

## MODELING THE BEHAVIOR OF THE EARLIEST HOMININS DRAWING ON THE NEW DISCIPLINE OF PRIMATE ARCHAEOLOGY

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New lines of evidence from primatology, ethnography and hominin functional morphology argue that stone tools could have been utilized before the earliest stone tools finds at 2.6 million years ago at Gona, Ethiopia. Simple stone tools (anvils and hammerstones) could even have been part of the behavioral repertoire of the earliest hominins 5-7 million years ago in the paleoecological context of an ancient forest floor setting. The paper is divided into 3 parts:

- 1.) Laboratory and field studies in Kenya to distinguish recognizable traces on anvils from a range of food processing activities including pounding, chopping and slicing. Results showed recognizable traces and the general ability to distinguish each activity.
- 2.) The paleoecological context of the earliest hominins 5-7 mya indicate a more closed, forested setting for the emergence of behaviors that we begin to recognize as human like. We report on new studies conducted on the ecology of Kenya's modern Tana riverine forest and Kibwezi groundwater forest as analogous habitats. In these modern settings the distribution and diversity of edible foods in relation to early hominin foraging, bipedalism and tool use will be discussed.
- 3.) Finally we discuss how the combination of a research team comprised of primatologists and paleoanthropologists can contribute in innovative ways to begin to test the hypothesis of late Miocene/early Pliocene use of stone pounding tools. We report on results from the first field survey for pounding tools conducted in the Pliocene deposits east of Lake Turkana, Kenya.

Keywords: Paleoanthropology, Hominins, Forest, Tool Use