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EARNEST ALBERT HOOTON

1887—1954

A Biographical Memoir by

STANLEY M. GARN AND EUGENE GILES

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Ernest A. Hooton

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BY STANLEY M. GARN AND EUGENE GILES

OVER FOUR DECADES Earnest Albert Hooton became known nationally and internationally for his contributions to the study of human evolution, for his comprehensive comparisons of nonhuman primates, and for his management of mass-scale anthropometric studies both of skeletal populations and on the living. He also became well known to a generation of newspaper readers for his pithy and often irreverent comments on the human condition and for his advocacy of a woman president. As an early exponent of applied physical anthropology and human engineering, Hooton was responsible for improvements in clothing sizing, work space, and air frame and seating design. For years Earnest Hooton was the principal source of graduate students in physical anthropology and, through his students, was responsible for much of the growth and direction of the American Association of Physical Anthropologists.

EARLY LIFE AND EDUCATION

Earnest Albert Hooton was born in Clemansville, Wisconsin, on November 20, 1887, the third child and only son of an English-born Methodist minister married to a Canadian-born woman of Scotch-Irish ancestry. Both parents

emphasized learning and made sure that all three Hooton children went to college, despite the meager salary accorded a clergyman. Besides, Hooton's small size and myopia made him a scholar from the start—"with my nose always stuck in a book." Hooton also demonstrated an ability for cartooning at an early age, and he enlivened both his high school and college annuals with cartoons and more serious artwork, a skill he maintained for the rest of his sixty-six years.

Earnest Hooton graduated from Lawrence College at the age of nineteen and went on to the University of Wisconsin, where he attained his Ph.D. degree in the classics, having great proficiency in Latin and more skills in ancient Greek. His 1911 Ph.D. thesis was titled "The Evolution of Literary Art in Pre-hellenic Rome." With this educational background and his outstanding academic record, he applied for and was awarded a Rhodes scholarship, electing to study at Oxford. There he moved in succession from classical archeology to iron-age and Viking-period archeology, assisting in the excavation of Viking boat burials and description of the remains. At Oxford, under R. R. Marett, Hooton turned to anthropology, taking a diploma in general anthropology in 1912. He then worked with Arthur Keith, where he developed a lifelong interest in human paleontology, especially paleoanthropic fossils from England and the continent.

With Marett's strong support, Hooton was offered a teaching position at Harvard in 1913, and he remained there for four decades. Besides teaching introductory physical anthropology and iron-age archeology, he busied himself with descriptive analyses of skeletal remains, writing many addenda or technical notes to archeological reports and lecturing to alumni and professional groups on the relevance of physical anthropology to medicine and dentistry.

Though disqualified from military service because of his

nearsightedness, requiring six diopters of correction, he volunteered for training at the Civilian Military Training Center at Plattsburgh, New York, becoming a passable rifleman at 100 yards but a wild shot at greater distances. Hooton also became involved in revising military recruitment standards, a necessity given the large number of smallish immigrants who could not qualify for service under the existing dimensional requirements standards.

A RECORD OF RESEARCH

During the 1920s, Hooton moved on from his earlier descriptions of individual skeletal remains found in the course of archeological digs and isolated fossil crania (like the La Quina skull) to metric and morphological analyses of large skeletal assemblages, including the remains of the ancient inhabitants of the Canary Islands, originally collected in 1915. Studies on the remains from Pecos Pueblo, comprising over 500 individuals of all ages, marked a turning point in human skeletal biology, for the sample was large enough to allow attention to age changes in this prehistoric skeletal population, as well as a careful and detailed description of such pathological conditions as osteoarthritis and rheumatoid arthritis, accomplished in conjunction with radiologists and pathologists.

Chapter X of the Pecos report (Pathology) included a detailed analysis of the age incidence and population prevalence of antemortem fractures (some 7 percent overall), with the highest age incidence in the elderly. The Pecos report also included appendixes on the dentition (by Habib J. Rihan) and a separate chapter on the pelvis (by Edward Reynolds). The entire study was facilitated by a sizeable group of devoted laboratory and statistical assistants, including Ruth O. Sawtell, who later wrote a series of popular

detective stories featuring human bones and skeletal identification.

During the 1930s, Hooton turned his attention to anthropometric surveys and anthropometric studies of living human beings, including a very large series of criminals measured in ten different states, and years later, an anthropometric survey of the Irish. Such studies represented a major management task, keeping track of workers at distant locations, a major accomplishment in data handling (thousands of completed anthropometric and observational forms), and a major accomplishment in data analysis, made possible by the use of IBM punched cards and the Hollerith card sorter.

Though his criminal study (published as *The American Criminal* in 1939) was criticized as Lombroso-like in assuming the existence of criminal types, Hooton did demonstrate that different classes of felons differed substantially in body size and proportions, pickpockets being the smallest and forgers being the tallest and best educated. Self-selection and occupational selection clearly accounted for such dimensional and proportional differences, as we have since come to know also for different groups of Olympic athletes.

Hooton also operated an anthropometric booth at the New York World's Fair, gathering novel dimensional data on the visitors, and he was involved in annual anthropometric studies on Harvard freshmen, extending investigations originally initiated by Dudley Sargent at the turn of the century.

MILITARY AND CIVILIAN APPLICATIONS

In the course of his anthropometric studies, Hooton developed a model for mass surveys and for data analysis using punched cards and card-sorting equipment located in his statistical laboratory atop the Peabody Museum. This

model proved especially applicable to mass data surveys relating to equipment design, both civilian and military, which Hooton helped organize and provided direction. As a result, many of Hooton's students became involved in applied human engineering with the Air Force (previously the Army Air Corps), the Chemical Warfare Service (later the Army Chemical Corps), and the Quartermaster Corps, among others.

Gas masks, oxygen masks, aircraft seating, tank interiors, military uniforms, G-suits, and tank helmets all became more comfortable, better-fitting, and more user friendly because of Hooton's efforts and directions. It was his notion that equipment and garments should fit the user, rather than vice versa, and Hooton was a proponent of ergonomics long before the term was coined by Le Gros Clark. Many of the national and international nutrition surveys conducted well after the midcentury mark also reflect Hooton's designs and contributions, through the efforts of his students of an earlier period.

Hooton also conducted an anthropometric study of commuters in Boston's North Station in order to develop more comfortable train seats for the Heywood Wakefield Company, as described in *A Survey of Seating* (1945). (Hooton's principal assistant in that study later became the director of the Kinsey Institute.) From such endeavors Hooton was able to provide alternative employment for many of his students, at Wright-Patterson Air Force Base, for example, and at the Quartermaster Laboratories in Natick, so that academia was no longer the only source of jobs for physical anthropologists.

OTHER LITERARY CONTRIBUTIONS

Besides technical monographs and book-length research reports (one over a thousand pages in length), Hooton also

wrote several introductory texts that were widely used and lasted through multiple revisions. *Up from the Ape* (1931, 1946) was his best-known work, covering the scope and range of physical anthropology and providing detailed, illustrated instructions on anthropometry. *Man's Poor Relations* (1942) was the first comprehensive treatise on primates, primate taxonomy, and primate behavior. Their titles were sufficiently catchy to attract a wide and appreciative audience, and they were written in a friendly expository style so that students found them pleasant reading despite the wealth of technical material and the polysyllabic Greco-Latin names bestowed on individual fossils and primate genera and species.

Hooton also extended his writing to popularized accounts of his own contributions (such as *Crime and the Man*), and he was called upon to write a popular description of the Grant study at Harvard University. Since the study was dedicated to a biobehavioral understanding of normal college undergraduates, Hooton titled that popular work *Young Man, You Are Normal.*

Hooton also penned doggerel that has been likened to the work of Ogden Nash. Some of these verses were included in his scholarly texts, some found their way into his popular works, and others were used to enliven his classroom lectures and the lectures he was invited to give at conventions and conferences. His *Ode to a Dental Hygienist* was especially well received by dentists, who frequently invited Hooton to serve as a dinner speaker. Some of Hooton's more notable verses have been reprinted in volumes of poetry, and a representative selection (with illustrations also by Hooton) was reprinted posthumously under the title *Subverse* (1961). Like Ogden Nash, Hooton made use of unorthodox and surprising rhyme combinations.

Hooton became an accomplished cartoonist in his high school and college days and returned to this skill in the

second half of his academic career. Some cartoons enlivened his popular works, and a selection can be found in *Subverse,* including his rather hilarious drawing of a Harvard faculty meeting showing Conant at the dais and a back view of Hooton himself lounging in the front row.

HOOTON AND HIS PH.D. STUDENTS

For three decades, 1920-50 approximately, Earnest Albert Hooton was the major source of Ph.D. recipients in physical anthropology in the United States and indeed the world. This preeminence in the supply side stemmed, in equal parts, from Hooton's location in the Peabody Museum of Harvard University, from the laboratory and statistical facilities he built, from his inspiring teaching, and from his personality. The Department of Anthropology, in the Peabody Museum, was rich in archeological and ethnological holdings and had access to a remarkably complete research library, with long runs of scientific journals in many languages. The bone lab grew under Hooton and came to include extensive primate collections as well as collections of human skeletons from many parts of the world. Hooton also expanded his statistics laboratory, beginning at the time he participated in the Civilian Military Corps during World War I, and with continuing cooperation of the International Business Machines Corporation thereafter, thus providing a facility for data reduction and data analyses without parallel in the field.

Hooton excelled as a teacher, teaching all of the courses in physical anthropology himself until the postwar expansion of physical anthropology demanded additional course offerings. With continuing programs of research, with expeditions to staff, and (later) with commercial and military projects, he was able to provide work-related training and

financial support at a time when fellowships were scarce and uncommon.

Though a shy man in public, Hooton had a warm relationship with his graduate students, according each in turn the feeling of being most favored. While many professors doled out bits of research as thesis topics along their own lines of interest, Hooton encouraged his graduate students to look wide in search of investigative problems and then provided advice and counsel in the course of data acquisition and thesis writing. As a result, Hooton's students were diverse in their interests, some excelling in primate comparisons; some concentrating on prehistoric and protohistoric skeletal remains and skulls; other working in population biology, demography, and the secular (generational) changes of Americans or immigrant populations; and some in human genetics and histology.

Besides hour-long student conferences of the formal sort, Hooton had regular afternoon teas (especially on Saturdays), which provided social interaction, good conversation, and the opportunity to meet visitors from around the world. Thus, along with jasmine tea and shortbread, Hooton's graduate students (and other graduate students in anthropology) became acquainted with a wider academic world. As one of his former students calculated, getting a Ph.D. degree with Hooton included twenty-three gallons of jasmine tea, sixteen pounds of Scotch shortbread, and a surprising variety of people.

Most of the doctoral-level students produced by Hooton went on to professional positions in physical anthropology, thereby changing the composition of the American Association of Physical Anthropologists, which had been largely made up of anatomists and clinicians at the time of its inception. As their numbers grew, and as they gained in academic status, Hooton's students came to dominate the

AAPA for decades, eventually providing all of the elected officers for years and the majority of the executive committee. Given this start and a long-term near-monopoly of graduate students, it is not surprising that many of Hooton's products were elected to the National Academy of Sciences, including Baker, Garn, Howells, Hulse, Shapiro, and Washburn.

HOOTON'S PLACE IN NATURE

It is difficult to evaluate Hooton or to rank him among his peers for he held a unique position in physical anthropology and was without parallel. Only Franz Boas at Columbia and Ales Hrdlicka at the Smithsonian had comparable stature and recognition in the scientific community.

Hooton's honors included membership in the National Academy of Sciences, the Viking Fund Medal in Anthropology (he was the second recipient), and an honorary degree from Lawrence College. He was one of the founding members of the American Association of Physical Anthropologists, serving as president from 1936 to 1938 and associate editor of the *American Journal of Physical Anthropology* from 1928 to 1942, working closely with Hrdlicka. Hooton was also much esteemed as a guest lecturer and dinner speaker at various professional conventions, including the NAACP. *Life* magazine devoted a six-page spread to him under the title "Hooton of Harvard" (Aug. 7, 1939, pp. 60-66).

Hooton was often quoted in daily newspapers and news magazines, for his pithy comments were highly quotable. That and some of the titles of his popular books (*Apes, Men and Morons, The Twilight of Man*, etc.) did not sit well with more conservative colleagues and publicity-averse members of the Harvard faculty, including Harvard president James Bryant Conant. Hooton's comments were much appreciated by generations of Harvard undergraduates, however,

and his popular "Anthropology A" course was long well attended by premedical students, liberal arts majors, and socialites alike. Lectures, according to Hooton, "need not be the same as a sleeping pill."

THE LAST YEARS

Though Hooton reached the official retirement age at Harvard after his sixty-fifth year, he was invited to return by a new and more favorable administration at Harvard and happily resumed teaching introductory courses that had decreased in enrollment. He was actively teaching "Anthropology 10" when he died unexpectedly of a vascular accident.

Shortly before his death, Earnest Hooton expressed a desire to visit England once again to renew his acquaintance with Sir Arthur Keith, his old mentor and friend and "hear his cheerful voice again." This was an unusual decision on Hooton's part, for he detested travel except to the annual meetings of the American Association of Physical Anthropologists, and his yearly treks to Pinehurst, North Carolina, to play golf.

Hooton was survived by his wife Mary Camp Hooton, whom he married in 1913, by two sons (Newton and Jay), one daughter (Emma Hooton Robbins) and two grandchildren. Though he had agreed to accept a doctor of letters degree at the University of Wisconsin-Madison, the award was made posthumously at the 1954 spring commencement. Thereafter, an Earnest Albert Hooton professorship was established at the University of Wisconsin-Milwaukee, and its first incumbent was, fittingly enough, a pupil of a pupil of Hooton's.

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