

James Crudup and his connection to Oak Ridge

(As published in The Morgan County Today's Historically Speaking column the week of April 27, 2020)

Mike Stallo, Reference Librarian at the Oak Ridge Public Library, brings us this article featuring an African American man who only spent three weeks in Oak Ridge working at the K-25 Gaseous Diffusion Plant, but went on to an extraordinary career. Enjoy learning about this amazing man and the impact he had on transplant surgeries and his talented teaching the skill to young college students.

The Manhattan Project was first headquartered in Manhattan (hence the name) the headquarters moved to Oak Ridge TN. (NOTE: Colonel Nichols actually managed the day to day activities of the Clinton Engineer Works, the Hanford Engineer Works in Hanford, WA, and all the rest of the Manhattan Project, except Los Alamos, from the Administration Building which came to be known as the "Castle on the Hill" – Ray)

In Oak Ridge, Tennessee, from 1943-1946 African Americans living in the town were not only segregated from their white coworkers but also from their spouses. Husbands and wives had to live in separate living quarters and, believe it or not, their children were not allowed to live here in Oak Ridge until after the bomb was dropped and the war had ended.

I say all of this to give some perspective on the person that I would like to tell you about and some of the obstacles that he faced 75 years ago. James Crudup was no exception. He experienced all the same segregation as all other African Americans who came to Oak Ridge during the Manhattan Project.

About 10 years ago I was at work doing a routine task in the K-25 records department. While putting away a file I noticed a badge photo of a young black man and I noticed his name - James Crudup. It was the last name that made me take notice. The name stood out to me as I was quite familiar with a blues musician named Arthur "Big Boy" Crudup. Big Boy, from forest Mississippi, was a blues singer who was active during the 1940's and up until just a few years before his death, in 1974.

I was aware that he had written several of the first few songs that Elvis Presley recorded including *That's Alright Mama* and *My Baby Left Me*. Elvis mentioned Crudup as an influence on several occasions.

I wondered if perhaps this James Crudup was related to Arthur Crudup? It was a long shot but I tend to obsess over names and am always looking for connections of this type.

A few internet searches confirmed that they were related! I found a picture and a bio linking the two men. James Crudup was Arthur Big Boy's cousin.

Well this was all very nice and sort of cool to discover and I thought that was the end of the story. But wait there's more! James Crudup was a janitor at the K-25 site for only a little over three weeks. But that's not all. He was also was a soldier. And then he was a truck driver. Later, James Crudup became a pioneer in a highly specialized field. He did this with great skill and determination.

Crudup was very good with his hands and had considered becoming a mechanic. He wanted to go to college but he was very self-conscious about his stuttering.

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James was an ambitious young man and felt he might find a better job up North where there were employment opportunities for African Americans during the 1940's. He followed his siblings to Ohio and then to Detroit. In 1950, he began driving a truck. It was a good paying job and could have been a career for him until retirement.

However, his brother, Jonas, had a job working at the morgue at the hospital encouraged him to speak with C. Gardner Child the manager. Child offered James a job working in the animal dissection/surgical training area.

Although he had some reservations, Crudup took the job. The job involved cleaning up the surgical room where incoming students learned to do surgeries on animals.

James immediately begin to observe the dissections and surgeries with great interest. Although he was an animal lover he was fascinated by the surgeries. He immediately saw application to humans.

He began to take the text books home to study anatomy on his own. As the incoming students would finish with their dissections, he would study them. Soon he began dissections on what remained of the animals.

He continued to learn and get better. James was very dexterous and could quickly operate with greater skill than many of hospital's surgeons and all of the incoming students.

The surgeons were attempting to do transplants in mice with very limited success. The mouse organs were extremely small and all but the simplest transplants were unsuccessful. The size of the tools they were using were too big to be very effective.

James begin to do surgeries on the mice and even did transplants of his own with some success. He began to fashion his owns tools to use in surgery. He made adjustments to the tools and continued to gain greater skill.

Crudup successfully did liver and pancreas transplants on the mice and not only did they survive, they functioned well with their new organs. This amazed the doctors and students alike.

Over time Crudup became known for his ability to teach the incoming students and recognize the better surgeons as they were moving up the ranks. Despite the fact that James had no formal training in surgery, he became known as one of the most valuable teachers in the surgical department.

An intern named Sherman J. Silber began working with Crudup and they spent many hours together in the lab. According to Silber, they developed the techniques that would later be called microsurgery.

Silber credited James Crudup for his contributions to the invention of microsurgery. Silber went on to become a world-renowned surgeon and developed techniques for several surgeries that had never been performed before.

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Personally, I was tremendously inspired and awed by the story of James Crudup. He sure came a long way from his humble beginnings in Forrest, Mississippi, to sweeping the floors in Oak Ridge before finally becoming a pioneer and co-inventor of microsurgery. What an amazing accomplishment!

The University of Michigan has an award called the James Crudup award. They recognize his valued contribution to the invention of microsurgery.

This prestigious award is presented annually by the Department of Surgery to the Chief Resident who has demonstrated the most outstanding accomplishments in research during residency training.

I would like to thank the University of Michigan for giving permission to use the photos and data during the development of this article.

Thanks to Mike Stallo for this insightful story of James Crudup, who contributed greatly to the development of a surgical technique used extensively today. Mike is my "go to person" when I get a request for finding someone who descendants think worked in Oak Ridge. He amazes me with his research skill and dedication. Thanks again Mike for a really interesting look at James Crudup!

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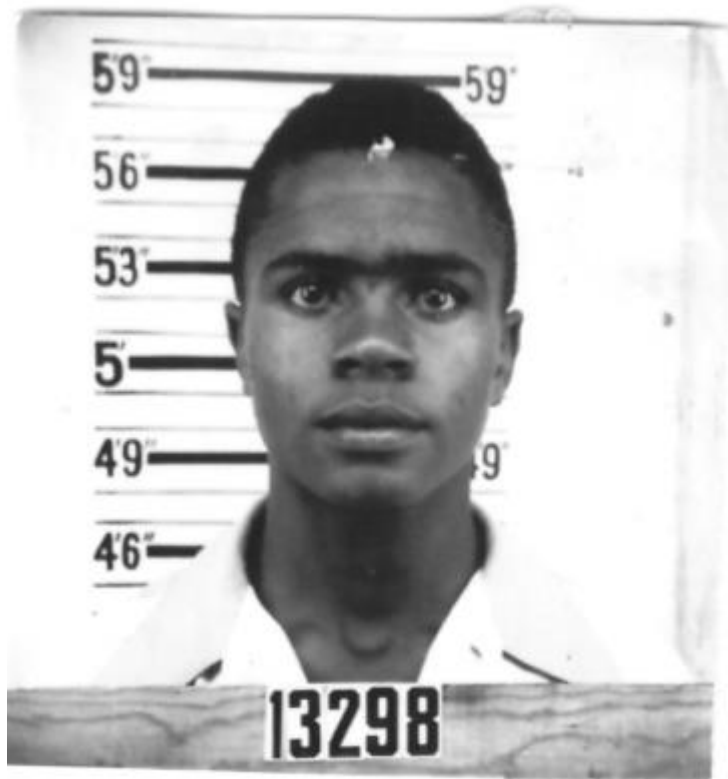
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A closeup view of the actual tools used by James Crudup, likely at least some items were actually hand crafted

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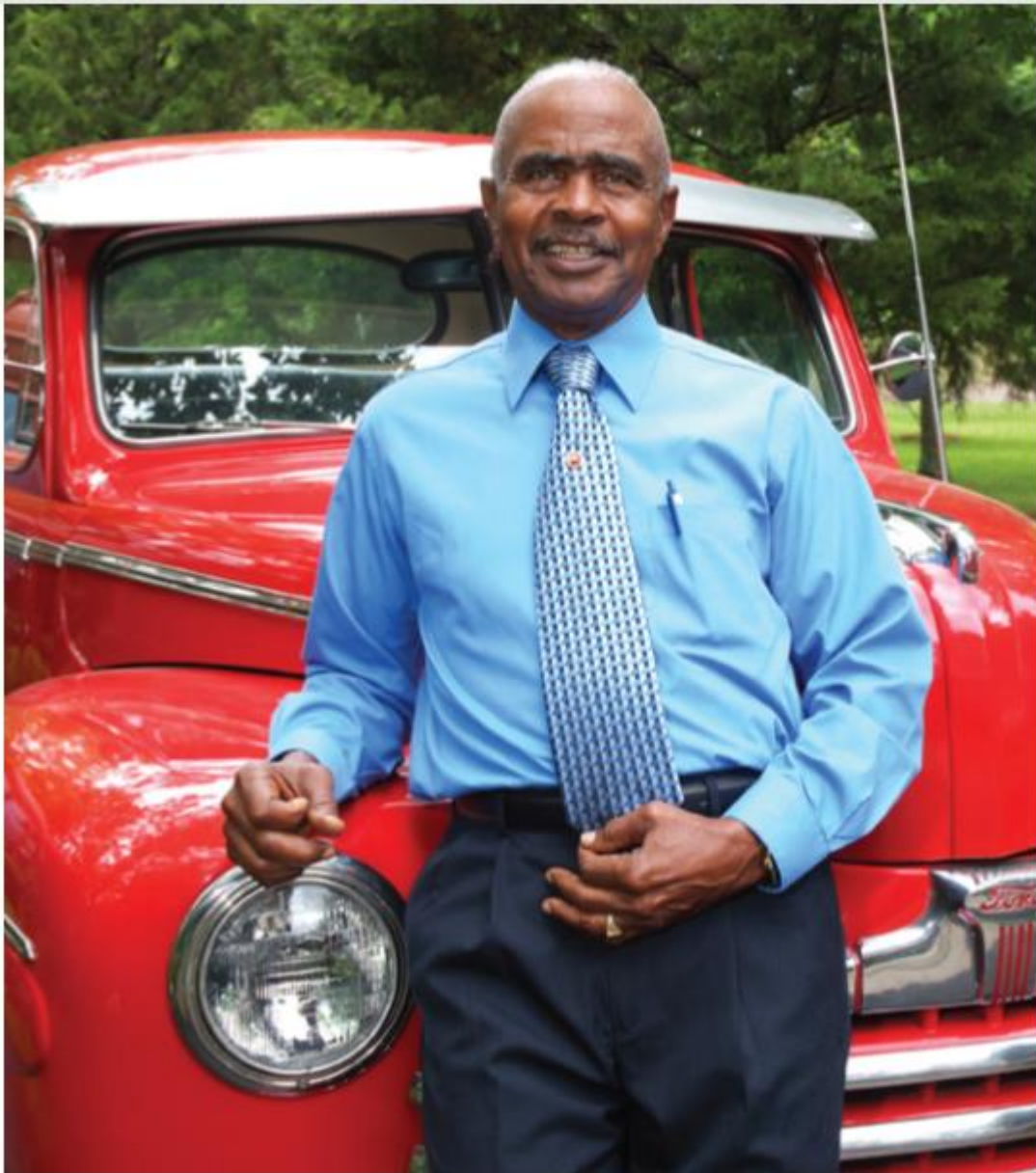
James Crudup badge photo for K-25



James Crudup in the military

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James Crudup with what must have been a favorite truck