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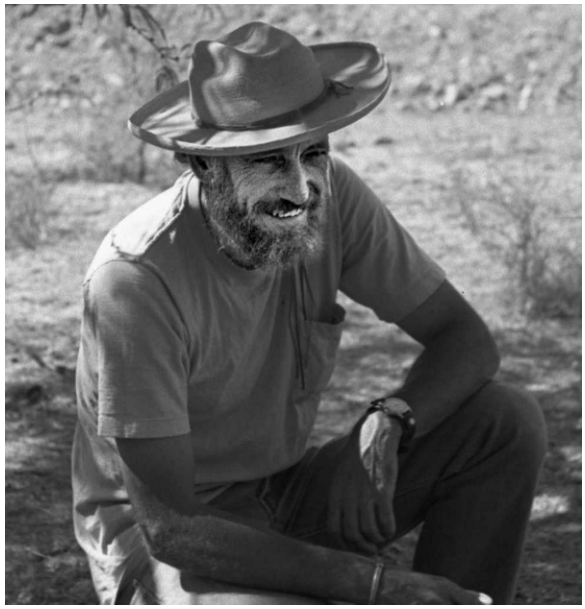
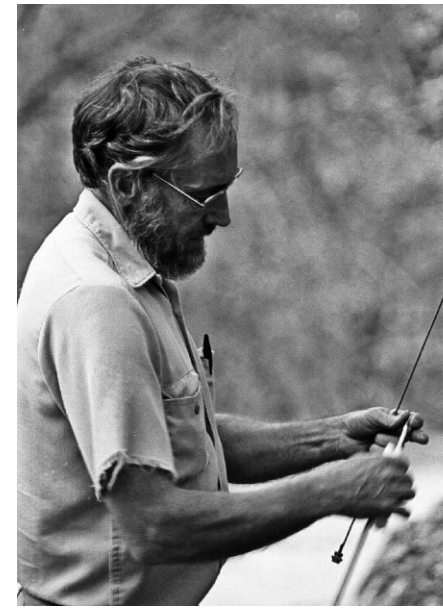
In Memoriam

MARVIN A. STOKES

1927–2010





(Photo Credits- T. Harlan)

Marvin A. Stokes, a dendrochronologist who studied tree rings in ancient Navajo dwellings and Spanish Colonial mission churches in the southwestern United States and northern Mexico died April 7, 2010, in Tucson at the age of 82. Stokes worked as a scientist and educator at the Laboratory of Tree-Ring Research (LTRR), University of Arizona in Tucson for 37 years.

Stokes' tree-ring dating of wooden beams from ancient Navajo dwellings and other structures was used by the U.S. Indian Claims Commission in the 1960s to settle reparation claims by the Navajo Nation. Stokes' research was key in supporting the Navajo Nation's claim that its people had been living in the American Southwest for centuries.

Following the Navajo Land Claim work, Stokes led U.S. National Science Foundation-supported expeditions in northern Mexico, sampling tree rings in ancient trees and roof beams of old mission churches. Stokes also collaborated in the reconstruction of exactly-dated forest fire histories from tree rings, and he co-wrote with Terah L. Smiley, one of the most frequently cited books in the field of dendrochronology, "***An Introduction to Tree-Ring Dating***", first published in 1968 by University of Chicago Press, and reprinted by University of Arizona Press in 1996.

In the foreword to the 1996 book, Bryant Bannister (professor emeritus and former director of the LTRR) referred to it as the "classic introduction to the field of dendrochronology." Bannister went on to say, "Of course the world of dendrochronology has changed dramatically in the three decades since this book was first

published… Yesterday's slide rule has been replaced by the math coprocessor of today's personal computer. But the reader should not be misled by these high-tech changes, because no matter how complex and sophisticated the tools and techniques of dendrochronology have become, the fundamental principles underlying the dating of a tree-ring specimen will always remain the same. Therein lies the beauty of this book, for the authors have presented the basic procedures of the entire dating process in such a clear and systematic fashion that their introduction is just as valuable to the interested reader today as it was nearly thirty years ago.''

Stokes was born in Aberdeen, South Dakota, November 3, 1927. He served in the U.S. Army Air Corps from 1945–1948 conducting geodetic survey in Greenland and elsewhere. He was a park ranger at Mesa Verde National Park in 1953. He earned a Bachelor of Arts degree in anthropology in 1952 from the University of Colorado at Boulder, and a Master of Science degree in botany from the University of Arizona in 1965. He began working at the LTRR in 1953 as a laboratory assistant. He was appointed assistant professor in 1967, associate professor in 1972, professor in 1977, and emeritus professor upon his retirement in 1989.

Stokes' wide-ranging field studies with Thomas P. Harlan and others in the western United States and Mexico contributed to a continental-scale network of tree-ring width chronologies from drought-sensitive trees. Beginning in the late 1960s Stokes' LTRR colleagues, led by Harold C. Fritts and Charles W. Stockton, employed these data for producing the first statistically-calibrated reconstructions of drought history and Colorado River flows extending back more than 400 years.

Stokes is remembered with affection and gratitude by a generation of distinguished dendrochronologists whom he mentored. ''Marv was the one who introduced me to tree-ring analysis in the Fall 1969 semester with his ''Introduction to Dendrochronology'' class and I am forever grateful,'' said Edward R. Cook, director of the Tree-Ring Laboratory at Lamont-Doherty Earth Observatory, Columbia University. ''It truly did change my life for the good. He was a wonderful and very generous man and an excellent teacher… My proudest moment was in working on some very difficult samples with lots of missing rings. When I correctly completed the dating on my own, Marv said to me 'Well, I guess you are a dendrochronologist now'. It couldn't get any better than that! I still consider it one of the highlights of my life.''

''Marv was far more than just a mentor to me,'' said David W. Stahle, distinguished professor and director of the Tree-Ring Laboratory at the University of Arkansas. ''He saw something in an enthusiastic but very immature undergraduate student, me, and helped him grow up and pursue a meaningful career. He hired me as an assistant in the Modern Studies section, and then as his student assistant on the Mexican Tree-Ring Project …and what an adventure and privilege it was to tour the remote forests of the Sierra Madre, to study the authentic Jesuit and Franciscan era missionary churches of northern Mexico, and to build tree-ring chronologies where they had not existed before. Around the campfire we often spoke about the goal of extending the tree-ring record into central Mexico to document climate changes during the development of Mesoamerican civilization. I called Marv a few weeks ago to tell him that Jose Villanueva [an eminent Mexican dendrochronologist] and I have finally achieved that goal with the development of the long Montezuma baldacypress tree-ring chronology in Queretaro dating from AD 771-2008. …So for what it is worth, one of the legacies of Marvin Stokes has been my career and the continuing development of dendrochronology in Mexico. He was a generous and trusting person and one I've tried to emulate.''

From a personal perspective, Marv was my first advisor and mentor when I arrived here as a graduate student in 1980. Marv and the late Jack Dieterich [a research scientist with the U.S. Forest Service] were using tree rings to study forest fire history, and Marv hired me to assist with that research. He was a gentle man, in the literal sense…and he had a wry wit. He loved field work, and the joy of finding old trees, sampling them and crossdating their tree rings. But more than that, he loved teaching and sharing these pleasures of discovery with others. What a great gift that was to so many of us.

—Contributed by Tom Swetnam