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Update on Paleolithic Research in Northern Mongolia

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The 2014 field season in northern Mongolia proved to be an exciting one with 20 new Upper Paleolithic sites recorded, including one possible Middle Paleolithic site (Kharganyn-13) with potential to be the oldest stratified site north of China and east of the Altai Mountains, Russia. In the past decade, the Joint Mongolian-Russian-American Archaeological Expedition (JMRAAE) has discovered 63 sites dating to the Pleistocene and early Holocene along the Ikh Tulberiin Gol, Kharganyn Gol, and Altatyn Gol (hereafter, Tolbor, Kharganyn and Altatyn Rivers) of the greater Selenge Gol Basin (Figure 1); Gillam et al. 2012; Gladyshev et al. 2011, 2012; Olsen 2002; Tabarev et al. 2013). The region is high, cold, and dry, with little arable land; it is a mountainous forest-steppe, known as the Selenge-Orkhon Forest-Steppe, of the ancient Khangai Mountains of north-central Mongolia. It is best characterized as semi-arid grasslands along valley floors and adjacent hills, with mostly barren steep mountain terrain, accompanied by larch- and birch-dominated forests on shady north- and west-facing slopes of high hills and mountains, where soil moisture is sufficient to support tree stands.

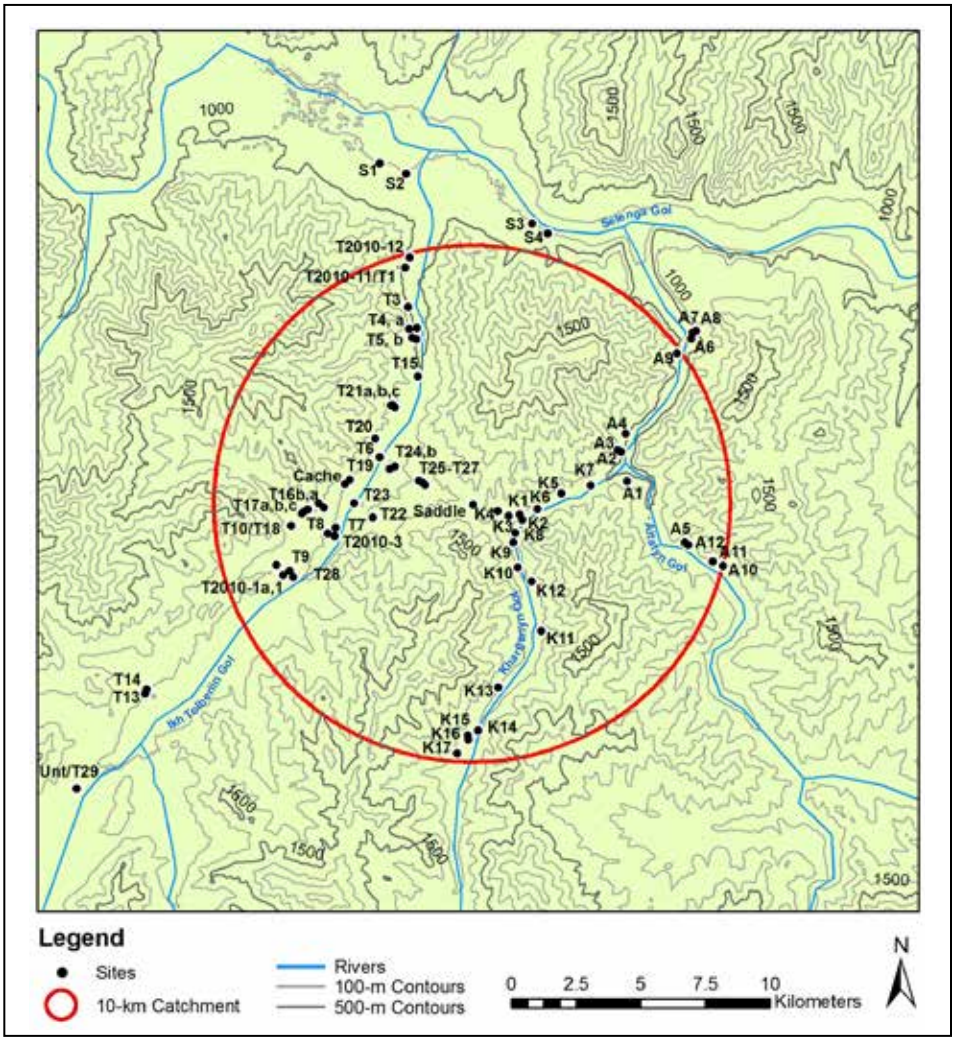

Figure 1: Map of all recorded Paleolithic and early Holocene sites (n=63) and the 10-kilometer catchment survey area. (Drawing courtesy of Christopher Gillam)

Archaeological deposits indicate an initial occupation of the region by the Early Upper Paleolithic (ca. 40,000 calendar years before present; hereafter, BP; Gladyshev et al. 2011; Zwyns et al. 2014), although the discovery of Kharganyn-13 this season may indicate an earlier Middle Paleolithic occupation (ca. 45,000 BP) containing Levallois stone tools in the region (Figure 2). Typical Early Upper Paleolithic (40,000-25,000 BP) stone artifacts include flake and blade cores, large flakes, large blades, scrapers, points, denticulates, and burins (Figure 3). The Middle Upper Paleolithic (25,000-16,000 BP) is dominated by large flake cores and a flake tool industry. Late Upper Paleolithic (16,000-12,000 BP) and Early Holocene (12,000-9,000 BP) forms are dominated by micro-blades, wedge-shaped and prismatic micro-blade cores, small flake tools, endscrapers, sidescrapers, points, and burins.

Stone raw materials are locally abundant on hillside outcrops and in streambed gravels. Each produce conchoidal fractures and are similar in texture and color, making field identification at times cumbersome, consisting of very fine-grained and dark gray: metamorphic sedimentary rocks (orthoquartzite/sandstone and, rarely, flint/chert and red jasper), foliated metamorphic sedimentary rocks (aleurolite/siltstone), and aphanitic igneous rocks (basalt and rhyolite). Chert-like aleurolite is the dominate stone-type selected for flaked stone tools, followed by very fine-grained orthoquartzite.

In 2014, excavations at the Upper Paleolithic site, Kharganyn-5, continued under the direction of Sergei Gladyshev with Evgeny Rybin, Tsedendorj Bolorbat, and others from the Institute of Archaeology and Ethnography, Novosibirsk, Russia, and Institute of

Figure 2: Probable Middle Paleolithic Levallois Point Core (ca. 45k BP) from Kharganyn-13. (Photo courtesy of Christopher Gillam)

Archaeology, Ulaanbaatar, Mongolia. Given the probable significance of the Saddle site to the Paleolithic settlement and inter-connectedness of the Tolbor-Kharganyn-Altatyn valleys, a 10-kilometer catchment survey design was implemented by Tabarev and Gillam from the Saddle site location for 2014 (Figure 1). The Saddle site itself is located around 1,200-meters in elevation and lays 125-150 meters above the Kharganyn and Tolbor Rivers and 500-600 meters below the highest ridges flanking north and south, consecutively. It is 10 kilometers south and 400 meters relative elevation to the greater Selenga River that flows east, then northward to feed Lake Baikal in Russian Siberia.

The 10-kilometer survey area of the Tolbor had been surveyed successfully in 2011, so 2014 surface surveys for new sites focused on the lower and mid-reaches of the Kharganyn and Altatyn Rivers within 10-kilometers of the Saddle site. We completed over 100-kilometers of pedestrian surface surveys across rugged terrain in just a few weeks' time (AKA, "Daily 10-K"). Ground-surface visibility was quite good, as winter's ice had melted in all but the shadiest incised locations and spring growth was just beginning in late May and early June (see Figure 3). We recorded 20 new sites and nine previously identified sites (2011/2013) along the Kharganyn (n=17 sites) and Altatyn (n=12 sites) Rivers.

Three sites discovered along the Kharganyn River offer perhaps the greatest potential for understanding the earliest peoples of the region. Kharganyn-11, -12 and -13 (Figure 1) all contain potentially stratified Early Upper Paleolithic components (40k-25k BP), while Kharganyn-13 is possibly unique with the discovery of a probable Middle Paleolithic Levallois Point Core on the surface of the site (ca. 45k BP). The Levallois technique is most commonly associated with European Neanderthal Mousterian stone tool technology, but in recent decades has been demonstrated to have been used by archaic and early modern humans in Europe, the Near East, northern/eastern Africa and western Asia. Although some possible finds of Levallois technology have been noted in Mongolia's Gobi Desert further south, none of those sites have stratified cultural remains to confirm their cultural affiliation. As such, Tolbor-13 has the potential to be one of the most significant cultural sites in the entire region, with global significance for understanding the complex cultural interactions and migrations of the Pleistocene (e.g., Lycett and Norton 2010). Of course, as is the norm for archaeological expeditions worldwide, this discovery was made on the final day of fieldwork, so testing of the site for stratified remains will have to wait for the next scheduled field season in 2016. We'll keep you posted!

Acknowledgements

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Figure 3: Early Upper Paleolithic large blade endscraper (40k-25k BP) on the surface of Kharganyn-12. (Photo courtesy of Christopher Gillam)