

## Dr. James Waller Lambuth Lewis



Sometimes in life, a person and a period in time perfectly align. This was certainly the case with Jim Lewis. James Waller Lambuth Lewis was born in Natchez, MS to Elizabeth “Bess” Lambuth Lewis and James Moore Lewis on May 3, 1938.

He was six years old when the Allies landed in Normandy. He taught himself how to read using the articles in Life Magazine so he could keep track of where uncles and cousins were fighting. He vividly remembered leaving the post office after hearing that his cousin, Lieutenant Prentiss Newman, had been shot down in the

Pacific. Without a doubt, growing up with the Second World War as a backdrop imbued Jim with a deep pride in and love of country and a dedication to contribute to its future. The events and experiences of his early years culminated in his decision to become a physicist during the Space Race and at the height of the Cold War. “These were exciting times, OK?” he’d often say with a grin.

As anyone knows, it’s impossible for the true measure of a life to be summed up in an obituary, even a lengthy one. But by tracing some throughlines in his life - some obvious like his picturesque Mississippi boyhood, Physics, and family -and some seemingly random themes- like movies and clothes, we hope that we are able to paint a picture of Jim Lewis that will resonate with those who knew him, as well as with his descendants in the future who one day may read this wanting to learn more about their remarkable ancestor.

Jim’s childhood in the Mississippi river town of Natchez was colorful. He loved baseball and engaging in bb gun wars with his lively group of friends, as well as spending time with his beloved ponies, Doug and Pete. It was in Natchez, when he was just eight years old, that he first saw a young Susan Butler. While sitting on his bicycle behind Burn’s Shoe Store, he watched a car pull up and an angry girl with blonde ringlets jump out, yell something into the car, slam the door, and stomp into the store followed by her distressed mother. When he’d tell the story, he’d always end it with “... and I thought, this is going to be good.” She was new to town, her father having moved there after serving as an Army doctor at nearby Camp Van Dorn. Jim happened to become best friends with Susan’s older brother, Edwin, with whom he shared a birthday. In fact, Jim spent so much time at the Butler home that he and Susan said they grew up together. Jim graduated from Natchez High School where he played baseball and basketball and was voted “Most Likely to Succeed.” He was known for his sharp wit and his ability to narrowly escape the scene of numerous memorable pranks. Although taken with Susan since their first childhood encounter, what he was not, he’d tell his children, was dumb enough to date her in high school where she was named Most Popular and was a gregarious extrovert.

In 1956, Jim received an appointment to the United States Naval Academy at Annapolis, after

making a perfect score on the entrance exam that was then required. Unfortunately, after a year and a summer at Annapolis, Jim suffered a near fatal heat stroke on board a destroyer. Although he did not reveal it at the time, this was not the first one he had suffered, having had several while playing ball in the ferocious Natchez heat. At the same time, a family health emergency arose, and this confluence of events persuaded Jim that he needed to be closer to home. It was a hard pill to swallow for someone who had always dreamt of going to the Naval Academy, but his life to that point had required him to be resilient. The Naval Academy afforded him a “family hardship” honorable discharge and made it possible for him to transfer his Navy scholarship to Ole Miss. It would be a decision that would once again place him in the orbit of Susan Butler, and they’d often find themselves on the same train that ran between college and home. Around Christmas of 1960, they became engaged in the most Jim Lewis way possible. No one else knew they had started dating, maybe not even the two of them. When Susan got a call asking her to a dance over the holidays, she put her hand over the receiver, looked up at Jim who was at the Butler’s house and asked, “What should I tell him?” To which Jim replied, “Tell him you are engaged.” They remained married for 58 years until her passing. One might assume that it was a reaction to being married to Susan and having three daughters that Jim’s most repeated quote was Thoreau’s “Beware all enterprises that require new clothes...” But in fact, his contentious relationship with clothing began at an early age. In February 1949, National Geographic Magazine ran a story on the history and architecture of Natchez, MS. To his everlasting chagrin, accompanying the article was a full-page color photograph of a young Jim Lewis dressed in fancy 19th century attire and standing with a pony and cart in front of an antebellum home. Although he was only 11 years old, he claimed it was the last time he let anyone tell him what to wear. We tend to believe this. During his many years at Arnold Engineering Development Center (AEDC), Jim would show up at work with jeans and cowboy boots and a jean jacket. Much later, as a professor and research scientist at the University of Tennessee Space Institute (UTSI), Jim was unhappy to find himself forced to attend a meeting with big wigs from the University of Tennessee and the State. He begrudgingly attended, but while everyone else there was in coat and tie, Jim arrived in self-mended cargo pants, a Lilith Fair concert t-shirt, and Teva sandals. As he got older, he loved getting humorous t-shirts for Christmas from his children and grandchildren. One of his favorites read: “It’s just a matter of time before they add the word ‘Syndrome’ after my name.” Jim enjoyed tennis, canoe trips, and going to the beach each May with his family, but the pastime that spanned his entire life was watching movies. As a young child he spent a lot of time at the air-conditioned cinema watching WWII newsreels and the popular films of the day. Natchez, with its timeless appeal, was often a shooting locale for films. During his high school senior year, the production of future classic film, Raintree County, starring Elizabeth Taylor, had taken over the town, and one night Jim and his friends thought it a good idea to “liberate” a statue from the set. Designed to appear life-sized in the movie, in reality, it was only a few feet tall. While taking their “new friend” driving around town in a convertible, the

statue slipped out of their grasp and flew out into the road. They went back to rescue it, but not before a concerned citizen called the police yelling, "Someone just threw a baby out of a car!" After a stop at a local bar, where all the patrons toasted the small papier mâché gentleman, word began to circulate that the police were on the case. The group of friends decided to scatter. Jim drove straight home, as no one would have suspected his involvement, but another friend cautiously took the back way home, spending literal hours trekking through bayous only to find a police car waiting in his drive. When Jim would retell stories such as this, usually pausing throughout to laugh, he always wrapped up with "Yep...The good old days." He had another brush with filmmaking in 1960 when, after a chance meeting on the Square in Oxford, MS, his soft drawl led him to be hired as George Hamilton's dialect coach during the filming of *Home from the Hill*. Always the paradox, when he wasn't regaling people with entertaining stories, he was the strong and silent type. He passed his deep love of cinema on to his children and grandchildren who likened him to the characters often played by Gregory Peck in such films as *Big Country* ... someone who liked to do the good and important things but tried his best to avoid the attention that came with it.

Choosing physics as a vocation gave him plenty of opportunity to do those good and important things. He was one of a handful of undergrads selected from across the country to assist the Dahlgren Naval Weapons Laboratory in Virginia to help prevent on-board ignition of weapons on warships. After earning his master's in physics, he returned to the Naval Weapons Laboratory, this time as a newlywed with his wife Susan. While conducting research there, he was selected to serve as the Naval Weapon Systems Liaison to both the Pentagon and the Department of Defense. Jim earned a PhD in physics in 1966 and, after a summer stint as a researcher in the Plasma Physics Branch at the U.S. Army Missile Command at Redstone arsenal in Huntsville, Alabama, he and his young family moved to Tullahoma, Tennessee, where he joined ARO Inc. at AEDC, a world-renowned scientific research and development center that worked in support of NASA as well as weapon system development for the United States government. At AEDC he assembled a fifteen-man interdisciplinary group to research expansion and combustion source flow fields. In addition, Jim began teaching part-time at UTSI which had only been established four years earlier. It was a place with a mission that Jim found exceptionally inspiring, and it would end up as the place he would spend the majority of his professional career.

In 1968, Jim was named a United Kingdom Science Research Council Postdoctoral Fellow, the first American to earn such an honor. He moved with his family to Belfast, Northern Ireland, to pursue his fellowship at Queens University. Afterwards, he was awarded a NATO grant to present lectures on his electron beam molecular work. Lectures were presented at various establishments including Oxford University; Rocket Propulsion Establishment, Buckinghamshire, UK; DFVLR (Germany's National Space Agency) sites in Gottingen, Karlsruhe, and Cologne; ONERA (French Aerospace Laboratory) in Chatillon; and The Von Karman Institute in Brussels, Belgium. Traveling through Europe for months in a very small European car with a

wife and three young children was fodder for many a tale. He would continue to interact with European and British colleagues throughout the remainder of his career, making numerous return visits abroad for collaborations and presentations.

In 1969, Jim and family returned to Tullahoma, where he continued his work at AEDC. He was named as a Senior Scientist, for both Sverdrup and Calspan, performing research and development in rarefied gas dynamics and laser technology including diagnostics development of rocket exhaust plumes, rocket engines, and flow fields. While at AEDC, he accomplished a number of “firsts” in the use of laser implementation. He also served as a consultant to both the Pentagon and the Department of Defense. Along with his research at AEDC, Jim continued teaching at UTSI, advancing from assistant to associate to full professor in 1982. It was then that Lewis and four colleagues moved from AEDC to UTSI to form the Applied Physics Research Group. In 1983, Jim became a founding member of the Center for Laser Applications (CLA), a state-funded Center of Excellence, established by then Governor Lamar Alexander, of which Jim served as a chairman. The goal of CLA was to become a premier laser applications center with an international reputation, a goal that was certainly achieved. The establishment and furtherance of CLA was one of the things in his life that brought Jim the most satisfaction. He regularly led tours for Lamar Alexander and succeeding governors, congressmen and senators. He loved getting people excited by science.

In 1994, Jim was named a University of Tennessee Distinguished Service Professor, only the third professor from UTSI to receive the honor. Oddly enough, the first was the late Dr. John B. Dicks who was also a native of Natchez, MS! During his distinguished career at UTSI, Jim also served as Chair of the Physics Program, Interim Assistant Vice President and Dean for Academic Affairs, as well as Chief Information Officer. He was a member of Phi Eta Sigma, Phi Kappa Phi, the American Physical Society, and the American Institute of Aeronautics and Astronautics, and the list of Jim’s professional publications, presentations, and patents is too long to enumerate. Jim became Professor Emeritus in 2006 after retiring from the teaching faculty, but he continued his research there, becoming a founding partner of E-Vision Technologies, a venture focused on the innovation of ground-breaking laser technologies for the advancement of medical diagnostics. In addition, he was named an Honorary member of President Barack Obama’s Council for Scientific Research and Development.

Jim was, of course, much more than his chosen profession of applied physics. He was also a loving husband, father, and grandfather. He could at times come across as surly and intimidating - sometimes on purpose! One of his favorite pastimes was sitting silently with his daughters’ dates while they waited. “PLEASE be ready on time next time!” was a plea the girls often heard. Despite his sometimes-gruff demeanor, he was the go-to parent for calm sage advice in contrast to Susan’s “Just get on with it” attitude. (Both approaches have merit.) And to the surprise of many, Jim held the title of “The Baby Whisperer” to his children and grandchildren. He was always able to calm a crying child or get one to sleep when no one else could. He had a thunderous laugh, an acerbic wit, and a great gift for story-telling. He was

always in attendance for his children's many activities, including softball and basketball games, dance and piano recitals, theater productions, and of course science fairs. A man of contradictions, he was a natural introvert who could hold court and entertain all in attendance. Above all, he was a man of character and conscience who viewed his professional purpose as a search for Truth, all part of working for the greater good. Jim was a former member of First Presbyterian Church, USA, where he served as both a Deacon and Elder. He was an ardent supporter of the ACLU, The Southern Poverty Law Center, Amnesty International, St Jude's, and St. Joseph's Indian School, in South Dakota.

He was preceded in death by his wife, Susan Butler Lewis. He is survived his three daughters, Lisa Lambuth Lewis of Tullahoma, Amy Susan Lewis (Brent Hyams) of Nashville, and Megan Butler Lewis-Eidt (Michael Eidt) of Tupelo MS; four grandchildren, Susannah Butler Eidt, Harrison Lambuth Crawford Eidt, Lewis Butler Hyams, and Fentress Lambuth Hyams; a brother, John South Lewis (Jan); a sister-in-law, Marion Butler (John Harding); nephews South Lewis, Fletcher Lewis, and Thomas Harding, great-nephews, two half-sisters, cousins, and friends across the world.

*Daves Culbertson Funeral Home*