

## PREHISTORIC STONE TOOLS OF EASTERN AFRICA

Stone tools are the least familiar objects that archaeologists recover from their excavations and, predictably, they struggle to understand them. Eastern Africa alone boasts a 3.4 million-year-long archaeological record, but its stone tool evidence remains disorganized, unsynthesized, and all-but-impenetrable to non-experts, and especially so to students from Eastern African countries. In this book, John J. Shea offers a simple, straightforward, and richly illustrated introduction in how to read stone tools. An experienced stone tool analyst and an expert stoneworker, he synthesizes the Eastern African stone tool evidence for the first time. Shea presents the EAST Typology, a new framework for describing stone tools specifically designed to allow archaeologists to do what they currently cannot: compare stone tool evidence across the full sweep of Eastern African prehistory. He also includes a series of short, fictional, and humorous vignettes set on an Eastern African archaeological excavation that illustrate the major issues and controversies in research about stone tools.

John J. Shea is Professor of Anthropology at Stony Brook University, New York. He is the author of *Stone Tools in Human Evolution* (Cambridge University Press, 2016) and *Stone Tools in the Paleolithic and Neolithic Near East: A Guide* (Cambridge University Press, 2012).

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PREHISTORIC STONE TOOLS  
OF EASTERN AFRICA  
A Guide

JOHN J. SHEA  
*Stony Brook University*

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*For all students of African archaeology.*

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## PREFACE

I wrote this book in order to improve Eastern African archaeological stone tool analysis. *Prehistoric Stone Tools of Eastern Africa: A Guide* describes how to measure and identify stone artifacts. This book introduces the East African Stone Tool (EAST) Typology, a framework for describing individual lithic artifacts from any period of Eastern African prehistory. In this respect, the EAST Typology differs from nearly all the other stone tool typologies currently in use in Eastern Africa. I envision the EAST Typology as a means for establishing concordances among typologies now in use. That is, Professor Jones' artifact type X and Professor Smith's artifact type Y are both equivalent to EAST Type IX.A.1.g (a convergent sidescraper). This work builds on Mehlman's (1989) efforts to establish concordances among typologies then in use for Middle and Later Stone Ages. I do not intend it to replace existing stone artifact typologies that archaeologists find adequate for their own research purposes. This being said, I have tried to make the EAST Typology as user-friendly as possible and adaptable to variable circumstances. One can use it in whole or in part and equally well to describe stone tools from Early Pleistocene sites as those from Iron Age contexts. In this respect the EAST Typology also differs from all lithic artifact typologies currently used anywhere else in the world.

Developing an artifact typology is an odd errand for me. A previous book (Shea 2013b) documented how colleagues working in the East Mediterranean Levant classified stone tools. Having shifted my research interest to Eastern Africa, I wanted to write a book that would make it easier for students to learn about the Levant's lithic record than my own experience. It was the most difficult thing I have ever written. As a stoneworker and archaeologist, I have never felt myself drawn to debates about artifact classification. As a stoneworker, questions about how earlier humans made and used stone tools interest me much more (Shea 2015). As an archaeologist, I care more about how we can use stone tools to answer questions about human evolution than about what we call them (Shea 2017b). As an anthropology professor, I exhort

my own students to “measure first, only classify if you must.” Still, one needs words for things. There may well come a day when archaeologists develop “wholly parametric” (exclusively measurement-based) ways of characterizing the stone tool evidence, but that day is not yet here nor even in sight on the horizon. Even if it was archaeologists would still need “a bridge to the twentieth century,” terms for the evidence we have unearthed in Eastern Africa so far. If we have to classify stone tools in order to describe them to one another, we might as well “intelligently design” these classifications. I hope *Prehistoric Stone Tools of Eastern Africa: A Guide* will help Eastern Africanist archaeologists (indigenous scholars and those who work in that region) understand stone tools and assist them in answering important research questions about African prehistory.

Stone tools suffer an undeserved reputation for being uninteresting. Indeed, some of this book’s more technical sections, namely Chapters 6–9, may be as tough a slog to read as they were to write. To convey some of the intellectual adventure of trying to make sense out of stone tools, this work punctuates its chapters with “Uwazi Valley Tales.” These short fictional episodes illustrate, from a student’s-eye perspective, some of the major issues in stone tool analysis in Eastern African archaeology. Kent Flannery (1976) adopted a similar strategy in his *The Early Mesoamerican Village*, a book I read as an undergraduate archaeology student. Flannery’s vignettes and archetypal characters (the Real Mesoamerican Archaeologist, the Skeptical Graduate Student, the Great Synthesizer) helped me better understand archaeology. I hope my Uwazi Valley characters will do the same for others. These episodes are works of fiction. Any resemblances to actual events or persons living or dead are entirely coincidental.

I do not expect that all of my colleagues in Eastern African archaeology will agree with all of my choices of terms or the distinctions I make (or fail to make) among artifact-types. So be it. All those things I have done, I have done in good faith and above all in hopes that they will improve Eastern African archaeology.



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For advice on how to improve the EAST Typology, I thank Justin Pargeter, Hilary Duke, and the numerous colleagues who commented on the earlier version of the typology that I posted online. I thank Steve Brandt and Stan Ambrose for helping fill gaps in my knowledge about more recent phases of Eastern African prehistory. For suggesting the fictional vignettes that comprise the Uwazi Valley Tales, I thank Katheryn Twiss. I thank Erik Otarolla-Castillo, Sonia Harmand, Jason Lewis, and particularly Christian Tryon, for reading and commenting on drafts of the manuscript-in-progress. Finally, I thank the Stony Brook University Inter-Library Loan Service, especially Jay Levenson and Donna Sammis, for their help in procuring references I needed to write this book. I thank, my wife, Patricia Crawford, for her patience and advice (even such of it as I ignored in writing the Uwazi Valley Tales). Opinions expressed herein and any errors or omissions are entirely my responsibility.

Because in-text citations would interrupt the narrative flow of Uwazi Valley Tales, I here acknowledge the following sources for ideas expressed in them:

Tim White (2000) for paleoanthropology's "inverted ecosystem."

Jonathan Kingdon (1993) for elephants' possible roles as Pleistocene trailblazers.

Corbey and colleagues (2016) for their theory that earlier hominins' long core-tools might arise from some sort of genetic programming and the bird song/nest analogy.

Louis Liebenberg (1990) for proposing that the scientific method originated from animal tracking.

Mentioned by name but not cited in the vignettes are Eric Boëda's (1995) work defining the Levallois methods, Shannon McPherron's (2006) comparative study of handaxes, and Richard Leakey's anti-poaching strategy (Leakey and Morell 2001).

For the "Eskimo seal hunting" story, I thank the late Irven DeVore but with a qualification. I am confident he told it in Harvard's Science B-29 Sex and

Human Behavior as an example of human strategic variability, but I cannot remember if he explicitly invoked it as a metaphor for scientific authorship. It was a long time ago, and memory fails me. If you like it, credit Irv. If it offends, blame me.

That “the shortest line between two people is laughter, for humor is truth,” is a quote from the Danish composer, pianist, and comedian, Victor Borge (1909–2000).