

OBITUARY

M. Yaşar Işcan,¹ Ph.D.

John Lawrence Angel, Ph.D., 1915–1986, a Tribute and Remembrance

The members of the American Academy of Forensic Sciences have lost a scholar, friend, and mentor. Dr. J. Lawrence Angel, born in London, England, received his A.B. (1936, *magna cum laude*) and Ph.D. (1942) from Harvard University (Fig. 1). He carried out field-work in Turkey, Cyprus, and Greece encompassing social biology, paleopathology, and paleodemography. In the United States, he studied the physical characteristics and health status of colonial Americans, and taught anatomy at Jefferson Medical College (1943–1962). In 1962, Dr. Angel was appointed curator of the Smithsonian Institution where he became actively involved in forensic anthropology and was often called upon to assist the FBI, other law enforcement agencies, and the U.S. Armed forces.



FIG. 1—*Dr. J. Lawrence Angel.*

¹Professor, Department of Anthropology, Florida Atlantic University, Boca Raton, FL.

Dr. Angel was one of the founders of the Physical Anthropology section of the AAFS and served as its president. He received the AAFS section award in 1984, an honor he richly deserved.

Through his publications, including two books and over 125 articles and book reviews, scientific presentations, an annual course in forensic anthropology at the Smithsonian Institution, and teaching duties, Dr. Angel advanced the development of forensic and physical anthropology in a number of important areas. His unique understanding of the interaction of culture, biology, genetics, and environment was reflected through his published articles, and notably his book [1].

His ability to integrate the role of these factors can best be seen in his work on porotic hyperostosis, anemias, and malaras [2,3]. It is my observation that studies like these led to the establishment of paleopathology as a discipline in its own right. Dr. Angel went far beyond the mere diagnosis of pathological lesions to analyze the relationship between environment and disease. He discovered a link between changes in bone morphology and the anemia-malaria complex that became the basis for intensive research in this area.

His great knowledge of anatomy and human skeletal variation allowed him to make outstanding contributions on the assessment of health from the skeleton. He demonstrated that pelvic inlet depth [4] and skull base height index [5] changed over time from prehistory to the present and are markers of nutritional stress.

All of Dr. Angel's discoveries have significantly expanded the field of forensic anthropology. He correlated changes in the skeleton with occupation which can provide vital clues to identity. His expert grasp of the facial musculature enabled him to engineer outstanding facial reconstructions [6].

One of Dr. Angel's most notable contributions was the morphological assessment of parity from the dorsal surface of the pubis. In a 1969 article [7], he presented a clear, precise, anatomical model of how to diagnose parturition scars and use them to estimate the number of completed pregnancies. Again, following his lead, research has proliferated on this subject in the United States and abroad.

Dr. J. Lawrence Angel was indeed a genius in his field and can be credited with having the most comprehensive knowledge and understanding of contemporary human skeletal biology. He saw and grasped the significance of skeletal nuances that most of us would not even notice. The profession will miss his guidance and experience, but most of all, we have lost a friend.

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Address requests for reprints or additional information to
 M. Yaşar İscan, Ph.D.
 Department of Anthropology
 Florida Atlantic University
 Boca Raton, FL 33431