Logistical mobility in plateaus in Central-Western Santa Cruz, Argentina. An approach from technological, archaeofaunal and anthracological evidence

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ABSTRACT

The aim of this paper is to discuss hunter–gatherers’ logistical mobility strategies in Central-Western Santa Cruz province during the last 2500 years BP, in a context of human adaptations to semi-desert conditions. The approach to the archaeological record is focused on integrating three independent lines of evidence: technology, zooarchaeological and anthracological analysis. Logistical mobility will be addressed focusing on two main aspects: resources transportation and variability of archaeological contexts. The observed variability has allowed shedding light on the use of the category “logistical” used to describe plateaus. Additionally, these areas show a well-planned and scheduled use during a regional process of desiccation.

1. Introduction

During the late Holocene in Central-Western Santa Cruz province (Patagonia, Argentina) climatic fluctuations established new environmental and ecological conditions (Stine, 1994). Linked to a number of changes in the intensity and direction of the Southern Westerlies (Gilli et al. 2001), a trend towards a decrease in the relative humidity was observed (Stine, 1994). This climatic phenomenon might have set up a scenario in which the critical resources for human groups of Patagonia, water and the main prey guanaco (*Lama guanicoe*), might have been unevenly distributed in the landscape. Considering this scenario a human settlement model was proposed (Goni, 2010). It states that residential mobility would have been greatly reduced and concentrated around lake basins located in areas with low elevation above sea level, where resources would have been present all year round. At the same time, logistical mobility might have increased significantly.

In order to broaden the discussion about the nature of logistical mobility in the context of a regional drought, this paper aims to deepen aspects related to the logistical use proposed for plateaus. Thus, it seeks to move on from the simple assignment to that use, addressing two aspects that are part of a logistical component: the resources or goods transportation and the variability of archaeological contexts. To this end, the analysis focuses on one of the high plateau areas in the region covered by Pampa del Asador and Guitarra Lake Plateau (Fig. 1).

Analyzing complex phenomena such as human adaptations in semi-arid environmental conditions of the past requires an approach where different lines of archaeological evidence are integrated. It should be considered that human adaptations are not segregated in different spheres; such segmentation only works as a methodological tool for the researcher. Thus, through the integrated analysis of three lines of evidence as technology, archaeofauna and charcoal remains, a better understanding of the problem is intended.

2. Logistical mobility and environmental conditions

There is a wide discussion about the strategies developed by human groups in dry environmental conditions (Raab and Larson, 1997; Jones et al. 1999; Veth, 2005). Some of these strategies refer to the establishment of social networks, exchange, mobility, use of different landscapes, etc. (Halstead and O’Shea, 1989). In general terms, mobility, is understood as the movement from one place to another by an individual or group, being a feature of human adaptation strategies and one of the most important aspects of...
human behavior (Hitchcock, 2004). Hunter–gatherer groups move in different ways and for different purposes, not only related to subsistence but also to social relationships (Macdonald and Hewlett, 1999; Hitchcock, 2004).

In this paper we seek to address the mobility strategies implemented by hunter–gatherer populations in a context of regional moisture decreasement. These strategies are necessarily linked to the structure of resources of a region (Binford, 1980, 2001). In this regard, Binford (1980) recognizes two different aspects of mobility in hunter–gatherers, a concept that refers to how groups move through a landscape during their annual range. There is a residential and a logistical mobility. In this work, it is the latter which will become increasingly important.

A logistical mobility is a strategy developed in a context where resources are heterogeneously distributed in space and time. Accordingly, resources are exploited by organized groups with specific tasks (Binford, 1980). This implies that such special purpose groups leave the residential camp and move through different patches of resources by establishing temporary camps or stations from which operations for resources acquisition are planned and executed. In terms of the archaeological record, this strategy generates a variety of contexts. Therefore, not only residential camps and locations, but also temporary camps, stations and caches are recognized. Also, special purpose sites might tend to have higher occupation redundancy and to be discrete (Binford, 1978a).