TABLE II

ALTERNATE EROSION AND ALLUVIATION IN SOUTHWESTERN VALLEYS

	Erosion	Various dates after 1885 A.D. Established on historical evidence.
3.	Alluviation	Contains artifacts and potsherds indicating deposition from about 1400 to 1885 A.D.
	Erosion	In places dated by archeological means in the interval 1100–1400 A.D., probably 1250 A.D. and later.
2.	Alluviation	In places contains human cultures, may eventually be divisible into two or more periods of alluviation.
	Erosion	Large gullies formed with evidence of strong wind action.
1.	Alluviation	Usually contains extinct animals; artifacts generally absent, except the Abilene-Gibson culture of the Durst silt.

The second period of alluviation presents many problems. In places in New Mexico and Arizona it appears to be of early Puebloan date. In Texas it corresponds in time to part of the Clear Fork culture. These and related archeological stages are not yet harmonized, and it is possible that this second period of alluviation is actually a complex that will prove to be divisible into two or more stages.

The first period of alluviation is even more synthetic. The older beds which usually are slightly cemented and contain extinct animals have been put in this category. The fossils are so meager in number that they afford no critical evidence as to age. Only near Abilene is this older body of alluvium artifact-bearing. Here the Durst silt contains *Elephas,* Abilene and Gibson points.[33] These cultural objects are generally thought to have considerable antiquity, but until a definite tie with the Folsom culture can be made, the alluvial sequence hangs in the air. Even if a tie were made in Texas, the other alluvial beds which have been correlated with the Durst, but have so far proved sterile, may not be the exact equivalent.

The alluvial chronology even in its imperfect present state is an advance in knowledge. It seems likely that it may eventually be integrated with the sequence of dune deposits. Hack[34] has correlated the main body of dunes in the Hopi Country with the first period of erosion. Huffington and Albritton[35] have suggested that the three periods of dune formation in the southern High Plains correspond to the three periods of erosion of this sequence. When and if the alluvial and dune sequences can be tied to the general climatic rhythm, a powerful tool in chronology will have been forged.

CONCLUSION

The problem of the antiquity of man in America has lost its heretofore hypothetical character. It has become a series of detailed problems involving the antiquity of several Paleo-Indian cultures. These cultures, when better known, can be tied to each other archeologically. Also each site studied by geologic methods contributes to a general geologic chronology in step with the rhythm of climatic fluctuations.

OBITUARY

WILLIAM WEBBER FORD

1871–1941

WILLIAM WEBBER FORD, professor emeritus of bacteriology in the Johns Hopkins University, died of cancer at the Johns Hopkins Hospital on February 10, 1941, following a short illness. He was born December 15, 1871, in Norwalk, Ohio, the son of Dr. James Ford and Cornelia Cook Ford. Upon completion of his preparatory education he entered Western Reserve University, from which he received the A.B. degree in 1893. Possessed of an inquiring mind and influenced by his close association with his father it was quite natural that he should then take the obvious next step and enter upon the study of medicine. This he did by matriculation in the Johns Hopkins Medical School, from which he received the M.D. degree in 1898. The next year, 1898–1899, he served as resident house officer in the Johns Hopkins Hospital.

During his medical course Ford came directly under the influence of Dr. William H. Welch, who at that time was teaching pathology and bacteriology in the Medical School. As a consequence of this contact, though also influenced by his association with Kelly, Halstead and Osler—the Big Four of the early days of Hopkins—Ford's natural interest in scientific medicine and research received an impetus which resulted in his election of a career in teaching and investigation rather than in the clinical field. During the years 1899–1901 Ford served as a fellow in pathology at McGill University, and from that institution he received the D.P.H. in 1900. Subsequently, he was appointed a fellow in the Rockefeller Institute for Medical Research, 1901–1903, studying at the Institute for Infectious Diseases in Berlin, 1901–1902, and at the Johns Hopkins University, 1902–1903. In the years immediately following he successively served as instructor in bacteriology, 1903–5; associate, 1905–6; and associate professor, 1906–10, in Welch's depart-

[33] Cyrus N. Ray, *Tex. Arch. Pal. Soc. Bull.,* 12: 223–237, 1940, and papers referred to.

[34] John T. Hack, *Mus. of North. Ariz. Museum Notes,* Vol. II, pp. 67–73, 1939. *Geogr. Rev.,* Vol. 31, pp. 240–263, 1941.

[35] Roy Huffington and C. C. Albritton, *Am. Jour. Sci.* (in press).

ment in the Johns Hopkins School of Medicine. In 1910 he was appointed associate professor of bacteriology and hygiene in the Johns Hopkins School of Medicine, a position he held until 1917. During 1917–18 Dr. Ford was lecturer in hygiene and legal medicine and from 1918–1936 lecturer in hygiene in the School of Medicine. In the meantime the School of Hygiene and Public Health in the Johns Hopkins University had been organized with Welch as its first director and professor of bacteriology and immunology. In this new venture it was quite natural that Dr. Welch should take his assistant with him from the Medical School, and so it was that Ford became associate professor of bacteriology in the School of Hygiene and Public Health in 1918. In this position he virtually organized the department of bacteriology and continued to serve as its real head until 1922, when Dr. Welch relinquished the professorship to devote himself exclusively to the administrative duties of the rapidly growing school; Dr. Ford thereupon became professor of bacteriology and continued to hold this title until his retirement in June, 1937. From 1937 to the date of his death he held the title of professor emeritus of bacteriology in the Johns Hopkins University.

W. W. Ford was one of the most modest and retiring of men and I am sure was generally unappreciated except by those having the opportunity of close association with him. These fortunate individuals could not fail to recognize his sterling qualities; his thoroughness, the breadth and depth of his knowledge, his keen scientific insight, his modesty, generosity, loyalty and innate kindliness. In his contact with colleagues and students no one ever more readily placed himself at the disposal of others. His fine record of published work covered a remarkably wide range of subjects and was equaled only by what he did, quietly yet meticulously, on behalf of his associates and students. It would be too much to reproduce Dr. Ford's complete bibliography; suffice it to say that it includes original observations in the fields of pharmacology, immunology, bacteriology, the higher fungi and of recent years, in the history of his chosen branch of science. During his early career Dr. Ford was particularly interested in mushrooms and mushroom poisoning and was internationally recognized as an authority on the subject. His scientific publications in this field were numerous and, though somewhat diverted later on, he never really lost his interest in this group of plants. Beyond this, and without disparaging any of his other work, it may be said that Dr. Ford's chief interest lay in the field of descriptive and determinative bacteriology. Here he was at his best, and his years of devoted study culminated in the publication of his "Text-book of Bacteriology," which is truly a classic from the standpoint of the authentic description of species. Most recently—since his retirement—his studious efforts came to fruition in his published "History of Bacteriology."

Dr. Ford was a member of many scientific societies but was particularly interested in the Society of American Bacteriologists, the American Association for the Advancement of Science, the American Medical Association, the American Society of Naturalists, the American Association of Pathologists and Bacteriologists and the Society for Experimental Medicine and Biology.

In his adopted State of Maryland he was repeatedly appointed a member of the State Board of Health, serving during the years 1913–1935.

In 1902 Dr. Ford married Louisa Wright Neilson, a water-color artist of note, and their daughter, Mrs. Sidney Montgomery, is now living in West Chester, Pennsylvania. Mrs. Ford died in 1930, and Dr. Ford subsequently married Charlotte Manning, who survives him, together with a daughter, Miss Margaret Annina Ford.

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SCIENTIFIC EVENTS

SYMPOSIUM ON THE RESPIRATORY ENZYMES AND THE BIOLOGICAL ACTION OF THE VITAMINS

A SYMPOSIUM on "The Respiratory Enzymes and the Biological Action of the Vitamins" has been arranged jointly by the University of Wisconsin and the University of Chicago to be held from September 11 to 17, inclusive. The first sessions, from September 11 to September 13, will be devoted largely to the respiratory enzymes and will be held on the University of Wisconsin campus. On September 14, after an outing, the group will move to the University of Chicago where from September 15 to September 17 the sessions will be devoted to the vitamins.

At Madison the speakers will be Otto Meyerhoff, Eric Ball, F. Lipmann, K. G. Stern, F. Schlenk, T. R. Hogness, Elmer Stotz, C. F. Cori, E. A. Evans, Jr., and P. P. Cohen. The following will speak at Chicago: W. H. Taliaferro, R. R. Williams, S. Ochoa, Norman Jolliffe, P. György, W. H. Sebrell, C. A. Elvehjem, D. T. Smith, S. Lepkovsky, T. Spies, R. J. Williams, E. Gordan, V. du Vigneaud, W. H. Griffith, C. G. King, F. C. McLean, D. W. MacCorquodale, H. P. Smith and E. D. Warner.