Towner Launches Beam Expedition

• *By Melanie Lenart*

Carrying on a tradition that brought the Laboratory of Tree-Ring Research its initial prominence as a research institution, LTRR adjunct professor Ron Towner has launched a "beam expedition" in northern Mexico.

Dr. Towner and colleagues are collecting hundreds of samples from beams used to build ancient cliff dwellings in northern Sonora, as well as cores from nearby living and dead trees. He plans to use these samples to create tree-ring chronologies that he hopes will apply to prehistoric archaeological sites throughout Sonora and Chihuahua.

"It's all concerned with the movement of prehistoric folks across the Southwest," Towner explained. "What we're interested in is human interaction."

The research effort harkens back to the expeditions of LTRR founder A.E. Douglass, whose tree-ring dating of beams from southwestern archaeological sites early in the last century established dendrochronology as a science, and the LTRR as a world-class institution.

"Without a regional chronology, some of the most interesting anthropological questions – particularly those related to interaction, trade, and migration – are impossible to address," noted the research proposal prepared by Towner and co-principal investigators, LTRR Professor Jeff Dean and Elizabeth Bagwell of the University of New Mexico. The international research team also includes collaborator Elisa Villalpando of the Instituto Nacional de Antropolgía e Historia Sonora, the state archeological office of Mexico.

The potential of the Sonoran dendroarchaeological research was indicated by David Street's dating of some of the laboratory's archived samples collected in the 1930s from cliff dwellings in neighboring Chihuahua. Dr. Street has recently returned from England to work as a Research Specialist in LTRR's archaeology program. Obtaining more dates for cliff dwelling beams would shed light on an ongoing debate in academic circles. Some scholars believe the ancestral Puebloans who thrived at Chaco Canyon in New Mexico from the 9th through the 12th centuries migrated south to establish the sophisticated cliff dwellings in northern Mexico. Others note that the cultures of the south in Central America were more complex than those in the north, indicating the cultural migration likely moved northward.

But all agree that interaction between the Southwest and Central America occurred, and that prehistoric cultures in northern Mexico must have been involved in the cultural exchange. Yet few sites in northern Mexico have been dated, and even fewer have been dated with the precision afforded by tree rings.

"The evidence from our collections will certainly contribute to the question of the direction of movement. With only a few pieces of data, you can create whatever theory you want. With more and more data, it often makes the picture more complex," Towner said.

The only northern Mexico site with reasonable age estimates for construction is in Paquime, near the town of Nuevo Casas Grandes in Chihuahua. Yet even these dates, some secured by LTRR professor Jeffrey Dean, are estimates because of erosion and because the prehistoric builders shaped the beams by squaring them off on one side.

Ron Towner extracts a core from a beam at Cueva Bringas in Sonora, Mexico.

Photo by Júpiter Martinez

Towner plans to incorporate some of the samples from living trees and missions in northern Sonora collected by retired LTRR professor Marvin Stokes in the 1970s. Although the results were not published, the samples remain in the LTRR archives. Chihuahua collections from tree-ring researchers Mark Kaib and David Stahle also might contribute to clarifying the bigger picture.

Dr. Stahle, of the University of Arkansas, developed a chronology that goes back to 1600 for the Chihuahua region. Towner hopes to build upon this to develop chronologies that would apply to the northeastern Sonoran cliff dwellings, which he suspects date back to the 1300s or 1400s.

His hope is to lay down the groundwork that will make tree-ring dating of archeological sites in northern Mexico "commonplace" over the next decade, thus improving understanding of these ancient people and the migrations that helped define their culture.

"People used to think that prehistoric people didn't go more than 20 miles from their homes in their lifetimes, and that's just not true," Towner said. "They were moving around."

Ron Towner

Cliff dwelling in Sonora, Mexico.