

PALEOENVIRONMENT. THE STONE AGE

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THE PLEISTOCENE PEOPLING OF THE NORTH: PALEOLITHIC MILESTONES AND THRESHOLDS HORIZONS IN NORTHERN EURASIA

PART I: LOWER PALEOLITHIC ANTECEDENTS

Human occupation of northern Eurasia high latitudes entailed coping with severe bioclimatic circumstances and Ice Age cycle fluctuations. Resolving this “adaptability paradox” required depending on cultural, rather than biological means. Paleolithic evidence indicates culture historical developments of considerable time depth, long-term adaptive stages, and thresholds in the “peopling of the North.” It began with Lower Paleolithic populations expanding into temperate and continental Eurasia, becoming fully actualized during the Middle and Upper Paleolithic. The Middle Paleolithic formative stage constituted a human biogeographic realm overlapping significantly with the Mammoth-Steppe Biome faunal complex. Part I identifies issues, time perspectivism, culture, foraging adaptation, and human biogeography concepts. Lower Paleolithic occurrences, initial occupation episodes are surveyed and discussed.

Keywords: *Adaptive constraints, culture, time perspectivism, Mammoth-Steppe Biome, early dispersals evidence.*

Introduction

The Paleolithic peopling of northern Eurasia and Beringia receives recurrent attention (Bader, 1965; Nat, 1971; McBurney, 1976; Clermont, Smith, 1980; Derevianko, 1990; Guslitzer, Pavlov, 1993; Cinq-Mars, Morlan, 1999; Serikov, 1999; Keys, 2000; Orlova, Kuzmin, Zolnikov, 2000; Pavlov, Indrelid, 2000; Rolland, 2001, 2008, 2010; Hoffecker, 2002; Mochanov, Fedoseyeva, 2002; Pitulko et al., 2004; Chlachula, 2011), because of its significance.

It called for coping with physico-climatic barriers, varied ecological constraints, and long-term adapting to high latitudes, boreal, subarctic, subpolar (Clermont, 1974; Clark, 1975: Chap. 2; Zvelebil, 1978: 205–207), continental, hypercontinental (Nat, 1971: Pt. 2; 1972: 212–218; 1974), periglacial habitats (Tricart, Cailleux, 1967; West, 1968: Chap. 5; Butzer, 1971: Chap. 7).

Colonizing these remained primarily non-biological, a cultural “artifact.” Tropical African origins, illustrating the south to north zoogeographic dispersal principle,

nevertheless left hominids ill equipped for surviving entirely by somatic means. Relying more on behavior (Irving, 1985: 539) was rooted partly in a carnivorous Plio-Pleistocene dietary shift in Sub-Saharan Africa (Bourlière, 1963; Foley, 1987: Chap. 10) highlighting natural historical intelligence (Cachel, 1994) and ecological polymorphism (Kummer, 1971: 143–144), and developing techno-economic, societal, cognitive repertoires over “longue durée” time spans. Settling vast ‘cold spaces’ expanses required protracted “apprenticeship” thresholds identifiable through “time perspectivism” (Bailey, 2007) observation units.

Research indicates widespread ice-free viable habitats in northern Eurasia and Beringia, as far as and beyond the Arctic Circle, supporting biotically rich plant and animal communities of the Mammoth-Steppe Biome (Guthrie, 1985, 2001; Kahlke, 1999; Ukkonen et al., 1999; Svendsen et al., 2004; Gualtieri et al., 2005; Kienast et al., 2005; Mangerud et al., 2008; Välranta et al., 2009). Upper Paleolithic occupations across meridians, high, subpolar latitudes show time depth, including the severe Last Glacial Maximum (Pavlov, 1988; Cinq-Mars, Morlan, 1999; Serikov, 1999, 2007; Pavlov, Indrelid, 2000; Pavlov, Svendsen, Indrelid, 2001; Terberger, Street, 2002; Pavlov, Roebroeks, Svendsen, 2004; Pitulko et al., 2004; Svendsen et al., 2004; Kuzmin, 2008; Pavlov, 2008, 2009; Chlachula, 2010a, b): Mamontova Kuriya (66° N, 36 ka BP) and Pymva Shor (67° N, 13.5–11.1 ka BP) in the northern Urals; Yana RHS (71° N, 27 ka BP), Berelëkh (>71° N, 11.8–12.2 ka BP) in north Central Siberia; and Bluefish Caves (67° N, 23 ka BP) in eastern Beringia (Cinq-Mars, Morlan, 1999; Harington, Cinq-Mars, 2008). Humans thus overwintered far north by cultural means despite seasonal cold extremes.

Archaeology reveals that this Upper Paleolithic also had long-lasting high-latitude Middle Paleolithic antecedents associated with Neanderthals or archaic modern humans during late Mid- to early Late Pleistocene stadials or periglacial Ice Age cycles: Lynford (OIS 4) and La Cotte de St Brelade, Jersey (OIS 6 and 4) in England; Beauvais (OIS 4) and Achenheim “sol 74” (OIS 6) in France; Mesvin IV (OIS 8) in Belgium; Lichtenberg (OIS 4), Ochtmissen (OIS 6), and Markkleeberg (OIS 8) in Germany; Biśnik, Tomaszów, Trzebca, Rozumice 3 (OIS 8) in Poland (Grahmann, 1955; Sainty, Thévenin, 1978; Cahen, Michel, 1986; Callow, Cornford, 1986; Locht et al., 1995; Veil et al., 1996; Boismier et al., 2003; Thieme, 2003; Cyrek, 2010; Foltyn, Kozłowski, Waga, 2010); Wolf Cave (62.2° N) (some researchers regard Susiluola artifacts as unconvincing) (Vishnyatsky, Pitulko, 2012: 7–15)), Ostrobothnia, in Finland; Khvalynsk human remains (52.5° N, OIS 5e/5d) on the Volga; Elniki II (58–59° N, OIS 07/06) and Byzovaya (65° N, OIS 3b) (L.B. Vishnyatsky and V.V. Pitulko regard it as a Middle to Upper Paleolithic transitional occurrence (Ibid.)) in

the Urals; Baigara human talus bone (58° N, OIS 3a, AMS >40.3 ka BP), Aryshevskoye-1 (56.8° N, OIS 3a) in Western, Central, and Northern Siberia; and Mungkharyma (64° N, OIS 3a) in Yakutia, Russia (Talitsky, 1946; Gremyatsky, 1952; Bader, 1968; Guslitzer, Pavlov, 1987; Shirokov, 1992; The Paleolithic..., 1998; Serikov, 1999, 2000; 2007, 2008; Zenin et al., 2000; Chlachula, 2001, 2010a; Mochanov, Fedoseyeva, 2002; Schultz et al., 2002; Kuzmin, 2008; Kuzmin et al., 2009).

The results of these studies demonstrate (contra (Gamble, 1986; Whallon, 1989; Goebel, 2002; Hoffecker, 2002)) that humans lived long ago in severe stadial, periglacial, sub-polar high-latitude habitats of Europe and Siberia (Nat, 1972; Auguste, 1996; Chlachula, 2011: 497; Prirodnaya sreda..., 2003; Raynal, 2007; Rolland, 2008). Upper Paleolithic expansions further on stemmed from these preceding “northern” colonization trends and apprenticeship thresholds horizons, ushered in by Lower Paleolithic penetrations into Northeast Europe and Siberia during Mid-Pleistocene interglacials (Bader, 1965; Arkhipov, 1999). Part I of this publication introduces these Lower Paleolithic northern Eurasian peopling antecedents, while Part II is devoted to the Middle Paleolithic as the formative stage fully involved in these colonization events.

Adaptive constraints in colonizing northern Eurasia

Constraints. Colonizing high latitudes and continental habitats meant coming to terms with challenging recurrent bioclimatic and subsistence stresses (Rolland, 2010: Tab. 1; Torrence, 1983) from extreme seasonal regimes (Clermont, 1974; Whiting et al., 1982; Irving, 1985: 539–540) and unstable, unpredictable circumstances: short summers and long winter temperatures dropping to –40° ... –60°; rarified oxygen supplies (Tomirdiaro, 1997); January daylight reduced to 6–9 hours; short photoperiods in <56° to 72° latitudes. Holarctic taiga/subarctic forest zones support a rich warm season vertebrate biomass, but winters severely reduced or halted primary production causing acute food shortage and starvation risks (Clermont, 1974; Zvelebil, 1978: 207). Thick snow covers, prolonged frost, dense summer/winter fogs, and ice sheets impeded mobility and running water access.

The northern colonization “adaptivity paradox.” Settling these backgrounds during stadials or interglacials implied year-round survival, overwintering in hazardous settings (Liebig law of minimum). African primate ancestry and early *Homo* adapted to tropical semi-arid or moist ecosystems (Wheeler, 1991, 1992) meant that such unfamiliar conditions stretched hominid thermoregulatory tolerance response beyond limits, risking hypothermia

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