

Starosele

The site (more correctly Starosel'e) is described in ERAUL 1 (1998) Part II (Chapters 4, 5, 6, and 7). The ESR dates are detailed by Jack Rink et al. in Chapter 13 and the U-series dates by Curtis McKinney in Chapter 14. Chabai and Marks also refer to the site in their preliminary synthesis in Chapter 15. A. Burke describes the fauna (mainly *Equus hydruntinus*) in Chapter 1 of ERAUL 2 (1999), and there are further remarks relevant to the site in Chapter 11 of this volume by Chabai et al. Reference should also be made to Chapter 25 by Chabai et al. in ERAUL 3 (2004).

The site is on the east side of Kanly-Dere, a box canyon in limestone not far from Bakhchisarai. Traditionally it has been described as a cave or rock shelter but according to C.R. Ferring (ERAUL 1, page 70) 'none of the sediments in the excavation area indicate that the deposits formed in a rock shelter'. Rather, it is the vertical gorge wall which is 'maintained by exfoliation of tall, thin slabs of bedrock'. A small tributary of the Churuksu river flows or flowed on the floor of the canyon. The site was excavated by A.A. Formozov in 1952-1956. His excavations were concentrated in the northern and central portions of the site, and it is estimated that he dug about 250 square metres. The depth of deposits increased as he went south, finally reaching a thickness of about 4 metres. He encountered a level of huge limestone slabs which he treated as a stratigraphic marker dividing the site into upper and lower portions, but in his descriptions in general he treated the site as a whole. In 1953 the remains of a child were found in square J20 at a depth of about 70-90 cm beneath the surface, just above the limestone slabs. The child appeared to show mixed Neanderthal and modern characteristics, and since it was considered to be in situ in a Middle Palaeolithic context, the site has attracted considerable international interest since its discovery.

New excavations were conducted by a joint American-Ukrainian team in 1993-1995. They estimated that the remaining untouched sediments amounted to about 100 square metres, of which they dug 38. The position of both old and new excavations is indicated on page 80 of ERAUL 1 (Figure 5.9). The new team was highly critical of Formozov's inexact recording methods. Thus, Marks et al. state (ERAUL 1, page 79) that 'it was immediately apparent that Formozov's published renderings ... had only the most general similarities with what we saw'. Figure 5.10, on the east-west line 21/22 H-K, illustrates this point. A new stratigraphic description has been given by C.R. Ferring in ERAUL 1 (Figure 5.5 and Table 5.1). Figure 5.5 is on the east-west line 23/24 H-K. There are six basic stratigraphic units labelled A-F, with subdivisions. There are four archaeological levels, the position of which is given in Table 5.1.

cultural level (CL)	stratigraphic unit
1	B1, B2, and B4
2	C
3	D2b
4	E2/F

According to Ferring and the other authors, there are quite considerable differences between the sediments above and below the rockfall horizon C.

Unit A is a young (18th century AD) anthropogenic accumulation.

Unit B is already Pleistocene and quite fine in texture. There are a number of cut and fill packages, indicative of low energy water action.

Unit C consists of thick limestone exfoliation slabs, with a sand and silt matrix. The suggestion is that this unit came into being rapidly, and also that it was rapidly covered by B.

Units D-F are markedly different, large boulder gravels with sand, loam, and clay interbedded. Their increasingly reddish colour is 'probably the result of infiltration and pedogenesis'. They indicate strong fluvial action, and the suggestion is that they accumulated over a long period of time. A. Burke suggests that in these circumstances it was no more than a 'happy accident' that the find horizon in cultural level 4 was preserved, and cultural level 3 was also formed in a 'generally turbulent depositional environment' (ERAUL 2, page 26).

Contrary to Formozov's interpretation, cultural levels 1-4 are held to be quite distinct in terms of stratigraphy and content. The tool assemblages (not the total artefacts) in each are as follows: (1) 159 (2) 21 (3) 140 (4) 10. Levels 1, 2, and 4, were first classified as 'Staroselian'. In this non-Levallois industry, 'bifacial reduction' was said to be the norm (up to 10%), as also indicated by numerous bone retouchers. More recently (ERAUL 3, Table 25.1) the 'Staroselian' has been reclassified as a 'facies' of the Micoquian, no doubt because of the bifacial element. Cultural level 3 remains on its own, unrelated to any of the other industries identified in the Crimea. An important archaeological event was the uncovering of two more burials (another child and an adult) in approximately the same stratigraphic position as the child discovered in 1953. Both the new finds are unquestionably modern. The fact that all three were found in a restricted area, apparently with the same orientation, supports the idea that they were all of them Crimean Tatar Moslem burials dating to the 18th century AD.

There are 4 radiocarbon (AMS) dates for cultural level 1, and a number of ESR and uranium-series dates for this and the other cultural levels. Marks et al. comment that 'multiple dating systems have provided multiple results', and hence as of now 'the various archaeological occupations must be dated in somewhat general terms' (ERAUL 1, pages 97-98). The ESR dates are listed at Table **13.1** and the U-series dates at Table **14.2**, but in neither case can these figures be taken at face value. In the light of the authors' discussion, the very different figures which appear in the final composite table (ERAUL 2, Table **11.1**) seem to be nearer the truth as they see it.

Level 1

There are 4 AMS dates for this layer. Two were obtained on bone retouchers from the immediate vicinity of the child burial of 1953 and two were obtained on material from the excavations of 1993. The first two dates are 36,160 +/- 1250 and 35,510 +/- 1170 BP. The second two dates are 41,200 +/- 1800 and 42,500 +/- 3600 BP. As Marks et al. point out, these dates do overlap at two standard deviations. With regard to the ESR dates, despite what is listed in the Table, Rink et al. state that an age of >41.2 +/- 3.6 kyr is 'the best age estimate for this level at the present time' (ERAUL 1, page 331). The U-series dates for this level are rejected by McKinney himself as being much too recent.

Level 2

There are two U-series dates for this level, which suggested to McKinney that its minimum age should be 60,000 years BP. This date appears in the composite Table **11.1**, but Chabai et al. consider it probable that both levels 1 and 2 correspond to the Hengelo Interstadial, for which this date would be too old (ERAUL 2, page 218).

Level 3

7 ESR dates are listed for this level in Table **13.1**, for which the mean value is 38 +/- 5 kyr [Note: it is said that this is a mean for level 2, but that is clearly a misprint]. As in the case of level 1, however, Rink et al. state that a minimum age of 41.9 +/- 4.1 kyr in fact provides a better estimate (ERAUL 1, page 329). A further minimum age of 42.0 +/- 4.7 kyr is also mentioned (ERAUL 1, page 331), and this appears in the composite Table **11.1**. According to McKinney the 'plotted' results for his three U-series dates from this level produced an overall result of about 67.5 kyr (ERAUL 1, page 350), and this also appears in the composite Table **11.1**. Marks et al., on the basis of the ESR dates, were at first inclined to accept that level 3 might not be much older than levels 1 and 2 (ERAUL 1, page 99). The same authors, however, now consider that the older date of around 67,500 years BP is more likely to be correct (Chabai et al., ERAUL 2, page 216).

Level 4

ESR (LU) means for level 4 and below level 4 are given as 48 +/- 8 and 55 +/- 3 kyr in Table **13.1**. In the text however the LU age is given as 48 +/- 11 kyr and there is also mention of a recent uptake (RU) date of 77 +/- 6 kyr (ERAUL 1, page 331). These two dates appear in the composite Table **11.1**. With regard to the U-series dates, McKinney considers that it would be best to amalgamate levels 3 and 4, in which case a combined result of 68.9 +/- 10 kyr is achieved (ERAUL 1, page 351). One sample however produced a date of 80 +/- 10 kyr, and it is this which is listed in the composite Table **11.1**. The general view expressed by Marks and Chabai is that the first occupation of level 4 occurred somewhat after the end of the Last Interglacial (ERAUL 1, page 99; ERAUL 2, page 214).

The problems in dating the site are evident from the above account, although its general position within the last glacial period is reasonably secure. Multiple and inconsistent reporting (and subsequent withdrawals of already published dates) make it somewhat difficult to deal with the evidence as printed in the ERAUL volumes. There is no way within the context of the project as a whole however that this site can be ignored.

paj
10 August 2004