPS or a concessionaire for the purpose of transporting visitors to and from the historic sites located adjacent to Wilderness."

To fulfill the statutory mandate, a Transportation Management Plan/Environmental Assessment (TMP/EA) was intiated in 2005, although it was not completed until April 2009. The preferred alternative in the TMP provides for daily motorized tours of the historic sites at the north end of Cumberland Island and a separate shuttle service on the south end. A second "action" alternative would provide only the north end tours. The "no action" alternative would continue present management of CUIS without the tours. The EA analyzed the effects of five to eight tours per day, consistent with the statutory mandate. A Finding of No Significant Impact (FONSI) was issued in May 2009.

An NPS contractor has calculated the cost of implementing the TMP. Based on current visitation, and depending on the number of tours per day and the percentage of visitors who elect to take the tours, for NPS (or a concessioner) to cover its costs, each person taking the tour would have to be charged between $70 and $140. For NPS to subsidize the tours in lieu of a charge would cost NPS $800,000 per year. In either case, the capital cost to start up the tours would be about $1 million.[61]

After reviewing this report, NPS proposed an alternative Transitional Program in 2010, consisting of up to three tours per day, with minimum staffing and only four vehicles, including one with a lift for the mobility-impaired. Each participant would be charged a minimum "transportation fee" of $15. NPS proposed to implement this transitional program for one year, after which it would report to Congress and other interested parties on the success of the interim plan and a recommendation for going forward with the full TMP.

In 2011, the program began as a "Lands and Legacies" tour to the north end of Cumberland Island that includes both cultural and natural resources. The motorized tour departs from the Sea Camp Ranger station using enclosed vans. Stops include the remains of Robert Stafford's plantation and cemetery, Plum Orchard Mansion, Cumberland Wharf, The Settlement and First African Baptist Church, and others.

60. Completion Report, Rehabilitate Plum Orchard Mansion, August 8, 2008, CUIS archives, Box 2.

61. Horace Clark, Regional Solicitor to David Vela, Regional Director, January 11, 2010.

Landscape Characteristics

Landscape characteristics include tangible and intangible aspects of the cultural landscape that individually and collectively give a landscape its historic character. Landscape characteristics range from large-scale patterns to site details and materials. These landscape character-defining features are used throughout the report to focus on the definition and details of the cultural landscape as it has evolved through time to the present.

Spatial Organization

Origin of the Place Name

Plum Orchard was one of the earliest settled areas on Cumberland Island, its origins stretching back to its colonial owners. According to Mary Bullard, the area has been called "Plum Orchard" at least as early as 1793 when it appeared on a surveyor's plat and probably was known by that name at an earlier date.[1]

The site name was also on the John McKinnon map of 1802 and was mentioned by tanner Reuben King in a journal that he kept from 1800 to 1806 describing his travels in coastal Georgia. On December 31, 1801, he stated:

> We left thare at 5 o. c. in the morning went to Bruns- wick and then to the Plumborch [Plum Orchard]

On January 21, 1802, King again mentioned arriving at Plum Orchard:

> We got to the Plomb orched [Plum Orchard]

Although the origin of the place name is unknown, it seems likely that it referred to a planting of fruit trees, either native or introduced.[2]

Bernardey/Stafford Era, 1823-1881

Plum Orchard Tracts

John McKinnon's 1802 survey map shows that Plum Orchard lay within Tract 6 on a "bluff" at the mouth of the Brick Kiln River. Immediately north of Plum Orchard and on the margin, as the westward-facing river hammock of Cumberland is still called, lay the two tracts purchased by Peter Bernardey in 1823 from John Peter Ward and Charles H. Ward, sons of Esther McIntosh Ward Bayard. McKinnon's map shows two houses closely adjacent to one another on the margin at the Plum Orchard Bluff. According to Cumberland Island historian Mary Bullard, Peter Bernardey purchased the northern one of the two and the adjacent Table of Pines tract (see three cotton fields on map below for location). A location of deepwater landing was of prime importance, and Plum Orchard Bluff was such a landing.[3]

Bernardey purchased a previously undivided interest within a tract known as Plum Orchard in 1825, located in Tract 6 on the 1802 map, from Charles H. Ward, who had just purchased it from his stepfather, Nicholas J. Bayard. This was the first time a deed mentioned "Plum Orchard." After this purchase, his tax report showed the addition of an "orchard" to his holdings, indicating that Bernardey did not acquire a full interest in Plum Orchard, whether it was a homesite or an orchard only, until 1825.[4]

Robert Stafford eventually acquired these tracts from the Bernardey estate. After Peter Bernardey's death, his wife, Catharine Bernardey, and her second husband, William Laen, sold Catharine's share of Peter Bernardey's property to Robert Stafford in 1841 and 1842. Stafford also purchased 300 acres at Plum Orchard from James H. Downes on July 12, 1853. Downes was the husband of

1. Bullard, *Pierre Bernardey*, 34.

2. Virginia Steele Wood and Ralph Van Wood, eds., *Collections of the Georgia Historical Society: The Reuben King Journal, 1800-1806 XV* (Savannah: The Georgia Historical Society, 1971).

3. Bullard, *Pierre Bernardey*, 33-36; the Brick Kiln River may have received its name from the location of kilns for lime-slaking used in the preparation of tabby bricks. The name eventually became Brick Hill River.

4. Bullard, *Pierre Bernardey*, 35, 51.

Landscape Characteristics

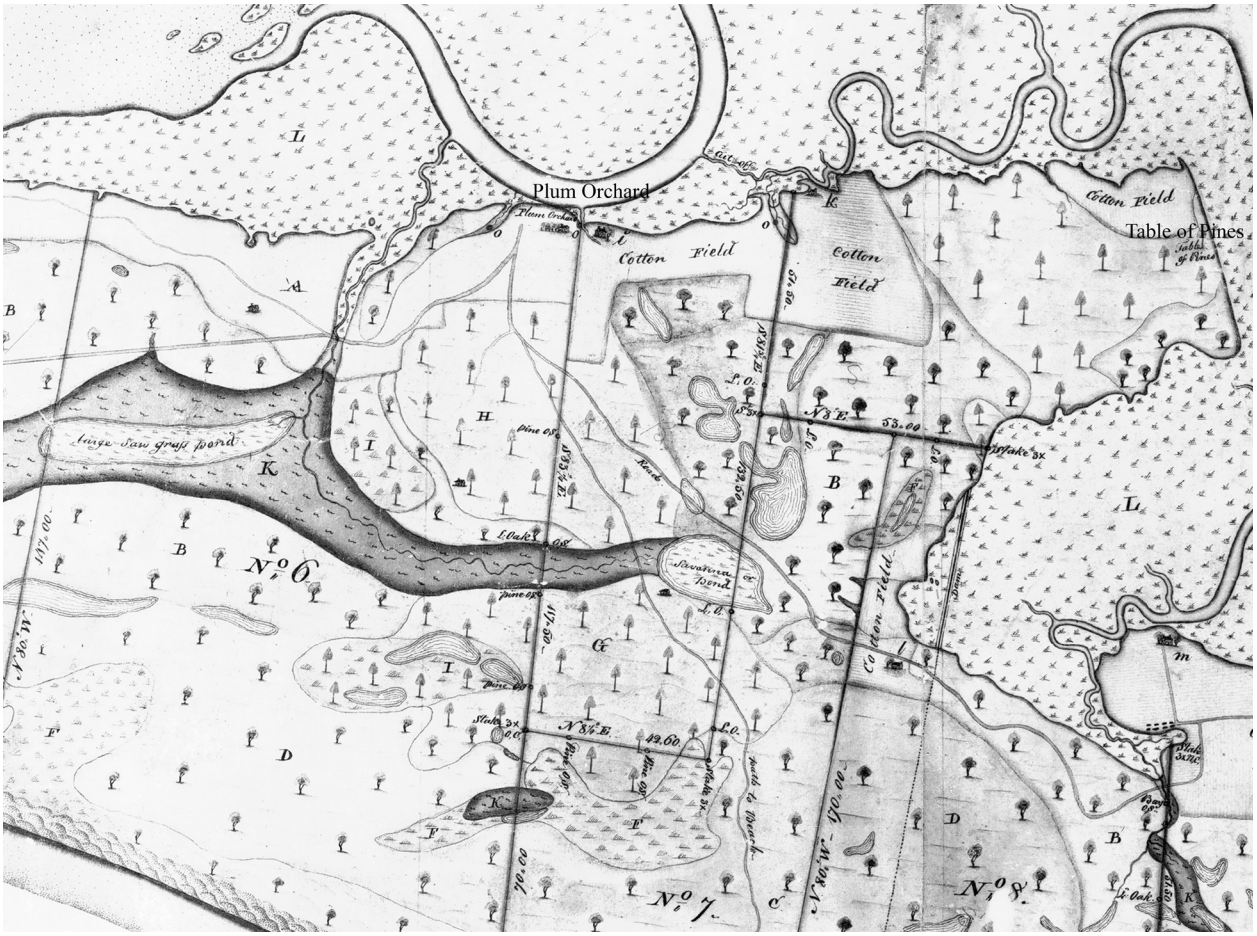


FIGURE 36. Detail from 1802 McKinnon map showing corresponding tracts. (Courtesy Georgia Division of Archives and History)

Peter Bernardey's daughter, Margaret Elizabeth Bernardey (see Figure 18).[5]

Field Patterns

The 1802 map shows three cotton fields north of the house within the two tracts. Table of Pines is clearly labeled on the map. Oak and pine surround the cleared cotton fields.

In 1833, Catherine Bernardey paid out $31 for clearing land, and another $31 for the hire of three black males. Proceeds from the sale of cotton in 1833 came to $338.93. $150 was paid to John W. Gray for "overseer's wages." Gray was a successful plantation owner on Cumberland Island who undertook directing Bernardey's enslaved workforce for a fee after Peter Bernardey's death.[6]

Cultivated acreage on Cumberland Island was planted in cotton, peas, beans, sweet and Irish potatoes, some cane and a small amount of orchard products, according to the agricultural schedules of the census. Large portions of the island were marshland, which had a high saline content and could not be planted in cotton, but its grasslands supported cattle. Feral hogs ate nuts, tubers, and other forest products, including mast, the acorns dropped by live oak trees. They were probably only penned for fattening, otherwise they ran wild.[7]

Following abandonment of the Plum Orchard cotton fields after the Civil War, successional hardwood and pine invasion within the old field boundaries appears in an 1870 coastal survey map. According to Dr. Cecil Frost, Landscape Fire Ecologist, the light areas are cleared fields that correspond well with the margins of existing fields and of old fields gone to forest succession on Cumberland today. The patchily-stippled areas north and south of Plum Orchard represent

5. John Ehrenhard and Mary Bullard, 20; Bullard, *Cumberland Island*, 108; Bullard, *Pierre Bernardey*, 79.

6. Gray was a neighbor of the Bernardeys on Jekyll Island in the 1820s. He owned Spring Plantation on Cumberland and later became indebted to Robert Stafford; Bullard, Pierre Bernardey, 93; Bullard, Robert Stafford, 75.

7. Bullard, *Robert Stafford*, 180, 263.

scattered trees and clumps of live oak (*Quercus virginiana*) — perhaps left standing for shade in areas being used for pasture. Further inland, the maps shows clumps of longleaf pine woodland and savanna in the same areas that support longleaf pine today. The original stands were supported by fires moving with the prevailing winds from south to north, maintaining an open, grassy understory of woodland pasture for horses and other plantation livestock. An annotated version of the map is found in Jay Avriett's 1984 historic landscape report.

On the 1870 agricultural schedule Robert Stafford also reported 8,000 acres of woodland, only 6 of which were improved. He also reported $500 of orchard products, which may have come from Plum Orchard, and 50 gallons of molasses, indicating he was growing cane somewhere.[8]



FIGURE 37. 1870 map detail. (1870 U.S. Coast Survey, courtesy Georgia Division of Archives and History)

8. Dr. Cecil Frost, personal communication; Bullard, *Robert Stafford*, 262; J. F. Avriett, "The Historic Landscape of Plum Orchard," 1983, 13, CUIS archives, 66618, Box 1, Folder 4.

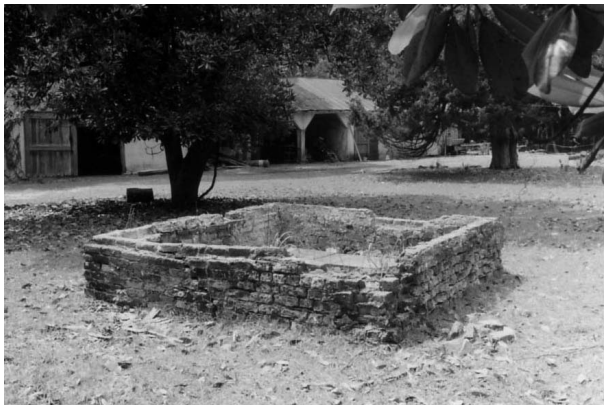


FIGURE 38. Bernardey walled cemetery, 1975. (CUIS 4270)

Bernardey Walled Cemetery

A tabby and brick-walled grave plot built after Peter Bernardey's death in 1827. A wall built by Robert Stafford originally enclosed the grave of Peter Bernardey. After Bernardey's mother's death in 1853, she was buried next to Peter, although her grave is unmarked. At that time, Robert Stafford built a new wall to enclose both graves.[9]

Carnegie Era, 1882-1972

The Carnegies acquired the Plum Orchard tracts from Robert Stafford in 1882. The January 1898 Page/Meader map shows three roads entering the site from Plum Orchard Road, a spur off the Main Road: one circled around to the river and came back out onto the Main Road at the south end of the property; one entered the property and stopped in the middle of an open area, and one led north to Table of Pines. No structures are shown, and the open part of the site is shown as "Old Fields." "Hammock" and "Pine" are noted

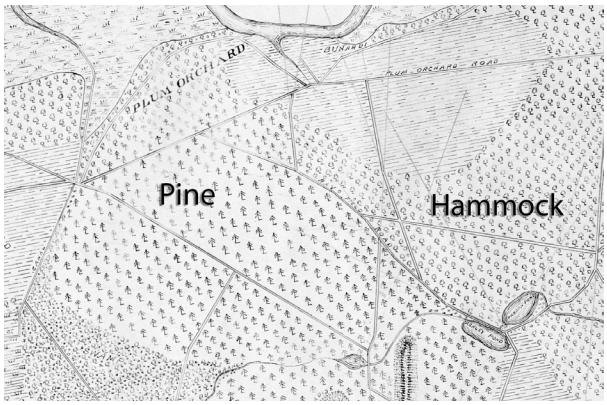


FIGURE 39. 1898 Page/Meader map detail. (Courtesy Georgia Division of Archives and History)

9. Bullard, *Pierre Bernardey*, 92; Bullard, *Robert Stafford*, 96, 130.

Landscape Characteristics

south of the old fields area. The open area appears to be the site of the future mansion, carriage house, and other landscape features, whose construction began in 1898.

The Plum Orchard Mansion and surrounding compound constructed for George Lauder Carnegie and his descendants did not include the Table of Pines tract of the Bernardey/Stafford era. Although Table Point, as it came to be called, was still owned by the Carnegies, as shown on the 1898 map, "Plum Orchard" during the Carnegie era was clustered around the mansion built for George Lauder Carnegie and his wife Margaret Thaw and the complex of support buildings needed to run the compound.

Plum Orchard Mansion

The spatial layout around the Plum Orchard Mansion focused on the front or south elevation of the house, with a secondary axis off the east elevation that centered on the carriage house. An entrance drive that began with an allée of cabbage palms (Sabal palmetto) became more curvilinear with six Italian cypresses (Cupressus sempervirens) as it approached the front piazza's Canary Island date palms (Phoenix canariensis) and looped around. A spur road lined with cabbage palms and southern magnolias (Magnolia grandiflora) turned east then circled around the perimeter of the property, passing by the dock before tying back into the entrance road. Service roads to the east and north linked the mansion with support buildings. Tennis courts, enclosed by a wire fence, sat east of the house but could be seen from the front piazza.



FIGURE 40. Plum Orchard Mansion, c. 1915. (CUIS 51592)

The Carnegies wanted additions to the mansion to relate spatially to the landscape. William Page informed Peabody & Stearns in 1902:

> They also believe that the general appearance of the house will be better suited to the grounds if scheme A is followed with some minor changes.

There was discussion about giving the east elevation more prominence when the 1902/04 additions were being planned. William Page wrote to give Peabody & Stearns guidance about what the Carnegies wanted:

> The east end of the Swimming Pool addition will be approached by a road, and the elevation should be treated with some emphasis.

Peabody & Stearns responded with plans for the east elevation that included a pergola, but it was changed to a porch by the Carnegies. Again, William Page wrote in 1902:

> East wing, cover the passage marked "Pergola" with a porch roof. . . .
>
> The east face of this wing now centres with the stables some 200 yards away. . . .
>
> As the grounds are laid out, I do not think that the extending of this wing south of main line of the house would be offensive.

In 1906, Page mentioned the orientation of the east entrance in a letter informing Peabody & Stearns that the Carnegies wanted an addition to the service wing:

> The east front of the house is more or less visible from the Tennis Courts, and will be helped in appearance by the porches indicated.[10]

Thus, although Peabody & Stearns may have envisioned a more formal landscape around the house in keeping with the Country Place Era layout seen at other large houses they designed on the island, additions to the mansion over the years took precedent and space in the landscape. The landscape around the north, east, and west elevations of the mansion was developed in a more naturalistic Country Place Era aesthetic, with a park-like scene of high canopy specimen trees, lawn, and the Duck Pond as prominent landscape features. Peabody & Stearns author Annie Roberts describes this style as a "key element in the

10. Olson, 18-21, 113-15.

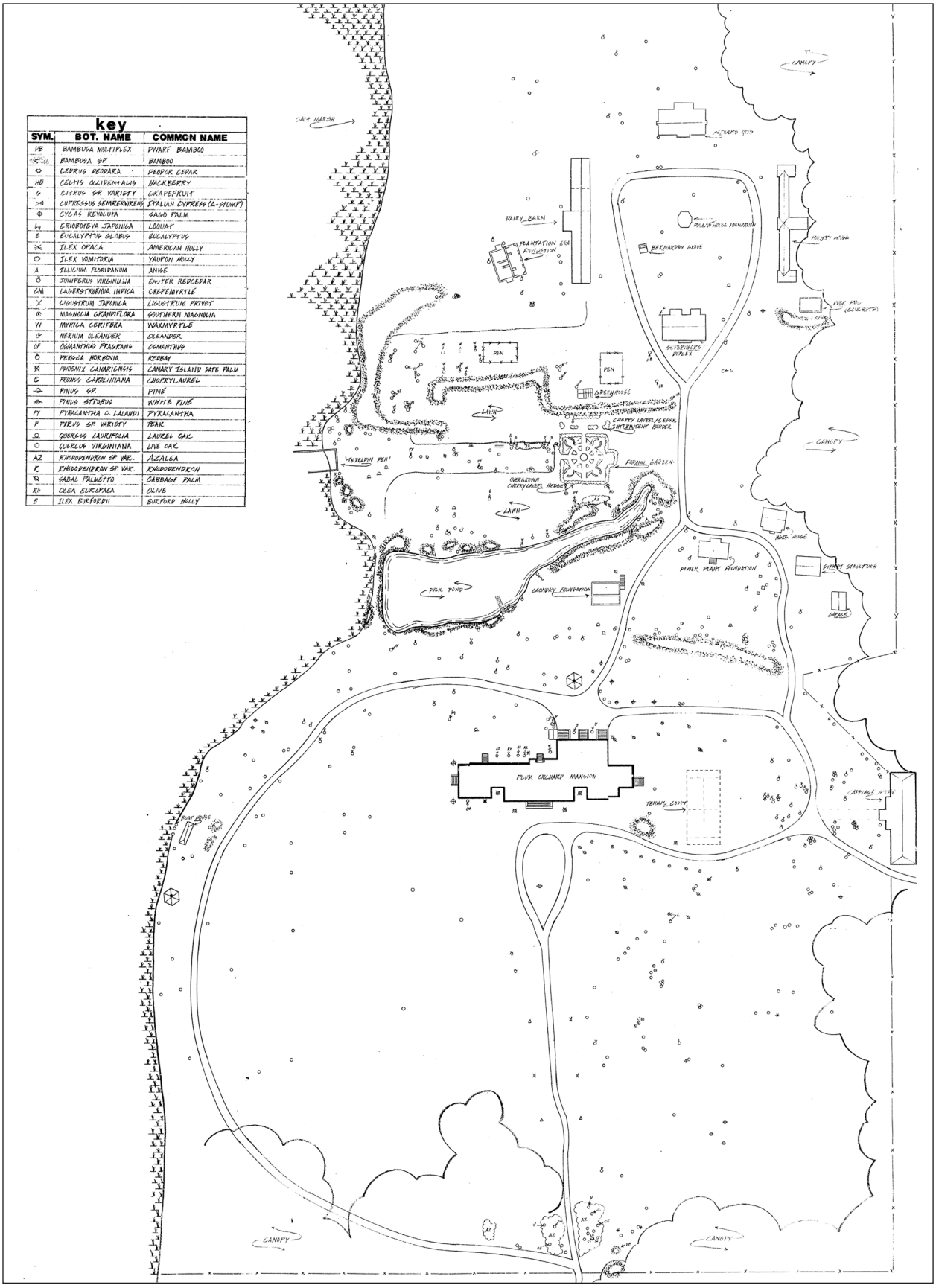


FIGURE 41. Plum Orchard site plan including formal garden designed in the 1930s. Note some buildings are mislabeled. (Denver Service Center etic 540/25001)

burgeoning American resort community," where "natural surroundings became an integral part of the resort cottage, bringing with them suggestions of nostalgia, boundless potential, and images of the sublime." Robert Peabody apprenticed for English architect Alfred Waterhouse in 1869, where he studied the English country house and its landscape setting. He wrote that he wanted to study "modern work and picturesque Elizabethan and the like" and that the country house in England were "such as the French in their dreary chateaus or country play houses never dream of."

Frederick Law Olmsted, Sr., the father of American landscape architecture, adapted the English principles of the picturesque to an American style that has been described as the Olmstedian Picturesque. A typical estate layout included winding approach drives, lawns and meadows, massed plantings of trees and shrubs, reflective water features, garden structures, terraces, orchards, vegetables, cutting and ornamental gardens, bridle paths, bridges, and greenhouses, farm buildings, and stables. Peabody & Stearns later worked with the design firm of Frederick Law Olmsted for numerous residential projects.

The Plum Orchard estate layout of the 1910s included a winding approach drive, massed plantings of azaleas, a lawn interspersed with native trees, a reflective water feature, a terrace overlooking the front entrance flanked by palms, a garden of vegetables and cut flowers, and a greenhouse, stables, and other support buildings. Tennis courts east of the house were typical of the Carnegie's interest in recreational spaces and would have been a typical component of the landscape of the American country house, where estate owners entertained guests in the style of a gentleman.[11]

Plum Orchard Carriage House

A carriage house was the only other structure designed by Peabody & Stearns at Plum Orchard. It was constructed before the mansion to house workmen. It sat about 100 yards east-southeast of the mansion and was approached by a service road.

Duck Pond

A pond and rustic footbridge north of the mansion were prominent naturalistic landscape features of the George Lauder Carnegie period. Damning a streambed fed by an artesian well into the deep Floridan aquifer created a fresh water reservoir devoted to water fowl. Lotus (Nelumbo spp.) and water lilies (Nymphaea odorata) were planted in the pond to add horticultural interest. The footbridge over the pond connected the open area north of the mansion with a series of ornamental gardens near the service complex.

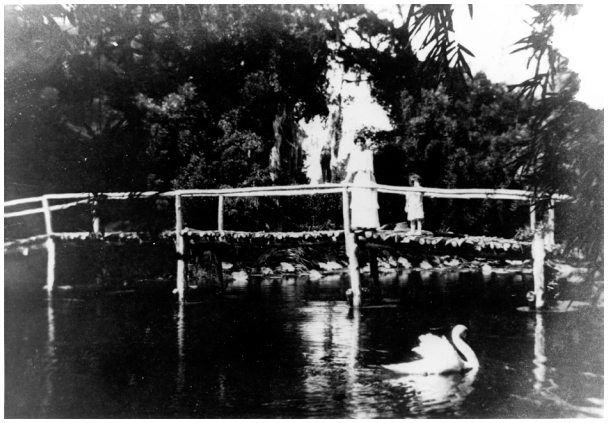


FIGURE 42. Plum Orchard Duck Pond, undated. (CUIS 4642A)

Nancy Carnegie Rockefeller recalled that the Duck Pond could be seen from the north windows of the house:

> There were also two windows overlooking the pond at the back of the house.

Margaret (Retta) Ferguson McDowell recalled "a pond with an arched bridge, and an alligator."[12]

An undated sketch map in the CUIS archives shows that the Duck Pond was 200 feet from the mansion (see Figure 46).

Service Complex

East and north of the Duck Pond, the complex of buildings, laid out in a clustered pattern around a service road, featured garden areas formalized with tightly clipped hedges. A historic image from

11. Ian Firth, *Moses H. Cone Memorial Park Cultural Landscape Report* (Atlanta, GA: National Park Service Southeast Regional Office, 1993), 82-83; Annie Robinson, *Peabody & Stearns: Country Houses and Seaside Cottages* (New York: W. W. Norton & Company, 2010), 20-30; for a more in depth discussion of the pictorial principles in the Country Place Era see Robin Karson, *A Genius for Place: American Landscapes of the Country Place Era* (Amherst: University of Massachusetts Press, 2007), 28-35, 131, 135, 225.

12. Nancy Carnegie Rockefeller, *The Carnegies and Cumberland Island* (Greenwich, CN: privately printed, 1993), 97; James Conaway, "Idyll Threats," Preservation 49 (March-April 1997): 49.

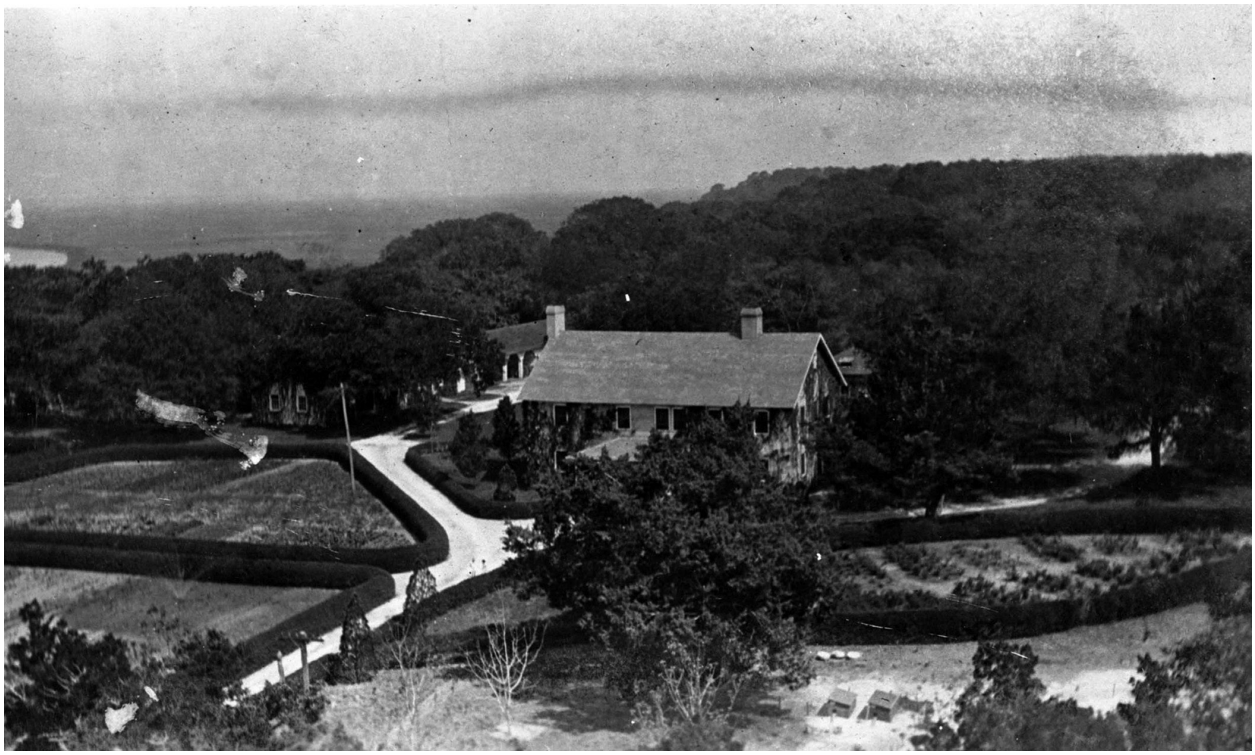


FIGURE 43. Formal garden spaces around the service road, c. 1910s. (CUIS Collection)

c. 1910s shows that within these spaces fruit, vegetables, and flowers were grown before the design of the formal garden in the 1930s. It appears from the image that trees were interspersed along the loop road that linked the buildings. Carnegie family members related that the design of the complex was based on a European farm or ferme ornée, where a country estate was partially laid out according to aesthetic principles and partly as a productive farm.[13]

Structures included in the complex included the supervisor's duplex (sometimes referred to as the gardener's house and seen in the 1910s photograph), housekeeper's cottage (maids' cottage), pumphouse, laundry, powerhouse, water tower, stables/dairy barn, chicken house, electrician's house, servants' quarters/caretaker's house (colored quarters), and greenhouse. An undated sketch map in the CUIS archives shows that the supervisor's duplex, stables, chicken house, and servants' quarters/caretaker's house were laid out on a grid spaced 250 feet apart. These structures were 500 feet from the mansion. The clustering of support structures around a loop road and their formal layout were typical features of historic designed landscapes for American country places as described above. This portion of the property included the Bernardey house and cemetery, which lost all spatial connection when the service complex was built.[14]



FIGURE 44. Water tower, electrician's house, and laundry building, before 1974. (CUIS Collection)

Formal Garden

In 1937, Nancy Carnegie Johnston asked Richard Forester, a landscape consultant from Jacksonville, Florida, for assistance with the design of a "flower garden" at Plum Orchard. An article that she saved from Country Life magazine seems to have been part of her inspiration for a radial version of a five-part parterre garden. Columnist Dorothy Nicholas wrote:

13. Avriett, 8.

14. CUIS archives, 66618, Box 1, Folder 2; Karson, 39.

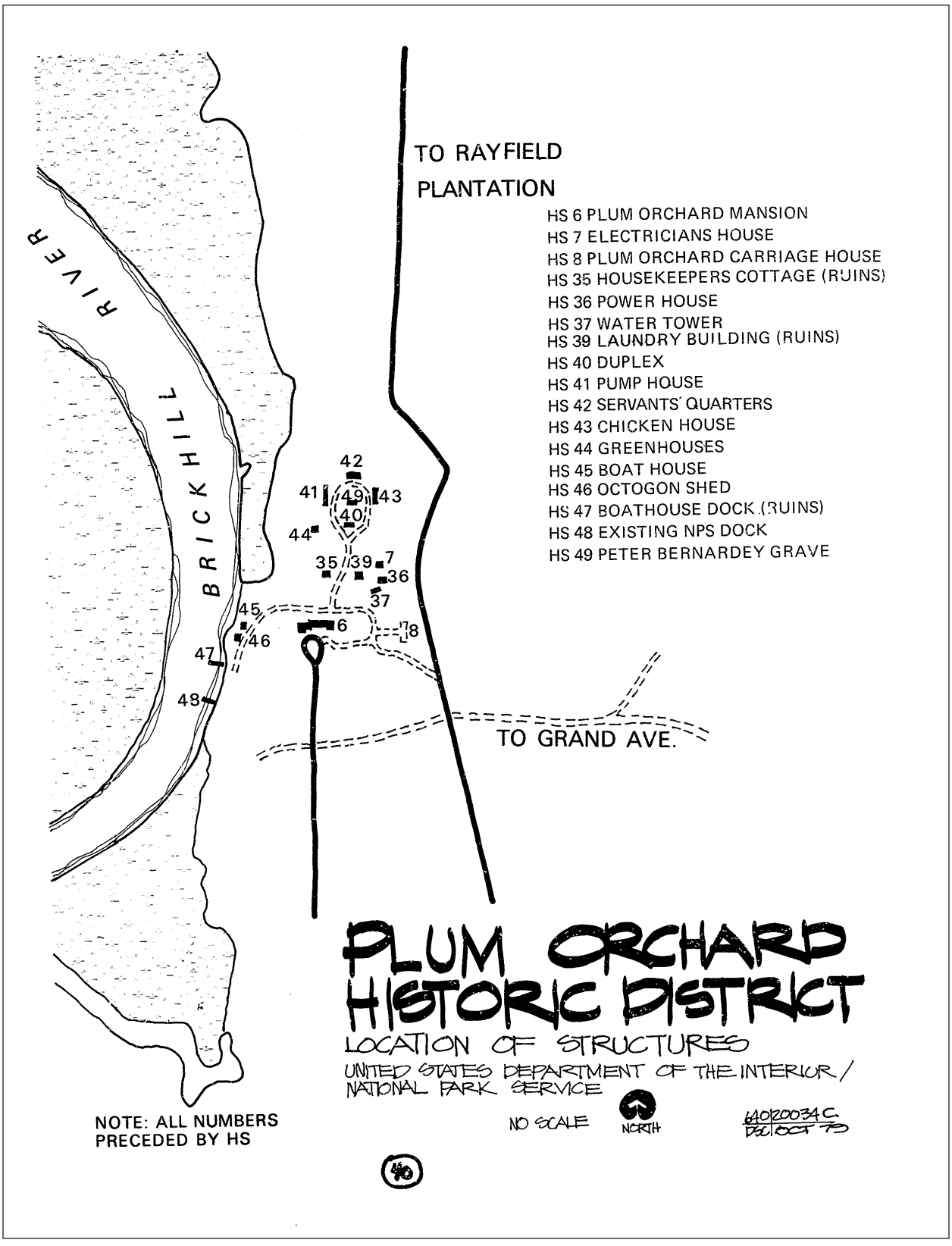


FIGURE 45. Layout of the service complex, as modified by Fielding Link (NPS). Note that HS 41 is the stables/dairy barn not the pumphouse. (Denver Service Center etic 640/20034C)

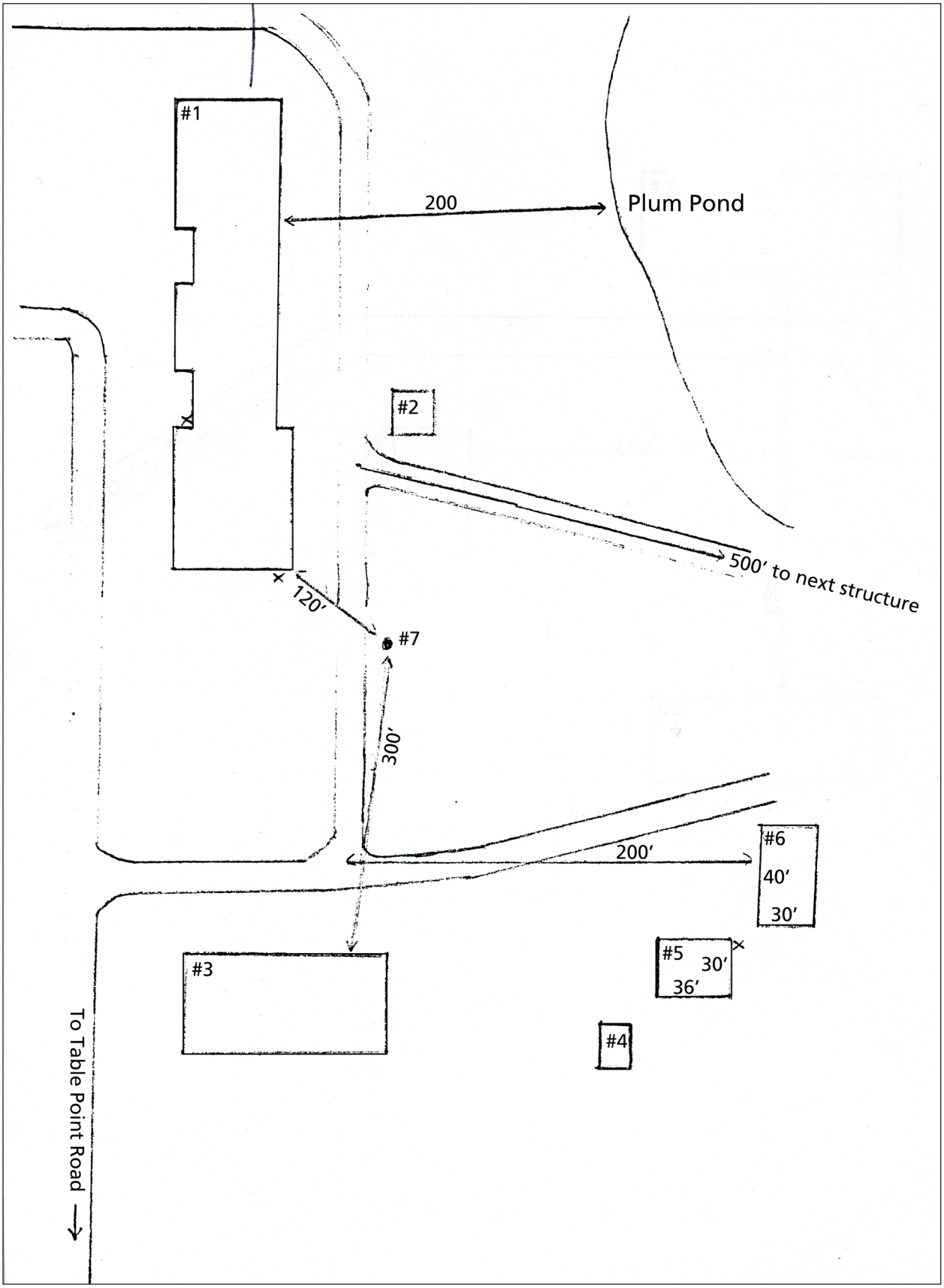


FIGURE 46. Sketch map showing building locations, undated. (CUIS 66618, Box 1 Folder 1)

Concerning the garden illustrated, there was not much to start on in the way of a definite asset. The space itself was a scrubby flat lawn with no particular boundary. There was, however, a lovely view, with two shade trees near the house; these assets had to be incorporated into the general scheme.

First step: A definite knowledge that I wanted a round garden, with a little round pool.

Second: I mapped it out vaguely, but fairly successfully, on paper and in my own mind.

Third: Failed completely in getting it staked out on the ground. Could not get anything plumb or true, nor connect it with my old garden and house. Despair!

Fourth: Called in professional advice. (The late Clarence Fowler, who became my guide, philosopher, and friend.)

Fifth: He had the area surveyed and made a plan drawn to scale. A nice tidy plan, patterned after my general idea, but done with professional skill and correct proportions, tying in the new garden with the house and the rest of the surrounding, and featuring the view by framing it through an arbor!

Sixth: Staked out the garden with the help of Mr. Fowler. It looked so simple when finished which is the way, of course, a well planned garden should look! Yet, often, this is a difficult achievement for the amateur.

One should never scorn asking for professional assistance when "stumped". It saves mistakes, often serious ones, ruining one's enjoyment and one's bank account! Remember, I would never advocate calling in a landscape architect, then going to Europe, to return and see the finished product; that would represent no fun whatsoever. But trained, skilled advice . . . is often invaluable.

Seventh: Hired some laborers and the next few weeks the place looked like a devastated area . . . .

As good soil was conspicuously absent, every cubic inch of dirt, sand, gravel, and stones had to be removed, and good soil and manure carted in.

Eighth: I made a planting plan of a sort and went to work setting everything out according to schedule. That was a good many years ago. I forgot just what I planted, but the effect was pretty good for more or less of a beginner.

Use few varieties of flowers, and repeat, repeat, and repeat. If you do not there will be none of the continuity that makes for the charm of this round garden.[15]

Nancy Carnegie Johnston's surviving correspondence with Richard Forester about the design of the flower garden began in March 1937, when he wrote:

Enclosed please find a roughly drawn sketch for the layout of your flower-garden.

You will notice that the over-all size of the design is 48x48 feet instead of 54x36 feet as staked out last Monday. I made this change after thoroughly studying the proportionate relation of your flower-garden to the general landscape scheme to be developed near your flowergarden.

I trust that the design itself will appeal to you, for even though it is rather simple, you will find that you will be able to work out some very interesting color combinations.

In addition to this you will find that this design will readily lend itself to expansion, which in itself will be an advantage if you decide to have a Rose-garden.

You mentioned something about a Rose-garden last Monday and it occurred to me that it might appeal to you to have your flowergarden surrounded on three side[s] by Roses. (by three sides I mean North, East and South, the arbor would be on the West side)

Your Rose-garden does not necessarily need to occupy a very large area, we might

15. Dorothy Nicholas, "Gardens," *Country Life* nd: 54-55, CUIS archives, 237, 51540.

just design a number of beds and walks that will not only take care of whatever Rose-plantings you have in mind, but also serve as a border for your flowergarden.

Of course, you would still surround your garden with a hedge, but instead of this hedge enclosing just the flower-garden, it would also enclose the Rose-garden; I believe, if you will give the matter some thought, that you will like this idea.

You will note that I have suggested grass for the walks in your flowergarden.

The "Feature" indicated on the sketch can be anything you would like it to be, either a small fountain and pool, a sundial, a gazing-globe or just a bed of flowers.

Please notice that I have not forgotten "shade-trees"! I'm making inquiries about larger specimens of Crabapple.

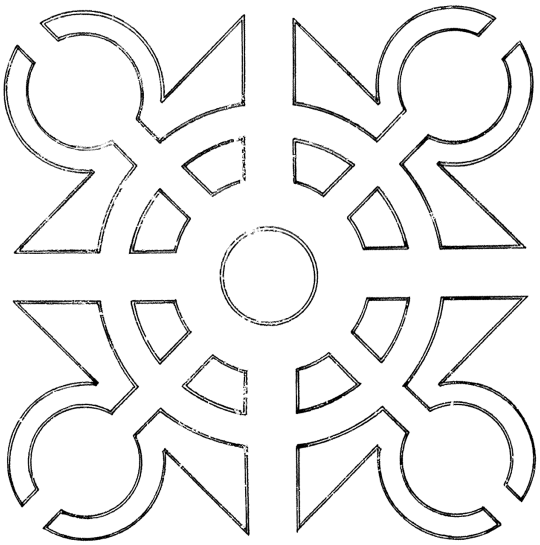
After you have laid out your flowergarden I am inclined to think that you will find that the length of the arbor should be considerably less than originally decided upon.

If you should happen to have any difficulty in laying out your flowergarden, please let me know and I'll be glad to hold Monday March 21 open and see you on that date.

The letter outlined some of the major features of the formal garden as seen in historic images. To date, a copy of the plan has not been found, perhaps because it was described as being a "roughly drawn sketch."[16]

The garden featured a central pool with fountain, around which grass paths radiated like spokes in a wheel. Beds edged with concrete laid out in a symmetrical pattern formed four quadrants on axis with the center, each terminating in a circle. A set of steps led down into the garden from the west, and a cherry laurel hedge enclosed the garden.

Historic images do not show an arbor on the west side as described by Richard Forester in the above correspondence, although Nancy Carnegie Johnston made an inquiry about wisteria for an



Formal Garden Plan Detail, 1984

FIGURE 47. Formal Garden Plan Detail, 1984. (Denver Service Center etic 640/25002)

arbor in 1939. The focal point off the west axis of the garden was the Brickhill River, and she may have intended to frame this view with an arbor.[17]

Coleman Johnston recalled his mother's rose garden as being "behind the fountain." Invoices indicate that fifty-four roses were ordered in 1939 (see Vegetation and Appendix). Richard Forester suggested that roses serve as a border for the "flower-garden," but images of the formal garden from the 1930s focus on the annuals and perennials. Roses cannot be identified in any of these images without speculation. Apparently roses were still being sought for planting in 1941, however, as an invoice for evergreen hollies noted with regret that the nursery did not sell roses.

A garden for cut flowers and vegetables was located north of the formal garden, adjacent to the greenhouses. Coleman Johnston remembered "beautiful strawberries." 500 strawberry plants were set out in the garden in 1939. He also remembered "chicken coops and pheasant pens" near the cutting garden.[18]

16. Richard Forester, Jacksonville, Florida to Mrs. M. E. Johnston, Cumberland Island, March 11, 1937, CUIS archives, 237, 51540.

17. A. E. Wohlert's Nurseries to Mrs. M. E. Johnston, November 4, 1939, CUIS archives 237, 51540.

18. Olson, 38; "Inside My Garden Gate," Invoice Le-Mac Nurseries, CUIS archives 237, 51539.



FIGURE 48. Garden pool and four quadrants, c. 1939. (CUIS neg0060a)



FIGURE 49. Garden pool and four quadrants, c. 1939. (CUIS 5152)



FIGURE 50. Headhouse section of greenhouse with garden beds, c. 1939. (CUIS 4950)



FIGURE 51. Garden beds, c. 1939. (CUIS 4946)

Nancy Carnegie Johnston kept a gardening journal for the years 1937 through 1940. She used a journal called "Inside My Garden Gate: A Record of My Garden Clippings of Interest and My Garden Notes" by Julia A. Latimer, a garden consultant from New York. The journal documents what seeds were planted in the greenhouse, what colors were used, and what did well. She also wrote down what she planted in the quadrants of the parterre and the color scheme (see Vegetation section below for specifics).

At its height, hundreds of spring bulbs were followed by over twenty different kinds of annuals and perennials, whose seed was sown in the greenhouse each fall. Asian lilies and gladiolus were a major component in the larger beds of the parterre. Lilies were also planted in the azalea beds. Calla lilies were ordered during this time, although it is unclear whether they were planted in the garden, around the pond, or just potted up to be brought inside.

The following letter from Richard Forester describes the approach to the garden during the first year:

> I note what you said about the Narcissus, the price of the Narcissus is $75.- Per 1000, I don't know just what the express would amount to but I would prefer to deliver them myself as I would like to show Mr. Thomas just how they ought to be planted, so don't add any express to your check.
>
> Am glad to learn that your garden has been a success this past spring and really I don't see any reason why you could not have plenty of color during October and November if you plant the following items during the late summer months:
>
> Zinnias
>
> Fall Asters
>
> Late Marigolds
>
> Torenia
>
> Amaranth
>
> Salvia



FIGURE 52. Greenhouse, headhouse, and garden beds, c. 1939. (CUIS 4947)

> Tithonia
>
> Petunia
>
> In addition to the above there are many other varieties of annuals that do very well when the plants are put out during the late summer months. Be sure to shade with Palm leaves or any other shadeproducing agency. ALL ANNUAL PLANTS SET OUT DURING SEPTEMBER.

As stated above, the gardener in charge during this time was Mr. Edwin Thomas. His wife, Grace, helped with the house.

Another feature of the garden mentioned by Richard Forester was an "evergreen garden," which he mentioned in both surviving letters to Nancy Carnegie Johnston. In his first letter he states:

> I'm enclosing a picture of a garden laid out by my Grand-father years and years ago. This will give you some idea of a Dutch evergreen garden. Please return picture it's the only one I have.

Later in 1937 he wrote:

> As to your Evergreen Garden I am afraid that a roughly drawn sketch of an intricate design would hardly be practical, these roughly drawn sketches are alright until you have to lay them out on the ground.
>
> If agreeable to you I would rather give this matter some further thought this summer, look around for suitable planting material and submit something definite to you when you return next fall.

No further mention of the evergreen garden has been found. She ordered six evergreen hollies in March 1941, but it is unknown exactly where they were planted.[19]

19. Richard Forester, Landscape Consultant to Mrs. M. E. Johnston, Plum Orchard, March 11, 1937; Richard Forester, Landscape Consultant to Mrs. M. E. Johnston, Plum Orchard, June 9, 1937, 237, 51540; Invoice Le-Mac Nurseries, 237, 51539, CUIS archives; Rockefeller, 279.

Azalea Beds

Nancy Carnegie Johnston mentioned the azalea beds several times in her garden journal, but she did not indicate the location. Southern Indian and Kurume hybrid azaleas were ordered from Gerbing's Azalea Gardens in Amelia City, Florida in 1938. A typical planting of azaleas in the South would have been informal, under pines or other canopy trees. Margaret (Retta) Ferguson McDowell recalled that "in the spring, there were azaleas everywhere." In 1983, Avriett described plantings of azaleas, camellias, and grapefruit flanking the entry drive. His plan also identified azaleas planted north of the Duck Pond (see Figure 41).[20]

Two events in succession played a major role in the development of the garden. First Marius and Nancy Johnston were in a serious car accident on their way to Cumberland Island in 1937, and neither ever fully recovered from their injuries. Invoices and notes in her garden journal stop in 1940. After the United States' entry into World War II in 1941, they never returned to the island.

In 1950, an inspection of the Carnegie holdings on the island described the "yard" and dock at Plum Orchard:

> Yard O.K. Azaleas lovely. One dead limb on big pine. Pine by pool and porch very large. Big tree on pond down. Chester could in course of year cut it up. He is still waiting for man to cut Coley's timber. He could do this himself. I found him once at Plum and then carrying flowers to his house.
>
> Munn trees healthy. Roof on laundry bad. Water tower leaking.
>
> Plum dock fixed up – 4 pilings, 4 cross timbers near shore, new boards.

From the above description, it appears that flowers were still blooming in 1950. The description of the Munn trees refers to Uncle Munn, an employee who took care of the Stafford grounds. He cared for the cedar trees at Stafford, and the Carnegies always referred to them as "Munn trees." Nancy Carnegie Johnston recorded planting a cedar hedge for the "house garden" in 1937, but it is unknown if these were the "Munn trees" referred to above.[21]

There is little documentation about the grounds after 1950. When the NPS took ownership in 1972, the spatial footprint was fractured when some of the ornamental gardens and most of the support

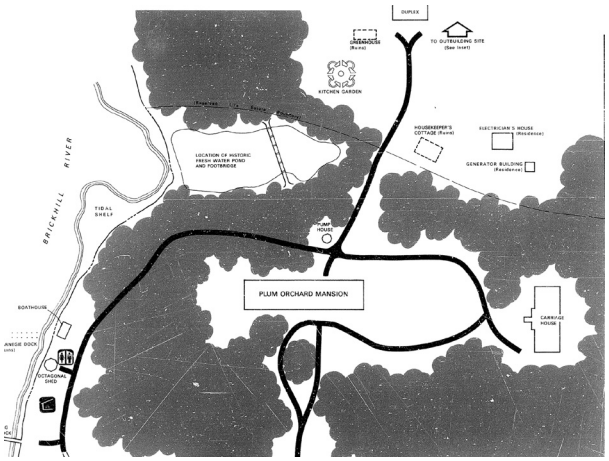


FIGURE 53. Site plan showing reserved life estate boundary, 1984. (Denver Service Center etic 640/40098A; note that housekeeper's cottage is actually the laundry)

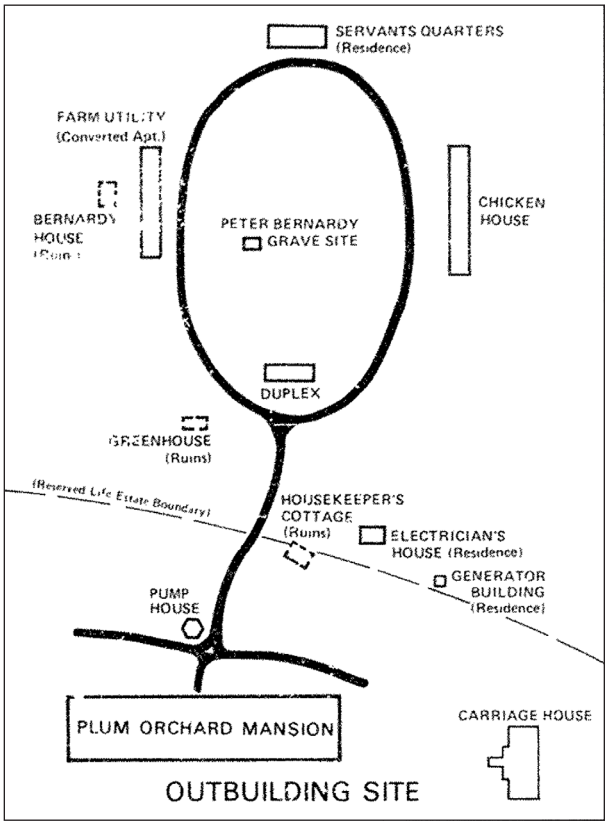


FIGURE 54. Detail from site plan showing outbuildings, 1984. (Denver Service Center etic 640/40098A; note that housekeeper's cottage is actually the laundry)

20. "Inside My Garden Gate," Invoice Gerbing's Azalea Gardens, April 5, 1938, 237, 51539, 51540, CUIS archives; Avriett, 17; *Preservation*, March-April 1997, 49.

21. Rockefeller, 292; "Inside My Garden Gate," 237, 51539, CUIS archives.

structures were included in the two reserve life estates north of the mansion. Images from the 1970s show the garden area was already overgrown with vegetation and the greenhouses falling into ruin (see Figure 121).

During Phase 2 Rehabilitation from 2006 to 2008, the park installed a fire suppression water tank in the area behind the mansion that historically was an open space with trees with views to the Duck Pond. An effort was made by CUIS Chief of Maintenance to tie into the existing artesian well system, but by law, there has to be a known quantity of water available at all times.

Plum Orchard Dock

The Plum Orchard dock complex included a dock, boat house, and octagonal shed.

Vegetation

When Europeans made first contact with American Indians in the mid-1550s, they found plums growing in the villages of these native peoples. These native plums, of which there are many species, were important subsistence fruits for American Indians and were gradually adopted in the orchards of European settlers. The Chickasaw plum, Prunus angustifolia, was among the most palatable and widely grown native plums east of the Mississippi. In the 1700s, the European plum species Prunus institia and its cultivated variety Prunus institia 'Damson' were introduced to American orchards. Thus, a planting of fruit trees at Plum Orchard dating to the 1700s when the name "Plum Orchard" was first seen on a surveyor's map could have been either native or introduced.[22]

Bernardey/Stafford Era, 1823-1881

There are no descriptions of the vegetation during the Bernardey era of occupation. Most of the land was planted in Sea Island cotton. Oak and pine surrounded the cleared cotton fields on the 1802 McKinnon map. An 1870 Coastal Survey map shows the beginning of forest succession in the former cotton fields, clumps of live oak, and longleaf pine woodland and savanna maintained by fire on the island (see Figures 36 and 37).

Carnegie Era, 1882-1972

George Lauder Carnegie Period

"Hammock" and "Pine" are noted south of the old fields area on the 1898 Page/Meador map (see Figure 39). With the Plum Orchard Mansion's construction completed shortly thereafter, George and Margaret Thaw Carnegie began developing their own landscape style. Historic images show the original Plum Orchard Mansion with very scant foundation plantings. Like Dungeness, clipped evergreens were displayed in large terra cotta pots on the main piazza overlooking the front lawn. A few small trees, sago palms, and yuccas were planted near the front entry. The larger setting was park-like, or what landscape historian Robin Karson describes as the Olmstedian Picturesque, with the lawns kept open under large specimen trees and the naturalistic Duck Pond north of the mansion.[23]

The pond was laid out around a number of large live oaks. Historic images show clumps of bamboo along the edges of the Duck Pond. Avriett's historic landscape report compiled in 1983 mentioned redbuds as being interspersed with the bamboo and lotus and water lilies planted in the pond. Calla lilies were described as growing around the Duck Pond and were associated with both Nancy Carnegie Johnston and her daughter Lucy Johnston



FIGURE 55. Park-like character of Plum Orchard landscape, c. 1900. (CUIS 51149/51153)

22. Susan Dolan, *Fruitful Legacy: A Historic Context of Orchards in the United States, with Technical Information for Registering Orchards in the National Register of Historic Places* (Washington, D.C.: National Park Service, 2009), 19-23.

23. Karson, 131.

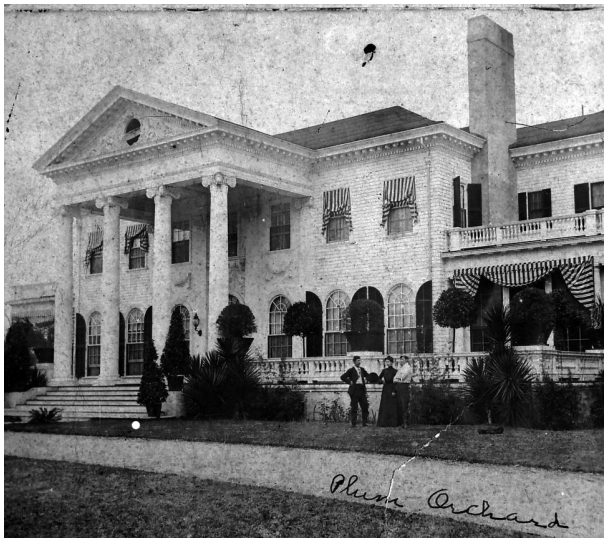


FIGURE 56. Clipped evergreens in pots, c. 1900. (CUIS 4332)

Graves. Nancy Carnegie Johnston included calla lilies in her list of bulbs that do well in the south, as well as in her list of white flowers. She ordered calla lilies yearly from 1937 through 1940.[24]

After the completion of the additions to the mansion in 1907, the Carnegies added Canary Island date palms to the landscape. Two were planted at the front entry and another was placed near the junction of the entrance drive and the spur road to the east that was lined with cabbage palms and southern magnolias. Pindo palms (Butia capitata) flanked the front piazza. Foundation



FIGURE 57. Duck Pond and bridge, 1939. (CUIS 51592)

plantings of broadleaved evergreens, fig vine, and sago palms along the east and west pavilions and porticoes can also be seen at this time in historic images. It is not known when they planted the allée of cabbage palms and six Italian cypresses along the entry road, but this would have been a prominent design feature.

According to family members, there was a garden at Plum Orchard during this time. Nancy Carnegie Rockefeller, who visited Plum Orchard regularly, remembered:

> Plum Orchard had a very good garden and Frank McLauren was the head gardener and lived in the double house with the chauffeur, Frank Lynn, until he took over Mr. Page's job.[25]



Figure 58. Canary Island date palms at the front entrance, c. 1913. (CUIS 5262)

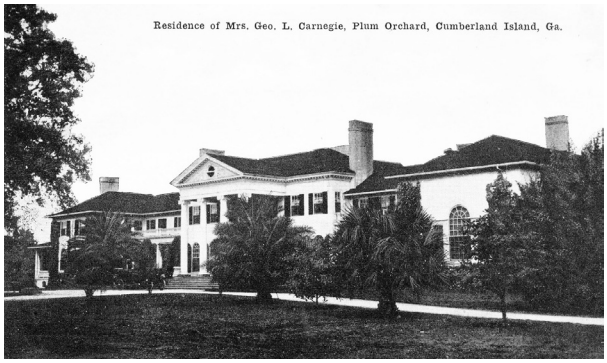


FIGURE 59. Palms and magnolias along spur road, c. 1915. (CUIS 51592)



FIGURE 60. Broadleaved evergreens and fig vine, c. 1915. (CUIS 4616)

24. Olson, 38; "Inside My Garden Gate," CUIS archives 237, 51539; Avriett, 18.

25. Rockefeller, 98.



FIGURE 61. Entrance road and palms, 1978. (CUIS 4670)

Surviving invoices from 1904 indicate that vegetables and sweet peas were ordered from the same companies that furnished the seeds for the Dungeness gardens, R. & J. Farquhar of Boston and J. M. Thorburn of New York. Included in the garden were nineteen different vegetables (see Appendix A for list). By 1906, however, the invoices included vegetables, annuals, and bulbs, including jonquil, anemone, gladiolus, sweet pea, zinnia, marigold, petunia, ageratum, straw flower, calendula, candytuft, and gaillardia (see Appendix A for list). As stated earlier, these gardens were most likely located southeast and southwest of the supervisor's duplex, as shown in a historic image from c. 1910s (see Figure 43). The image also shows clipped evergreen hedges enclosing the gardens and specimen conifers within the supervisor's duplex hedge. Later, the location of annuals, perennials, bulbs, and roses shifted to the formal garden designed in the 1930s.[26]

Nancy Carnegie Johnston Period

Nancy Carnegie Johnston was the chief architect of the Plum Orchard gardens. Inside her garden journal ("Inside My Garden Gate") she recorded exactly what was planted and even made notes about which seeds did not germinate and which annuals did not do well. She had a definite color scheme in mind for the quadrants of the formal flower garden and carefully planned color combinations. Since their time at Plum Orchard did not extend into the hot summer months, pastel spring colors and white dominated.

House Garden. In an area she referred to as the "House Garden," Nancy Carnegie Johnston planted a cedar hedge in November 1937. She also moved a large holly and a clump of small ones, planted three white crape myrtles, one sparkleberry, delphiniums, and daylilies.

Annuals and Perennials 1937. In the greenhouse in November 1937, seeds of the following were sown:

Carnation – pink, white, deep salmon

Snapdragon – pink, white, copper

Dianthus – white, salmon

Cape bugloss – blue

Italian bugloss – gentian blue

Baby Blue Eyes – light blue

Pot marigold - yellow

Chrysanthemum

Sea dahlia – pale yellow

Stokesia - blue

Ageratum - blue

Larkspur – white, pink

Sweetpeas – white, pink, blue, rose

Cleome- rose

Batchelor Buttons - blue

Cat mint – blue

Verbena – lavender blue

Clearly a palette of pink, white, blue, and yellow annuals was being used in the garden at this time with splashes of salmon or copper. These annuals also conform to a list she compiled of "plants that do well in the South" (see Appendix for list). It appears that staff planted these seeds in the greenhouse for the new formal garden that was completed in the spring of 1937.

Formal Flower Garden Scheme. In her garden journal, Nancy Carnegie Johnston described one planting scheme of the quadrants or "circles" as she called them of the formal garden. Names are transcribed directly from her journal. See Appendix for complete common and scientific names.

26. Carnegie Estate Records of Cumberland Island, ac 1969-0501M, Box 64, Georgia Archives.

Scheme A- two complete circles

Orange hemerocallis (on hand)

100 yellow Dutch iris (4 clumps of 25)

100 mixed rununculas (4 clumps of 25)

The following were grown from seeds:

Lavender stock

Cream stock

Lavender verbena

Purple petunias

Russell lupines

Lavender stokesia

Pale pink carnations

Scheme B- two complete circles

12 miniature dahlias (6 to each circle) – ordered 3 'Baby Royal', 3 'Coralette', 2 'Fairy', 2'Goldina', and 2 'Irene' from Henry A. Dreer's nursery catalogue

24 lemon lilies (clumps of 6)

100 bronze Dutch iris (clumps of 25)

The following were grown from seeds:

Gerbera daisies

Pansy

Chinese delphinium

Verbena – cream

Anchusa

Myosotis

Dianthus – coral

Stock – cream, copper

Lupines – terra cotta

Ageratum

Canterbury bells – blue and white

Four small beds with white hardy carnations

Four small beds with white ruffled petunias

This scheme as documented featured one side of the formal garden planted in lavender, pink, and yellow colors and the other side planted in cream, blue, and bronze/coral colors.

1938. She ordered eight different varieties of gladiolus (over 200), which she divided into three groups, and 100 regal lilies. The glads were to be planted a week or so apart according to groups. She indicated that these were to be planted in rows for cutting, so they were probably planted in the garden adjacent to the greenhouse. The regal lilies were to be planted in the azalea beds. She noted that seed of alyssum and nemophila that were sown should go in the "border."

Results 1938/1939. Her recorded results of bulbs and annual and perennial seed sown in the greenhouse and planted in Fall 1938 for bloom in Spring 1939 are listed below and in the appendix:

Grape hyacinths - 300

Early small daffodils - 200

Daffodils - 200

Snow drops - 200

All the above came from Mrs. Anderson in Augusta, Georgia, and reported to be "no good."

She ordered two tulips:

'The Bishop' – 100 – for flower garden - good growth, poor color (lavender)

'Prince of Orange' – 50 – pots for dining room – no good

She planted the grape hyacinths, daffodils, and 'The Bishop' tulips in the formal garden in the following pattern:

Each circle (her description of each quadrant ending in a circle) got 25 tulips, 50 large daffodils, 50 small daffodils, and 75 grape hyacinths. Since each circle was split into two large beds forming an arc and two smaller beds, each bed got 12 tulips, 25 large daffodils, 25 small daffodils, and 37 grape hyacinths. She further broke down each group of

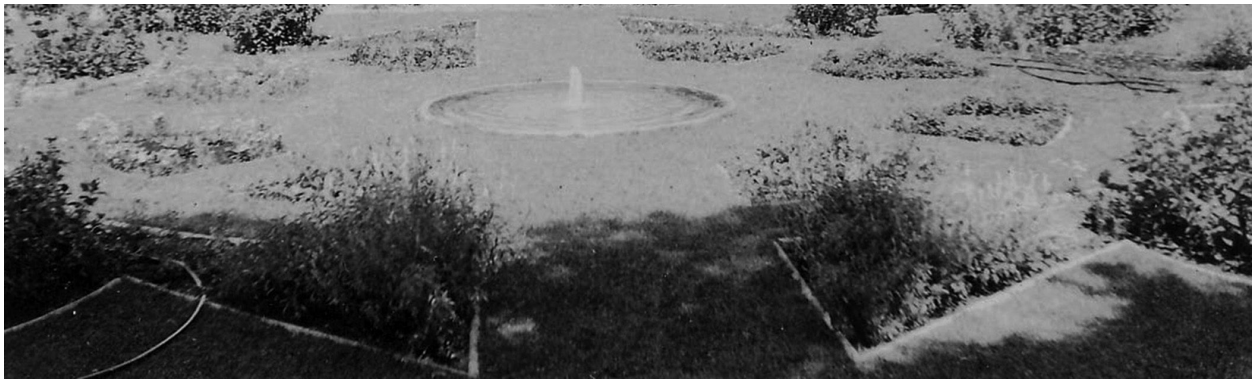


FIGURE 62. Formal garden parterres planted with annuals and perennials, c. 1939. (CUIS 5152_detail)

bulbs, keyed to a plan, but the plan has not been found. The lavender tulips, yellow daffodils, and purple grape hyacinths would have combined well in the garden had their performance been better.

She also noted that the spaces between the bulbs should be filled with small plants for later bloom. In the same entry, she asked for the date of bloom of the red bud tree and pansies to be recorded. It is unknown where the snowdrops were planted.

1939. The 1939 garden featured 500 daffodils. Other bulbs included numerous lilies, ixias, hyacinths, irises, tulips, and glads (see Appendix B for complete list). 350 pansies and over 20 different annuals were planted. Those whose location was given are listed below:

Formosa lily

Planted at Rose Garden entrance

Henry's lily

3 planted each side of seat in Formal Garden

Tiger lily

3 planted each side of entrance steps

Double tiger lily

3 planted each side seat in small garden

Coral lily

'Golden Gleam' – planted at orange tree entrance

Hyacinths

'L'Innocence' – 25 in bed in small garden

'King of the Blues' – 25 in bed in small garden

Dutch Iris

Planted border of pool

12 'Jacob de Wit'

12 'Leonardo da Vinci'

Tulips

Planted in Formal Garden – November 1939

'Yellow Giant' – 50 each side of entrance

'Rev. Eubanks' – 4 small beds – violet

'Zwanenburg' – 4 small beds – white

'Rev. Eubanks' – 50 each entrance – violet

Planted in Rose Garden – November 1939

'Clara Butt' – border

'Pride of Harlem' – border

'Salmon Rose'

'Carmine'

Spanish Iris

'Golden Wonder' – planted by cedar by pool – December 1939

Gladiolus

Planted in the Vegetable/cut flower Garden

'Picardy' – apricot

'Charles Dickens' – Blue

'Maid of Orleans' – white

Planted in the corners of the Formal Garden

'Pelegrina' – deep blue

'Gold Finch' - pale yellow

'Commander Koeh' – dark scarlet

'Betty Nuthall' – pale bronze

'Dr. Bennett' – scarlet

'Mammoth White' – white

In a 1939 article about gladiolus, the following was written:

> When such outstanding varieties as "Picardy," the most popular of the "glads," and "Pelegrina," a lovely deep blue colored one, can be purchased for 50 cents a dozen, why plant inferior old-fashioned varieties.
>
> Other outstanding varieties that are reasonably priced are:
>
> "Betty Nuthall," a charming pink flower, overcast with orange and opening several large florets at once on tall stems; "Marmora," beautiful coloring of smoky lavender; "Minuet," one of the finest of the lavender colored, and "Mrs. P. W. Sissons," a lovely ruffled pink.
>
> If you have never tried growing white flowering gladiolus, let me urge you to plant a few of this collection. You will enjoy their chaste beauty, and they will bring a new kind of "glad" beauty into your garden. Try "Mammoth White," a variety that bears enormous flowers, or "Albatross," with even larger flowers of a glistening, pure white.

Another article written in 1941 described the changes in the most popular glads:

> Here in order of preference is the list for 1934: Picardy, Minuet, Marmosa, Betty Nuthall, Commander Koehl, Mildred Louise.
>
> And here are the leaders five years later: Picardy, Minuet, Maid of Orleans, Commander Koehl, Vagabond Prince, and Pelegrina.[27]

Also in 1939, Nancy Carnegie Johnston noted that an orange tree had been transplanted in the garden border. The invoice for another orange tree was dated April 6, 1940.

The 1940 garden featured over 400 pansies and 13 different annuals and perennials (see Appendix B for complete list). It was probably anticipated that many of the bulbs planted in 1939 would return, although it is doubtful that the tulips rebloomed. She noted in her journal that gladiolus, calla lily, iris, Madonna lily, and ranunculus did well in the South.[28]

Roses. Roses for the garden came from Burns Nursery & Flower Garden located in Wills Point, Texas. The 1939 order included:

6 'Ami Quinard'

6 'Caledonia'

6 'Dainty Bess'

6 'Golden Opelia'

12 'Pres. Hoover'

6 'Etoile de Hollande'

6 'Souv. de Claudius Pernet'

6 'Tallisman'

The exact location of the Rose Garden is unknown, although Coleman Johnston recalled his mother's rose garden as being "behind the fountain." Historic images do not show plantings beyond the formal garden beds. Mrs. Johnston noted the Rose Garden as the location of tulips and lilies in 1939 (see above).[29]

Azaleas. G. G. Gerbing of Gerbing's Azalea Gardens located in Amelia City, Florida, wrote

---

27. Merton G. Ellis Bulb Garden, Canby, Oregon, 1941 Bulb Catalogue.

28. "Inside My Garden Gate," Trueman Fertilizer Company Invoice, 51539, CUIS archives; Hazel Moyle, "Plant New, Striking Varieties of Gladiolus," *The Deseret News*, May 11, 1939, p. 21; *The Milwaukee Journal*, August 17, 1941, p. 63.

29. Burns Nursery & Flower Garden to Mrs. M. E. Johnston, October 18, 1939, CUIS archives, 237, 51540; Olson, 38.

Nancy Carnegie Johnston in April 1938 that the following azaleas could be delivered to Cumberland Island. The letter indicated that Mrs. Johnston had made a visit to the nursery, but that G. G. Gerbing was not there when she visited. The letter also referred to her accident.

'Fielders White' – Southern Indian hybrid (*Rhododendron* 'Fielders White')

'Lawsal' – Southern Indian hybrid (*Rhododendron* 'Lawsal')

'Salmon Prince' - Kurume hybrid (*Rhododendron obtusum* 'Salmon Prince')

'Salmon Beauty' - Kurume hybrid (*Rhododendron obtusum* 'Salmon Beauty')

'Yaye-Giri' - Kurume hybrid (*Rhododendron obtusum* 'Yaye-Giri')

The letter had a note written at the bottom that the azaleas were to be ordered in the Fall of 1938. Mrs. Johnston ordered 100 Regal lilies for "azalea beds" in November 1938.

Azaleas were recorded as plantings north of the Duck Pond and flanking the entrance drive in Avriett's 1983 landscape study. Lilies would most likely have been planted in areas that received the most sun, and since most of Mrs. Johnston's orders were for the formal garden, the azalea bed west of the flower garden may have been the location of the lily planting.[30]

Italian rye was typically sown in the garden in November. Panels of grass flanked the formal garden on the north and south.

Articles from garden writers like Elizabeth Lawrence, Helen Van Pelt Wilson, and Julia Lester Dillon were routinely clipped from major horticulture magazines like House and Garden and Flower Grower on subjects of particular interest. Examples include articles on vines for southern gardens, dahlias, delphiniums, azaleas, and chilling tulip bulbs.

Documentation for the garden ends in 1940. 1941 marked the entry of the United States into World War II. Nancy Carnegie Johnston never returned to Cumberland Island after the war. Without her careful oversight, the gardens gradually declined, as Plum Orchard shifted from a winter home to a vacation home for the Johnston descendants.

Images from 1957 show immature Canary Island date palms interplanted with the Italian cypresses along the entry drive. It is unknown when these palms were added to the landscape. No images have been found of this portion of the entry drive prior to the 1950s. The 1957 images show broadleaved evergreen foundation plantings, one crape myrtle, and vines along the west portico of the mansion. Other images from the 1960s and 1970s show increasingly overgrown foundation plantings along the west pavilion and portico and missing foundation plantings along the remainder of the south elevation, with the exception of the four palms.



FIGURE 63. Entry drive, 1957. (CUIS 23)



FIGURE 64. West portico, 1957. (CUIS 203)



FIGURE 65. Plum Orchard Mansion, 1960s. (CUIS 5556)

30. G. G. Gerbing to Mrs. M. E. Johnston, April 5, 1938, CUIS archives, 237, 51540.

When the NPS acquired the property in the 1970s, the evergreen foundation plantings had overgrown the west pavilion windows and saw palmetto had invaded the sago palms at the west portico. An oleander was growing besides the north portico. The NPS removed the evergreen foundation plantings on the south elevation, leaving one crape myrtle at the west pavilion and the sago palms at the west portico.



FIGURE 66. Plum Orchard Mansion, 1975. (CUIS 4250)



FIGURE 67. West pavilion and portico, 1979. (SERO Collection)



FIGURE 68. West pavilion and portico with crape myrtle, 1984. (SERO Collection)

Topography

Duck Pond

The Carnegies created the Duck Pond by constructing a levee running north-south on the eastern edge of the river. The levee formed a broadly rectangular shaped west end to an otherwise irregular shaped fresh water reservoir to the east. Water from an artesian well into the deep Floridan aquifer fed the pond.

Brickhill River

The Brickhill River was deep enough to accommodate large vessels, such as the Cumberland Queen, a 64.5-foot ferry that made bi-monthly stops at Plum Orchard into 2012. Since the Land and Legacies van tour that stops at Plum Orchard departs from Sea Camp, there was no longer a need for the ferry to stop at Plum Orchard.

The Plum Orchard Historic District contains two prehistoric middens sites along the Brickhill River (Plum Orchard Midden and the Tabby House Midden) and the Plum Orchard Sand Mound. In later years, middens provided level platforms on which a house could be built, a solid base for the



FIGURE 69. Duck Pond, 1939. (CUIS 51592)



FIGURE 70. Duck Pond, 2000. (SERO Collection)



FIGURE 71. Levee with river to the left and Duck Pond to the right, 2000. (SERO Collection/Bob Blythe)

Main Road system running the length of the island, and tabby for house and wall construction.[31]

Erosion at Brickhill River

Plum Orchard's location on the outside bend of the Brickhill River played a significant role in its topography historically, as large tidal fluctuations made the shoreline naturally vulnerable to erosion that eventually required intervention. The Chief of Maintenance reported in 1984 that erosion was not a problem, but by 1992, the construction of a seawall was needed to stabilize the shore, which was being undermined by the swift currents of the Brickhill River. Erosion threatened the octagon shed and boathouse.

Subsurface reconnaissance prior to subsurface testing for the seawall revealed a midden that extended north of the octagon shed in the eroding bank. It was apparent that the midden at its southern point had been partially destroyed when the historic dock was built and had also been disturbed by the construction of the octagon shed. It was hoped that the construction of the seawall would protect the archeological remains from erosion into the Brickhill River. Borrow that was dredged at the south end of the island by the Corps of Engineers filled the area between the bulkhead and the bank, but erosion continued to be a problem.[32]

Drainage/Sewer System

The original sewer line emptied into the Duck Pond. It was later rerouted directly into the Brickhill River. The installation of a septic system occurred in 1983.

The original drainage system consisted of a tile drain line that extended from the back center of the mansion around to the west side of the house. It flowed into the old sewer system, which emptied into the Brickhill River.

At the carriage house, two 30-inch brick manholes with cast iron covers serviced a 6-inch terra cotta drain tile that conveyed stable wastes to an unknown location. Water was probably supplied by the pumphouse behind the mansion, as there is no pumphouse at the carriage house.[33]

By 1992, the existing drainage system around the Plum Orchard Mansion had collapsed. Water overflowed from the collapsed system and settled around the foundation causing moisture problems. The installation of a new underground drainage system occurred in 1992. Initial shovel tests conducted around Plum Orchard Mansion

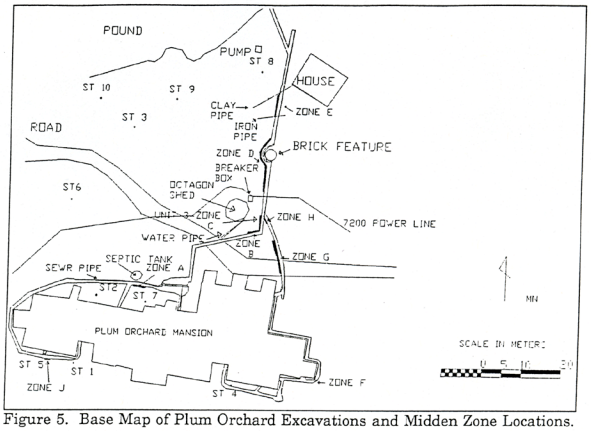


Figure 5. Base Map of Plum Orchard Excavations and Midden Zone Locations.

FIGURE 72. Base map of Plum Orchard excavation, 1992. (SEAC image)

indicated prehistoric midden remains were present 1.5 meters from the house foundation.

31. Ehrenhard, *Assessment of Archeological and Historic Resources, 31, 52-53.*

32. Chief of Maintenance, CUIS to John Murphy, Denver Service Center, March 13, 1984; Chief, Investigation and Evaluation Section to Chief, Southeast Archeological Center, May 5, 1992.

33. Chief of Maintenance, Cumberland Island National Seashore to John Murphy, Denver Service Center, March 13, 1984, Box 2, CUIS archives; David G. Henderson, *Architectural Data Section Historic Structure Report Plum Orchard Carriage House* (Denver: Denver Service Center, 1977), 21.

To avoid any adverse impacts to the midden, already disturbed by construction and general occupation activities, the plan to direct water away from the mansion focused on following the routes of existing drain, power, sewer, and water lines, so that all drain lines could be run down one trench to the pond instead of the initial proposal of three trenches to the pond. At the edge of the pond, a cast iron pipe was located that appeared to be oriented towards the mansion, so the trench was excavated along its path.

Three drain lines serviced the house—one drained the west front and side, one drained the east front and side, and one diverted water from the back of the house. They converged north of the road and followed the route of the cast iron pipe from the Duck Pond, continued along the east side of the pumphouse and emptied into the Duck Pond, diverging just west of the end of the cast iron pipe.[34]

Buildings and Structures

Bernardey-era Resources

Bernardey Walled Cemetery

A tabby brick and clay brick wall about two feet high surrounds two internments. The grave of Peter Bernardey (died 1827) is marked by a horizontal slate marker. The other grave is unmarked but believed to be that of his mother, Marguerite. The cemetery wall dates to 1853, when Robert Stafford was paid to replace the original wall to include the grave of Marguerite Bernardey. Stafford also built the original wall after the death of Peter Bernardey.[35]

Bernardey House (ruin)

The ruins are actually the foundation system for a rather substantial dwelling—probably a two or a one-and-one-half story frame building—to which a porch was added at a later date. The ruins reflect characteristics typical of late eighteenth-century and early nineteenth-century building technologies. The upper surfaces of the walls do not reveal the existence of beam pockets or remnant elements pertaining to a wooden floor system. However, the surfaces are level with grade, supporting the contention that a superstructure existed at one time above the foundation. The foundation's thickness accounts for the assumption that it supported a sizeable space.

The foundation's building material is tabby, a cementitious material made of lime, sand, and crushed oyster shell. Test excavations carried out



FIGURE 73. Peter Bernardey's grave, 1975. (CUIS 4271)



FIGURE 74. Bernardey walled cemetery, 1994. (SERO image)

34. Ken Wild, "An Archeological Research Design for Testing Prior too Installment of a Drain System and Seawall at Cumberland Island National Seashore," Tallahassee, FL: Southeast Archeological Center, January 1992; Chief, Investigation and Evaluation Section to Chief, Southeast Archeological Center, May 5, 1992, Box 2 and 3, CUIS archives.

35. Bullard, *Robert Stafford*, 108-121, 130; Bullard, P*eter Bernardey*, 93.

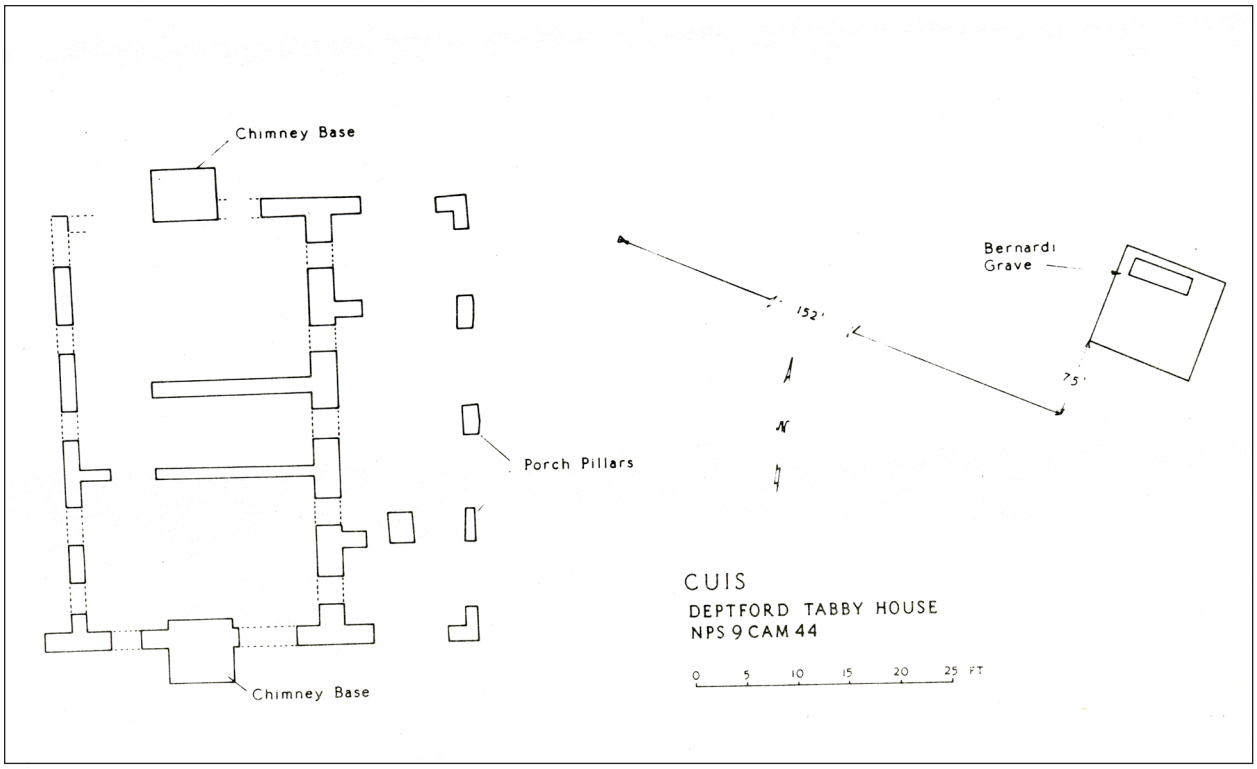


FIGURE 75. Plan of the relationship of the Bernardey House ruin and the Bernardey walled cemetery, 1976. (SEAC image)



FIGURE 76. Bernardey House foundation, 1994. (SERO Collection)

by SEAC revealed that the structure was built on an aboriginal shell midden adjacent to the Brickhill River. Due to the large quantity of Deptford ceramics and other midden material within the tabby matrix, the structure is sometimes referred to as the Deptford Tabby House. The LCS record's construction date is 1823-27.[36]

Carnegie-era Resources

Plum Orchard Mansion

Peabody & Stearns' design for the original structure was a two-and-one-half-story frame, hip-roofed Georgian Revival mansion set on a raised piazza constructed in 1898. The entrance portico was of the Roman Ionic style with richly ornamented capitals and pediment. Two chimneys off-center at the east and west walls and one chimney centered on the north wall were plastered.

Outer retaining walls of brick covered with cement plaster were 5 ft-6 in. above grade and battered back ½ in. per foot. 30-ft-wide entrance steps were flanked by 2-ft-wide cheek walls, also of plastered brick. Flanking the steps in the retaining wall on each side were two segmental arch openings with wrought iron grilles at the openings of ventilation tunnels to the basement.

Along the front wall of the piazza flanking the entrance portico and returning to the house wall were wood balustrades. At the end and centers of the balustrade, paneled piers carried 2-ft-high terra cotta urns. The original piazza floor was wood on wood frame. A 9-in.-high molded cement belt-course extended around the entire house and piazza.

At each end of the house, flush with the front and rear wall corners, were identical Doric porticoes, with triple columns at the outside corners and an engaged column and pilaster at the house

36. Architecture Conservator to Chief, SCRPS, April 25, 1986; draft CRMP, 73; Ehrenhard, *Assessment of Archeological and Historic Resources,* 73-76.

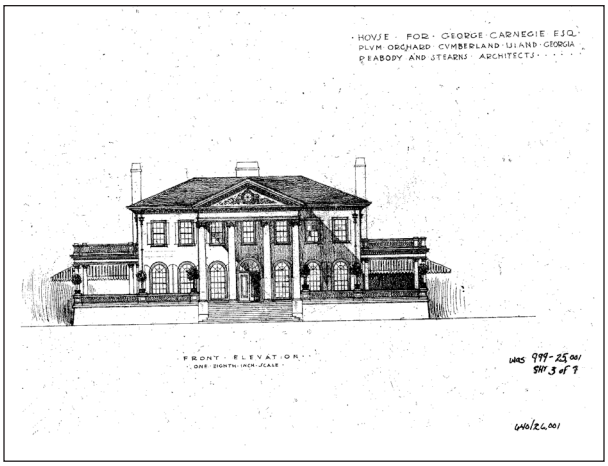


FIGURE 77. Peabody & Stearns elevation, c. 1898 (Denver Service Center etic 640/26001)



FIGURE 78. Plum Orchard Mansion, c. 1898 (CUIS Collection)

corners. The cornices were surmounted by wood balustrades, similar to the piazza balustrade but with different baluster profile. This same portico design was followed in other porches built with later additions to the house.

The original exterior walls were finished with clapboards with a 4-inch exposure except at the front wall under the portico, where flush boards were used. The roofing material was wood shingles. At the roof edges were built-in gutters lined with copper connecting to leaders with elaborate bronze leaderheads and brackets.

A tilting fan light surrounded by a molded architrave with a top center volute surmounted two French entrance doors. Double-hung windows of similar design flanked the doors. Elaborate garlands over the doors and swag ornaments on plaques over the two windows flanking the doors were executed in molded plaster. All front windows except those under the portico had slatted wood shutters.

The west wall under the portico contained three single-leaf French doors surmounted by a tilting fan light sash and a molded architrave similar to the detail used at the front wall. It is likely that the east elevation of the original house was identical to the west elevation.

The east section of the original north elevation was demolished in the second addition, so what this elevation looked like is hard to say, since changes drawn on the original design sketches did not include the rear elevation.[37]

First Addition

According to historical architect Craig Frasier, who wrote a historic structure report in 1986, it is likely that the symmetrical purity of the original design, which constrained the interior spaces, was abandoned to add a northeast kitchen wing. Because of various later additions and alterations, the exact configuration of the first addition is hard to determine, but it was a two-story element that extended about 32 feet past the original north rear wall and ran 20 feet east. The east wall probably had a servants' porch in the northeast corner, with Doric column and pilasters, cornice, and balustrade similar to the original east and west porticoes. Centered on the wall were three double-hung windows at the first and second floors. These were the same as the windows at the front (south) wall and the west wall of the original house. At the basement level, four double-hung windows centered on those above.

The west wall of the addition apparently contained windows of similar size and design at all three floors to those in the east wall and placed symmetrically with the latter. The south wall first floor fenestration is uncertain. It may have had a high round head fixed sash as noted on one drawing, similar in design to windows flanking the portico, and in the center of the wall. At the second floor there was a double-hung window similar to the other second floor windows and centered in the wall.

The walls were probably clapboard and the roof finished with wood shingles, matching the original house. Details such as the cornice gutters and leaderheads were probably the same as the original house.[38]

37. C. Craig Frazier, *Historic Structure Report Architectural Data Section for Plum Orchard Mansion* (Denver: Denver Service Center, 1986), 205-208.

38. Ibid, 208-212.

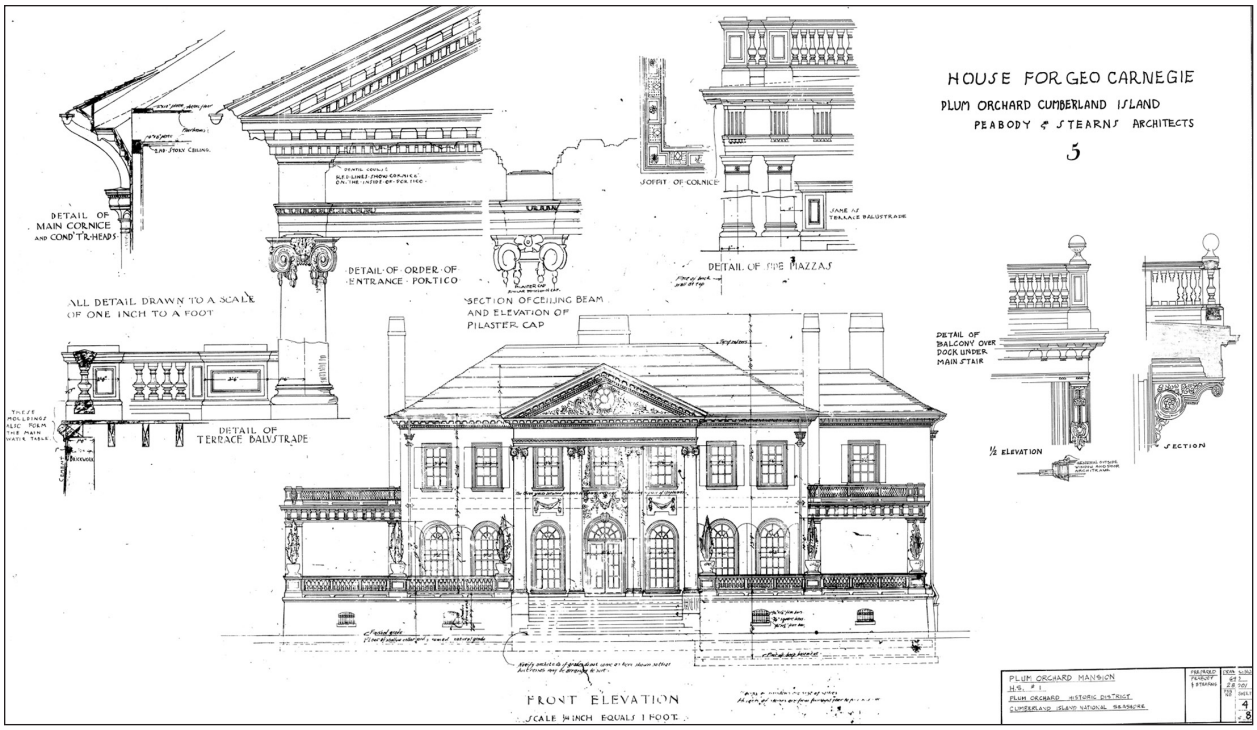


FIGURE 79. Peabody & Stearns elevation, c. 1900. (Denver Service Center etic 640/28001 sheet 4)



FIGURE 80. Plum Orchard Mansion, c. 1900. (CUIS 51194)

1902/04 Addition

In 1902, the George L. Carnegies advised Peabody & Stearns of their desire to enlarge Plum Orchard. Architectural drawings and correspondence indicate that their primary intention was to enlarge the entertaining capacity of the mansion. The second addition created an exponential change in the footprint of the mansion, extending the overall length of the building to 240 feet. The main feature of this enlargement was the addition of pavilions on the east and west ends that projected south of the original main facade of the house. New balustraded piazzas extended from the original ones at the southeast and southwest corners of the new pavilions, as did flat-roofed, balustraded Doric porticoes, all details and dimensions identical with the original designs. The piazza floors were probably finished with the integrally colored concrete squares that exist today.

The east pavilion contained a swimming pool and squash court connected at the east side to a low half-hipped element containing dressing rooms. The west pavilion included a portion of the living room at the first floor level and a part of the master suite at the second level. Beyond the pavilion extended a half-hipped covered piazza identical in outline to the low element east of the swimming pool. The west addition included a hyphen connecting element extending west from the original house to the west pavilion. Other changes included reorganizing the former living room/gun room combination into a large library, enlarging the dining room, redesigning the service stair hall, adding an elevator, and increasing bedrooms on the second story. Finally, the clapboard exterior was replaced with cement plaster.

Initial designs by architects Peabody & Stearns preserved the exterior symmetry of the structure, but they were notified by estate manager William Page that Mrs. Carnegie wanted to break up the

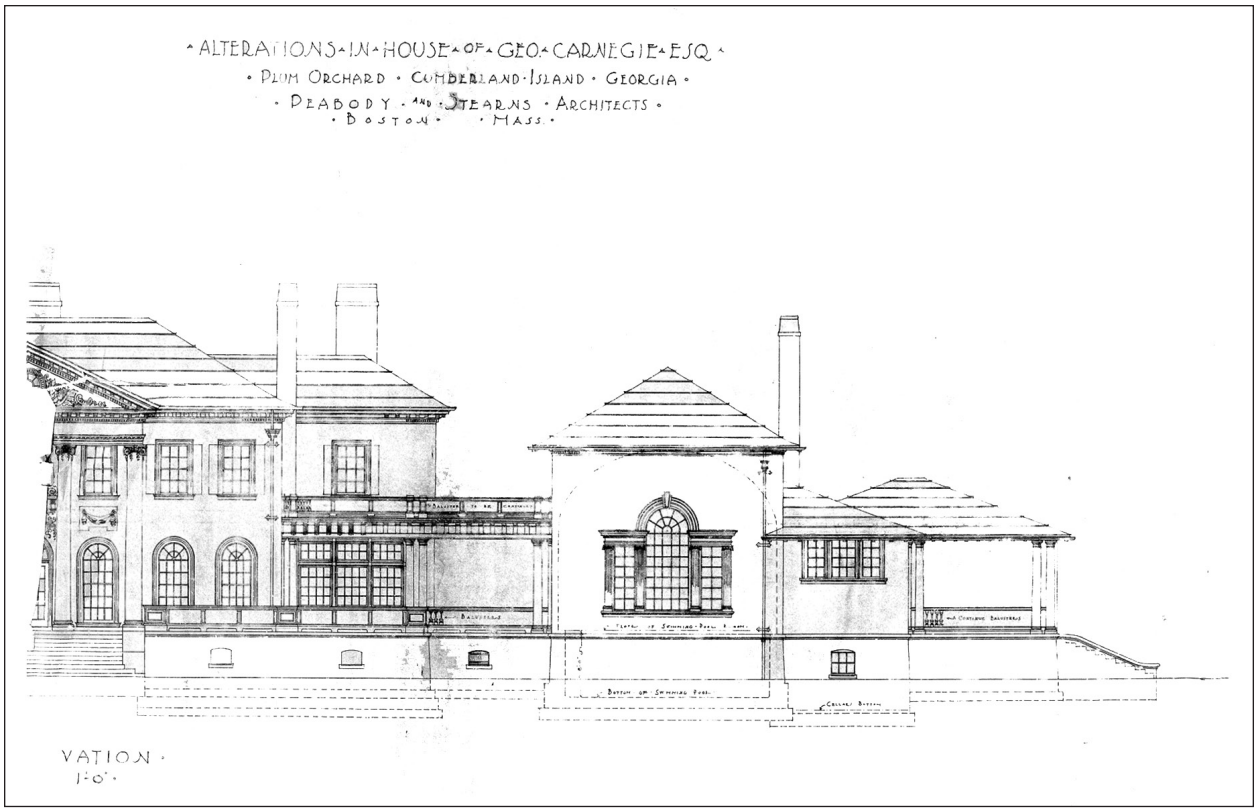


FIGURE 81. Peabody & Stearns elevation, c. 1902. (Denver Service Center etic 640/26000 sheet 5)



FIGURE 82. Plum Orchard Mansion, c. 1902. (CUIS 4671)

symmetry. Page explained that the basis for the Carnegies' decision against a strictly symmetrical design for the 1902/04 additions was more functional than aesthetic.

> They appreciate that the scheme you propose . . . makes a better building, but the arrangement of the east wing is impossible for their purpose. The addition shuts the air away from the rooms at the east end of the house, cutting off the prevailing breezes in the warm spring season.

There was discussion about placing a new emphasis on the east elevation during the additions in 1902/04.[39]

1906/07 Additions

In February 1906, William Page notified Peabody & Stearns that "Mrs. George L. Carnegie wishes to enlarge the service part of the Plum Orchard House." The Carnegies wanted to replace the L-shaped kitchen and service rooms that were part of the original design with a threefold eastern expansion of the service wing. Peabody & Stearns designed the new roof framing system with a flat top since a hipped roof on so large an addition would have been several feet higher than the original mansion roof. The height of the new roof was the same as the hyphen of the previous western addition, and the new front (south) façade cornice aligned with the cornice of the swimming pool pavilion to the east. The alignment of the west hyphen cornice balanced with the cornice of the corresponding west pavilion. This scheme filled in the L, restoring some of the symmetry lost during the 1902/04 additions.

Page explained:

39 Frazier, 214-18; Olson, 18-19.

> The new work is to take the place of the present L, and to fill the space between the main house and the west line of the Squash court. The front of the addition can be made symmetrical with the addition of the west end. The roof of the addition can be managed by using a big deck in the centre, which can be fitted with skylights to admit light to the corridors and hallways.
>
> We propose to take away the present L, and all of the old building which is between the dining room and the swimming pool. We shall want to use the sash, doors, pantry cases, etc., and as much of the old material as possible in the new work. The dining room chimney and the kitchen chimney can be left standing.

The addition expanded the service functions of the original house, doubling the size of the butler's pantry and adding a housekeeper's office and separate upstairs bath for the "housekeeper's exclusive use." It is obvious from the surviving correspondence between William Page and Peabody & Stearns that the project was managed by Page. Peabody & Stearns actually never saw the house.[40]

The new east and north walls as shown on the elevation drawings had an interesting design motif, each containing the unifying element used elsewhere—the Doric portico. Also, an attempt was made to impose symmetrical opening patterns, more successfully at the north wall.

At the east wall, Peabody & Stearns designed a three-bay, four-column portico at the first and second floors, each with a balustrade and pilasters at the walls, the west end of the first floor portico engaging the northwest corner of the squash court. The first floor porch was intended for use by the servants, being just outside the servants' dining room. The second floor was for guest use only. The wall under the portico contained a glazed door flanked by two large double-hung windows. Going from south to north, the second floor featured two double-hung windows south of the portico. Under the portico were three double-hung windows.

The north wall portico was three bays wide with four columns and end pilasters. Centered on each end of the wall was a single 6/6 double-hung window. From the center bay, concrete steps with stuccoed cheek walls extended 12 feet north. Three

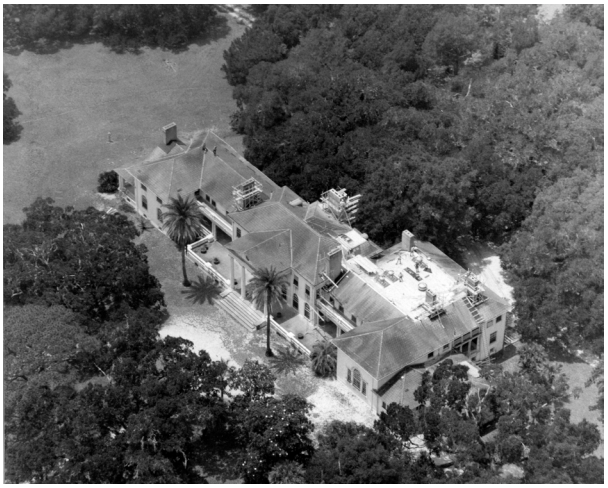


FIGURE 83. Aerial image of Plum Orchard Mansion showing flat roof of addition, c. 1978. (NPS Collection/Bob Yeager)

6/6 double-hung windows centered on the portico and a pair at each end of the wall made up the second floor fenestration.

Wood shingles covered the roof as in the earlier additions. They changed this material at some point to asbestos cement shingles and terra cotta ridges. Enamel finish aluminum gutters replaced the original suspended galvanized steel gutters in 1975. At some point, they changed the entrance steps to concrete and the piazza floor to integrally colored concrete in square or diamond sections.[41]

Construction Details

Study of the construction details and conditions of the surface of the balustrades and boxes indicated that workmen turned the columns and balusters in the Dungeness Carpenter Shop from heart cypress. This was evident from the live center marks and tail stock marks that matched the lathe dimensions from the carpenter shop. The boxes were made at three different periods by three different carpenters. This conclusion was evident from molding differences, dimensional discrepancies, and differing joinery techniques.

When the pieces were scraped during a 1977 restoration, it was apparent that some years previous there had been a previous "wooding" of the paint on the balustrades and boxes. At this time, which was dated at later than 1925 because of the nails used, some repairs occurred to the molding and skirts of the boxes. Parts of the turnings,

40. Olson, 21; GWWO, 35-36.

41. Frazier, 223-27.

chipped in the process of getting the paint off, were repaired as they were.[42]

Little is known about maintenance on the mansion after George Lauder Carnegie died in 1921. The house was occupied on a seasonal basis by Nancy Carnegie and Marius Johnston and their children from 1924 until 1973. Up until 1940, Nancy and Marius maintained a dominant presence at Plum Orchard but never returned after the war. It was reported in 1950 that only half of the front had received a new coat of paint, but by 1959 the entire mansion had been painted.[43]

NPS Ownership

After acquisition in 1972, the NPS spent $3,805.00 to repair the roof. In 1975, the National Park Foundation donated $7,628 to be used for restoration and stabilization of the mansion. The regional director suggested that the funds be used for gutter installation and replacement of porch ceiling boards.

In 1977, a park maintenance crew carried out restoration of the railings and boxes that embellish the porches and steps of the main (southern) entrance to the mansion. The balustrades and boxes had two causes of deterioration: dry rot and carpenter bees.

The crew separated the balustrades from the boxes with care taken not to mar or split the moldings at the connection points. Each box was then taken to the maintenance facility at Dungeness and further disassembled, marking each piece as it was taken apart. They carefully scraped the parts to remove the heavy cracked paint before sanding the original surface. All nails were pulled out from the inside to reduce surface damage. They reused every piece that could be saved. Moldings were in generally better shape than the panels, as they were on the outside and had good ventilation and paint protection.

Where the balustrades were rotten or bee-tunnelled, they spliced the wood to retain as much of the original as possible. Only one of ten rail tops needed replacing, but all of the box tops were rotten and replaced. The cypress used in reconstruction was heart wood, air dried to less than 12% moisture and select or better grade. Boards were personally selected from the distributor.

All cracks were cleaned and glued. Any area of rot that was not exposed or so extensive that structural weakness was present was treated with Glove and Epoxy Rot Sealant. All surfaces of the rebuilt parts were treated with Celcure preservative.



FIGURE 84. Porch repair, c. 1977. (CUIS Collection)



FIGURE 85. Piazza repair, c. 1977. (CUIS Collection)



FIGURE 86. Roofing crew, c. 1977. (CUIS Archives image)

42. Exterior Restoration Work on Balustrades and Boxes, Main Entrance Plum Orchard Mansion Cumberland Island National Seashore 1977, Box 1, Folder 19, CUIS archives.

43. Rockefeller, 292; Olson, 34.



FIGURE 87. Plum Orchard Mansion, 1978. (CUIS 4673)



FIGURE 88. Plum Orchard Mansion, 1994. (SERO Collection)

Dents, cracks, and nail holes were then filled with Gloucester Sea Jacket trowel cement marine quality surfacing putty and a second coat of undercoat applied. The major parts were then transported to Plum Orchard for installation. All interfaces were treated and painted to prevent rot. Holes were drilled to give ventilation in places where the holes would not be visible. The tops were secured with bedding compound to prevent the entrance of water to the boxes.[44]

In 1977, crews reroofed the flat porch roofs. $6,445.94 was spent of the flat portions of the mansion roof in 1981.

Park employees resided at the mansion until 1983, when it was vacated to permit exterior stabilization, reroofing, and painting. This work was based on recommendations in the 1977 historic structure report by David Henderson.

44. Sam P.Weems, Assistant to the Director, Southeast Region to Herbert Readdick, January 3, 1972; John L. Bryant, Jr., National Park Foundation to David D. Thompson, Jr., Regional Director, Southeast Region, September 24, 1975; Exterior Restoration Work on Balustrades and Boxes, Main Entrance Plum Orchard Mansion Cumberland Island National Seashore 1977, Box 1, CUIS archives.

The work included repairing the water table, rebuilding several chimneys, restoring and repairing the roof, skylights, flashing, and gutters; cleaning and painting the walls, porticoes, eaves, and piazzas; reconstructing deteriorated balustrades, porch ceilings and columns, cornice

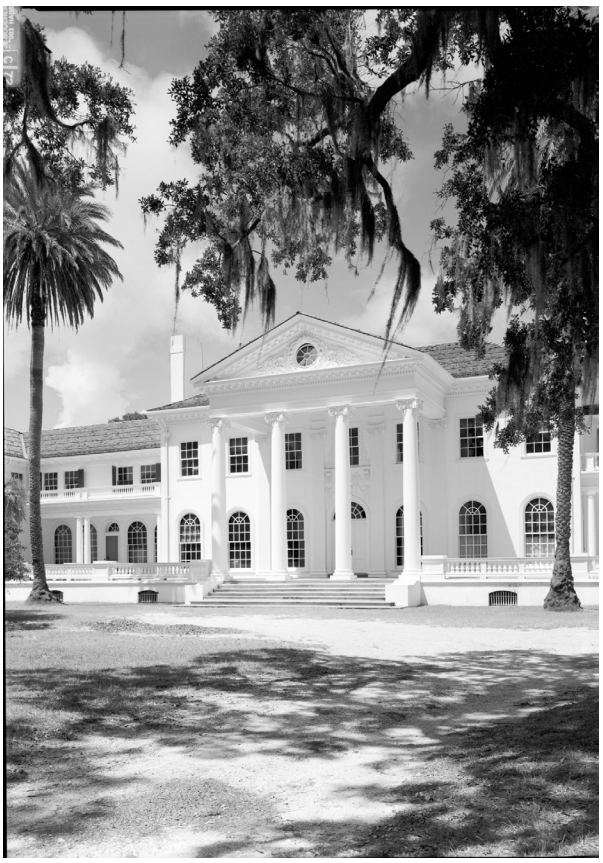


FIGURE 89. Plum Orchard Mansion, 2003. (HABS/Jack Boucher)

soffits, and entablatures; cleaning and repairing all exposed concrete surfaces; repairing and replacing deteriorated doors and windows; and reinstalling shutters. The total for this contract was $415,620.74, and the work was completed in 1984.

A rehabilitation project occurred from 1987 to 1988 that included exterior painting, conversion of servants' quarters on the second floor to an apartment, partial dining room restoration, and construction of a handicapped accessibility ramp at the northwest corner of the mansion. Inspection of the swimming pool at this time revealed that the grout had numerous cracks, which allowed water to penetrate through pool walls causing hydrostatic pressure build-up between the pool wall and building foundation. The pool was originally fed by an artesian well that constantly introduced fresh water into the pool. The pool was emptied

in 1982 in conjunction with ongoing preservation work. After water accumulation behind pool walls subsided, a combination of settlement, cracking, and displacement at the east end portion of the pool wall and floor occurred.[45]

By the mid-1990s, the mansion was in need of both exterior and interior rehabilitation work, and a contract was finally awarded in December 2000. Phase I addressed most of the exterior envelope problems and repair of structural failures and included a new pine shingle roof. Phase I completion occurred in 2002.

An update of the historic structure report to include interior details, completed in 2004 by GWWO Architects, was required before the contract for Phase II could be awarded. Phase II began in 2006 and completed the exterior work and provided interior rehabilitation such as restoring historic finishes, accessibility upgrades, and installation of fire protection and building ventilation systems, electrical system upgrades, and lead based paint abatement. This work included the removal of the handicap accessibility ramp, which was replaced by a wheelchair lift, and the addition of an elevator in the former wine cellar. Phase II completion occurred in 2008.[46]

Utilities

A well dug in 1979 at the rear of the mansion supplied water for the house and for one in-holder residence north of the mansion using a 75-gallon holding tank and chlorine injector system. One artesian well was still flowing at the time.

Originally, raw sewage ran into the Duck Pond. Later, it was rerouted to run directly into the Brickhill River. In 1984, the park installed a 1,500-gallon septic tank and 300-ft-long leach field pipe to handle the mansion's sewage disposal.

Single phase electrical service is supplied through a cable from the mainland that crosses at Table Point, just north of Plum Orchard. The Phase II Rehabilitation project updated the electrical system. Coal-fired, low-pressure steam originally heated the mansion and provided hot water.[47]

Plum Orchard Carriage House

Peabody & Stearns designed the structure, and its construction occurred in the 1890s before the mansion was built. It was used to house workmen employed in building the main house and other structures. Later, Plum Orchard staff occupied the rooms on the second floor.[48]

The Plum Orchard Carriage House showed the ability of Peabody & Stearns to design a utilitarian building in the Shingle style. Unlike the mansion, it never had any additions or changes. Its hipped-roof rectangular frame construction was interpenetrated east-west by a large pavilion topped with a complex hip and gable roof. Irregularly spaced dormers and roof ventilators studded the roof portion of the long rectangle.

A rolling, nine-panel door, the top three panels glazed, centered on the west pavilion. A pair of double-hung windows flanked this opening to the north and south. The wide gable forming the upper part of the pavilion contained two double-hung windows, separated by a panel of flush horizontal tongue and groove boards. The east pavilion façade was identical to the west façade.

The south stable wing contained at the first floor at both west and east walls nine 6 light single sash windows approximately equally spaced. At the north carriage storage wing, the same windows occurred at west, north, and east walls. The south stable wall included a door with three top panels and three bottom panels. In between were a row of glass lights. Above and aligned with this door was a pair of two-panel doors for delivering hay. At the north end of the building was a similar gable wall with two double-hung windows.

The north-south (long rectangle) hipped roof merged at each end into short gable roof sections. The east-west (pavilion) hipped roof became a continuous gable roof section above. Sheathing was cedar shingles.

45. Section 106 Plum Orchard Mansion Restoration; Completion Report, Preservation of the Plum Orchard Mansion, Cumberland Island National Seashore, December 12, 1985; Historical Architect, Historic Architecture Division, Southeast Region to Chief, Historic Architecture Division, March 15, 1988, CUIS archives 66618, Series 3, Box 2; Development Concept Plan, 7.

46. Project Report, Rehabilitate Plum Orchard Mansion, March 23, 2000; Completion Report, February 12, 2002; Project Agreement, Rehabilitate Plum Orchard Mansion, July 31, 2003; Completion Report July 28, 2008, CUIS archives, Series 3, Box 2.

47. Chief of Maintenance, Cumberland Island National Seashore to John Murphy, Denver Service Center, March 13, 1984, CUIS archives 66618.

48. Torres, 179; Henderson, 2; National Register nomination, 2.

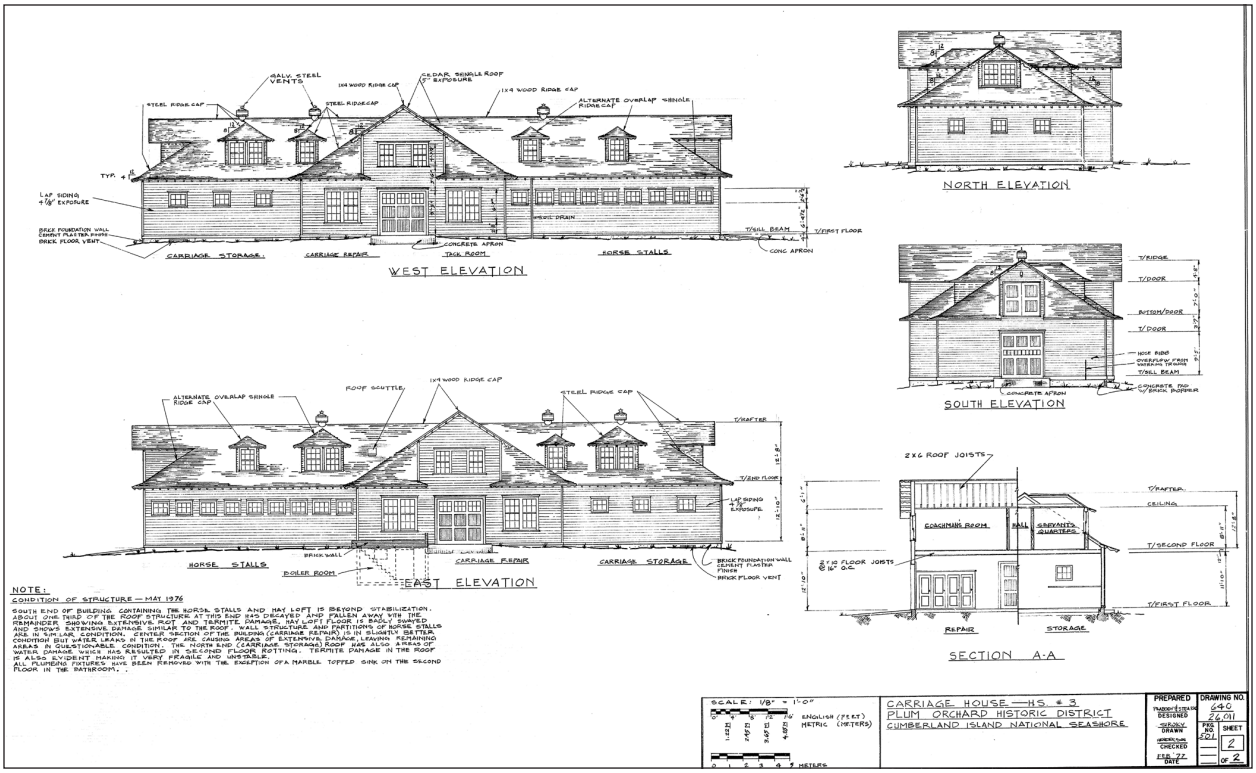


FIGURE 90. Plum Orchard Carriage House elevation, 1977. (Denver Service Center etic 640/26011 sheet 2)

On the north end of the west roof slope were a double and a single window dormer. At the south end were two equally spaced dormers. On the north end of the east roof slope, a double dormer and a single dormer matched those of the west slope. At the south end, a double dormer by the pavilion roof and a single dormer centered on the dormers on the west slope. There were three round galvanized steel attic ventilators.

The section south of the pavilion housed the stable and hayloft; the section north of the pavilion housed the carriages. The tack room, carriage repair, and blacksmith shop were located on the pavilion first floor. Over the north section, the pavilion, and part of the stable were servants' quarters. Below the blacksmith shop was the boiler room. The exterior was painted white.[49]

In 1902, a new stable was discussed with Peabody & Stearns, but George Lauder Carnegie decided against their plan and opted for a "home-made 'Barn' buried in the woods." William Page explained:

> In regard to Mr. George Carnegie's stable. When Mr. Carnegie asked you for drawings of a stable, his plan was to place his stable in full view opposite his house. An estimate on your plan even after making large deductions for simplifying the detail of finish, was almost twice as large as Mr. Carnegie was willing to pay; in fact to build a stable large enough for his purposes, and of proper character for such a situation, would involve too much cost, so the scheme was given up and Mr. Carnegie will content himself with a home-made "Barn" buried in the woods out of sight.[50]



FIGURE 91. Plum Orchard Carriage House, 1975. (CUIS 4252)

49. David G. Henderson, *Architectural Data Section Historic Structure Report Plum Orchard Carriage House* (Denver: Denver Service Center, 1977), 13-20.

50. Olson, 23.



FIGURE 92. Plum Orchard Carriage House, 1987. (CUIS Collection)



FIGURE 93. Plum Orchard Carriage House, 1996. (SERO Collection/Bob Blythe)

Little is known about the upkeep of the building by the Carnegies. By 1973, the roof of the south end of the building (the stable portion) had collapsed, but the center and north sections of the building were described as relatively sound. Correspondence within the Regional Office shows that there was disagreement about how to stabilize the building, although an interim preservation plan was discussed in 1975. Due to lack of funding and maintenance personnel, nothing was done. By 1976, the roof on the north wing was also deteriorating. The 1984 National Register nomination described the structure as "extremely deteriorated." The 1996 draft Cultural Resources Management Plan (CRMP) described it as "collapsing."[51]

The 1977 historic structure report described the condition of the building:

> The walls of the north wing and the pavilion are in fair to good condition, with a few loose pieces of siding or trim where nails have loosened. Mainly the condition is surface abrasion owing to lack of paint. However, the stable walls have deteriorated beyond repair, due to near-total collapse of the roof (see below) resulting in water penetrating the walls and rotting the framing. The condition is aggravated by termite damage, chiefly in the east wall. It should be noted that no termite damage was observed in the pavilion (carriage repair) section except in the blacksmith shop east exterior wall or in the north (carriage storage) section.
>
> The roof of the south stable wing has almost totally collapsed, except for the end gable roof and the dormers, and is beyond repair. This was partly caused by large clusters of ferns growing on the roof that acted as water reservoirs causing gradual rotting of the roof structure. The condition was probably started by rotting leaves falling on the roof from overhanging tree branches . . . . A similar condition exists at the south portion of the west pavilion roof over the tack room.
>
> Other badly deteriorated roof areas are at north and south portions of the west pavilion roof over the area near the stair and over the blacksmith shop; and less severely at the northwest section of the north wing roof. In all cases, the shingles and sheathing have rotted away and there is damage to the rafters. Elsewhere on the roof surfaces the shingles are severely weather beaten and in some places covered with organic growth; and in scattered areas the shingles have disappeared and the sheathing has started to rot. Altogether approximately 25% of the roof sheathing and rafters (other than the stable) have been damaged in some degree.[52]

In April 1999, the Georgia Historic Preservation Division concurred with the request to demolish the Plum Orchard Carriage House, following

51. Acting Superintendent, Cumberland Island National Seashore to Associate Regional Director, Professional Services, Southeast Region, November 5, 1974; Associate Regional Director, Park System Management, SER to Superintendent, Cumberland Island, April 2, 1975, SERO architecture files, Plum Orchard Carriage House; Draft National Register nomination, 1973; National Register nomination, 1984; Draft CRMP, 66; LCS documentation.

52. Henderson, *Plum Orchard Carriage House*, 18-21.

approval of the proposed Section 106 undertaking by the Southeast Regional Office.[53]

Tennis Courts

Tennis courts had been constructed east of the house by 1906. William Page mentioned them in correspondence with Peabody & Stearns, stating that "the east front of the house is more or less visible from the Tennis Courts." A portion of the tennis courts could also be seen from the front portico.[54]



FIGURE 94. Tennis courts in background of Thaw wedding picture, 1913. (CUIS 51592)

Service Complex

All of the following buildings date to the early 1900s, with the exception of the earlier terrapin pen. All of the buildings had been completed by 1919, when William Page enumerated them for insurance purposes. By 1917, George and Margaret Carnegie were no longer living at Plum Orchard.

Pumphouse

An octagon-shaped building with stucco walls and an octagonal roof. After a well was dug in 1979, it housed a water pump, chlorinator unit, and firefighting equipment.

Its roof was repaired in 1992. A project to repair and retrofit the structure to accommodate a new fire pump concluded in 2008. At this time, the existing pump was removed to the Dungeness Wagon Shed for storage.[55]



FIGURE 95. Pumphouse, 1970s. (CUIS 4859)



FIGURE 96. Pumphouse, 1994. (SERO Collection)

Powerhouse

Plum Orchard acquired its own powerhouse with two gasoline powered electric lighting sets in 1913. Previous to 1913, the Dungeness powerhouse supplied electric service to Plum Orchard. William Page considered rewiring Plum Orchard for

53. Regional Director, Southeast Region to Superintendent, CUIS, March 25, 1999; Ray Luce, Deputy State Historic Preservation Officer to Dennis Davis, Superintendent, CUIS, April 7, 1999, CUIS archives 66618, Folder 102.

54. Olson, 21.

55. Superintendent, Cumberland Island National Seashore from Deputy Associate Regional Director, Cultural Resources, Southeast Region, "Section 106 Clearance for Repair of Pumphouse Roof in Plum Orchard Historic District," February 21, 1992, CUIS archives 66618, Folder 99.

alternating current instead of installing another powerhouse, but Plum Orchard's distance from Dungeness and large use of electricity made it economically unfeasible. Page described the powerhouse in 1919:

> The powerhouse at Plum Orchard, Mr. George Carnegie's place, is a frame building about 24 feet by 28 feet, plastered with concrete on metal lath inside and outside and shingled with asbestos shingles. Two General Electric gasoline lighting sets are installed in the building, which, with accessories, cost about $12,000 in 1913. Gasoline supply tank is buried more than 30 feet from building.

Thomas M.C. Johnston replaced the generator plant in 1954. Power lines reached Plum Orchard in 1966, making the powerhouse obsolete. The 1998 draft Cultural Resources Management Plan stated that the structure had been recently painted and was in good condition.[56]



FIGURE 97. Powerhouse, 1975. (CUIS 4255)



FIGURE 98. Powerhouse, 1994. (NPS Collection)

56. Olson, 24; GWWO, 48; Draft CRMP, 67.

Electrician's House

A two-story, frame building with stucco exterior with a small one-story portico and an inset porch on the west side. The LCS record indicates a construction date of 1913 and described its condition in 1995 as "good."



FIGURE 99. Electrician's House, 1975. (CUIS 4251)



FIGURE 100. Electrician's' House, 1994. (NPS Collection)

Laundry Building

A one-story frame building where the Plum Orchard laundry was processed. The LCS record gives a construction date of 1917. It fell into ruins and was removed in 1974.[57]

57. Supervisor's Duplex, Laundry Building, LCS documentation, 1976.



FIGURE 101. Laundry Building, 1971. (CUIS Collection)



FIGURE 102. Laundry Building foundation, after 1974. (CUIS 4847)



FIGURE 103. Laundry Building foundation, 1994. (SERO Collection)

Housekeeper's Cottage (Maid's Cottage)

A one-story building that burned in the 1960s and was removed in 1974. The LCS record indicates a construction date of 1917.



FIGURE 104. Housekeeper's Cottage foundation, 1975. (CUIS 4254)



FIGURE 105. Housekeeper's Cottage foundation, 1994. (SERO Collection)

Water Tower

A 50-ft-high water tower located south of the powerhouse had a wooden stave roof and tank supported by a wooden frame resting on concrete piers. The LCS record gives a construction date of 1913. The 1977 draft National Register nomination described the structure as without a roof but in fair



FIGURE 106. Water Tower foundation, 1994. (SERO Collection)

condition, but it may have been dismantled before 1977.[58]



FIGURE 107. Water Tower, 1975. (CUIS 4256)



FIGURE 108. Water Tower without a tank during the demantling process, after 1975. (CUIS Collection)

58. Draft National Register nomination, 1977; National Register nomination, 1984, says it was dismantled in 1976; 1976 LCS documentation says 1974.

Supervisor's Duplex (Gardener's House)

A two-story, side-gabled frame duplex with weatherboard siding and stucco finish. Its eight-bay façade had one interior chimney on the east and an exterior end chimney on the west. The LCS record gives a construction date of 1917, but it may have been earlier.

The building was extensively altered in 1975, including the removal of interior finishes. The removal of a hipped-roof porch on the south side occurred sometime prior to May 1975.



FIGURE 109. Supervisor's Duplex, 1971. (CUIS Collection)



FIGURE 110. Supervisor's Duplex, 1975. (CUIS 4258)



FIGURE 111. Supervisor's Duplex, 1994. (SERO Collection)

Stable/Dairy Barn

In 1902, George Lauder Carnegie decided to construct a home-made "Barn" out of the viewshed of the mansion. This was a one-story, frame building with a two-story center section and cross-gable roof. It served a number of different uses, including stable and hayloft, plumbing shop, woodshop, wagon storage, and milking parlor for the Plum Orchard estate.

In 1973, it was described as being in poor condition and structurally weak. In 1975, a portion of the north wing collapsed. Doors and windows were missing but the roof was intact in 1977. The conversion of the south end of the structure to living quarters occurred in 1983. The 1998 draft Cultural Resources Management Plan stated that the structure had been recently painted and restuccoed.[59]

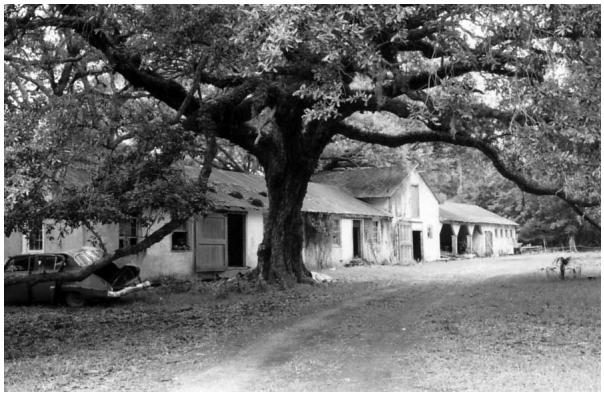


FIGURE 112. Stable/Dairy Barn, 1975. (CUIS 4264)



FIGURE 113. Stable/Dairy Barn, 1994. (SERO Collection)

59. Draft National Register nomination, 1973 and 1977; Draft CRMP, 66.

Servants' Quarters/Caretaker's House (Colored Quarters)

A new quarters building was constructed in 1917 and replaced an earlier building. It was a two-story, side-gabled frame structure with a stucco exterior, two end chimneys and a recessed, two-story porch on the south elevation. At the time of its construction, William Page corresponded with Margaret Thaw Carnegie about her desire for a more sanitary building to house the African-American staff:

> Your building, of reinforced concrete, vermin proof, with sanitary walls and floors, and, I believe embodying every one of your suggestions, can be built for $9,000. Mr. Dankins preliminary figures for the building proper, iron sewer to connect with present sewer, and old building removed, are $8,492.

Page described the building:

> The colored quarters is one building, about 35 feet by 60 feet, 2 story, built of reinforced concrete, excepting that the second floor joists and flooring and the frame of the roof are of wood. The roof is covered with asbestos shingles. The building cost about $8,500 in 1916.

The building underwent extensive interior and exterior changes in 1975-76, including changes to the original porch configurations. The LCS described its condition in 2008 as good.[60]

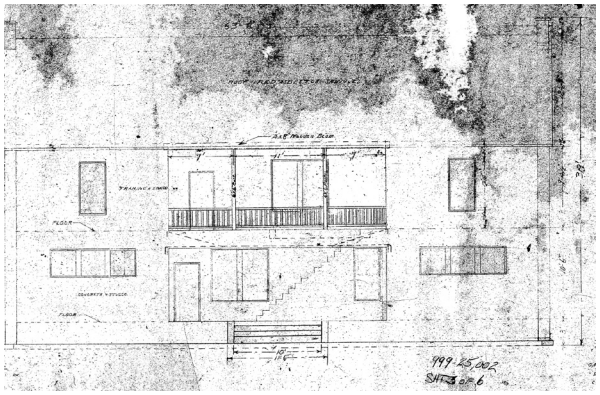


FIGURE 114. Peabody & Stearns drawing. (Denver Service Center etic 640/26002)

60. National Register nomination, 1984; LCS Documentation, 1976



FIGURE 115. Servants' Quarters, 1975. (CUIS 4260)



FIGURE 116. Servants' Quarters, 1979. (CUIS Collection)



FIGURE 117. Servants' Quarters, 1994. (SERO Collection)

Chicken House

A rectangular, side-gabled stucco over wood frame building originally built with three cross-gables. The exterior was vertical board, converted to frame and stucco. Its condition was described in 1984 as being poor to fair, with the southern half of the building deteriorated. This portion of the building collapsed between 2005 and 2007 leaving two cross-gables.



FIGURE 118. Chicken House, 1975. (CUIS 4262)



FIGURE 119. Chicken House, 1994. (CUIS 06619)



FIGURE 120. Chicken House, c. 2008. (NPS 0247)

Greenhouses

Two frame greenhouses were cited northeast of the formal garden and southwest of the supervisor's duplex, facing south. They were described in 1976 as being in a very deteriorated condition with all of the glass gone and the end of the westernmost structure partially collapsed. A headhouse was attached to the westernmost greenhouse. It is unknown when the removal of these structures occurred.[61]

61. A headhouse is a service area or building attached to a greenhouse usually for housing the central temperature-control equipment and providing working and storage room.



FIGURE 121. Greenhouse with headhouse, 1975. (CUIS 4263)

Duck Pool

A concrete pool is recorded south of the chicken house on the Avriett base map. 1984 LCS documentation described it as measuring approximately 20 ft by 10 ft, rectangular in shape with rounded edges, shallow, and located south of the chicken house. Some of the concrete was noted as cracking. Its condition was recorded as fair.

Pigeon House

A foundation marked "Pigeon House" is recorded on the Avriett base map north of the Bernardey grave. No other documentation has been found.

Plum Orchard Duck Pond

Duck Pond and Levee. A levee was constructed on the eastern edge of the river to dam the irregularly-shaped pond to the east. On the southeast side of the Duck Pond, a large diameter metal pipe and valve added water from an artesian well into the deep Floridan aquifer to the pond. Unlike the Duck Ponds at Dungeness that had concrete linings, the Plum Orchard Duck Pond had a natural edge.



FIGURE 122. Duck Pond levee, 2000. (SERO Collection/Bob Blythe)



FIGURE 123. Terrapin Pen, 1994. (SERO Collection)

Terrapin Pen. This structure is a U-shaped tabby wall that opens onto the marsh west of the formal garden. The LCS lists its construction date as c. 1830-65.

Plum Orchard Dock

Octagon Shed. An octagonal stucco over wood frame building with a single opening on each elevation and an octagonal roof supporting a cupola. Located south of the boathouse, it was probably used for storage. The park repaired the roof in 1992.



FIGURE 124. Octagon Shed, 1975. (CUIS 4266)

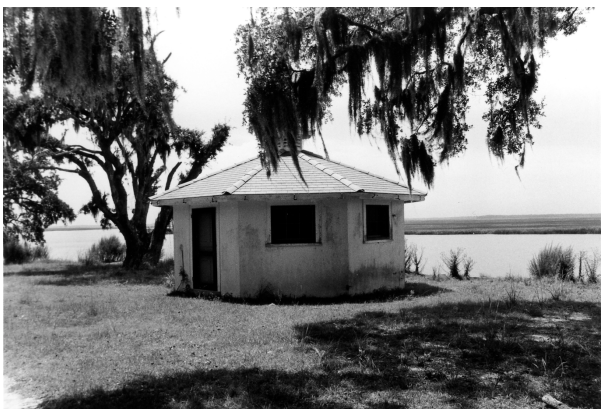


FIGURE 125. Octagon Shed, 1994. (SERO Collection)

Boat House. A rectangular frame structure with a shouldered opening and a hipped roof that was described in 1976 as being in poor condition with several holes in the metal roof. In 1995, it was described as being beyond repair. Shoreline erosion was pulling the building into the marsh and the roof was collapsing in on the structure. It was classified as a ruin in 1998.



FIGURE 126. Boat House, 1975. (CUIS 4265)



FIGURE 127. Boat House, 1996. (SERO Collection)



FIGURE 128. Carnegie dock, 1975. (CUIS 4267)

Carnegie Dock. A wooden ramp to a fixed dock whose construction date is unknown. It was reported in 1950 that the "Plum dock fixed up – 4 pilings, 4 cross timbers near shore, new boards. By 1977, only the pilings that supported the deck of the dock remained.[62]

NPS Dock. Approximate 100-ft-long wooden ramp to a fixed dock with a short ell constructed before the NPS took ownership in 1972. Repair work to ramp occurred in 1980. It was reported in 1984 that the dock was in need of repair and that the boat ramp and fixed dock decking had been repaired numerous times. In 1988, the dock was reconstructed with new pilings as a larger floating wood dock. It was replaced in 2002 with a floating concrete dock.[63]



FIGURE 129. NPS dock with water tower in the background, 1971. (CUIS Collection)



FIGURE 130. NPS dock, 1975. (CUIS 4269)

62. Rockefeller, 293; Draft National Register nomination, 1977.

63. Chief of Maintenance, Cumberland Island National Seashore to John Murphy, Denver Service Center, March 13, 1984; Plum Orchard Mansion Expenditures by National Park Service, undated; Section 106 Form, February 11, 2002, CUIS archives 66618, Folder 54.

Seawall. The construction of a seawall to stabilize the shore that was being undermined by the Brickhill River tidal water occurred in 1992. It was a 100-ft-long wooden bulkhead with 25-ft-long wing walls approximately 10 feet back from the eroding bank.[64]

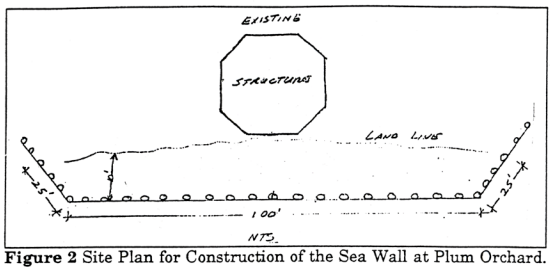


Figure 2 Site Plan for Construction of the Sea Wall at Plum Orchard.

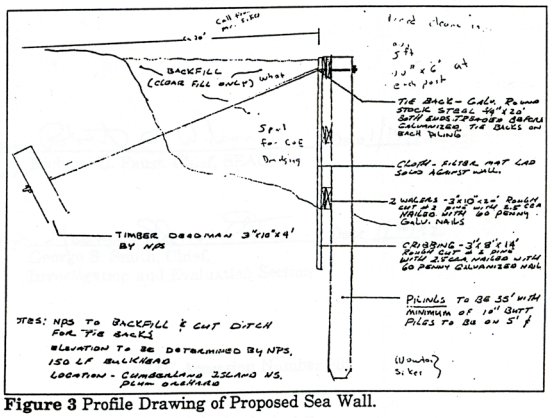


Figure 3 Profile Drawing of Proposed Sea Wall.

Figure 131. Seawall drawing, 1992. (SEAC image)

Circulation

Bernardey-Era Resources

The 1802 map shows a circulation network running north and south and east and west to Plum Orchard. The roads running north to south are labeled Bluff Road and New Road to Plum Orchard. Roads running east to west are labeled Path to Beach and Road.

What is known today as the Main Road, running north and south on the island, is not shown as one continuous road on the 1802 map, but rather a series of roads. In 1800, Camden County's Justices of the Inferior Court ordered that a public road be laid out from the north to the south end of Cumberland Island, and that Phineas Miller, William Johnston, and John H. McIntosh be commissioners for laying out the road and appointing overseers for working on it. All three men were Cumberland Island landowners. On December 21, 1820, an act was passed to relieve the inhabitants of Cumberland Island from working on the Post Road on the mainland and to

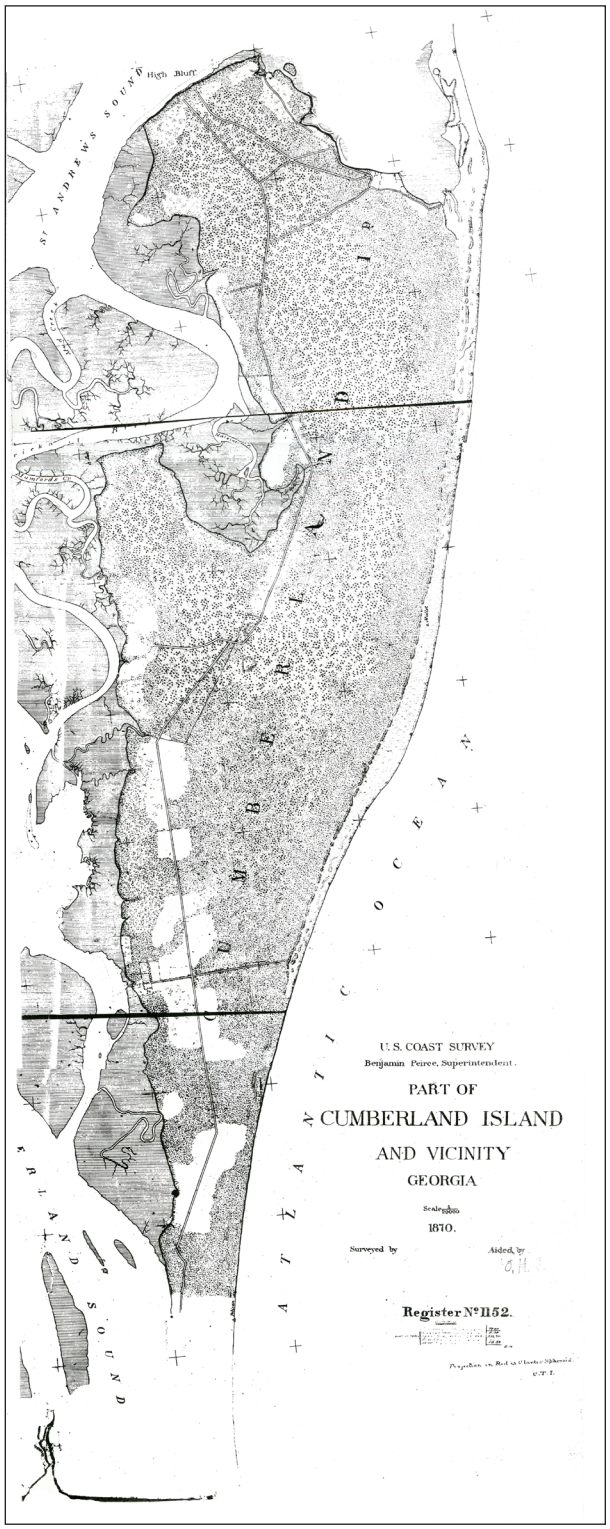


FIGURE 132. U. S. Coast Survey Map of Part of Cumberland Island and Vicinity, 1870. (Courtesy Georgia Division of Archives and History)

64. Ken Wild, "An Archeological Research Design for Testing Prior to Installment of a Drain System and Seawall at Cumberland Island National Seashore," CUIS archives 66618, Folder 100.

appoint commissioners of roads specifically for Cumberland Island. Commissioners appointed were Robert Stafford, Ray Sands, and William Craig, all island landowners. By 1832, the Main Road was being used as a reference point in some deeds.[65]

The earliest known map showing one road connecting the north and south ends of the island was drawn around 1860. It shows a single main road running from Dungeness to a point just beyond Plum Orchard. An 1870 map, which follows the topographical features of the island, is a more accurate depiction of the road.[66]

During the plantation period, much of the Main Road was probably quite primitive. Frederick Ober observed in 1880 that only three miles remained cleared, although at one time the road had been cleared for eighteen miles all the way to High Point.[67] An 1885 Florida Mirror article also stated that the road's length was three miles.[68]

Carnegie-era Resources

Vehicular Circulation. The 1898 Page/Meador map showed all of the Carnegie holdings on Cumberland Island. The Main Road, called "Stafford Road," ran north to south from Rayfield to Dungeness. A spur road near Plum Orchard, called "Plum Orchard Road," ended at Table Point while the Main Road continued on to Rayfield. Three spur roads entered the site from the Plum Orchard Road—one looped around to the river and hooked up with the Main Road further south, one entered an open area of the site and stopped, and one continued north along the river to Table Point.

As the Carnegies developed Plum Orchard, they constructed a series of interconnected roads that linked the various sections of the site. After the construction of the mansion, Plum Orchard Avenue (a spur off Table Point Road, the old Plum Orchard Road cited above) transitioned to an entrance drive that approached and then looped around the front piazza. Historic images indicate that the loop may have begun as a circle that evolved into an oval over time. It passed east of a large oak tree as it looped back out to the entrance drive.



FIGURE 133. Plum Orchard entrance road, c.1905. (CUIS 002)



FIGURE 134. Plum Orchard entrance road, 1964.(CUIS 51592)



FIGURE 135. Plum Orchard entrance road, 1960s. (CUIS 2028)



FIGURE 136. Plum Orchard entrance road, 1971. (CUIS Collection)

65. Bullard, *Robert Stafford*, 197-99.

66. Torres, 254.

67. Ober, 246.

68. Bullard, *Cumberland Island*, 187.

A spur continued east to the carriage house, then turned west to the rear of the house before circling around to the dock and back out to Plum Orchard Avenue. The road north to Table Point was a major north-south byway, and Plum Orchard Avenue, Duck House Road, and one of the service roads at the north end of the historic district all intersected with it. Duck House Road led to Duck House, the Plum Orchard beach house. A 1917 USGS quadrangle map illustrates the changes in circulation as the Carnegies developed Plum Orchard. The 1917 map eliminates the road along the river to Table Point that was documented on the 1898 map and shows the internal roadways at Plum Orchard.

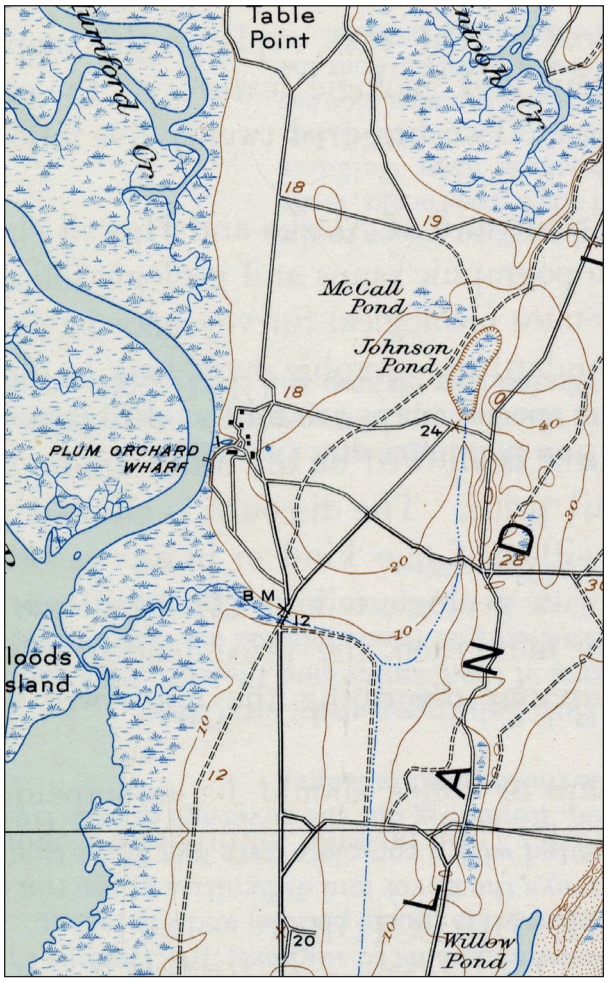


FIGURE 137. 1917 USGS Quadrangle map detail. (Courtesy University of Georgia Map Room)

Service roads provided access to the various support buildings east and north of the mansion before joining just north of the laundry building. The road split again at the Supervisor's Duplex and looped around the Dairy Barn, the Servants' Quarters, and the Chicken House. It is unclear exactly how the service roads evolved. Changes

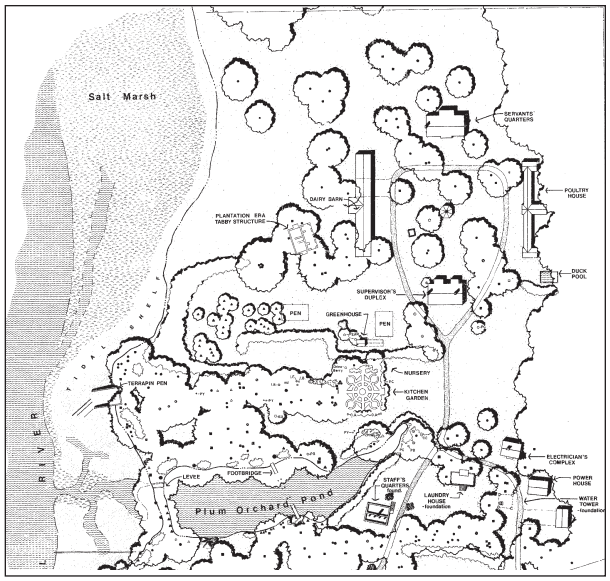


FIGURE 138. Detail of service roads, 1984. (Denver Service Center etic 640/25002)

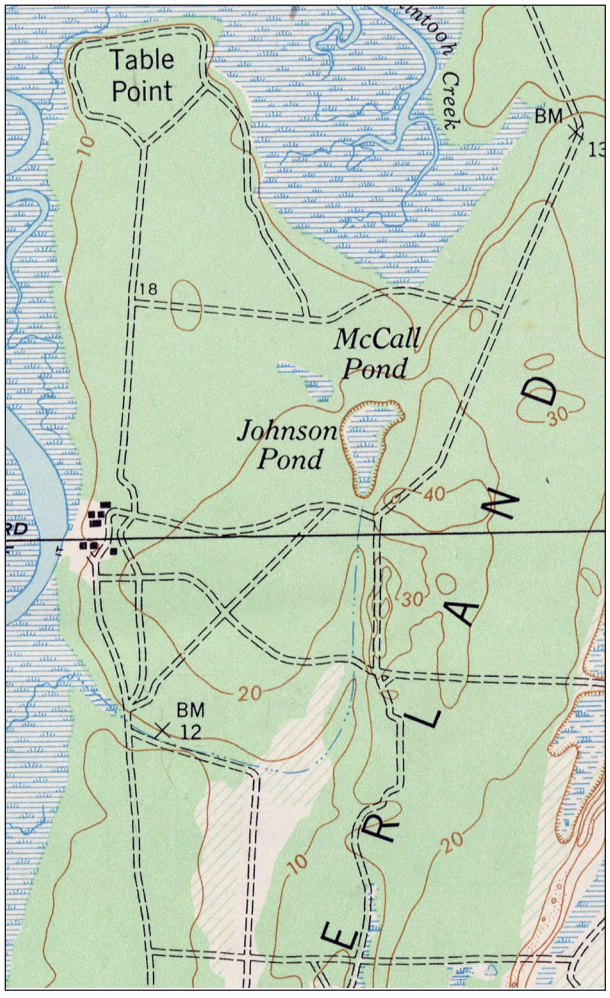


FIGURE 139. 1945 USGS Quadrangle map detail. (Courtesy University of Georgia Map Room)

were probably needed to accommodate the threefold expansion of the mansion. Page explained to Peabody & Stearns in 1902 that a road would approach the east end of the swimming pool addition, implying that this was a new road or a new alignment of an existing road. A 1945 USGS map shows a more accurate layout of the entrance road, which is actually curvilinear and not straight as portrayed in the 1917 map, and shows that the service roads are less defined than they were in 1917, more or less at the apex of the George Lauder Carnegie era at Plum Orchard. (See Figures 137 and 139).

Plum Orchard maintained its own roads. George Carnegie paid for crushed shell laid down at Plum Orchard, and in 1921, Frank MacLaren was charged $28 for "board of men on wood and roads."[69]

Pedestrian Circulation. The service roads were also used for foot traffic around the complex. A rustic bridge over the Duck Pond connected the mansion with the formal garden. Paths in the formal garden were turf. A set of concrete steps negotiated a change of grade on the marsh side of the formal garden.

At the carriage house, a 2-foot-wide concrete sidewalk led to 5-foot-wide concrete steps down to the boiler room. At the east and west pavilion doors, sloping concrete aprons were scored in 4-inch squares. At the south stable door was a similar apron. To the east, a concrete pad with an 8-inch flush brick border was used for bathing horses.[70]

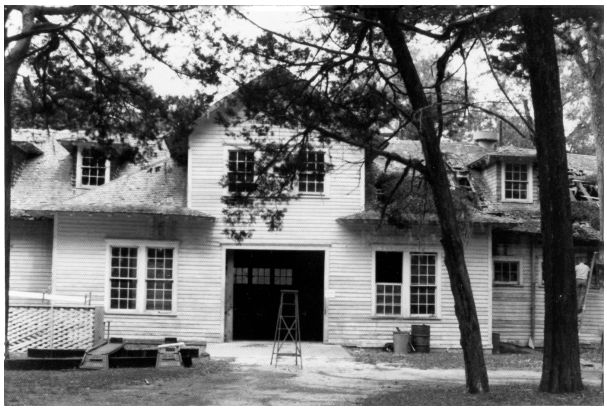


FIGURE 140. Scored concrete pad at east pavilion door, 1977. (SERO Collection)

69. Olson, 113; Bullard, *Cumberland Island* , 251.

70. Henderson, *Plum Orchard Carriage House*, 15.

Views and Vistas

Views during the Bernardey era would probably have been of the Brickhill River.

Views during the Carnegie era from the front of the Plum Orchard Mansion would have been out into the open, park-like setting of large canopy trees. Eventually, Italian cypresses lined a portion of the entrance drive, which looped around the front piazza.

Views from the north windows of the mansion would have been of the Duck Pond. Views east included the tennis courts and carriage house. The music room of the west wing took in the Brickhill River.[71]

The formal garden was enclosed by a cherry laurel hedge, but there was a vista onto the Brickhill River on the west.

Small-Scale Features

Fencing

Fencing would have been an important small-scale feature but there is little documentation of it. Historic photographs document a tall wire fence enclosing the tennis courts, similar to the one at Dungeness.

The 1977 historic structure report identified a wire fence at the carriage house that ran about fourteen feet from the southwest corner to a wood gate used to block access by visitors along the service road running east to west to the Main Road. This fence continued south past the gate and then ran east to the Main Road. A similar wire fence extended from the northeast corner of the north wing. Images from the historic structure report also show a wire fence at the northeast corner.[72]

Duck Pond

Bridge. An arched rustic footbridge spanned the Duck Pond running northwest to southeast .

71. Carnegie, 97; Graves, 122.

72. Henderson, *Plum Orchard Carriage House*, 35.

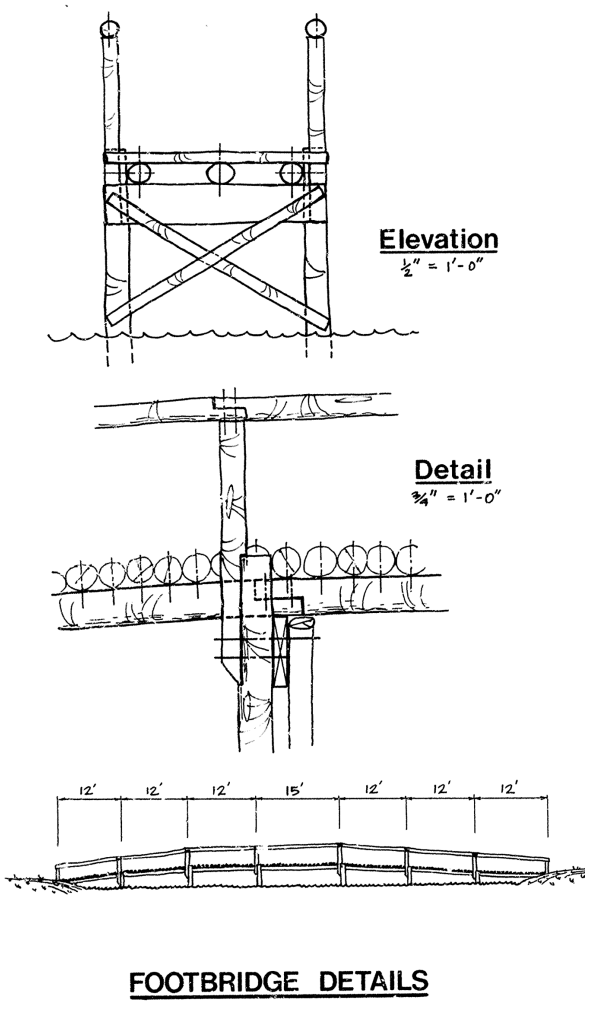


FIGURE 141. Detail of footbridge, 1984. (Denver Service Center etic 640/25002)

Concrete Enclosure. On the southeast side of the Duck Pond, an open top, 4-ft-square concrete enclosure held a large diameter metal pipe and valve for adding water from an artesian well into the deep Floridan aquifer to the pond.



FIGURE 142. Concrete enclosure, 2000. (SERO Collection/Bob Blythe)

Formal Garden

Fountain and Pool. Nancy Carnegie Johnston used landscape designer Richard Forester to design and lay out the formal garden in 1937. A circular concrete pool with spray head was the focal point of the formal garden.



FIGURE 143. Circular concrete pool, 2000. (SERO Collection/ Bob Blythe)

Concrete Edging. Beds edged in concrete were laid out in a radial pattern around the central fountain feature.

Arbor. An arbor was mentioned in correspondence with Richard Forester, but it is unknown if it was ever built.

Garden Benches. A woman can be seen sitting on a garden bench of undetermined description in one of the images from the 1930s.



FIGURE 144. Concrete edging and pool with fountain head, c. 1939 (note steps and garden bench in the background). (CUIS 4942)

Steps. Concrete steps can be seen in the image of a woman sitting on a garden bench above. It appears that a garden terrace and steps helped negotiate a change in grade.

Carriage House

A circular concrete structure with part of a supply pipe still present that was identified in the 1977 historic structure report as a watering trough.



FIGURE 145. Circular concrete structure, 1987. (CUIS Collection)

A brick structure in the form of an attenuated irregular pyramid located east of the circular trough whose use has not been identified. It was not a chimney as there is no opening for a breeching. Another is located near the Cottage at Dungeness.

A rectangular concrete feature of unknown use located near the brick structure.

Natural Systems and Features

Cumberland Island

Cumberland Island is part of a chain of barrier islands that stretches nearly 150 miles from the middle of the South Carolina coast to the mouth of the St. Johns River in Jacksonville, Florida. The islands that border the Georgia coast form a barrier that separates the mainland from the Atlantic Ocean. These islands are composed of two groups formed during two separate geological time periods: the Pleistocene and the Holocene. The first set of islands, including Cumberland Island, a small portion of Jekyll Island, St. Simons Island, Sapelo Island, St. Catherines Island, Ossabaw Island, and Skidaway Island, were formed 35,000 to 40,000 years ago. The Holocene Islands – Little Cumberland Island, portions of Jekyll Island, Sea Island, Little St. Simons Island, Wolf Island, Blackbeard Island, and Wassaw Island—were formed approximately 4,000 to 5,000 years ago.

These barrier islands are subject to large daily tides, reaching upwards of eight feet in amplitude. The fluctuation of the tides restricts marsh vegetation between the islands and the mainland to a few species that can tolerate saltwater inundation followed by drying out in full sun exposure. The flow of freshwater into the ocean from nearby rivers creates estuaries, areas with low salt content that serve as nurseries for many species of mollusks, freshwater and marine fish. These unique environments created by the barrier islands are extremely important in maintaining the health of the natural world.[73]

Separating the barrier islands from the mainland is a belt of tidal marshes, four to six miles wide. Amid the marshes, and running the length of the coast, are the waterways that, from the earliest years of the region's European occupation, have been known as the Inland Passage. The natural "water highway" of this Inland Passage provided a protected route for intracoastal maritime traffic, enabling smaller craft to avoid the outside passage along the coast, a route often impassable due to frequent Atlantic Ocean northeasters and tropical storms. The portion of the Inland Passage that passes Cumberland Island is called Cumberland River.[74]

Jonathan Bryan, who later acquired large portions of land on the island, provided an early account of Cumberland Island in 1753:

> It is separated from the Main by Rivers and Marshes, about two or three miles distant from the Mainland. . . . St Marys River vents itself into Amelia Inlet, between the South End of Cumberland and the North End of Amelia Island. . . . We were informed by a Person who had been four days row up the River that there were several fine high Bluffs upwards and there was the greatest quantity of fine cedar that he had seen.

American surveyor Benjamin Hawkins described the barrier islands in 1785:

73 http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-2123.

74 This passage is known today as the Atlantic Intracoastal Waterway; Bullard, *Cumberland Island*, 5; http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-1299.

> In your American Atlas you have a tolerable good map of the seacoast islands, harbors and depth of water; but I do not recollect any treatise which describes the soil and timber of the islands or the lands bordering on the island navigation. The latter are very low and everywhere sandy except the salt marsh and swamp on the rivers. The larger growth is yellow pine with some fine groves (called in [Georgia] Hammocks) of the live-oak. [The largest islands in Georgia—Cumberland, St. Simons, St. Catharines, and Sapelo—] are edged . . . with Liveoak, the soil where this grows is always the best and very good for corn or indigo, [in] the middle of them or bordering on the sea the soil is sandy and apparently of no other use than of being a barrier against the waves of the sea, the growth is small scrubby pine, brush and palmetto. I believe there is not more than one third of the land capable of cultivation on any of the islands situated out of the freshes.

In the nineteenth century, Cumberland Island's various habitats supported an abundance of wildlife. William Bartram described "excellent haunts for deer, bear, and other game." Ober reported that there were thousands of deer, vast numbers of ducks, and that bear were plentiful.[75]

Hurricanes were part of the ebb and flow of island life. A particularly severe storm that struck Cumberland on September 17, 1813 was described in the unsigned account below:

> On Saturday the 16th of September it blew fresh but steady from NE all day about sunset the wind lulled a little and the clouds appear'd & bright and more mild but by seven o'clock the wind began to rise and blow in [illegible] At ten o'clock the wind had attain'd an alarming degree of violence and from that time till one AM it blew a perfect hurricane At one o'clock the wind suddenly ceas'd and a dead calm ensued with a stillness almost as awful as the tempest At the time the tide was two feet higher than in the hurricane of 1804, and the sea beat on the beach with a weight that shook the whole Island . . . At two o'clock the wind suddenly sprang up at SW and veering to South and SSE increased to a fury greater if possible than the preceding gusts from the northward and completed the destruction they had commenced. It continued blowing with unremitting violence till daylight and then gradually died away. Daylight presented a scene of indescribable ruin prostrate trees and [wreckage?] of buildings in every direction The northern gale took the copper off the roof of this house the southern gale took out timber 12 to 18 inches and hurl'd them to a considerable distance . . . the sturdiest live oaks were twisted up by their roots—their limbs twisted off and scatter'd in every direction—Every tree in the forest appear'd as if it had been shiver'd with lightning—the pine barrens all laid flat—scarcely a building left on its foundations—all kinds of fruit and cotton crops all destroy'd.
>
> The south part of the Island is much cut away & the destruction in every direction almost as complete as any event but annihilation could make it.[76]

Presettlement Vegetation and Natural Fire Regimes

A recent study of the presettlement vegetation patterns on the island represents the best approximation of natural vegetation as it existed at the time of European settlement (around 1600), under the original fire regimes as maintained by lighting and the Timucuan Indians.[77]

The dominant trees on Cumberland Island at this time were live oak, longleaf pine, and slash pine, all highly fire tolerant species, with a species-rich grassy savanna ground cover in the central and northern uplands. Saw palmetto (*Serenoa repens*) was important but less abundant than today in the southern half of the island and in partially or wholly fire-sheltered pockets in the northern half. The relative abundance of each of the three shifted with the complex gradient of moisture, fire exposure, and fire frequency. The dominant on the drier, more fire exposed sites was longleaf pine, with live oak dominant on moister upland soils with less frequent fire. The more interesting part of the continuum, which explains the greater

75. Bullard, *Cumberland Island*, 4; Bartram, 74; Ober, 246.

76. Bullard, *Robert Stafford*, 190.

77. Cecil C. Frost, Vonda Frantz, and Justin Shedd, "Presettlement Vegetation and Natural Fire Regimes of Cumberland Island," (National Park Service, 2011, digital copy), 2.

part of the variation seen on historic survey maps, is found in the middle where longleaf pine graded into mixed longleaf and slash pine downslope on the margins of wetlands and in areas with slightly lower fire frequency. The mixture graded into mixed longleaf and live oak in those areas with fire but at a slightly lower frequency than in the pine dominated areas. The pattern of this original distribution can be seen on early maps that mention boundary line trees (early land grant plats), as well as those that use different icons for pines versus oaks (McKinnon 1802), and on the 1870 U.S. Coast Survey map that shows a different kind of stippling for different vegetation. No key is given for these but the vegetation type can be readily inferred from soils and topographic location. This pattern can still be discerned today in the distribution of second and third growth trees in those areas that were never cleared for farming.

Live oak. Birds spread the small acorns of live oak and it seeds readily into old fields, forming dominant stands, often with laurel oak that invades these stands after disturbance followed by fire suppression. Mature live oak, with its thick, ridged bark, is very fire resistant and can co-exist with longleaf pine under a natural regime of frequent fires of low intensity. Longleaf pine needle litter seems to promote the flow of fire, increasing fire frequency for this fire-dependent species. In a contrasting strategy, live oak litter is thin, often only a centimeter deep and seems to act as a fire retardant, creating a nearly fire-free patch under the tree. As a result individual live oaks constitute fire-safe islands, facilitating their survival in a flammable landscape.

Longleaf pine. Originally the most abundant pine or coequal with slash pine, but likely sparse or absent from the southern third of the island. On most of the Cainhoy, Albany, and Pottsburg soils and some of the more fire-exposed parts of the Mandarin where it would have occurred in mixed pine savannas with slash and pond pines. Remnant maturing stands and old cut lightwood stumps left from the previous logging, some of which date back 250 years, clearly show that longleaf was the dominant pine on drier soils of the northern half of the island from the vicinity of Stafford to Table Point and Terrapin Point. If there were any on the sands around Dungeness in Timucuan times, there is no remaining evidence.

Slash pine. Slash pine has a number of habitats on coastal islands. At Cumberland it was abundant in older dunes systems along the northern two thirds and may have been almost the only pine on the southern third of the island with exception of a few loblolly pine trees on salt marsh edges. A second habitat includes the intermittent fresh ponds prominent in the oaks barrens and the margins of all the other wetlands toward the north end. It may have been most extensive in a third habitat where it was maintained by fire, in mixtures with longleaf pine, in the zones transitional to wetter habitats. A fourth habitat was along brackish shorelines such as at Brickhill Bluff and Terrapin Point and any other abrupt shorelines just high enough that it could keep its roots out of any brackish influence. The ecology of slash pine is intermediate to that of longleaf and loblolly. Its saplings have thicker bark than loblolly and the young trees seem more resistant to fire. Both slash and loblolly are tolerant of salt spray, but loblolly is more likely to be found on low sands on salt marsh margins, suggesting that it is more tolerant of salinity in ground water, while slash pine is more likely to be found on higher shorelines, whether or not exposed to salt spray.

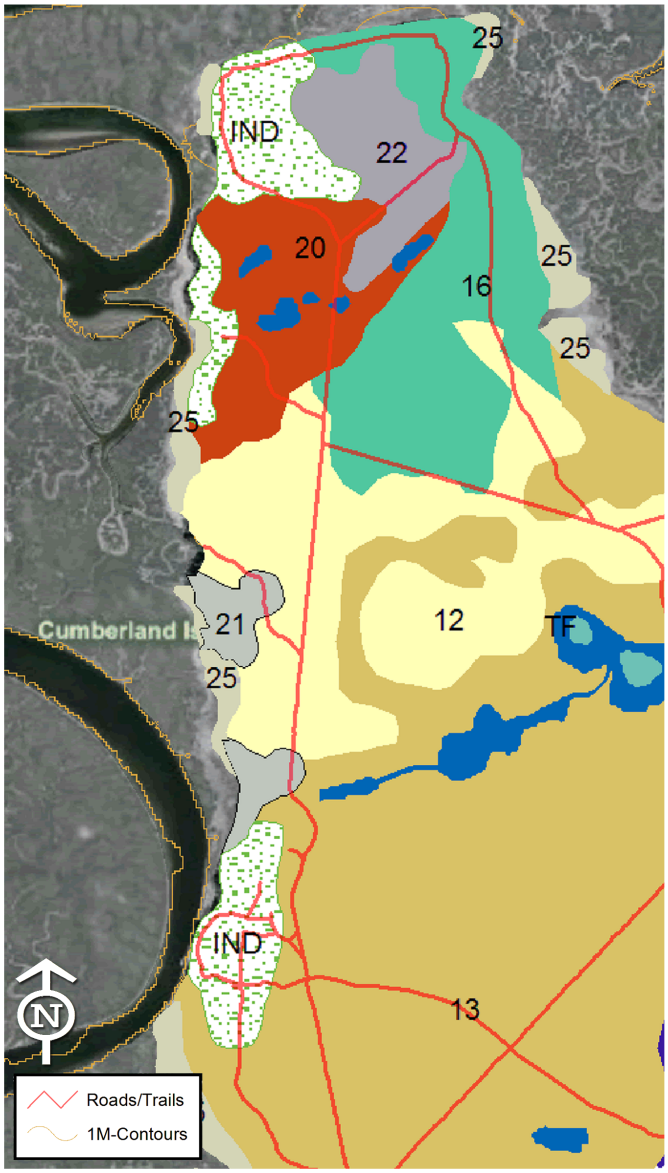
Old field succession and pines on Cumberland Island.

When a seed source is available, pines capture old fields in the following order: loblolly→ slash pine → longleaf. If the only seed sources available are loblolly pine and hardwoods, a dominant stand of loblolly is inevitable, with only an occasional stem of hardwood but with an understory of shade tolerant hardwoods developing with time. If loblolly pine and slash pine are equally present, the old field will be dominated by loblolly with a small number of slash pines. The same occurs if loblolly and longleaf occur as seed sources.

Loblolly pine is a weedy species, producing massive amounts of wind-dispersed seed at an early age. In the central part of the island, there are a number of old fields now forested with loblolly pine stands. Most of these were planted by J.B. Peebles, the Ferguson foreman. He described planting loblolly pine south of Stafford and all over the island after WWII, stating: “On the island in all I planted 2 million pines”.

In other areas it has seeded into abandoned old fields along with slash pine, live oak, and laurel oak creating mixed stands of these species. Almost everywhere on Cumberland loblolly should be regarded as an introduced species. The only likely natural habitats for the species are on low upland soils in marshes and in hammocks adjacent to marshes and sprinkled along upland shorelines. An occasional tree in old dune fields is also a likely natural occurrence.

Presettlement Vegetation Types of Plum Orchard



Presettlement Vegetation Types of Cumberland Island	
Pleistocene Island Upland System	
12	Longleaf Pine-Slash Pine Woodland
13	Mixed Longleaf Pine-Slash Pine-Live Oak Woodland and Savanna
16	Fire-maintained Live Oak-Slash Pine Forest (open understory)
Freshwater Wetlands	
20	Pocosin
21	Freshwater Swamp Wetland Complex
22	Quercus virginiana/Lyonia ferruginea Savanna Mosaic
TF	Freshwater, Oligohaline and Brackish Ponds (Temporarily Flooded)
Fringing Marsh System	
25	Salt Flat-Salt Marsh-Brackish Marsh Mosaic
Other	
IND	Timucuan Indian Influenced: villages, fields, camps and fire use

*Map detail taken from Pre-European Fire Regimes and Vegetation of Cumberland Island National Seashore (NPS).

FIGURE 146. Presettlement vegetation patterns at Plum Orchard. (NPS image)

Red cedar (*Juniperus virginiana*) is a shade-intolerant species. Its presence as tall live or dead stems in forests of the island interior indicates old field or logged sites that were much more open when the cedars germinated. Its saplings are easily killed by fire but once established, can tolerate infrequent, light fires. The majority of red cedars on Cumberland have old, partially healed fire scars. It has two principal habitats on the island: first, it is an abundant component of primary succession on dunes and second, being salt-tolerant, it forms a narrow zone along the western shorelines and salt marsh margins on moist or slightly drier sands, and on salt marsh islands.

Wiregrass (*Aristida beyrichiana*) thrives on an annual fire regime. The finding of wiregrass remnants southeast of Terrapin Point is highly significant as it is an indicator of a high original fire frequency. With long fire suppression, a wiregrass-dominated landscape can be reduced to a few plants that manage to hang on in sunny spots in places that have occasionally burned. The distribution of remnants indicates that the central

and northern sections of Cumberland Island comprised a frequent fire landscape.[78]

Plum Orchard

Plum Orchard's location along the Brickhill River, a deepwater tidal creek with excellent docking capabilities, gave rise to an important deep water landing, which came to be known as Plum Orchard Bluff.

There is little written documentation regarding the historic condition of the woodland at Plum Orchard. Lachlan McIntosh's 1766 plat, which included Table of Pines, is marked "oak land." Since subsequent maps referred to McIntosh's grant as Table of Pines (meaning a stand of pines), it seems likely that it was heavily wooded. According to the 2011 presettlement vegetation study, the dominant natural canopy of Table of Pines on the 1802 McKinnon map was slash pine and live oak with pond pine (*Pinus serotina*) pocosin in the middle section and narrow zones of pond pine savanna in the areas transitional to slash pine and live oak.

McKinnon's 1802 map shows most of the Plum Orchard area cleared for cotton fields. Oak and pine surround the cleared cotton fields (see Figure 36). Frederick Ober's article about Dungeness described "the live-oak forest" of the island as covering "several thousand acres . . . filled with scrub palmetto, impenetrable almost, and so difficult to pierce that the deer with which the forest swarms choose the old paths and roadways in their walks from sleeping- to feeding-grounds." On the 1898 Meader/Page map, the oak-palmetto forest community was indicated as "hammock lands" and the oak-pine forest community (where pine might be dominant) was indicated as "pine lands" (see Figure 39).[79]

According to the 2011 presettlement vegetation map, most of the Plum Orchard Historic District was a Native American use area. The distinctive patterns of marsh creeks on the earliest surveys show that shorelines with water access were primes sites for villages and fields. The site was surrounded by a mixed longleaf pine-slash pine-live oak woodland and savanna. Plant communities were *Pinus palustris-Pinus elliottii-Quercus virginiana*/ mixed mesic pine woodland and *Pinus palustris-Pinus elliottii-Quercus virginiana*/*Serenoa repens*.

Increased density of saw palmetto. In all but the most fire sheltered pockets, saw palmetto has likely increased greatly over its original density over much of the island with reduction in fire frequency. Serenoa density, like that of other resprouting shrubs, is reduced by growing season fire—as occurred in nature—but not by winter prescribed burning that leaves the belowground carbohydrate reserves intact to support robust sprouting when spring arrives. Repeated early growing season burns have been shown to reduce saw palmetto and other shrubs and increase the cover of grasses and forbs. J.B.Peeples, long time foreman and manager for timber and fire for Lucy Ferguson, commented during an interview in 1983 that "there is more palmetto every year."[80]

Land Use

The Plantation era on Cumberland Island was initially financed through the cutting of live oak timber, which brought General Nathanael Greene to the island in 1783. Sea Island cotton soon replaced "live oaking" as the primary cash crop on Cumberland Island.

Plum Orchard was a largely self-supporting economic unit based on plantation agriculture during the Bernardey and Stafford ownerships. An enslaved labor force drove the plantation economy. Livestock grazed on the open range and wild game was abundant. The following account describes the lifestyle of the planter class on the island before the Civil War:

> Old Stafford before the war was owner of four hundred slaves, who came to his beck and call, and worked in the fields over we hunted. Four thousand acres were then in cotton. What a glorious sight it must have been, and what a life the old man led, planting and picking his cotton, tending his vast domain, feasting his guests, or attending to meets of the Camden Hunting Club, riding after the deer, or sitting at the regular hunting dinners, and rising to offer a toast. The club was composed of gentlemen who owned plantations near by on the mainland, and offered in turn the hospitality of their homes and hamaks

78. Frost, 11-14.

79. Ober, 246; Hilburn O. Hillestad, 97; Frost, 51-52; Pocosin is defined as an evergreen shrub bog on organic soils with a canopy of pond pine (often crooked and sparse) over a dense semi-evergreen shrub layer, often tied together with Smilax.

80. Frost, 39-40.

> [sic], swamps and woods for the pursuit of deer. The rules of the club were strict, and sure was the penalty or fine for breaking any of them. Mr. Dilworth told me he once asked . . . Stafford if he remembered when they fined him that basket of champagne. "You bet I do," he answered, "but," hitting his hand on his pocket, "cotton's a dollar and a half a pound, so what did I care."[81]

During the Carnegie era, a compound of family houses was essentially self-sufficient, but it did not rely on island production. Its economic base was the Carnegie family fortune, and the family yacht made daily trips to the mainland to pick up any items that the family needed. Orders were regularly placed with merchants in New York and Boston and sent down by steamship or rail to Fernandina. Once unloaded at the Dungeness dock and taken to the Dungeness Commissary, supplies were sorted by household. Each house had its own stall where supplies were placed upon delivery. Each house supported its own roadways and paid for the room and board of the laborers who did the work.

Plum Orchard's manager was Frank MacLaren, who eventually took over as manager of the overall estate after William Page's death. Plum Orchard had its own vegetable garden, greenhouses, dairy barn, chicken houses, powerhouse, and laundry.

In later years, Carnegie heirs tried planting a tung orchard in the field northeast of the Dungeness dock and at Stafford. Intermittent logging also occurred on the island, with a pine plantation planted at Stafford. The Fergusons raised cattle at Greyfield.

Recreational activities were an important part of the lifestyle of the estate. Carnegie family members and guests enjoyed riding, hunting, skeet shooting, tennis, golf, croquet, badminton, sailing, swimming, and picnics. Field days featuring more unusual forms of entertainment were a regular part of the scene.

Archeological Resources

Plum Orchard Village and Mound Complex Site

What is today classified as two sites (Plum Orchard Midden and Tabby House Midden) was historically probably one site that extended about 3200-3500 feet north-south along the Brickhill River and about 1000 feet inland at the southern end and about 500 feet at the northern end of the site. The Plum Orchard Mansion is about in the middle of the site. Investigation by Deutschle and Wilson in 1975 indicated a Deptford occupation. Additional investigation by Ehrenhard in 1976 indicated the site was occupied from the Deptford Period through the San Marcos Period (ca. 1000 BC to 1500 AD).

Deutschle and Wilson reported in 1975 that there were several undisturbed shell mounds in the southern part of the site, construction and site development having severely modified the remainder. They noted that it was possible that in the northern portion of the site there was a solid shell bank along the marsh, but excavation would be needed to confirm this hypothesis due to the degree of disturbance in the area.

In 1992, archeological investigations conducted during the installation of a new drain system indicated that the midden had been partially disturbed in some areas near the rear of the mansion by construction and occupational activity, such as the installation of water, sewer, and power lines. A large percentage of the midden remains intact and undisturbed, however, reflected by the absence of intrusive remains, a compact shell strata, and large pottery sherds. Trenching for the drain line demonstrated that the midden runs at a near constant 25 centimeters below surface (cmbs), extending to 50-55 cmbs throughout the area investigated.

Also in 1992, in conjunction with the construction of a seawall along the Brickhill River, surface reconnaissance prior to subsurface testing revealed a 20 to 30-cm-deep midden in the eroding bank. The midden extended north of the octagon shed and ended 13 meters south of the shed. It was apparent that the midden at this southern point had been partially destroyed when the Carnegie-era dock was built and that the construction of the octagon shed had also impacted the midden. Two excavation units revealed that the remains of the midden in the proposed construction area had been disturbed.[82]

81. Bullard, *Robert Stafford*, 282.

82. Archeologist, Southeast Archeological Center to Chief, Southeast Archeological Center, May 5, 1992, Box 3, Folder 100, CUIS archives; Deutschle and Wilson, 16; Ehrenhard, *Assessment of Archeological and Historic Resources*, 52.

Plum Orchard Sand Mound

Located southeast of the Plum Orchard Mansion, the mound is believed to be of aboriginal construction as several sherds of St. Catherines ware have been recovered from the site. During the plantation era, it is believed that the mound was used as a grave site to bury deceased slaves that had fallen victim to yellow fever.[83]

Summary

The Plum Orchard cultural landscape is a combination of plantation-era and Carnegie-era landscape features. Unlike Dungeness, however, there is no layering of landscape features, and no intact buildings survive aboveground from the plantation era. Moreover, the construction of the service complex degraded the spatial integrity of the plantation-era resources.

Plum Orchard's name derives from an antebellum plantation at this location, whose eventual owner was Peter Bernardey. Little is known of the historic landscape during the nineteenth century, other than Sea Island cotton being grown in fields near the house. The ruins of the Bernardey House, two graves, and the Terrapin Pen remain from the plantation era.

Beginning in 1898, construction began on the Plum Orchard Carriage House and Mansion, designed by Peabody & Stearns as a wedding gift from Lucy Carnegie to George Lauder Carnegie and his wife, Margaret Thaw. The Carnegies also built a number of support buildings and an ornamental Duck Pond, which were sited north of the mansion. Three additions increased the original mansion by nearly threefold, and it stood as one of the finest structures on the island.

During the George Lauder Carnegie period of occupation, the historic landscape consisted primarily of a picturesque, park-like setting of large canopy trees around the mansion, a curvilinear, tree-lined entrance drive that looped around the front of the mansion, clumps of azaleas, and a piazza overlooking the front entry. Canary Island date palms flanked the front entry, cabbage palms and southern magnolias lined the spur road to the east, and pindo palms flanked the piazza. Damning an artesian fed streambed created the Duck Pond, with its natural edge and rustic wooden bridge.

North of the Duck Pond, hedge-lined spaces contained vegetable and cut flower gardens and greenhouses. A loop road connected support buildings, placed out of sight of the mansion. Tennis courts sited east of the mansion completed a landscape of the American Country Place.

In the 1930s, Nancy Carnegie Johnston oversaw the installation of a formal garden designed by landscape designer Richard Forester just north of the Duck Pond. A cherry laurel hedge enclosed the garden on three sides, with a vista towards the river on the west. The garden design featured a central pool with fountain, around which grass paths radiated like spokes in a wheel. Beds edged with concrete laid out in a symmetrical pattern formed four quadrants on axis with the center, each terminating in a circle. Bulbs and annuals grown from seed in the greenhouses were planted in the beds for bloom during the Johnston's residence on the island. Mrs. Johnston kept careful notes of what was planted and what did well in her garden journal. She preferred a palette of pink, white, blue, and yellow with splashes of salmon or copper. After a car accident around 1937, her careful oversight of the garden ended, and she and her husband never returned to the island following WWII.

The gardens gradually declined as Plum Orchard shifted from a winter home to a vacation home for the Johnston descendants. When the NPS took ownership in 1972, the spatial footprint was bifurcated when some the ornamental gardens and most of the support structures remained in the two reserve life estates north of the mansion. There has been little documentation of the historic landscape with the exception of a 1983 landscape study that focused on a vegetation survey of the property.

83. Ehrenhard, *Assessment of Archeological and Historic Resources*, 52; Draft CRMP, 17.

Existing Conditions

Spatial Organization

The centerpiece of the Plum Orchard Historic District is the Plum Orchard Mansion. The historic approach to the house was an oval entrance drive that is presently missing half of its loop. An extensive open space of lawn interspersed with large specimen trees surrounds the mansion. A loop road circumvents the mansion, passing by the dock area before exiting the site.

The other principal building under the park's care is the carriage house located east of the mansion, which has collapsed. Other buildings managed by the park include the pumphouse north of the mansion and the octagon shed and NPS boat dock adjacent to the Brickhill River. A Carnegie-era boat house is in very bad condition and the Carnegie-era dock is no longer standing. The housekeeper's cottage is no longer standing and the foundation is overgrown with vegetation The Plum Orchard Hunt Camp is a modern compound located southwest of the dock.



FIGURE 147. Plum Orchard entrance drive, 2011. (SERO Collection)



FIGURE 148. Plum Orchard Carriage House, 2011. (SERO Collection)



FIGURE 149. Pumphouse, 2014. (SERO Collection)



FIGURE 150. Octagon shed, 2014. (SERO Collection)

The remaining buildings are located on two reserved estate properties north of the mansion that were once part of a complex of support buildings arranged in a cluster around a circular service road. Those still standing include the powerhouse, terrapin pen, electrician's



FIGURE 151. NPS boat dock, 2014. (SERO Collection)

house, supervisor's duplex, stable/dairy barn, chicken house, and servants' quarters. Those no longer standing include the laundry, water tower, greenhouses, and the Bernardey house. Foundations of the water tower, laundry building, and Bernardey house can still be seen. The Bernardey cemetery sits between the Bernardey house and the stables/dairy barn.



FIGURE 152. Powerhouse, electrician's house, and laundry foundation, 2014. (SERO Collection)



FIGURE 153. Supervisor's duplex, 2014. (SERO Collection)



FIGURE 154. Stable/dairy barn, 2014. (SERO Collection)

The Duck Pond is extant but currently serves as habitat for wood storks. Remnants of the formal garden from the 1930s survive north of the Duck Pond, but only the central pool base is readily evident as a landscape feature under encroaching vegetation. A complete survey of the spatial patterns could not be undertaken in 2011 because of landscape features that are located on two reserved life estates.



FIGURE 155. Duck Pond, 2014. (SERO Collection)



FIGURE 156. Central pool base from formal garden, 2013. (CUIS Collection)

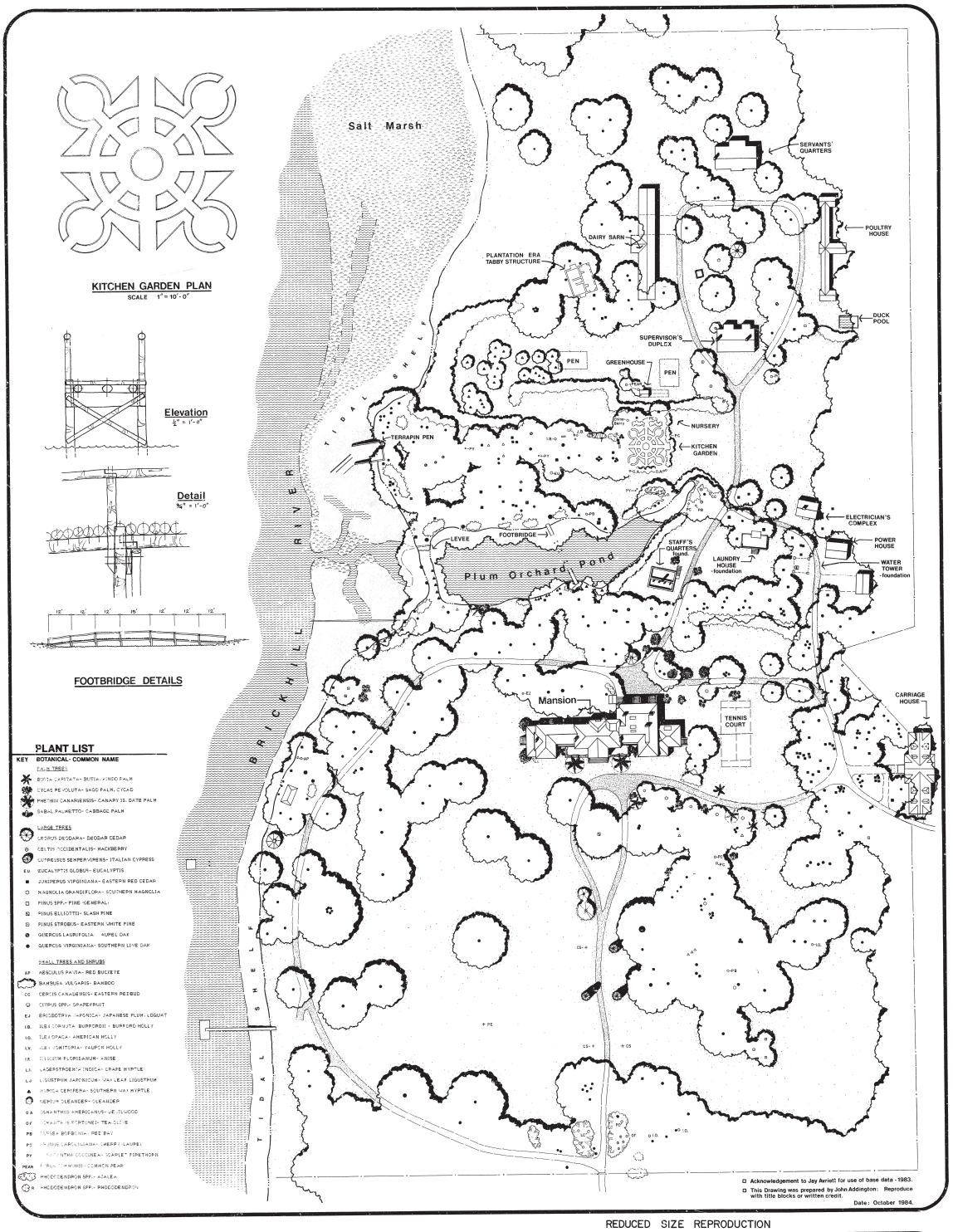


FIGURE 157. Existing conditions map, 1984. (Denver Service Center etic 640/25002)

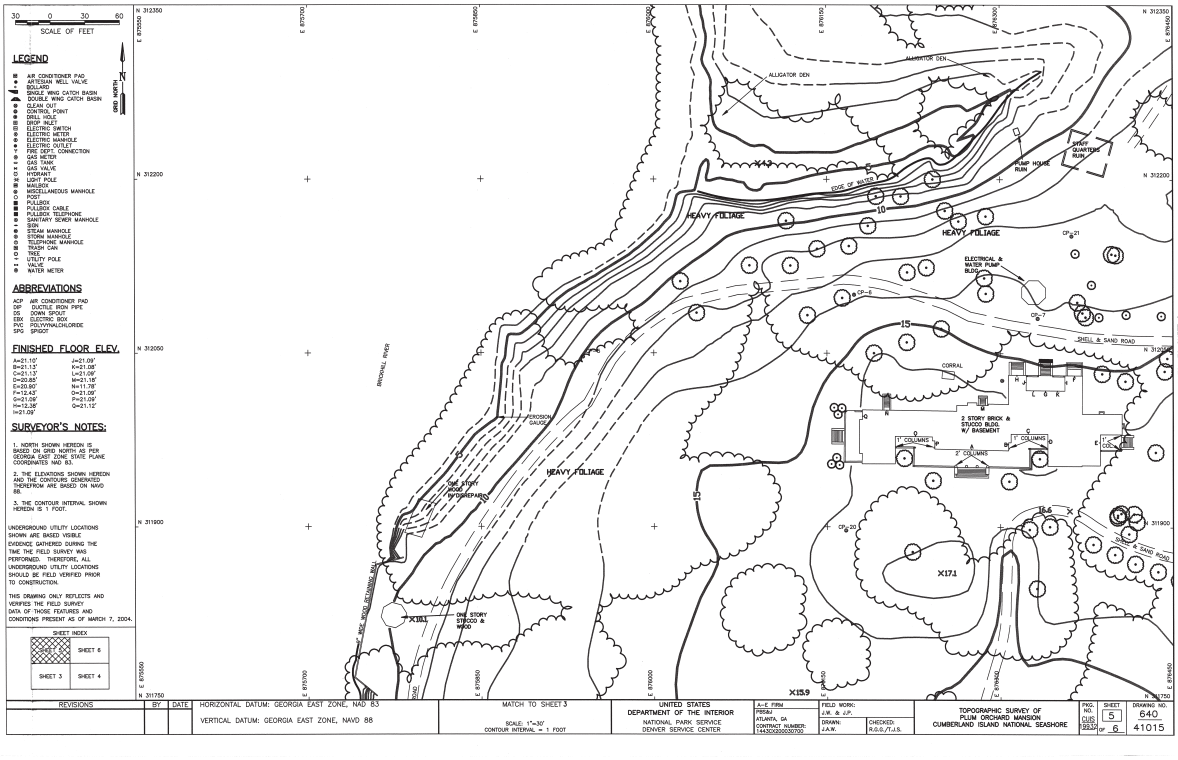


FIGURE 158. Topographic survey, 2004. (Denver Service Center etic 640/41015 sheet 5)

Vegetation

Mapping of the vegetation at Plum Orchard occurred in the 1980s and was incorporated into a series of base maps. A topographic survey completed in 2004 also mapped some of the vegetation.

The 1984 base maps show the loss of most of the formally clipped hedges documented in early images of the Plum Orchard landscape (see Figure 43). Remnants of the cherry laurel hedges planted in the 1930s were observed north of the formal garden. Other ornamentals documented between 1983 and 1984 include:

Palms

Pindo palm (*Buttia capitata*)

Sago palm (*Cycas revoluta*)

Canary Island date palm (*Phoenix canariensis*)

Cabbage palm (*Sabal palmetto*)

Large trees

Deodar cedar (*Cedrus deodara*)

Sugarberry (*Celtis laevis*)

Italian cypress (*Cupressus sempervirens*)

Eucalyptis (*Eucalyptis globus*)

Eastern red cedar (*Juniperus virginiana*)

Southern magnolia (*Magnolia grandiflora*)

Slash pine (*Pinus elliotti*)

Eastern white pine (*Pinus strobus*)

Laurel oak (*Quercus laurifolia*)

Live oak (*Quercus virginiana*)

Small trees and shrubs

Red buckeye (*Aesculus pavia*)

Bamboo (*Bambusa* spp.)

Eastern redbud (*Cercis canadensis*)

Grapefruit (*Citrus* × *paradisi*)

Loquat (*Eriobotrya japonica*)

Burford holly (*Ilex cornuta* 'Burfordii')

American holly (*Ilex opaca*)

Yaupon (*Ilex vomitoria*)

Florida anise (*Illicium floridanum*)

Crape myrtle (*Lagerstroemia indica*)

Wax leaf privet (*Ligustrum japonicum*)

Southern wax myrtle (*Myrica cerifera*)

Oleander (*Nerium oleander*)

Devilwood (*Osmanthus americanus*)

Tea olive (*Osmanthus frangrans*)

Red bay (*Persea borbonia*)

Cherry laurel (*Prunus caroliniana*)

Scarlet firethorn (*Pyracantha coccinea*)

Common pear (*Pyrus communis*)

Azalea (*Rhododendron* cvs.)

Rhododendron (*Rhododendron* spp.)

Olive (*Olea europaea*)

In the years 1984 and 1985, there were two unusually harsh winters followed by summer droughts. During this extreme weather, some of the ornamentals documented by Avriett and Addington were probably lost. In fact, field work in April 2011 failed to find many of the ornamentals listed as present in 1983, including devilwood, tea olive, Florida anise, yaupon, wax leaf privet, loquat, Burford holly, olive, grapefruit, common pear, eucalyptus, and red buckeye. However, the survey did not include the two reserved life estates, where much of the ornamental vegetation was planted, including the 1930s formal garden. Also, red bay throughout the island is succumbing to laurel wilt.



FIGURE 159. Azaleas, 2011. (SERO Collection)



FIGURE 160. Italian cypresses, 2013. (NPS image 1827)



FIGURE 161. Allée of cabbage palms, 2011. (SERO Collection)

An informal planting of southern Indian hybrid azaleas flanks the main entrance to Plum Orchard. In 1983, tea olive, Florida anise, and cherry laurel were recorded among the azaleas. These were not identified in 2011, nor did the vascular plant survey for the island conducted between 2004 and 2006 document them. The azaleas are overgrown with fox grape (*Vitis labrusca*). One crape myrtle survives southeast of the azalea plantings.

Three of six Italian cypresses that line the entrance drive survive. A remnant allée of cabbage palms was identified along Plum Orchard Avenue in 2011, south of the azalea plantings, just before the road transitions from the more natural setting through the woods to an open expanse of lawn. This feature was much like the entrance at Dungeness, although less formal. Many of the palms along the east side of the entrance road were missing in 2011. Another feature documented in 2011 was a formal planting of southern magnolias and cabbage palms along the entrance road as it turns east in front of the mansion. The 1983 vegetation maps prepared for



FIGURE 162. Allée of southern magnolias, 2011. (SERO Collection)



FIGURE 163. Canary Island date palm, 2013. (NPS image 1829)

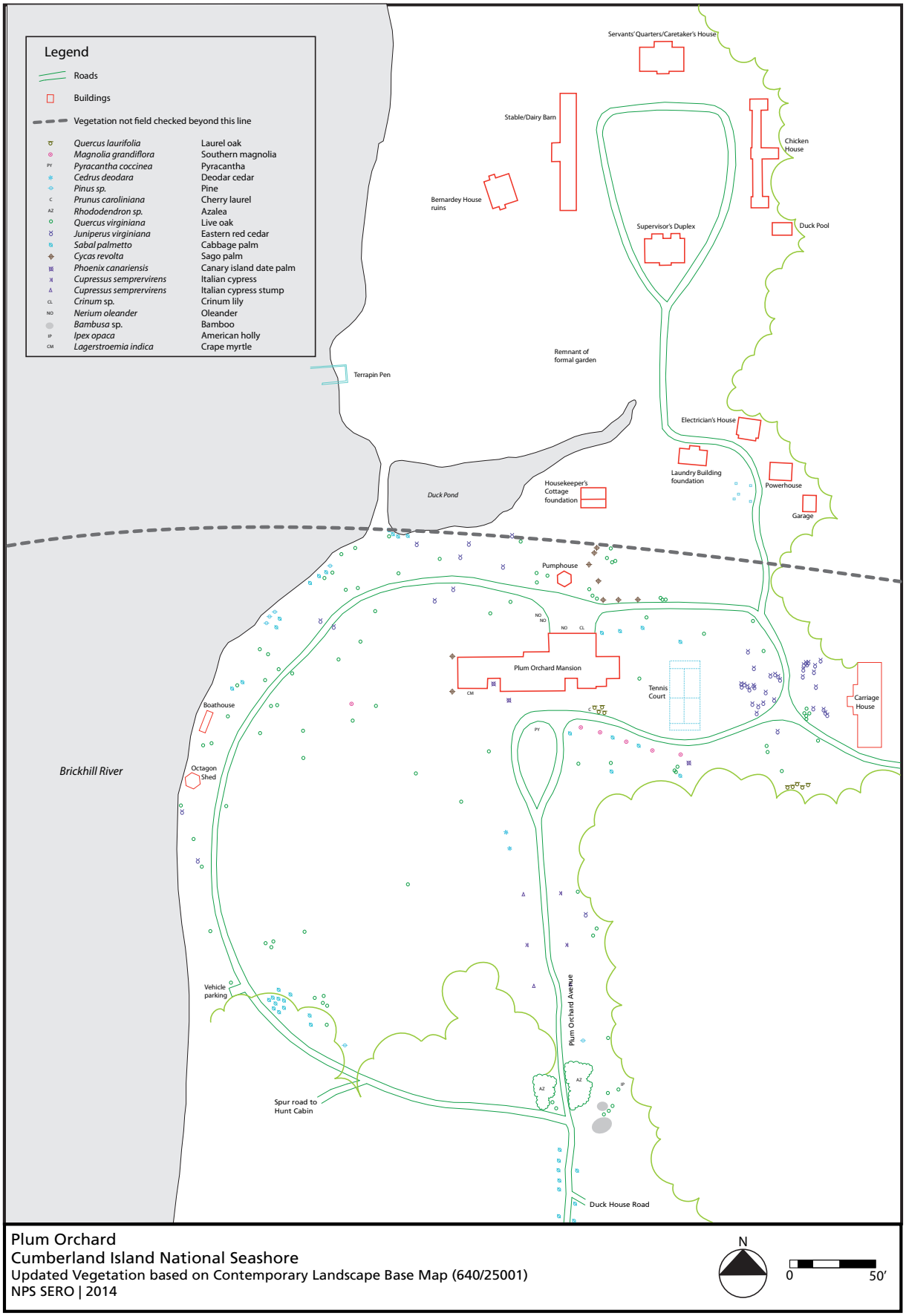


FIGURE 164. Pindo palm, 2013. (NPS image 1830)

the site identified the cabbage palms but not the magnolias. It appears that planting only occurred on one side of the road.

Foundation plantings around the mansion are largely missing. One of a pair of Canary Island date (at the front entrance steps) and pindo palms (flanking the portico) remain. No crape myrtles (along the gun room façade) survive. Sago palms, overgrown with muscadine (*Vitis rotundifolia*), flank the west portico.

A few live oaks are threatened by severe erosion along the banks of the Brick Hill River, especially near the boathouse. The Duck Pond is overgrown with duck weed (*Lemna* spp.). Clumps of bamboo (*Bambusa* spp.) and cabbage palm surround the pond. Bamboo, cedars, and other vegetation are growing on the river side of the levee. A complete survey of the vegetation around the Duck Pond could not be undertaken in 2011 because the north side was thought at that time to be on reserved property. Clarification since that time indicated it is NPS fee simple property.



Plum Orchard
Cumberland Island National Seashore
Updated Vegetation based on Contemporary Landscape Base Map (640/25001)
NPS SERO | 2014

FIGURE 165. Existing Conditions Vegetation Map, 2011. (NPS image, Beth Byrd)



FIGURE 166. Vegetation around the Duck Pond, 2014. (SERO Collection)



FIGURE 167. Vegetation on the river side of the levee, 2014. (SERO Collection)

Topography

Physiography

Cumberland Island is located within the Coastal Plain physiographic province that extends inland from the coast to the Fall Line, the geological boundary that separates the Coastal Plain from the Piedmont. The Coastal Plain is characterized by a transition of gently rolling hills into low-lying pine-forests, saltwater marshes and estuaries on the coast, and bisected by rivers that empty into the Atlantic Ocean. The Satilla River empties into St. Andrews Sound at the north end of Cumberland Island, and the St. Marys River, which forms the border between southeast Georgia and northeast Florida, empties into Cumberland Sound.

The sweeping beach lines on the east side of the island contrast sharply with irregular outlines formed by river, creek, and sound waters on the west. Building up from wind and ocean-borne sands on the east, dunes generally produce elevations that fall sharply toward the west. Occasionally, the land may drop abruptly into a salt marsh or fall sharply into the sound. Free-flowing streams generally drain to the ocean and sounds from freshwater wetlands and marshes west of the dunes.[1]

Soils

Principal soil types identified in the Plum Orchard Historic District are classified as Cainhoy, Pottsburg, Rutledge, and Mandarin in the most recent draft Soil Survey of Cumberland Island. Wetland soils are Bohicket and Capers.

The Cainhoy series consists of very deep, excessively drained, rapidly permeable soils that occur on nearly level to sloping landforms. These soils have slopes ranging from 0% to 10%.

Vegetation: Mixed Woodland – The overstory vegetation is typically longleaf pine, live oak, post oak (*Quercus stellata*), white oak, (*Quercus alba*), bluejack oak (*Quercus incana*), turkey oak (*Quercus laevis*), common persimmon (*Diospyros virginiana*) and southern red oak (*Quercus falcata*).

The Pottsburg series consists of very deep, somewhat poorly and poorly drained moderately permeable soils that occur on upland flats. These soils have slopes ranging from 0% to 2%.

Vegetation: Mixed Woodland - second growth slash pine, and longleaf pine, with an understory of saw palmetto, gallberry (*Ilex coriacea*), pineland threeawn (*Aristida stricta*), broomsedge bluestem (*Andropogon virginicus*), lopsided Indiangrass (*Sorghastrum secundum*), chalky bluestem (*Andropogon capillipes*), wild grape, and other perennial grasses

The Rutledge series consists of very deep, very poorly drained rapidly permeable soils that occur on upland flats or depressions. These soils have slopes ranging from 0% to 2%.

Vegetation: Mixed Woodland – blackgum (*Nyssa sylvatica*), Carolina ash (*Fraxinus caroliniana Mill.*), red maple (*Acer rubrum*), sweetbay (*Magnolia virginiana*), water oak (*Quercus nigra*), pin oak (*Quercus palustris*), pond pine, slash pine, and longleaf pine. The understory is huckleberry

1. *General Management Plan Cumberland Island National Seashore* (Atlanta, Ga.: Southeast Regional Office, 1984), 5.

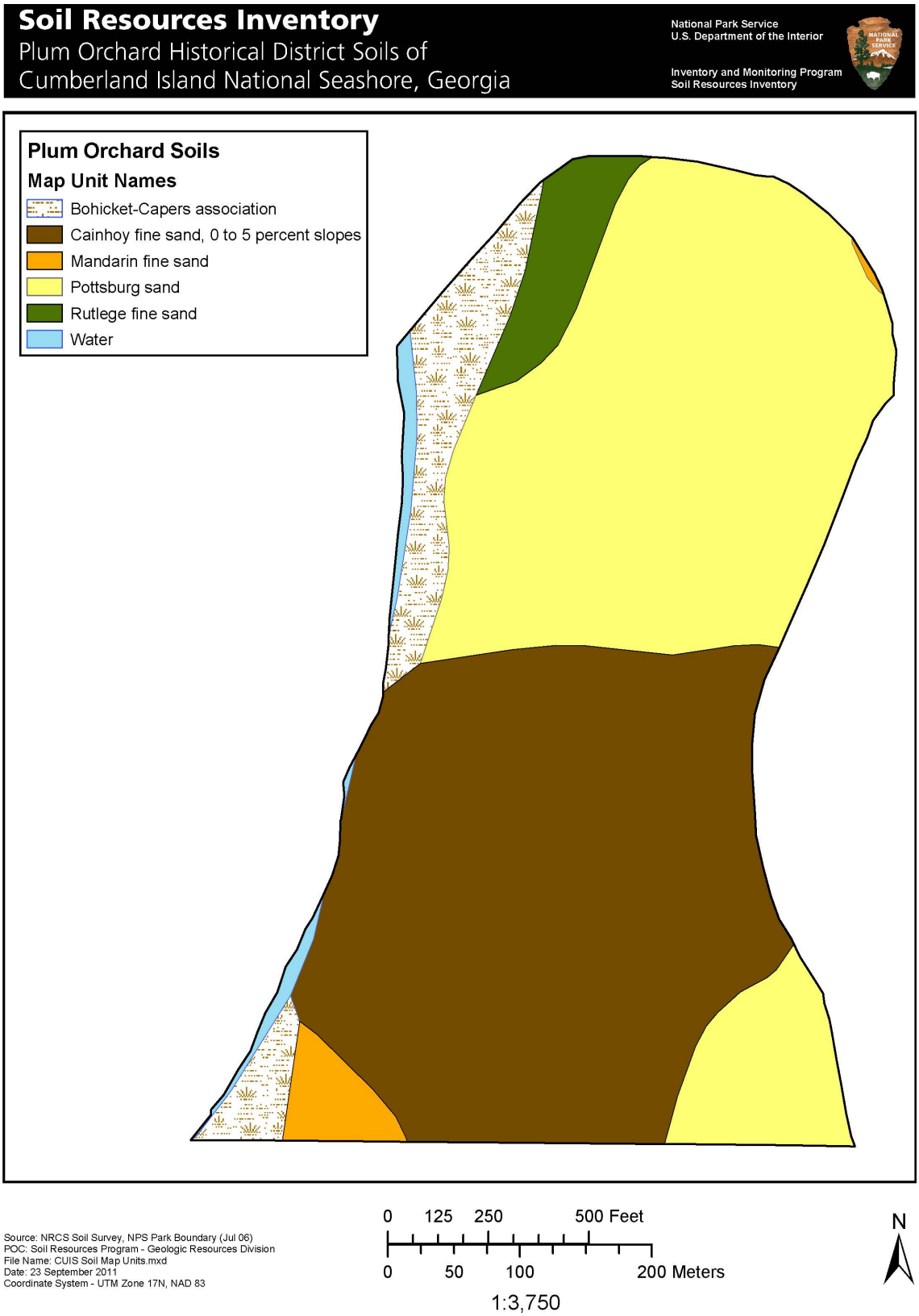


FIGURE 168. Plum Orchard soils map, 2011. (NRCS Soil Survey)

(*Gaylussacia Kunth*), wax myrtle (*Myrica cerifera*), greenbriar (*Smilax* spp.), grasses, and sedges. Some ponded areas consist of entirely grasses and sedges.

The Mandarin series consists of very deep, somewhat poorly drained moderately permeable soils on marine terraces. These soils have slopes ranging from 0% to 3%.

Vegetation: Mixed Woodland - scattered second growth slash pine and longleaf pine with an understory of greenbriar, saw palmetto, pineland threeawn (*Aristida stricta*), creeping bluestem (*Schizachyrium scoparium*), seashore paspalum (*Paspalum vaginatum*), *panicum* spp., and lopsided Indiangrass (*Sorghastrum secundum*).

The Bohicket series consists of very poorly drained, slowly permeable soils on broad, level tidal flats bordering the Atlantic Ocean. They are flooded by sea water twice daily and slopes are less than 2%.

Vegetation: Wetland - The vegetation is limited to salt tolerant marshland plants with the principal species being black rush (*Juncus roemerianus*), smooth cordgrass (*Spartina alterniflora*), big cordgrass (*Spartina cynosuroides*), and three square (*Scirpus robustus*).

The Capers series consists of very deep, very poorly drained, very slowly permeable soils on broad, level tidal flats and along the lower reaches of larger streams flowing into tidal flats. Slopes are mainly less than 2%.

Vegetation: Wetland - The vegetation is limited to salt tolerant marshland plants with the principal species being black rush, smooth cordgrass, big cordgrass, and three square.

Erosion at Brickhill River

The Plum Orchard Historic District is located on the Brickhill River on the west, or backbarrier, side of Cumberland Island. The approximately 1,450 feet of shoreline associated with the former Carnegie estate and earlier human occupations is naturally vulnerable to erosion due to its location on the outside bend of a river that has swift currents due to large tidal fluctuations. Recently, erosion rates have seemed to increase dramatically based on assessments and casual observations. An island-wide assessment of historical shoreline change indicates that prior to 1983 erosion along Plum Orchard was on the order of 0.14-0.17 meters (0.5 feet) per year. After 1983, erosion rates increased to an estimated 0.65 meters (2.1



FIGURE 169. Comparison of 1992 and 2012 erosion. (NPS image)



FIGURE 170. Cultural resources threatened by erosion, 2013. (NPS image/Google Earth)

feet) annually. Within the past two years serious undercutting has taken place along the bank leading to small sinkholes, severe slumping, and rapid, irregular bank loss. The unstable shoreline creates a safety hazard, alters the local environment, and is an imminent threat to cultural resources.

Erosion along the banks of the Brickhill River threatens the boathouse, octagon shed, terrapin pen, Duck Pond, and specimen trees and may eventually impact the loop road and other features. A bulkhead constructed in 1992 has not contained erosion advancing on the structures and possibly accelerated erosion adjacent to the ends of the bulkhead. Other forces such as boat wakes may also be likely factors. Activities at the dock and boat ramp are direct sources of erosion. Run-off from the loop road and open area of lawn are also contributing to erosion. The collective result is a highly dysfunctional, unstable shoreline that is putting historic features in jeopardy.

In October 2013, a team of subject matter experts representing the cultural and natural resource fields, as well as shoreline engineering experts, began a dialogue to address the issues at Plum Orchard. Involvement was also sought from Georgia Department of Natural Resources and a Georgia Southern University coastal geologist with regard to potential shoreline stabilization. The park sought direction from these experts in order to move forward with a comprehensive plan and project to mitigate the effects of the ongoing shoreline erosion and prevent further loss of resources.

In March 2014, a site visit to Plum Orchard resulted in a list of short-term data needs and ideas for



FIGURE 171. Eroding shoreline, 2014. (SERO Collection)



FIGURE 172. Bulkhead, 2011. (SERO Collection)



FIGURE 174. Duck Pond, 2014. (SERO Collection)



FIGURE 173. Boathouse and eroding shoreline, 2014. (SERO Collection)



FIGURE 175. Duck Pond levee, 2014. (SERO Collection)

short-term protective measures at one or two specific areas. Long-term shoreline protection ideas and specific actions to mitigate the effects of shoreline erosion still need to be developed.

Topographic Features

The Duck Pond is covered with duck weed, and encroaching vegetation has obscured views of the reservoir from the mansion. The Duck Pond levee is approximately 4-5 ft high and 3-5 ft wide and extends north-south on the eastern edge of the Brickhill River shoreline. The levee is severely undercut on the outer face by shoreline erosion. The headwall is in need of stabilization and, if breached, it will drain the Duck Pond.

Dr. Chester Jackson, coastal geologist from Georgia Southern University, suggested that protection (stabilization) of the duck pond levee may require a more substantial protection such as a bulkhead structure, perhaps even made of concrete rather than wood. He also indicated that the height of the levee is a problem in that the levee could be over-topped by high water levels and breached from the top down.

Middens are described under Archeological Resources.

Buildings and Structures

NPS Managed Resources

The Plum Orchard Mansion and Carriage House are currently the only structures owned and maintained by the NPS that were designed by Peabody and Stearns. Since the writing of the

National Register nomination in 1984, the carriage house, which even at that time was dilapidated, collapsed due to lack of maintenance and use. There have been several major efforts to preserve the Plum Orchard Mansion, which is now a destination of a daily van tour of the island, but because of its size and location it requires constant maintenance.

Plum Orchard Mansion (LCS 006608)

Plum Orchard Mansion is a two-and-one-half-story, hipped-roof Georgian Revival structure resting on a raised balustraded piazza. Constructed of wood in 1898 with a stucco finish, it extends 240 feet from east to west with a full basement. The central portion of the structure features an Ionic portico with a richly decorated pediment and round arched windows. Additions from 1905 through 1907 used hyphens connecting to projecting pavilions at the extreme ends to create a five-part plan characteristic of a Georgian-style house.[2]

There is no dedicated maintenance staff to perform regular upkeep on the mansion. As a result, a series



FIGURE 177. Plum Orchard Mansion, 2003. (Jack Boucher/ HABS image 208825)

of major interventions have been needed when problems became serious enough to threaten the integrity of the structure. In FY 1999, the NPS began the commitment to implement a general program of rehabilitation work for the mansion.

Phase I, which began in 2000 and was completed in 2002, included most of the exterior envelope

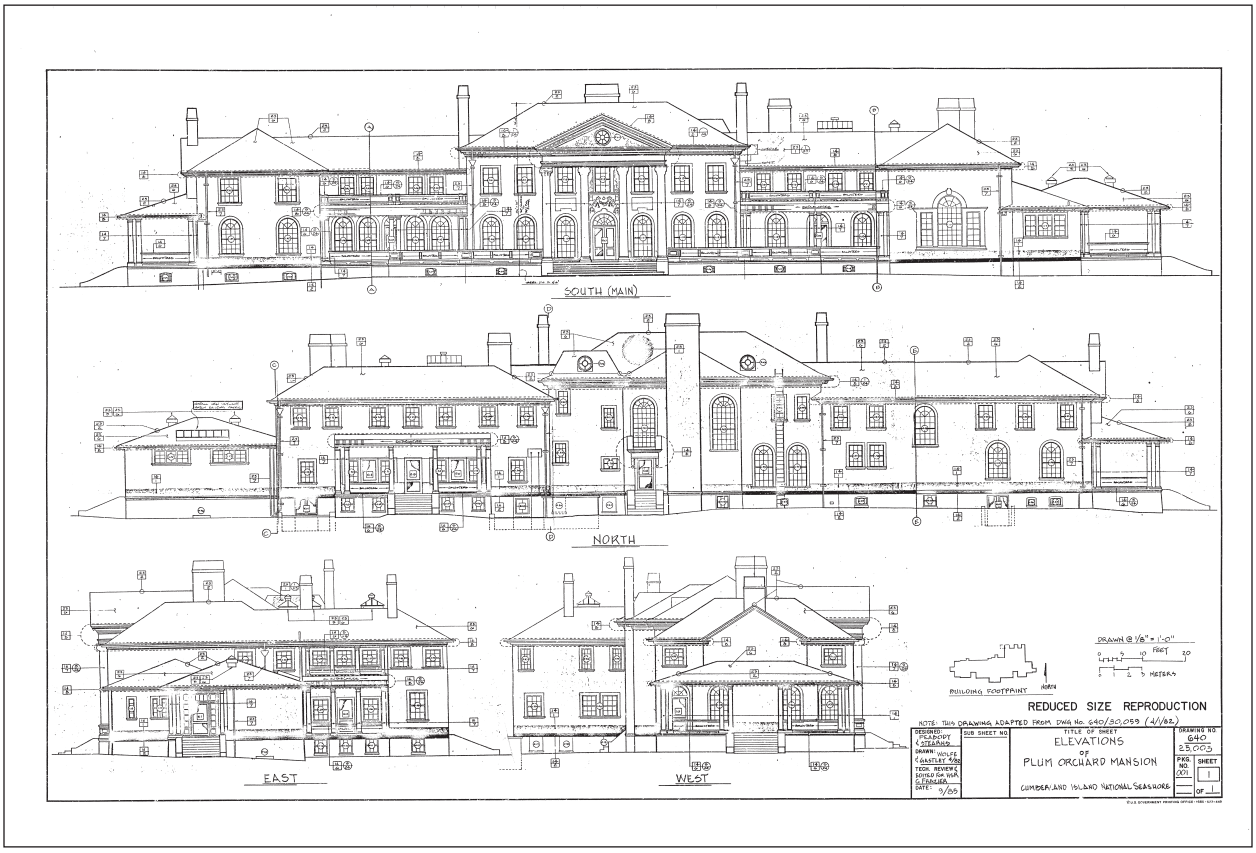


FIGURE 176. Plum Orchard Mansion elevation, 1985. (Denver Service Center etic 640/25003)

2. GWWO, 8-9.

problems and repair of structural failures and included a new pine shingle roof. Work included roof replacement and repairs related to roof drainage; installation of lightning protection; rehabilitation of window glazing; exterior wall surface preparation and painting; and repair of the portico columns and balcony column and beam. Phase IA was an ongoing day labor project and included resetting of the south piazza pavers; window and door rehabilitation; cleaning and painting of the ornamental soffit; and cleaning and painting of the ornamental gable wall at the south portico. The completion of the project occurred in February 2002.

Phase II began in 2006 and concluded in 2008. The work included installation of fire suppression/detection system; abatement/removal of hazardous materials; replacement/upgrade of plumbing, electrical, and HVAC systems; restoration of historic wood finishes, interior surfaces such as floors, walls, ceilings, stairways; repairs to the north portico deck and replacement of the south portico deck; and rehabilitation of interiors of the Plum Orchard Mansion. Site work associated with the fire suppression system and electrical upgrades were also included.[3]

In 2010, the exterior of the mansion was entirely washed down and the south, east, and west sides were scraped and painted. This included all exterior windows, doors, shutters, and benches. Some minor repairs were done to the hand railings and metal flashing on the floor of the balcony.[4]

Plum Orchard Carriage House (LCS 006610)

Currently a large frame structure in ruins and covered with invading vegetation, the original building was a one-and-one-half story, frame structure of a T-shaped plan with hipped principal roof and central cross gable, hipped dormers, weatherboard siding, and central, three-part entry. It housed carriages (later automobiles), horses, and the required tack rooms and equipment.

Ferns growing on the roof acted as water reservoirs causing gradual rotting of the structural



FIGURE 178. Plum Orchard Carriage House, 2011. (SERO Collection)

components.[5] The NPS could not agree on a plan of action, and without the funds or staff necessary to substantially intervene and stabilize the building, the wings began to collapse. By 1996, the central, three-part entry was intact but collapsing, and eventually the entire structure collapsed.

Plans are to remove the remains of the structure and stabilize the foundation in order to protect the archeological component of the site and interpret the area to visitors.

Pumphouse (LCS 006617)

An octagonal building located north of the mansion consisting of 9-ft-wide walls with door on the south elevation and one casement window on the north elevation. The roof is sheathed in concrete asbestos tile grained to replicate wood. Interior houses pump for fire suppression tank. It is in good condition.



FIGURE 179. Pumphouse, 2010. (SERO Collection)

3. Project Report, Rehabilitate Plum Orchard Mansion, March 23, 2000; Completion Report, February 12, 2002; Rehabilitate Plum Orchard Mansion Phase II, March 1, 2006; Completion Report, Rehabilitate Plum Orchard Mansion, August 8, 2008, CUIS archives 66618, Box 2.

4. Superintendent's Annual Narrative Report, 2010, 4.

5. Henderson, 20.

Housekeeper's Cottage (LCS 006612)

A brick ruin measuring 45 ft by 36 ft with a stucco finish consisting of foundation walls, basement, and a prominent chimney stack, located north of the mansion, abutting the Duck Pond. The ruin is severely overgrown with vegetation and bamboo invading on the north.



FIGURE 180. Housekeeper's Cottage, 2014. (SERO Collection)

Octagon Shed (LCS 006623)

An octagonal frame structure with stucco exterior with 9-ft-wide walls and a single opening on each elevation located west of the mansion on the banks of the Brickhill River. The roof is surmounted by a vented octagonal cupola and sheathed in concrete asbestos tile grained to replicate wood. Two exterior doors access three interior rooms. Although it is in good condition, the shed is extremely vulnerable to shoreline erosion despite construction of a headwall in 1992 and may need to be relocated.



FIGURE 181. Octagon Shed, 2014. (SERO Collection)

Plum Orchard Boathouse (LCS 006622)

A rectangular frame shed with a shouldered opening and a deteriorating hipped roof located north of the octagon shed on the banks of the Brickhill River. Shoreline erosion is pulling the building into the marsh, and the roof is collapsing in on the structure. It is in a ruinous condition and is beyond repair.



FIGURE 182. Plum Orchard Boathouse, 2014. (CUIS Collection)

NPS Dock

A sectional, floating concrete dock replaced the old wooden NPS dock in 2002. The existing structure consists of a fixed timber ramp and dock with an aluminum gangway leading to a T-shaped concrete floating dock. A new concrete dock with a raised platform and longer gangway that moves up and down with the tide will supply adjustments needed to meet universal accessibility standards.



FIGURE 183. NPS dock, 2014. (SERO Collection)

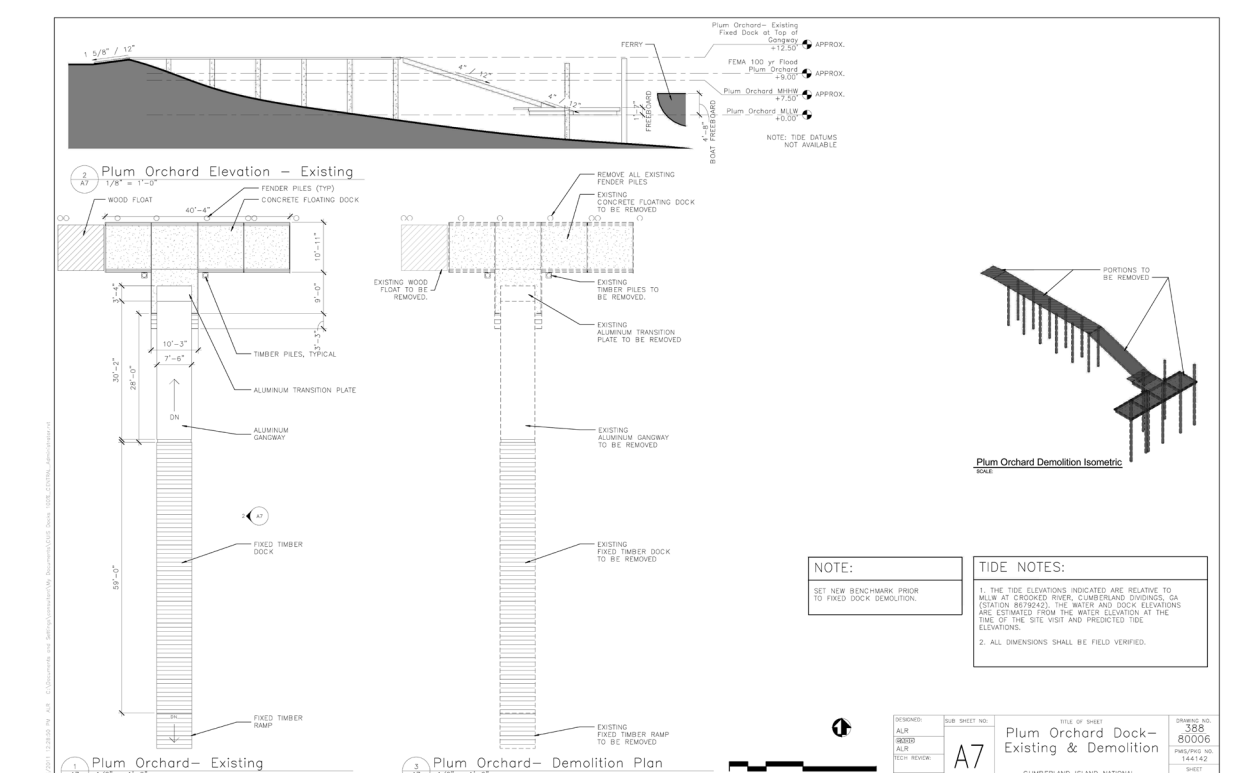


FIGURE 184. Existing elevation and plan, 2011. (Denver Service Center etic 388/80006 sheet 9)

Carnegie Dock

Remains of the decking of a wooden dock can still be seen in the Brickhill River at low tide.



FIGURE 185. Carnegie dock at low tide, 2011. (SERO Collection)

Seawall

A wooden bulkhead that runs 100 feet along the Brickhill River with wingwalls of 25 feet on each end. The park installed the seawall in 1992 to control bank erosion and protect the octagon shed and boathouse, but the bulkhead that is currently in place needs to be repaired, replaced, or removed (see Topography above).



FIGURE 186. Seawall, 2014. (SERO Collection)

Terrapin Pen

A U-shaped tabby wall measuring approximately 3-4 feet in height located northwest of the Duck Pond. Standing on an eroding marsh edge, it is in fair condition and threatened by shoreline erosion.



FIGURE 187. Terrapin pen, 2014. (SERO Collection)

Reserved Life Estate Resources

The two Reserved Life Estates associated with Plum Orchard are located immediately north of the mansion and, between them, include most of the support structures of the Plum Orchard Historic District.

Powerhouse (LCS 006613)

A one-story hip-roofed frame building with a stucco exterior, vented monitor, and a single interior chimney measuring 26 ft by 34 ft. Windows are 6/6/6 triple hung sash. Well-maintained and recently painted with wood decking at the front and rear entries, the building has been rehabilitated for residential use and is in good condition.



FIGURE 188. Powerhouse, 2011. (SERO Collection)

Electrician's House (LCS 006609)

A two-story, side-gabled building with stucco exterior measuring 37 ft by 39 ft with flat-roofed entry portico and shallow piazza on the south elevation, an inset porch on the west elevation that opens onto a wood deck, and a small rear entry portico on the north. The gable ends are pedimented with a half-moon vent and the cornice is boxed with molded trim. Two chimneys pierce the roof line. Windows are 6/6 double hung sash. In 2011, two additions were built, a sunroom with fireplace replacing the wood deck on the west and an outdoor shower attached to the north portico. It is in good condition.



FIGURE 189. Electrician's House, 2011. (Collection)

Laundry Building Foundation (LCS 006615)

A rectangular ruin measuring 40 ft by 40 ft consisting of a 6-ft-high, 3-course brick foundation with deteriorated stucco finish and a 35-40-ft-high brick chimney stack. Two concrete platforms on the south and east likely supported equipment. The LCS described its condition as fair in 2008.



FIGURE 190. Laundry Building foundation, 2009. (SERO Collection)

Water Tower Footings (LCS 006614)

The site consists of four 2-ft-high battered concrete piers, a circular brick well with a stucco finish, and a rectangular foundation with an enclosing curb that likely held the pump housing. Palmettos are growing up between the piers. The LCS described the condition as good in 2008.



FIGURE 191. Water tower footings, 2009. (SERO Collection)

Supervisor's Duplex (LCS 006616)

A two-story side-gabled frame building with weatherboard siding and a deteriorating stucco finish measuring 58 ft by 44 ft located. The north elevation has paired hip-roofed porches on chamfered posts. The structure is currently unoccupied, and the exterior material is in poor condition. Resurrection fern covers the porch roofs, windows are missing, and vines are growing on the exterior. The roof was reported as sound in 2008, but the building's condition was poor. Access to the building was not possible for this report.



FIGURE 192. Supervisor's Duplex, 2014. (SERO Collection)

Stable/Dairy Barn (LCS 006611)

A one-story, cross-gabled stable/barn measuring 171 ft by 24 ft whose two-story, central section has a large paneled door on casters and hay loft opening above. The south end has been converted to living quarters, and the north end has walk-thru stalls and two garage bays. Recently painted/stuccoed, the LCS described its condition in 2008 as good. Access to the building was not possible for this report.



FIGURE 193. Stable/Dairy Barn, 2014. (SERO Collection)

Servants' Quarters/Caretaker's House (LCS 006618)

A two-story, side-gabled frame building measuring 62 ft by 43 ft with a stucco exterior and two end chimney. A recessed, two-story porch with a connecting exterior stair has been screened in on the front elevation, which faces south. The rear



FIGURE 194. Servants' Quarters, south elevation, 2009. (SERO Collection)



FIGURE 195. Servants' Quarters, north elevation, 2008. (SERO Collection)

elevation has a shed-roofed sun room. The LSC described its condition in 2008 as good. Access to the building was not possible for this report.

Chicken House (LCS 006619)

A low rectangular, side-gabled building located northeast of the supervisor's duplex has numerous bays, interior rooms, and stalls to house animals The rear elevation has vented slatted openings. The southern portion of the building collapsed and was taken down around 2008, leaving a structure with two cross-gables. The LCS described its condition as poor in 2008. Access to the building was not possible for this report.



FIGURE 196. Chicken House, 2009. (SERO Collection)

Bernardey Walled Cemetery and Grave Marker (LCS 006626)

An area measuring 10 ft by 10 ft located east of the dairy barn enclosed by a 2-ft-high tabby and clay brick wall laid in common bond with remnants of a stucco finish. The wall encloses encloses two interments, one marked for Peter Bernardey and one unmarked, belonging to his mother, Mrs. Marguerite Bernardey. The grave marker is slate laid horizontally on a brick foundation. Vegetation is growing within the enclosure, and the LCS described its condition as poor in 2008.



FIGURE 197. Bernardey walled cemetery, 2009. (SERO Collection)

Bernardey House Foundation (LCS 006627)

A ruin measuring 54 ft by 48 ft consisting of 4-5-ft-high tabby wall sections with an eroded stucco exterior scored to resemble ashlar. Vegetation is growing among the wall sections. This foundation likely supported a wood building and is built on partially excavated shell midden. It sits west of the dairy barn along the Brickhill River. The LCS described its condition as poor in 2008.



FIGURE 198. Bernardey House foundation, 2009. (SERO Collection)

Modern Features

A fire suppression tank and a generator are located northeast of the pumphouse.

The Plum Orchard Hunt Camp is located southwest of the dock. It includes the hunt cabin, which was remodeled in 2010 to include four bathrooms with a shower, sink, and toilet, including an ADA compliant unit. This project also added a ramp to the cabin and allowed the park to decrease the footprint of the hunt camp by eliminating the shower trailer that was a separate structure. The camp also includes a pumphouse and walk-in refrigerator on a covered concrete pad. The camp is not visible from the mansion or the loop road that passes by the dock.[6]



FIGURE 199. Generator, 2010. (SERO Collection)



FIGURE 200. Fire suppression tank, 2010. (SERO Collection)

Circulation

The current circulation system at Plum Orchard is a remnant of the historic circulation system. The limbs of a historic live oak are now growing into the path of the missing entry road loop.

6. Superintendent's Annual Narrative Report, 2010, 4, 6.

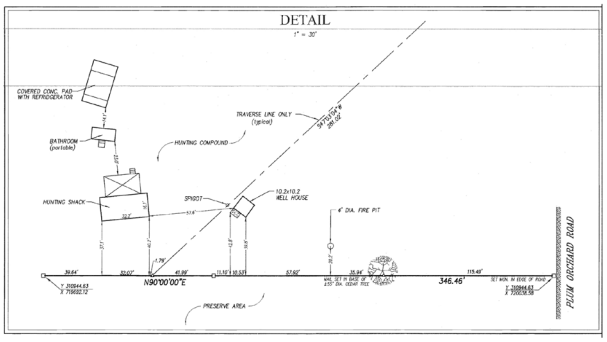


FIGURE 201. Plum Orchard Hunt Camp detail, 2010. (Taken from Hunt Camp Survey of 5/10/2010)

With the loss of several service buildings, their interconnecting access roads have also disappeared. All roads are unpaved.

Table Point Road is a major north-south roadway just off the Main Road. From Table Point Road, Plum Orchard Avenue travels through woods and enters the site, where a shell and sand entry road makes a long loop around the NPS managed portion of the property. After reaching the front piazza, it turns east towards the carriage house, turns west to pass by the rear of the house, turns south to pass by the octagon shed and boathouse, and turns east to hook back up with Plum Orchard Avenue and exits the site. The dock can be reached by foot or by truck from a roadway west of the loop road as it passes by the three-sided wayside exhibit. Just south of the wayside is the entry to the Plum Orchard hunt cabin.

A service road accesses the two Reserved Life Estates north of the mansion. It loops around the extant support buildings much as it did during the Carnegie era, with a connection on the north end to Table Point Road.

Another service road links the carriage house ruins with Table Point Road. Duck House Road travels east from Plum Orchard Road, crosses



FIGURE 202. Plum Orchard Avenue, 2011. (SERO Collection)



FIGURE 203. Plum Orchard Avenue, 2011. (SERO Collection)



FIGURE 204. Entry road as it approaches the front piazza and turns east, 2011. (SERO Collection)



FIGURE 205. Portion of road that loops around the rear of the mansion, 2014. (SERO Collection)



FIGURE 206. Portion of the road that loops around the mansion, 2014. (SERO Collection)



FIGURE 207. Portion of the loop road that passes by the octagon shed, 2014. (SERO Collection)



FIGURE 208. Portion of the loop road that passes by the dock and exits the site, 2014. (SERO Collection)



FIGURE 209. Service road that loops around support buildings, 2009. (SERO Collection)



FIGURE 210. Service road to Table Point Road, 2010. (SERO Collection)

Table Point Road, and crosses the island to the site of the former Duck House, where Plum Orchard residents and guests accessed the beach. The house burned in 1988.

Views and Vistas

Modern intrusions and changes in circulation patterns and vegetation have affected views at Plum Orchard. From the front portico, the loss of three of the formally planted Italian cypresses, one of the Canary Island date palms, and one pindo palm, as well as the reconfiguration of the front entrance drive, altered the views from the front steps.

From the back portico, a generator and fire suppression tank degrade views to the Duck Pond, although the fire suppression tank is screened by the pumphouse from this vantage point. Kings Bay Naval Base can be seen from the Brickhill River.



FIGURE 211. View of Italian cypresses from front portico (SERO Collection)



FIGURE 212. Fire suppression tank partially hidden by pumphouse, 2011. (SERO Collection)

Small-Scale Features

Duck Pond Concrete Enclosure

A 4-ft-square concrete enclosure located on the southeast edge of the Duck Pond held a large diameter metal pipe and valve that added aquifer-fed ground water to the pond. The interior is covered with green biological staining and the exterior wall is cracked. Its condition is fair.



FIGURE 213. Concrete enclosure, 2009. (SERO Collection)

Formal Garden Pool

A 7-ft-diamter concrete structure that served as the central focus of the formal garden. The feature is presently empty and is missing the fountain head. It is the only remaining aboveground structure of the formal garden. Its condition is unknown.



FIGURE 214. Formal garden pool, 2014. (SERO Collection)

Duck Pool

A rectangular, concrete pool measuring approximately 20 ft by 10 ft with rounded edges located south of the chicken house. Its condition was described as being fair in 1995. Access to this feature was not possible for this report.

Post-and-wire Fencing

Post-and-wire fencing encloses portions of the reserved life estate inholdings. Remnant posts survive from a fence near the Duck Pond levee.



FIGURE 215. Remnant fencing near the Duck Pond levee at low tide, 2009. (SERO Collection)



FIGURE 216. Post-and-wire fencing on the reserved life estate inholding, 2009. (SERO Collection)

Circular Concrete Feature (Carriage House)

A circular, 2-ft-high concrete structure with a supply pipe for water. These are also found near the cisterns at the Dungeness dock and were identified in the historic structure report for the carriage house as watering troughs. Its condition is unknown.



FIGURE 217. Circular concrete feature, 2010. (SERO Collection)

Brick Pyramid Structure (Carriage House)

An attenuated, irregular brick pyramid structure that rises to 13 ft-8 in. with a 3-ft-square base. A similar structure is found at the Cottage at Dungeness. Its condition is unknown.



FIGURE 218. Brick pyramid structure, 2010. (SERO Collection)

Rectangular Concrete Feature (Carriage House)

A rectangular, 8-in-high concrete element located near the brick pyramid structure. Its condition is unknown.

Corner Monuments

Three concrete corner monuments mark the boundary of the NPS-managed resources.



FIGURE 219. Aerial image of boundaries, 2013. (NPS image/ Google Earth)



FIGURE 220. Concrete marker near housekeeper's cottage, 2014. (SERO Collection)

Fee Area Sign and Lock Box

A wooden sign and metal fee collection lock box are modern features located adjacent to the dock.

Interpretive Marker

A three-sided wayside located northeast of the dock along the main roadway.



FIGURE 221. Wooden sign and fee collection box, 2014. (SERO Collection)



FIGURE 222. Interpretive wayside, 2011. (SERO Collection)

Natural Systems and Features

Ecology

Cumberland Island

A typical cross section of Cumberland Island features a wide flat beach stretching from the ocean to the dune line, fresh water sloughs (still or slow-moving waterbodies occupying swales between old dunes) lying behind the dunes, a forested area running from the western slough margin back to the western margins of high ground, and broad salt marshes extending out to tidal creeks.

A sparsely vegetated and shifting foredune (5 to 10 feet in height) can be distinguished from larger (up to 30 feet in height), more stable vegetated secondary dunes found behind the former.

Nestled between the primary and rear dunes is the interdune area. In this environment of reduced salt spray and increased moisture, plant life thrives. Abundant grasses and sedges attract small mammals and seed eating birds. Wax myrtle thickets provide shelter for deer and nesting sites for songbirds.

Six dune and interdune plant communities have been described on Cumberland Island:

- Dune grass-forb
- Dune shrub thicket
- Dune oak-buckthorn shrub forest
- Interdune grass-sedge meadow
- Interdune shrub thicket
- Interdune pine-mixed hardwood forest

The freshwater sloughs behind the dunes are an extremely important habitat for reptiles, amphibians, and waterfowl. The forested section of the island is similar to the shoreline and hammocks on the mainland. Loblolly and long leaf pine, live oak, and cabbage palm are the dominant trees, while saw palmetto and wax myrtle provide ground cover.

Salt marshes interlaced by rivers and tidal creeks cover an extensive area on the west side of the island and provide a vital feeding area for important game and commercial fish frequenting nearby estuarine waters. Tolerant of both tidal fluctuations and variations in salinity, saltmarsh cordgrass (*Spartina alterniflora*) dominates the marsh. When the marsh grass dies and decomposes, it is broken down into a protein rich substance called detritus, which forms the basis of an intricate food web that supports such diverse animals as clams, oysters, shrimp, periwinkles (*Littorina littorea*) fiddler crabs (*Uca* spp.), and flounder. These marshlands also provide breeding and nursery habitats for various forms of wildlife such as the clapper rail (*Rallus longirostris*), long-billed marsh wren (*Telmatodytes palustris*), sharptailed (*Ammospiza caudacuta*) and seaside sparrow (*Ammodramus maritimus*), marsh rabbit (*Sylvilagus palustris*) and raccoon (*Procyon lotor*). The marsh system between Cumberland Island and the mainland also plays an indispensable role in the purification of waste materials and protection from erosion and flooding.

Surface water. The Seashore has two rivers (Cumberland and Brickhill Rivers), 10 creeks, and a number of permanent and temporary freshwater ponds and lakes. Lake Retta and South End Pond are permanent saline water bodies that have an outlet to the ocean and are inundated regularly enough to remain brackish. There are several outflows that connect waterbodies to the ocean or sounds including Whitney (South Cut) and Lake Retta Outflows (Big Slough Overflow). These are places where the water flows out and eventually connects with the ocean or sounds.

Cumberland Island has the largest and most diverse system of wetlands on any of Georgia's barrier islands with approximately 45% (16,500 acres) of the Seashore classified as wetlands. The wetlands consist of salt marshes, mud flats, tidal creeks, and more than 2,500 acres of freshwater wetlands that range from permanent and semi-permanent ponds to seasonal wetland areas. Freshwater wetlands increase biodiversity on barrier islands by providing habitat for animals such as frogs, salamanders, water snakes, turtles, and aquatic mammals—all of which are largely absent from barrier islands lacking freshwater habitats. Barrier-island freshwater wetlands commonly provide the only dependable source of water for upland fauna such as whitetail deer and feral horses and hogs. In addition, wetlands provide habitat for aquatic plants, aquatic invertebrates, and fishes, as well as nesting, feeding, and roosting areas for wading and shore birds.

Ground water. The primary groundwater sources of drinking water for residents, park employees, and visitors comes from the surficial and Upper Floridan aquifers. The deep-lying and confined Upper Floridan aquifer is important regionally for industrial and municipal uses and supplies drinking water for almost all domestic wells. The shallower Pliocene and late Miocene deposits that comprise most of the water-bearing zones of the surficial aquifer also have been used, primarily by the NPS, as a drinking-water resource on the island. Unconfined portions of the surficial aquifer are important for sustaining freshwater wetland ecosystems on Cumberland Island.

The surficial aquifer consists of unconsolidated sands, clays, and gravels that are recharged locally by rainfall. Water levels in the surficial aquifer vary seasonally and respond to local changes in recharge and discharge. Rainfall and seepage from wetlands is the primary source of water to the aquifer.

Water is discharged from the surficial aquifer by evapotranspiration and flow to wetlands, coastal areas, and locally to wells. Wells in the surficial aquifer have a higher risk of saltwater intrusion and contamination than those in the Floridian aquifer.

Fauna. White-tailed deer (*Odocoileus virginianus*), gray squirrels (*Sciurus carolinensis*), marsh rabbit, mink (*Mustela vison*), river otter (*Lutra canadensis*), raccoons , bobcat (*Lynx rufus*), and various rodents are common mammals on the island. Frogs and toads, salamanders, snakes, turtles, alligators, and lizards are common reptiles and amphibians. Nonnative species include feral pigs (*Sus scrofa*), feral horses (*Equus caballus*), coyotes (*Canis latrans*), armadillo (*Dasypus novemcinctus*), and black rats (*Rattus rattus*).

Birds are the most visible and diverse vertebrate fauna found on Cumberland Island. The undeveloped beach provides important habitat for winter migratory shore- and wading birds. The 2013 mid-winter shorebird survey recorded over 28,000 birds and 20 species. The beach and associated dunes provide suitable nesting habitat in the spring/summer months for shorebirds that include but are not limited to American oystercatcher (*Haematopus palliatus*), least terns (*Sternula antillarum*), Wilson's plovers (*Charadrius wilsonia*), and willets (*Tringa semipalmata*). The marshes provide nesting habitat for clapper rails, and marsh wrens (*Cistothorus palustris*); year-round foraging habitat for shore and wading birds and raptors, including the bald eagle (*Haliaeetus leucocephalus*). The mature oak forests provide nesting habitat for 77 species of tree nesting birds and foraging habitat for over 100 species of insect-eating birds.

The Seashore lies in the Atlantic migration flyway, and many species of birds are transient during spring and fall migrations. Migration flyways provide habitats to serve as food sources, water sources, and resting places for migrating birds. Birds found in the Seashore predominantly consist of four categories: waterfowl, shorebirds, passerines (including many neotropical songbirds), and raptors. The abundance and variety of birds in the Seashore contribute to one of the favorite visitor activities, bird watching.[7]

Six threatened or endangered species can be found on the island. One of these, the loggerhead sea turtle, has been studied since the early 1970s by researchers on CUIS and Little Cumberland Island. Currently, the turtles are no longer tagged, but a Sea Turtle Management Plan was implemented beginning with the 1994 season. The number of turtle crawls and nests are recorded during the nesting and hatching season. A combination of predator reduction and nest protection is used to increase the hatching success. In 2012, sea turtle nesting on the island was 700 confirmed nests, far exceeding the previous high of 482 in 2010.[8]

Between 1975 and 1983, an ambitious feral hog trapping program resulted in 1,488 feral hogs being removed from the island. A current aggressive management program has been in place since 2002 and has reduced the population to acceptable management levels. Full eradication of the hog population is considered infeasible due to vast, impenetrable refuges on the island. Managed hunts for deer and feral hogs that began in 1980 are mandated by the park's enabling legislation and have only minor value in helping to reduce hog numbers. The rooting of feral hogs prevents natural vegetation succession from taking place.[9]

In addition to the feral hogs, feral horses graze the marsh grasses and dune-stabilizing vegetation.[10]

Plum Orchard

Within the Plum Orchard Historic District, pine-oak forest surrounds the disturbed areas of lawn and pasture around the mansion and service complex, with salt marsh along the river.

Pine-oak Forest. The pine-oak forest community occurs naturally on sandhills and deep sands on ridge tops. On Cumberland Island, most of the acreage was under cultivation in the years preceding the Civil War. The community represents secondary forest growth on old fields and pastures where the original maritime hammock was cleared for agricultural purposes or logged extensively of the first generation of pine. Loblolly and slash pines are most common from Plum Orchard south to Greyfield, and longleaf pine is most frequent in the northern fields, particularly Terrapin Point, where there are patches of longleaf pine-turkey oak sandhill type community.

7. Ecosystem Management, Inc., "Fire Management Plan Environmental Assessment," 2013, 3.3.4-3.3.6.

8. Resource Management Plan, 12-13; Superintendent's Annual Narrative, 2010, 10; http://www.seaturtle.org/nestdb/index.shtml?view_beach=90&year=2012.

9. Resource Management Plan, 12; park comments, 2012.

10. Hillestad, 29.

Canopy trees include: live oak, laurel oak, loblolly pine, longleaf pine, slash pine, red bay, American holly, southern red cedar, pignut hickory (*Carya glabra*), and, less commonly, southern magnolia.[11]

Shrubs, vines, and juvenile tree species include: greenbrier, muscadine grape, shiny blueberry (*Vaccinium myrsinites*), sparkleberry (*Vaccinium arboreum*), inkberry (*Ilex glabra*), deerberry (*Vaccinium stamineum*), wax myrtle, fetterbush (*Lyonia lucida*), rusty staggerbush (*Lyonia ferruginea*), pineweed (*Hypericum gentianoides*), tartflower (*Bejaria racemosa*), and scattered clumps of saw palmetto.

Herbs: This habitat supports a diversity of herbaceous understory species, particularly grasses. Species of bluestem (*Andropogon gyrans*, *A. ternarius*, *A. virginicus*), threeawn (*Aristida lanosa*, *A. longespica*, *A. purpurascens*), and witchgrass (*Dichanthelium aciculare*, *D. oligosanthes*, *D. strigosum*) often predominate; other common grasses are: longleaf woodoats (*Chasmanthium laxum*), lovegrass (*Eragrotis* spp.), pinewoods fingergrass (*Eustachys petraea*), twoflower melicgrass (*Melica mutica*), woodsgrass (*Oplismenus hirtellus*), torpedograss (*Panicus repens*), and hidden dropseed (S*porobolus compositus*). Other understory herbs include: milkweed (*Asclepias* spp.), capillary hairsedge (*Bulbostylis ciliatifolia*), finger rot (*Cnidoscolus stimulosus*), rabbitbells (*Crotalaria rotundifolia*), thoroughwort (*Eupatorium mohrii*), nut grass (*Cyperus* spp.), Carolina frost weed (*Helianthemum carolinianum*), nut rush (*Scleria* spp.), coastal plain balm (*Dicerandra linearifolia*), lanceleaf blanketflower (*Gaillardia aestivalis*), Elliott's milkpea (*Galactia elliottii*), hairy bedstraw (*Galium pilosum*), Carolina jessamine (*Gelsemium sempervirens*), Carolina indigo (*Indigofera caroliniana*), lady lupine (*Lupinus villosus*), shortleaf blazing star (*Liatris tenuifolia*), Indianpipe (*Monotropa uniflora*), Texas woodsorrel (*Oxalis lyonii*), buckroot (*Pediomelum canescens*), tall jointweed (*Polygonella gracilis*), sandyfield beaksedge (*Rhynchospora megalocarpa*), anisescented goldenrod (*Solidago odora*), coastal plain dawnflower (*Stylisma patens*), wavyleaf noseburn (*Tragia urens*), narrowleaf bluecurls (*Trichostema setaceum*), and Adam's needle (*Yucca filamentosa*).

Centipede grass (*Eremochloa ophiuroides*) covers the lawn areas. In 2011, Virginia snakeroot (*Aristolochia serpentaria*) was observed growing behind the mansion in the lawn area between the house and the loop road. Pipevine swallowtail butterfly (*Battus philenor*) use Virginia snakeoroot as a host plant. Ground orchid (*Spathoglottis* sp.) was observed in the west lawn at Plum Orchard in 2011.

Open salt marsh. Salt marshes are coastal communities of salt-tolerant plants occupying intertidal zones at least occasionally inundated with salt water, generally characterized by dense stands of saltmarsh cordgrass and/or needle rush. The salt marsh community occurs throughout the tidal land on the western side of Cumberland Island between the island proper and the tidal creeks, rivers, and sounds.

Canopy: Absent

Shrubs and vines: Absent

Herbs: Saltmarsh cordgrass, commonly associated with saltmarsh false foxglove (*Agalinis maritima*), turtleweed (*Batis maritima*), bushy seaside tansy (*Borrichia frutescens*), saltgrass (*Distichis spicata*), needle rush, lavender thrift (*Limonium carolinianum*), chickenclaws (*Sarcocornia perennis*), seashore dropseed (*Sporobolus virginicus*), and perennial saltmarsh aster (*Symphyotrichum tenuifolium*). These species tolerate poorly aerated saline substrate, frequent immersion, and intense sunlight.[12]

Climate Change

Observed Climate Change

Long-term temperature records in the southeast show that average annual temperatures have not significantly changed during the last century; however, since 1970 average annual temperature has increased 2°F. Annual temperature increases in the Caribbean since 1970 have been about 1.5°F. During this time period the greatest changes in average annual temperature occurred during the winter months and the number of freezing days per year decreased. Precipitation records (1901-2007) indicate a regional reduction in rainfall in

11. Although red bay would be naturally occurring in the canopy, they are near complete extirpation by Laurel wilt disease.

12. Wendy B. Zomlefer, David E. Giannasi, Kelly A. Bettinger, S.Lee Echols, and Lisa M. Kruse, "Vascular Plant Survey of Cumberland Island National Seashore, Camden County, Georgia," Castanea 73, no. 6 (December 2008): 262-65; Hillestad, 68-86.

the summer, winter, and spring from 10% to 25%; however, precipitation increased during the fall by as much as 30%. Precipitation patterns are also changing, with the intensity of storms and the occurrence and severity of droughts increasing since 1970.

An increase in sea surface temperature since 1970 has been accompanied by an increase in the destructive potential of Atlantic hurricanes that make landfall in the Southeast region, although changes in the frequency of landfalling hurricanes has not been established. Summer wave heights have increased along parts of the U.S. Atlantic coastline since 1975, attributed to the increase in tropical storm intensity in the Atlantic Basin.

Projected Climate Change

Temperature projections indicate continued warming in all seasons across the southeast along with an increase in the rate of temperature increase through 2099. Projected rates of warming are twice the rates of temperature increases experienced in the southeast since 1975, with the greatest temperature increases projected to occur during the summer months. The number of days with peak temperatures over 90°F are predicted to increase at a greater rate than average temperature. Temperature projections vary based on emission scenarios, with lower emissions scenarios projecting an average temperature increase of about 4.5°F by 2080, while a higher emissions scenario projects an average annual temperature increase of about 9°F, including a 10.5°F increase in summer, and a much higher heat index for the southeastern United States. In the Caribbean, temperature is predicted to increase by about 4 °F by 2080, somewhat below the global average. Climate models also project a continuing decline in days below freezing across the entire region during the coming decades.

Sea surface temperature is projected to increase globally as the oceans absorb increasing heat energy from corresponding projected annual air temperature increases. Tropical storm and hurricane activity is likely to increase in the Atlantic hurricane formation region with global warming as a function of globally observed higher sea surface temperatures. If the intensity of Atlantic tropical storms increase, southeastern ecosystems will likely be exposed to higher peak wind speeds, rainfall intensity, storm surge, and wave heights.

Climate models provide divergent results for future average annual precipitation for most of the southeast and Caribbean; however, data suggests that southeastern states will tend to have less rainfall in winter, spring, and summer and precipitation in the Caribbean is expected to decline by about 12%. Because corresponding predicted temperature increases will lead to increased evapotranspiration, moisture deficits and droughts are likely to continue to increase.

Predicted average annual temperature increases will warm oceans and increase the rate that land ice melts. Global average mean sea levels are expected to increase up to 2 feet or more by 2100. Increasing the rate and magnitude of sea-level rise has serious implications for low-lying southeastern coastal wetlands and barrier islands. Many coastal environments along the South Atlantic and Gulf of Mexico coastal margins are experiencing land surface subsidence due to factors such as groundwater withdrawals, changes in sediment delivery via rivers, and the drainage of soils for coastal development. Even if hurricanes do not increase in intensity, an increase in mean sea level will amplify coastal inundation and erosion during hurricane landfall.

There are currently 5,000 square miles of dry land within 2 feet of mean sea-level in the coastal areas of the continental United States. While the majority of this land is currently undeveloped, coastal development in the southeast is predicted to increase more than any coastal region in the United States, and any terrain within a few feet above mean sea level could be inundated; just a 2-foot rise in sea level would inundate an area the size of Massachusetts and Delaware. Currently, sea levels are rising at 0.07 inches per year. Predictions of future sea-level rise through 2100 are between 0.6 to 2 feet. Impacts of rising sea levels include coastal erosion; coastal inundation (including wetlands); increased storm surge; loss of habitat, property, and cultural resources; and degradation of surface and groundwater quality. Highly productive coastal wetland ecosystems, which provide habitat for many species, act as filters to improve ground and surface water quality, provide an economic base for many coastal communities, offer recreational opportunities, and protect local areas from flooding, are particularly vulnerable to sea-level rise.[13]

13. Sonya A. Jones and Melinda S. Dalton, comps., *U. S. Department of the Interior Southeast Climate Science Center Science Plan: U.S. Geological Survey Open-File Report*

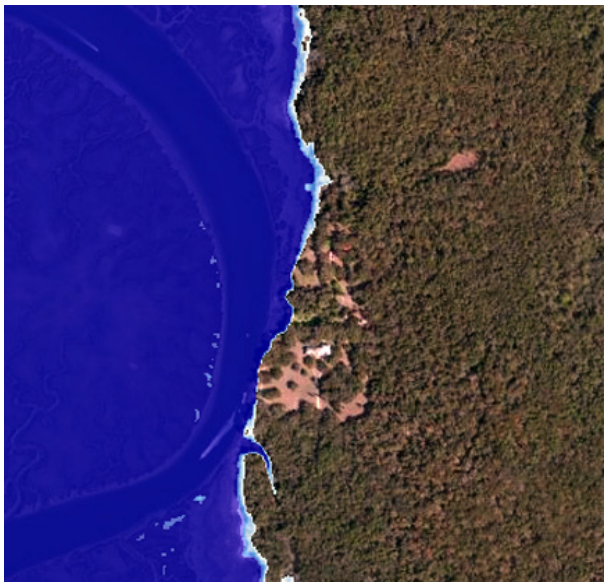


FIGURE 223. Potential flooding impact at Plum Orchard with a 2-foot rise in sea level. Levels represent inundation at high tide. Darker blue equals greater depth. (NOAA, 2012)

Land Use

A number of land uses occur within the Plum Orchard Historic District:

- Interpretation—Interpretive tours occur at Plum Orchard Mansion and the adjacent grounds.
- Recreation—Visitors can hike or bike to Plum Orchard up the Main Road or travel by passenger van for a ranger led tour of the mansion. The Plum Orchard Hunt Camp supports the park's six hunts held annually.
- Residential—Several structures in the Reserved Life Estates are used to house visiting family members or guests. Plum Orchard Mansion has two apartments for staff/VIP use.
- Cemetery—One cemetery lies within the Reserved Life Estates.

2012–1034, 2012, 8-11, http://pubs.usgs.gov/of/2012/1034/

Archeological Resources

Plum Orchard Midden (ASMIS CUIS00017.00)

This midden extends approximately 1520 meters north to south along the southern portion of the Brickhill River and adjoining marsh. A large undisturbed portion of the site exhibits numerous shell mounds, several of which are eroding into the adjacent marsh.

The Plum Orchard Mansion marks the approximate north terminus of the site. The majority of the site has been disturbed by construction and site development.

Tabby House Midden (ASMIS CUIS00018.00)

Located to the northwest of Plum Orchard Mansion, this midden measures 457 m by 150 m and is over 60 cm thick in some areas. This badly disturbed midden area was most likely connected to the larger Plum Orchard Midden. Construction and landscaping associated with the Carnegie-era occupation of Plum Orchard destroyed most of the evidence of contact between them.

Plum Orchard Sand Mound (ASMIS CUIS00017.01)

The site, southeast of the Plum Orchard Mansion, can be seen on the west side of the spur road that runs north to south along the east side of Plum Orchard. Noticeably impacted by looters, this mound stands 1.2 m in height and 20 m in diameter.[14]

Ethnographic Resources

The ethnographic resources of Cumberland Island itself have not been specifically inventoried, although a number of oral history interviews were conducted with former and current island residents and workers by Joyce Seward in 1995-96.

The antebellum plantation economy was based on the use of enslaved Africans as human capital, and their descendants on the barrier islands are part of a more widespread, distinctive pattern of

14. Ehrenhard, *Assessment of Archeological and Historic Resources*, 52-53; National Register nomination, 1984.

coastal cultural adaptation commonly referred to as Gullah (in South Carolina) and Geechee (in Georgia). Currently, a variety of organizations and scholars are engaged in the study and preservation of Gullah/Geechee language and culture. Any elements of the wider Gullah/Geechee culture distinctive to Cumberland Island and environs should be well documented while still possible for a fuller ethnographic understanding of this important African-American culture. The 2005 Low Country Gullah Culture Special Resource Study lists CUIS as one of the NPS units best suited to expanding the Gullah/Geechee story.[15]

Eighteenth-century landowners established a trend of large holdings by a small number of families on Cumberland and most neighboring barrier islands. In the late nineteenth century, industrial magnates continued this landholding pattern. Their descendants on most of the islands carried forward the tradition into the twentieth century. Gradually, government agencies and developers have replaced the elite landowners of the Georgia Sea Island cultural system. Nonetheless, new but less opulent communities of affluence have emerged on some of the islands, in the second half of the twentieth century, sometimes with negative effects on small landowners. Cumberland Island provides an excellent base for ethnographic study of a unique affluent American lifestyle and its successors that developed on the barrier islands of Georgia, Florida, and South Carolina from Hilton Head to Amelia Island.

In symbiosis with upper class cultures of the islands are the lifeways of working class whites and African Americans of the region. Though largely confined to the mainland in the modern era, on Cumberland Island a community of service personnel was established on the north end of the island. Recollections of former residents and their descendants, in conjunction with documentary records, provide valuable ethnographic resources. Understanding the effects of recent economic development and tourism on poor people of the region is itself a potential ethnographic resource.

The mainland areas surrounding Cumberland Island from Brunswick, Georgia, to Jacksonville, Florida, offer a great variety of ethnographic resources for understanding the cultural context of the park and its place in twentieth-century American history. Three principal industries have provided the economic foundations of the local cultures: pulpwood/paper production, commercial fishing, and military installations.

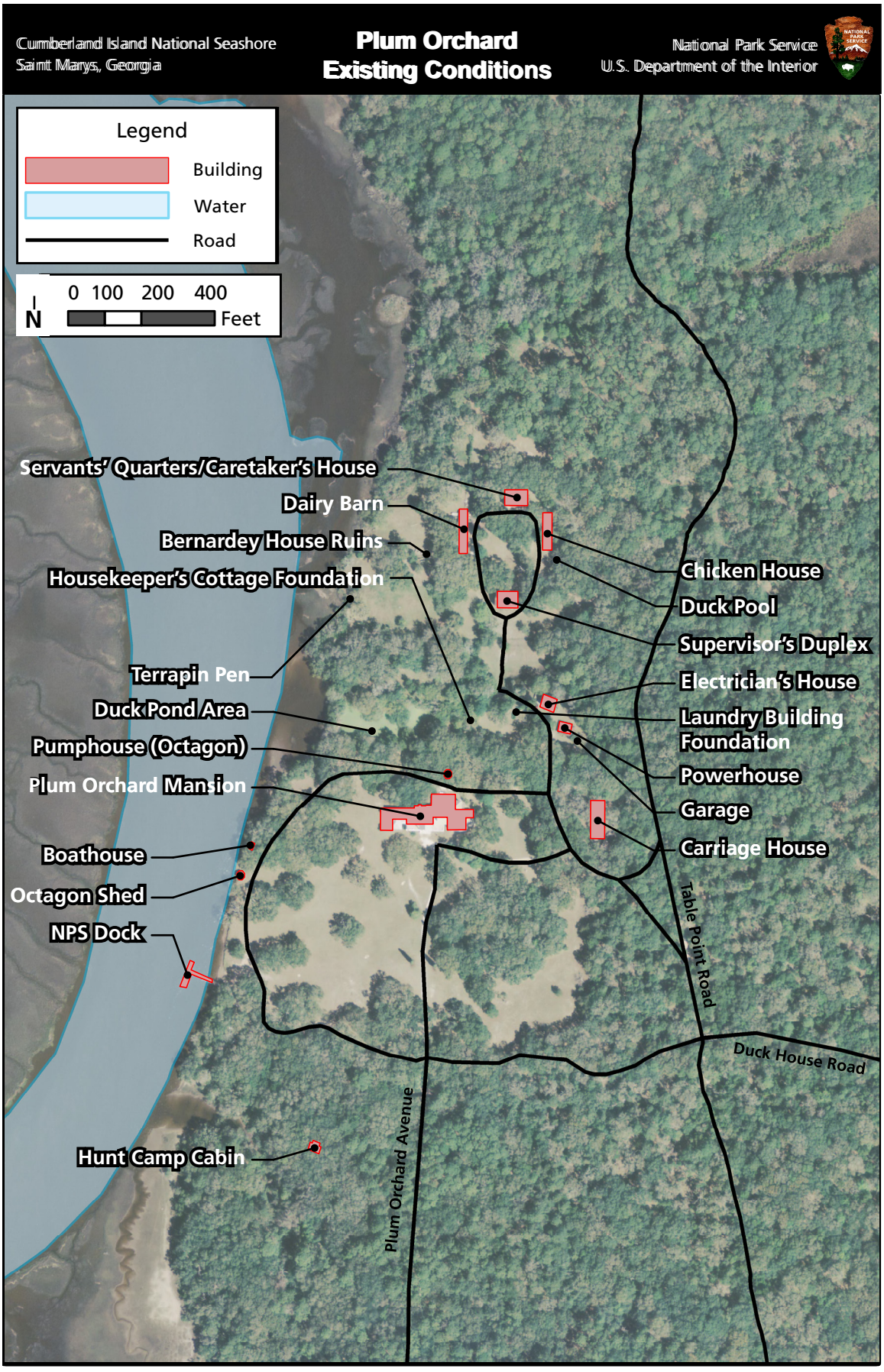
Although commercial fishing has become secondary in the local economy, it has a long history in the region. Earlier in the century, the menhaden fishery was a major regional industry, with a processing plant built at St. Marys in 1917. The majority of the menhaden boat-crews were African Americans, though whites were the captains and mates. Beginning in the 1920s, shrimp fishing became increasingly important to the area. From the 1970s to the present, anthropologists and sociologists from the University of Georgia have been studying shrimp fishermen and their communities in the Cumberland Island area. The resulting ethnographic resources could be very valuable in park interpretation. In addition to commercial fishing, subsistence fishing has been an important, albeit sometimes overlooked, part of the local economy. The changing maritime cultures associated with Cumberland Island are ethnographic resources in need of further study.

In the 1970s and 1980s, a considerable amount of applied anthropological research was conducted on the social and cultural impact of the military installations at St. Marys, especially the expansion of the nuclear submarine base. In the course of these studies, many baseline ethnographic data were collected, but some of these studies should be replicated to understand recent cultural change for more effective administration of Cumberland Island.

Like the military, the NPS itself, has become an increasingly controversial part of the local cultural scene. National Park Service acquisition and management of Cumberland Island has been a source of considerable local opposition and conflict. Ethnographic study of the dynamics of NPS involvement in the contemporary lifeways of the associated communities of Cumberland Island would be a valuable case study of the NPS as an agent of social and cultural change.[16]

15. *Low Country Gullah Culture Special Resource Study* (Atlanta, GA: Southeast Regional Office Planning and Compliance Division, 2005), 125-127.

16. The Ethnographic Resources text was taken from the draft Cultural Resources Management Plan, 3.



Compiled by Fielding Link | Cultural Resources Division | Southeast Regional Office | Atlanta, GA

September 2014

Analysis and Evaluation

Significance Evaluation

Current National Register of Historic Places Status

The Plum Orchard Historic District was listed in the National Register of Historic Places as part of the 1984 Multiple Resource Nomination. The nomination mentioned fourteen buildings, two structures, a cemetery, ruins of an antebellum house, and two archeological sites. The nomination describes the Plum Orchard Historic District as being significant in the areas of archeology (Criterion D: have yielded, or may be likely to yield, information important in prehistory or history) and architecture (Criterion C: embody the distinctive characteristics of a type, period, or method of construction), with most of its buildings dating to the Carnegie era of occupation.

CLR Significance Evaluation

The existing National Register documentation served as the foundation for evaluating the significance of Plum Orchard Historic District as part of this CLR. The documentation was reviewed in terms of relevant National Register criteria and the guidance provided in the National Register Bulletin How to Apply the National Register Criteria for Evaluation. The comprehensive investigation into the history of Plum Orchard, coupled with the comprehensive review of the landscape, suggested aspects beyond that afforded by the existing nomination.

Statement of Significance

The Plum Orchard Historic District is a significant designed historic landscape representative of the Country Place Era. Set within the coastal terrain of Georgia's Cumberland Island, the estate was the winter home and seasonal retreat of George Lauder Carnegie, son of Pittsburgh steel magnate Thomas Morrison Carnegie, and George's wife, Margaret Thaw, a wealthy Pittsburg socialite. Plum Orchard was part of a larger 8,000-plus acre tract acquired by Thomas Morrison Carnegie from the heirs of Robert Stafford in in 1882. Within the Plum Orchard estate, the Carnegies built an impressive manor house overlooking the Brickhill River. They transformed a landscape of exhausted cotton fields into a picturesque pleasure ground where visitors were introduced to the beauty of a barrier island.

The period of significance begins in 1898 with the construction of the carriage house and mansion and ends in 1917 with the construction of the last support buildings in the service area. Because the 1937 formal garden could not be fully evaluated for integrity and individual features are not listed in the LCS, the period of significance does not include the Nancy Carnegie Johnston era ending in 1937. Although the site was occupied during the plantation era, there are no plans, sketches, or photographs of specific landscape features during this period. Under National Register guidelines, historic properties must possess integrity for all periods of significance. The aboveground resources at Plum Orchard that represent plantation-era significance lack integrity and are not included in the period of significance.

Under Criterion A, the Plum Orchard cultural landscape is locally significant in the area of Social History as an example of a gentleman's country estate established by the family of an American captain of industry of the late nineteenth and early twentieth centuries. By the time of his death, George Lauder Carnegie was a model country gentleman whose life at Plum Orchard illustrated the ideals of the Country Place era. Beginning with the period of rapid industrialization that followed the Civil War in the 1880s and continuing until the economic downfall of the late 1920s, wealthy business leaders established private estates in picturesque rural settings. As exemplified at Plum Orchard, a vernacular Country Place era estate often consisted of a large main house surrounded by a landscape that included winding approach drives, lawns and meadows, massed plantings of trees and shrubs, reflective water features, garden structures, terraces, orchards, vegetables, cutting and ornamental gardens, bridle paths, bridges, and greenhouses, farm buildings, and stables.

Under Criterion B, the Plum Orchard cultural landscape is locally significant for its association with Thomas Morrison Carnegie and his wife, Lucy Coleman Carnegie, and their son George Lauder Carnegie and his wife, Margaret Thaw Carnegie. Thomas Carnegie was the younger brother of famed steel and iron magnate Andrew Carnegie. Together they founded Carnegie Brothers & Company, a conglomerate of iron and steel plants plus associated manufacturing and financial operations and eventually accumulated one of the largest fortunes in American history. After Thomas' untimely death in 1886, Lucy Carnegie continued his legacy by creating a highly organized, largely self-sufficient private preserve on Cumberland Island and turned it into a complex of family estates that included almost 90 percent of the island.

Under Criterion C, the Plum Orchard cultural landscape is locally significant for the design of its buildings and landscape in the areas of Architecture and Landscape Architecture. The Plum Orchard Mansion is an excellent example of a Georgian Revival building designed by Peabody and Stearns, one of the country's preeminent architectural firms of the American country house. The landscape surrounding the mansion is a good example of a vernacular expression of the Country Place Era, with a tree-lined entrance road that linked the mansion, carriage house, and service area and a naturalistic, park-like style surrounding the house characteristic of the Olmstedian Picturesque.[1]

Under Criterion D, the Plum Orchard cultural landscape is locally significant for its prehistoric and historic resources. The Depford Tabby House is likely an important building dealing with the plantation era of the island and if so, represents one of the few tangible remnants of the period visible today on the island. The presence of the Bernardey graves would indicate that the tabby ruins are associated with these nineteenth-century plantation owners and may yield information about the family and their lifestyle.

1. Frederick Law Olmsted, Sr., the father of American landscape architecture, adapted the English principles of the picturesque to an American style that has been described as the Olmstedian Picturesque by Robin Karson in her book *A Genius for Place: American Landscapes of the Country Place Era*.

Analysis and Evaluation

Analysis of Landscape Characteristics

In order to better understand the relationship between the existing Plum Orchard landscape and its character historically, this chapter includes a comparative analysis of historic and existing conditions. The focus of this section is to identify the broad patterns and specific features associated with the historic periods and to evaluate to what extent they survive today.

Spatial Organization

Plum Orchard's name derives from an antebellum plantation at this location, the house ruins of which and two associated graves are adjacent to the present-day complex in a reserved life estate.

Little is known about the spatial organization of the antebellum plantation known as Plum Orchard. The 1802 McKinnon map shows most of the property planted in cotton. Peter Bernardey purchased two tracts in 1823 and added to his holdings in 1825. It is not known exactly when the so-called Deptford tabby house, now in ruins, was built. Robert Stafford eventually acquired the property in 1841 and 1842, adding to his vast holdings on the island.

In 1882, Thomas M. Carnegie and his cousin Leander Morris together purchased the 8,240-acre tract of Robert Stafford. Carnegie had previously acquired the adjacent Dungeness property in 1881. The 1898 Page/Meador map shows no house and three roads leading into the site. An open area labeled "Old Fields" appears to be the site of the future Plum Orchard mansion, carriage house, and other landscape features, whose construction began in 1898.

The Plum Orchard complex of the George Lauder Carnegie era was a picturesque Country Place Era landscape with a winding approach drive, massed plantings of azaleas, a lawn interspersed with native trees, a reflective water feature, and a piazza overlooking the entrance drive. The centerpiece of the landscape was the Georgian Revival mansion, which was linked by service roads to the carriage house east of it and to a cluster of support buildings arranged around a loop road. The Duck Pond and rustic footbridge north of the mansion was a prominent naturalistic landscape feature, similar to the ones at Dungeness. Formally clipped hedges enclosed garden spaces southeast

Analysis and Evaluation

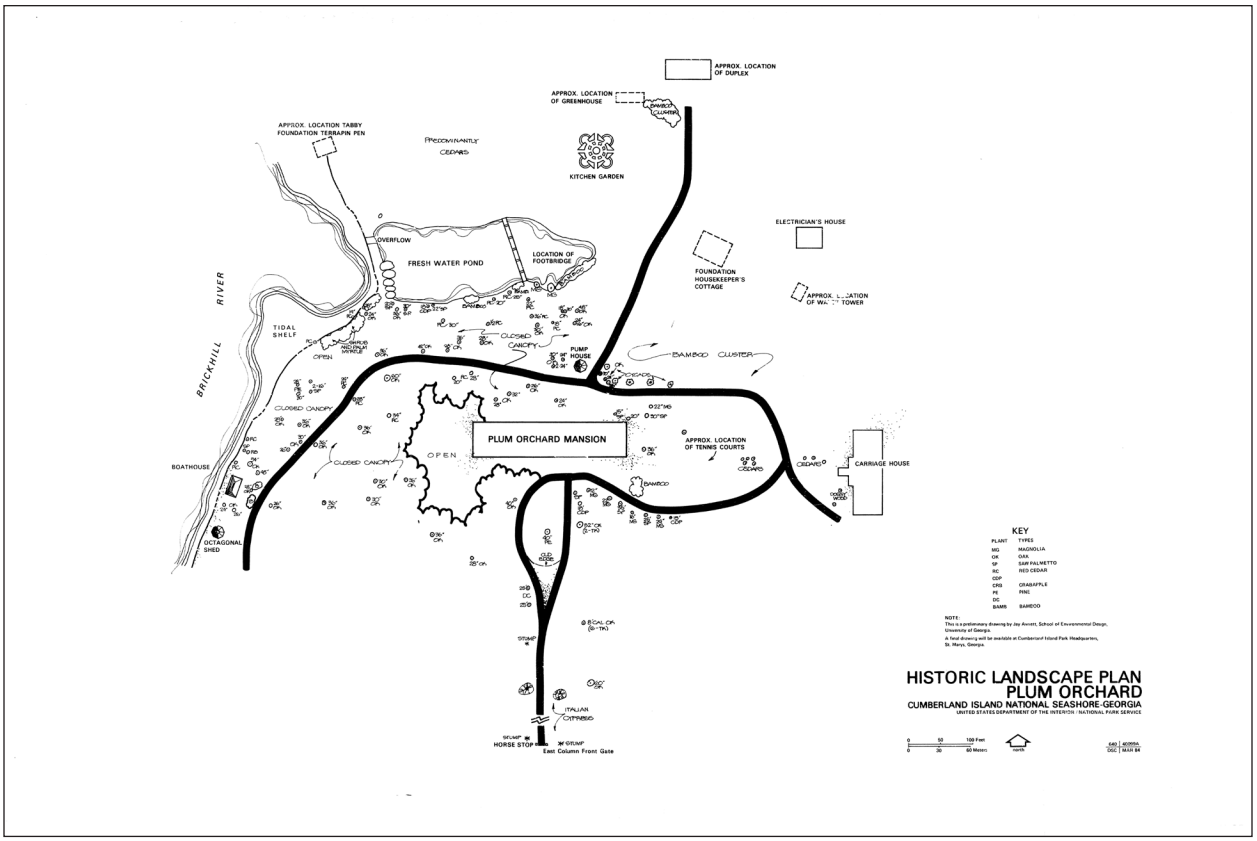


FIGURE 224. Historic Landscape Plan, 1984. Note laundry foundation misidentified as housekeeper's cottage. (Denver Service Center etic 640/40099A)

and southwest of the Supervisor's Duplex, where vegetables and cut flowers were grown.

In the 1930s, Nancy Carnegie Johnston oversaw the installation of a five-part parterre garden along the Brickhill River. The design featured a central pool around which beds edged with concrete laid out in a symmetrical pattern formed four quadrants on axis with the center, each terminating in a circle. A set of steps led down into the garden from the west, and a cherry laurel hedge enclosed the garden.

The Plum Orchard cultural landscape retains the patterns of spatial organization that has defined it since the George Lauder Carnegie era, although specific features are missing. Surviving character-defining features include a winding, tree-lined entrance drive, clumps of azaleas, an open lawn with native trees, a terrace flanked by palms overlooking the front entrance, a reflective water feature, clustering of support buildings, and sand shell roads that linked the estate support buildings. Missing features include the vegetable and cut flower garden, the tennis courts, and the loop in the entrance drive. The formal garden commissioned by Nancy Carnegie Johnston suffers from years of neglect and the forces of nature. Those resources were not accessible for this study, and their integrity remains unknown.

Vegetation

The original Plum Orchard mansion built for George and Margaret Carnegie had very few foundation plantings. Like Dungeness, clipped evergreens were displayed in large terra cotta pots on the main piazza overlooking the front lawn. A few small trees, sago palms, and yuccas were planted near the front entry and fig vine covered the exterior facades. The larger setting was that of a picturesque park landscape, based on principles advocated by Frederick Law Olmsted, Sr., based on European precedents. An informal lawn kept open under large specimen trees, massed plantings of azaleas, and a naturalistic Duck Pond north of the mansion were key components.

After the completion of the two additions in 1907, Canary Island date palms were planted at the front entry. Cabbage palms and southern magnolias lined the spur road to the east. Pindo palms flanked the front piazza. It is not known when the allée of cabbage palms and six Italian cypresses were planted along the entry road, although this was a major design feature.

Nancy Carnegie Johnston was the chief architect of the Plum Orchard gardens in the 1930s. She used a garden journal to document exactly what was planted and even made notes about which seeds did not germinate and which annuals did not do well. She had a definite color scheme in mind for the quadrants of the parterre and carefully planned color combinations. Since their time at Plum Orchard did not extend into the hot summer months, pastel spring colors and white dominated.

The installation of the formal garden occurred around 1937. It was planted in hundreds of spring bulbs, which were followed by over twenty different kinds of annuals and perennials. Asian lilies and gladiolas were a major component in the larger beds of the parterre. Lilies were also planted in the azalea beds. Calla lilies were ordered during this time, although it is unclear whether they were planted in the garden, around the pond, or just potted up to be brought inside. Nancy Carnegie Johnston mentioned azalea beds several times in her garden journal, but she did not indicate the location(s). Some of these survive in the landscape, flanking the entry road.

An interesting study of the forest succession was done by Jay Avriett in his 1983 landscape study of Plum Orchard using historic maps. Although these maps are very schematic and are not to scale, they show how the landscape patterns changed from a nineteenth-century cotton plantation to a twentieth-century estate. A comparison of aerial images from 1942 through 2010 shows how forest succession overgrew the formal garden north of the mansion, which was still visible as a landscape feature in 1942. Components of this landscape feature survive aboveground, but a thorough survey of the area was not possible. These images also show how the entry drive loop disappeared over the years.

The overall vegetation pattern continues to convey the configuration representative of the George Lauder Carnegie era, although pieces are missing. The character of the landscape was one of open spaces of lawn interspersed with large specimen trees, with allées or pairings of trees along the edges. There was a sense of entering the site along the shaded Plum Orchard Avenue into a sunny expanse of lawn punctuated with native live oak trees and an entrance road lined with Italian cypresses, palms, and magnolias. This design aesthetic would have been consistent with the Olmstedian Picturesque. The tree canopies contributed a vertical dimension to the cultural

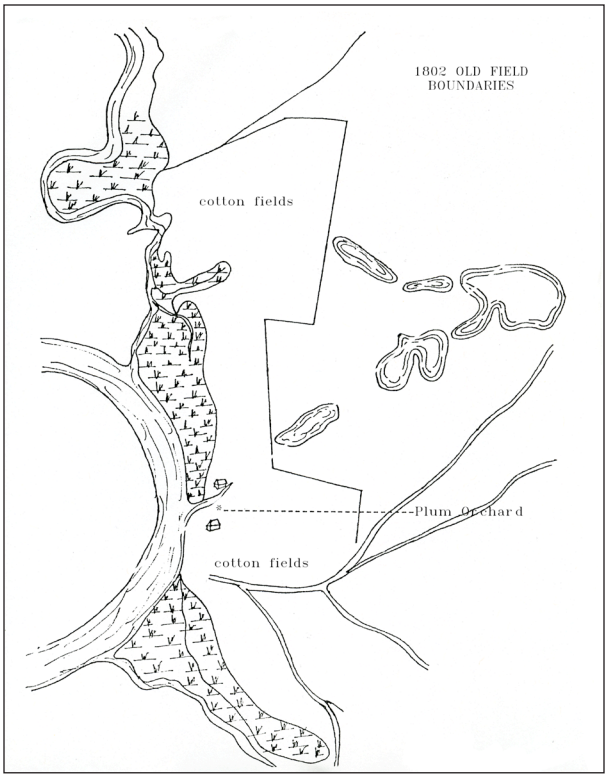


FIGURE 225. 1802 Old field boundaries. (Jay Avriett/ 1983)

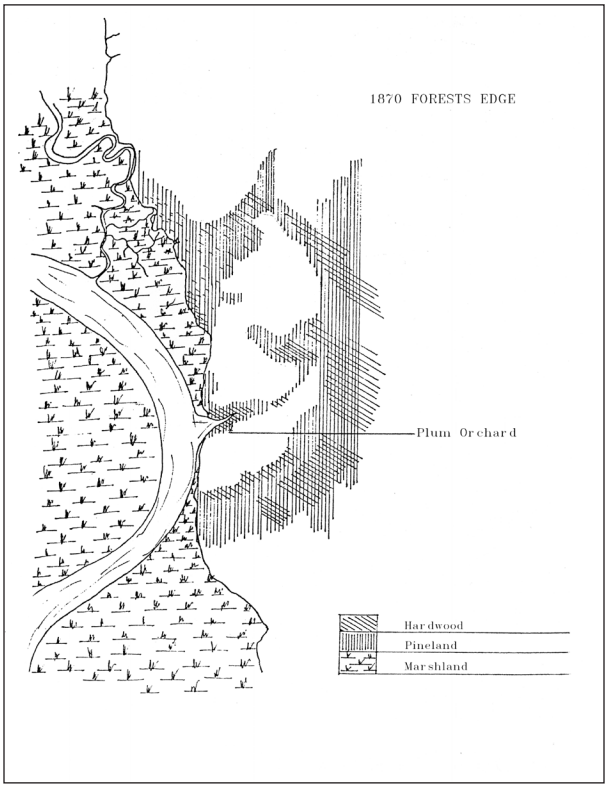


FIGURE 226. 1870 forest edge. (Jay Avriett/1983)

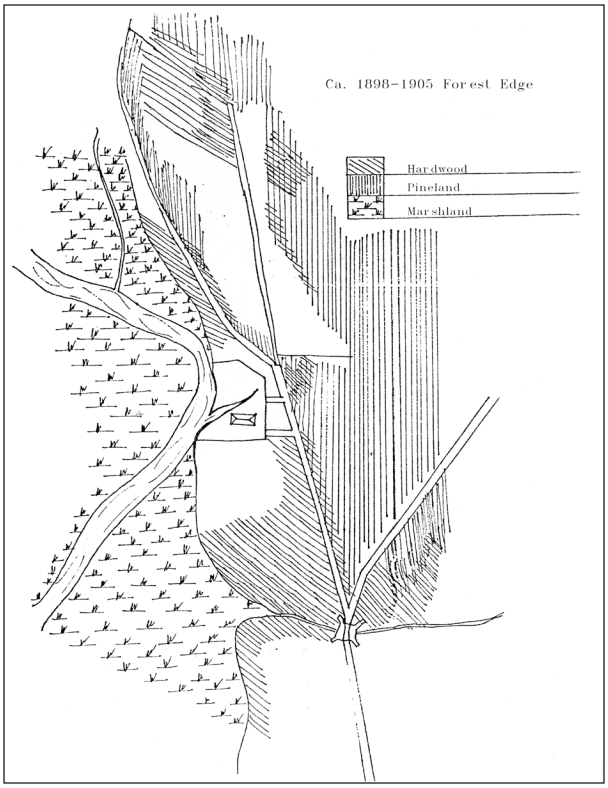


FIGURE 227. 1898-1904 forest edge. (Jay Avriett map modified by Laura Bradford)

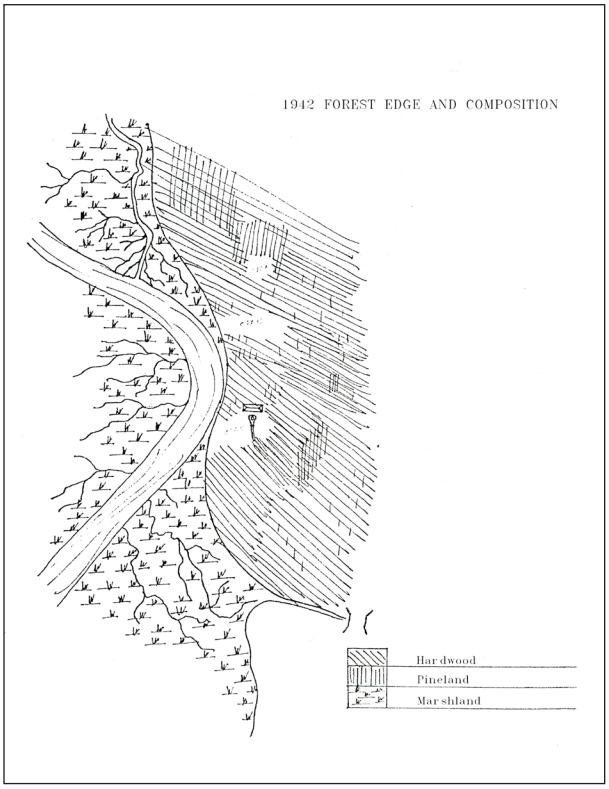


FIGURE 228. 1942 forest edge and composition. (Jay Avriett/1983)

landscape, which is still present today, although individual cypresses and palms have been lost and need to be restored.

Contributing features include specimen trees in a park-like expanse of lawn, the pattern of trees along avenues, the vertical element of the tree canopy, clusters of azaleas, and Italian cypress, palms, and magnolias planted along the entrance road and at the front piazza. Missing features include the enclosing hedges and conifers south of the Supervisor's Duplex and clipped evergreens in terra cotta pots. Vegetation in the formal garden and in the service complex was not surveyed for this report.

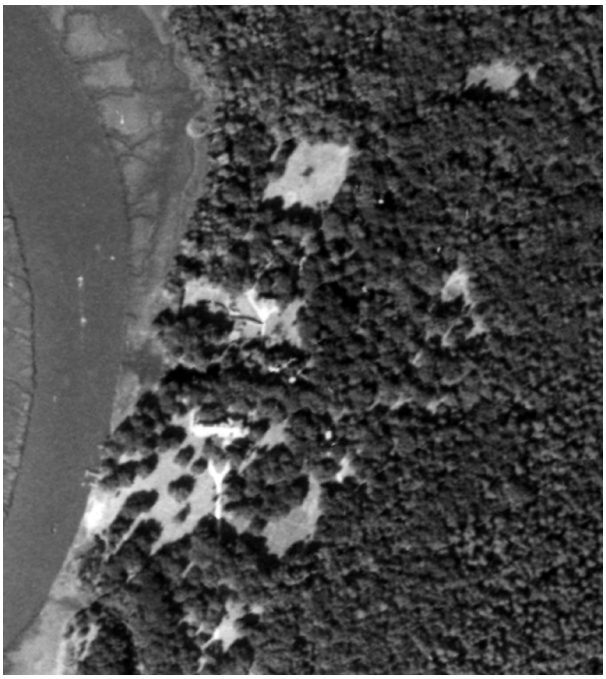


FIGURE 229. Plum Orchard landscape, 1942. (Georgia Southern University)



FIGURE 230. Plum Orchard landscape, 1993. (Map Data: Google, U.S. Geological Survey)



FIGURE 231. Plum Orchard landscape, 2003. (Map Data: Google, Digital Globe)



FIGURE 232. Plum Orchard landscape, 2014. (Map Data: Google)

Topography

The major topographic features of the Plum Orchard Historic District are the Duck Pond and two prehistoric middens sites along the Brickhill River (Plum Orchard Midden and the Tabby House Midden). A levee running north-south on the eastern edge of the river dammed a streambed fed from an artesian well into the deep Floridan aquifer, creating the Duck Pond. Middens provided level platforms on which a house could be built, a solid base for the Main Road running the length of the island, and tabby for house and wall construction.[2]

Bank erosion along the Brickhill River led to the construction of a seawall to protect the octagon shed, but these efforts failed and erosion continues to threaten the buildings, the Duck Pond levee, specimen trees, and other features. The Duck Pond is a contributing feature, although its surface is covered with duck weed and encroaching vegetation has obscured views of the reservoir from the mansion.

2. Ehrenhart, 31.

Buildings and Structures

Bernardey-era Resources

Little is known about the buildings and structures present during the Bernardey occupation of the site in the nineteenth century. The only remaining aboveground resources are the ruins of a tabby house and two graves enclosed by a tabby and brick retaining wall. One grave belongs to Peter Bernardey; the other grave is unmarked but believed to be that of Marguerite Bernardey.

Carnegie-era Resources

The Plum Orchard Mansion, designed by the Boston architectural firm of Peabody and Stearns, is the centerpiece of a complex of structures within the Plum Orchard Historic District. It was enlarged twice between 1902 and 1906. Just east of the mansion sat the carriage house, also designed by Peabody and Stearns. Its construction occurred first to house the workmen for the mansion.

A dock, boathouse, and octagon shed were located along the Brickhill River west of the mansion. A cluster of support buildings sat north of the mansion. These included a housekeeper's cottage, pumphouse, laundry building, water tower, powerhouse, electrician's house, supervisor's duplex, servants' quarters, stable/dairy barn, chicken house, and greenhouses. When the NPS took over the site, most of the support buildings became part of two reserved life estates. The 1984 National Register nomination noted that several of these structures (the supervisor's duplex, servants' quarters, and the stables) had been extensively rehabilitated, and the nomination questioned their integrity, although they were included in the list of contributing structures.

Missing features include the tennis courts, laundry building, water tower, greenhouses, and housekeeper's cottage. The carriage house and boathouse are in ruins. Contributing features include the mansion, octagon shed, pumphouse, powerhouse, electrician's house, supervisor's duplex, servants' quarters, stable/dairy barn, and chicken house.

Beginning in 2000, a multi-phased rehabilitation effort began for the Plum Orchard Mansion. Phase I addressed most of the exterior envelope problems and the most pressing structural problems and included a new pine shingle roof. Phase II completed the exterior work and provided

interior rehabilitation such as restoring historic finishes, accessibility modifications, and basic components of fire protection, electrical, and climate control systems.

Circulation

Little is known about the circulation system during the Bernardey era. The 1802 map shows "New Road to Plum Orchard" and "Bluff Road" running north to south and "Road" and "Path to Beach" running east to west.

The 1898 Page/Meador map shows the circulation system before the mansion, carriage house, and other support buildings were constructed. Plum Orchard Road provided access to the site off the Main Road. As the Carnegies developed Plum Orchard, they constructed a series of interconnected roads that linked the various sections of the site. A rustic footbridge over the Duck Pond connected the mansion with the formal garden, where turf paths radiated out from the central fountain feature.

The historic circulation system is little changed from the Carnegie era. Contributing features include Plum Orchard Avenue, the circular entry road around the mansion, service complex loop road, service road from carriage house to Table Point Road, and the section of Duck House Road that travels through the historic district. Missing features include the loop in the entry drive, interconnecting access roads between some of the service buildings that no longer survive, and turf paths in the formal garden. It is unknown if concrete sidewalks and aprons at the carriage house or steps in the formal garden survive.

Views and Vistas

Views of the Brickhill River would have been prominent features during both the Bernardey and Carnegie periods of occupation. Other dominant views during the Carnegie era were of the open, park-like landscape of large specimen trees in a broad lawn surrounding the mansion, the Italian cypress-lined entrance drive and palms flanking the front entrance of the mansion, the Duck Pond, and the carriage house.

Encroaching vegetation is currently blocking views of the Duck Pond from the mansion. Views of the park-like setting, tree-lined entrance drive, the Brickhill River, and palms at the front entry are contributing, although some of the cypresses and palms are missing. Non-contributing views are from the Brickhill River southwest to St. Marys that now include Kings Bay Naval Base and views of the fire suppression tank and generator from the loop road.

Small-Scale Features

Fencing would have been an important small-scale feature but there is little documentation of it. A tall wire fence enclosed the tennis courts. Other small-scale features included the Duck Pond footbridge, formal garden pool, concrete edging and steps in the formal garden, garden benches, and possibly an arbor into the formal garden that has not been documented but was mentioned in correspondence. Several concrete features were present in the landscape, some of which housed supply pipes for water.

The formal garden pool is contributing, but the Duck Pond footbridge and garden benches are missing. It is unknown if garden edging or steps survive belowground in the formal garden. The Duck Pond concrete enclosure is contributing. The integrity of the other concrete features and the attenuated, irregular brick pyramid structure east of the carriage house is unknown.

Archeological Resources

Three archeological sites are considered to be contributing elements to the National Register Historic District. These include two prehistoric middens sites along the Brickhill River (Plum Orchard Midden and the Tabby House Midden) and the Plum Orchard Sand Mound. Sand mound construction is believed to be of aboriginal origin, yet it is also believed to have been used during the historic period to bury slaves who died of yellow fever. Archeological significance of these sites is considerable.

Table A (Appendix C) shows the contributing features identified in the LCS for the Plum Orchard cultural landscape, as well as other landscape features not included in the LCS.

Assessment of Integrity

The effort to determine a landscape's significance according to National Register criteria focuses on seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The persistence of these qualities as they apply to the landscape determines whether the landscape retains enough of its important features to

convey its historically significant appearance or associations.

Location

Integrity of location remains strong for the Plum Orchard Historic District. All contributing resources retain their original locations, however, erosion along the Brickhill River threatens the historic location of the octagon shed and boathouse.

The vehicular and pedestrian circulation features are in their original locations, although there have been slight alignment modifications to some of the service roads and some that have disappeared.

The location of internal boundaries changed with the establishment of the two reserved life estate boundaries. Also, the loss of landscape features such as enclosing hedges and the outline of formal garden spaces affected integrity of location.

Setting

The setting of the Plum Orchard Historic District has been compromised. The construction of the Carnegie-era service complex undermined the setting of the Bernardey-era resources. The change in use from a winter residence to a vacation home led to the decline of Carnegie-era landscape features such as the formal garden and hedges that defined the vegetable and cut flower gardens. Several of the support buildings fell into ruin or burned. Over the years, vegetation encroachment around the Duck Pond also compromised integrity of setting.

The most severe impact to integrity of setting occurred when the boundary of the reserved life estates were established, which truncated the landscape. The Bernardey-era resources and over half of the Carnegie-era resources are now part of the Johnston and Butler reserved life estates.

The unimpeded, open expanse of grass around the mansion and the unobstructed views along the loop drive are character-defining features of the historic landscape.

Design

The Bernardey-era landscape features survive as the ruins of a house, a cemetery with two graves, and a terrapin pen. These resources have lost all spatial connection, and there is no documentation of any other landscape features during this period other than cotton fields.

The design of the Carnegie-era landscape at Plum Orchard began with the picturesque park-like setting around the Plum Orchard Mansion that included a winding, tree-lined entrance drive, clumps of azaleas, an open lawn with native trees, a terrace flanked by palms overlooking the front entrance, a reflective water feature, and sand shell roads that linked the estate support buildings. All of these features survive in the landscape and are character-defining, although some are in need of restoration.

A complex of support buildings and gardens for vegetables and cut flowers, whose arrangement was described by one family member as being patterned after a European farm, was sited north of the Duck Pond. The intact arrangement of the support buildings around a circular drive is a character-defining feature of the historic landscape.

In the 1930s, Nancy Carnegie Johnston oversaw the addition of a five-part formal garden. Without constant upkeep, the formal garden and other highly maintained landscape features eventually fell into disuse as Johnston family members spent less time at Plum Orchard after WWII. Today, the formal garden is overgrown with vegetation and is in deep shade. Two greenhouses and the adjacent spaces where vegetables and cut flowers were grown are no longer extant. Although the Duck Pond survives, it is in need of restoration. Duck weed and encroaching vegetation threatens to overtake it, the rustic footbridge is gone, and the dam built to establish and maintain the pond is threatened by erosion along its face on the Brickhill River. The entrance drive no longer loops around the front of the mansion, although its trace is still extant.

A major loss to the historic district occurred with the collapse of the carriage house, the principal support building designed by Peabody and Stearns. When the NPS took over management of the property, the carriage house roof was already at risk after years of neglect. Without any intervention, the building eventually collapsed. Its location on a major circulation loop around the mansion made it an important component of the historic landscape that remained intact after the division of the site in 1972.

The decline and disappearance of historic vegetation is also a threat to the design integrity of

the historic landscape. Nonetheless, the winding entrance drive is still lined with cabbage palms and Italian cypress and magnolias line the road that turns east of the mansion, although several are missing. Likewise, Canary Island date and pindo palms survive at the front piazza, although one of each is missing. Of the vegetation remnants recorded in 1983, only those managed by the NPS have been documented to date. The vegetation survey did not include the reserved life estates.

The Plum Orchard Mansion retains integrity of design following a multi-phase rehabilitation effort completed in 2008. Although many individual features of the historic landscape are threatened or missing, the overall spatial footprint is intact. Division of the property can be reversed when the reserved life estates expire, and the respective properties come under full federal management.

Workmanship

Workmanship can only be evaluated for the landscape features managed by the NPS, since it is unknown exactly what has been done to the structures included in the two reserved life estates. Workmanship remains high for the Plum Orchard Mansion. A recent rehabilitation effort addressed most of the exterior envelope problems and structural failures and included a new pine shingle roof. Accessibility upgrades included the removal of the handicap accessibility ramp and the addition of an elevator in the basement, which improved integrity of workmanship.

Roof repairs in 1992 returned the octagon shed and pumphouse to a high level of workmanship. The pumphouse was repaired and retrofitted in 2008 to accommodate the fire suppression tank pump. Although this may have necessitated some intervention, all materials were replaced in-kind.

However, the high cost associated with the regular upkeep of the structures and other landscape features has been and remains a key issue for the park and must be overcome to ensure the property's long-term preservation.

Materials

Materials can only be evaluated for the landscape features managed by the NPS, since it is unknown exactly what has been done to the structures included in the two reserved life estates. Material integrity remains high for Plum Orchard Mansion, which has undergone an extensive rehabilitation effort. Material integrity is also high for the pumphouse and octagon shed.

In a mild coastal climate such as Cumberland Island's, with an almost twelve-month growing season, plants grow, mature, and die at an accelerated rate. The opportunistic encroachment of native plants, the spread of exotic species, and the effect of herbivores on regeneration of vegetation are all factors that have incrementally decreased the integrity of plant material. As a result, many of the historic plants have been lost because of these growing conditions, two devastating freezes in the 1980s, and a lack of routine maintenance. Nonetheless, character-defining features like the palmettos and Italian cypresses along the entrance drive, palms at the front entrance, and native live oaks in the lawn continue to contribute a vertical dimension to patterns of spatial organization. Many trees at Plum Orchard are historic features that help convey the historic character and spatial order of the cultural landscape. Although a few of the palms, Italian cypresses, and palmettos are missing, they could be restored.

Historically, roads played an important role in connecting various components of the cultural landscape. The roads within the historic district retain their historic character of sand and shell and are a character-defining feature.

Feeling

A historic landscape that was meant to be experienced as a whole is now divided, with the majority of the support buildings on the two reserved life estates. Within the reserved life estates, integrity of feeling is missing for the Bernardey-era resources, which lack any kind of connection to the plantation era.

Modern intrusions such as the fire suppression tank and generator adjacent to the mansion diminish integrity of feeling and detract from the historic character of the Plum Orchard landscape. Nonetheless, there is still a sense of place within the NPS-managed cultural landscape.

Association

Integrity of association has been affected by the bifurcation of the historic landscape, half of which is now contained in two reserved life estates. These resources are off-limits to visitors, and NPS employees must have permission to go

on site. Nonetheless, Carnegie descendants on the Butler reserved life estate maintain integrity of association with the lives of Tom and Lucy Carnegie, George and Margaret Carnegie, and Nancy Carnegie Johnston. Within the reserved life estates, the nineteenth century-era resources have lost all association with Peter Bernardey and his descendants.

The collapse of the carriage house lowers integrity of association. It was the only other building at Plum Orchard designed by Peabody and Stearns.

Summary

Although changes to the property diminished integrity of setting, feeling, and association, many of the character-defining, picturesque qualities of the Carnegie era remain, including a winding, tree-lined entrance drive, clumps of azaleas, an open lawn with native trees, a terrace flanked by palms overlooking the front entrance, a reflective water feature, sand shell roads that linked the estate support buildings, and key views of the Brickhill River. Although some landscape features have been lost, many could be restored, and the Plum Orchard landscape continues to convey the general character of the historic period. The landscape has matured while retaining much of its original natural vitality.

Treatment Recommendations

The centerpiece of the Plum Orchard historic landscape is the Carnegie-era mansion designed by Peabody and Stearns. The setting began as a picturesque, park-like arrangement of large specimen oaks in a panel of grass with a tree-lined entrance drive that looped around the front piazza of the mansion. Views from the rear of the mansion looked out onto the Plum Orchard Duck Pond, laid out in a naturalistic style. After additions increased the footprint of the mansion, George Lauder and Margaret Carnegie formalized the foundation plantings, adding palms to the front portico. It is unknown when the cabbage palms and Italian cypresses were added to the entry drive, but it may have been during this period.

A service road to the east linked the mansion with the carriage house, also designed by Peabody and Stearns. North of the Duck Pond, a service complex of support buildings was laid out in a clustered pattern around a loop road and featured garden spaces around the supervisor's duplex formalized with tightly clipped hedges. A kitchen garden was located southeast and southwest of the supervisor's duplex, where fruit, vegetables, and flowers were grown in the 1910s.

Beginning in the 1930s, Nancy Carnegie Johnston began to create a formal garden north of the Duck Pond, for which she kept a garden journal and careful notes. In 1937, Jacksonville landscape consultant Richard Forester designed a radial version of a five-part parterre "flower garden" with a fountain at the center. An untimely car accident later that year derailed her vision for the garden, whose upkeep eventually fell victim to a change in use at Plum Orchard from winter residency to a vacation home.

When the park was created in 1972, only a portion of the Plum Orchard historic landscape fell under full NPS management. The remainder was set aside in two reserved life estate agreements, virtually bisecting the historic landscape. Moreover, CRPS staff did not have access to that portion of the historic district for existing conditions documentation in 2011, although it remains a vital component of the spatial layout of the site.

The overarching treatment recommendation is preservation. Restoration has been recommended for certain features, such as historic spatial organization, vegetation, and circulation patterns.

Spatial Organization

Historic patterns of spatial organization, which connected the cultural landscape with a series of service roads, have been bisected by the boundaries of the two reserved life estates. Nonetheless, it is important to maintain the spatial patterns that are still extant within the site.

- Preserve the entry road alignment and its turn to the east that circles around to the dock and reconnects with Plum Orchard Avenue.
- Restoration of the entry road's missing loop cannot be accomplished without significant trimming of the historic live oak under which it passes. Therefore, if the road is to have its loop restored, it is not to be done unless the historic live oak suffers storm damage and needs to be pruned or dies.
- Preserve the road that loops around the service complex.
- Restore the spatial outline of the formal garden. Consult with SEAC to determine if edging or other landscape features survive belowground.
- Restore/rehabilitate the Duck Pond.
- When the support buildings come back into federal ownership, the spatial unity of the cultural landscape can be restored.



FIGURE 233. Plum Orchard Avenue, 2011. (SERO Collection)



FIGURE 234. Entrance drive looking south, 2009. (SERO Collection)



FIGURE 235. Portion of the loop road that passes by the octogon shed, 2011. (SERO Collection)

Vegetation

Preserving trees in the cultural landscape is challenging. Continued tree growth and its effect on adjacent vegetation, structures, and views may be incompatible with other preservation goals of sustaining historic form and preserving views.



Figure 236. Loop from the dock area, 2011. (SERO Collection)



FIGURE 237. Road trace of missing loop in lawn, 2009. (SERO Collection)

However, trees are an important record at Plum Orchard that should be preserved. Generally, tree preservation practices should adhere to arboriculture standards, protect aged trees, and use non-invasive methods for removal and replacement.

General Guidelines:

- Minimize the use of heavy vehicles in or around the root zone of nearby trees in order to limit soil compaction.
- Educate maintenance staff on the significance of historic vegetation and ensure that they receive appropriate training.
- Replace dead or damaged historic plant materials in-kind, whenever possible, using specimens of the same species, variety, and form.

- If in-kind replacements are not available or appropriate (due to disease, hardiness, maintenance requirements, etc.) replace with species of similar size, shape/habit, texture, and color.

- Use a certified arborist with successful experience working at historically significant sites for all tree work.

- Minimize the use of string trimmers around historic trees and other features. If a string trimmer must be used, use a round line with a smaller diameter, which will do less damage if it comes in contact with a historic building or vegetative feature.

- Consider retrofitting mowers with soft bumpers to minimize contact damage.

A character-defining feature of the historic landscape is the open, park-like setting around the Plum Orchard Mansion, which includes several components.

- Preserve the oaks that form the canopy. Consult with a certified arborist before any pruning is done. Do not prune branches touching the ground.

- Preserve the open expanse of lawn.

- Preserve the deodar cedars west of the entry drive.



FIGURE 238. Specimen live oak, 2014. (SERO Collection)

Tree Replacement

Landscape preservation strategies and arboriculture techniques can be used to effectively extend the anticipated lifespan of individual specimens. However, even with the best of care, all trees will eventually deteriorate and need to be removed from the landscape. As trees begin to fail, structural instability and associated issues of safety become more prevalent. Trees that present hazards or no longer effectively contribute to the desired character of a cultural landscape should be removed and replaced. Considerations for tree removal and replacement include:



FIGURE 239. Open expanse of lawn, 2011. (SERO Collection)



FIGURE 240. Deodar cedars, 2011. (SERO Collection)

- **Historic character.** When a tree becomes too large and can no longer be managed to effectively contribute to the desired character of the landscape, such as blocking an important view.

- **Safety.** When structural instability cannot be remedied through arboricultural treatments such as cabling or bracing, and the tree poses safety hazards to people and potential damage to adjacent resources.

- **Health.** When decline in tree health due to age, pest infestations, or disease infection is irreversible. In addition, if a severely diseased or infested tree becomes a host for pests or pathogens that will adversely impact other trees.

- **Management Goals.** When an existing tree becomes an unavoidable obstacle to implementing a change in site management or operational goals such as new visitor access routes.

Formal Tree Groups

Groups of trees in symmetric plantings were an important design feature of the Plum Orchard historic landscape. Groups consisted of pairs and allées of palms and cypresses. Prevailing historic landscape preservation maintenance guidelines generally recommend that ongoing care focus on maintaining uniformity and formality of the group over preservation of specific plants, even when individual trees are the remaining authentic survivors of the historic period.

Following a conference call with Charlie Pepper of the Olmsted Center for Landscape Preservation and John Fry, Chief of Resource Management for the park, it was decided that this management approach may not be the best for the Plum Orchard historic landscape. The replacement of historically significant plant material in order to perpetuate the documented design intent of the trees would likely be opposed by stakeholders and park constituents. Therefore, replacement of individual missing trees may be the best solution in this case.

Several components are missing from the historically-significant plantings near the front piazza.

- Replace the missing Canary Island date palm. Before trying to acquire a palm of a similar height and uniformity, the palm should be identified at the variety level if possible. Of equal importance is a condition assessment of the health (insects, diseases, etc.) and structural condition of the palm. If the palm is found to be in decline or diseased, the best option would be to remove it and start over with two palms of the same height and uniformity.

- If the palm is found to be healthy and structurally sound, then a palm broker/ nursery might be able to locate a palm of a similar height and uniformity and assist the park in assuring it is planted properly.



FIGURE 241. Stump of missing Canary Island date palm, 2009. (SERO Collection)

- Replace the missing pindo palm on the east side of the front portico with a specimen of a similar size, scale, and symmetry. Perform the same condition assessment on the surviving pindo palm.

- Preserve the allée of southern magnolia and cabbage palm along the entrance road as it turns east in front of the mansion.

- A dark pink crape myrtle was planted along the west portico. It could be replanted using a modern cultivar like 'Tonto', which is both mildew resistant and heat tolerant (see Figure 68).[1]

1. Tonto - A Gold Medal award-winning hybrid crape myrtle developed by the National Arboretum. This selection in the large shrub to small tree category offers a marvelous palette of flower, trunk, and fall foliage color combinations. It is field resistant to powdery mildew. http://www.usna.usda.gov/Newintro/crapemyr.html

- Remove muscadine from sago palms at west piazza.

One of the more prominent features of the surviving landscape is the grouping of trees and



FIGURE 242. Approach to house with palms, 1973. (SERO Collection/Gene Phillips)



FIGURE 243. Allée of southern magnolia and cabbage palm, 2011. (SERO Collection)

shrubs along the entry drive. The repeating form of the palms and cypresses contrasts with the understory shrubs. When individual specimens in a formal planting need to be replaced due to declining health, death, or have outgrown their effectiveness, the entire plant group may be removed and replaced with uniform trees. However, in some cases, replacing a missing tree with a mature specimen of equal size, scale, and symmetry to the remaining plants in the group is the best solution.

If the entire group is replaced, the park should consider the age of the replacement trees. If the trees are replaced with more mature trees, there will be minimal impact to the landscape character, but with a minimal life span within the gardens. However, if younger, smaller trees are used for replacement, they will be in the landscape for a longer time although they will not immediately fill the landscape space.

Several components are missing from these historically-significant plantings.

- Replace the missing Italian cypresses (see Figure 63 and Treatment Map). Although uniformity and verticality within this group was an important characteristic, replacement of the entire group at one time would require the removal of healthy individuals in order to maintain character-defining qualities of symmetry and uniformity.

- Perform condition assessment of surviving cypresses to determine their health.

- If the surviving cypresses are determined to be in good condition, then replace only the missing cypresses. If tree conditions are compromised, structural instability and associated issues of potential failure and safety will become more prevalent. Trees that present hazardous situations or no longer effectively contribute to the desired character of a cultural landscape need to be removed and replaced.

- Use of smaller trees that will eventually catch up with the surviving cypresses will result in a longer lifespan and be more cost effective.

- Vegetation surveys conducted in the 1980s marked the missing locations (see Figure 41).

- Remove encroaching vegetation that is engulfing the cypresses and maintain as an open area.



FIGURE 244. Bird's-eye view of entry drive showing trace of missing Italian cypress, 1979. (SERO Collection)

- Replace the missing cabbage palms along Plum Orchard Avenue. Missing palms can be replaced with mature specimens of equal size, scale, and symmetry. Missing palms are mostly on the east side of the road. Treatment Map locations are approximate.

- Preserve/rehabilitate the azalea plantings. Remove fox grape from azaleas. If any azaleas need replacing, use varieties that Nancy Carnegie Johnston ordered (see Appendix).

The Duck Pond vegetation was an important feature of the historic landscape.

- Plant lotus and water lilies if the Duck Pond is restored.



FIGURE 245. Azalea planting on east side of entry drive, 2011. (SERO Collection)

Virginia snakeroot (*Aristolochia serpentaria*) grows behind the mansion in the lawn area between the house and the loop road. Pipevines are important larval food sources for Pipevine Swallowtail (*Battus philenor*).

- Monitor Virginia snakeroot for caterpillars and do not mow when they are present.

Reserved Life Estates

The formal garden vegetation was enclosed by a cherry laurel hedge. It is unknown exactly how much, if any, of this hedge survives, since the formal garden is located on one of the reserved life estates. It is also unknown exactly what vegetation patterns or specimens survive from the last survey conducted in the 1980s.

- Conduct a vegetation survey of the formal garden using the Avriett map as a guide to identify historically-significant vegetation (see Figure 41).

- Remove encroaching vegetation that is blocking views and vistas.

- Consider restoring the hedge with Prunus caroliniana 'Bright N Tight'.

The service complex was a designed historic landscape, featuring enclosing hedges, specimen conifers, and southern magnolias.

- Although some of these features may not be realistically restored, an effort should be made to determine if any of these features

survive, especially the trees that once lined the service road.

Screening of Modern Intrusions

The fire suppression tank needs to be screened from the loop road that passes by the rear of the mansion. Although its location lowers integrity of setting, it does allow for adaptive use of the pumphouse. Complex issues such as water pressure, the water table at Plum Orchard, and the requirement of a known quantity of water preclude the use of alternative sources of water. Eastern red cedars were documented in this area on the 1983 Avriett map.

- Grind stump and replant clump of three red cedars along the road near the pumphouse. Replant in original holes to prevent further ground disturbance if adequate decay has occurred or plant adjacent to the stump. Monitoring by SEAC may be necessary. (use image and show on Treatment Map.

- *Juniperus* 'Brodie' would be a good cultivar for the coast.

- Fill in with additional cedars or wax myrtle as needed along the service road.

- Wax myrtles planted to screen the fire suppression tank from housekeeper's cottage foundation are in too much shade. Some died and the remaining ones are leggy. Plant Florida leucothoe (*Agarista populifolia*), which is shade tolerant, to screen the fire suppression tank.



FIGURE 246. Wax myrtles in too much shade, 2009. (SERO Collection).

- Encourage staff and VIPs living on site to keep personal items (chairs, coolers, etc.) out of view.

Topography

Erosion at the Brickhill River continues to undermine historic resources along the river's edge, despite the construction of a wooden seawall in 1992. Rapid erosion along its flanks has left an isolated head of land that has begun to slump and develop holes due to failure/undermining of the bulkhead.

A team of subject matter experts representing the cultural and natural resource fields, as well as shoreline engineering experts, made a site visit to address the issues at Plum Orchard in March 2014. It is anticipated that the direction provided by the collected professionals will allow the park to move forward with a comprehensive shoreline management plan that will mitigate the effects of the ongoing erosion and prevent further loss of resources.

Runoff from the open area of lawn is adding to the erosion problem near the dock area. It is directed toward the loop road and pools at low points until it spills over and streams to critical points along the shoreline that become stressed and erode.

- Install a French drain to catch the flow and direct it past the shoreline scarp into the river.

The Duck Pond is an important character-defining feature of the historic designed landscape. It is currently covered with duck weed and overgrown with vegetation. It is also a habitat for wood storks. The levee that impounds the Duck Pond is severely undercut on the outer face by shoreline erosion. Vegetation currently growing on the levee is actually helping to maintain it.

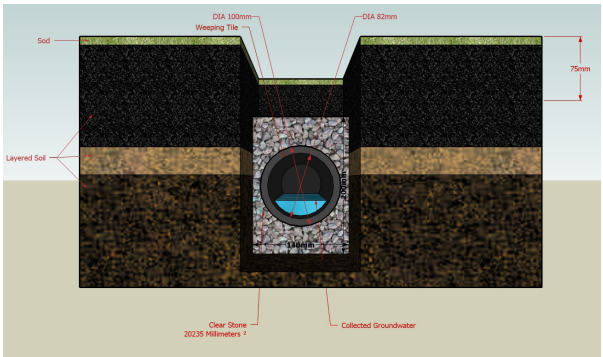


FIGURE 247. French drain diagram. (http://wikipedia.com)

- The vegetation currently growing on the levee should not be removed until a stabilization plan has been agreed on.
- Both elevation and vegetation will be needed to stabilize the levee. Oyster bags or possibly core logs could be stacked up, and perhaps some fill added on top or in between the logs to allow vegetation to grow.
- If the growth of any new vegetation is to be successful, it will be necessary to keep the island horses out of the area to prevent their grazing of the vegetation.
- Care should be taken to protect the levee until it can be restored.
- Remove encroaching vegetation from the margins of the Duck Pond.



FIGURE 248. Encroaching vegetation, 2011. (SERO Collection)



FIGURE 249. Encroaching vegetation, 2014. (SERO Collection)

- Work should not adversely impact wood stork habitat.

Buildings and Structures

Plum Orchard Mansion

The mansion is the center piece of the Plum Orchard historic landscape. Its preservation should be given the highest consideration. Restrooms that are not part of the historic fabric will be needed as visitation increases at Plum Orchard.

- Preserve/rehabilitate the Plum Orchard Mansion.
- New restrooms may be added in the downstairs service area.
- Inspect basement level doorways and seal as necessary.

Plum Orchard Carriage House

The Plum Orchard Carriage House is now in ruins and cannot be reclaimed. Plans are to remove the remains of the structure and stabilize the foundation in order to protect the archeological component of the site and interpret the area to visitors.

- Complete Section 106 compliance in consultation with the Georgia Historic Preservation Division.
- Clear away vegetation.
- Preserve features that should be curated and could be part of an interpretive display. Consult with park curator.
- Preserve the circular concrete feature, rectangular feature, and attenuated brick feature.
- Interpret using waysides with historic images.

Housekeeper's Cottage

- Clear out vegetation.
- Preserve the foundation.
- Seek historic image for interpretation.

Pumphouse

- Preserve the building.

Duck Pond

- Restore the concrete enclosure, which is cracked and stained.

Seawall

The wooden bulkhead that is currently in place needs to be repaired, replaced, or removed.

- One potential option identified by a team of experts in 2014 would be to take out the bulkhead and re-contour the shoreline. Some increase in erosion might result in this area once the bulkhead is removed. Some living shoreline protection (restoration of oyster reef and native vegetation) might therefore be needed for the area.

- This option would necessitate moving the octagon shed.

- Before the shoreline is re-contoured, an archeological investigation would be needed to survey for potential resources that could be impacted.

Octagon Shed

The octagon shed is in danger of being overtaken by the Brickhill River.

In March 2014, a team of experts met with the park to seek a solution to the shoreline erosion problem along the Brickhill River (see Topography above).



FIGURE 250. Octagon shed, 2014. (SERO Collection)

- The octagon shed is partially protected by the wooden bulkhead built in 1992, which is deteriorating and causing erosion of the shoreline at either end of the structure. Erosion and undercutting is also occurring on the interior (land side) of the bulkhead, forming holes and threatening to undermine the structure.

- If the building is moved, complete Section 106 compliance in consultation with the Georgia Historic Preservation Division. Its new location should preserve its relationship to the shoreline without compromising the open character of the landscape around the mansion or diminishing historic circulation patterns.

Boathouse

The boathouse is in ruinous condition, although encroaching vegetation was removed in 2014 and the interior cleaned out. According to the LCS, it is beyond repair. It is also threatened by erosion along the Brickhill River and is likely to collapse into the river in the near future.

- Keep building clear of vegetation.

- Complete Section 106 compliance in consultation with the Georgia Historic Preservation Division to determine what mitigation is needed if the building is to be removed.

Reserved Life Estates

All buildings and structures should be preserved/rehabilitated. Any changes should be approved through the Section 106 review process.

- The Bernardey cemetery wall is in poor condition and should be restored.

- Historic structure reports will be needed when buildings come back into federal ownership.

- Consider marking the locations of missing features such as the water tower and greenhouses with historic images on waysides.

Circulation

Historic circulation patterns are a character-defining feature of the cultural landscape.

- Restore the missing loop in the entry drive. Use historic images to determine the original alignment. Because of the growth of trees over the years, it will be necessary to restore it as a pedestrian path only. If the loop is to be restored as a road, it could only be done if the historic live oak suffers storm damage and needs to be trimmed or dies.
- Preserve the historic alignment of the entry drive that turns east and loops around the mansion and other service roads in the historic district, including those in the reserved life estates.
- Preserve the historic character of Plum Orchard Avenue.
- Preserve Duck House Road.
- Roads should remain shell and sand.



FIGURE 251. Bird's-eye view of loop in entry road, 1979. (SERO Collection)



FIGURE 252. View of missing loop around the front portico, 1979. (SERO Collection)



FIGURE 253. View of trace of missing loop, 2011. (SERO Collection)



FIGURE 254. Historic alignment of the entry road, 2011. (SERO Collection)



FIGURE 255. Historic alignment of road as it loops by the dock area with Italian cypresses in the background, 2014. (SERO Collection)



FIGURE 256. Historic character of Plum Orchard Avenue, 2011. (SERO Collection)



FIGURE 257. Historic character of Plum Orchard Avenue, 2011. (SERO Collection)



FIGURE 258. Duck House Road, 2010. (SERO Collection)

Views and Vistas

Historic views and vistas are a character-defining feature of the picturesque landscape developed by the Carnegies.

- Preserve views of the open, park-like landscape of large specimen trees in a broad lawn surrounding the mansion.
- Restore the view of the Italian cypress-lined entrance drive from the front piazza.
- Restore the view of the palms on approach to the front portico.
- Preserve views of the Brickhill River from the mansion and loop road.
- Seek more documentation for the vista from the mansion to the Duck Pond and from the Duck Pond to the mansion. Only two images have been found to date of the Duck Pond and both focus on the footbridge.
- Screen views of the fire suppression tank and generator from the loop road and larger landscape.



FIGURE 259. View of park-like landscape surrounding the mansion, 2010. (SERO Collection)



FIGURE 260. Specimen oaks in the lawn, 2014. (SERO Collection)



FIGURE 261. Historic view of the palms on approach to the front portico, 1960. (SERO Collection)



FIGURE 262. View of the Brickhill River, 2011. (SERO Collection)



FIGURE 263. Current view of fire suppression tank from loop road, 2014. (SERO Collection)



FIGURE 264. Current view of fire suppression tank from larger landscape, 2014. (SERO Collection)

Small-Scale Features

- Restore the Duck Pond footbridge if visitors gain access to the formal garden.
- Preserve the formal garden pool and any edging that may survive belowground. Consult with Southeast Regional Office Cultural Resources Research and Science Branch to seek a Determination of Eligibility for inclusion in the LCS.
- Restore the Duck Pond concrete enclosure.
- Preserve the circular concrete feature, the brick pyramid feature, and the rectangular concrete feature at the carriage house.

- Signage within the historic district should be compatible with National Park Service system-wide standards and be as simple, consistent, and unobtrusive as possible.
- Site furnishings should be compatible with the character of the historic landscape.
- Use interpretive waysides of an appropriate number, scale, and location.



FIGURE 265. Open space of formal garden area with concrete pool, 2014. (SERO Collection)



FIGURE 266. Duck Pond concrete enclosure with crack, 2009. (SERO Collection)

Natural Systems and Features

- Consider equally both natural and cultural features of the project area in treatment and land use decisions.
- Rare, Threatened, and Endangered Plant and Animal Species: Avoid altering the habitats of rare, threatened, or endangered species or species of special concern. Evaluate the potential impact to wildlife habitat prior to undertaking any construction or vegetation removal project.

Archeological Resources

- Protect/preserve all archeological resources.
- Consult with SEAC before undertaking any ground disturbing activities.

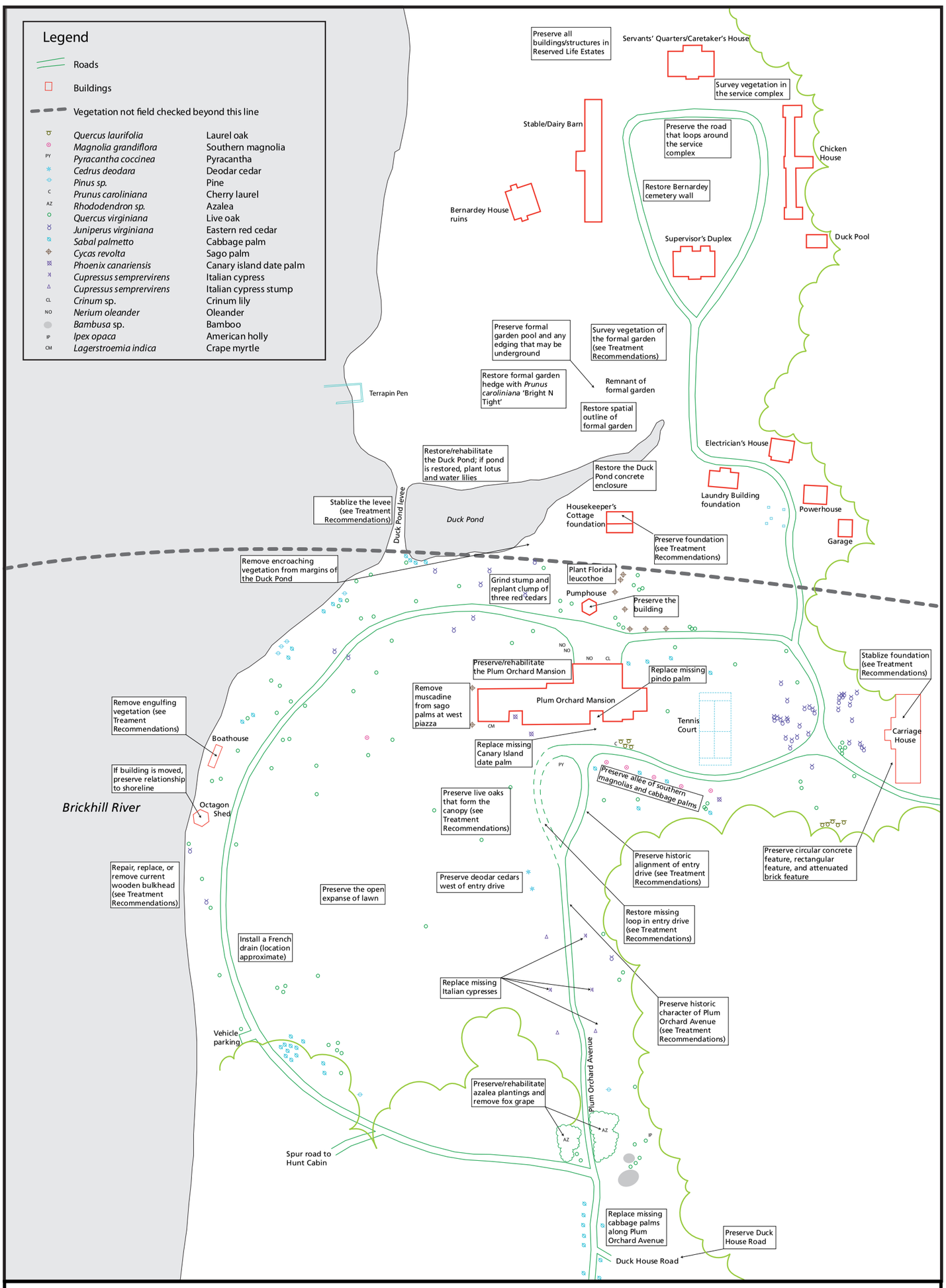
National Register Nomination

- Amend the National Register nomination to include landscape architecture as an area of significance.
- Conduct a survey of the 1937 formal garden in order to better evaluate its integrity. The period of significance could be expanded to 1937 based on this information.

Additional Research

Due to restricted access to the Reserved Life Estates, that portion of the cultural landscape was not surveyed for this study. An assessment of these landscape features would be a valuable addition to this study.

- Due to constraints of time and travel and the body of information already gathered, additional research of the Carnegie Papers at the Georgia State Archives was not undertaken. Such an effort might reveal additional information about the Plum Orchard cultural landscape.



Plum Orchard
Cumberland Island National Seashore
Treatment Map
NPS SERO | 2014

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Archives

Cumberland Island National Seashore Archives

Georgia Department of Archives and History

Appendix A

George Lauder Carnegie Garden

Ordered from J. M. Thorburn & Co. in 1904

Celery	Fin de Siecle
Spinach	
Radish	Non Plus Ultra
Parsley	Extra Curled
Onion	Giant Rocca
	Yellow Danvers
	Large Yellow Globe
Lettuce	Market Gardener Private Stock
	Maximum
Kohlrabi	Early Purple Vienna
Corn salad	Lettuce Leaved
Carrot	Early Scarlet Horn
	Half Long Danvers
Cabbage	Thornburn Colossal
	Stein Early Flat Dutch
Cauliflower	Extra Early Paris
	Large Algiers
Brussel Sprouts	Improved Half Dwarf
Beet	Half Long Blood
	Crimson Globe
Peas	Duke of York
	Excelsior
Parsnip	Maltese
Turnip	Red Top Globe
	Thorburn Yellow Stone
Rutabega	Thorburn Improved
Raffia	

Ordered from R & J Farquhar & Co. in 1904

Spinach	Thick leaf
Onions	Sets red and white
Leeks	Carentan
Sweet peas	California hybrids

1906

Anemones	Single finest
	Single fulgens
	St. Brigid
Jonquils	Single sweet scented
Gladiolus	Blandus
	Colvillei ‘Alba’
	Colvillei ‘Rosea’
	Cardinalis ‘Blushing Bride’
Sweet Peas	Farquhar Cal. Hybrids
Zinnia	Farquhar Exhibition Prize

Appendix A

Ageratum	Blue Perfection	Cauliflower	Kronk's Perf. D.E.
Marigold	Tall French Single		Danish Giant
Helichrysum			Autumn Giant
Gaillardia	Single	Carrott	Early Scarlet Horn
	Grandiflora		Danver's Half Long
Calendula pongei		Beet	Imperial Early Egyptian
Cacalia coccinea		Bean	Green Pod
Petunia		Radish	Early French
Candytuft	Great White Perfection	Turnip	White Globe
Onions	Yellow Globe	Ruta Baga	White French
Watercress			Purple-top
Parsnips	Market Model	Parsley	Moss Curled
Peas	Early Alaska	Spinach	Round Thick Leaf
	Horsford Market Garden		
Spinach	Thick Leaf		
White Mustard			
Endive	Green Curled		
Beans	Broad Windsor		
Lettuce	Brown Dutch		
	Boston Forcing Tennisball		
	Farquhar Longstanding		
Leek	Giant Carentan		
Cabbage	Drumhead		
	Danish Ballhead		
	Early Jersey Wakefield		
Celery	Crosby's Orig. B.M.		
	Giant Pascal		
	Carter's Dwarf Crimson		

Appendix B

"Inside My Garden Gate," Notebook of Nancy Carnegie Johnston

Annuals and Perennials 1937

In the greenhouse in November 1937, seeds of the following were sown:

Carnation (*Dianthus caryophyllus*) – pink, white, deep salmon

Snapdragon (*Antirrhinum majus*) – pink, white, copper

Dianthus (*Dianthus barbatus*) – white, salmon

Cape bugloss (*Anchusa capensis*) – blue

Italian bugloss (*Anchusa italica*) – gentian blue

Baby blue eyes (*Nemophila menziesii*) – light blue

Pot marigold (*Calendula officinalis*) - yellow

Chrysanthemum (*Chrysanthemum× morifolium*)

Sea dahlia (*Coreopsis maritima*) – pale yellow

Stokesia (*Stokesia laevis*) - blue

Ageratum (*Ageratum houstonianum*) - blue

Larkspur (*Consolida ajacis*) – white, pink

Sweetpeas (*Lathyrus odoratus*) – white, pink, blue, rose

Cleome (*Cleome hasslerana*) - rose

Batchelor buttons (*Centaurea cyanus*) - blue

Cat mint (*Nepeta* × *mussinii*) – blue

Verbena venosa var. *lilacina* – lavender blue

Bulbs 1938

Ordered the following from the Merton G. Ellis Bulb Gardens in Canby, Oregon:

Gladiolus

30 'Ave Maria' – violet blue B

24 'Dr. Moody' – lavender A

20 'Golden Chimes' – yellow C

40 'Golden Dream' – yellow A

40 'Margaret Fulton' – salmon C

30 'Wasaga' – apricot B

24 'Marocco' – dark red A

20 Marmora – smoky B

Regal lilies (*Lilium regale*)- 100 for azalea beds

Also ordered:

'Giant Yellow' tulips (*Tulipa* 'Giant Yellow') – 12 pans

Ixias (*Ixia* spp.) – 4 pans

Yellow calla lilies (*Zantedeschia elliottiana*) – 6 pans

White calla lilies (*Zantedeschia aethiopica*) – 6 pans

Ornithogalum (*Ornithogalum* spp.) – 2 pans

Sowed alyssum and nemophila - border

Appendix B

Results for 1938:

Mexican tuberoses (*Polianthes tuberosa*) – 24 - sent too late

Ranunculus (*Ranunculus asiaticus*) – 100 red – very poor

Stock (*Mathiola incana*)

Blue – too purple

Chamois – good

White – poor germination

Yellow

Violet

Petunia (*Petunia × hybrida*)

Ordered from Frasier's

'Romaney Lass'

'Elk's Pride' – deep purple – no good

'Giants of California' – poor

Ordered from Diener's - all good

'Royal Purple'

'Center'

'Mauve'

'Steel Blue'

Zinnia (*Zinnia elegans*) – sown too early

'Black Giant'

'Poppy Gold'

'Miniature Mix'

'Giant Mission'

China aster (*Callistephus chinensis*) – flesh pink – good

Sweet sultan (*Centaurea moschata*) – mix – fair

Cosmos (*Cosmos bipinnatus*) – early white

Dwarf mignonette dahlia (*Dahlia* hybrids) – frost

Lupine (*Lupinus polyphyllus*) – blue and dark blue – nothing special

Snapdragon

Ordered from Howard's Jacksonville FL

'Autumn Glow' – mahogany – good

'Harmony' – bronze – good

Batchelor Button

Ordered from Howard's Jacksonville FL – did not germinate

'Blue Boy'

'Red Boy'

'Black Boy'

Sweetpea

From Howard's Jacksonville, FL

'Forty Niner' – planted too late and in a bad place

'Fragrance'

'Oriental'

Ordered from Pudor's Puyallup, WA - good

Orange

Candytuft (*Iberis sempervirens*) – not sent

Dianthus – double mix, all red – very poor

California poppy (*Eschscholzia californica*)

From Howard's – did not germinate

'Mauve Beauty'

Ramona hybrid

Gaillardia (*Gaillardia pulchella*)

'Indian Chief'

Appendix B

Sea dahlia - did not germinate

Marigold (*Tagetes erecta*)

'Yellow Supreme'

Mignonette (*Reseda odorata*) – sowed too late

Nicotiana (*Nicotiana alata*)

Mixed – colors not good – good plants

Shirley poppy (*Papaver rhoeas*)

Single

Double purple

Verbena (*Verbena × hybrida*)

Blue – poor

Yellow – not sent

Ageratum

Dwarf

Pansy (*Viola tricolor*)

Ordered from Steele's Pansy Garden Portland, OR – all very good

'Sea Blue'

Swiss Mixed

'Mlle. Irene'

'Henna Red'

Jumbo Mixed

Delphinium Bella Donna type (*Delphinium elatum*)

From Pudors – Fair, deep blue shades

'Pudor's Sapphire'

'Cliveden Beauty'

Rich dark blue ['Bellamosum Improved']

Carnation

From Pudor's – very late, white, pink, salmon

'Legion of Honor'

'Pink Beauty'

White

Perennial lupine (*Lupinus polyphyllus*)

Blue

Shasta daisy (*Leucanthemum × superbum*)

Rainbow Pink

Bulbs 1939

1 dozen Andean Glory of the Sun Lily (*Leucocoryne ixioides odorata*) in pots

1 dozen Guernsey lily (*Nerine sarniensis*)

Gold-banded lily (*Lilium auratum*) – 25 pots

White calla lilies – 25 in pots

Regal lily – 50

Narcissus (*Narcissus* spp.) – 500 planted in garden

Ixias

'Bloem Elf'

Formosa lily (*Lilium philippinense* or *formosanum*)

Planted at Rose Garden entrance

Henry's lily (*Lilium henrii*)

3 planted each side of seat in Formal Garden

Tiger lily (*Lilium tigrinum* 'Splendens')

3 planted each side of entrance steps

Double tiger lily (*Lilium tigrinum* 'Flore-Pleno')

3 planted each side seat in small garden

Coral lily (*Lilium tenuifolium*)

'Golden Gleam' – planted at orange tree entrance

Hyacinths (*Hyacinthus orientalis*)

'L'Innocence' – 25 in bed in small garden

'King of the Blues' – 25 in bed in small garden

Dutch Iris (*Iris* × *hollandica*)

Planted border of pool

12 'Jacob de Wit'

12 'Leonardo da Vinci'

Tulips

Planted in Formal Garden – November 1939

'Yellow Giant' – 50 each side of entrance

'Rev. Eubanks' – 4 small beds – violet

'Zwanenburg' – 4 small beds – white

'Rev. Eubanks' – 50 each entrance – violet

Planted in Rose Garden – November 1939

'Clara Butt' – border

'Pride of Harlem' – border

'Salmon Rose'

'Carmine'

Spanish Iris (*Iris hispanica*)

'Golden Wonder' – planted by cedar by pool – December 1939

Gladiolus

Planted in the Vegetable/cut flower Garden

'Picardy' – apricot

'Charles Dickens' – Blue

'Maid of Orleans' – whte

Planted in the corners of the Formal Garden

'Pelegrina' – deep blue

'Gold Finch' - pale yellow

'Commander Koeh' – dark scarlet

'Betty Nuthall' – pale bronze

'Dr. Bennett' – scarlet

'Mammoth White' – white

Annuals and Perennials 1939

Pansies – 350 in border

Dames Rocket (*Hesperis matonalis*) – white

Batchelor Button

'Blue Boy'

'Pinkie'

Pincushion flower (*Scabiosa atropurpurea*)

'Blue Moon'

Ageratum

'Blue Ball'

Dwarf

Carnation

Chabaud's Giant Improved White –'Jeanne Dionis' – 1 flat sown in greenhouse

Chabaud's Giant Improved Deep Rose – 'Rose Queen' – 1 flat sown in greenhouse

Stock

'Improved Bismark Buttercup' – deep yellow

'Malmaison Pink' – light shell pink

Large flowered pure white

Chrysanthemum

Korean hybrids – single and double mixture

Gerber daisy (*Gerbera jamesonii*)

Jameson hybrids

Petunia

'Elk's Pride' – purple

'Grandiflora Ruffled' – white

'Dainty Lady' – creamy yellow

'Salmon Supreme' – salmon pink

Larkspur

'Blue Spire'

'Giant King' – deep blue

'White Spire'

Lupine

'Oxford Blue'

White

'Giant King'

Baby's Breath (*Gypsophila elegans*)

'Paris Market'

'Carminea'

Hollyhock (*Alcea rosea*)

'Indian Spring' Mixed

Pincushion flower

'Blue Moon'

Iceland poppy (*Papaver nudicaule*)

Mixture

Marigold (*Tagetes patula*)

'Winter Sunshine'

Salpiglossis (*Salpiglossis sinuata*)

'Emperor'

Zinnia

'Fantasy'

'Star Dust'

Nasturtium (*Tropaeolum majus*)

'Golden Gleam'

'Scarlet Gleam'

Schizanthus (*Schizanthus* × *wisetonensis*)

Dr. Badgers Hybrids

Pansy

Canadian Giant Strain - mixture

Swiss Lake of Thun – blue dark center

Delphinium

Pacific Giants - white

Castor Bean (*Ricinus*)

500 strawberry plants

Sweet peas – November 23, second planting outside

'Fragrance'

'Harmony'

'Laddie'

'Spring Song'

'Apollo'

'Prosperity'

'Triumph'

'Snow Storm'

Annuals and Perennials 1940

Petunia

'Royal Purple'

'Center'

'White Beauty'

Delphinium

California Pacific Hybrids

Bella Donna 'Sapphire'

White Wonder Strain

'Mother of Pearl'

Pansy

Mastodon – 400 Super Swiss Mixed

Mastodon 'Sea Blue'

Mastodon 'Grand Duke Michael'

Mastodon 'Improved Isabelle'

Petunia

'Ruffled Monster'

'Deep Velvety Violet'

'Copper Red Double'

White with yellow center

Gerbera

Diener's hybrid double

Dianthus

Single white

'Newport Pink'

Marsh Forget-Me-Not (*Myosotis palustris*)

'Hardy Blue'

Drummond phlox (*Phlox drummondii*)

Phlox drummondii grandiflora

'Salmon Glory'

'Chamois Rose'

'Isabellina'

Pansy

Canadian Giant Mixture

Baby's Breath

'Bright Carmine'

White

Schizanthus

'Brilliant Blend'

'Extra Dwarf'

Stock

'Malmaison Pink'

'Pure White'

Ranunculus

'Lassie Pink'

'Sunset Orange'

Calla lily – 39 pots

List of "Plants That Do Well in the South"

Annuals

Poppies (*Papaver* spp.)

Stock (*Matthiola incana*)

Annual phlox (*Phlox drummondii*)

Snapdragon (*Antirrhinum majus*)

Zinnia (*Zinnia elegans*)

Single dahlia (*Dahlia* cvs.)

Alyssum (*Lobularia maritima*)

Ageratum (*Ageratum houstonianum*)

English daisy (*Bellis perennis*)

Pansy (*Viola tricolor*)

California poppy (*Eschscholzia californica*)

Candytuft (*Iberis sempervirens*)

Lobelia (*Lobelia erinus*)

Baby's Breath (*Gypsophila elegans*)

Nasturtiums (*Tropaeolum* spp.)

Mignonette (*Reseda odorata*)

Petunia (*Petunia* × *hybrida*)

African Marigold (*Tagetes erecta*)

Bachelor's Buttons (*Centaurea cyanus*)

Larkspur (*Consolida ajacis*)

Sweet William (*Dianthus barbatus*)

Pot marigold (*Calendula officinalis*)

Italian bugloss (*Anchusa azurea*)

Forget Me Not (*Myosotis* spp.)

Nicotiana (*Nicotiana alata*)

Cosmos (*Cosmos bipinnatus*)

Pincushion flower (*Scabiosa atropurpurea*)

Sweet peas (*Lathyrus odoratus*)

Baby blue eyes (*Nemophila menziesii*)

Perennials

Dahlia (*Dahlia* cvs.)

Daylily (*Hemerocallis* spp.)

Daisy (*Leucanthemum* × *superbum*)

Lupine (*Lupinus polyphyllus*)

Salvia (*Salvia* spp.)

Pinks (*Dianthus plumarius*)

Chinese delphinium (*Delphinium grandiflorum*)

Stokesia (*Stokesia laevis*)

Germander (*Teucrium chamaedrys*)

Hardy carnation used as annual (*Dianthus caryophyllus*)

Bulbs

Gladiolus (*Gladiolus* cvs.)

Calla lily (*Zantedeschia aethiopica*)

Bulbous iris (*Iris* spp.)

Madonna lily (*Lilium canidum*)

Ranunculus (*Ranunculus* spp.)

White Flowers

Lilies (*Lilium* spp.)

Calla lilies

Magnolia (*Magnolia* spp.)

White red bud (*Cercis canadensis* 'Alba' or other white form)

Crape myrtle (*Lagerstroemia indica* cvs.)

Camellia (*Camellia japonica* cvs.)

Azaleas (*Rhododendron* spp.)

Tuberoses (*Polianthes tuberosa*)

Narcissus (*Narcissus* spp.)

Snowdrop (*Leucojum vernum*)

Things to Try in the Greenhouse

Rosa 'Roulette'

African violets (*Saintpaulia* spp.)

Allamanda (*Allamanda cathartica*)

Tuberous begonia (*Begonia* spp.)

Daphne (*Daphne odora*)

Pineapple lily (*Eucomis bicolor*)

Gloxinia (*Sinningia speciosa*)

Tea olive (*Osmanthus fragrans*)

Bougainvillea (*Bougainvillea* spp.)

Bouvardia (*Bouvardia ternifolia*)

Calceolaria (*Calceolatia crenatiflora*)

White cyclamen (*Cyclamen persicum*)

Forget-me-not (*Myosotis* spp.)

Gardenia (*Gardenia jasminoides*)

Heliotrope (*Heliotropoum arborescens*)

Lily of the Valley (*Convallaria majalis*)

Pelargonium (*Pelargonium* spp.)

Dwarf pomegranate (*Punica granatum* 'Nana')

Primula (*Primula veris*)

Camassia (*Camassia leichtlinii*)

Zephyranthes (*Zephyranthes atamasco*)

Roses

Roses were ordered from Burns Nursery & Flower Garden located in Wills Point, Texas.

'Ami Quinard'

'Caledonia'

'Dainty Bess'

'Golden Opelia'

'Pres. Hoover'

'Etoile de Hollande'

'Souv. de Claudius Pernet'

'Tallisman'

Azaleas

Azaleas were ordered from G. G. Gerbing of Gerbing's Azalea Gardens located in Amelia City, Florida.

'Fielders White' – Southern Indian hybrid (Rhododendron 'Fielders White')

'Lawsal' – Southern Indian hybrid (Rhododendron 'Lawsal')

'Salmon Prince' - Kurume hybrid (Rhododendron obtusum 'Salmon Prince')

'Salmon Beauty' - Kurume hybrid (Rhododendron obtusum 'Salmon Beauty')

'Yaye-Giri' - Kurume hybrid (Rhododendron obtusum 'Yaye-Giri')

Table A: Historic Features in the Plum Orchard Cultural Landscape

Feature	LCS#/ ACMIS#	Construction Date	Condition	Contributing	FMSS#	Treatment
Plum Orchard Mansion	006608	1898	Good	Contributing	62795	Rehabilitation
Plum Orchard Carriage House	006610	1890s	Poor	Contributing	109682	Stabilize foundation
Pumphouse	006617	1913	Good	Contributing	112874	Preserve
Octagon Shed	006623	1900-1907	Good	Contributing	113369	Preserve
Boathouse	006622	1900-1906	Poor	Contributing		
Powerhouse	006613	1913	Good	Contributing	114724	Preserve
Electrician's House	006609	1913	Good	Contributing	114722	Preserve
Stable/Dairy Barn	006611	1902	Good	Contributing	114723	Preserve
Supervisor's Duplex	006616	1910s	Poor	Contributing		Preserve
Servants' Quarters/Caretaker's House (Hauser's House)	006618	1917	Good	Contributing	114725	Preserve
Chicken House	006619	1919	Poor	Contributing		Preserve
Housekeeper's Cottage Foundation	006612	1917	Fair	Contributing		Preserve
Water Tower Footings	006614	1913	Good	Contributing		Preserve
Laundry Building Foundation	006615	1917	Fair	Contributing		Preserve
Bernardey Walled Cemetery and Grave Marker	006626	1827-1853	Poor	Contributing	93294	Restore
Bernardey House Foundation	006627	1823-1853	Poor	Contributing		Preserve
Terrapin Pen	DOE pending	1830-1865	Good	Contributing		Preserve
Duck Pond Concrete Enclosure		c.1900-1910s	Fair	Contributing		Preserve
Tennis Courts		By 1906		Missing		

Feature	LCS#/ ACMIS#	Construction Date	Condition	Contributing	FMSS#	Treatment
Greenhouses		1910s		Missing		
Formal Garden Pool		1937	Fair	Contributing		Preserve
Live oak canopy		c.1898-1910s	Good	Contributing		Preserve
Open expanse of lawn		c.1898-1910s	Good	Contributing		Preserve
Pattern of trees along avenues		c.1900-1910s	Fair	Contributing		Restore
Clusters of azaleas		c.1900-1910s	Fair	Contributing		Preserve
Enclosing hedges and conifers		c.1900-1910s		Missing		
Circular entrance drive		c.1898-1910s	Poor	Contributing		Restore missing loop
Spatial pattern between buildings in service complex		c.1900-1910s	Good	Contributing		Preserve
Clipped evergreens in terra cotta pots on piazza		c.1898-1910s		Missing		
Duck Pond and levee		c.1900-1910s	Poor	Contributing		Restore
Italian cypresses, cabbage palms, pindo palms, Canary Island date palms		c.1900-1910s	Poor	Contributing		Preserve/restore missing elements
Plum Orchard Avenue		c.1898	Good	Contributing		Preserve
Service complex loop road		c.1900-1910s	Good	Contributing		Preserve
Service road from carriage house to Table Point Road		c.1898-1910s	Good	Contributing		Preserve
Section of Duck House Road inside historic district		c.1898-1910s	Good	Contributing		Preserve
Entrance loop road		c.1898-1910s	Good	Contributing		Preserve

Feature	LCS#/ ACMIS#	Construction Date	Condition	Contributing	FMSS#	Treatment
around complex						
Interconnecting access roads between service buildings		c.1900-1910s		Missing		
Turf paths in formal garden		1937		Missing		
Concrete edging in formal garden		1937		Unknown		
Vegetation in formal garden		1937		Unknown		
Views of park-like setting from mansion		c.1898-1910s	Good	Contributing		Preserve
Views of tree-lined entrance drive		c.1900-1910s	Good	Contributing		Preserve
Views of Brickhill River from mansion		c.1898-1910s	Good	Contributing		Preserve
Views of Duck Pond from mansion		c.1900-1910s	Poor	Contributing		Restore
Views from Brickhill River southwest to St. Marys		c.1898		Non-contributing		
Duck Pond bridge		c.1900-1910s		Missing		Restore
Garden benches		1937		Missing		
Plum Orchard Midden	CUIS00017.00			Contributing		Preserve
Tabby House Midden	CUIS00018.00			Contributing		Preserve
Plum Orchard Sand Mound	CUIS00017.01			Contributing		Preserve



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.



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Cumberland Island National Seashore

Plum Orchard Historic District
Cultural Landscape Report

National Park Service
U.S. Department of the Interior

Plum Orchard Historic District
Cumberland Island National Seashore
101 Wheeler Street
St. Marys, Georgia 31558

www.nps.gov/cuis

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