

Sites Related to Crawford Williamson Long in Georgia

Katie J. Roddy, M.D., Vicki Starnes, A.A., Sukumar P. Desai, M.D.

ABSTRACT

Background: Crawford Williamson Long (1815 to 1878) was the first to use ether as an inhaled anesthetic for surgical operations. By not publishing his discovery for 7 yr, his pioneering work was largely overshadowed by that of Horace Wells (1815 to 1848), Charles Thomas Jackson (1805 to 1880), and William Thomas Green Morton (1819 to 1868). As a result, sites commemorating Long's discovery are not offered the same recognition as those affiliated with Wells or Morton.

Methods: We highlight sites in Athens, Danielsville, and Jefferson, Georgia, that honor the first man to regularly use ether as an anesthetic agent. Extensive site visits, examination of museum artifacts, and genealogical research were used to obtain information being presented.

Results: Historic Oconee Hill Cemetery in Athens is where Long and members of his family are buried. Established in 1856, it is closely linked to the history of Athens and the University of Georgia (Athens, Georgia). The main site we describe is the Crawford W. Long Museum, located in Jefferson, Georgia, which opened to the public in 1957. It has undergone extensive renovations and holds an expansive collection of Long's family heirlooms and personal artifacts. In addition, it displays an impressive art collection, depicting Long, surgical procedures, members of Long's family, and homes associated with him. Visitors to the museum may also enjoy a walking audio tour that highlights the life of Long and his contribution to medicine.

Conclusions: We provide information on sites and artifacts that honor Georgia's most celebrated physician. Much of this has not been published before, and it is our hope that Crawford Williamson Long's legacy receives the attention it richly deserves.

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CRAWFORD Williamson Long (1815 to 1878) is owed a debt of gratitude for recognizing the anesthetic properties of ether for surgical operations.^{1,2} Although William Edward Clarke (1819 to 1898) used ether during a painless dental extraction a few months earlier than Long, Clarke was discouraged by his preceptor at Vermont Medical College (Burlington, Vermont), Professor E. M. Moore, to repeat any such attempts.³ Because Clarke not only followed this advice, but also did not think much of his own effort, it receives scant mention in biographical sketches of his long medical career.⁴ Long used ether successfully for many years, yet he is faulted for not publishing his work until the battle for recognition and credit for the discovery of anesthesia was in full swing.⁵⁻⁷ In delaying publication for 7 years, his pioneering work is largely overshadowed by that of Horace Wells (1815 to 1848), Charles Thomas Jackson (1805 to 1880), and William Thomas Green Morton (1819 to 1868).^{3,8} For a variety of reasons beyond the scope of this discussion, Morton, who could be considered the third individual to arrive on the discovery scene, "stole the show" and is now considered by many as the one who introduced anesthesia, thus paving the way for the parallel development of the disciplines of anesthesia and surgery. For obvious reasons, advances in surgery could not occur without safe anesthesia, and a few decades later, the introduction of asepsis.⁹

Anesthesia history enthusiasts consider a visit to the Ether Dome at Massachusetts General Hospital (Boston, Massachusetts) de rigueur. Other relevant sites in Boston are the Ether

Monument in the Boston Public Garden,¹⁰ Mount Auburn Cemetery,¹¹⁻¹³ and the Francis A. Countway Library of Medicine,¹⁴ where Robert Cutler Hinckley's (1853 to 1941) famous painting depicting the first public demonstration of anesthesia with ether is on display.^{15,16} The Ether Dome,^{17,18} Boston Public Garden,¹⁰ and the Bullfinch Building (at Massachusetts General Hospital) are listed as protected sites in the National Register of Historic Places.¹⁹ Likewise, Mount Auburn Cemetery was designated a National Historic Landmark District in 2003. While such recognition has not been extended to sites related to Crawford W. Long, this article highlights sites in Athens, Danielsville, and Jefferson, Georgia, that honor the first man to regularly use ether as an anesthetic agent. For a variety of reasons, these sites do not enjoy the wider recognition extended to those affiliated with Horace Wells (Hartford, Connecticut)²⁰ and W. T. G. Morton (Boston and its environs, Massachusetts).^{13,17,21-23}

Biographical

Crawford Williamson Long, son of James Long (1781 to 1853) and Elizabeth Ware (1789 to 1856), was born on November 1, 1815, in Danielsville, Georgia.^{1,24} Crawford's paternal grandfather, Samuel Long (1753 to 1822), was born in the province of Ulster, Ireland, where he married Ann Williamson (1757 to 1829) and from where he immigrated to America in 1761.^{1,2} They initially resided in the Cumberland Valley, near Carlisle, Pennsylvania, where

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Crawford's father, James, was born on April 4, 1781. In the 1790s, the family moved to Georgia and came to reside in Elbert County, which in 1811 became known as Madison County.^{1,25} In 1812, Madison County was authorized to establish a county seat, which was named Danielsville.

James Long was a successful planter, merchant, state senator, and co-founder of the town of Danielsville.^{1,2} He also founded Danielsville Academy, where his son Crawford would later attend grade school and high school. James received a generous inheritance that included slaves on his father's death, making him wealthy at a young age.² He married Elizabeth Ware on December 6, 1813. She was born in Amherst, Virginia, of English ancestry, and together they had four children: Elizabeth Amanda (1828 to 1897), Henry Russell Jones (1823 to 1888), Sarah Ann Elinor (1817 to 1874), and Crawford Williamson, Crawford being the eldest.²⁶

After attending Danielsville Academy, Crawford began college at the age of 14 at Franklin College, now the University of Georgia, in Athens, Georgia.¹ He roomed with Alexander Hamilton Stephens (1812 to 1883),¹ who later served as Vice President of the Confederacy.¹ In 1835, Long received his Masters of Arts degree before pursuing a career in medicine. Throughout their lives, Long and Stephens remained friends, and today their statues represent Georgia in the National Statuary Hall at the U.S. Capitol, Washington, D.C.²⁷

Having graduated from college at the age of 19, Long was considered by his father too young to attend medical school away from home. Instead, he taught at his alma mater, Danielsville Academy, where he later served as principal.¹ After teaching for a year (circa 1835), Long began studying medicine with a local physician, Dr. George R. Grant (1804 to 1870), in nearby Jefferson.¹ Grant attended medical school at the University of Pennsylvania (Philadelphia, Pennsylvania), graduating in 1828. He moved to Alabama in 1840 and to Tennessee in 1847. He was proud of his southern heritage and remarked to Tennessee Medical College students in 1847, "The new era which is dawning upon Medicine, will be succeeded by a meridian splendor of scientific achievement, a large supply of which, from the very nature of things, should be derived from the contributions furnished by Southern intellect." He authored several scientific articles.²⁸⁻³⁰ He died in Memphis, Tennessee, on April 25, 1870, of apoplexy, and his funeral was reportedly attended by every "regular physician" in the city.³¹

Seeking formal medical education, Long traveled by horseback to study at Transylvania College in Lexington, Kentucky, in 1836.¹ In 1838, he transferred to the Medical School of the University of Pennsylvania, where he graduated with a medical degree in 1839 at the age of 24.¹ He then spent 18 months "walking the hospitals" in New York City, where he assisted in many surgical operations, none of which involved anesthesia. Of course, he witnessed great suffering without effective relief of surgical pain.^{1,2} In later

years, Long's daughter, Frances Long Taylor, would recall that the suffering of the surgical patients made a profound and life-long impression on her father.¹

Long returned to Jefferson in August 1841, after obtaining ward service experience in New York. He purchased the office of his former preceptor, George R. Grant. It was here that Long administered the first surgical anesthetic on March 30, 1842. His patient, James M. Venable (1821 to 1852), was a student at Jefferson Academy.³² Venable wished to have cysts removed from his neck but hesitated to undergo painful surgery. Long was quite familiar with the practice of inhaling ether, not only as a medical student in Philadelphia, but also he would frequently engage in this practice with friends at his office in Jefferson. Venable agreed to have the cysts removed after being assured by Long that the pain would be avoided with the use of sulfuric ether; a second cyst was removed later on June 6, 1842.³³

On August 11, 1842, Mary Caroline Swain (1825 to 1888), age 16, and Long were married in Jackson County, Georgia. Caroline, as she was known, was a supporter of Long's endeavors even prior to their marriage and encouraged him to pursue them even as others pleaded with him to abandon his experiments for fear of the effects of any fatality on his career. The Long family lived in Jackson County until 1850, when after a brief stint in Atlanta, the family settled in Athens. Caroline Long had 12 children, but only 7 survived into adulthood.² By all accounts, Caroline was devoted to her husband and family, and the household was full of love and harmony.²⁴

In September 1888, Caroline was killed in a railroad accident when the coach derailed. In her will, she left \$50 each to her two sons, Edward and Arthur, and divided the remainder of her estate valued at \$18,000 among her four daughters: Sarah Frances Long, Florence Cornelia Bartow, Eugenia Anna Long, and Emma Mitchell Long. She explained her decision thus, "I wish it distinctly understood, that this unequal distribution is not the result of partiality or caprice, for I love all my children with a constant uniform and equal affection but because I have a well-founded conviction of its propriety and justice, taking into consideration the relative ability of my said sons and daughters to encounter the hardships and privations of life, and whatever adverse fortune the future may have in store for them. I am especially moved to this course by the consideration that my sons had sufficient property from their father's estate to support them, that they are well educated, have unimpaired mental and physical constitutions with sufficient means to embark in a paying business."³⁴ Between 1888 and 2016, the United States experienced inflation at an annual average rate of 2.52%. Thus, \$18,000 in 1888 would be equal to \$436,370.08 in 2016.³⁵ Mary Caroline Swain Long is buried in the Oconee Hill Cemetery in Athens, Georgia, with her husband and eight of their children. None of the Long daughters had offspring, and only his son, Edward Crawford Long (1852 to 1934), had children with Cora Celestia

Stroud (1855 to 1944). Their children were Marion Sims (1878 to 1880), Edward Crawford (1880 to 1951), and Maude Eudora Baker (1882 to circa 1948).²⁶

Medical Experimentation

In addition to providing anesthesia on two separate occasions for the surgical removal of Mr. Venable's cysts, Long administered ether for a toe amputation of a slave boy named Jack, owned by Mrs. Sabrey Hemphill, on July 3, 1842.² In two subsequent experiments, Long reported the use of ether in two more patients, both requiring multiple surgical excisions or amputations and for whom ether anesthesia was used for only a portion of the operations.² Long's intention was to evaluate ether's effect, examining the patients' responses while under its influence compared to a state of partial awareness when the drug's effects had dissipated.^{24,33} For the removal of three tumors from Mrs. Mary Vinson's head on September 9, 1843, Long used ether for the removal of the second tumor, but not for the first or third tumor. Again in 1845, Long used ether for two finger amputations in a slave boy named Isam, owned by Ralph Baily, Sr. (1784 to 1861).² During this surgery, Long administered ether for only one finger amputation, but not for the second. Long carried out these series of experiments to compare the anesthetic effect and to further his limited evidence that ether allowed painless surgery.^{2,24,32}

Theories Explaining Delayed Publication

Long published his experience using ether as an anesthetic during surgery in 1849—more than 7 yr after administering it to James M. Venable on March 30, 1842.^{2,33} In this publication in the *Southern Medical and Surgical Journal* in December 1849, Long provides explanations for the delay and acknowledges that procrastination was a factor. It was only after reading a report in the December 1846 issue of the *Philadelphia Medical Examiner* about the successful demonstration of "letheon" by William Morton at Massachusetts General Hospital that Long initiated communication with the editor of the *Medical Examiner*.¹ His intention was to notify the medical community in Philadelphia that he had been using it for this purpose for more than 4 yr.^{6,33} Neither Long's writing nor that in his daughter's biography specifically addresses whether Long believed that ether and letheon were the same substance. However, novelist and historian Ruby Lorraine Radford (1891 to 1971) has suggested that Long was aware of this fact.³⁶ Long stated that he was interrupted when he had written but a few lines and was prevented from resuming his communications by a very "laborious" country practice.^{1,6,33}

A second reason for Long's delay in publication was the limited number and complexity of surgical operations he performed. Operating in rural Georgia meant that he operated only a few times a year, with most cases being limited to excision of cysts or small tumors and amputation of fingers or toes. Likely compounding his limited experience was the

advice of Dr. George Bacon Wood (1797 to 1879), professor of *Materia Medica* at the University of Pennsylvania from 1835 to 1850,³⁷ who condemned the premature reporting of drug actions, insisting that the observer should not be content with a single experiment.²

A final and probably central reason for his hesitation to publish was Long's anxiety regarding his reputation as a clinician, and how he might be perceived after sharing a new and revolutionary discovery that some believed to be the result of "mesmerism" or the effect of imagination. In his correspondence with the editor of *Medical Examiner*, Long writes "I was anxious ... to fully satisfy my mind that anaesthesia was produced by the ether, and was not the effect of the imagination, or owing to any peculiar insusceptibility to pain in the persons experimented on." Long had more than himself or his career to think about. Had he been labeled a "quack," as Morton and Wells initially were, it might have become very difficult for this small-town, rural surgeon to provide for his ever-expanding family.⁶

Role in the Civil War

Crawford W. Long was a Whig, following the political ideology of family friend and statesman Henry Clay (1777 to 1852) of Kentucky. Clay was the author of two federal compromise actions that kept a balance between the number of states allowing slavery and those that did not, staving off the brewing war between the states for three decades. Long and his Franklin College roommate, Alexander Stephens, both opposed Georgia's secession from the Union, but both also supported their state after secession occurred. Long was appointed physician to the University Campus Hospital in Athens where he was responsible for providing medical care to the families of Confederate soldiers and to soldiers who were home recovering from wounds and illness. Before the start of the war, Long had ordered a large supply of pharmaceuticals for his drugstore, allowing Athens, for a time, to escape the problem of drug shortages common elsewhere in the South. Eventually, when the union blockades went into effect, physicians fell back on their knowledge of botany to create medicines. Opium was replaced by American hemlock and digitalis by bloodwort and wild cherry. After the end of the war, Long applied for and received a presidential pardon for his service on behalf of the Confederate government. In 1867, he was appointed surgeon for the U.S. Army post in Athens, a position he held until civil government was restored in 1872 although Georgia was admitted to the Union in 1868.

Death and Burial

On June 15, 1878, Long died at the age of 62, shortly after attending a childbirth. On February 2, 1877, 16 months earlier, Long had written to Dr. James Marion Sims (1813 to 1883) complaining of severe headaches, sometimes lasting several days. It was eventually concluded that Long likely suffered from hypertension, which was the likely cause of hemorrhagic stroke.² After collapsing at the pregnant woman's bedside, he was carried to a guest room and died early

the following day. Even during his final hours, he reportedly asked those looking after him to first attend to the patient and newborn child.

Many members of the Long family are buried in a family plot in Oconee Hill Cemetery, in Athens, Georgia, just across from the University of Georgia³⁸ (fig. 1, A and B).

The cemetery was established in 1856 and has always been closely linked to the histories of Athens and the university. Initially, many gravesites in Athens were located on unused land of the college campus. Over the years, the burial ground began to encroach upon the residences of the university president and other members of the faculty. This temporary

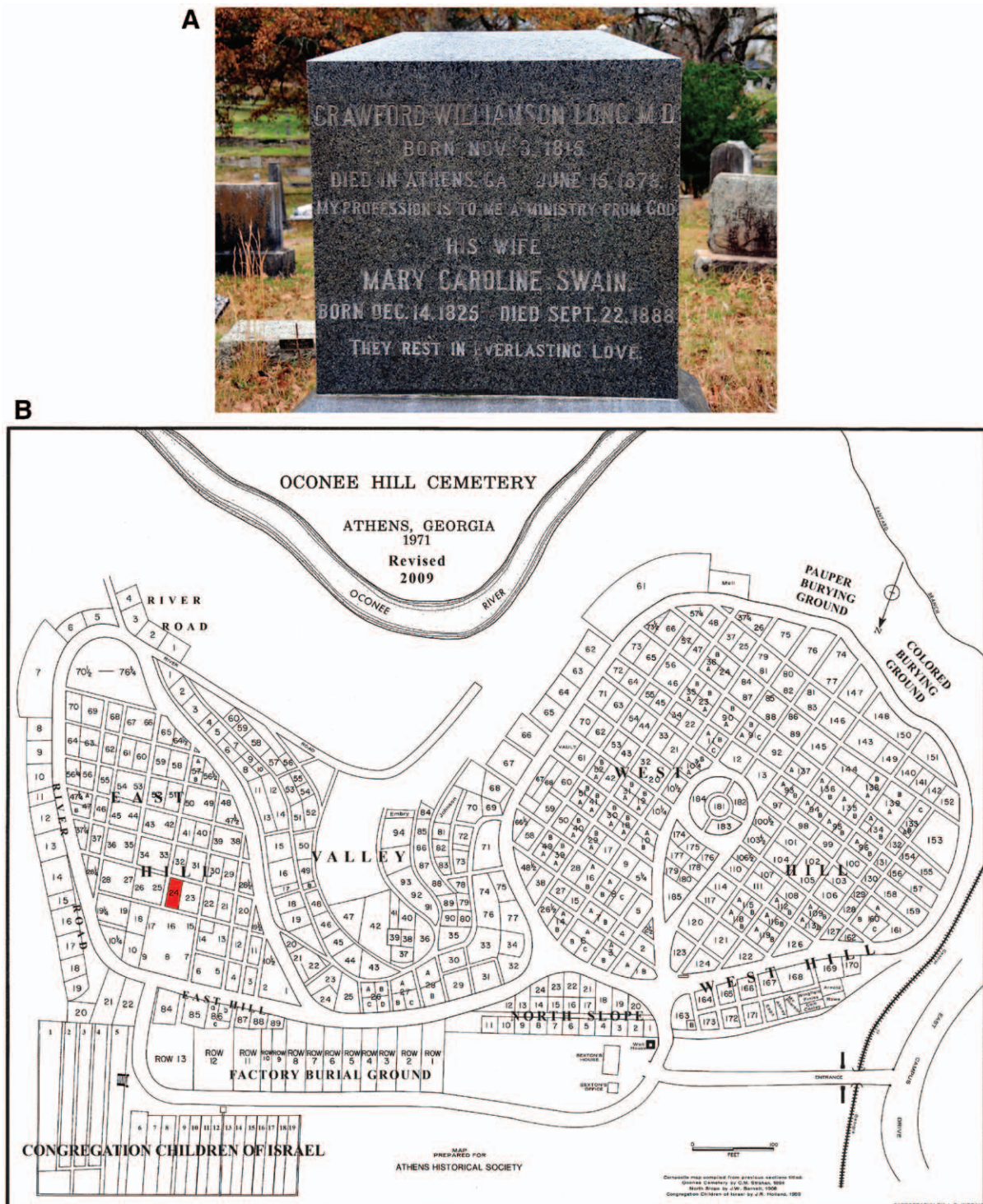


Fig. 1. (A) Crawford W. Long's grave at Oconee Hill Cemetery, Athens, Georgia (photograph from the authors' collections). (B) Map of the cemetery. Reproduction of the map, courtesy of Ms. Charlotte Marshall.

arrangement had to be rectified, and in 1855, university trustees urged the mayor and wardens of Athens to create a public cemetery. That same year, 17 acres of land beside the Oconee River were purchased for \$1,000. In 1856, the plan for the cemetery's design was adopted, and the first lots were auctioned. Oconee Hill Cemetery has long been a treasure to the citizens of Athens, Georgia, and is often referred to by locals as "the great walking history of Athens."³⁸

Crawford W. Long Museum, Jefferson, Georgia

This museum, dedicated to Crawford Williamson Long, is located in downtown Jefferson about 60 miles northeast of Atlanta and 20 miles northwest of Athens. Several people are responsible for founding the museum honoring Crawford Long and his discovery of anesthesia, which is located on the site of his medical practice in Jefferson, Georgia. The initial steps were taken in 1951, by *Jackson Herald* publisher Tom P. Williams and physician Frank Kells Boland, M.D. (1875 to 1953). They met with authorities from the Georgia Historical Commission, and along with citizens of Jefferson, Georgia, raised half the purchase price of the two-story brick building believed to be on the site of Long's medical office in Jefferson. The commission matched the money raised, and the structure was acquired in 1952. Restoration work began later that year with support from Governor Herman Talmadge (1913 to 2002, served 1947 to 1955), and the effort was continued by succeeding Governor Marvin Griffin (1907 to 1982, served 1955 to 1959). The museum was opened to the public on September 15, 1957. Although the structure is not the original building housing Long's office, in which the first operation with ether was performed, it is located on the same site and uses the original foundation.

Having returned to Jefferson in 1841, Long purchased the structure and medical practice of his preceptor, George Grant. In 1850, Long sold the property to his cousin Dr. John David Long (1824 to 1875, general physician) when he and his family moved to Atlanta and later to Athens. Long's original office building was a wooden structure that was demolished and replaced with a brick structure with walls four bricks thick in 1879 by a subsequent owner, Dr. James Bascomb Pendergrass (1851 to 1929). Pendergrass graduated from the Kentucky School of Medicine in Louisville, Kentucky, and served as President of the Jackson County Medical Association. The adjoining Pendergrass General Store was owned by his father, and Pendergrass worked in the store as a young man until he gained admission to medical school.³⁹ The store housed a continuous mercantile operation for over 100 yr until incorporation into the museum complex in 1987.⁴⁰

Since its inception in 1957 and for the subsequent 17 yr, the Crawford W. Long Museum was operated with resources from the Georgia Historical Commission, but in July 1975, the Georgia Department of Natural Resources determined that the museum would have to close as a result of financial cutbacks of state operating funds. To prevent closure,

the Crawford W. Long Museum Association (CWLMA) and the City of Jefferson assumed ownership, and in 1979, the museum underwent its first renovation—sponsored by generous contributions from the Medical Association of Georgia (Atlanta, Georgia) and the Georgia Society of Anesthesiologists (Atlanta, Georgia). These enhancements were completed in 1987 and included an extensive expansion into the buildings on either side of the original museum. The Pendergrass General Store, an early Greek revival-style building, was an operating general mercantile establishment from the early 1800s until the mid-1970s. It is the only surviving pre-Civil War business structure in Jefferson.

The museum's main building served as the medical office of physician James Thomas Stovall (1906 to 1957) from 1934 to 1957. A graduate of Georgia Medical School, he was exempted from serving during World War II by the governor, since he was the only physician in the area at the time. Originally built in 1893, this small, unadorned commercial structure was incorporated into the museum during the 1987 renovation-cum-expansion. It features a gift shop and visitor center, along with displays of photographs and maps of early Jefferson. A diorama in an adjacent medical gallery depicts the first painless operation performed under the influence of ether. Other areas on the first floor showcase Long's family heirlooms, furniture, and personal items. In April 1988, the Georgia Trust for Historic Preservation presented the Crawford W. Long Museum with an Outstanding Rehabilitation Project award.

After over 20 yr, the historic structures were once again in need of repair, and in September 2007, the CWLMA voted to transfer the assets of the museum to the City of Jefferson, Georgia. The city obtained a \$100,000 grant from the Appalachian Regional Commission (Washington, D.C.) to supplement existing association funds to complete major structural renovations and upgrade its exhibits over 19 months. An integral part of the museum's three-building complex, the Pendergrass General Store was elevated and made level as part of the renovations. Structural brick was repaired, a new roof was installed, windows were replaced to eliminate water intrusion and peeling plaster, and new wiring and lighting were installed throughout. After being made structurally sound and filled with historic exhibits, the museum reopened to the public on January 9, 2010.^{41–43}

While the city of Jefferson provides the basic annual operating budget to cover staffing and building maintenance, the CWLMA operates the gift shop and otherwise supports the museum financially through exhibits and special events (*e.g.*, horse-drawn carriage rides at Christmas, historic cemetery tours, and a 200th birthday celebration, among others).

Museum Collections

Museum records indicate that an initial collection of anesthesia machines and inhalers was partly transferred, partly on loan, from the Wood Library-Museum of Anesthesiology (Schaumburg, Illinois),⁴⁴ and artifacts related to early

medical practice were transferred from the National Museum of Natural History (Smithsonian Institution, Washington, D.C.)⁴⁵ and the American Museum of Natural History (New York, New York).⁴⁵ The bulk of the Long family artifacts was received in 1968 as a generous gift from Mrs. Elizabeth Swift Tutt (1888 to 1976), grandniece of Crawford W. Long. The inside of the Pendergrass General Store holds collections donated by Drs. Morgan Raiford (1912 to 1994), James Stovall (1906 to 1957), and Sumner Smith (1918 to 1999)—these include medical instruments, apothecary bottles, documents, books, hotel ledgers and early farming and housekeeping artifacts. Some of these were donated by local families who support the museum. In 1988, the Department of Anesthesiology at Emory University (Atlanta, Georgia) donated a few anesthesia machines and gas tanks, while the Crawford Long Society of Medical Students from Emory University donated another anesthesia machine in 2015. These were most useful in creating the Development of Anesthesia exhibit, a popular section with visitors who wish to learn about anesthesia equipment used in the more recent past. Museum collections include displays of early inhalation masks and dropper bottles, handheld inhalation devices, and 11 anesthesia machines that span almost a century (1914 to 2002).

The museum has an impressive collection of art depicting Long, surgical procedures, members of Long's family, and homes associated with him. These include a surgical scene by Georgia artist Richard Low Evans (1916 to 1998), a 12" × 17" engraved woodcut print presented to the museum by Emory University on September 30, 1979 (fig. 2). This signed and numbered work from 1979 was donated to the museum by Crawford Long Hospital, now known as Emory University Hospital Midtown. On March 28, 1992, a second 26" × 21" oil on canvas depicting Long's first use of ether was donated by Organon, Inc., a division of Merck & Co. (Kenilworth, New Jersey; fig. 3). Yet another surgical



Fig. 2. Surgical scene depicted by Georgia artist Richard Low Evans (1916 to 1998), 12" × 17", medium woodcut print. Courtesy of Crawford W. Long Museum.



Fig. 3. Oil painting depicting Crawford W. Long's first use of ether, 26" × 21", donated by Organon, Inc. Courtesy of Crawford W. Long Museum.

scene is a depiction by Maurice Siegler (1896 to 1965) an oil on canvas 36" × 42" of Long's third operation under anesthesia (fig. 4). The undated work is called "Anesthesia" and was presented to the museum by the Robert W. Woodruff Library, Emory University. The museum also has a portrait of Long's wife, Mary Caroline Swain Long, although the work is undated and the identity of the artist is unknown (fig. 5). This oval oil on canvas (27" × 22") shows a young Mrs. Long dressed in formal attire. Crawford W. Long is featured in two paintings; the first is an undated oil on canvas (23" × 17") by his youngest daughter, Emma (1859 to 1935), based on a photograph taken in 1860 (fig. 6). Emma Mitchell Long was the ninth of Mary Caroline Swain Long's 12 children.



Fig. 4. "Anesthesia," a depiction of Crawford W. Long's third operation under ether, by Maurice Siegler (1896 to 1965), undated, oil on canvas, 36" × 42". A gift to the museum by the Robert W. Woodruff Library, Emory University, Atlanta, Georgia. Courtesy of Crawford W. Long Museum.



Fig. 5. A portrait of Mary Caroline Swain Long (1825 to 1888), wife of Crawford W. Long. Unknown artist and undated, oil on canvas, oval shape, 27" × 22". Courtesy of Crawford W. Long Museum.

After her father died, Emma wrote a poem memorializing him—the final stanza reads²⁴:

Bright shining through the trees the sunbeams play
And gild the ground,
They glimmer on the tombs of those who
Lay at rest around.
O'er thee, dear one, no stately column rears
Its lofty head,
Thy life, thy noble life, is all that cheers
Thy humble bed;
Though known to few, thy unrewarded fame
Was truly won,
Some day thy Nation's heart shall proudly claim
Her gifted son.

A second portrait of Long in a standing pose was painted in 1926 by Lewis Gregg (1880 to 1957) (fig. 7). This 31" × 40" oil on canvas is based on a crayon sketch of Long at the age of 26. Crawford W. Long's childhood home is in Danielsville, Georgia; that home is the subject of two watercolor renditions by Leroy D. Vandam (1914 to 2004), Professor of Anaesthesia at Harvard Medical School (Boston, Massachusetts), and Anesthesiologist-in-Chief at Peter Bent Brigham Hospital, Boston, Massachusetts (fig. 8). In addition, Vandam also created a watercolor of the Crawford W. Long Museum (fig. 9). The diorama that depicts the scene of the first operation under ether by Long is also the subject of an undated watercolor by an unidentified artist although most likely this is the pre-production sketch from the Deland, Florida Company that produced the diorama in 1957 (fig. 10).



Fig. 6. Portrait of Crawford W. Long by his daughter Emma (1859 to 1935), undated, oil on canvas, 23" × 17", based on a photograph of Long taken in 1860. Courtesy of Crawford W. Long Museum.



Fig. 7. Portrait of Crawford W. Long by artist Lewis Gregg (1880 to 1957), oil on canvas, 31" × 40", based on a sketch of Long at the age of 26. Courtesy of Crawford W. Long Museum.



Fig. 8. Crawford W. Long's childhood home in Danielsville, Georgia, watercolor by Leroy D. Vandam (1914 to 2004). Courtesy of Samuel W. Van Dam.



Fig. 9. Crawford W. Long Museum, watercolor by Leroy D. Vandam (1914 to 2004). Courtesy of Samuel W. Van Dam.

In addition to medical equipment and artwork, the museum has an abundant collection of personal belongings and memorabilia. These include furniture, silhouettes, personal care items, kitchen utensils, clothing accessories, medicine boxes and cases, books, eye glasses, a pocket watch, a compass, a chess set, and personal letters.

Other Sites and Artifacts

The childhood home of Dr. Crawford Long was added to the National Register of Historic Places on December 6, 1977. From architectural analysis and primary historical data, it was concluded that the house was built on its current site sometime

between 1817 and 1820. According to the Nomination Form prepared by Howard L. Preston (Consultant, History Group, Inc., Atlanta, Georgia) and Martha F. Norwood (Research Associate, Historic Preservation Section, Atlanta, Georgia) of the Georgia Department of Natural Resources, Historic Preservation Section, the boundaries of the Long property are quite expansive, stretching over 5 acres. The home remains standing on its original site in Danielsville at 223 Crawford W. Long Street, approximately 0.2 miles from the Danielsville Madison County Courthouse. The property was purchased on December 24, 1817, by Crawford's father, James Long, along with more than 477 acres of land for \$900.

The original design of the home was a "two-over-two, plantation plain style" house, flanked on either side by chimneys, one constructed of stone and the other brick. In the late nineteenth century, a triangular, "pedimented" front porch was replaced by a simple, low-hipped shed roof. The home's foundation is stone, while the structural system is of a "heavy-braced timber frame with pegged mortise and tendon joists." The home currently has a white wood exterior. Documents suggest that in the past, the home had a smokehouse, a barn, a carriage house, and a well-house. Crawford Long lived here from the age of 2 to 14 yr, when he matriculated to Franklin College, in Athens, Georgia, for his undergraduate schooling.

In 1926, a statue of Dr. Crawford W. Long was given by the state of Georgia to the National Statuary Hall Collection as one of two representatives of the state. The all-marble statue was created by Scottish-American sculptor John Massey Rhind (1860 to 1936). An exact replica of the sculpture was made and on March 30, 1936, was unveiled by Dr. Long's daughter, Mrs. Eugenia Long Harper, and his great-grandson, Mr. E. C. Long, Jr., at the Madison County courthouse in Danielsville, Georgia, with Judge B. T. Moseley presiding (fig. 11). According to the sculpture's inscription, it was erected by the state of Georgia, with the support of Governor Eugene Talmadge (1884 to 1946) and Madison County Commissioner W. H. Compton. Among those serving on the memorial committee was L. G. Hardman, son of Dr. W. B. J. Hardman, a friend of Dr. Long.

The statue stands on the lawn of the Madison County courthouse, located at 101 Courthouse Square, Danielsville, Georgia 30633. The courthouse was constructed in 1901, designed by J. W. Golucke and Company, and features Romanesque Revival-style architecture. It was added to the National Register of Historic Places on September 18, 1980.

Franklin College of Arts and Sciences, University of Georgia, is the nation's first state-chartered institution of higher education and is the heart of University of Georgia. Classes began in 1801, and the first brick structure was built in 1806—it was named Franklin College in honor of Benjamin Franklin. This structure is the oldest standing structure in Athens and is called Old College. It houses administrative offices and classrooms.

Included in the Hargrett Rare Book and Manuscript Library at the University of Georgia is an original silhouette of Crawford W. Long. It resembles exactly a crayon sketch



Fig. 10. Watercolor depicting the diorama showing Crawford W. Long's first use of ether. A preproduction sketch. Courtesy of Crawford W. Long Museum.



Fig. 11. A statue of Crawford W. Long in front of Madison County Courthouse, Danielsville, Georgia. It is an exact replica of the original that is displayed in the National Statuary Hall Collection, Washington, D.C. Photograph from the authors' collections.

on display at the CWL Museum in Jefferson. Long's ninth child, Emma, was an artist and a poet, and she cut many silhouettes of her subjects. It is most likely that the silhouette at the CWL Museum was made by Emma.

Long and Mary Caroline were married in the Lebanon Methodist church, and Long attended Trinity Church in Athens. Churches with very similar names exist in the Athens area, but the authors are unable to ascertain whether these current churches have any connection to the ones associated with the Long family. There are two other areas where we have very limited information about sites related to Long. Despite numerous attempts, we have not been able to obtain information about Danielsville Academy, the institution where Long attended school and briefly served as teacher and principal. Likewise, we have not been successful in determining the year in which the town of Danielsville honored Long by naming a street after him—Crawford W. Long Street.

Summary

Georgia's most celebrated physician was the first to use ether as an anesthetic in surgery. Crawford Williamson Long was a young man of 26 when he performed the first painless operation on March 30, 1842, in his Jefferson office. During a time when individuals with almost no specific education could practice medicine, Long was a highly educated and well-trained physician. He practiced in Georgia for almost 40 yr, receiving respect and admiration from his peers and countrymen.

Yet, despite being the first to use ether as an anesthetic, credit for this discovery evaded him, just as it did the other contenders for this recognition—William Thomas Green Morton (1819 to 1868), Horace Wells (1815 to 1848), and Charles Thomas Jackson (1805 to 1880). If there is some justice, he alone among this group remained largely unaffected by this denial of recognition.⁴⁶ Morton, Wells, and Jackson encountered more than their share of personal tragedies as each sought credit in his own way, and all their lives ended tragically. Long lived a long peaceful existence, was busy with family and professional life, died from natural causes at the age of 62, when life expectancy at birth in America was

only 38 yr. He had said of his career: "My profession is to me a ministry from God."

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Competing Interests

The authors declare no competing interests.

Correspondence

Address correspondence to Dr. Desai: Department of Anesthesiology, Brigham and Women's Hospital, 75 Francis Street, Boston, Massachusetts 02115. sdesai@partners.org. Information on purchasing reprints may be found at www.anesthesiology.org or on the masthead page at the beginning of this issue. ANESTHESIOLOGY's articles are made freely accessible to all readers, for personal use only, 6 months from the cover date of the issue.

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Franklin College, Oldest Building at the University of Georgia and Dormitory to Crawford Long and Alexander Stephens



Originally named after Benjamin Franklin, today's University of Georgia was once known formally as Franklin College and informally as "Old College" (*right*). Its two most famous roommates to "dorm" in this brick structure (*left*) were natives of Georgia, Crawford W. Long (1815 to 1878) and Alexander H. Stephens (1812 to 1883). Each of the roommates joined a college literary society: Long, the Demosthenian; Stephens, Phi Kappa. A tiny, sickly man, Stephens graduated first in his class in 1832. He would study law, pass the bar, and serve as vice president of the Confederacy and finally governor of Georgia. A sturdier physical specimen than Stephens, Long earned his A.M. degree in 1835 and survived a horseback ride through Cherokee Territory to his initial medical school in Kentucky. After completing his M.D. at the University of Pennsylvania, Long returned to Georgia to practice medicine. His most famous moment was etherizing James Venable in 1842 for minor surgery. Long died in 1878; Stephens, in 1883. Statues of these two Georgians were donated by their home state to the federal government in 1926 (Long) and 1927 (Stephens). These onetime college roommates were finally reunited, at least in Georgia marble, in Congress' National Statuary Hall! (Copyright © the American Society of Anesthesiologists' Wood Library-Museum of Anesthesiology.)

George S. Bause, M.D., M.P.H., Honorary Curator, ASA's Wood Library-Museum of Anesthesiology, Schaumburg, Illinois, and Clinical Associate Professor, Case Western Reserve University, Cleveland, Ohio. UJYC@aol.com.