



Photograph of Douglass examining Chetro Kettle beams, taken at the Laboratory of Tree-ring Research, University of Arizona, Tucson, 1957.

ANDREW ELLICOTT DOUGLASS

1867–1962

Andrew Ellicott Douglass was an astronomer who did more for American archaeology than any American archaeologist, for he perfected a method by which many prehistoric ruins have been dated — the tree-ring calendar for the Southwestern United States. He died in his 94th year, March 20, 1962, at his home in Tucson, Arizona. Mrs. Douglass, the former Ida E. Whittington of Los Angeles, an accomplished pianist, survives.

As an astronomer, Douglass was primarily concerned with Mars and its “canals” but the whole solar system was his field of inquiry. With an A.B. from Trinity College in 1889 he went to Harvard Observatory and from there in 1894 to Lowell Observatory at Flagstaff, Arizona. It was during this first year at Lowell that he recognized a possible relationship between climate and plant growth. He recorded the annual rings of pines and Douglas firs from local forests and in 1911 he discovered

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duplicating records among trees felled near Prescott, 50 miles or more to the southwest.

This "cross-identification" confirmed his theory that climatic factors were reflected in tree growth and he promptly turned his attention to the long-lived Sequoias of California in the hope of finding therein a direct bridge to the pines and firs of northern Arizona. It was this pre-occupation with the giant Sequoias, perhaps, that prompted him later to warn me that there was nothing to be gained in collecting specimens less than 6 inches in diameter. And charcoal, too, was quite useless — until charred material from Pueblo Bonito proved entirely readable when properly treated.

Douglass' first contact with archaeology came in 1915 through Clark Wissler of the American Museum of Natural History. Although Wissler (1921, *Natural History*, Vol. 21: 13–26) associated Douglass with the Archer M. Huntington Survey of the Southwest, organized in 1909, it was six years later according to Douglass (*Natural History*, Vol. 21: 27–30) before he received word of Wissler's interest in his climatic researches and 1918 before he received from Earl H. Morris, at Wissler's request, the nine beam sections from Aztec Ruin and Pueblo Bonito that led to the cross-dating of these two famous ruins. Wissler may not have realized it at the time but Douglass' principal concern in 1918 was not in comparing the age of one ruin with that of another but in ascertaining what evidences of rainfall were preserved in their prehistoric timbers. At a meeting held in Washington in the autumn of 1920, Wissler stated that the American Museum was not prepared to pursue Douglass' climatic researches further and relinquished whatever claim it had on his cooperation.

The following spring, 1921, the National Geographic Society inaugurated its exploration of Pueblo Bonito, Chaco Canyon National Monument, New Mexico, and, as leader of the expedition, I wrote Douglass offering to send him whatever beam material we might recover and inviting him to attend a camp symposium I had planned for late summer. But neither I nor anyone else, so far as I know, had any thought at that time of a tree-ring calendar. It was a year later, December 8, 1922, while attending a conference on cyclic phenomena at the Carnegie Institution of Washington, that I heard Douglass illustrate a point by citing the cross-dating of Pueblo Bonito and Aztec Ruin. It occurred

to me at the moment that, if this were possible, it was also possible to reach backward through the Spanish missions and older Pueblo villages to Chaco Canyon and its period. The dating of Pueblo Bonito with reference to our own calendar became at that moment a definite objective of the Pueblo Bonito expeditions.

That chance thought of early December, 1922, was conveyed to Gilbert Grosvenor, President of the National Geographic Society, and Dr. Frederick V. Coville, then chairman of the Committee on Research, and brought about the Society's beam-collecting expeditions of 1923, 1928, and 1929. Douglass has presented the results of those three search parties in his many articles and especially in those of 1929 and 1935 published by the National Geographic Society. Following his instructions and mine, the first two expeditions, manned by J. A. Jeançon, Oliver G. Ricketson, and L. L. Hargrave, traveled widely and collected several hundred beam specimens. With the active guidance of H. S. Colton, director of the Museum of Northern Arizona, and the advice of A. V. Kidder, the expedition of 1929 focussed its attention upon yellow-pottery producing ruins of the upper Little Colorado River Valley. And there, with L. L. Hargrave and Emil W. Haury participating, Douglass finally attained our goal. Search for the age of Pueblo Bonito, which began in isolated Chaco Canyon, New Mexico, in 1922 came to its happy end seven years later in the then lonely little town of Showlow, Arizona.

Among the 159 titles in a Douglass bibliography published in *The Tree-ring Bulletin* for May 1962, 121 have appeared since 1909 and of these 81 refer to some phase of climate, cyclic phenomena, and tree-rings. Eight of the 15 titles published between 1945 and 1951 pertain to the long annual records of the California Sequoias.

It was this preoccupation with sunspots, solar variations, and tree-growth that brought about Douglass' wide recognition outside his own profession. Among other awards, it led to his appointment as research associate of the Carnegie Institution of Washington; to his designation as a life member (honorary) of the National Geographic Society; and to the 1931 award of \$2500 from the Research Corporation of New York. But I am sure I do his memory no great injustice in saying now, after an association of more than 40 years, that Douglass was never really inter-

ested in archaeology, as such. To him it was a means to an end. He was forced into archaeology against his will — surprising as this may be to many.

The contributions of Andrew Ellicott Douglass as an astronomer will be evaluated by others. To me his chosen career was almost pre-ordained. He was named for his great-grandfather, Andrew Ellicott, a noted astronomer and geographer of his time. His father and both

grandfathers were university presidents. His life was devoted to the service of others, in and near the classroom. When I last saw him, in early September, 1959, his otherwise empty garage was papered down one side and back the other with charts illustrating the periodicity of sunspot maxima. He was prepared for another decade or more with his favorite research problems.

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