

1How to read stone tools – a new mode system for describing variation in the Eastern African
2lithic record?

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4*THE PREHISTORIC STONE TOOLS OF EASTERN AFRICA: A GUIDE* J. J. Shea 2020

5Cambridge: Cambridge University Press. ISBN: 9781108334969. £85.

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10Introduction

11Classification of stone artifacts is challenging yet essential for understanding hominin
12behavior in the deep past. *The Prehistoric Stone Tools of Eastern Africa: A Guide* attempts
13(a) to provide students interested in Eastern African archeology with a simple and
14straightforward introduction to stone tools; (b) to facilitate intraregional comparative analysis
15over time and space; and (c) to provide a new framework for investigating evolutionary and
16historically vital questions about hominins inhabiting the area. It accomplishes these goals
17exceptionally well, offering both a comprehensive overview of stone tool evidence in Eastern
18Africa as well as a novel system through which lithics from this region can be examined, the
19Eastern African Stone Tool (EAST) Typology. The book's author, John Shea, is successful in
20convincing the reader that the EAST Typology could reform stone tool systematics in Eastern
21African archeology; his expertise as an experienced stone tool analyst is demonstrated
22throughout this guide, yet how feasible his proposed overhaul of Eastern African stone tool
23systematics will prove to be, and how widely his novel framework will be applied, remains to
24be seen.

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26Unlike archeological theory and methods, which have seen consistent review, the
27classification of Eastern African stone tools has not experienced similar development.
28Multiple systems are presently adopted for categorizing African stone tools of similar age and
29provenance, such as Africa's 'Three Age System' and Modes 1-5^{1,2}, though whether these
30actually reflect patterning in the existing evidence is highly debated, especially as they
31inevitably undervalue the diversity and complexity of variation in the African archeological
32record³⁻⁵. Because of this 'lithics system anarchy' (a phrase coined by the Shea), many
33prominent scholars have previously called for a reform in stone tool systematics⁶⁻⁸, yet, so far,
34these have had little, if any, effect on scientific practice. For example, delegates of the 1965

35Burg Warstenstein conference proposed that the ‘Three Age system’¹ should be abandoned;
36however, they failed to produce an effective alternative and the terminology widely remains
37in use^{3,4}. Despite previous calls for continental-wide change being largely unsuccessful,
38Shea’s novel typology has good potential to drastically improve stone tool systematics in
39eastern African archaeology. Despite previous calls for continental-wide change being largely
40unsuccessful, Shea's novel typology has good potential to drastically improve stone tool
41systematics in Eastern African archeology. This is primarily because the author does not
42demand the rejection of widely used nomenclatures, as have previous reformation attempts,
43but rather methodologically addresses problematic areas specific to Eastern African
44archeology, such as redundant named stone tool industries⁹ (also widely known as
45NASTIES), in order to enhance the accuracy of stone tool categorization and standardize
46archeological practice in the region. Standardization could ultimately improve the accuracy of
47comparisons between sites which would greatly enhance our understanding of hominin
48behavior in the region. One of the main issues with not having a single set of standards
49through which to describe, classify, measure, or analyze stone tool evidence is that it makes it
50largely impossible to differentiate between variation deriving from hominin behavior across
51Eastern African sites and that introduced by semantics; the EAST Typology offers an
52impartial solution to this issue.

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54Impressively, this guide offers also one of the most comprehensive syntheses of Eastern
55African stone tool evidence to date. Despite the ever-increasing number of archeologists
56interested in Eastern Africa stone tool archeology and the huge amount of research interest
57(and funding) dedicated to understanding hominin behavioral evolution in the region, the last
58major overview of the Eastern African Stone Age record was published in the 1950s¹⁰. Shea's
59handbook therefore fulfills the need for a revised report detailing the current stone tool
60evidence, as well as an updated evaluation of how this body of evidence should be
61approached in practice. The EAST Typology borne from this synthesis offers a bespoke
62approach for the analysis of stone tool data across the expanse of Eastern African prehistory
63which could be very powerful coupled with transparent quantitative analysis¹¹. As noted by
64the author, it is especially poignant to fully understand behavior in this region due to its
65pivotal role in understanding long-term trends in hominin evolution.

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67A Guide to *Prehistoric Stone Tools of Eastern Africa*

68This book has three main sections. The first comprises Chapters 2–3, which provide a basic
69yet thorough introduction to stone tools and how to 'read' them. This book is targeted at
70students and professionals somewhat unfamiliar with prehistoric stone tools, therefore the
71author introduces the essential terms and concepts used to describe, examine, and interpret
72this type of evidence in these chapters. Shea familiarizes the inexperienced reader with the
73vocabulary used by archeologists when studying stone tools, as well as introducing them to
74the current debates in stone tool analyses. The author does well to place the student within
75these debates, offering advice on best practice and how students can contribute to these long-
76standing conversations.

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78Chapters 4–5 form the second section, describing Eastern Africa and the significance of its
79stone tool evidence for understanding prehistoric populations. An introduction to Eastern
80Africa's topography, geology, and environments—all of which influence hominin evolution
81and behavior in this region—is provided by Chapter 4. Importantly, this chapter also
82discusses the history of research in Eastern Africa and the current frameworks for the region's
83prehistory, demonstrating their implications for research today. Chapter 5 centers on the stone
84tool evidence in Eastern Africa, describing the different artifact types and NASTIES that
85typify major prehistoric age stages, the use of which—Shea argues^{9,12,13} - no longer holds
86merit based on the updated body of evidence. In Chapter 5, the author compares over 250
87archaeological collections from the Eastern African archaeological record using his
88previously established Lithic Modes A-I^{12,13}. The poor correlation between the stone tool
89evidence and his earlier framework justify the book's centerpiece, the EAST Typology. Shea
90acknowledges that not all artifacts will fit his EAST Typology (though dismisses this as an
91argument against its use) and welcomes proposals to recognize new artifact types, providing
92criteria through which these would be assessed. Such a dynamic mode system is arguably
93vital in a field like prehistoric archeology whereby single discoveries can lead to considerable
94overhauls in our understanding of early hominin behavior.

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96The third and largest section of the book, Chapters 6–9, introduces the EAST Typology. This
97novel framework describes Eastern African stone tools in terms of nine technological
98categories (Groups I–IX), within which further subdivisions define more specific artifact
99types. The hierarchical nature of this typological mode system enables archeologists to
100recognize consistencies among the many different stone tool typologies currently in use, as
101well as making it easier and more effectual to compare stone tool evidence across periods and

102regions. Chapters 6–9 also describe different ways of measuring artifacts, suggesting when
103different types of analyses should be used, which is particularly useful for inexperienced
104readers. In conclusion, Chapter 10 considers the wider questions in Eastern African
105archeology and how studies of stone tools in this region, as well as archeological and
106academic practice, can be made more relevant and useful to prehistoric research.

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108Running through this guidebook is a series of short fictional episodes set on an eastern
109African archaeological excavation in Uwazi Valley. Based loosely on real characters and
110events, Shea uses humorous dialogue to convey the realities of being an archeologist in this
111region, with each episode embodying the issues, controversies and topics raised by the author
112in each chapter. This truly brings the guide to life, making the content of this book more
113accessible to students with little contextual knowledge and experience through which to
114understand its content.

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116Reforming eastern African stone tool systematics

117This guide, and the associated EAST Typology, is a welcome addition to the reading list of
118any student or professional interested in African archeology. The style, content and nature of
119the book is ideally pitched as an introduction for those with little to no prior knowledge of the
120Eastern African stone tool record, providing helpful guidance, clear illustrations and detailed
121descriptions. Its extensive coverage of Eastern African stone tool evidence is outstanding but
122not overwhelming for beginners due to its simple and straightforward language. The EAST
123Typology is an easy-to-use yet comprehensive mode-based system that could be easily be
124adopted by students and professional alike.

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126The author succeeds in providing a standardized typological system for describing Eastern
127African stone tools, the absence of which has previously limited research in this region. As
128the author notes, such a reform in stone tool systematics has the potential to answer some of
129the most important questions in paleoanthropology, such as how stone working evolved and
130why it was abandoned in the majority of cases as well as queries about how sites of different
131ages and geography relate to each other.

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133However, whether the EAST Typology will become standard practice in Eastern African
134archeology, as the author optimistically intends, is far from clear. The author himself
135acknowledges that, historically, archeologists are reluctant to revise established artifact

136typologies with earlier attempts at reform, including his own Lithic Modes A-I^{12,13}, proving
137largely unfruitful. That said, similar recent calls for standardization in other areas of
138prehistoric archaeology¹⁴⁻²¹ suggests that Shea's appeal for abandoning well-known NASTIES
139in Eastern African archaeology in favor of a system free of presumptions is timely and
140opportune, despite some reservations about his total rejection of cultural taxonomy²².
141Therefore, *The Prehistoric Stone Tools of Eastern Africa: A Guide* offers an innovative
142solution that may be uniquely positioned to revolutionize research in eastern Africa, should
143archaeologists working in the region be receptive of it.

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145Acknowledgments

146I would like to thank Dr Matt Grove and Professor John Gowlett for their feedback I also
147acknowledge the funding received from the Arts and Humanities Research Council (DOI:
14810.13039/501100000267; Grant Numbers: AH/R012792/1).

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