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The Original Progressive Farmer: The Agricultural Legacy of Thomas Spalding of Sapelo

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ABSTRACT

During the first half of the nineteenth century, a thriving plantation emerged on Sapelo Island, Georgia. The plantation's owner was Thomas Spalding (1774-1851), who was one of Georgia's foremost planters, and yet his substantial contributions to Georgia's agricultural development have gone unnoticed by most historians. Spalding built a prosperous enterprise around staple crops such as Sea Island cotton; however, he was better known for his experiments with novel crops such as sugar cane, as well as his innovations in the areas of crop rotation and diversification and the successful implementation of tabby as a viable construction material on the Georgia coast. This paper analyzes these areas of Spalding's career with particular attention given to his extensive writings on the subjects in the leading agricultural journals of the period. Spalding's accomplishments are many, and this study seeks to shed new light on his most noteworthy agricultural endeavors and to demonstrate that his life and career deserve further investigation by historians.

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Introduction

Nestled along the coast of McIntosh County, Georgia lies Sapelo Island. Amid the dense forests of live oak and pine, few vestiges remain to indicate that an immense agricultural empire once flourished there, save a few vine-covered tabby ruins and the ornate South End House—its antebellum roots barely recognizable after many modern renovations. Just as the once great plantation has given way to the forces of man and nature, so the great planter himself seems to have been forgotten, doomed to historical obscurity. That planter was Thomas Spalding of Sapelo.

It was on Sapelo Island that Spalding sought to permanently establish himself and where he would construct a model plantation that would cement his name in Georgia's antebellum history. In addition to cultivating such notable cash crops as Sea Island cotton, Spalding gained great fame as an innovator in a variety of experimental crops, particularly sugar cane, as well as his use of tabby as an effective building method on his plantations.[1] Experimentation alone was not enough, however, as Spalding was a great believer in sharing his knowledge with his fellow planters across Georgia and the South. Spalding in time became the state's most well-known contributor to a number of prestigious agricultural journals, and these prolific writings have proven to be some of the few remaining reliable sources of his agrarian endeavors.[2] As this study of his writings will attest, Thomas Spalding was, in the words of historian Buddy Sullivan, the "consummate scientific farmer."[3] Through his important role in the development of

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[1] Buddy Sullivan, *Early Days on the Georgia Tidewater: The Story of McIntosh County and Sapelo,* 6th ed. (Darien, GA: McIntosh County Board of Commissioners, 2001), 101, 107.

[2] James C. Bonner, *A History of Georgia Agriculture, 1732-1860,* (Athens: University of Georgia Press, 1964), 59.

[3] Buddy Sullivan, *Ecology as History in the Sapelo Island National Estuarine Research Reserve* (Occasional Papers of the Sapelo Island NERR, 2008), 9.

sugar cane, Sea Island cotton, and tabby, as well as other scientific innovations, Spalding made substantial contributions to agriculture and deserves a high degree of credit and respect.

Early Life

Thomas Spalding was born at Frederica on St. Simons Island, Georgia, March 25, 1774, the only child of James and Margery McIntosh Spalding. James Spalding, a Scottish immigrant, had built a substantial mercantile business based at Frederica and had accrued what was for that place considerable wealth. Margery McIntosh was a daughter of William McIntosh and a granddaughter of John McIntosh Mohr, leader of the Highland Scots who had established the nearby town of Darien in 1736. Despite his privileged birth, young Thomas's early childhood was one of uncertainty. With the outbreak of the American Revolution in 1775, James Spalding had chosen to remain loyal to the Crown and as a result saw his property confiscated by the state and was forced to flee with his family to British Florida.[4] In the years following the war, however, James was able to reclaim most of his lands and soon became the wealthiest man in Glynn County.[5]

Despite the temporary setbacks brought by the Revolution, Thomas Spalding's upbringing was one of great advantage. Spalding was well-educated as a child and as a young man studied law under Judge Thomas Gibbons (of *Gibbons v. Ogden* fame) at Savannah, being admitted to the bar in 1795. That same year, Spalding married Sarah

[4] E. Merton Coulter, *Thomas Spalding of Sapelo* (Baton Rouge: Louisiana State University Press, 1940), 1-7.
[5] Coulter, *Thomas Spalding of Sapelo,* 9.

Leake, daughter of wealthy coastal planter Richard Leake.[6] Leake and his business associate, Edward Swarbreck, owned a tract of land, known as Chocolate, on the north end of Sapelo Island and were in the process of purchasing land on the island's south end from a consortium of Frenchmen when Leake passed away in 1802, leaving his estate to his daughter and son-in-law. Spalding, who had been residing at his Retreat Plantation on the south end of St. Simons, continued where Leake had left off and purchased 4,000 acres of land at South End after selling his St. Simons holdings.[7] In 1843, Spalding purchased 7,000 acres on Sapelo's north end, giving him total ownership of the island, excepting 650 acres at Raccoon Bluff.[8]

In addition to acquiring land, however, Spalding also found it necessary to acquire a labor force. Like all antebellum planters, Spalding's agricultural empire was built on the institution of African slavery. In addition to those slaves inherited from his father, Spalding purchased slaves from markets in Savannah and Charleston and occasionally from the Caribbean and came to own several hundred slaves, scattered across his vast landholdings in McIntosh County and elsewhere. Spalding's methods of slave management have been studied and commended by historians as uncommonly humanitarian for the time.[9] Although slavery was an essential component of Spalding's agricultural endeavors, it will not be discussed in any detail in this study, in part due to the lack of reliable records.[10]

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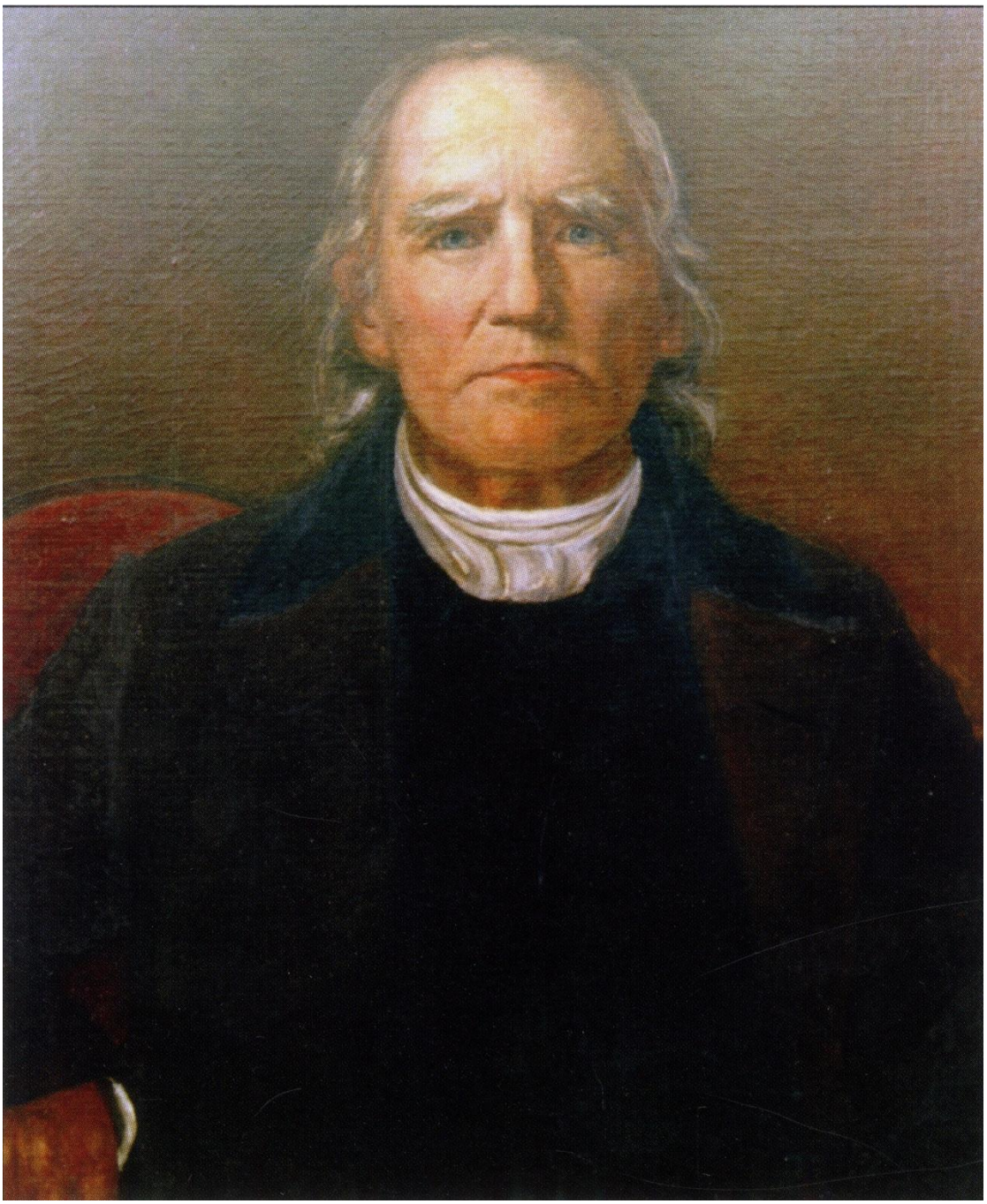
[6] Coulter, *Thomas Spalding of Sapelo,* 10-12. Despite studying law and being admitted to the bar, Spalding never practiced.

[7] Coulter, *Thomas Spalding of Sapelo,* 39-40; Sullivan, *Tidewater,* 87.

[8] Sullivan, *Tidewater,* 89, 95.

[9] For more on this subject, see Coulter, *Thomas Spalding of Sapelo,* 80-86 and Sullivan, *Tidewater,* 120-123.

[10] Sullivan, *Tidewater,* 98, 120-121. Due to numerous courthouse fires in McIntosh County, exact records as to the number of slaves owned by Spalding are inconsistent and unreliable. Furthermore, the confines of the present paper do not permit a discussion of Spalding's slaves.



Thomas Spalding of Sapelo, oil on canvas by John Maier, now in the possession of the Georgia Historical Society. (From Buddy Sullivan, *Georgia: A State History*)

With sufficient capital, Spalding immediately set about establishing one of Georgia's most prosperous and innovative plantations. Although Spalding's fortunes were built on traditional coastal crops such as Sea Island cotton and, to a lesser degree,

rice, his reputation as one of the South's greatest agricultural minds was built on his experimentation and success with a variety of less common crops and farming techniques—most notably sugar cane—and his frequent writings on the subject.[11]

Sugar Cane

Although sugar was not as lucrative as rice and cotton, it was regarded by many coastal planters as an important supplemental cash crop.[12] No planter was more enthusiastic about sugar cane than Thomas Spalding. Spalding perfected the cultivation and manufacture of sugar and developed the crop into a successful industry, all the while publishing numerous treatises on the subject to educate and encourage his fellow planters.

Spalding was credited by many as the first Georgia planter to grow sugar cane as a crop when he began experimenting with cane on Sapelo in 1805 or 1806. Spalding firmly believed that the climate and soil of Georgia were far better suited for sugar cane than Louisiana.[13] Cane was a versatile crop and could be planted anytime from October to March, with the best results occurring in October. Spalding explained that the process of planting cane in Georgia did not differ from that in Louisiana, where the cane was planted in ridges approximately four to five feet apart, very similar to the system used for planting cotton.[14] The actual planting of cane was "in some degree laborious"; however, Spalding pointed out that one of cane's great advantages was that, "once planted, you are

[11] Sullivan notes that, although Spalding was an authority on rice, he never cultivated the crop on a large scale. See Sullivan, *Tidewater,* 108. For more on rice cultivation, see Thomas Spalding, "On the Culture, Harvesting and Threshing of Rice, and on Rust in Cotton," *Southern Agriculturist* 8 (April 1835): 169-174.

[12] Mart A. Stewart, *"What Nature Suffers to Groe": Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996), 122.

[13] Stewart, *"What Nature Suffers to Groe,"* 123; Thomas Spalding, "On the Cultivation of the Sugar Cane, Erecting of proper Buildings, and Manufacturing of Sugar," *Southern Agriculturist* 2 (February 1829): 55. Spalding contradicts himself as to the year he began cultivating sugar cane, stating 1805 in one writing and 1806 in another.

[14] Spalding, "On the Cultivation of Sugar Cane," 57; Stewart, *"What Nature Suffers to Groe,"* 125.

done for the season," with no more expense after planting than what is involved in the cultivation of cotton. In fact, Spalding observed that cane and cotton were complementary and recommended combining the two crops. Rice and indigo, too, could be combined with cane, for the benefit of both crops. The greatest difficulty presented by cane was the labor of transporting the harvested cane from the fields to the mill, whether by carts or canals. Spalding criticized the Louisiana system of harvesting—in which 50 slaves would typically be responsible for 250 acres of cane—as too severe and degrading, preferring instead his own, more proportional system of 50 slaves to every 100 acres.[15] In order to benefit from the crop, however, a planter first had to invest in a complex sugar mill.

In what would be his most influential tract on the subject of sugar on the Atlantic coast, "Observations on the Method of Planting and Cultivating the Sugar-Cane in Georgia and South-Carolina," Spalding detailed the design of his sugar mill. The octagonal, two-story mill house measured forty-one feet in diameter and was built of tabby for durability, to protect against fire, and for aesthetic purposes. The second floor featured a circular wooden platform, around which the animals would walk to turn the workings of the mill itself. The rollers of the mill were exposed on the ground level, where the sugar cane itself was pressed and the juice extracted. In a humanitarian move, Spalding altered the standard design of the mill as used in the Caribbean by enlarging the center roller "in order to increase the velocity of my *Mill,* and to admit of my mules walking"; Spalding explained that, using traditional mills, the animals "are obliged to

[15] Spalding, "On the Cultivation of Sugar Cane," 58-59.

canter," which is "enough to destroy the animals."[16] Although animal-powered mills were sufficient for Spalding's operations, he recommended erecting a steam mill if one were cultivating several hundred acres.[17] From the millhouse, the juice extracted from the cane traveled by gutter through the walls to the adjacent boiling house.[18]

Architectural rendering of Spalding's tabby sugar mill (right) and boiling house (left). (From Marmaduke Floyd, "Certain Tabby Ruins on the Georgia Coast")

Spalding's boiling house, also made of tabby, was built directly adjacent to the mill house and measured approximately 22 ½ by 100 feet.[19] From the gutters, the sugar cane juice was conducted to large purifying vats, called receivers, in the boiling house. After purification, the juice was placed into four or five copper boilers, where the juice

[16] Thomas Spalding, "Observations on the Method of Planting and Cultivating the Sugar-Cane in Georgia and South-Carolina," in E. Merton Coulter, ed., *Georgia's Disputed Ruins* (Chapel Hill: University of North Carolina Press, 1937), 236-237.

[17] Spalding, "On the Cultivation of Sugar Cane," 60.

[18] Spalding, "Observations…" 239.

[19] 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), 108.

was boiled until it began to form syrup. From there the syrup was placed into cypress coolers so that the sugar could crystallize.[20] The resulting mixture of sugar and molasses—"a thick turbid mass"—was then transported to the curing house, which was connected perpendicularly to the boiling house. The floor of the curing house consisted of "two inclined planes, of two feet descent, that discharges the molasses into a gutter in the middle," leaving behind the crystallized sugar.

Spalding was very particular about the designs of the boiling and curing houses, stating that the boiling house should have many windows and a cupola running the length of the roof for ventilation, while the curing house had few windows and openings and was equipped with a stove to generate heat to facilitate the curing process.[21] The Agricultural Society of South Carolina originally published Spalding's "Observations" in 1816, soon after Spalding had begun manufacturing sugar. The pamphlet was widely read and "established Spalding as the recognized authority on the cultivation and production of sugar cane in the southern coastal region."[22] Prior to its publication, a few local planters had followed Spalding's advice and begun planting cane, and others would soon follow, particularly after learning that in 1814 Spalding's crop generated $12,500.[23]

Historian Mart Stewart noted that, although many Georgia farmers cultivated sugar cane and manufactured sugar on a small scale, few farmers—indeed, few planters—could afford the substantial investment required to manufacture sugar on the level of Spalding.[24] Roswell King, Sr., who managed Major Pierce Butler's extensive Butler Island Plantation in the nearby Altamaha River delta, began planting sugar cane in

[20] Spalding, "Observations…" 239-241.
[21] Spalding, "Observations…" 243.
[22] Sullivan, *Tidewater,* 111.
[23] Spalding, "On the Cultivation of Sugar Cane," 55.
[24] Stewart, *"What Nature Suffers to Groe,"* 123.

1815 and continued to increase his acreage over the coming years, as did his son, Roswell King, Jr.[25] The younger King noted in 1828 that sugar cane "has been found more profitable…than Cotton, and less precarious than Rice; not so liable to be injured in gales." King's methods of cultivation largely mimicked those of Spalding.[26] Spalding's methods and designs for sugar houses strongly influenced the sugar operations of William Carnochan at the Thicket near Darien, GA, and also those of Dr. Robert Grant at Elizafield Plantation in Glynn County and of Spalding's cousin, John Houstoun McIntosh in Camden County.[27]

Despite the great successes of Spalding and other planters, his sugar production would be surpassed by another protégé, James Hamilton Couper of Glynn County. Couper followed Spalding's methods with great diligence and in time became the leading producer of sugar in Georgia.[28] As Couper increased his acreage of sugar cane at his Hopeton Plantation in the Altamaha delta, he found that his animal-powered mill like those used by Spalding and others was no longer sufficient. Couper modernized by constructing an immense, steam-powered tabby sugar mill—"the finest ever erected in Georgia and equal to any in the West Indies or Louisiana."[29] With a steam-powered mill, Couper was also capable of grinding a new, better variety of cane.

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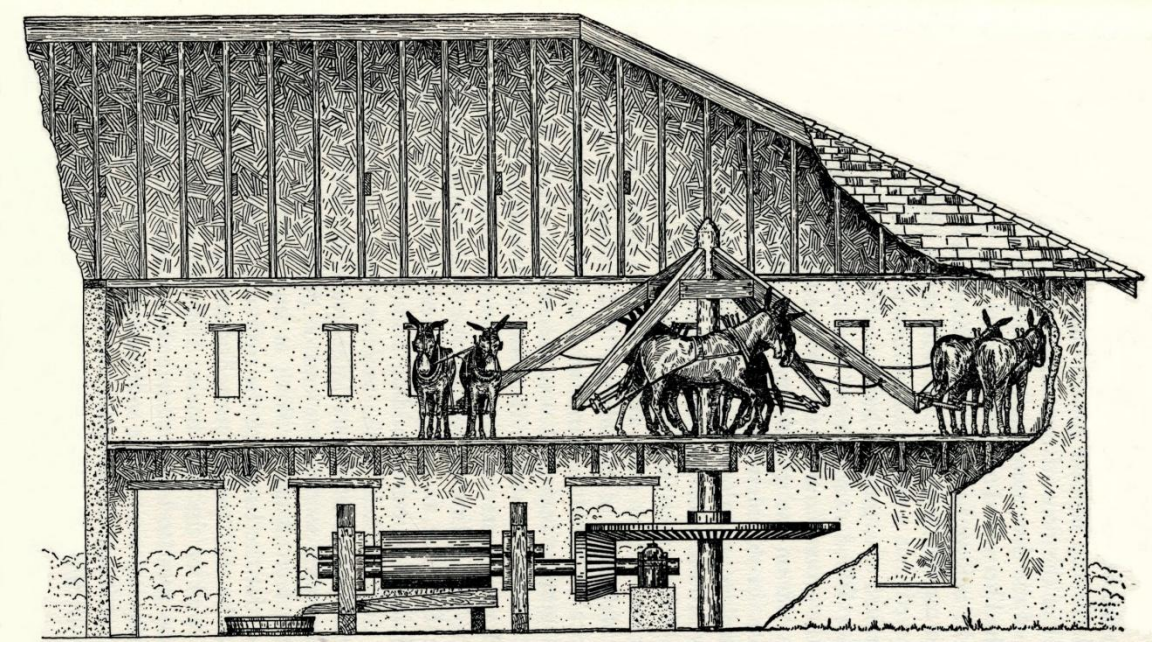
[25] Buddy Sullivan, *"All Under Bank": Roswell King, Jr. and Plantation Management in Tidewater Georgia, 1819-1854* (Darien, GA: 2013), 15.

[26] Roswell King, Jr., "On the Management of the Butler Estate, and the Cultivation of the Sugar Cane," *Southern Agriculturist* 1 (December 1828): 527.

[27] Sullivan, *Tidewater,* 112. For more on these individual operations, see Floyd, "Certain Tabby Ruins."

[28] Stewart, *"What Nature Suffers to Groe,"* 123.

[29] James Bagwell, *Rice Gold: James Hamilton Couper and Plantation Life on the Georgia Coast* (Macon: Mercer University Press, 2000), 69-70. Couper was the son of Spalding's close friend and fellow agriculturist, John Couper of Cannon's Point on St. Simons Island.



Horizontal sugar mill erected by John Houstoun McIntosh in Camden County at Spalding's recommendation. (From Floyd, "Certain Tabby Ruins")

When Spalding introduced sugar cane, the common variety was Otaheite—the pulp of which was soft. Soon after, however, a new, faster-growing variety known as ribbon cane replaced Otaheite.[30] The rind of ribbon cane was much thicker than Otaheite, and Spalding's traditional vertical sugar mills were not able to press the cane efficiently. Steam mills like Couper's were able to do the job; however, the price of such mills was a major deterrent to most planters. Therefore, Spalding set out to devise another, more affordable solution. During his visit to Louisiana in 1825, he observed horizontal, steam-driven mills and designed a similar mill that could be operated by cattle. He recommended this design to John Houstoun McIntosh, who successfully implemented it in Camden County. Still, despite the fact that his new design was able to handle ribbon

[30] Thomas Spalding, "On the Construction of Sugar Mills," *Southern Agriculturist* 5 (June 1832): 281; Stewart, *"What Nature Suffers to Groe,"* 122.

cane, Spalding noted that he was "disappointed in the mode of connecting the mill with the moving power" and therefore decided to modify his design yet again.[31]

Taking advantage of his coastal location, by 1832 Spalding began modifying his sugar mill to operate using water power from the tides. He dug a shallow, five-acre reservoir in the marsh to contain the water, calculating that

> "one foot of water over five acres would afford a power, equal to the power of a ten-horse engine, for five or six hours of each tide; and this is the highest power that should be applied to a sugar mill.…I placed a water-wheel twenty-four feet in diameter and with five feet length of bucket. I found, under experience, that letting on my wheel four inches of water, I sunk my pond but ten inches in six hours operation, while I commanded as much power as was necessary."[32]

Despite the success of Spalding's new mill, its use would unfortunately be short-lived. Following the War of 1812, tariffs on imported sugar caused the price of American sugar to soar. This, accompanied by unstable cotton and rice prices, led to an ideal economic setting for sugar production.[33] In 1832, however, disaster struck the American sugar industry when "import duties were lowered to about 60% of the American market value. This, along with deflated foreign markets and increases in cotton and rice prices, led to the abandonment of the sugar industry on many estates."[34] Such was apparently the case on Sapelo, as it seems that Spalding ceased producing sugar after 1832.[35]

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[31] Spalding, "On the Construction of Sugar Mills," 281-282.
[32] Spalding, "On the Construction of Sugar Miller, 282.
[33] Morgan R. Crook and Patricia O'Grady, "Spalding's sugar works site, Sapelo Island, Georgia," *Industrial Archaeology* 12 (1977): 321.
[34] Crook and O'Grady, "Spalding's sugar works site," 323.
[35] Crook and O'Grady, "Spalding's sugar works site," 335.

Spalding himself saw the writing on the wall. Commenting in the *Southern Agriculturist* in 1832, Spalding lamented the decreasing prices of sugar and humorously noted that "This state of things cannot continue, or sugar will be employed in nourishing a lower grade of animals than man."[36] Spalding was a firm believer in legislative patronage of America's farmers, writing to William H. Crawford that "the best wealth of a nation is, the ploughman and his plough."[37] When Spalding felt that such patronage was no longer being extended, as was the case in the Tariff of 1832, he unleashed a barrage of criticism upon those whom he felt were responsible for the plight of sugar producers:

> "Duties on, or duties off, the consumers of sweets will have to pay a higher price for them; it is political oppression that has driven the sugar-grower into this condition of things…For myself, I have drawn consolation in the conviction that the miscreants of Europe and America, who have lent themselves to the persecution of the agriculturists of warm climates, will in their turn, have to pay the penalty, in some proportion, for their follies and their crimes."[38]

Despite Spalding's best efforts, the short-lived sugar industry in Georgia had come to an end, and no letters in agricultural journals would resurrect it.

In April 1815, a writer with the *Savannah Republican* wrote that the efforts of Thomas Spalding had released American consumers from dependence on foreign sugar producers. The public owed "him a debt of gratitude, if to be highly useful to a country,

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[36] Spalding, "On the Construction of Sugar Mills," 285.
[37] Thomas Spalding, "Copy of a Letter to Mr. Crawford, on Legislative Patronage," *Southern Agriculturist* 1 (October 1828): 433.
[38] Spalding, "On the Construction of Sugar Mills," 285.

ever entitles a citizen to this claim."[39] Sugar never became the salvation to Georgia's planters as Spalding had anticipated; nevertheless, for a brief time Georgia was ranked fourth in the nation in sugar production.[40] Just as in Spalding's day, most modern historians consider Spalding to have been the principal mover in establishing sugar cane as an important, albeit secondary cash crop in Georgia. Spalding was, in the words of E. Merton Coulter, "the father of the sugar industry in Georgia," and although sugar quickly declined in commercial importance, its chief promoter would remain very much at the center of progressive agriculture.[41] With sugar on its way out, Spalding would once again return his attention to the crop on which he and countless other tidewater planters had built their fortunes.

Sea Island Cotton and the Need for Diversification

Cotton was produced in small amounts from the beginnings of the Georgia colony. Secretary of the colony William Stephens wrote that "Cotton deserved a Place not too scanty…" in the colony's agricultural production. The extensive labor required to remove seeds from the standard upland, or "green-seed" cotton, prevented it from gaining any economic significance prior to Eli Whitney's invention of the cotton gin in 1793.[42] The advent of another variety of cotton in the 1780s, however, would bring untold prosperity to the Georgia and Carolina coasts.

Long staple, black-seed cotton, better known as Sea Island cotton, originated in 1786 when plants of *Gossypium barbadense* were adapted to be grown in Georgia's climate. This variety thrived on the sea islands and upper areas of the coastal plain of

[39] Quoted in Coulter, *Thomas Spalding of Sapelo,* 122.
[40] Bonner, *A History of Georgia Agriculture,* 49.
[41] Coulter, *Thomas Spalding of Sapelo,* 121.
[42] Bonner, *A History of Georgia Agriculture,* 51-52.

Georgia, South Carolina, and Florida, with the highest quality—distinguished by its long, strong, and silky fibers—grown in fields exposed to sea breeze.[43] Although Sea Island cotton became highly sought after in Europe, particularly during the Industrial Revolution, its importance was relatively short-lived.[44] Nevertheless, its place is rooted in Georgia's agricultural history, largely due to the efforts of Thomas Spalding, who was associated with the crop from its inception and contributed greatly to its development during the early nineteenth century.

It was only natural that Spalding would be involved with the crop, for he was exposed to it from the earliest days of his childhood. Spalding wrote on numerous occasions of its history and development, as well as his personal observations on its cultivation. In an 1831 letter in the *Southern Agriculturist,* Spalding noted that the first long staple cotton seeds, referred to as "Anguilla," arrived in Georgia on St. Simons Island in 1785. These seeds were sent to his father, James Spalding, from one of the elder Spalding's associates in the Bahamas. Though James Spalding is typically given the most credit for developing Sea Island cotton, Thomas noted that several others, including future Governor Josiah Tattnall, received seeds and cultivated the crop around the same time.[45]

Beginning in 1794 when he planted his first Sea Island cotton, Thomas Spalding experimented extensively with the crop. His expertise was highly regarded and sought out by many, including the editor of the *Southern Agriculturist.* In his typical fashion, Spalding was always willing to share the results of his experimentation with his fellow

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[43] Richard Dwight Porcher and Sarah Fick, *The Story of Sea Island Cotton* (Charleston: Wyrick & Company, 2005), 93; Stewart, "*What Nature Suffers to Groe,"* 116-118.

[44] Porcher and Fick, *The Story of Sea Island Cotton,* xvii-xviii.

[45] Thomas Spalding, "On the Introduction of Sea-Island Cotton into Georgia," *Southern Agriculturist* 4 (March 1831): 133; Porcher and Fick, *The Story of Sea Island Cotton,* 94.

planters. Writing in 1829 in response to a query by the *Southern Agriculturist*, Spalding explained in great detail his system of cotton cultivation. Spring was generally accepted as the time to plant Sea Island cotton; however, Spalding noted that due to frost, many planters met with failure after the initial planting and were forced to plant again. Therefore, Spalding narrowed down the window of planting to one month, April 1 to May 1, for best results.[46]

Spalding adopted a system of "ridge husbandry," whereby cotton was planted in ridges five feet apart. These ridges consisted of large raised beds to keep the roots from being submerged in standing water.[47] In later years, Spalding would determine that planting the ridges five feet apart was "quite too thin, and although the plant grew generally well, the products rarely reflected one hundred lbs. per acre, and at four acres to the hand, gave about four hundred labor…"[48] He therefore began planting the cotton thicker and increased his yields from 100 pounds per acre to an astounding 350 pounds per acre.[49] The most interesting aspect of Spalding's successful ridge system was his use of alternating rows of corn. He explained that this was best done in areas of rich, low-lying land where the cotton would grow too thickly. From year to year, he simply rotated the rows of corn and cotton, so that "A Cotton row gives place to a Corn row, every alternate year," resulting in increased productivity without having to allow the fields to lay fallow.[50] This system of alternating rows was part of Spalding's larger practice of crop rotation for maintaining his fields.

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[46] Thomas Spalding, "On the time to Plant Sea-Island Cotton, and on the best mode of treating new and worn-out Land," *Southern Agriculturist* 2 (August 1829): 348-349.

[47] Spalding, "Brief Notes on the Cultivation of Cotton, Rice, Sugar Cane, and the Grape Vine," *Southern Agriculturist* 1 (February 1828): 58-59.

[48] Quoted in Sullivan, *Early Days on the Georgia Tidewater,* 117.

[49] Coulter, *Thomas Spalding of Sapelo,* 70.

[50] Spalding, "Brief Notes," 59.

As a devoted agricultural innovator, Spalding was a champion of conservation of the land and diversification. One reason for the ridge system, he wrote, was because "the lands are best preserved when at an early period of their culture the vegetable matter upon their surface is intermingled with the argillaceous or silaceous [sic] matter, of which their substratum may be composed."[51] By adopting similar trenches, he noted, the country of Flanders remarkably increased its soil productivity and its wealth.[52] A simpler way of conserving the soil, however, was through a crop rotation system. To explain, Spalding presented a simple analogy:

> "Are the woods destroyed by storm or fire, a new race of timber trees spring up. Do you have a field uncultivated, the first year gives an abundant coating of grass, the next of fennel or coarser weeds, and the third of some broom, or inferior grass. Do we not see in all this, that nature abhors repetition, in any form, and requires change…"[53]

Spalding preferred to pair cotton and corn on dry land and cotton and rice on wet land and noted that cotton could be paired with sugar cane in any circumstances. As for reclaiming land that had lost its productivity, Spalding recommended planting cotton the first year, corn the second, and leaving it fallow the third. The fourth year the field should be burned, and the field should be fertilized periodically with manure.[54] In addition to planting in ridges and rotating crops, however, Spalding also firmly believed in diversifying.

[51] Spalding, "On the time to Plant Sea-Island Cotton," 349.
[52] Spalding, "On the time to Plant Sea-Island Cotton," 392.
[53] Spalding, "On the time to Plant Sea-Island Cotton," 393.
[54] Spalding, "On the time to Plant Sea-Island Cotton," 393.

Spalding viewed reliance on one cash crop as irresponsible and dangerous and proposed a variety of secondary crops and products. Sugar was, of course, at the top of his list; however, he experimented with a wide variety of other crops, many of which met with failure. He penned numerous articles in the *Southern Agriculturist* on olives, indigo, grapes, silk, orange trees, Bermuda and gamagrass, and tea cultivation.[55] Although Spalding had personally experienced failure in olive cultivation, he laid the blame on recent unfavorable weather conditions and cited the great successes of his neighbor and fellow experimenter, John Couper of St. Simons.[56]

Spalding also believed that mulberry trees could be planted in conjunction with olives for the purpose of raising silk worms.[57] He recalled the history of Georgia, citing the fact that silk production was one of the earliest ventures in the colonial period and noting the successes of the German settlers at Ebenezer near Savannah. It was his opinion that the key to the successful cultivation of silk was the use of the imported white mulberry, which was better able to resist the cold than the native black and red mulberry.[58] Spalding repeatedly called for government action to promote the silk industry, and in 1838, the state finally authorized a fifty cent per pound bounty on silk cocoons. Although silk production in Georgia did increase, the efforts of Spalding and other silk promoters were largely unimpressive.[59]

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[55] Bonner, *A History of Georgia Agriculture,* 59. For more on the attempts to revive indigo, see Thomas Spalding, "On the Culture of Sugar and Indigo," *Southern Agriculturist* 1 (November 1828): 482-485 and Thomas Spalding, "Observations and Extracts on the Manufacturing of Indigo in Bengal" *Southern Agriculturist* 3 (May 1830): 247-254, 293-300.

[56] Spalding, "On the time to Plant Sea-Island Cotton," 393.

[57] Spalding, "On the time to Plant Sea-Island Cotton," 394.

[58] Spalding, "Brief Notes," 107.

[59] Thomas Spalding, "On the Culture of the Silk-Worm," *Southern Agriculturist* 1 (September 1828): 391; Bonner, *A History of Georgia Agriculture,* 111.

Some experimental crops had more than strictly economic purposes. Orange trees were another venture of Spalding's, of which he wrote, "The orange tree will grow better upon the river banks…they occupy no available space, they strengthen, and shade, and beautify the banks." These trees, he believed, would require very little labor and would serve two purposes: protecting against erosion by the tidal rivers in the Altamaha delta and providing fruit for the slaves.[60] Nevertheless, the climate of Georgia did not prove hospitable, and the editor of the *Southern Agriculturist* noted after an 1832 visit to Sapelo Island that Spalding's orange and date trees were "both in a very unpromising state…injured by the severe frosts" of previous years.[61]

Another solution to the problem of erosion in low-lying areas was Bermuda grass, which would protect against floods from the river or from the ocean. Spalding praised Bermuda grass as "the best and most nutritious of all grasses, for stock of every kind…" Even the grass's great promoter admitted, however, that Bermuda could spread into fields and "overpower the cultivator"—a fear which was quickly realized by some planters.[62] Bermuda had the potential to become invasive, leading the editor of the *Southern Cultivator* to ask Spalding how to exterminate the grass. Spalding only cited the benefits of the grass and had no solution.[63] Bermuda grass, like oranges, olives, and silk, met with failure for the most part. Nevertheless, lack of success in one venture did not discourage Spalding's efforts. He continually sought out new crops, experimented, and promoted them. By Spalding's estimation, many of these plants could be successfully

[60] Thomas Spalding, "Observations on Bordering our River Banks with Orange Trees, and protecting the embankments with Bermuda Grass," *Southern Agriculturist* 3 (February 1830): 73.
[61] John D. Legare, "Account of an Agricultural Excursion made into the South of Georgia in the winter of 1832," *Southern Agriculturist* 6 (March 1833): 147.
[62] Spalding, "Observations on Bordering our River Banks with Orange Trees," 74.
[63] Coulter, *Thomas Spalding of Sapelo,* 100-101.

cultivated in Georgia and had the potential to become important secondary crops and, more importantly, could release Georgia from overreliance on cotton.[64]

For Spalding, diversification represented the future. Cotton prices fluctuated greatly and were unstable due to tariffs and, in Spalding's opinion, did not bring as great a return as rice, sugar, and his other secondary crops. He thought that "Cotton must take its real and relative value, among the gifts of God—or its growers will leave the wrangling governments, that have done what they could to destroy it, to quarrel over its remains."[65] Spalding sincerely believed that agricultural diversity would eventually enable "the thin population of the South, taking refuge in minor occupations…[to] escape from the hands of plundering monopolists…"[66] Despite making great financial gains through Sea Island cotton, Spalding saw the threat posed by monoculture of cotton and was troubled by the implications for the future.

Freeing the South from economic tyranny was not Spalding's only hope in diversification. Cotton required great labor and contributed to the South's heavy reliance on the institution of slavery. Writing in the *Darien Gazette* in 1825, Spalding asked,

> "Who will attempt to predict the effects on the future destinies of our country, of a culture, the tendency of which will be to substitute a class of free laborers for one of slaves, which presents the only obvious remedy for the evils of an institution that all deplore, and all despair to remedy?"[67]

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[64] Coulter, *Thomas Spalding of Sapelo,* 88-89.

[65] Spalding, "Cotton—its Introduction and Progress of its Culture, in the United States," *Southern Agriculturist* 8 (February 1835): 87.

[66] Spalding, "On the time to Plant Sea-Island Cotton," 394.

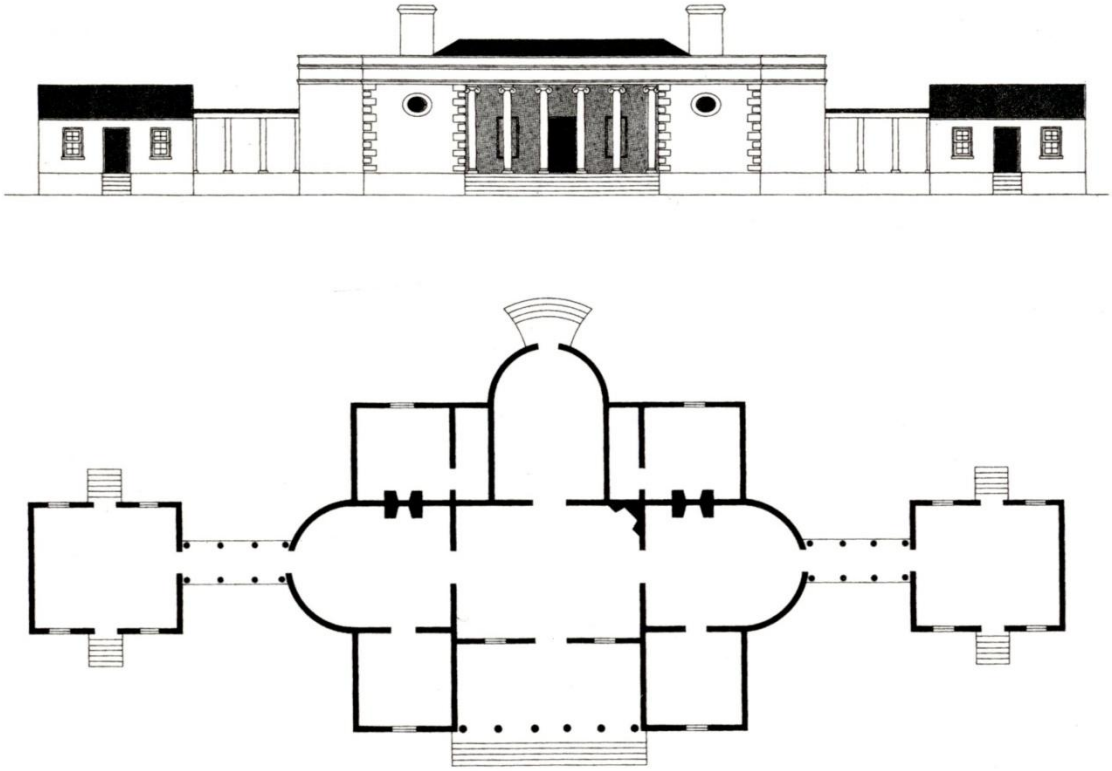
[67] Quoted in Coulter, *Thomas Spalding of Sapelo,* 88. Several authors, most notably Coulter and Sullivan, deal with the subject of Spalding's views toward slavery. The confines of the present study do not permit an in-depth discussion of this subject.

Perhaps this was the most prophetic and forward-thinking of Spalding's countless writings. Though himself a large slaveholder, like many in the young nation Spalding had misgivings about slavery and its effects—both present and future—on the southern economy. A diversified economy might have released the South from some of this burden. Had Spalding's progressive views taken hold on a large scale, would history have taken a different course? Cotton, however, was king, and even the weighty opinions of a noted agriculturist like Thomas Spalding was not enough to dethrone it. Spalding had much greater success in another, less controversial area that did not involve planting.

Tabby: "Improving Our Plantations in a Permanent Manner"

Although his writings on agricultural practices established Spalding's reputation during his own lifetime, he is best remembered today for another innovation. In 1807, soon after his first purchase on Sapelo, Spalding began construction of what was to become his most lasting physical legacy—South End House. The single-story mansion was built on the Palladian model and was rumored to have been at least partially inspired by Thomas Jefferson's Monticello, which Spalding supposedly visited while Monticello was being constructed. Although this story is not documented, the designs of the two houses do bear certain similarities. Most of the labor, performed by Spalding's slaves under the supervision of Roswell King, was completed by 1810.[68] Although its design was not typical of southern plantation homes, its revolutionary building material made it even more unique.

[68] Buddy Sullivan, *The Historic Buildings of Sapelo: A 200-Year Architectural Legacy* (Occasional Papers of the Sapelo Island NERR, 2010), 4.



Sketch and plan of Spalding's South End House, built of tabby on Sapelo Island. (From Mills Lane, *Architecture of the Old South: Georgia*)

The use of tabby as a building material dated to the colonial period when General James Oglethorpe employed it in the construction of the fortified town of Frederica.[69] In an 1844 letter to N. C. Whiting of New Haven, Spalding recounted, "I was born in one of these houses of Tabby" at Frederica; in fact, Spalding's childhood home was one of only two remaining habitable structures in the largely deserted town.[70] Spalding's affinity for tabby arose from this perceived permanence. Growing up in Frederica, Spalding observed the ruins of the fort and town and noted that he had "seen time destroy

[69] For a more thorough discussion of the origins of tabby in Georgia, see Floyd, "Certain Tabby Ruins," 63-71.

[70] Thomas Spalding to N. C. Whiting, July 29, 1844, quoted in Coulter, *Georgia's Disputed Ruins,* 73.

everything but them."[71] If properly cared for, Spalding believed, buildings like his South End House could last many lifetimes, enduring the forces of man and nature. Indeed, many tabby structures remain standing—and in some cases are still being utilized—two centuries and many violent storms later.[72]

In 1830, Spalding wrote an article for the *Southern Agriculturist,* entitled "On the mode of Constructing Tabby Buildings and the propriety of improving our plantations in a permanent manner." Spalding began his article by arguing that "no man who cultivates his own land, should erect upon it wooden or temporary buildings."[73] Plantation buildings, whether homes or buildings for agricultural purposes, should be built to withstand the tests of time. Temporary structures required constant maintenance and improvement, and suffered inevitable decay. Durable, permanent buildings were therefore more economically beneficial, as they saved planters much time and energy long term.[74] Tabby, according to Spalding, was the most economical material that could withstand the tests of time. Furthermore, tabby was convenient and affordable when the proper materials were available.

Spalding explained that tabby consisted of "a mixture of shells [usually oyster], lime and sand in equal proportions" and "makes the best and cheapest buildings where the materials are at hand, I have ever seen; and when rough cast, equals in beauty stone."[75] Spalding generally used whole oyster shells, locally available, often from Indian mounds. For plantations located in areas where shells were not readily available,

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[71] Thomas Spalding, "On the mode of Constructing Tabby Buildings, and the propriety of improving our plantations in a permanent manner," *Southern Agriculturist* 3 (December 1830): 618.

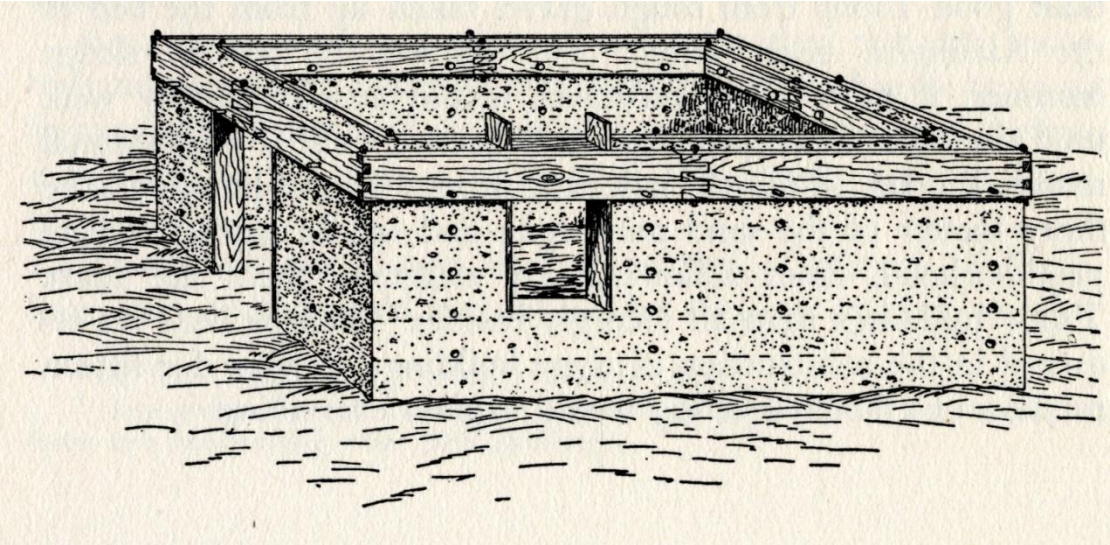
[72] Buddy Sullivan, *Tabby: A Historical Perspective of an Antebellum Building Material in McIntosh County, Georgia* (Darien, GA: 1998), 10.

[73] Spalding, "On the mode of Constructing Tabby Buildings," 617.

[74] Spalding, "On the mode of Constructing Tabby Buildings," 620-621.

[75] Spalding to N. C. Whiting, 72-73.

rough gravel or stone broken into small pieces could be substituted. Sand mined from a pit was preferred to sand from the beach or tidal rivers, as it must be free of salt, which undermined the stability of the tabby. Although lime could be acquired from other sources, Spalding chose to make his own by burning oyster shells. Most walls were built two feet thick at the foundation, 14 inches thick for the first floor, and 10 inches for the second floor.[76] Because tabby consisted of materials that most planters could locate on their plantations and because labor was generally performed by slaves, Spalding noted that "there is not one dollar of actual expenditure to the planter, for he neither buys bricks or hires masons to lay them."[77] It was Spalding's hope that his reader "may better understand the value of the material," as Spalding himself surely did.[78]



Sketch by Spalding detailing the method of constructing buildings using tabby. (From Floyd, "Certain Tabby Ruins")

In the years after Spalding constructed South End House, many other area planters followed suit and constructed a variety of tabby structures using the Spalding

[76] Spalding to N. C. Whiting, 73-75; Sullivan, *Tidewater*, 104.
[77] Spalding, "On the mode of Constructing Tabby Buildings," 619.
[78] Spalding to N. C. Whiting, 73.

method. According to Marmaduke Floyd, "every sort of building seems to have been made of it—barns, cotton gin houses, mansions, slave quarters, hotels, sugar houses, churches, rum distilleries, and tiny milk houses"; such examples were found all along the Georgia coast, though particularly in the vicinity of McIntosh County.[79] In addition to his own residence, Spalding's slave cabins were also made of tabby. Some of the best examples of such quarters are located at the tabby ruins at the Thicket, near Darien. These ruins include four tabby slave cabins, built by the slaves belonging either to Thomas Spalding or to his son Charles. These cabins were single story, duplex structures, measuring 30 feet by 14 feet with flat roofs. Of this style cabin, Julia Floyd Smith writes, "In their day they were models of efficiency and good design and were in striking contrast to the more usual type of slave house made of wood…"[80]

Sketch by Leonora Quarterman of tabby slave cabins at the Thicket. (From Smith, *Slavery and Rice Culture in Low Country Georgia*)

[79] Floyd, "Certain Tabby Ruins," 79.

[80] Julia Floyd Smith, *Slavery and Rice Culture in Low Country Georgia, 1750-1860* (Knoxville: University of Tennessee Press, 1985), 121. Although Smith credits these cabins to Charles Spalding's slaves, in *Tabby: A Historical Perspective of an Antebellum Building Material in McIntosh County, Georgia,* 7, Sullivan posits that these cabins may have been built by the slaves of Thomas Spalding himself during his ownership of the Thicket.

Spalding employed tabby in the construction of nearly every structure of any kind on Sapelo and his other plantations. Taking advantage of the affordable material, many other planters accepted Spalding's advice, leading to an abundance of tabby structures—and many ruins today—all along the Georgia coast.[81] Spalding himself noted that, "In my immediate neighborhood, from following my example, there are more Tabby buildings than all Georgia besides."[82] Spalding's architectural talents rivaled his agricultural instincts, and he certainly deserves credit for the revival of tabby as a viable building material, as the actions of other area planters demonstrate.

Conclusion

Writing in 1940, Historian E. Merton Coulter argued that, "If Georgia should look within her own limits for a counterpart of Benjamin Franklin she could find none who came nearer than Thomas Spalding."[83] This label as Georgia's Benjamin Franklin has been frequently repeated, and yet Spalding has remained a relatively obscure historical figure outside McIntosh County. Historians such as Coulter and Buddy Sullivan have recognized Spalding's accomplishments; however, outside their works and the works of a few other Georgia historians, Spalding remains largely under appreciated.

In *Thomas Spalding of Sapelo,* Coulter made no attempts to conceal his great admiration for Spalding and spoke of him in glowing terms throughout the work, which may cast a shadow of doubt on his objectivity. Nevertheless, the facts seem to speak for themselves. A simple analysis of Spalding's own writings in the agricultural journals

[81] For a more detailed discussion of the use of tabby on other plantations and Spalding's influence on them, consult Floyd, "Certain Tabby Ruins."

[82] Spalding to N. C. Whiting, op. cit., 73.

[83] Coulter, *Thomas Spalding of Sapelo,* 235. Coulter was also basing this statement upon Spalding's political accomplishments, as well as his other business ventures. The focus of this study has been solely on Spalding's agricultural interests; however, Coulter discusses the other aspects of Spalding's life in great detail.

establishes that he was a leading authority on many topics and that he spoke from personal experience. These were very often experiences of success, but just as often, his endeavors met with resounding disappointment.

Of all of Spalding's experiments, sugar seems to have been foremost in his mind. He spent many years studying and writing on sugar cane and the sugar manufacturing process and invested vast sums into its perfection. Spalding's insights into cane cultivation and his designs for sugar mills and refineries led to the establishment of a brief but burgeoning sugar industry in Georgia, which was ranked fourth in the nation in sugar production by 1860. Although James C. Bonner points out that Georgia's annual production was only one thousand hogsheads of sugar at the time, this is still a remarkable statistic considering sugar cane was not grown commercially in the state prior to Spalding's introduction of the crop.[84] By 1832, Spalding reported in an interview with John D. Legare of the *Southern Agriculturist* that

> "the sugar-cane has travelled up the Altamaha river, and its tributary streams from Darien to Milledgeville, and from Darien to Macon, until every log-house in this space has its sweets in abundance. However poor the individual may be…His little wooden mill and his pots set in clay; give him comforts which a few years back he little dreampt of."[85]

As always, Spalding was concerned not with the fortunes he could amass through his experiments, but also with the ways in which his experiments would benefit the people of Georgia—planter and lower-class farmer alike. Sugar would never be cultivated on the same scale as rice and cotton; however, the fact that men like Spalding and James

[84] Bonner, *A History of Georgia Agriculture,* 49.
[85] Legare, "Account of an Agricultural Excursion," 143.

Hamilton Couper were able to develop it into such a profitable enterprise speaks volumes for their abilities as planters. James Bagwell refers to Spalding as the "dean of sugar planters" on the Atlantic coast—certainly a fitting and well-earned title.[86]

Sea Island cotton generated a fortune for Spalding as it did for countless coastal planters. Without the income from this staple, Spalding would not have had the resources to embark upon other ventures. For that reason, he worked diligently to maximize efficiency in cotton production and became considered Georgia's "master planter" of Sea Island cotton.[87] In order to increase yields while maintaining soil productivity, Spalding planted his cotton in ridges and adopted a novel system of crop rotation. Cotton was certainly the most successful and lucrative crop on his plantations, and yet it was the crop which Spalding distrusted the most. To Spalding, a system in which plantations relied upon one crop, in this case cotton, was exceedingly dangerous, not only because of price fluctuations but also because of effects on the land. For that reason, he viewed agricultural diversity as the salvation of the South.

To this end, Spalding experimented with a wide variety of old and new crops including sugar, silk, indigo, and olives. Some, such as silk, were never more than experiments, while others, most notably sugar, were actually developed into viable industries for a time. Spalding was more concerned with long-term economic and environmental sustainability than with personal, short-term economic gain. In a time when most planters were only interested in cultivating the most financially beneficial crop, Spalding's views were extremely progressive.

[86] Bagwell, *Rice Gold,* 65.
[87] Bagwell, *Rice Gold,* 58.

Spalding was just as forward-thinking and innovative in his building practices, having single-handedly revived and perfected the use of tabby on the Georgia coast. Two factors motivated Spalding to employ tabby in constructing most of his plantation structures: availability and durability. Tabby could be produced from materials that were locally available on coastal plantations. Spalding was a steward of the land and was a firm believer in the efficient use of the resources at hand, as his ecologically responsible farming practices also illustrate. Buddy Sullivan puts it best when he writes that

> "Spalding, despite not having anything remotely approaching the modern technology that we take for granted in our own era, thoroughly understood the ecological ramifications of his region. He thus utilized to the maximum the environmental circumstances in which his life, and life-ways, were placed—salt air, soil conditions, tidal hydrology, the seasonal vagaries of local weather. Thus, rather than approach Mother Nature adversatively, he let the coastal ecosystem work for him in his planting profession, including all its extraneous aspects. This philosophic utilization of his landscape enabled Spalding to become perhaps the leading antebellum agrarian of Georgia."[88]

Furthermore, the use of tabby satisfied Spalding's desire for permanence. Having grown up amidst Oglethorpe's tabby ruins at Frederica, Spalding knew full well of tabby's durability, and the fact that many tabby structures built by Spalding and his contemporaries are still standing and being occupied further attests to its strength.

And yet, despite the permanence of Spalding's tabby, his legacy has not been so enduring. Yet his accomplishments were many, and his contributions to Georgia agriculture—many of which were and are taken for granted—were quite substantial.

[88] Sullivan, *The Historic Buildings of Sapelo,* 2.

Spalding deserves credit not only for the many successes of his experiments, but also for his failed attempts to bring diversity to Georgia's plantations. Thomas Spalding of Sapelo was the epitome of progressive agriculture and was far ahead of his time. For that he will always be remembered.

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