

5_7_1_The_barrow,_with_soil_micromorphology

Barrow burials (aka Russian '*kurgan*') were common in the Eurasian steppe zone from the late 4th millennium BC onwards (Ivanova, S. 2014), with examples known from the forest-steppe zone bordering on the steppe zone (in areas such as South Central Ukraine). Many barrows were identified and recorded in the Nebelivka micro-region fieldwalking [\[ADS LINK TO SECTION 2_2\]](#) While few of the Ukrainian barrows have been excavated, the earliest date to c. 3200BC, indicating an overlap of several centuries with late Trypillia settlements (dating to 29/2800 BC).

The single barrow found on the area of the Nebelivka mega-site was located in part of the open central area, c. 65m from the closest house - the innermost house in an inner radial street. The barrow was 16m in diameter and rose 2.2m from the current ground surface. Looting of the barrow in the 1980s left a large rectangular pit excavated to a depth of 3m. The North profile of this pit was cleaned and prepared for geoarchaeological recording and sampling to a depth of 3.5m.

The South-facing section of the test pit ([ADS LINK TO 5_7_2_4_SECTION/5_7_2_4_Section](#)) showed the following stratigraphy (from the bottom up - Context 5 is the latest):

5. barrow fill - sediments identical to present chernozem B horizon (1.4m thick);
4. no clear sign of spoil removed from burial pit; traces of black and yellow inclusions suggest this occurred at a depth of 0.6m from top;
3. buried black chernozem A horizon - uneven with varied thickness (up to 10cm thick) - post-abandonment of mega-site; different morphology from that of current chernozem A horizon;
2. Trypillia-age buried soil - light brown chernozem with small pieces of yellow daub (60 - 65cm thick);
1. sterile yellow loess (1.1m thick).

Preliminary analysis of the snail assemblages suggests that grassland-type habitats have dominated the immediate location since the late Pleistocene. *Vallonia excentrica* seems to dominate nearly every sample, and there are notable absences of many snail species

indicative of climax Holocene forest. Indeed snail diversity seems slightly higher earlier in the Holocene, with the assemblages potentially indicative of a mix of established grassland and colonising woodland. By the time of the mega-site, and probably significantly earlier, snail faunas became less diverse, and indicate uniform grassland over a significant local area.

Soil micro-morphology, the barrow

The micromorphological analysis of thin sections made from collected samples showed the mound overburden was built using sediments identical to those making up the B horizon of the present chernozem soil mantle ([ADS LINK TO 5_7_2_5_SOIL_MICROMORPHOLOGY](#)). At c. 1.4 m below the current surface, these piled up sediments preserved a buried A horizon (massive, porphyric, >40% of fine sand-sized to silt-sized quartz embedded in organically-stained undifferentiated b-fabric) containing charred plant tissue undergoing comminution to sand- and silt-sized fragments, as well as rounded daub fragments. Overall, the distribution of this debris was consistent with *in situ* trampling and limited down-mixing by soil fauna. Enhanced magnetic susceptibility and the near-neutral pH of these sediments suggested an occupation surface with excellent preservation potential. Worthy of particular interest was the fact that the buried A horizon did not resemble the deep chernozem A horizon of the current soil mantle. This could point to environment changes in the locale during and since the mega-site occupation took place, or be an artefact of the considerable surface modification of the buried A horizon prior to burial by the building of the kurgan mound.