Quaternary International 347 (2014) 39–52

Contents lists available at ScienceDirect

Quaternary International

journal homepage: www.elsevier.com/locate/quaint

Tools, beads, and migrations: Specific cultural traits in the Initial Upper Paleolithic of Southern Siberia and Central Asia

Evgeny P. Rybin [a,b,*]

[a] Department of Stone Age Archeology, Institute of Archaeology and Ethnography, Siberian Branch, Russian Academy of Sciences, Lavrentieva Ave., 17, Novosibirsk 630090, Russia
[b] Altai State University, Lenin ave., 61, Barnaul, 656049, Russia

ARTICLE INFO

Article history:
Available online 10 May 2014

Keywords:
Initial Upper Paleolithic
Southern Siberia and Central Asia
Lithic technology
Transmission of cultural traditions

ABSTRACT

This paper explores the modes of dispersal, variability, and chronology of the Initial Upper Paleolithic (IUP) of Southern Siberia and the northern Central Asia. Several types of tool-markers, a peculiar type of reduction technology and two types of adornments, specific to the area under study, are distinguished. Based on current data, the author concludes that about 45,000 years ago, there was a rapid eastern movement of populations from a core region in part of the mountains of the Russian Altai towards central Mongolia and southwestern Transbaikal. In these regions, about 43,000–40,000 years ago, a second center of a blade-based IUP appeared. It was characterized by specific forms of tools, reduction technologies and personal adornments similar to those in the core region. Thus, the transfer of a whole set of a unified cultural tradition occurred. Therefore, based on the geographic and temporal distribution of tool-markers, ancient populations moved along the most southern of the possible routes, i.e. over the territory of present-day Mongolia and northwest China.

1. Introduction

After the discovery of Paleolithic sites with early blade industries in Siberia in the 1970's, Siberian archaeologists faced the problem of identifying the chronostratigraphic position of these assemblages. Okladnikov (1981, p. 114) distinguished a Levalloisian stage in Southern Siberia and Central Asia, in which the lithic industries 'chronologically constitute a kind of a single entity that in terms of time conforms to the late Mousterian – Early Upper Paleolithic, and according to the cultural character is Levallois. According to Okladnikov, this technocomplex is characterized by the presence of cores and large blades with a Levallois-like appearance, accompanied by 'pebble and chopping-like cores'. The tool kit included side scrapers, Mousterian points on Levallois blades, and a large group of denticulate-notched tools.

In the late 1990s, the first attempts were made to identify variability in the Early Upper Paleolithic (EUP) in the Altai Mountains, and special Kara-Bom and Ust'-Karakol 'evolutionary trajectories' were distinguished (Derevianko, 2001). The first 'trajectory' was characterized by the technology of production of large blades and by 'pronounced Levallois features'. The second had more evolved Upper Paleolithic traits, and featured the application of a carinated bladelet technology. The emergence of these variants in the Altai region, as well as similar blade-based lithic assemblages in Southern Siberia and Mongolia, was considered as a result of either migration (for Transbaikal) (Rybin, 2008), or convergent evolutionary development based on genetically related Levallois industries of the Middle Paleolithic (for the Altai and Mongolia) (Derevianko, 2010; Derevianko et al., 2010a). Since the early 2000's, the dispersal of the Initial Upper Paleolithic (hereafter IUP) assemblages is perceived as a directed spatiotemporal transgression from the west to the east (Brantingham et al., 2001). However, the range of variability of the IUP assemblages in Southern Siberia has been poorly studied. Since the number of stratified and dated sites in the southern part of Siberia is larger than in Central Asia, studies of the pathways of the Upper Paleolithic dissemination have favored the 'northern dispersal route' (Derevianko et al., 1998c; Goebel, 1999). The main products of knapping, specific for the IUP and based on the utilization of flat-faced and sub-prismatic cores, were prominent and easily definable large blades and sometimes pointed spalls which were considered as Levallois points (Brantingham et al., 2001). Hence, all blade technologies and tool assemblages of IUP were widely regarded as uniform throughout the territory of their distribution (Derevianko et al., 1998b).

* Department of Stone Age Archeology, Institute of Archaeology and Ethnography, Siberian Branch, Russian Academy of Sciences, Lavrentieva Ave., 17, Novosibirsk 630090, Russia.
E-mail address: rybep@yandex.ru.

http://dx.doi.org/10.1016/j.quaint.2014.04.031
1040-6182/

Based on specific features of reduction technologies and the time span of their existence, the most ancient 'leptolithic' complexes in the Altai appear to be part of the Trans-Eurasian IUP phenomenon, the emergence, distribution, and chronology of which are still a matter of debate. The main issue is whether the IUP in Northern and Central Asia has one center of formation from where it dispersed through the cultural transmission of ideas and technologies and/or the movement of human populations, or whether one can trace the existence of several geographically distant core regions, in which independent blade industries are known. In this context, the main objective of this article is to determine the variability and chronology of the IUP in Southern Siberia and the northern part of Central Asia. This paper aims to determine the chronology and geographical distribution of specific cultural markers (tools, reduction technologies, and personal adornments) in the light of the existence of possible cultural and genetic relationships and regional variability of the IUP assemblages (Fig. 1).

2. Methods and materials

Due to the limited typological range of tools of IUP industries, the selection of the artefact groups that have a distinctive typology and morphology is of great importance. These artifacts that can be called the 'markers', or specific tools, technologies and adornments which have: a) a limited time span within a given territory; and b) morphological features that are unique for particular cultural and chronological group of assemblages. For the IUP of Southern Siberia and Central Asia, it is possible to distinguish a group of specific artifacts with a wide geographic distribution. These are as follows.

Points with ventral base thinning (Type 1). Blades are the tool-blanks. The long sides of blades are prepared by modifying retouch that form converging sides. One of the transverse sides is prepared by flat spall removals and ventral retouch. This kind of secondary treatment was probably used in the preparation of hafted tools (Fig. 2, 7–15).

Blanks with ventral trimming of transverse distal edge (Type 2) are typologically reminiscent of Kostienki knives. The transverse distal edge of these tools is prepared by ventral removals of small and flat spalls. This technology forms a straight or slightly wavy working edge (Fig. 3, 9–11, 14–17).

Oblique points (Type 3) made on blades. The distal segment of the longitudinal edge is treated with a steep retouch, which heavily modified the blank edges. This technology resulted in the formation of the outlines of the working edge diagonal to the symmetry axis of the tool (Fig. 4, 8–14, 29).

Backed points on bladelets/backed bladelets (Type 4). These artifacts are most likely used as in-laid parts of composite tools. One of the long sides is prepared with abrupt, stepped and parallel retouch, thus forming the back and/or pointed outlines of the tool (Fig. 4, 1–7).

Leaf-shaped/ovoid bifacial tools (Type 5). Both faces were processed by small flat scars and/or retouch (Fig. 3, 1–8, 12, 13).

Stemmed blades (Type 6). The proximal end of the blank was treated by heavily modifying, stepped retouch and/or spalls, in order to form the basis with the narrowed lateral sides (Fig. 4, 25–28, 30).

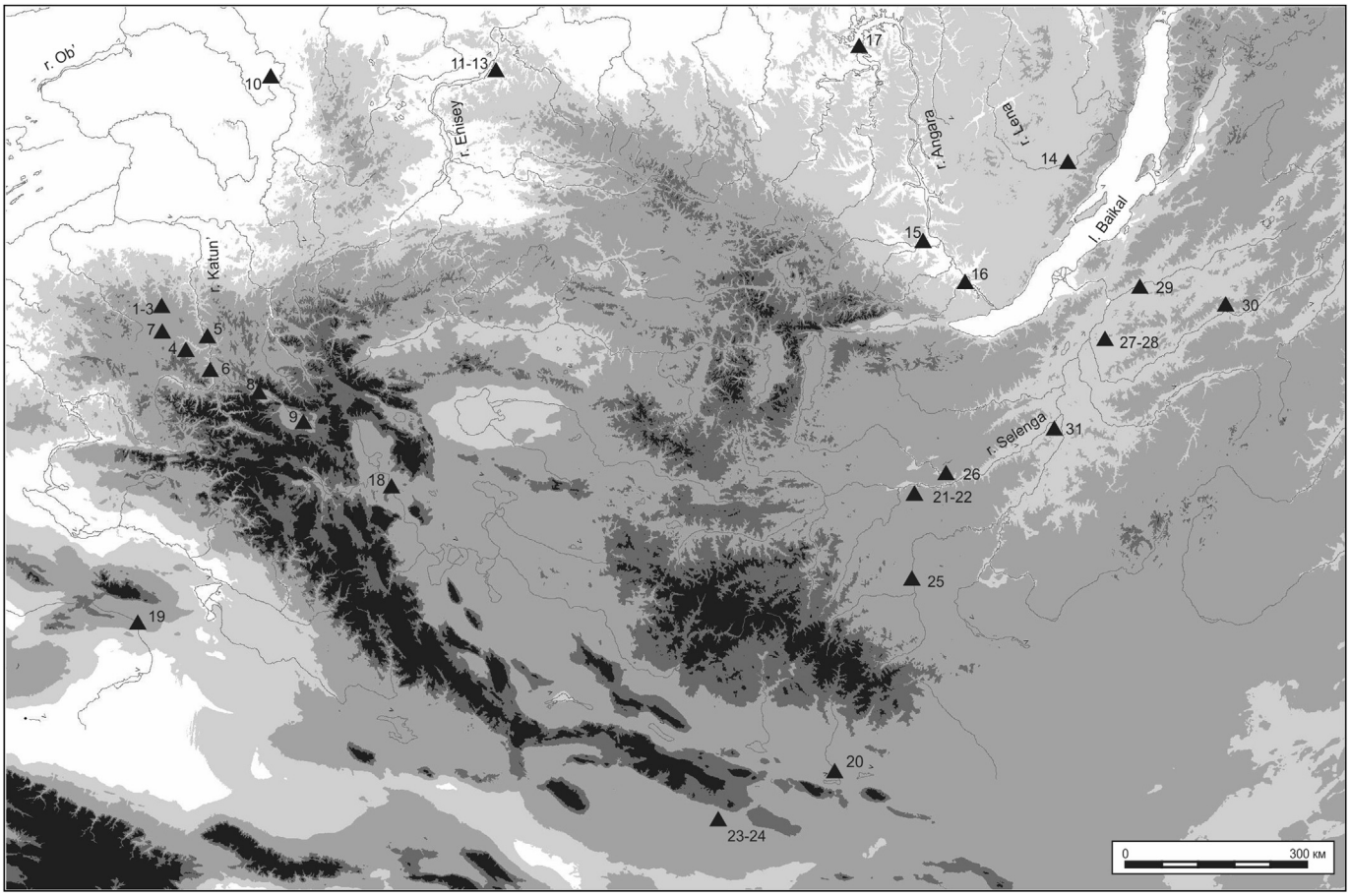

Fig. 1. Location of sites mentioned in text. 1. Denisova cave, 2. Anui 3, 3. Ust'-Karakol 1, 4. Kara-Bom, 5. Kara-Tenesh, 6. Malo Yaloman cave, 7. Ust'-Kan cave, 8. Torgun, 9. Boguty, 10. Mokhovo 2, 11. Ust'-Maltat II, 12. Derbina IV, 13. Derbina V, 14. Makarovo 4, 15. Mal'ta, 16. Arembovski, 17. Bratsk sites, 18. Bayan-nur-somon-13, 19. Luotuoshi, 20. Orok-nur 1,2, 21. Tolbor 4, 22. Tolbor 15, 23. Chikhen 2, 24. Chikhen-agui, 25. Moyltyn am, 26. Dorolj 1, 27. Kamenka, 28. Varvarina Gora, 29. Khotyk, 30. Tolbaga, 31. Podzvonkaya.