

Abstract

The research is dedicated to investigating the reconstruction of depositional and post-depositional processes at Obishirian archaeological sites in Kyrgyzstan, Central Asia. These sites are situated along the Silk Road, one of the most important and ancient trade routes in the region. The Obishirian represent an early Neolithic cultural unit, characterized mainly by the use of microlithics. This culture extends from the Western Tian Shan to the Pamirs, and is estimated to have existed between 9500 and 6500 years before present (BP), standing as the earliest Neolithic cultural unit in the interior mountains of Central Asia. Obishirian artifacts have been retrieved from various sites, with Obishir-5 being the most significant site. Other important sites include Obishir-1, Istikskaya Cave, Kurteke rockshelter, and Oshkhona.

This dissertation mainly focuses on two sites—Obishir-1 and Obishir-5—located on a slope in SW Kyrgyzstan in a small, arid intermontane basin. Obishir-1 and Obishir-5 are re-studied sites, which means that previous investigations were researched to acquire preliminary material. Additionally, a geoarchaeological investigation was designed for a detailed and state-of-the-art study of site formation. The investigation focused on two scales: the site scale and the microscopic scale. During fieldworks, detailed descriptions of site stratigraphy was carried out. Strategic bulk and micromorphological sampling was performed. Micromorphological studies were accompanied by complementary analysis such as grain size analysis, basic geochemical and mineralogical analyses. Furthermore, the designed approach, together with faunal assemblage analyses, allowed to reconstruct the paleoenvironment characterizing the research area. Moreover, archaeological artifact spatial distribution was analyzed. To determine the age of sediments, chronometric dating (radiocarbon and luminescence) was also considered. Altogether, the mentioned analyses provide useful information on the main sedimentological processes involved at the sites. What is also important is that the methodology allows a better understanding of the anthropogenic impact at the sites and the post-depositional disturbances due to anthropogenic, pedogenic, or geogenic factors.

The sites share similar geological and geomorphological settings, i.e., they are located at the base of a steep carbonate cliff in front of one or more rockshelters, and the archaeological and zoological material is generally embedded in talus deposits. The Quaternary sediments are an unsorted, mainly angular-shaped mixture of coarse and fine material. Being on a slope, the main processes involved in the site formation are colluvial; however, another important process responsible for the accumulation of fine materials is aeolian. At Obishir-5, anthropogenic and human-related activity inputs are also consistent especially in the Obishirian cultural unit, such as bones, charcoals and herbivore dung. The sites are affected by a wide range of post-depositional

processes, such as later translocation of material down the slope at Obishir-1, later vertical translocation of fine material by gravity and bioturbation, anthropogenic disturbances, especially in the cultural units, as well as weak soil formation. At Obishir-5, the presence of herbivore dung within the microstratigraphy of the Obishirian cultural unit supported the evidence of the use of livestock purported by the study on faunal remains. These pieces of evidence were dated around 8000 BP, providing the earliest use of livestock in the interior corridors of Central Asia.

Especially with the help of micromorphology, this study has brought to light important aspects of the animal husbandry process during the Neolithic turnover in Central Asia. Another compelling aspect is that the region is poorly studied, especially colluvial deposits. This research will supposedly contribute to the analysis of colluvial sequences and their micromorphological aspects in the region, and therefore to a better recognition of similar deposits and the depositional processes involved in similar environmental settings.

Keywords: geoarchaeology, site formation, micromorphology, Neolithic, Pleistocene/Holocene transition, Obishirian, Central Asia