

# 2011 MEDALS & AWARDS

## RIP RAPP ARCHAEOLOGICAL GEOLOGY AWARD

Presented to  
**Don G. Wyckoff**



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*Oklahoma Museum of Natural History*

### *Citation by Jesse A.M. Ballenger and Stance Hurst*

The 2011 recipient of the Rip Rapp Award in archaeological geology is Don G. Wyckoff. Don completed his Ph.D. in Quaternary Studies at Washington State University in 1980 under the direction of Peter Mehringer. His distinguished career spans 50 years of research concentrated on the Southern Plains and Osage Prairie, where he has discovered, collected, and interpreted critically important pieces of the late Quaternary environmental and archaeological records, and where his emphasis on geoarchaeology will guide the interests of future archaeologists and Quaternary scientists alike.

One of Don's most significant contributions to the late Quaternary prehistory of the Southern Plains unfolded at the Burnham site in 1986, where stone tool debris was found in stratigraphic association with a 33,000-year-old *Bison alleni* skull. The resulting multi-year, inter-disciplinary project led by Don aimed to reconcile the association of extinct faunas and artifacts 20,000 years before the appearance of Clovis, no small task in light of the complex stratigraphic situation at the site. Relying on information from geomorphology, geochronology, pollens, snail ecology, and mammalian faunas, Don and his team were able to bring multiple lines

of evidence to bear upon the problem. The resulting report, published in 2004, describes evidence that the bones and artifacts were together in a secondary deposit, leaving the antiquity of the artifacts unresolved. At the same time, the Burnham project provided an important record of Oklahoma's Ice-Age past, and it is a benchmark as the first concentrated effort to break the so-called "Clovis barrier" in Oklahoma. In 2007, Don led another interdisciplinary team in investigations at central Oklahoma's Powell Farm site, another mid-Wisconsinan pond deposit with complex late Pleistocene and Holocene deposits overlying it.

One of the epiphanies to come out of Don's experiences at Burnham and other late-Quaternary fossil sites was the need to better understand the modern distribution of terrestrial gastropods. The resulting Southern Plains Gastropod Survey conducted by Don represents a quantified baseline survey of terrestrial gastropod assemblages along a 700 km transect spanning three physiographic provinces and four biotic districts. During 1995 and 1996, more than 35,000 shells assignable to 26 taxa of terrestrial gastropods were sampled by Don and his colleagues. The results of this study revealed an east-to-west shift in the composition of land snail taxa, and it provides an important reference for studying Quaternary fossil assemblages. From 1997 to 2005 this research team collected land snails from Oklahoma to the Canadian border, from the Ozarks to the Southern Plains, and south into central Texas. A book compiling all these findings is currently underway.

One of Don's most significant contributions to Plains archaeology began in 1962 when he led excavations at the deeply stratified Packard site in northeastern Oklahoma. The site included an assemblage of lanceolate-shaped projectile points (now known as the Packard Complex) beneath Dalton tools. With the advent of AMS dating, Don went back to the Packard site collections and was able to show that Plains-oriented groups were visiting eastern Oklahoma by approximately 9,800 B.P., immediately before or during the widespread expansion of Dalton populations in the region.

However, if we were to measure Don's contributions based on how he allocated his time and resources, his greatest accomplishment would have to be his recruitment and training of students. As an instructor, Don stressed the development of skills acquired first-hand in the field. In his graduate-level courses in geoarchaeology, he dedicated his weekends to escorting students

to various stratigraphic sections throughout the state in order to instruct them in the proper documentation of soils and sediments within but also apart from the complexities introduced by human occupation. In 2009 Don went a step further by publishing several student papers in *Geoarchaeology of the Cross Timbers*, Memoir 13 of the Oklahoma Anthropological Society. His lithic technology course required two semesters, the first to learn the vast literature dedicated to the topics of geology, fracture mechanics, and human tool using behavior, and the second to learn how to apply that knowledge to a nodule of rock.

Don's passion for prehistory has taken him down many roads, and in each case he arrived with an eye on the fundamentals of archaeological geology, scholarship, and mentoring. We believe his efforts reflect the spirit and the standards of the award he is receiving, and that both the Geological Society of America and past award recipients should be proud to recognize him in this way. It is therefore with great pleasure that I introduce Don G. Wyckoff as the 29th recipient of the Rip Rapp Award.

### *Response by Don G. Wyckoff*

Having former students and colleagues nominate me for this award is deeply appreciated. To actually receive this award is even more gratifying, yet very humbling given the list of previous recipients. I certainly don't consider myself in their league. So in accepting this award, I express my thanks to the geoarchaeological decision makers and especially to three colleagues who, since 1985, have played key roles in our combined efforts to understand what was going on in Oklahoma since mid-Wisconsinan times. Brian Carter, at Oklahoma State University, has been a constant source of knowledge and questions as we opened up stratified deposits tucked away in slopes in the central and northwestern parts of the Rolling Red Plains. Likewise, archaeologist-rancher Pete Thurmond consistently proved to be an astute observer and synthesizer as we recorded profiles and collected cores from Pleistocene and Holocene dunes and alluvial deposits in the Washita River watershed of western Oklahoma. Finally, Jim Theler, University of Wisconsin-LaCrosse, has enlightened all of us with his knowledge of gastropods and its application to paleosols and sediments dating back to over 150,000 years ago.

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My interests in geology, pedology, and past environments were initiated and sustained by Robert E. Bell, Peter Mehringer, and Henry Smith. Dr. Bell gave me a chance to run archaeological salvage projects in Oklahoma, and the first two sites dug revealed multiple occupations buried in diverse terrace settings. In addition to forcing me to become concerned with alluviation and taphonomic issues, the recovered artifacts were primarily of chipped stone. Given Dr. Bell's early study (1941 M.A. thesis, University of Chicago) of the prehistoric use of particular kinds of knappable stone

for certain kinds of chipped stone tools, his insights spurred me to continually seek better information on the bedrock sources of such materials. Such research is ongoing as now I am analyzing 8000 to 9000 year old artifacts from a southern Oklahoma site where quartzite formed and exotic chert clasts were deposited in middle Cretaceous beach sands. Frank Leonhardy supported my application to the Ph.D. program in Quaternary Studies at Washington State University, and there Pete Mehringer introduced me to palynology and raised my awareness of "secrets of the past" while Henry Smith taught pedology with

a strong emphasis on tephra, other eolian, and alluvial processes in soil formation and landscape development. I am indebted to these scholars and teachers. I thank my Oklahoma University anthropology colleagues for allowing me to develop and teach courses in past environments and human society, geoarchaeology, and lithic technology. The students proved worthy and demanding, and it was a pleasure to try to keep up with their expectations. To have my efforts recognized in the kind words and thoughts expressed by Stance and Jesse is most touching. I thank you all for this very special recognition.