

Chapter 6

HUMAN REMAINS AT STAROSELE

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INTRODUCTION

The attention the site of Starosele has drawn is mostly due to the discovery, during the original excavations conducted by Alexander Formozov, of the remains of a child which were claimed to be associated with the uppermost Middle Paleolithic cultural level. Initially, the Starosele child was viewed as morphologically transitional between Neanderthals and modern humans, but since that time, conflicting opinions have surfaced about its phylogenetic attribution—it has been referred to as Neanderthal, transitional, and *Homo sapiens sapiens*—even though few physical anthropologists have been able to view the remains. The claim that the remains were stratigraphically contemporary with the Middle Paleolithic material encouraged the idea of it being morphologically transitional, and influenced how the stratigraphic sequence and lithic artifacts were interpreted by Formozov. The numerous attempts at absolute dating, both during the 1950s and more recently, have not clarified the situation. A further source of confusion has been the child's stratigraphic position and whether it was, in fact, directly associated with Middle Paleolithic deposits. During the 1993 and 1994 seasons at Starosele, two more skeletons were discovered, in much the same stratigraphic situation as the Starosele child. These unexpected findings require a reappraisal of the Starosele child, its phylogenetic status, and its relationship with the Middle Paleolithic deposits. Background and detailed information regarding the excavations conducted by Formozov and the joint Ukrainian/American project can be found in Chapters 4 and 5. This chapter reviews the discovery and excavation of the Starosele child by Formozov, the numerous attempts at dating the burial, how the child has been viewed over the years, the new human remains, how they pertain to the Starosele child, and what conclusions can now be drawn from all these data.

DISCOVERY OF THE STAROSELE CHILD

During the second season of Formozov's excavations at Starosele (1953), a 2 x 2 m test pit (referred to as "Block II") was opened to the south of the extant excavation area, in order to verify the stratigraphy. On 24 September 1953, in the southeastern corner of the pit (square J20), at a depth of 0.7-0.9 meters below surface, a nearly complete child's skeleton was discovered (fig. 6-1). The test excavation was immediately widened one meter to the east and south to the same depth as the burial (forming a 4 x 3 m block), leaving thin baulks as close to the burial as possible to view the profiles. Owing to its fragile condition, the skeleton was covered with glue to stabilize it (Gerasimov 1954: 23).

The skeleton appeared to lie on a horizontal surface immediately above the layer of large limestone slabs, separated from them by a thin layer of "white gravels" (Formozov 1958: 61-63). The body was oriented east-west, with the head toward the west and the face turned to the south. It lay on its back with its left shoulder slightly raised, its legs extended, the upper arms straight, with the lower left forearm bent so that the left hand lay on the pelvis (fig. 6-2) (Formozov 1958: 63-65). The gravel lens on which the skeleton lay was sterile, and there was nothing suggesting funereal offerings associated with the body. The uppermost Middle

Paleolithic cultural level lay some 10 cm above the layer in which the Starosele child was resting.

Following normal custom, when a potentially important find was being made (especially if it was a human skeleton in a Paleolithic context, as it was with the Neanderthals at Kiik-Koba, in 1924), the excavations were suspended and a commission of specialists (Ya. Ya. Roginsky, S. N. Zamyatnin, and M. M. Gerasimov) was assembled to examine the find in the field. This commission was joined by other professionals (S. N. Bibikov, P. N. Schults, E. V. Veimarn, V. N. Chernetsov, V. I. Moshinskaya, V. V. Bogachev, V. V. Bobin, and K. F. Sokolova) who tried to determine if the child burial was in situ; that is, was it contemporaneous with the Middle Paleolithic materials or was it intrusive from the surface and, thus, of post-Middle Paleolithic age? In spite of the remaining baulks, the commission could not see any evidence of an intrusive pit, nor any evidence that the sediments above the burial had been disturbed. The majority of the commission reported that they believed that the burial, in fact, was of Middle Paleolithic age (Alexeyev 1954; Gerasimov 1954: 23; Roginsky et al. 1954).

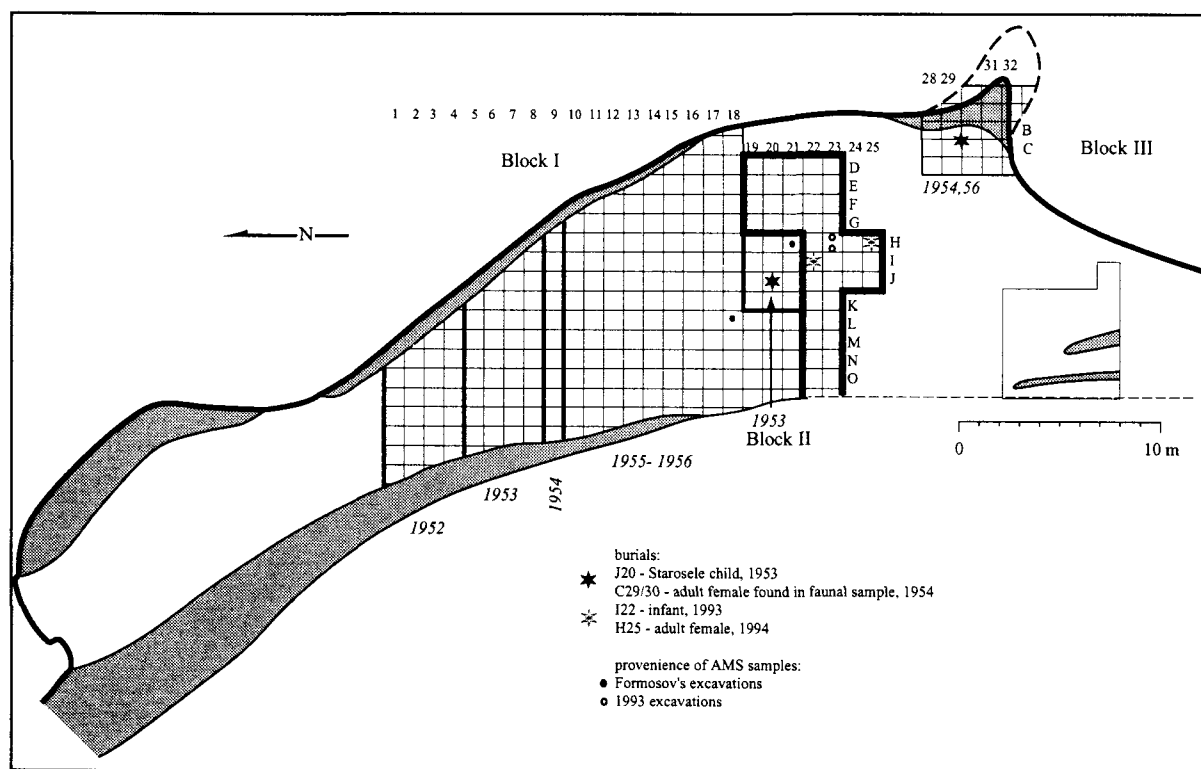


Fig. 6-1—Starosele, general plan of excavations, indicating the zones excavated by Formozov and by the Ukrainian-American project, the position of the burials, and the samples dated by AMS. (Redrawn from Formozov 1958: 26, pl. 16.)

The one dissenting voice in the commission, S. N. Zamyatnin, remarked that, given the homogenous nature of the sediments, it was unlikely that an intrusive burial pit would have been seen or could have remained intact and that, therefore, he could not exclude the possibility of a post-Mousterian age for the burial (Alexeyev 1954: 158; Roginsky et al. 1954: 40).

Formozov immediately rejected the possibility that the burial was of Late Paleolithic, Mesolithic or Neolithic age, as suggested by Zamyatnin, since only Middle Paleolithic cultural remains had yet been found at the site (Formozov 1958: 66). Only later, during the 1955/1956 field season, did Formozov find ceramics and domestic animal bones of A.D. eighteenth

century age. (Formozov 1958: 44). In his monograph, however, he claimed that the preservation of the child's bones in no way resembled the preservation of the bones of eighteenth century age, that the skull had no mongoloid (Tartar) features, and that, therefore, it must date to the Middle Paleolithic (Formozov 1958: 67). Formozov also had little doubt that the burial was intentional (Formozov 1958: 67).

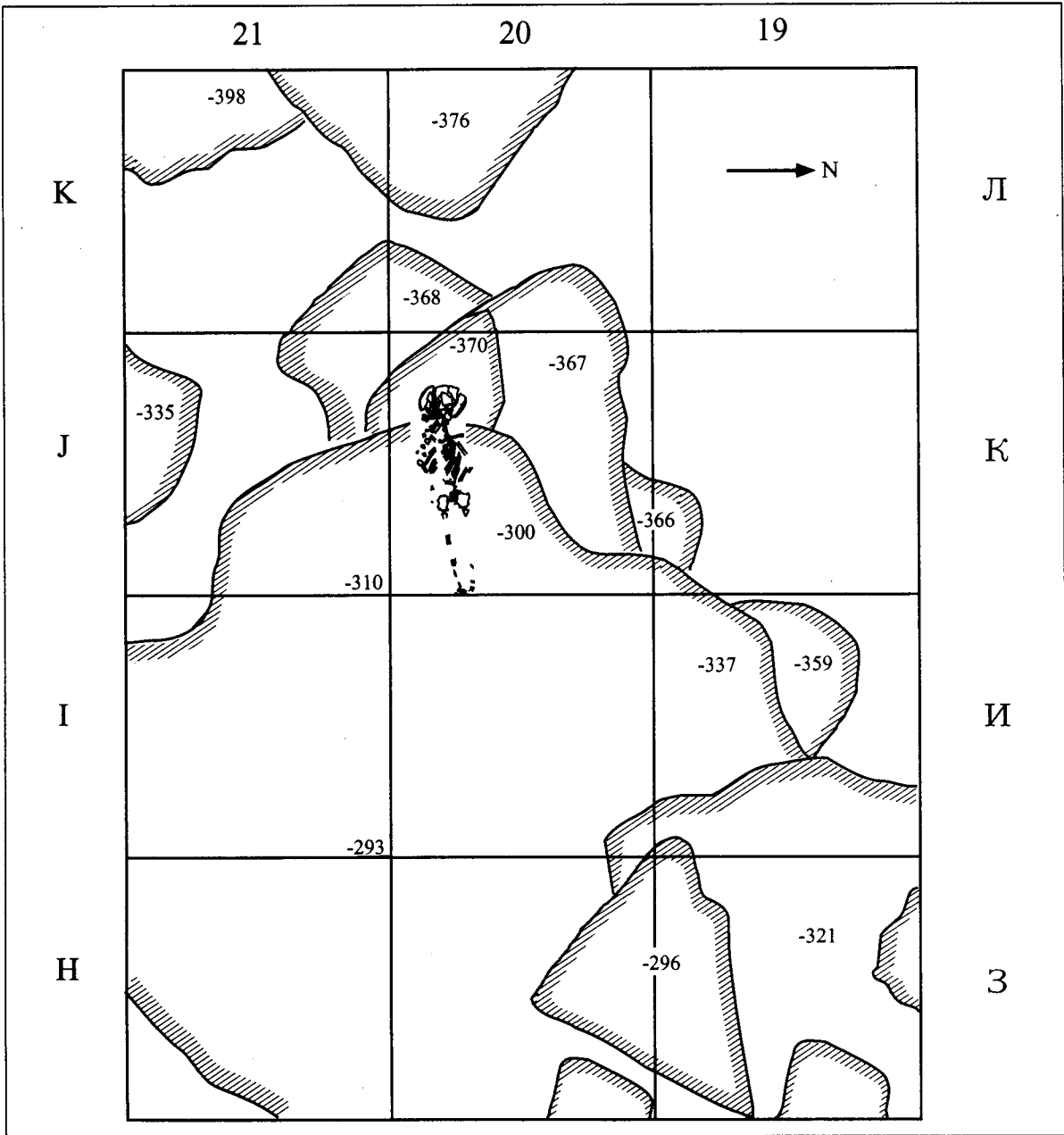


Fig. 6-2—The Starosele child (adapted from Formozov 1958: fig. 35). Grid is 1 meter.

Although not recognized during the excavation, additional human remains were identified among the faunal materials from the upper deposits of Block III, squares B/C-29/30 (fig. 6-1) by paleontologist N. K. Vereschagin (Smirnov 1991: 142). These consisted of the anterior lower jaw, including the chin and alveoli for 4 incisors, and fragments of a radius and humerus. The remains were attributed by Ya. Ya. Roginsky, G. F. Debets and M. M. Gerasimov to an adult woman with fully modern morphological features (Formozov 1958: 75). These remains were neither extensively studied nor published, and their current

whereabouts are unknown (Smirnov 1991: 269). Smirnov (1991: 142) expressed the opinion that these human remains "... might originate from a destroyed burial." While Formozov briefly discussed these findings in his monograph, and expressly stated that they were of modern origin, almost without exception these other human remains have been ignored by subsequent authors.

RECONSTRUCTION OF THE STAROSELE CHILD

The Starosele child was in poor condition when it was discovered; mostly crushed and fragmentary, although still in anatomical position. The remains consisted of the cranium, mandible, vertebrae, clavicle, ribs, 2 humeri, a radius, ulna, a finger bone, coccyx bone, 2 femurs, a tibia, a fragmentary pelvis, and foot bones (fig. 6-2). The skull and mandible were reconstructed by Gerasimov and published by Roginsky in 1954 (fig. 6-3), while the post-cranial remains, which could be of little interest given the age of the child and their fragmented state, were not examined further. Most of the teeth and all of the alveolar ridge of the maxilla were intact, enabling the child's dental age to be estimated at 24 months. The infant had all of the alveolar sockets of 16 milk teeth; in modern infants, the molar milk teeth erupt between 20 and 30 months of age. The anterior fontanel, however, appeared to still be open; this closes in modern infants not later than the 19th month, suggesting the child's age to be closer to 18-19 months of age. The discord between the dental age and the fontanel closing, although not remarked upon by Roginsky who gave the age as 18-19 months, has been attributed to hydrocephalus (Howell 1958; Spitery 1980).

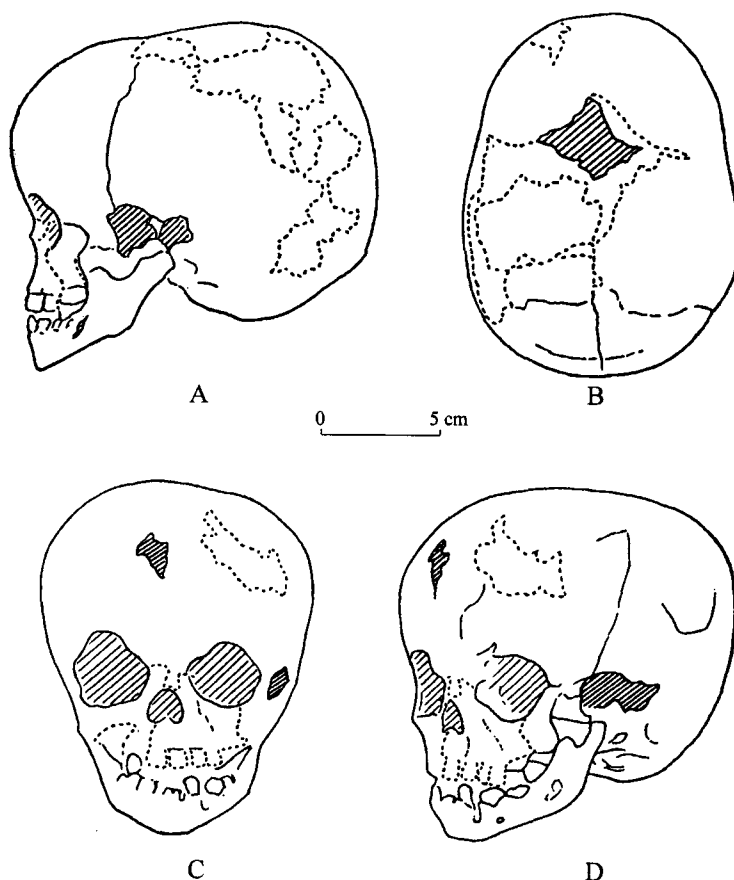


Fig. 6-3—Reconstruction of the Starosele child's skull: A—left lateral view of the cranium; B—dorsal; C—anterior; D—left oblique (adapted from Vallois 1955: figs. 1 and 2).

Roginsky believed the Starosele child to be neanthropic, but that it had several primitive features that made it quite similar to the specimens from Skhul, especially the Skhul I infant. The "primitive" features included the thickness of the skull and zygomatic processes, the absence of frontal protuberances, a weak development of the parietal protuberances, a thickening of the lateral orbital margins, small temporal bones, the great width of the anterior mandible, large teeth, the alveolar prognathism, and weakly developed mastoid processes. The "modern" traits included a high brain case, a prominent and domed brow, low angular orbits, an occiput which rises vertically with little curvature, the zygomatic width, the short face, the thickness of the mandibular body, the incipient chin, and gracile facial bones (Roginsky 1954; Vallois 1955; Alexeyev 1976). The results of a symposium convened to discuss the child's evolutionary significance, in 1954, upheld Roginsky's analysis, noting additional primitive features of the Starosele child's skull and concluding that it represented a hominid transitional between Neanderthals and modern *Homo sapiens sapiens* (Alexeyev 1976).

DATING THE STAROSELE CHILD

Numerous attempts have been made to either directly or indirectly date the Starosele child burial. During the 1950s, three absolute dating methods—collagen, fluorine, and radioactive isotopes—were used on the skeleton itself and on faunal materials believed to be contemporaneous with it. In 1992, two animal bones from Formozov's excavations in proximity to the Starosele child, which had been stored at the Institute and Museum of Anthropology of Moscow State University, were made available for AMS dating.

The collagen test, performed by I. G. Pidoplichko, produced an index of the ratio between the mineral and organic contents of the bones (the older the bone, the higher its mineral content), with the expectation that bones from the same stratum have the same, or approximately the same, indices. The collagen tests on the material from Starosele proved inconclusive, however. Initially, Pidoplichko ran tests on four *Equus hydruntinus* bones from the 1952 excavations, obtaining a mean index of 456 (indices: 402, 418, 495, 509), which, according to his system, was of late Mousterian age (Formozov 1958: 58-59). He then ran tests on the Starosele child bones, producing indices of 241, 255, 361 which, in his terms, were much younger than the tested faunal materials. Pidoplichko, suspecting the glue used to preserve the child skeleton was affecting the results, ran additional tests on more faunal material, including one bone which was impregnated with glue, which produced indices of 290, 307, 343, 344, 367, 472. Aside from the wide spread of the indices, a number fell within the range of those gotten from the child itself. Moreover, in Pidoplichko's chronological scale, these new indices fit into the very late Middle Paleolithic and early Upper Paleolithic. Assays were not run on faunal remains from the A.D. eighteenth century cultural deposit. Both Pidoplichko and Formozov explained the very late indices as the consequence of variable bone preservation according to sediment types, and the influence of the glue on both the child's bones and the Middle Paleolithic animal bones (Formozov 1958: 72-74; McKern and Kozlik 1962: 405).

Fluorine assays, performed by V. V. Danilova, were still more inconclusive: faunal samples from Block II of Starosele (adjacent to the burial) gave an index of 0.13, while the skeleton contained no fluorine whatsoever (the fluorine content of bones is expected to increase with geologic age). Danilova concluded, therefore, that the skeleton was not of Mousterian age, a conclusion rejected by Formozov (1958: 60) on the grounds that the sedimentary conditions resulted in a variable fluorine retention, the glue on the child's skeleton affected the results, and the test was, at that time, not well developed (Formozov 1958: 74-75; McKern and Kozlik 1962: 405).

The third absolute dating method was employed by V. V. Cherdyntsev using the radioactive isotopes actinium/radium, radium/uranium, and thorium. The Ac/Ra and Ra/U tests produced dates at Starosele ranging from 26,000 to 33,000 BP, and the Thorium test produced dates of 31,000; 41,000; and 110,000 BP (Cherdyntsev and Meshkov 1954; Cherdyntsev 1956; Cherdyntsev et al. 1961). Since 100 grams of bone were required to perform the tests, the tests were run on faunal remains from the 1952 excavations (ca. 17 meters to the north of the burial), the provenience of which, unfortunately, was not recorded. The dates produced by these tests were not accepted by Formozov, since he believed there was a single, late Middle Paleolithic occupation of Starosele, because Cherdyntsev had produced inconsistent results in the dating of other sites, and because the method was not well developed (Formozov 1958: 59-60).

The inconsistencies both within and among these dating systems, their experimental nature, and Formozov's belief that there was a single, late Mousterian occupation of Starosele, led to their complete rejection. Instead, rather tautological reasoning was used to estimate the age of the cultural material from Starosele: the lithic artifacts were said to be Mousterian, but with "evolved" characteristics, such as blades and well-shaped bifacial pieces, and the Starosele child was said to have "evolved" physical features, as well. The site must, therefore, be of late Mousterian age.

As part of the program "Dating the Paleolithic in Eastern Europe," sponsored by the McDonald Institute, the British Academy, the Radiocarbon Dating Laboratory in Oxford, and corresponding institutions in the C.I.S., AMS dates were recently run on faunal samples from Formozov's excavations in another attempt to date the Starosele child (Gvozdozer et al. 1996). The samples were collected by M. D. Gvozdozer during the 1956 excavations, as part of her study on bone retouchers, and are said to derive from above the "roof collapse," in a position analogous to the child's burial (squares H21 and L18; fig. 6-1). Two samples, broken fragments of long bones identified as *Asinus*, produced dates of $36,160 \pm 1250$ (OxA-4133) and $35,510 \pm 1170$ (OxA-4134) (Hedges et al. 1996: 189). These dates, if correct, provide an age for the cultural layer above the child's burial, and therefore, only a possible indirect age for the burial itself. These dates are discussed in more detail in Chapters 5, 13 and elsewhere (Hedges et al. 1996; Marks et al. 1997; Monigal et al. 1997).

VIEWS OF THE STAROSELE CHILD

Since its discovery, the Starosele child has received a fair amount of attention for numerous reasons. Mousterian burials were, and still are, relatively rare. The mixture of Neanderthal and Modern human traits it was said to possess made it the only one of its kind on the European continent. Also, it fit in with then-current evolutionary ideas about the origin of *Homo sapiens sapiens* evolving in the Near East and moving from there into Europe. In spite of all of this attention, however, there has been much confusion in the literature over its stratigraphic context and disagreement over its morphological attribution; the latter seeming to vary according to the prevailing evolutionary paradigm. Citations of the Starosele child tend to be of two types: those debating its phylogenetic attribution and those who use it to demonstrate evidence of advanced Mousterian cultural practices by claiming that the burial was intentional.

Two seminal articles which appeared in 1955 brought the Starosele child to the attention of the Western World and reflected the opinions which would hold sway for the next thirty years. Ullrich (1955), using the data from Formozov's (1954) and Roginsky's (1954) descriptions of the site and child, entertained no doubt that the burial was intentional and of Mousterian age. He also pointed out that the burial had the same body orientation as that found at Tabun, La Chapelle and Skhul. While noting that the skull had both Neanderthal and modern traits, he

was unwilling to commit himself to the child's phylogenetic attribution, although he suggested it might be related to the specimens from Mt. Carmel (Ullrich 1955). A few years later, Ullrich stated that the child was not a Neanderthal, but was most likely a *presapiens* related to the Near Eastern fossils (Ullrich 1958).

In an independent and very detailed review of the Russian reports, Vallois (1955) came to much the same conclusions as Ullrich. The mixture of Neanderthal and modern traits suggested to him that it had more affinity to the Skhul fossils than it did to classic Neanderthals. The coexistence of dolichocephaly, hypsicephaly, the shortness of the face with a low orbital position, and prognathism also suggested to Vallois similarities to the preaurignacians from Grimaldi. He put forth a hypothesis that the Aurignacian *Homo sapiens sapiens* did not evolve from the western European Neanderthals, but might have evolved from those of Eastern Europe. He argued that, since the Aurignacians already had modern features, they must have developed during the Mousterian, to which the specimens from Skhul, Teshik Tash, and Starosele attest. A possible center of evolution of *Homo sapiens sapiens*, in Vallois' opinion, was Russia (Vallois 1955).

As the remains of the Starosele child were examined by very few anthropologists, all Russian, Vallois' article and its long, detailed treatment of the site and the burial, was one of the only sources of information about the site available to western, non-Russian speaking archeologists. Unfortunately, Vallois' article misrepresented the child's stratigraphic context and may be the cause of the confusion in the subsequent literature regarding the burial. He stated that the stratigraphy of Starosele was "extremely simple": under a humus layer 30 centimeters thick, there was a single, homogenous cultural layer from 0.4 meters to 2 meters below surface, in which the burial lay (Vallois 1955: 556). While Formozov certainly did not belabor the complexity of Starosele's stratigraphy and did believe the lithic artifacts to be homogenous, he still recognized that a layer of rockfall separated two distinct cultural layers. In none of the published Russian reports was it stated that the child was actually in the cultural layer. While Vallois did mention that no burial pit was visible, he was more concerned whether or not it was an intentional Mousterian burial, not whether it was of an intrusive, later age.

Howell (1957, 1958) followed a line of reasoning similar to Vallois in two articles treating the evolutionary connections of Neanderthals and modern humans. He suggested that there was "broad racial continuity" across eastern Europe and into Southwest Asia, and that Neanderthals were either "sapienized" in the Near East or evolved in place further to the north. He placed the Starosele child midway—chronologically and morphologically—between the fossils from Skhul and Qafzeh and the Cro-Magnons, and stated that "the Starosele child would thus testify to the first penetration of such people into the eastern margins of the European continent" during Würm I (Howell 1958: 196).

Coon (1967: 558) remarked that many of the "modern" features of the skull were exaggerated; that the forehead is more rounded and curved, and the face shorter than modern-day infants of the same age, yet neither could one ignore its "primitive" features such as the thick cranial vault, weakly developed mastoids and large teeth. Coon offered two possibilities for its origin: an early example of modern "caucasoids," resulting from the miscegenation of Neanderthals and *Homo sapiens*, or the result of in situ evolution from Neanderthal to *Homo sapiens sapiens*.

These articles, based on information derived from Russian reports rather than firsthand observation, differed only in whether the transition to modern humans took place in Eastern Europe (e.g., Gerasimov 1964; Uryson 1964; Alexeyev 1966, 1976; Birdsell 1972; Thoma 1978) or in the Near East (e.g., Yakimov 1954, 1969; Bunak 1959). There was some variation on how "modern" the skull was seen to be.

An early study by G. F. Debets (1956) compared the Starosele child's skull measurements to those of modern specimens and, based on modern growth curves, attempted to predict how the child would appear fully grown. Debets was of the opinion that the child was, in fact, a *Homo sapiens sapiens* and did not have characteristics which were any more primitive than modern skulls (Debets 1956). In a similar study, some two decades later, Alexeyev (1976) concluded that in the brain case height, the size of the facial skeleton, and thickness of mandibular body, the Starosele child was modern. He claimed that his inferred growth curves showed the child to be no different from Upper Paleolithic archaic *Homo sapiens sapiens*.

Jelínek (1969) and Uspensky (1969), comparing a number of its metrical indices to Neanderthal and modern children, have both claimed that the Starosele child had unambiguously modern characteristics. Thoma, one of the few physical anthropologists able to study a cast of the skull, claimed that the primitive traits noted by Roginsky can be found on any hominidae, and that the child was a typical proto-Cro-Magnon which happened to have a few primitive characteristics. Thoma, incidentally, reported that the pathologists to whom he showed the cast did not consider the child to have any deformation of the skull (Thoma 1962), *contra* Howell (1958), Spitery (1980), and Wolpoff (1980) who considered it to be hydrocephalic. Bunak (1959), likewise, thought that it was closer to modern *Homo sapiens sapiens* than to Neanderthals, claiming that there were fully developed frontal protuberances. More recently, there has been a strong tendency on the part of physical anthropologists and archeologists to view it as completely modern, while also expressing concern that so young a specimen could be attributed to a specific subspecies and indicating doubts about the context of the burial (e.g., Tillier 1989, 1990; Trinkaus 1989; Stringer and Gamble 1993; Soffer 1994).

On the other hand, since its discovery, some have viewed it as essentially Neanderthal; Gross (1956: 75) referred to the Starosele child as Neanderthal, in the same group as the Last Interglacial Neanderthals from Ehringsdorf, Krapina, La Quina, and Saccopastore. Many of the other authors attributing the Starosele child to Neanderthals (e.g., Phenice and Sauer 1977; Bunak 1980; Shackley 1980; Spitery 1980; Lambert 1987; Gvozdover et al. 1996) seem to be misled by the apparently associated archeological remains, assuming it is Neanderthal because the cultural materials were Mousterian.

The question of the Starosele child was further complicated for western scholars in 1962 when McKern and Kozlik (1962: 405) made specific reference to the additional human remains found in Block III (discussed above; fig. 6-1) at Starosele. McKern and Kozlik (1962: 405) stated that "from these fragments it was concluded that this individual repeated the morphological mixture of Neanderthal and sapiens traits that had been seen in the earlier found child . . ." and that "the association of this second find with the Mousterian layer was never questioned." In fact, since the bones in question came from an area well separated from the main excavation block, where the stratigraphy was not clear, their association was not demonstrated. Given that the bones were never described in any detail, and that Formozov, following the opinions of Ya. Ya. Roginsky, G. Debets, and M. Gerasimov, stated that the mandible was modern in every respect (Formozov 1958: 75), McKern and Kozlik's comments were without basis. The most recent interpretation of these bones, based on a careful reading of the original day books, is that they came from a modern "destroyed burial" (Smirnov 1991: 142).

Aside from the confusion surrounding the phylogenetic attribution of the Starosele child, a number of authors have questioned its context and age. Gábori (1976) not only questioned the association of the skeleton with the Middle Paleolithic deposits, but also the homogeneity of the deposits. Klein (1969), referring to the collagen and fluorine tests, raised the question of contemporaneity, a point also raised by Harrold (1980) and Trinkaus (1982), although others

were not so cautious (e.g., Jelínek 1969; Birdsell 1972; Alexeyev 1976, 1981; Thoma 1978). Grahmann (1956) even suggested that the skull was not reconstructed properly.

It is unclear if questions about the child's context have been raised due to the original misgivings expressed by Zamyatnin (which were rarely mentioned in the Russian reports and not at all in non-Russian literature), or were due to the inconsistent stratigraphic descriptions published in the non-Russian literature. For example, Vallois (1955: 556) and Binant (1991: 10) state that the burial was within *the single* archeological level. Jelínek (1969: 500) states that it was in the "surface layer which contains mousteroid cultural finds." McKern and Kozlik (1962: 403) state that it was found in a "layer of crushed stone in association with . . . stone tools," while only Ullrich (1955: 96) and Gábori (1976: 133) correctly state that it was not within the upper archeological layer, but below it.

The Starosele child has also attracted much attention from archeologists who often cite it as an example of an intentional Mousterian burial (e.g., Grahmann 1956; Gamble 1986; May 1986; Binant 1991; Defleur 1993; Ullrich 1995; Alekshin 1996). In a few instances, it is even remarked how Mousterian peoples cared for their infirm, citing the child's hydrocephalic condition (e.g., Defleur 1993; Alekshin 1996). Those who do not question the association of the skeleton with the Middle Paleolithic cultural level and are aware that no burial pit was seen during its excavation, invariably cite the relatively good preservation (given its age) of the skeleton, that it was found in anatomical position, and that the overlying sediments were horizontally bedded with no evidence of disturbance.

In short, the Starosele child has been problematic. Even the physical anthropologists who have seen the specimen, or a cast of it, cannot agree on the extent to which it shows "modern" or "primitive" features. It is impossible to verify the context of the burial; neither the notes nor drawings are detailed enough, and Formozov tended to take a rather simplistic view of the stratigraphy (see Chapter 5). Yet another problem is the objectivity of those writing the major reports on the Starosele child: Alexeyev and Gvozdozer both were part of the original excavation team, and Gerasimov and Roginsky were part of the commission which examined the find in situ and concluded that it was of Middle Paleolithic age. All of these authors concurred with Formozov's beliefs that the child was associated with the Middle Paleolithic cultural remains, all emphasized the "primitive" traits the skeleton possessed, and all wrote major publications about the child on which all the other literature concerning the burial is based.

Although the child's burial was completely removed, along with the surrounding matrix, the opening up of Formozov's original profiles, the discovery of his original datum, and a newly published profile of the sediments one meter to the south of the burial (Smirnov 1991: 143), enabled us to place the burial into its probable stratigraphic context. It appears that the burial was below our Level 1, resting just above the major rockfall episode which seals Level 2, in a matrix of "white gravels." These "gravels," noted by Formozov, are, most likely, small chips and blocks of weathered and washed exfoliated limestone accumulated in a major erosional channel, clearly seen in Formozov's intact southern profile (see Figure 5-3, this volume). Additional discoveries of human remains during the 1993 and 1994 seasons necessitate a reappraisal of the original Starosele child's context and origin.

NEW DISCOVERIES OF HUMAN REMAINS AT STAROSELE

New discoveries of human remains during the 1993 and 1994 seasons have added still more reasons to carefully review the context and probable origin of the Starosele child. While these new finds cannot *prove* that the Starosele child is not what is was claimed to be, they do amount to a very strong argument that a new interpretation is warranted.

An infant burial was discovered in 1993, during the opening up and cleaning of Formozov's line 21 profile, in square I22. That particular profile had been opened in 1953 and had been left open until it was reburied by Formozov at the end of his excavations in 1956 (fig. 6-4). It appears that during those years, a portion of this burial, including its northern and western parts, as well as the skull and all the upper body, were eroded away. The remaining portions clearly lay within the matrix of modern loamy soil, some 10 cm above our cultural Level 1 (fig. 6-5). While no burial pit was visible, it appeared that the surface on which the skeleton lay, as well as the southern and eastern edges of the sepulture, had been artificially straightened by the removal of limestone slabs as the pit was dug. There were no associated artifacts or grave goods. The remains, which were in correct anatomical position, consisted only of parts of the femurs, the lower legs and feet, including toes.

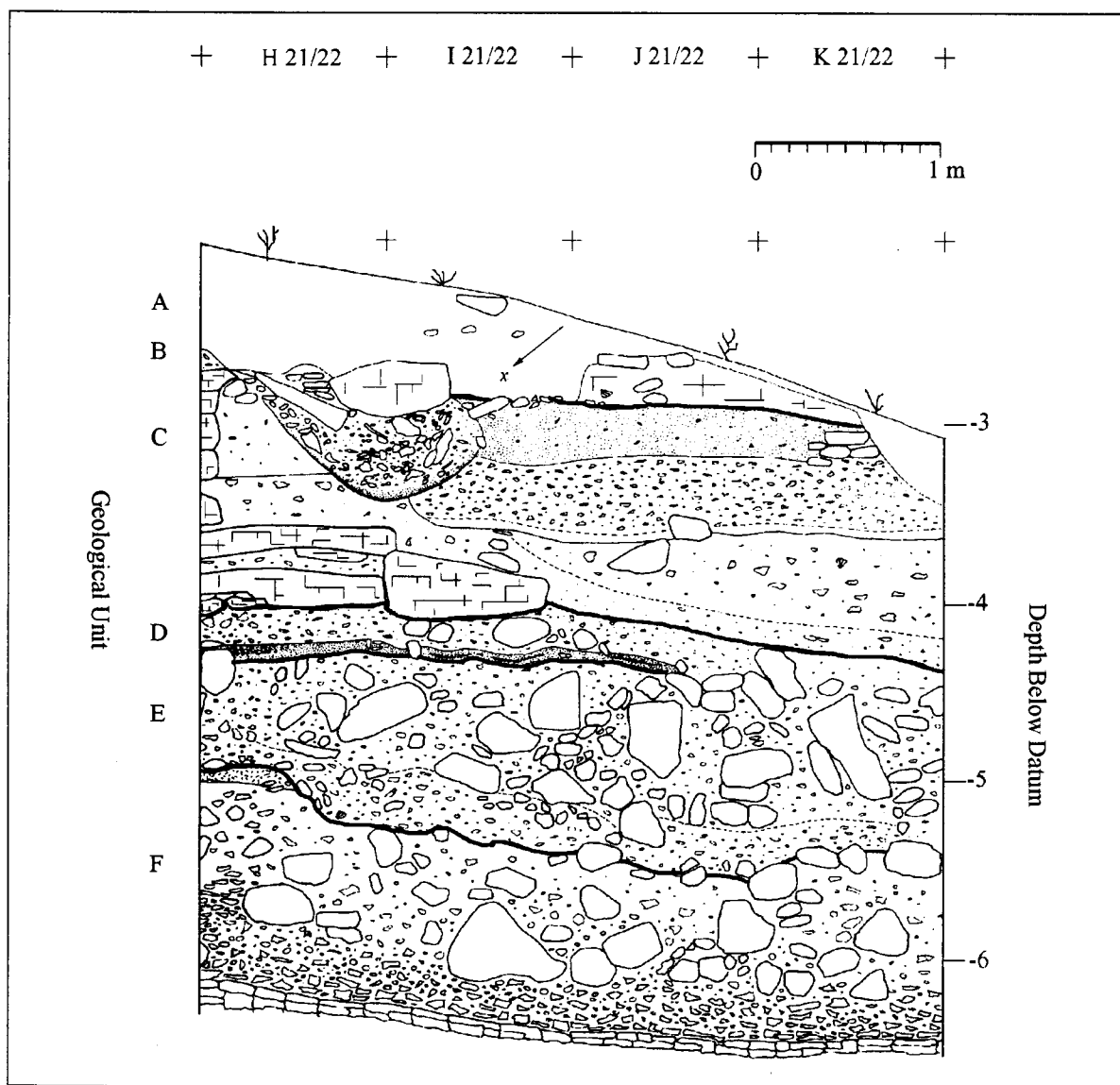


Fig. 6-4—Starosele, east-west profile of line 21/22 H-K as drawn in 1993 after removal of backfill and cleaning. The bones of the infant protruding from the profile are indicated by the arrow and the x at the top of the profile. To the left of the burial is an erosional channel, filled with exfoliated limestone fragments, gravels, and some derived Middle Paleolithic artifacts and bones. A-F—geological units: A—modern soil; B—complex of alluvial and colluvial sediments; C—exfoliated limestone sediments intercalated with fine sediments; D—gravels and exfoliated limestone fragments; E—boulders and gravels in reddish matrix; F—boulders in red clayey matrix.

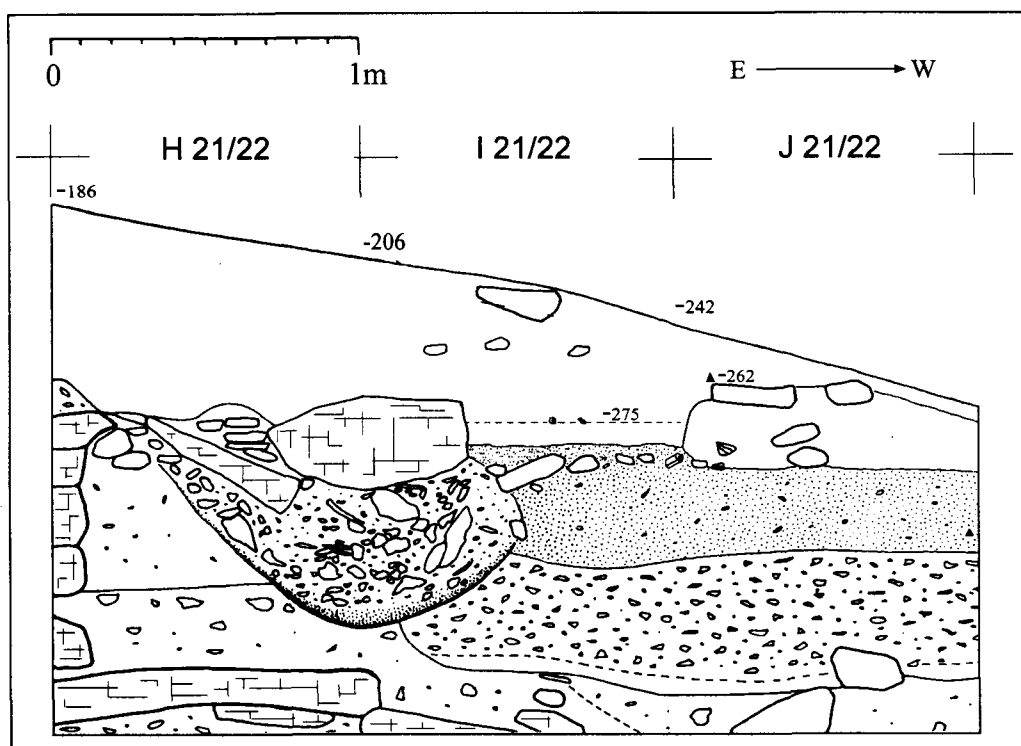


Fig. 6-5—Starosele, detailed profile of infant burial along line 21/22 H-J (1993).

Given the position of the legs and feet, it is possible to deduce that the infant had lain on its right side, with the legs in a semi-flexed position, the body oriented east-west, with the head west, and the face turned to the south (fig. 6-6). Thus, while the body position was different from that of the Starosele child (the latter's legs were extended), the body orientation was the same.

At the time of discovery, questions immediately arose concerning the possible relationship of the new discovery to the child burial discovered by Formozov, since they were only two meters apart. Both burials were about 90 centimeters below surface: however, while the 1953 burial was found below the uppermost archeological horizon, lying on top of the major rockfall in Pleistocene deposits, the 1993 burial was fully within modern sediments, above the uppermost archeological layer, and clearly of post-Paleolithic age. Given these differences and the fragmentary state of the 1993 burial, it was impossible to link the two burials as more than an improbable coincidence.

During the 1994 season, yet another burial was discovered, of a middle aged adult, this time in clear stratigraphic context, in squares G/H/I 25, 4.5 meters south-east of the 1953 burial, and 2 meters south of the 1993 burial (figs. 6-1 and 6-6). The burial pit, which was clearly visible (fig. 6-7), was wide: 1 meter at the top and 0.6 meters at the base. It began in the modern sediments and passed through our Level 1 into sterile deposits directly below, ending just above the limestone slabs. As a result of the disturbance of a portion of Level 1, a few Middle Paleolithic animal bones and flint artifacts were mixed in the burial fill, with one flake resting directly above the pelvis (fig. 6-6). The skeleton was complete and in correct anatomical position, lying on its back, its upper arms along its side and lower left arm bent so that the hand lay on the pelvis. The left shoulder was slightly raised. The legs were extended, the body oriented east-west, with the head to the west, and the face turned to the south. There is no doubt that this burial is modern, given its stratigraphic position and its state of preservation, which was vastly superior to the Middle Paleolithic fauna. The skeleton itself, without question, is modern (Trinkaus, personal communication).

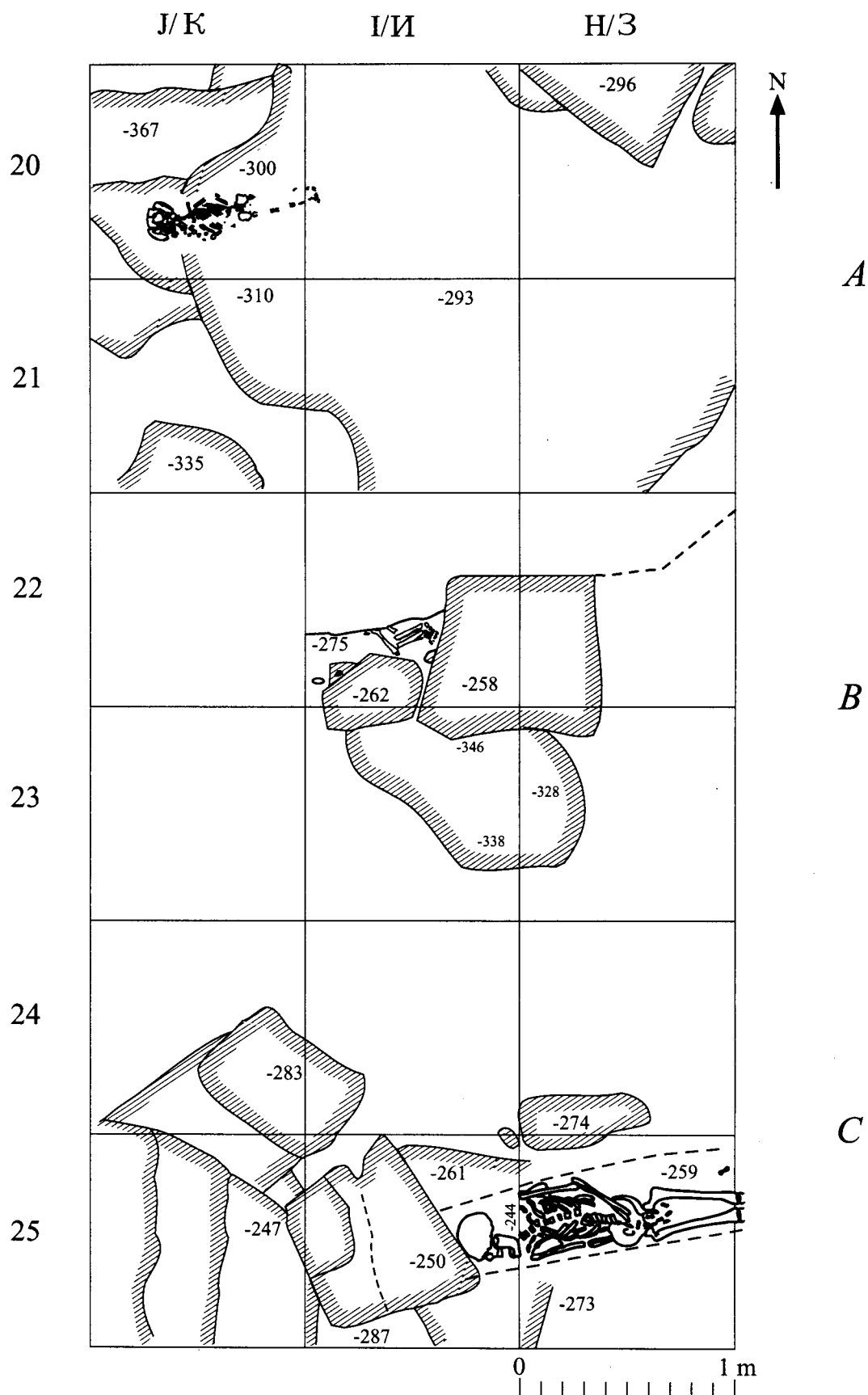


Fig. 6-6—Starosele, plan of the three human burials. A—the Starosele child (1953); B—the infant burial (1993); the broken line indicates the limit of erosion; C—the adult (1994).



Fig. 6-7—Starosele, photo of excavations at the end of the 1994 field season. The adult's burial pit is clearly visible below the arrow. The limestone slabs on the floor of the excavation are the lowermost: the uppermost slabs can be seen under the burial pit and to the right of the pit, along the back wall.

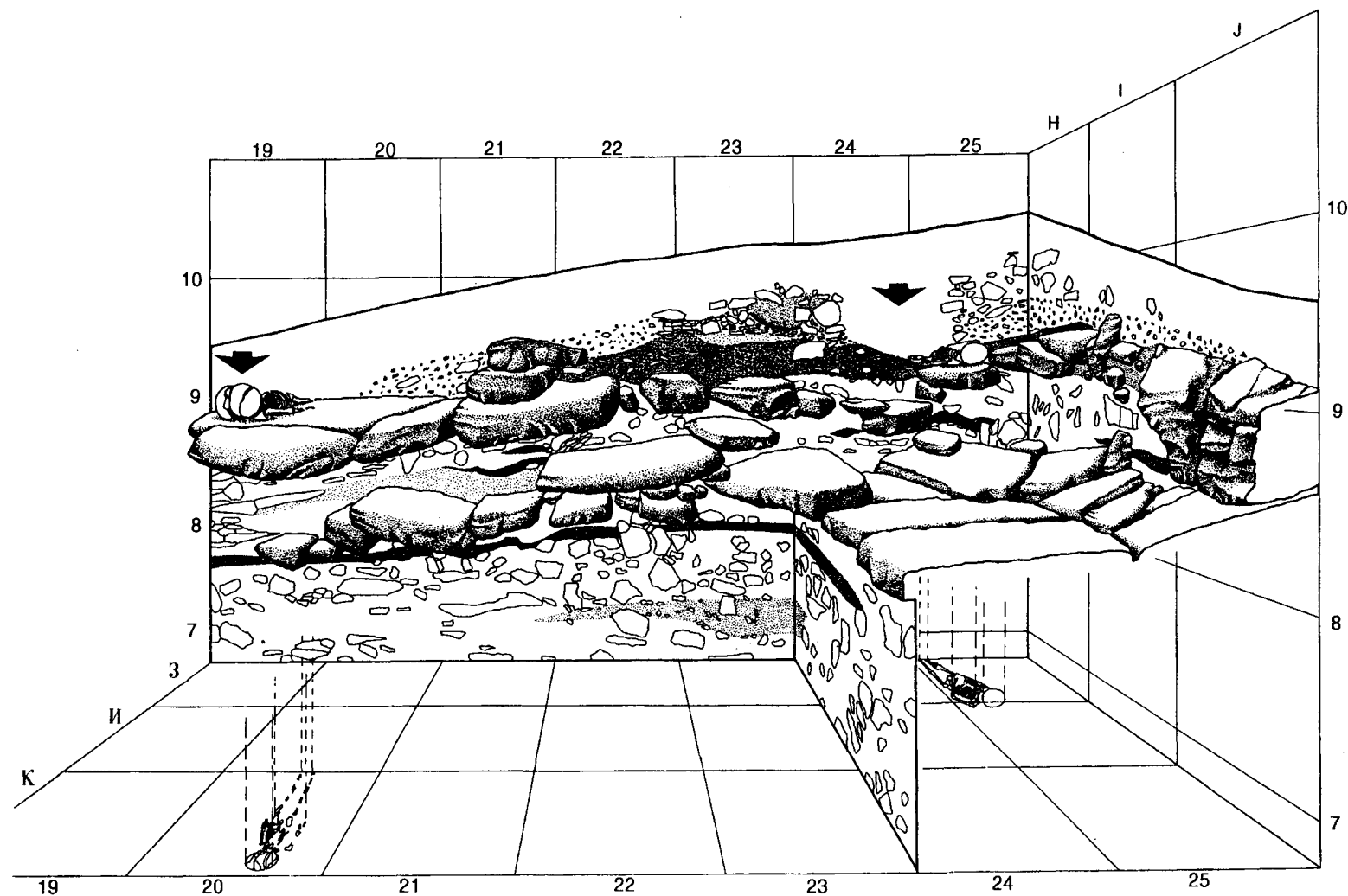


Fig. 6-8—Starosele, three-dimensional reconstruction of the stratigraphy, showing both the Starosele child (1953) and the adult burial (1993) in relation to the various sediments. The burials have been projected down onto a grid to show their orientations.

While neither of the recently discovered burials can be conclusively linked with the Starosele child, a number of striking similarities make the association highly probable. First, the presence of these two new burials places three individuals within a very small area (fig. 6-7). Of these, two are clearly modern (the recent finds), only the Starosele child is claimed to be of Middle Paleolithic age. When it is considered that over the remaining 260+ excavated square meters only three other human bone fragments were found, the tight clustering of these complete skeletons is curious.

Although no burial pit was seen for the Starosele child and one was plainly present in the case of the recent adult burial, both skeletons were in the same stratigraphic position, under the uppermost Middle Paleolithic level, resting on the top of the exfoliated limestone slabs (fig. 6-8). The 1993 burial, while fully within modern sediments, was at approximately the same depth below surface as both of these. All were without grave goods and all had the same body orientation (fig. 6-9). Obviously, the similarities among all three, two of which are without question modern, are striking. Although it is conceivable that this is no more than an unexplainable coincidence—that within a ca. 290 square meter excavated area of the site, two modern burials and a Middle Paleolithic one were all clustered spatially at the same depth below surface, with the same body orientation and, with the exception of the infant, the exact same body position—there are additional reasons to believe that coincidence is not involved.

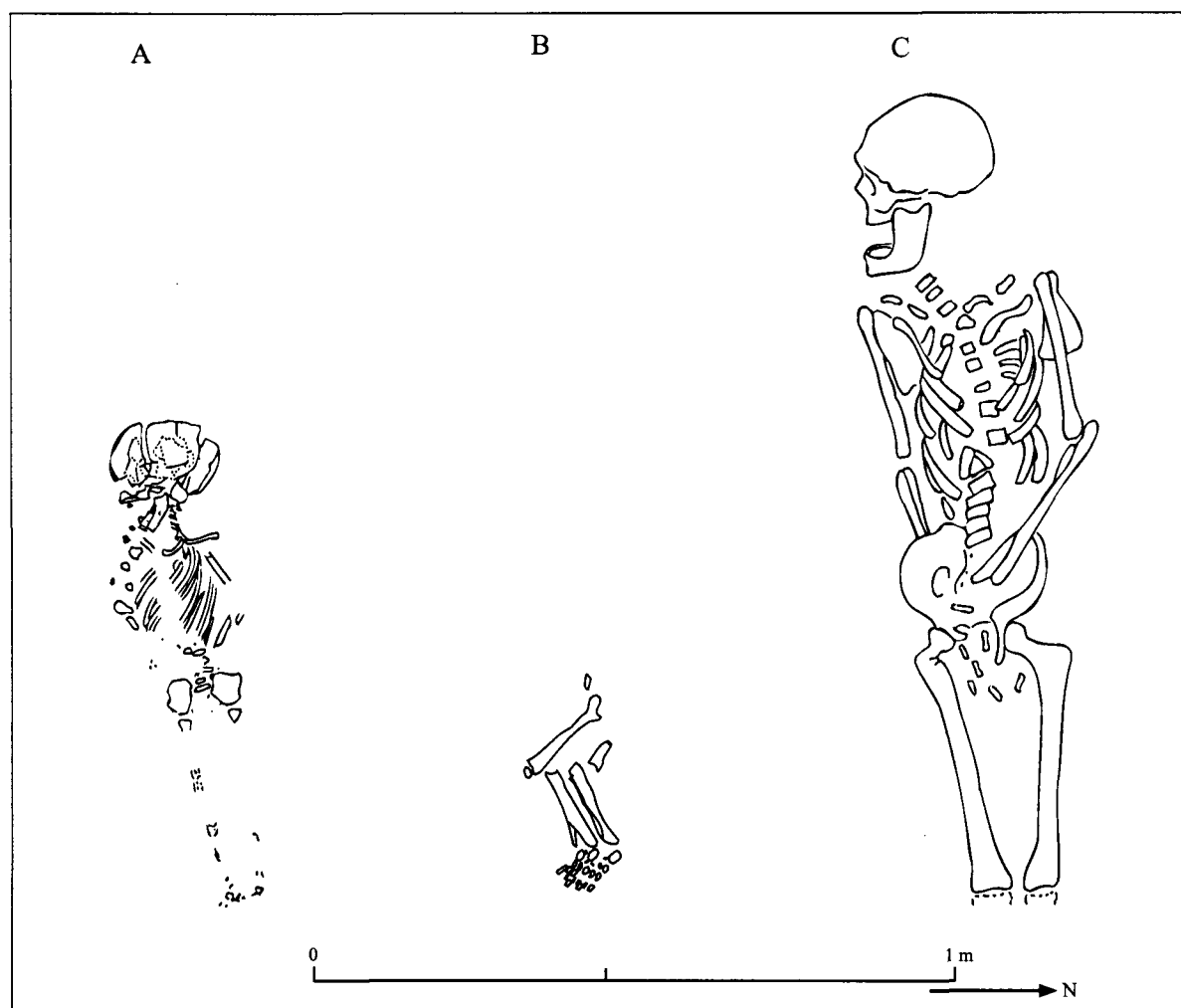


Fig. 6-9—Starosele, drawings of the three burials, to scale, showing body orientation and position; A—the Starosele child (1953) (adapted from Formozov 1958: 63); B—the infant (1993); and C—the adult (1994).

The Kanly-Dere box canyon was a traditional burial area during late Medieval times. A seventeenth-eighteenth century Muslim cemetery lay just inside the canyon's east side, about 100 meters from the site; it was excavated at the end of the 19th Century, as noted by Formozov (1958: 23). Also, before the nineteenth century, Crimeans commonly had separate burial areas outside their villages (V. Mytz, personal communication). Burials in these family groupings, regardless of their ethnic affiliations, followed Muslim burial practices, which included an extended position on the back, with the head to the west and the face to the south, since, from the Crimea, Mecca is to the south. Thus, the clustering of the human remains, their orientation, and their position, are fully consistent with Muslim burial customs. All these data make it virtually certain that the Starosele child was a late Medieval Muslim burial intrusively placed through the uppermost, in situ, Middle Paleolithic deposits.

CONCLUSION

The discovery of the Starosele child, now nearly a half century old, was an incredibly important find; it impacted chronological, physical, and cultural theories of how modern humans developed and entered Europe. Given over one hundred major references to the Starosele child in the anthropological literature since its discovery, there can hardly be any doubt that the child, and further information regarding the site, are still salient to our understanding of the emergence of modern humans.

While new excavations do not support Formozov's view of the stratigraphy and site formation processes at Starosele, in the case of the Starosele child burial, he can hardly be faulted. The sondage in which the child was found was widened for a better perspective of the stratigraphy at the time of its discovery and the excavators did their utmost to preserve the skeleton intact. Before removing the remains, a commission consisting of eleven very eminent archeologists, physical anthropologists, and geologists—some of whom had to travel a substantial distance to arrive at the site—was gathered to render their opinions on whether it was an intentional burial, whether it was Middle Paleolithic, and whether it was in situ, and drawings and notes followed the standard practice of the time. All of the steps Formozov took to ensure that his own interpretations of the site were not without basis are commendable.

None of the authors here have viewed remains of the Starosele child, nor were we present at the earlier excavations. The new excavations at Starosele were never intended to elucidate the circumstances of the discovery of human remains there in 1953, but the discovery of two more skeletons in such similar contexts can hardly be discounted. The resemblance of the new, unquestionably modern human remains in depths of burial, closeness of burial, conformation with Muslim burial practices to the 1953 skeleton, and the use of the Kanly-Dere canyon as a Muslim cemetery during recent times, all suggest that the original, Starosele child burial is likewise modern.