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Abstract

GAIL ASHLEY

Rutgers University
Piscataway, New Jersey

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The Sedimentary Record of Human Evolution

When and where humans evolved are fundamental questions that capture our attention and spark curiosity. Until recently most geologists involved in human origins research were geochronologists interested in dating fossils and adding branches to the hominin family tree. Questions now being asked need an interdisciplinary approach. Why did humans leave the safety of trees? What were the drivers that may have nudged hominids toward bipedalism and developed species that failed, while only one ultimately succeeded? Were the development of tools, the exodus from Africa, and brain development leading to

language, art and imagination a passive or direct response to some paleo-environmental stresses?

Sedimentary Geology is crucial to finding the answers to these questions. Studies involving (1) stratigraphy and correlation, (2) paleoclimate and climate change, (3) paleoenvironmental reconstruction, (4) water and food resources, (5) sourcing of raw materials for stone tools, and (6) associated flora and fauna at sites in East Africa show that Sedimentary Geology provides fundamental insights into questions of human origins.

Gail Ashley



Dr. Ashley is a geoscientist of international stature. She is Professor II of Geological Sciences at Rutgers University (New Brunswick, NJ) and Director of the Quaternary Studies Graduate Program there. She has been at Rutgers for 30 years and supervised 37 graduate students (~50% were women). Her current research focuses on the paleoclimate record of East Africa during the time of early human evolution. She received her PhD from University of British Columbia and has served as president of the Geological Society of America (GSA), the Society for Sedimentary Geologists (SEPM), the American Geological Institute (AGI) and Vice-President of the International Association of Sedimentologists (IAS). Her publication list includes over 75 peer-reviewed articles and editorship of six books. She has also served as Editor-in-Chief of the international publication, *Journal of Sedimentary Research* (1996-2000) and on numerous National Research Council and National Science Foundation boards, committees and panels. She has received the New Jersey Women of Achievement Award, the Association of Women

Geoscientists "Outstanding Teacher Award" and both the Distinguished Service Award and Honorary Membership from SEPM.

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P.O. Box 979 • Tulsa, Oklahoma 74101-0979 USA

(918) 560-2621 • Fax; (918) 560-2678 • email: kdotts@aapg.org