

Archaeology, Science and Forensic Anthropology: A Tribute to Dr. T. Dale Stewart

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ABSTRACT: The name, T. Dale Stewart is synonymous with physical anthropology. To many members of the physical anthropology section, particularly those born in the latter half of this century, he is perhaps best known for his 1979 *Essentials of Forensic Anthropology*. Without a doubt, much of the foundation of this discipline rests upon his teachings and influence.

Few knew him in the capacity that William M. Bass did, as T. Dale Stewart was a member of Bass' doctoral committee. Bass was greatly influenced during the time he spent working with Dr. Stewart in the 1950's and the instruction and guidance Stewart instilled in Bass has and will continue to be passed on to subsequent generations.

Research was Dale Stewart's main emphasis and he succeeded in demonstrating the value of investigation and how results were crucial in explaining many of the processes manifest on skeletal material. Clearly his hypothesis-based approach became essential to skeletal biology and numerous procedures and methods employed in the field are synonymous with the teachings of Dr. T. Dale Stewart. By reflecting on several recently completed interdisciplinary research projects, the far-reaching impact of his knowledge and instruction can be demonstrated.

KEYWORDS: forensic science, T. Dale Stewart, forensic anthropology, history

It is when we come together to honor a friend and colleague that we find ourselves reflecting on our academic and personal interactions. Through these salutes we inevitably write the history of our discipline, a beneficial endeavor given the youthfulness of this field. A gathering such as this gives us the opportunity to appreciate not only the foundations of our field, but the techniques we currently employ and how such will impact the future.

This arena, in particular, presents us with the opportunity to consider the influence of T. Dale Stewart upon the field of physical anthropology. The effects of his research and instruction as an archaeologist, scientist, and forensic anthropologist have influenced all of us here. The name, T. Dale Stewart is synonymous with physical anthropology. To many members of this section, particularly those born in the latter half of this century, he is perhaps best known for his 1979 *Essentials of Forensic Anthropology*. Collectively, how many times have we referenced this work (1)? Many have gazed at a nameplate on an office door on the third floor of the Smithsonian and wondered of the man. Without a doubt, much of the foundation of this discipline rests upon his teachings and influence. However, few knew him in the capacity that William M. Bass

did, as T. Dale Stewart was a member of his doctoral committee. Indeed this was a rare occurrence given that Stewart was not directly associated with an academic department. Having a doctoral committee of six members is not something Bass would recommend to any graduate student. Bass successfully defended his dissertation in the spring of 1961 in Philadelphia (see 2) and the following day presented a paper at the annual meeting of the American Association of Physical Anthropologists in Columbus Ohio. Bass began his presentation by announcing that he was likely the newest Ph.D. in the room, however, following the paper Dr. Stewart stated that he had not voted for the degree to be awarded. He explained that he thought more research was needed. Perhaps having a large committee is advantageous.

The path leading to Bass's association with Dale Stewart began seven years before they actually met. It was during the fall of 1949 that Bill took his first Anthropology class at the University of Virginia. During his undergraduate years, Bill took every course offered by Dr. Clifford Evans prior to his (Evans) departure for the Smithsonian in January of 1951. Following completion of his undergraduate degree and military service, Bass enrolled in the masters program at the University of Kentucky. Prior to graduation in 1956, Bill Bass learned from Dr. Evans about a new temporary summer position at the Smithsonian for a physical anthropologist to measure and analyze human skeletal remains excavated during the River Basin Projects. At the time, little did Bill know how greatly influenced he would be by the time spent working with Dr. Stewart in the 1950s. The instruction and guidance Stewart provided him has subsequently been passed on to another generation of physical anthropologists.

T. Dale Stewart was the type of scholar whose manner and style epitomized the highly educated and scientific mind. Dr. Stewart's professional appearance, in conjunction with his ability to ask penetrating in-depth questions often caused younger students to fear him. However, he was always very easy to approach and more than willing to spend time discussing research projects. This was his main emphasis and he succeeded in demonstrating the value of research and how results were crucial in explaining many of the processes manifest on skeletal material. By reflecting on several recently completed interdisciplinary research projects the far-reaching impact of his knowledge and instruction can be demonstrated. Clearly his hypothesis-based approach became essential to skeletal biology and numerous procedures and methods employed in the field are synonymous with the teachings of Dr. T. Dale Stewart.

Bill first met T. Dale Stewart at a meeting of the American Association of Physical Anthropologists. As you may imagine, the younger members were often unsure of interactions with Stewart given that he was always one to ask penetrating and in-depth ques-

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tions. Perhaps students worried unnecessarily, as likely he was harder on the physical anthropologists of his own generation. First impressions of T. Dale Stewart, usually involve the fact that he was always well dressed. He often wore a coat and when in the office he always wore a tie. His presence and his appearance gave the impression of a well educated scientific mind. He was always easy to approach and willing to spend time discussing research projects. Even when such discussions may have been uncomfortable. For instance, there was the time Doug Ubelaker, Terrell Phenice, and Bass began to notice artificial interproximal grooving on the teeth of plains skeletons, Dale could not believe he had looked at such material for years and had never noticed this. Nevertheless, he was always supportive of our discovering or noticing something new and would always encourage looking at larger samples.

T. Dale was not a teacher or lecturer as we in academics traditionally think of a professor, he approached students as a careful observer with an aim towards creating scientific and questioning minds. The type of relationship between Dale and Bill could be likened to that of a master and an apprentice. Although his main emphasis was on research, his approach benefited all career facets of those who worked with him. Even though Bass has spent the majority of his career as a university professor, he has, over the years, attempted to incorporate the research oriented style of T. Dale into the classroom. Given the frequency with which Bass is called upon to assist local law enforcement, he has had the opportunity to utilize and demonstrate the techniques and approach of Dr. Stewart on innumerable occasions. Over the years, the teachings of Stewart have been shared with numerous students whom will carry physical anthropology well into the twenty-first century. And though Bass has not put forth this as necessarily having been taught by Dale, it can be attributed to their interactions during Bill's more formative years.

Preparing for the symposium to honor Dale, gave participants cause to reflect upon their own careers, and to realize how influential Stewart was. His impact and teachings have transcended the generations of students (now instructors) such as the in depth research compiled in Doug Owsley and Richard Jantz's book: *Skeletal Biology of the Great Plains: Migration, Warfare, Health and Subsistence*, published in 1994 (3). Along the same lines, several cases and research endeavors conducted at The University of Tennessee, Knoxville demonstrate the lasting impact and far reaching influence of Dr. Stewart.

The dissertation work of one of Bass's most recent graduate students further illustrates the widespread influence of Stewart within the discipline of physical Anthropology (4). Lee Meadows Jantz systematically explored secular change in size and limb bone length proportion in five U.S. skeletal samples with dates of birth ranging from mid 1700 to 1970s. A large portion of her sample came from Mildred Trotter's WWII Pacific Theater casualty data. These data were "re-discovered" in the Washington University Medical Library archives. Results indicate that white males have changed significantly in their long bone lengths and shape, while black males and white females exhibit change in all bones with the exception of the humerus. Black females demonstrate only slight change in the femur. Without a doubt, these findings have interesting and significant forensic implications as well as biological implications regarding change over the last 200 years in America. Undoubtedly these results would have intrigued Stewart. In fact, we

inadvertently owe much of this outcome to him, as it was Stewart who suggested to Trotter that she go to the Army Human Identification Lab. We benefited from his technical instruction and methodological approaches, while we also reaped rewards from T. Dale's interaction with his peers.

Similarly, the widespread impact of Stewart's expertise became evident to us during the summer of 1997 when we worked a case in rural Union county, Tennessee. The Forensic Anthropology Center was called to the scene where incinerated skeletal material, believed to be the remains of a missing woman, had been discovered. Upon arrival, we determined the remains were human and proceeded to collect said elements from a rectangular refuse area and an adjacent 55 gallon drum. Our recovery relied upon standard archaeological techniques as taught throughout the decades. Skeletal fragments were recovered utilizing a standard grid procedure. The region was divided into 12 quadrants, which were thoroughly examined for the presence of skeletal material. All materials were transported to the University of Tennessee where analysis suggested that the remains represented the missing woman. The identity was subsequently confirmed by DNA testing.

Closer investigation of the incinerated bone suggested a possible reduction of soft tissue prior to incineration as evidenced by minimal curved transverse fractures and negligible warping. Though seemingly improbable given the absence of the victim for only a three week period, the condition of the remains were inconsistent with fleshed cremation. In addition, subsequent police investigation yielded information that supported our interpretation of the condition of the remains. It was reported that following death, the individual had been maintained in the trunk of the perpetrator's vehicle; such an environment that likely hastened decomposition. Towards developing a greater foundation for interpreting incinerated remains, graduate students Joanne Bennett, Lauren Rockhold, and others have engaged in several bone burning experiments. Such is in following with the teachings of Dr. T. Dale Stewart.

The research discussed herein demonstrates how the teachings of Dr. T. Dale Stewart influence current and undoubtedly, future research in physical anthropology. It is our hope that Bass has succeeded in passing along to his students that which was learned from working with Dale. In this manner, many of us then, can consider ourselves having been taught by one of the best: Dr. T. Dale Stewart.

References

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