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Finding the message in intricacy: The association of lithics and fauna on Lower Paleolithic Multiple Carcass Sites

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Abstract

This paper examines alternative models for the interpretation of Lower Paleolithic Multiple Carcass Sites based on analysis of the site of Holon, Israel. The nature of the lithic and faunal assemblages found at Holon are most consistent with a palimpsest site that represents repeated occupations of a marsh edge location by both hominids and carnivores, the remains of which have been moderated by natural agencies. It is argued that ambush hunting by hominids was likely to have been one of the activities involved in the accumulation of lithic and faunal remains on the site. A comparison of the lithic assemblage found at Holon with the lithic assemblages from Lower Paleolithic Single Carcass Sites suggest differences between the activities that took place on these sites and the type of activities that took place at Holon.

Keywords: Lower Paleolithic; Hunting; Lithics; Fauna

Introduction

Interpretation of the association of stone tools and fauna in Pleistocene open-air sites is critical for modeling the subsistence strategies and social organization of early and mid-Pleistocene hominids. However, since a multitude of factors potentially play a formative role in the creation and modification of archaeological assemblages, analysis must first establish that the association between lithics and fauna is not random. Once a meaningful association is demonstrated it is possible to explore the nature of this association and to identify and narrow the range of agents that may have contributed to its formation by assessing the degree of disturbance due to natural and non-hominid biotic agencies, and the extent of hominid action.

A good point of departure is to recognise the range of different faunal–lithic associations present in the archaeological record. The classification proposed by Isaac (1967, 1977, 1978) for Plio–Pleistocene sites identifies three site types (A–C), corresponding to a different set of hominid behaviours. These types differ both in their physical location in landscape and most importantly, in the character of their bone and lithic components.

Type A sites are defined as workshops and contain high concentrations of lithic material and a relative paucity of animal remains.

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Type B sites correspond to butchering or kill sites and have also been termed in the literature 'single carcass sites' (SCS) (Crader, 1983; Gaudzinski et al., 2005). Such sites are characterised by a single carcass of an extremely large animal (commonly hippopotamus or elephant species) found in close association with stone tools that occur within a circumscribed area close to the carcass. The state of anatomical completeness of the carcass varies among sites. SCS appear to reflect a single, and probably short event and a limited range of activities. It is important to note that most SCS contain 'background' fauna in addition to the main carcass. SCS can be divided into two groups. The first group has a very small collection of stone tools that do not refit, and are not always found in clear association with the main carcass. Such a case is illustrated by the *Elephas antiquus* skeleton found in Layer AS3 at Ambrona (Villa et al., 2005). The interpretation of these sites remains ambiguous. The second group includes a larger assemblage of stone tools, which often at least partially refit, and occur in close proximity to the carcass.

As discussed by Villa (1990, 2005), SCS offer a particularly compelling picture of the association of stone tools and faunal remains and offer a critical key to interpreting the way tools were used in butchery. Among the issues SCS provide insight into are:

1. Quantity of lithics associated with an individual carcass.
2. Composition of tools categories (e.g., heavy duty, retouched flakes, cores, etc.) at a butchery locality.
3. Types of tools relative to carcass size.
4. Spatial distribution of lithics relative to bones.
5. Favoured locations of SCS in the landscape.

On the basis of SCS, it is not possible to argue that Lower Paleolithic hominids were capable of encounter hunting, nor of disproving this contention. Gaudzinski et al. note for Proboscidean sites that "traces of human interference are only occasionally observed on the bones of the carcass…(as a result) the degree, intensity and character of interaction with the animal, as well as information about which parts of the carcasses were exploited, remains obsure" (Gaudzinski et al., 2005, p. 181). In some cases SCS were clearly localities where hominids came across a dead, dying or trapped animal, which they then butchered. Nowhere is this clearer than at Dungo V, Angola where stone tools were found in close association with the remains of a whale (Gutierrez et al., 2001). Since there is no evidence that the whale was killed at sea, this represents the carcass of a beached animal that was found and butchered by hominids. SCS such as Dungo suggest that at least in some instances, hominids moved across the landscape taking advantage of resources as they came across them.

Type C sites, identified by Isaac as base camps or living floors, represent repeated occupations resulting in dense accumulations of lithics and bones. Living floors particularly imply the presence of an undisturbed occupation surface whose faunal and lithic content primarily reflects human activities created over a short time period. Type C sites contain the skeletal remains of diverse taxa and multiple carcasses, often found incomplete and/or disarticulated, associated with a large assemblage of stone tools and debitage. They are by far the most common Plio–Pleistocene site type and are termed in this paper Type C or Multiple Carcass Sites (MCS) to avoid the behavioural implications in Isaac's terminology of base camps or living floors. This, since a number of competing models have been proposed to explain the behaviour that has led to the association of lithic and faunal remains.

Explaining Multiple Carcass Sites

Distinguishing which behavioural model best explains a particular MCS site should be based on the specific characteristics of the lithic and faunal assemblages and their association.

1. *Re-deposition:* In some contexts it can be demonstrated that fauna and lithics are found in association as a result of transport and re-deposition. This is usually related to fluvial activity, as in most instances sites are located on the banks of rivers or lakes. Such sites display evidence for high-energy transport, including rolled, abraded, rounded and/or polished fauna and lithics, as well as sorting of material by size weight, volume, and density (for example, Petraglia and Potts, 1994 and references therein; Coard and Dennel, 1995). It is important to stress that the winnowing that characterises many faunal assemblages can be accounted for on the basis of low-energy transport of selective elements such that presence of winnowing is not evidence that the association of lithics and fauna is the result of re-deposition.