

2008 MEDALS & AWARDS

RIP RAPP ARCHAEOLOGICAL GEOLOGY AWARD

Presented to E. Arthur Bettis III



E. Arthur Bettis III
University of Iowa

Citation by Rolfe D. Mandel

It is a great pleasure and honor to introduce my friend and colleague, Art Bettis, for the presentation of the 2008 GSA Rip Rapp Award. Recognition of Art's contributions to archaeological geology is long overdue, so I am pleased that the AG Division selected him for this award.

Art's academic training and professional experience in anthropology, soil science, and geology make him one of those rare individuals who can excel in all three disciplines. He also has the ability to combine knowledge from these disciplines in addressing archaeological problems that demand an understanding of human behavior and the earth sciences. Few people can effectively do this, but Art is one of them. In short, he is truly an interdisciplinary scholar, and archaeological geology, which is an interdisciplinary science, has benefited from his research and teaching.

Art's involvement in geoarchaeology spans more than 30 years. His most significant contribution to archaeological geology, and to the broader field of archaeology, is his work on soils and landscape evolution in archaeological contexts. He has played a leading role in determining how temporal and spatial patterns of erosion and sedimentation in stream basins affect the archaeological record. Art has published many articles dealing with

this topic, beginning in the early 1980s with several papers that focused on archaeology and Holocene landscape evolution in drainage systems of western Iowa. Soon after that he turned his attention to the Des Moines River valley, then moved farther east and attacked a bigger stream and more daunting problem: the relationship between the spatial pattern of landform sediment assemblages (LSAs) and the archaeological record of the upper Mississippi River valley. Art's approach to identifying and mapping LSAs in the Mississippi valley revolutionized alluvial geoarchaeology. Conceptualizing the landscape in this manner has provided archeologists with a range of powerful tools for evaluating and interpreting cultural resources preserved in sediments that constitute valley landscapes.

Art's expertise and contributions are not limited to the Midwest. Recently he has been studying Pleistocene and Late Pliocene landscape evolution in Central Java (Indonesia) as a context for *Homo erectus* occupation of Southeast Asia. In addition to reconstructing paleoenvironments, Art has provided information critical to interpreting the taphonomy of the hominid-bearing deposits in Java.

I have learned a lot from Art because he has always been willing to share his ideas. Collaboration is his mantra. This comment has been echoed by many of his colleagues. Art also has gained great respect among students for his teaching skills and willingness to train others who are interested in geoarchaeology. Although Art has heavy teaching and research loads and numerous other commitments, he often devotes considerable time to students. He has been a role model for many young geoarchaeologists coming out of the geoscience and archaeology programs at the University of Iowa and elsewhere.

In addition to his research and teaching, Art performed a significant service to the geoarchaeological community during his tenure as Chair of the AG Division in 1992, and as Editor-in-Chief of *Geoarchaeology: An International Journal* from 2003 through 2006. He is currently an Associate Editor for *Geoarchaeology*, and he continues to play an important role in promoting the journal.

If I had to identify a single attribute that stands out among Art's many qualities, it is his role in promoting the merits of field research. He is the ultimate "dirt" geoarchaeologist, always emphasizing the need to see landscapes and soils up close in person. Simply reading about theories

and methods of geoarchaeology in books and journals is not going to cut it with him. His passion for field research is apparent in his teaching, presentations at professional meetings, and collaboration with colleagues. Many of Art's students claim that his enthusiasm is contagious.

In sum, Art has been a driving force in geoarchaeology and undoubtedly will continue to have a strong influence on its direction. He deserves the recognition associated with the Rip Rapp Award because of his many outstanding contributions to the interdisciplinary field of archaeological geology. The Geological Society of America and members of the Archaeological Geology Division should be proud of honoring him in this way.

Response by E. Arthur Bettis III

Thank you, Rolfe, for the very kind words. I'm honored to receive this award and thank the Archaeological Geology Division Awards Committee for its support and George "Rip" Rapp, Jr. for his foresight in helping establish this division and for endowing this award. I've had the good luck of playing in the dirt with archaeologists for most of my career and what a wonderful windfall to be placed with the eminent prior awardees for the effort!

Reflecting on how I ended up doing geoarchaeology brings to mind the classic Grateful Dead line "what a long strange trip it's been ..." I've had a fascination for all things dirty and muddy since my parents let me start playing in the gully next to our house when I was 10. By the time I entered college at Iowa State University I had cleaned up my act—I was on a Navy ROTC scholarship to study bacteriology for climate control on nuclear submarines. To fulfill my social sciences requirement I took Introduction to Anthropology and met Bill Ringle, a disheveled Anthropology instructor who over the course of the quarter convinced me that Anthropology offered much more excitement and fun. I've always been somewhat of a science nerd and archaeology hit me as the part of Anthropology where I could pursue my interest in biology and get dirty at the same time. A summer field school at the newly reopened Lubbock Lake Site in 1973 convinced me that archaeology, especially zooarchaeology was for me.

After graduating with a BS in Anthropology in 1975 I worked for a year as a site supervisor mitigating prehistoric sites in the wake of Saylorville Dam flooding the

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central Iowa's Des Moines valley. Since we had taken a soils and geology class Larry Abbott and I were charged with assessing the stratigraphy of several sites and soon realized that our surface surveys in the valley had missed significant buried archaeological deposits and that we were in way over our heads. During visits to several deeply buried sites by soil stratigraphers from the ISU Agronomy Department I realized that the "matrix" rather than the artifacts was what interested me the most about archaeology; so much for my budding career as a zooarchaeologist.

Fall of 1976 found me enrolled in the Agronomy Department at ISU to begin a Masters program in soil genesis and morphology. I began a project on loess, changed to the origin of stone lines, and then had one of those life changing happenstances that pointed me back toward geoarchaeology. While on a soils field trip to Effigy Mounds National Monument I ran into Clark Mallam, an archaeologist at Luther College researching Effigy Mounds in northeastern Iowa. During our conversation Clark asked if I had a thesis topic and offered a soil genesis study at a mound group he and Dave Benn were excavating along the Mississippi Valley. That began a very productive collaboration with Dave that continues today. While completing

my MS I became involved in stratigraphic and soils work with Dave at the Rainbow Site in western Iowa where I found myself back in a gully very similar to the one I entered at age 10. That winter I came across a monograph by Daniels and Jordan outlining their stratigraphic and soil geomorphology studies in western Iowa's Thompson Creek Watershed. The alluvial stratigraphy they described was nearly identical to what I had documented at the Rainbow Site 120km to the north. This was a watershed moment for me—a regional alluvial stratigraphy that could have archaeological significance. Since that time much of my research has focused on the implications of regional alluvial stratigraphy for the archaeological record.

The accomplishments that this award is based on are due in large part to the colleagues and friends I've had the good luck and pleasure to work with. My "Dirt Brothers" Rolfe Mandel and Ed Hajic have been constant companions, a source of great ideas and critics of the best kind. Archaeologists Dave Benn and Dean Thompson were willing to look at sediment to understand the archaeological record and thus provided a new perspective on how to assess cultural resources in the Midwest. George Hallberg gave me the opportunity to become a "real" geologist, introduced me to the Quaternary

and made it possible for me to pursue my interests in geology, soils and geoarchaeology while working for a state geological survey. Under the tutelage of Tim Kemmis I learned to pay very close attention to the details of stratigraphic sections and came to better appreciate how scale affects our perceptions of sedimentary records. Dan Muhs opened my eyes to the wonders of geochemistry and has been an incredible springboard for ideas. Dick Baker has been my greatest inspiration both as an outstanding researcher and teacher and most of all by showing that one's greatest contribution is to be a really nice person. The person I owe the most to is my wife Brenda for enduring my long absences from home, for listening to my frustrations about academia, my musings about soils and mud and for being my moon and stars.

A final word to those aspiring to be geoarchaeologists. If you are a geologist, physical geographer or pedologist take as many archaeology courses and an archaeological field school if you can squeeze it in. If you are an archaeologist take as many soils, physical geography and geology courses as you can. Take every opportunity to go to the field. Go on field trips. Volunteer to work in someone's lab. Read voraciously. As Dr. Seuss said "The more you learn the more places you'll go".