

[Supplementary material]

Antarctica as a ‘natural laboratory’ for the critical assessment of the archaeological validity of early stone tool sites

Metin I. Eren^{1,2,*}, Michelle R. Bebber¹, Briggs Buchanan³, Anne Grunow⁴, Alastair Key^{5,*}, Stephen J. Lycett⁶, Erica Maletic⁴ & Teal Riley⁷

¹ Department of Anthropology, Kent State University, USA

² Department of Archaeology, Cleveland Museum of Natural History, USA

³ Department of Anthropology, University of Tulsa, USA

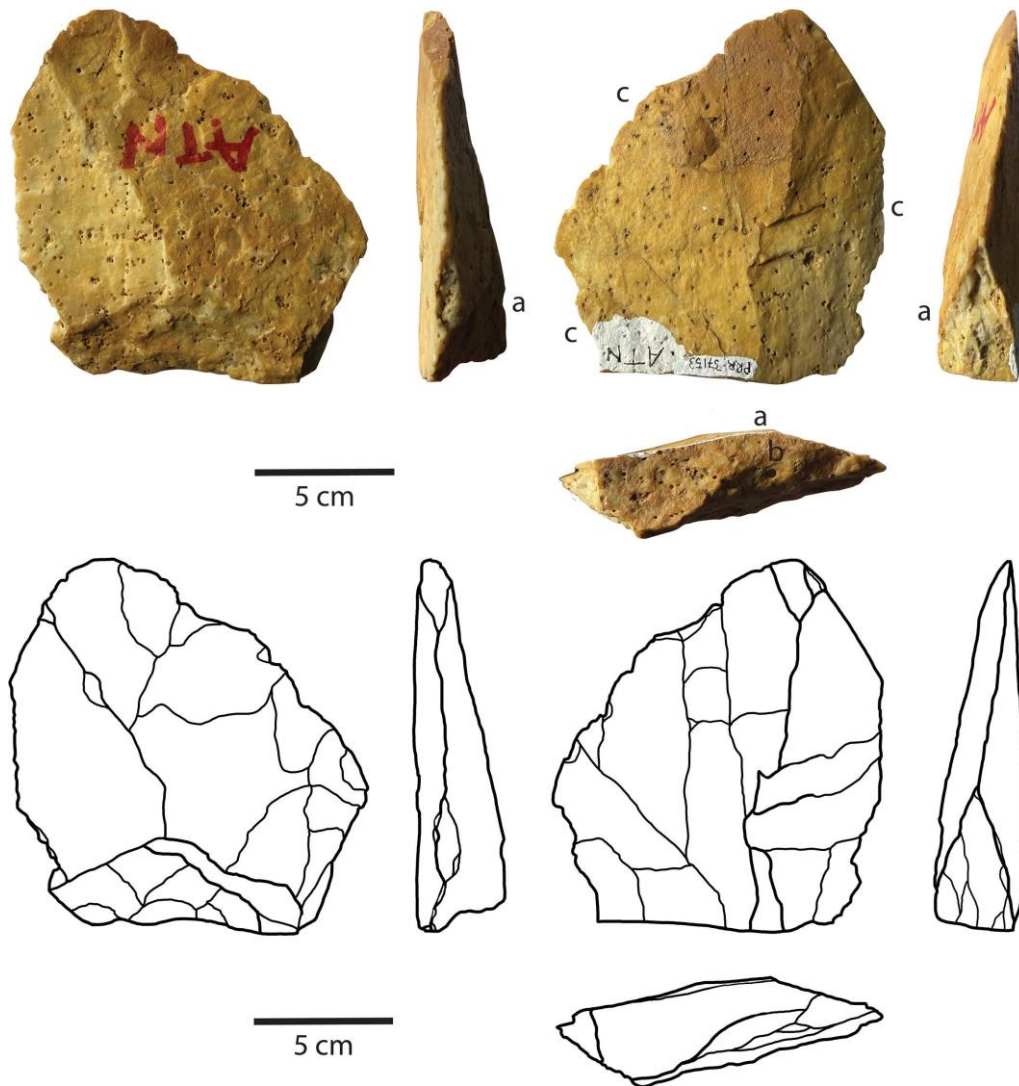
⁴ Polar Rock Repository, Byrd Polar and Climate Research Center, The Ohio State University, USA

⁵ Department of Archaeology, University of Cambridge, UK

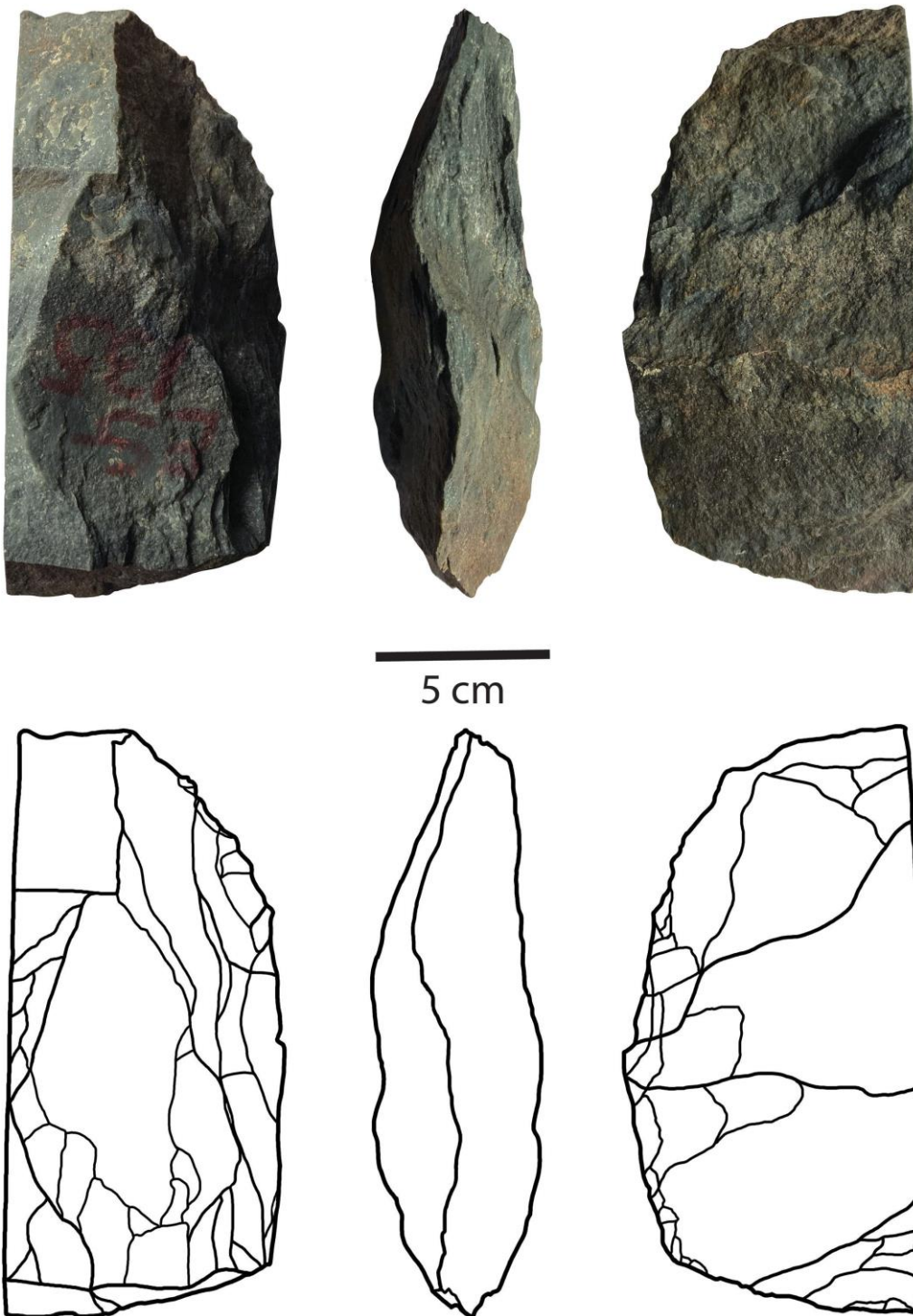
⁶ Department of Anthropology, University at Buffalo, USA

⁷ British Antarctic Survey, Cambridge, UK

* Authors for correspondence ✉ meren@kent.edu & ak2389@cam.ac.uk



Figures S1 (top) and S2 (bottom). This specimen (PRR-37153) possesses a morphology consistent with a large flake. It possesses what could be interpreted as a dorsal (left) and ventral face (third from left), blub of percussion (a), platform (b), and sharp edge (c) around its non-platform perimeter. All objects presented in the supplementary material were directly handled by, or observed by, the authors (i.e. the images here were not produced from the PRR database) (this image was produced by M.R. Bebber and M.I. Eren).

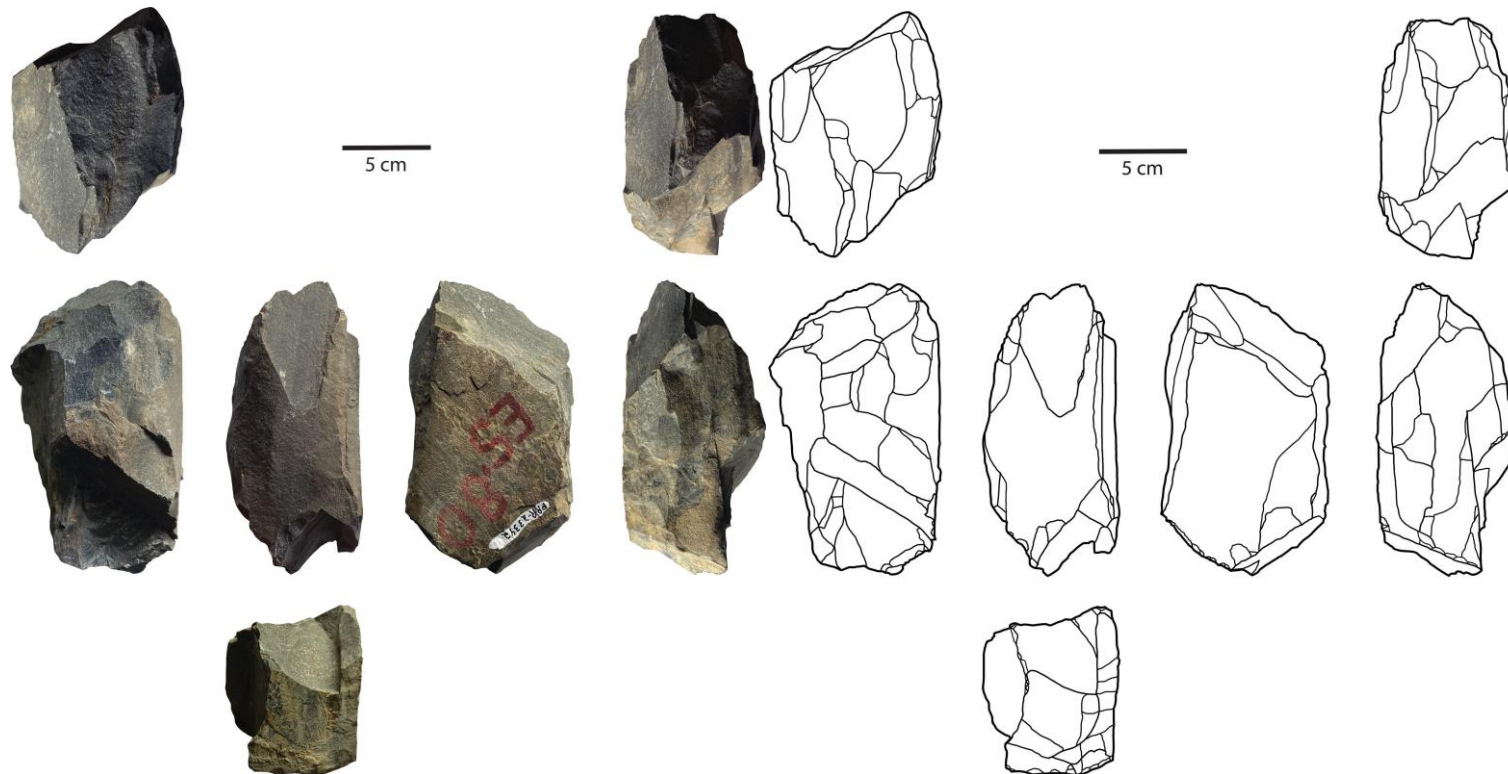


Figures S3 (top) and S4 (bottom). This specimen (PRR-23389)—had it been found in an archaeological context—would have been called a biface. It has had flakes removed both faces resulting in a sinuous bifacial edge and a clear bifacial plane. The flatness on one lateral side is due to a post-collection thin-section analysis that unfortunately cut the piece with a rock saw. We note that the ‘flake removals’ on this piece are lacking clear bulb of percussion negatives, which may be potentially due to its granularity, or due to the non-percussive nature of the removals. However, this is similar to discussions relating to

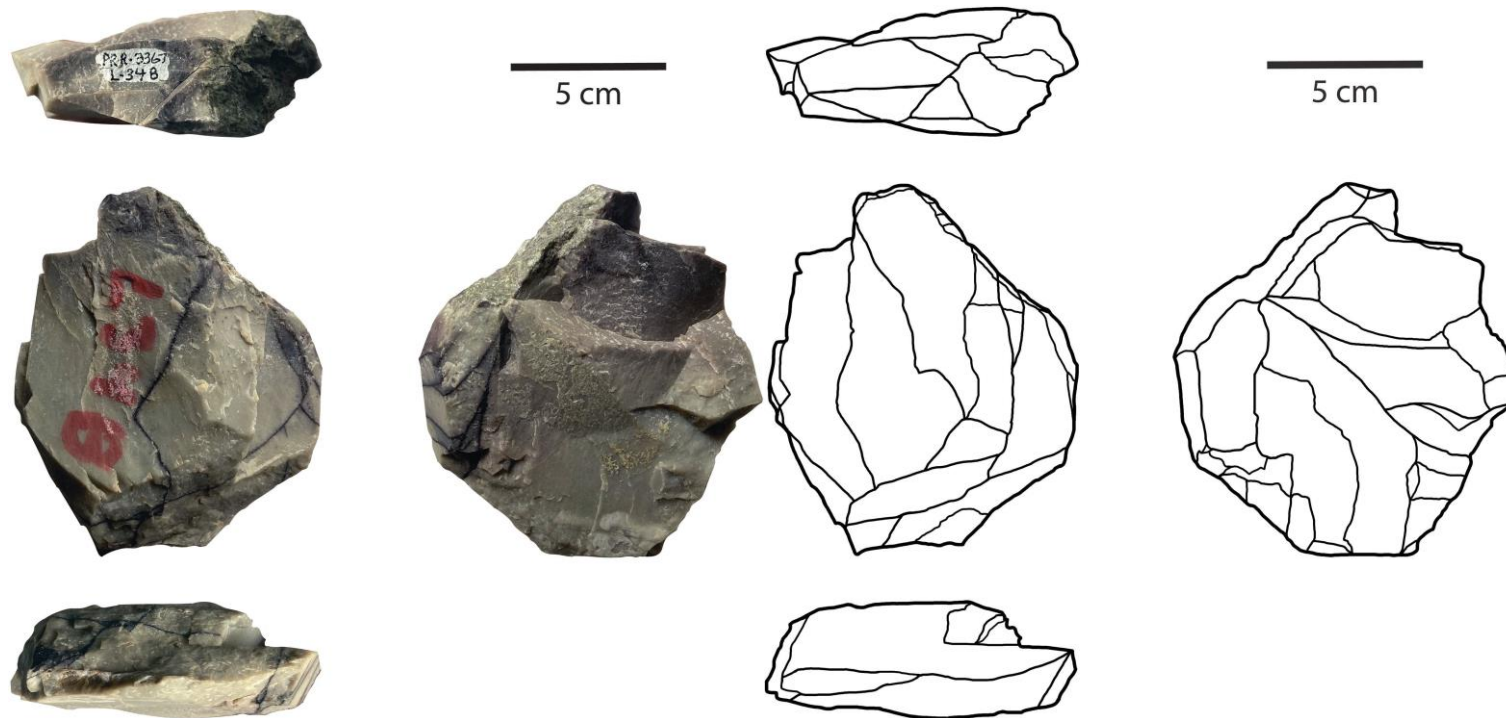
controversial sites where focus might be on whether alleged artefactual material possesses equally less ambiguous evidence (this image was produced by M.R. Bebber and M.I. Eren).



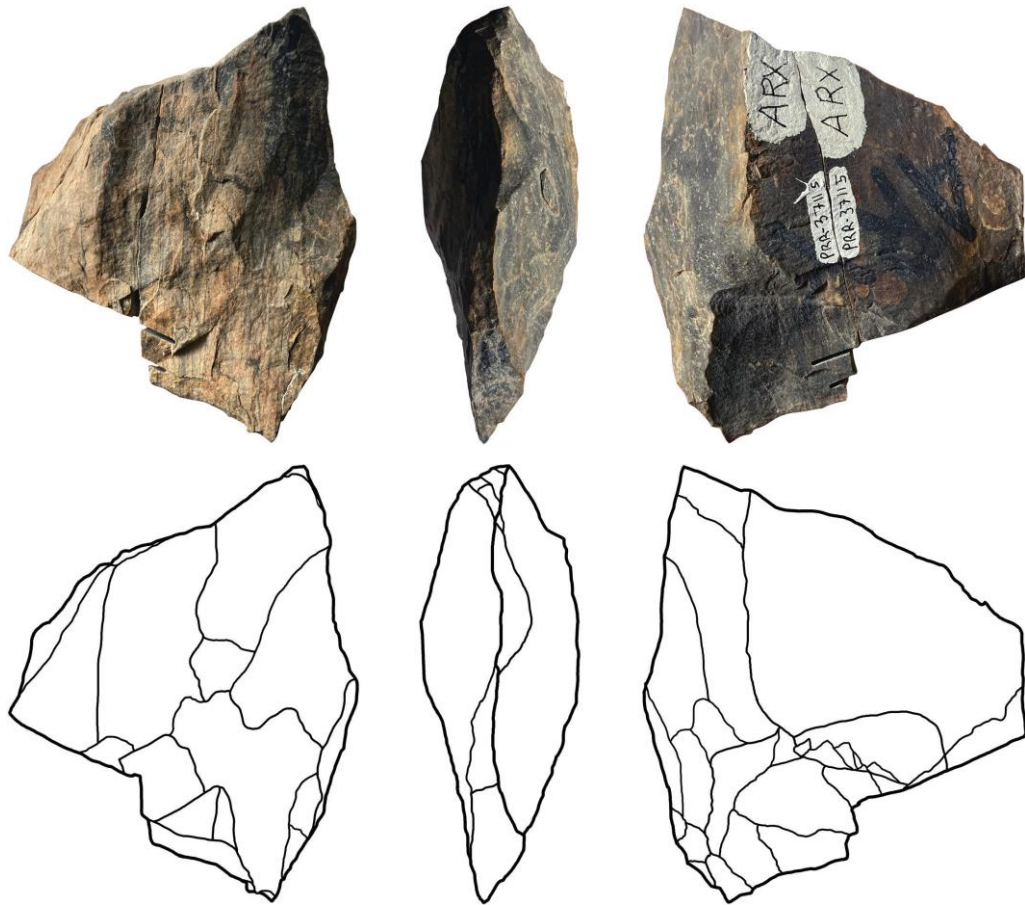
Figures S5 (top) and S6 (bottom). This specimen (PRR-37869) exhibits several conchoidal fractures (this image was produced by M.R. Bebber and M.I. Eren).



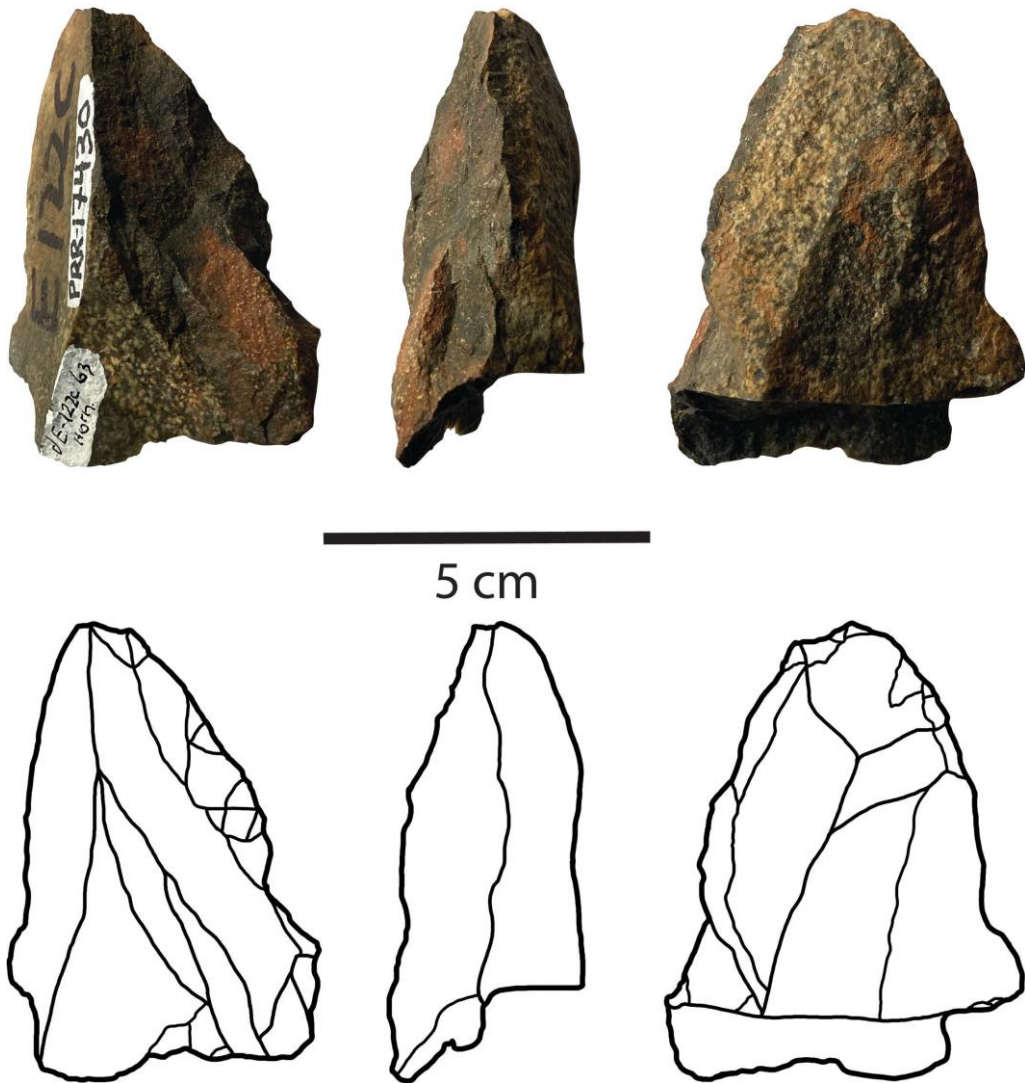
Figures S7 (left) and S8 (right). This specimen (PRR-23342) has several faces with flake removals (this image was produced by M.R. Bebber and M.I. Eren).



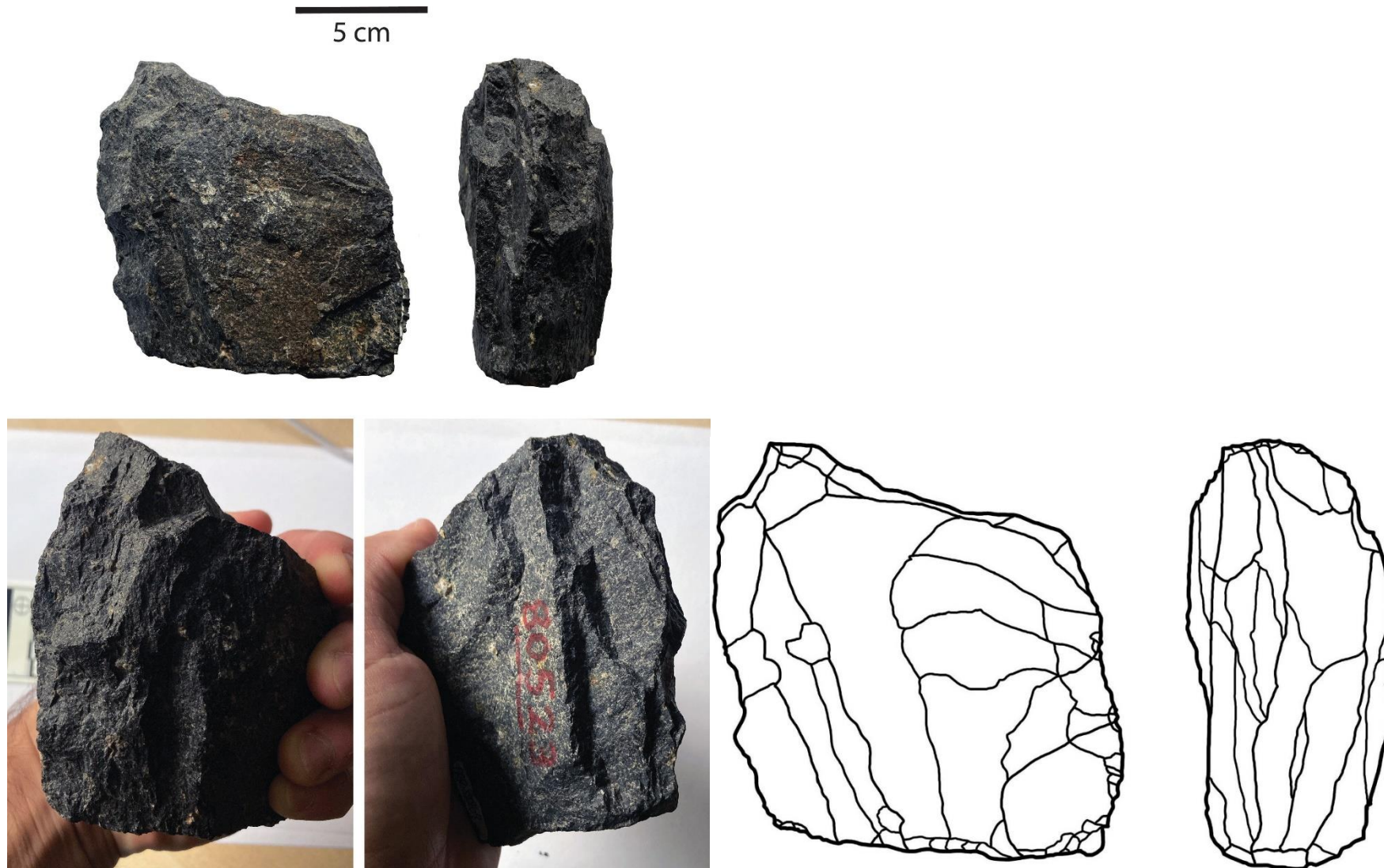
Figures S9 (left) and S10 (right). This specimen (PRR-03367) appears to exhibit several partial conchoidal fractures resulting in flakes that have not fully separated from the parent 'core' (this image was produced by M.R. Bebbler and M.I. Eren).



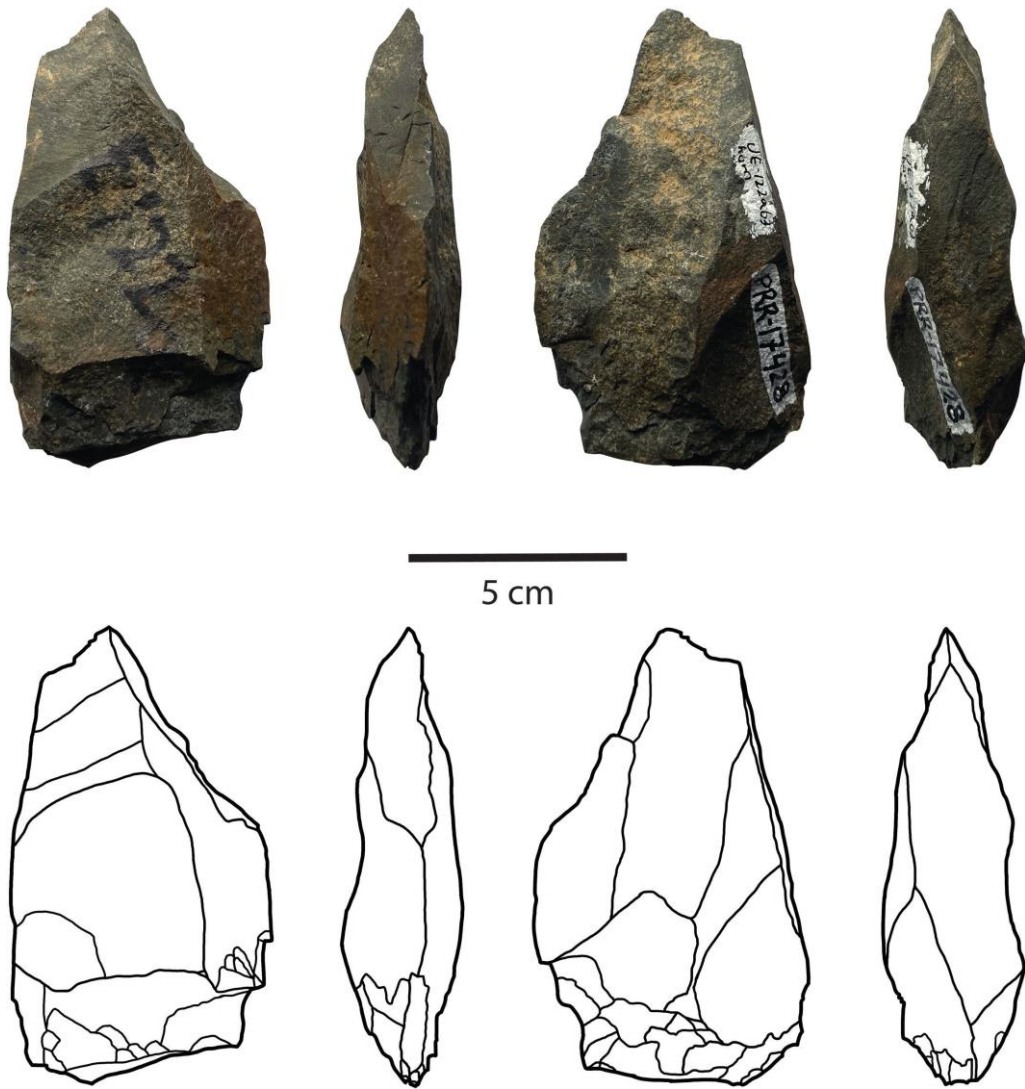
Figures S11 (top) and S12 (bottom). This specimen (PRR-37115) exhibits a large flake negative (left) as well as a bifacial edge (this image was produced by M.R. Bebber and M.I. Eren).



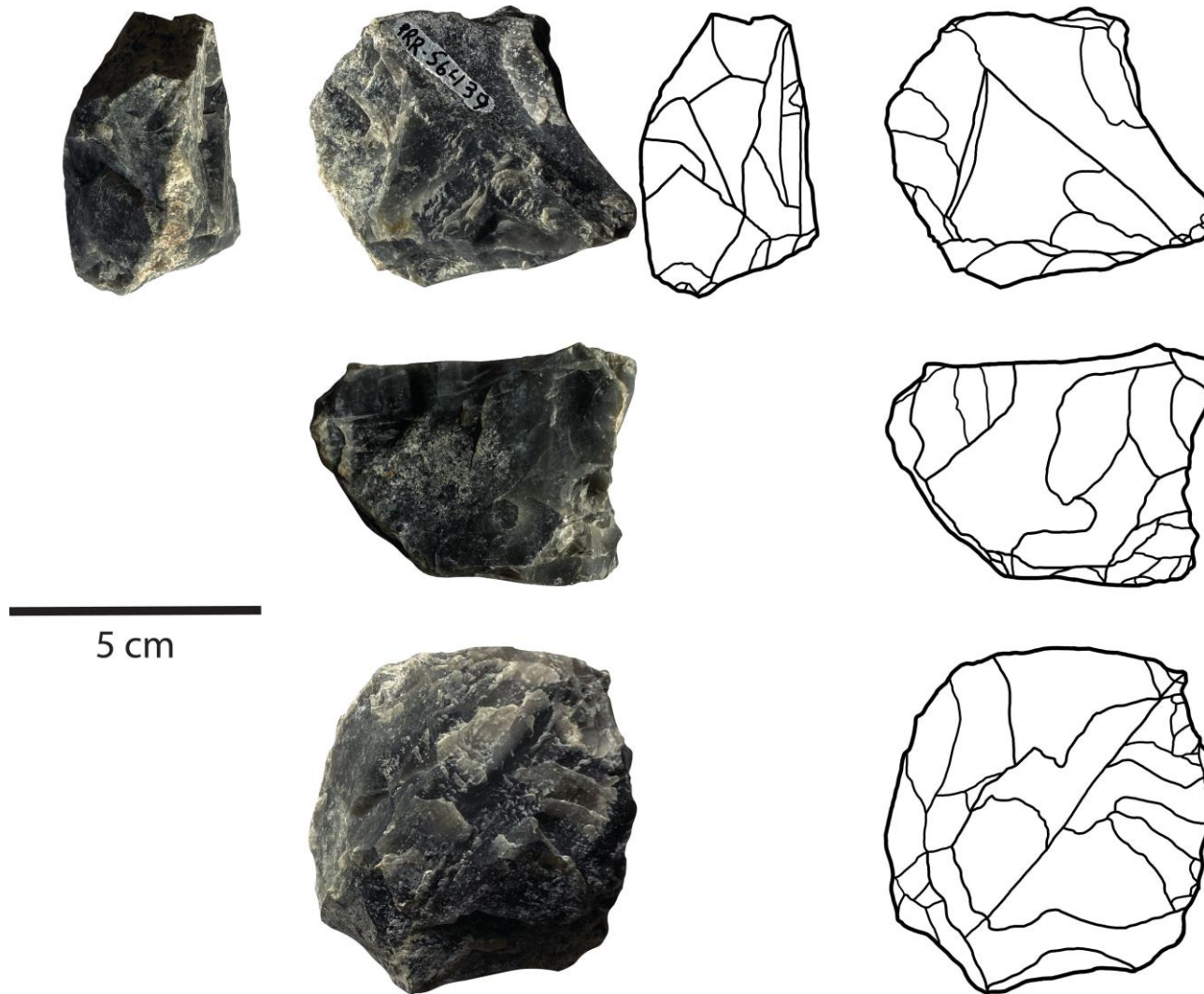
Figures S13 (top) and S14 (bottom). This specimen (PRR-17430) could be interpreted as the tip of a crude biface had it been found in an archaeological context (this image was produced by M.R. Bebber and M.I. Eren).



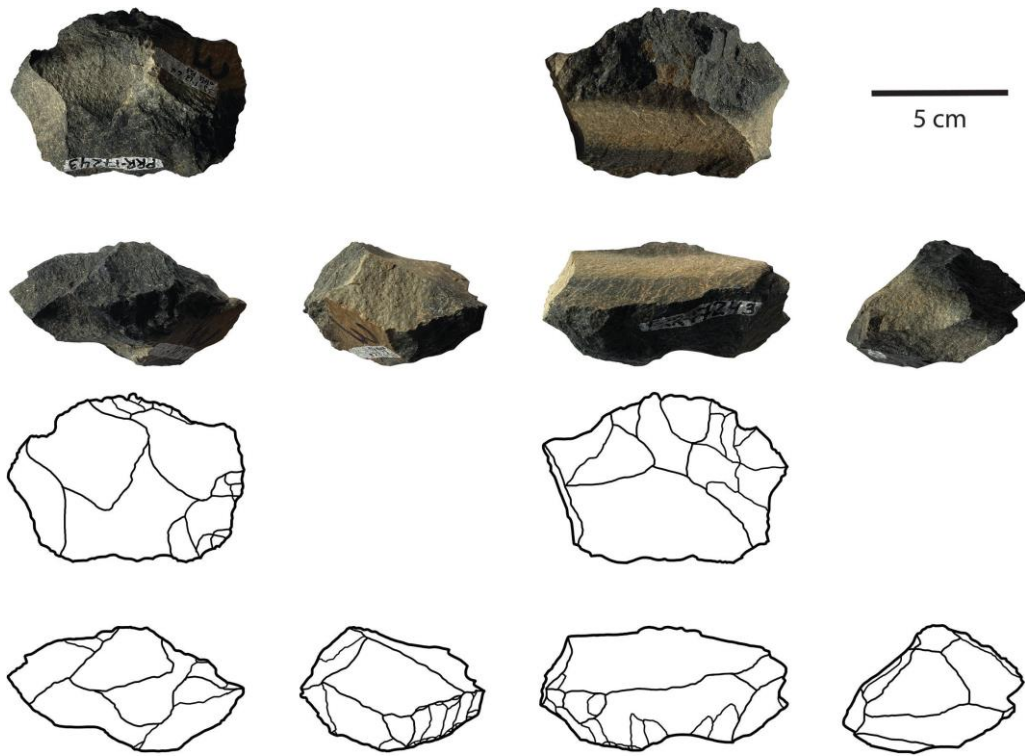
Figures S15 (left) and S16 (right). This specimen (PRR-34869) could be interpreted as a chopping tool had it been found in an archaeological context (this image was produced by M.R. Bebbler and M.I. Eren).



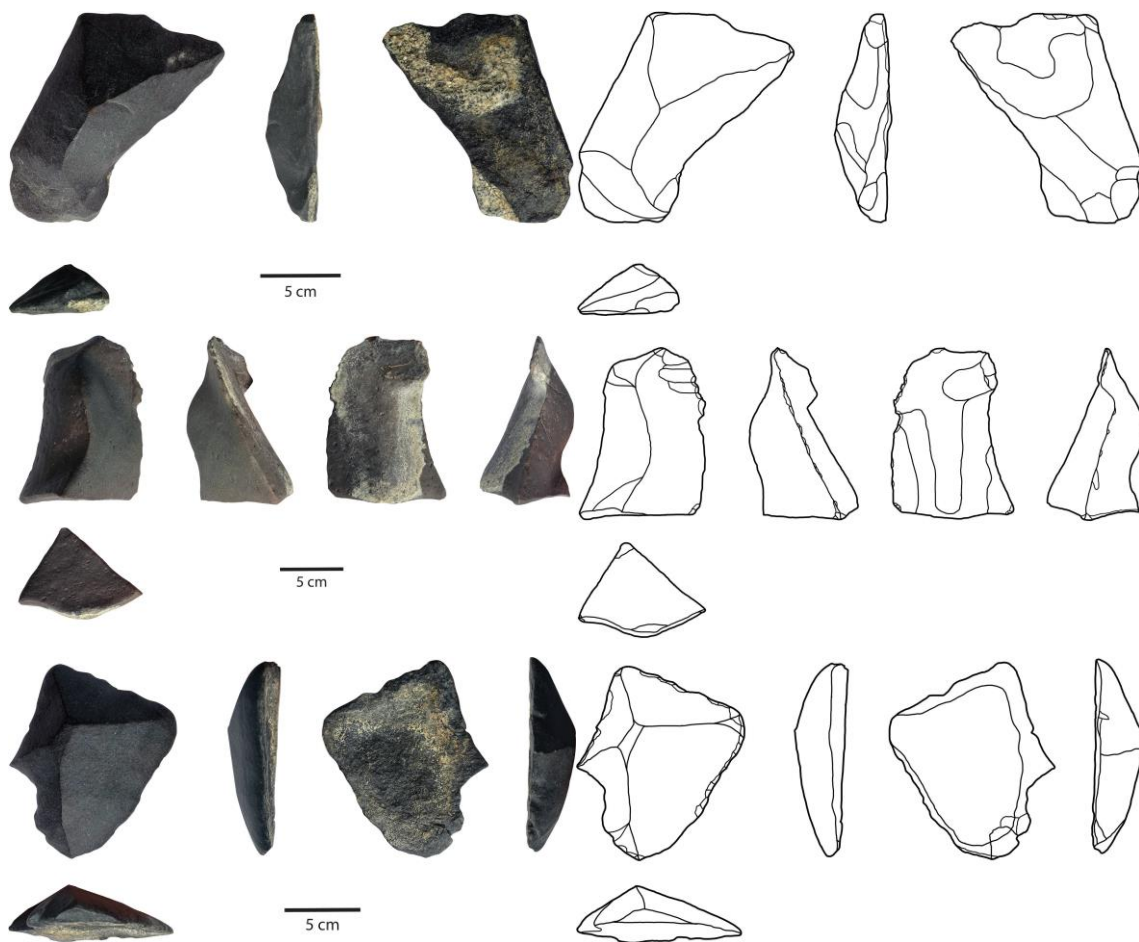
Figures S17 (top) and S18 (bottom). This specimen (PRR-17428) could be interpreted as an early-stage biface or core (this image was produced by M.R. Bebbler and M.I. Eren).



Figures S19 (left) and S20 (right). This specimen (PRR-56439) could be interpreted as a bipolar core with small sets opposing flake scars on either side of the rock. This specimen also exhibits cones of percussion on the surface (this image was produced by M.R. Bebbler and M.I. Eren).



Figures S21 (top) and S22 (bottom). This specimen (PRR-17243), had it been found in an archaeological context, would be called a discoid core given its bifacial, radial removals resulting in a sinuous edge around the specimen (This image was produced by M.R. Bebbler and M.I. Eren).



Figures S23 & S24 (top), S25 & S26 (middle), and S27 & S28 (bottom). These specimens exhibit features that analogous to dorsal ridges, platforms, bulbs of percussion, retouch, notches, among others (this image was produced by M.R. Bebber and M.I. Eren).