Chapter 1

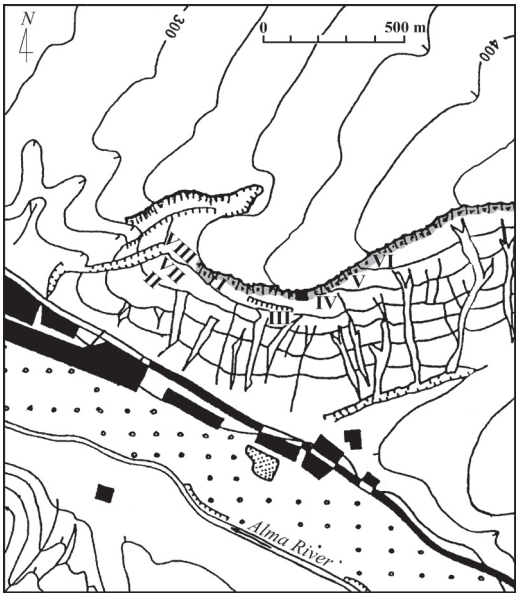


Fig. 1-1 Map of the Kabazi cuesta; Roman numerals indicate archaeological sites: I – Kabazi I; II – Kabazi II; III – Kabazi III; etc.

Kabazi V: The Lithological and Archaeological Sequences

Victor P. Chabai

The Middle Palaeolithic site Kabazi V (44°84′ N; 34°03′ E) is situated at the foot of a limestone cliff, near the peak of the south-west facing slope of Kabazi cuesta, 360 m above sea level, and 150 m above the present day Alma River valley. The site was formed in relatively soft Eocene fossil clay (Eb), which underlies the Eocene nummulitic limestone (Ea). In addition to Kabazi V, the slopes of the Kabazi cuesta have also revealed two further buried rock-shelters (Kabazi I and Kabazi VIII), one open air site (Kabazi II), and four concentrations of surface material (Kabazi III, IV, VI and VII) (Fig. 1-1).

Kabazi V was discovered in 1983 by Yuri Zaitsev, a student of Simferopol secondary school, now a senior scientist at the Crimean branch of the Archaeology Institute. In 1986 an expedition headed by Yu. Kolosov excavated a first test pit and established the grid system at Kabazi V. This system was oriented perpendicularly to the visible limestone cliff, in the hope that the back-wall of the assumed buried rock-shelter would share this orientation. Only later did it become clear that the present day cliff and the back-wall of Kabazi V rock-shelter differ in orientation by about 90°. In the1990 field campaign the back-wall of the rock-shelter was located 2 m from the initial sondage. Accordingly, the excavation area is oriented along the back-wall of rock-shelter. In the 1986, 1990, 1993-1996 and 2002-2003 field campaigns excavations were undertaken along the back-wall of the rock-shelter, as well as on the easternmost part of the rock-shelter platform (Fig. 1-2).

The materials from 1986, 1990 and 1993-1996 field campaigns have already been extensively studied and published (Kolosov et al. 1993, Yevtushenko 1998a, 1998b, McKinney 1998, Rink et al. 1998, Burke 1999, Markova 1999, Mikhailescu 1999).

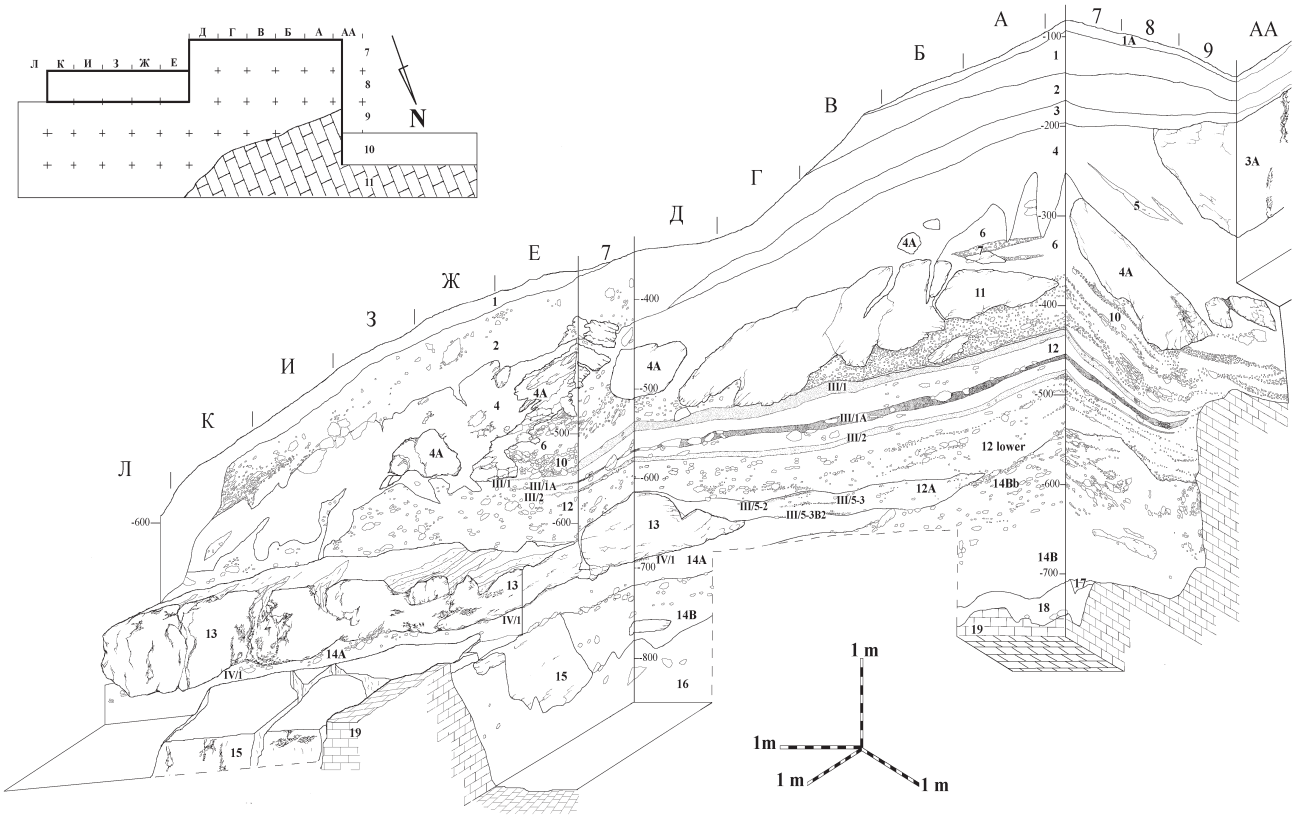


Fig. 1-2 Kabazi V. Combined sections along square lines AA, 6/7, Д/E, 7/8 and 8/9; Arabic numerals indicate lithological layers, combined Roman and Arabic numerals indicate archaeological levels.

Geological History and Archaeological Sequence

The stratigraphical sequence of Kabazi V comprises a total of 11 strata which are subdivided into 27 lithological layers (Table 1-1; Fig. 1-2; 1-3; 1-4; 1-5; 1-6). Three formation stages can be distinguished for Kabazi V. The first stage is connected with the deposition of Stratum G sediments; these consist of karstic clay and weathered bedrock: lithological layers 19, 18, 17 (Fig. 1-2; 1-3; 1-4). The karstic clay formed in channels of weathered bedrock, a configuration which would suggest the presence of a spring during this stage of site formation. There are no traces of human occupation in Stratum G.

The second stage is characterised by the accumulation of the fine-grained sediments encountered in strata F, E4, E3, E2 and E1 (Table 1-1). According to R. Ferring, these strata contain deposits from the weathering of bedrock clays (Ferring 1998). Also, two roof fall events occurred during the formation of these strata: lithological layers 15 and 13 (Fig. 1-2; 1-3; 1-5; 1-6, *B*). Remnants of human occupations are connected with lithological layers 14A, 12A and 12 (Table 1-1; Fig. 1-2; 1-3; 1-4; 1-5; 1-6).

The third stage begins subsequent to the next rock-shelter roof collapse – lithological layer 11 (Fig. 1-2; 1-3; 1-5). Colluvial and eolian sediments form the upper part of the sequence: strata D, C, B2, B1 and A (Ferring 1998). These strata accumulated in an open site setting. Archaeological material was found in lithological layers 10, 9, 6, 5, 4, 3, 2 and 1 (Table 1-1; Fig. 1-2; 1-3; 1-4; 1-5; 1-6).

Therefore, whereas the first stage of Kabazi V formation is connected with karstic rock-shelter evolution, the second stage reflects the accumulation of rock-shelter/*abri* deposits, and the third stage correlates with accumulations in an open-air site setting. The human occupations at Kabazi V were closely connected with its geological evolution. Whilst in the first stage, the rock-shelter floor inclined too sharply to permit habitation, during the second stage, weathering of the rock-shelter walls (lithological layers 16 and 14A) as well as rock-fall (lithological layer 15) in its eastern part, led to the formation of a more or less horizontal surface, thus making the location more comfortable for both

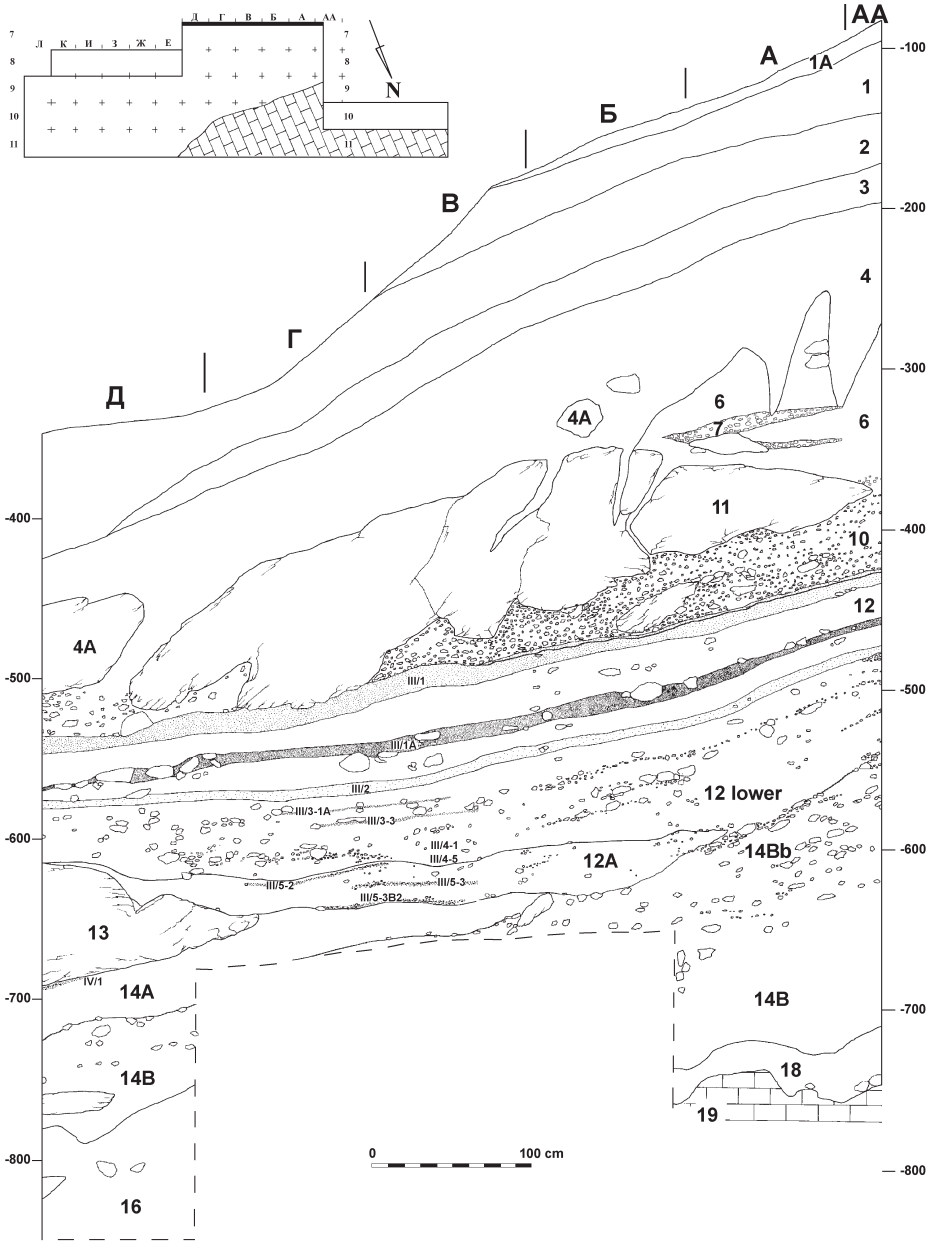


Fig. 1-3 Kabazi V. Section along square line 6/7; Arabic numerals indicate lithological layers, combined Roman and Arabic numerals indicate archaeological levels.

humans and bats – *Myotis sp.* (Chapter 4, this volume). The presence of the latter also suggests that the rock-shelter was sufficiently deep. The first human occupations observed in Unit IV, lithological layer 14A, accumulated directly on the surface of the limestone blocks from the first roof collapse – lithological layer 15 (Fig. 1-3; 1-5; 1-6, *B*). Some artefacts were found in fissures between blocks (archaeological level 4RF). These oldest occupations took place on a more or less horizontal surface in the eastern part of rock-shelter. The inclination of this surface is relative to the inclination angles of the rock-fall – lithological layer 15. In the western part of the excavation area, lithological layer 14A was cut by erosion (Fig. 1-3). Erosion channels were also found on brecciated sediments in lithological layer 14Bb, on square lines AA and A (Fig. 1-3). These channels are oriented west – east along the back wall of the shelter. This means that the western part of the rock-shelter was not protected from slope erosion.

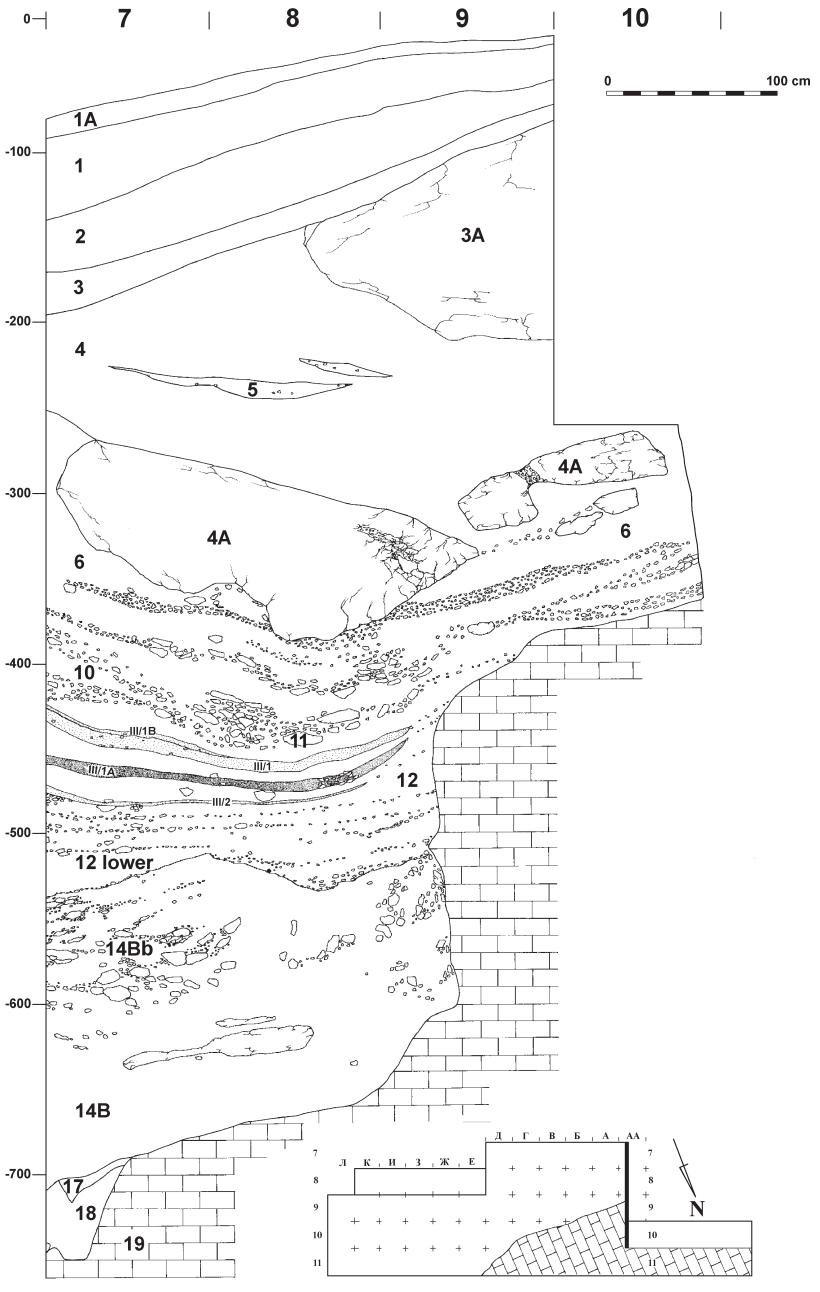


Fig. 1-4 Kabazi V. Section along square line AA; Arabic numerals indicate lithological layers, combined Roman and Arabic numerals indicate archaeological levels.

Following the second roof collapse (lithological layer 13) the lense-shaped lithological layer 12A accumulated (Table 1-1; Fig. 1-2; 1-3). There is some evidence of pedogenic process in lithological layer 12A. This layer contains a number of occupations assigned to sub-unit III/7, III/6 and III/5. In the western part of the excavation area, lithological layer 12A accumulated on the eroded surface of lithological layers 14A and 14 B (Fig. 1-3), but were also found in vertical fissures of blocks from the second roof collapse – lithological layer 13 (Fig. 1-5; 1-6, *A*). Part of layer 12A sediments accumulated on the top of the limestone blocks of lithological layer 13. The prolonged weathering of limestone blocks in this latter layer is attested by numerous fissures and caverns (Fig. 1-6, *B*), which subsequently became filled with sediments of lithological layer 12. Also, in these fissures and caverns, numerous artefacts and faunal remains

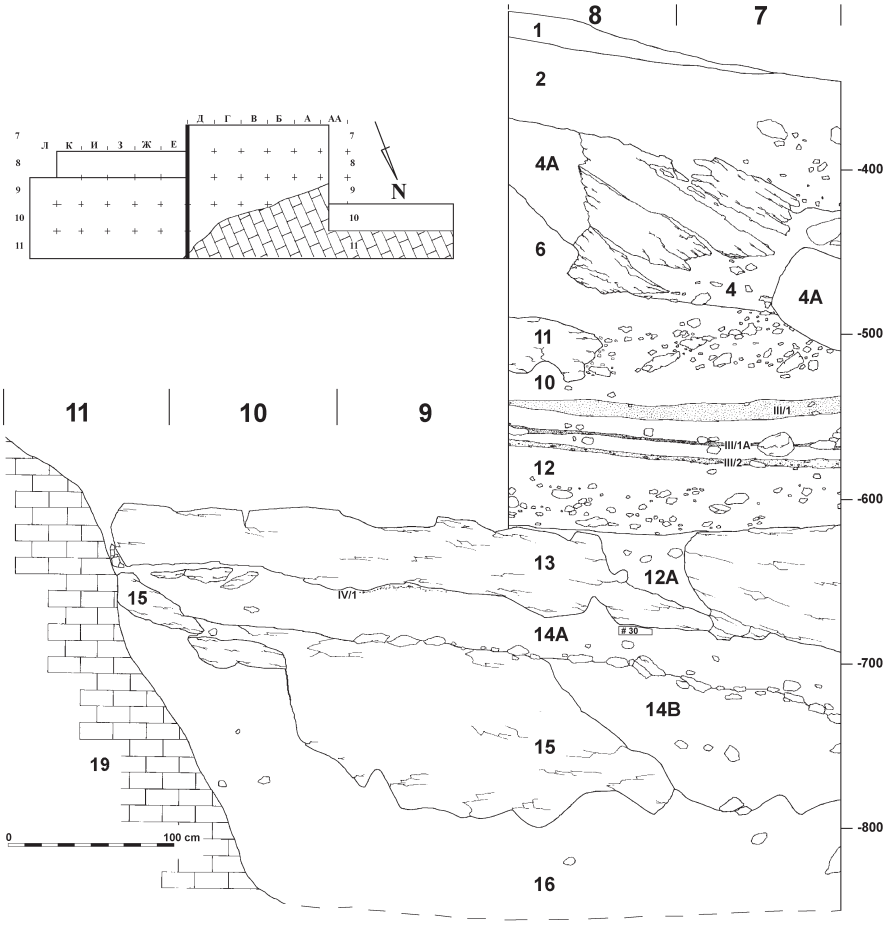


Fig. 1-5 Kabazi V. Section along square line Д/Е; Arabic numerals indicate lithological layers, combined Roman and Arabic numerals indicate archaeological levels.

were found (archaeological level 3RF). In other words, these artefacts and bones are the remnants of occupations on the top of limestone blocks from the collapsed roof – lithological layer 13. In the western part of the excavation area the inclination of lithological layer 12A follows that of the eroded surface of lithological layers 14B and 14A (Fig. 1-3).

Spatially, the occupations in sub-units III/7, III/6 and III/5 were limited by brecciated sediments of lithological layer 14Bb to the west, the back-wall of the rock-shelter to the north, and the upper part of the second roof collapse to the east.

Following the deposition of lithological layer 12A, the surface of the rock-shelter became more horizontal, but still with a sharp inclination in the western part of excavation area: square lines А, АА and partly Б (Fig. 1-3). Lithological layer 12 accumulated on the surface of limestone blocks of lithological layer 13 – 2nd rock-fall (Fig. 1-5; 1-6, *A*), on lithological layer 12A (Fig. 1-3) and in eroded breccia of lithological layer 14Bb (Fig. 1-3; 1-4). Due to the colour of sediments and sizes of limestone debris, lithological layer 12 is subdivided into two parts: 12 upper and 12 lower (Table 1-1). These differ from one another due to erosional disconformities (Ferring 1998). Also, according to R. Ferring, there is "*no evidence of soil formation and prolonged exposure of erosional surfaces*" in either parts of lithological layer 12 (Ferring 1998, p. 277). Numerous archaeological occupations of sub-units III/4, III/3 stem from lithological layer 12 lower. The deposits of archaeological sub-unit III/4 were the most affected by erosion. Archaeological sub-units III/2 and III/1 were found in the upper part of lithological layer 12 (Table 1-1; Fig. 1-2; 1-3; 1-4; 1-5; 1-6, *A*).

In the western part of the excavated area (square lines АА, А, Б and В) the deposition of lithological layer 12 was interrupted by water flow, which penetrated into the rock-shelter area. Evidence of

GEOLOGICAL SEQUENCE			ARCHAEOLOGICAL SEQUENCE		
Strata	**Description**	**Lithological layers**	**Levels**	**Sub-units**	**Units**
A	10YR4.5/1 poorly sorted gravelly silt loam; many angular and many rounded limestone cobbles and pebbles; thick carbonate crusts on the clast bases; gradual wavy boundary.	1	I/1		I
B1	10YR7/2 gravelly silt; clasts, mainly granules, with some rounded pebble to cobble clasts; continuous carbonate coats and some possible concretions; gradual irregular boundary.	2	I/2		
B2	10YR7/2 gravelly silt; clasts, mainly granules, with many rounded cobbles and few boulders; continuous carbonate coats on clasts; clear irregular boundary parallel to modern surface.	3	IA		IA
C	10YR8/1 silt; massive; contains few granule-size fossil clasts in upper part; thins down-slope; upslope it merges with weathered bedrock; faint bedding planes parallel to slope; lower 10 cm indurated; gradual smooth boundary.	4	IIA		IIA
		4a (4 rockfall)	1RF		
		5	IIA		
D	10YR7/3 clast supported granule gravel; some thin beds are silt matrix supported; clasts mainly small fossils from bedrock; beds subhorizontal; gradual wavy boundary.	6 (upper)	II/1		II
		6 (lower)	II/2		
		7	sterile		
		8	sterile		
		9 (upper)	II/3		
			II/3a		
			II/3b		
		9 (lower)	II/4		
		10 (upper)	II/4a		
			II/5		
			II/5a		
			II/6		
		10 (lower)	II/7		
		11 (3 rockfall)	2RF		
E1	10YR7.5/4 silt with angular cobble to pebble eboulis clasts; some zone clast supported; few thin discontinuous beds of sand-sized rock fragments; unit thins and pinches out to east; base of unit appears erosional.	12 (upper)	III/1B	III/1	III
			III/1		
			III/1A		
			III/1C		
			III/2	III/2	
			III/2A		

Table 1-1 Kabazi V. Lithological and archaeological sequences.

GEOLOGICAL SEQUENCE			ARCHAEOLOGICAL SEQUENCE		
Strata	**Description**	**Lithological layers**	**Levels**	**Sub-units**	**Units**
E2	10YR5/3 granual silt, with thin lenses of clast supported granual to pebble eboulis; base of unit appears erosional.	12 (lower)	III/3-1 III/3-1A III/3-1B III/3-1C III/3-1D III/3-2 III/3-2A III/3-3 III/3-3A	III/3	III
			III/4-1 III/4-2 III/4-3 III/4-4 III/4-5 III/4-6	III/4	
E3	10YR6/2 granual silt, some zone of clast supported; few thin discontinuous beds of pebble-sized rock fragments; few large blocks of limestone rockfall (these are more common and larger in east wall of block); sediments fill vertical fissures in rockfalll blocks at east; base of unit appears erosional at west.	12A	III/5-1A III/5-1 III/5-1B III/5-2 III/5-3 III/5-3B III/5-3B2	III/5	
			III/6-1-2 III/6-3	III/6	
			III/7-1 III/7-2 III/7-3	III/7	
		13 (2 rockfall)	3RF		
E4	2.5YR7/3 granual silt; massive, very hard when dry; clasts are mainly nummulitic fossil fragments; increase with eboulis content and clast size with depth, with the same silt matrix; unit thins and pinches out to west; the boundary is a few large blocks of limestone rockfall east (sediments fill vertical fissures in rockfall blocks) and appears erosional at west.	14A	IV/1 IV/2 IV/3 IV/4		IV
F	2.5Y7/4 granual silt; massive, very hard when dry; clasts are mainly nummulitic fossil fragments with many rounded cobbles and boulders; brecciated (lithological layer 14Bb) near the back-wall (square lines AA and A); gradual wavy boundaries.	14Bb 14B 15 (1 rockfall) 16			
G	weathered bedrock; 2.5Y4/4 clayey channel (lithological layer 17) lies directly on weathered bedrock limestone (lithological layers 18 and 19).	17 18 19			

Table 1-1 Continued.

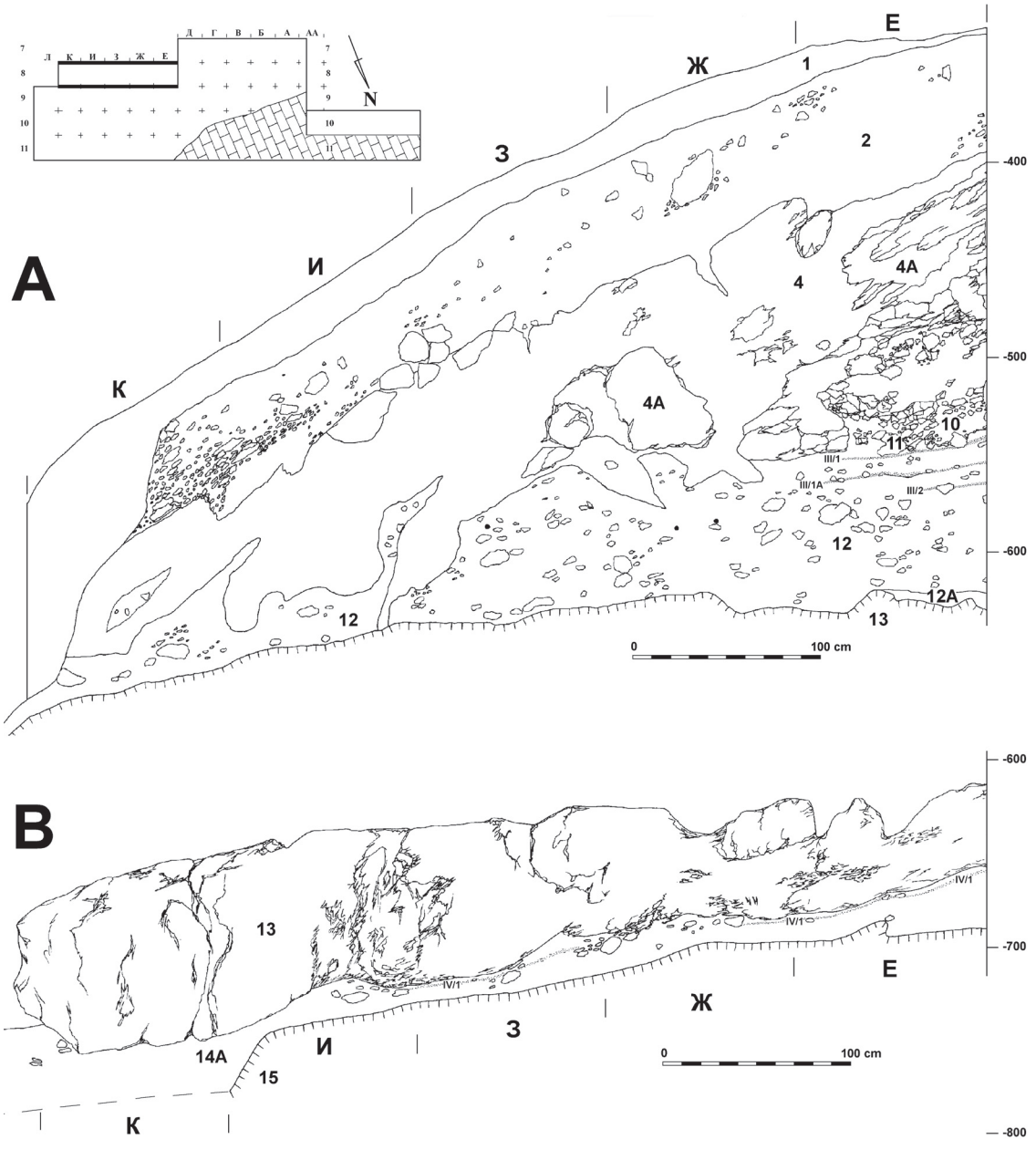


Fig. 1-6 Kabazi V. Sections along square lines 7/8 (**A**) and 8/9 (**B**); Arabic numerals indicate lithological layers, combined Roman and Arabic numerals indicate archaeological levels.

water flow was detected in the deposits of lithological layer 10, as there are "*thin beds of nummulitic fossils and small eboulis that are flow oriented to the south-south-west*" (Ferring 1998, p. 277). The water flow, which is reflected in lithological layer 10 sediments, commenced prior to, and continued on after, the third roof collapse – lithological layer 11 (Table 1-1; Fig. 1-2; 1-3; 1-4). Whereas the western part of lithological layer 12 was partly disturbed by water flow (Fig. 1-3; 1-4), the eastern part was destroyed by slope erosion (Fig. 1-6, *A*). At the same time, the central part of lithological layer 12 was securely covered by limestone blocks of lithological layer 11, which prevented post-depositional disturbance (Fig. 1-3).

In fact, the accumulation of limestone blocks of lithological layer 11 marked the close of the second formation stage and the beginning of the third stage at Kabazi V. In other words, the Kabazi V rock-shelter became an open-air site. According to

A. Yevtushenko, in the 1993-1996 field seasons some occupations (levels II/3, II/3a, II/3b, II/4, II/4a, II/5, II/5a, II/6 and II/7) from lithological layers 10 and 9 were found in primary context. These occupations, which stemmed from lithological layer 6, were partly disturbed. On the other hand, the uppermost archaeological material from lithological layers 5, 4, 3, 2 and 1 was found in a secondary context (Yevtushenko 1998a, 279).

During the field campaign in 2002-2003 no archaeological occupations were found in primary contexts in lithological layers 10 and 6. Lithological layers 9, 8 and 5 did not extend into the 2002-2003 excavation area. Some redeposited Middle Palaeolithic artefacts were found in lithological layers 10, 7, 6, 4, 3, 2 and 1.

To conclude, the Kabazi V stratigraphical sequence contains just one and a half metres of cultural bearing *in situ* soft deposits (lithological layers 14A, 12A and 12), which accumulated in a small rock-shelter or *abri*. There are two lines of evidence regarding the depth of the rock-shelter; first there are the remains of bats – *Myotis sp.*, which were found in lithological layer 14A, Unit IV (Chapter 4, this volume), and second there is an assumed area of bear hibernation in lithological layer 12, level III/2 (Chabai, Patou-Mathis 2006). The platform near the rock-shelter was not secularly protected from erosional processes at any stage of site formation. Also, in all stages of rock-shelter evolution the sedimentation rate was not impressive; there is multiple evidence of prolonged weathering of limestone debris.

Depositional Characteristics of Archaeological Occupations

A total of 37 archaeological levels were discovered in the course of the 2002-2003 field campaigns; all of these are characterised by differing, and sometimes steep, gradients (Table 1-2, Fig. 1-7; 1-8), all have yielded cultural deposits of differing thickness and density (Table 1-2), and all are separated by sterile sediments of varying thickness (Table 1-3). Although the occurrence of these sterile sediments between archaeological levels, pits, hearths and sooty scatters might be viewed as a "guarantee" of an undisturbed primary position of artefacts and bones, on the other hand, the gradients of occupied surfaces in some parts of the excavation area were some 20 degrees. Consequently, such angles could equally have led to post-depositional transportation of archaeological material. Also, in many cases the thickness of sterile sediments between levels measures just a few millimetres. Indeed, there is always the danger that such "minimal" accumulations might only exist in the imagination of the excavators. Finally, and unfortunately, erosional processes played a significant role in the formation of some parts of the cultural deposits at Kabazi V. Thus, not all 37 archaeological levels are characterised by the same degree of homogeneity. Thus, one of the biggest difficulties to have arisen from the main excavation at Kabazi V is the precise definition and consequences of erosion for the preservation of the archaeological levels.

Sub-unit III/1

Sub-unit III/1 consists of four occupational levels: III/1B, III/1, III/1A and III/1C. Level III/1B is the washed part of level III/1. Water flow, which is reflected in lithological layer 10 sediments, led to a disturbance of the cultural deposits of level III/1 in squares 7A, 7Б, and partially in 7B. Of course there are no sterile sediments between levels III/1B and III/1. In a sense, both levels belong to the same palimpsest of occupations. Level III/1 is one of the thickest levels of the sub-unit, characterised by densely packed artefacts, bones and burnt material (Table 1-2; Fig. 1-9). Along with levels III/1A and III/2, level III/1 is clearly visible in the profiles as a grey lens which contrasts clearly against the yellow-red background of lithological layer 12 sediments. Due to the absence of sterile sediments, the 12 cm thick cultural deposits assigned to level III/1 cannot be subdivided into different occupational levels. The gradient observed in level III/1 accumulations ranges from 10° (along square lines A and AA) to 7° (along square lines Б – 3) in a west – east direction (Fig. 1-7). The north-south gradient is, however, minimal (Table 1-2), and barely recognisable (Fig. 1-8). With the exception of a number of light and dense sooty scatters in an exposed area of level III/1, clear structures were not observed (see Chapter 2, this volume).

Level III/1A is separated from level III/1 by a relatively thick (for Kabazi V standards) lense of sterile sediments on square lines AA through Д, and less pronounced sterile sediments on the square lines E through 3 (Table 1-3). The depositional attributes of level III/1A, such as thickness of cultural bearing sediments, density of artefacts and gradient angles are very close to those observed in level III/1 (Table 1-2; Fig. 1-7; 1-8). The main difference between these occupations lies in the character and organisation of the living surface or surfaces. First, the living surface of level III/1A was covered by medium to large

	Levels	Thickness, in cm	Density of artefatcs, per cubic meter	Inclination angles	
				North-South	West-East
Sub-unit III/1	III/1B	2–8	2069.7	–	12°
	III/1	2–12	2022.6	2°–3°	7°–10°
	III/1A	4–12	2810.1	2°–3°	11°
	III/1C	3–6	266.6	–	5,5°
Sub-unit III/2	III/2	3–8	782.6	6°	11°
	III/2A	4	666.6	–	5°
Sub-unit III/3	III/3-1	2.0	1439.1	6°	6°–11°
	III/3-1A	2.0	1243.5	5°	12°
	III/3-1B	4.0	291.6	–	6°
	III/3-1C	3.0	288.8	–	5.5°
	III/3-1D	3.0	352.4	–	6.5°
	III/3-2	2.0	926.1	7°	6°–11°
	III/3-2A	2.0	1583.0	–	8.5°
	III/3-3	2.0	1452.2	5°–12°	7°–10°
	III/3-3A	2.0	2230.4	8°	7°–11°
Sub-unit III/4	III/4-1	2.0	1080.6	5°–14°	6°–18°
	III/4-2	1–2	1005.0	5°–16°	13°–17.5°
	III/4-3	2.0	775.0	11°	14°–19.5°
	III/4-4	2.0	705.0	15°–16°	14°–17°
	III/4-5	2.0	858.8	15°	15.5°
	III/4-6	1–3	622.2	13°	15°
Sub-unit III/5	III/5-1A	4.0	369.4	11°	14.5°
	III/5-1	2.0	815.4	13°	12°
	III/5-1B	2.0	450.0	9°	13.5°
	III/5-2	4.0	925.0	11°	12.5°
	III/5-3	2.0	907.4	11°	7°
	III/5-3B	2–4	1172.7	10°	11°
	III/5-3B2	2–4	1133.3	9°	7.5°
Sub-unit III/6	III/6-1-2	2.0	1033.0	12.5°	7.3°
	III/6-3	2.0	1900.0	10°	12.5°
Sub-unit III/7	III/7-1	3.0	1466.7	19°	13.5°
	III/7-2	5.0	1280.0	25°–32°	19.5°
	III/7-3	4.0	750.0	22°	14.5°
Unit IV	IV/1	2.0	1397.5	1-2°	10.5°
	IV/2	2.0	870.8	1-2°	9.5°
	IV/3	2.0	427.8	1-2°	11°

Table 1-2 Kabazi V. Characteristics of cultural deposits, by level.

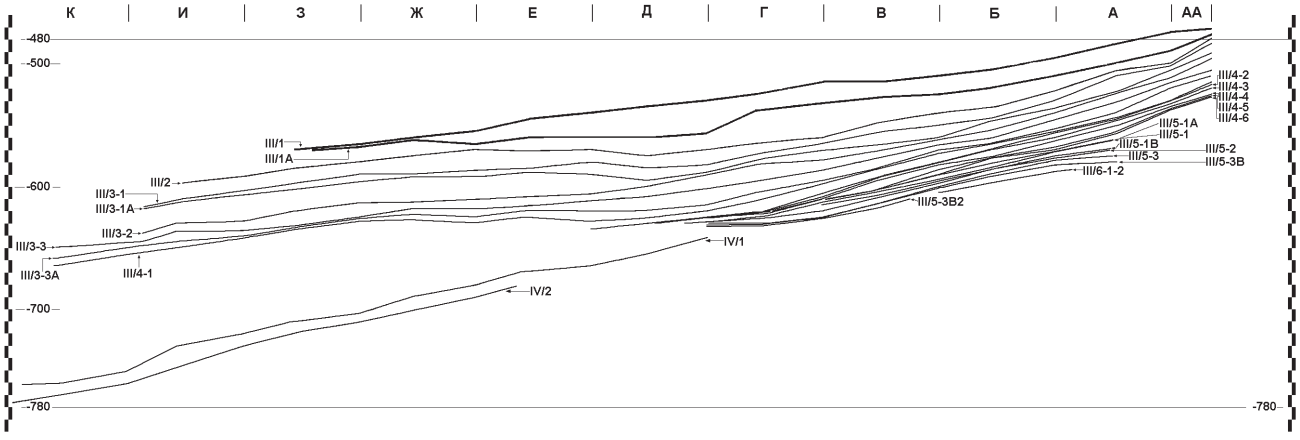


Fig. 1-7 Kabazi V. Pattern of gradients in archaeological levels along square lines 8/9; combined Roman and Arabic numerals indicate archaeological levels.

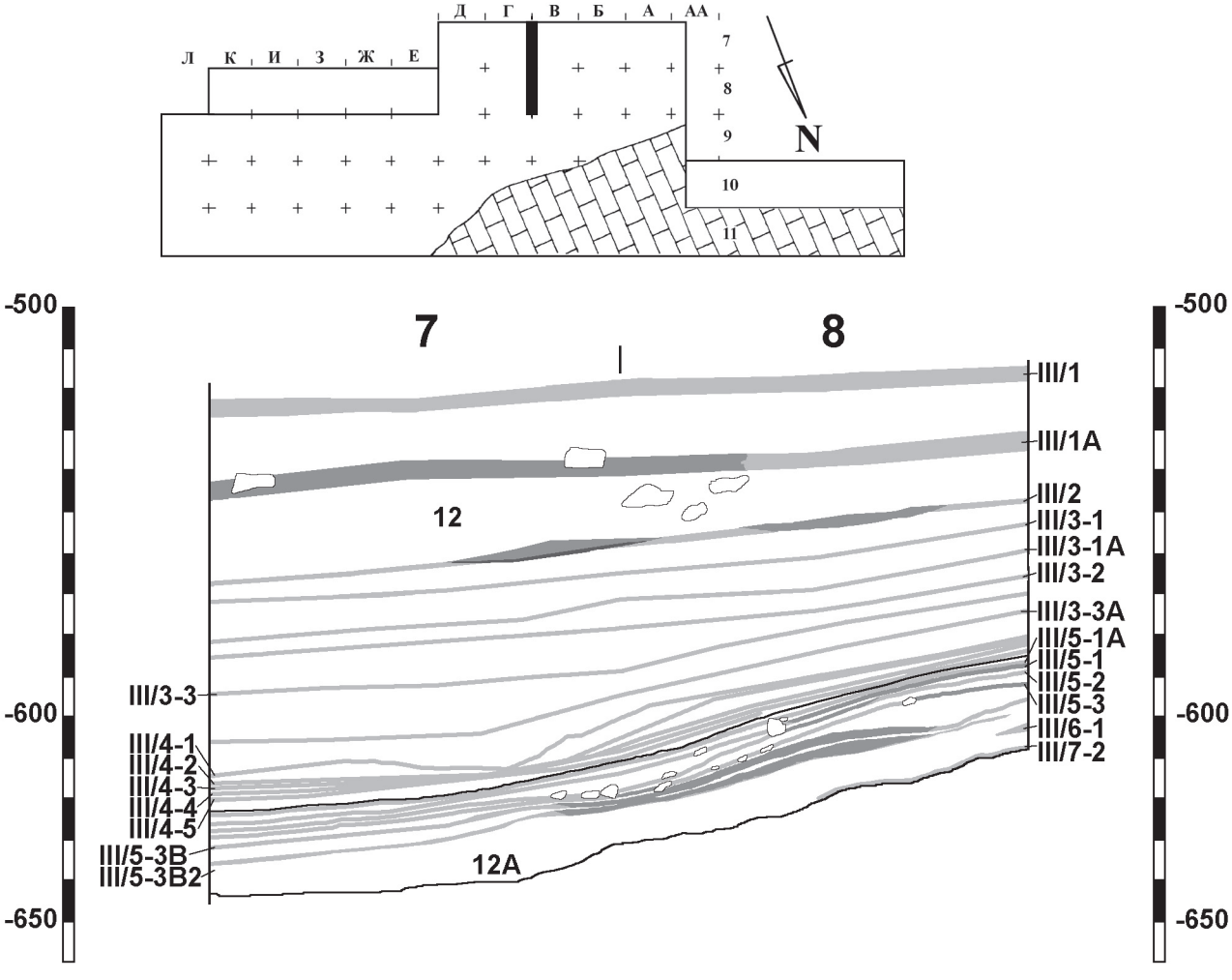


Fig. 1-8 Kabazi V. Section of lithological layers 12 and 12A along square line Г/В; Arabic numerals indicate lithological layers, combined Roman and Arabic numerals indicate archaeological levels.

Archaeological levels	Squares lines АА-Д	Squares lines Е-Л
III/1B – III/1	0 cm	–
III/1 – III/1A	5-28 cm	5-7 cm
III/1A – III/1C	–	4-11 cm
III/1C – III/2	–	3-5 cm
III/1A – III/2	6-25 cm	–
III/2 – III/2A	–	8-10 cm
III/2A – III/3-1	–	3-6 cm
III/2 – III/3-1	4-15 cm	–
III/3-1 – III/3-1A	5-12 cm	3-5 cm
III/3-1A – III/3-2	3-9 cm	–
III/3-1A – III/3-1B	–	3-9 cm
III/3-1B – III/3-1C	–	2-9 cm
III/3-1C – III/3-1D	–	2-7 cm
III/3-1D – III/3-2	–	3-7 cm
III/3-2 – III/3-3	4-10 cm	5-7 cm
III/3-2 – III/3-2A	2-4 cm	–
III/3-2A – III/3-3	3-5 cm	–
III/3-3 – III/3-3A	4-9 cm	1-5 cm
III/3-3A – III/4-1	10-13 cm	3-9 cm
III/4-1 – III/4-2	min – 5 cm	–
III/4-2 – III/4-3	min – 2 cm	–
III/4-3 – III/4-4	min – 3 cm	–
III/4-4 – III/4-5	min – 3 cm	–
III/4-5 – III/4-6	3-5 cm	–
III/4-6 – III/5-1A	3-8 cm	–
III/5-1A – III/5-1	min – 3 cm	–
III/5-1 – III/5-1B	min	–
III/5-1B – III/5-2	3-5 cm	–
III/5-1 – III/5-2	min – 4 cm	
III/5-2 – III/5-3	2-4 cm	–
III/5-3 – III/5-3B	1-4 cm	–
III/5-3B – III/5-3B2	3-10 cm	–
III/5-3B2 – III/6-1-2	4-5 cm	–
III/6-1-2 – III/6-3	–	2-4 cm
IV/1 – IV/2	–	7-10 cm
IV/2 – IV/3	–	5-7 cm
IV/3 – IV/4	–	3-5 cm

Table 1-3 Kabazi V. Thickness of sterile sediments between archaeological levels.

limestone blocks, and second, the living floor(s) was/were interrupted by a number of pits and hearths (Chapter 2, this volume).

Level III/1C was encountered in squares 8E, 8Ж, 83, and partially in 8И. The main concentrations of bones and artefacts lie in squares 8Ж and 83. Finds from level III/1C are separated from the uppermost level III/1A by 4 to 11 cm thick sterile sediments (Table 1-3). The gradient and artefact density observed for level III/1C are both minimal (Table 1-2). It would appear that this level lies at the periphery of occupation which otherwise extended into unexcavated parts.

In sum, levels III/1 and III/1A comprise an intense palimpsest of occupations. Level III/1B refers to a part of level III/1 which was disturbed by water flow, and level III/1C was only exposed in a very small area for it to be assigned with any great certainty to a particular level. Levels III/1, III/1A and III/1C were found in primary contexts. A post-depositional transportation of bones and artefacts is not visible. Levels belonging to sub-unit III/1 were covered during moderate continental climate conditions during the Denekamp Interstadial (Chapter 4, this volume). The moderate rate of precipitation, and, to some extent, fluctuations in temperatures, led to limestone/clay bedrock exfoliation, which in turn resulted in a silt with numerous angular *eboulis* clasts – Stratum E1 (Table 1-1); additionally, colluvial sediments also contributed to sedimentation. Consequently, bone surfaces and the edges of artefacts were discovered in an excellent state of preservation. The light to medium grey patina on flints appeared only after the exposure of artefacts (!). In other words, artefacts covered by sediments were not patinated. This is suggestive of an absence of prolonged weathering and a relatively rapid burial of both bones and flints.

Sub-unit III/2

Sub-unit III/2 comprises the two levels III/2 and III/2A. In squares 8И, 83, 8Ж and 8E, level III/2 is separated from the uppermost level III/1C by a 3-5 cm thick layer of sterile deposits, whereby the thickness of this sterile layer is most distinct along square lines АА, А, Б, В, Г and Д (Table 1-3). The west-east gradient (from square line АА to square line И) is comparable with the same observed for the uppermost levels (Fig. 1-7). On the other hand, the north-south gradient is roughly twice as pronounced (Table 1-2; Fig. 1-8). The thickness of cultural bearing deposits ranges from 3 to 8 cm, they being thicker along square lines АА through Г, but thinner along lines Д through И. At the same time, in the area of sooty scatters, level III/2 is represented by a thin

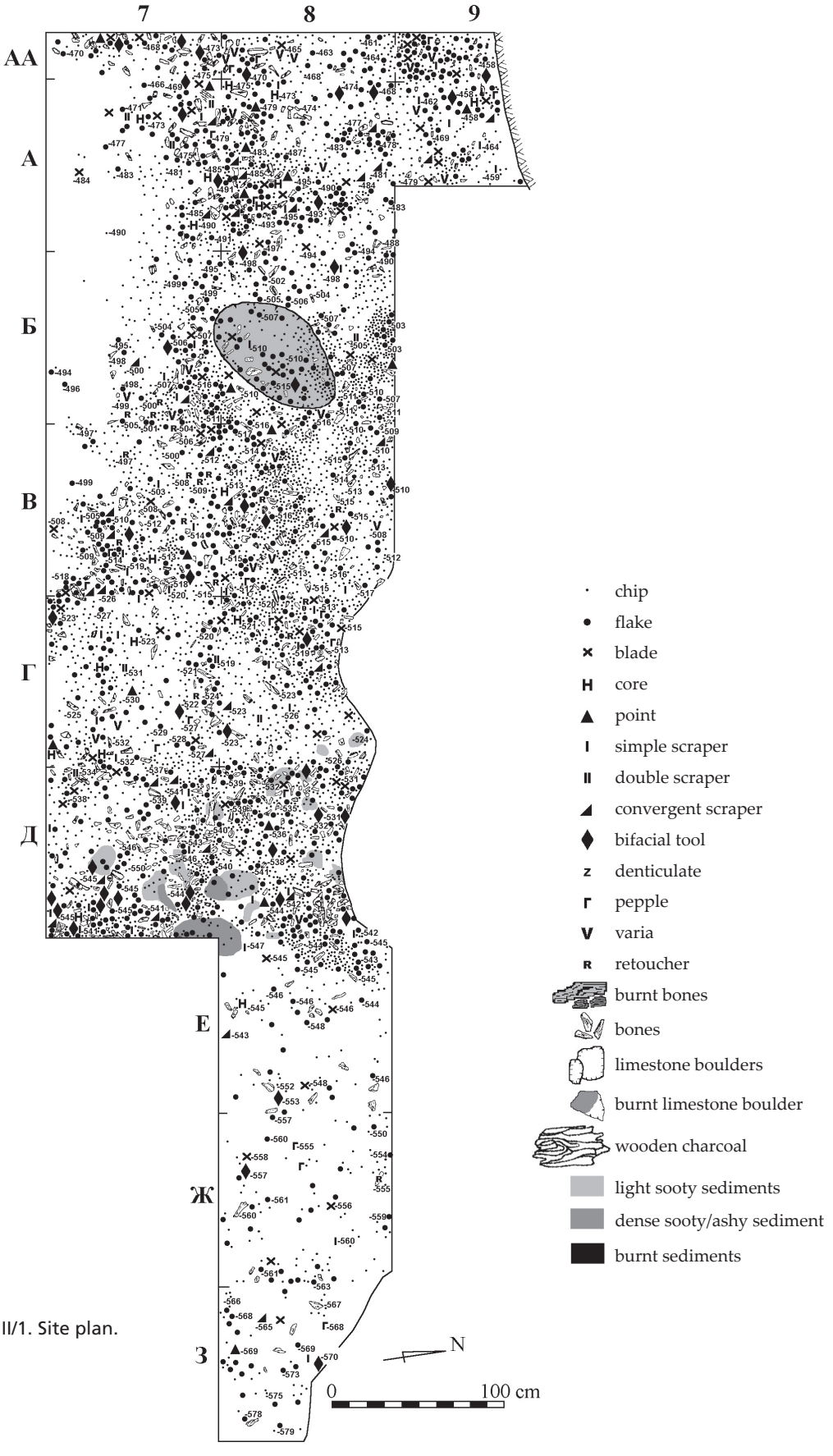
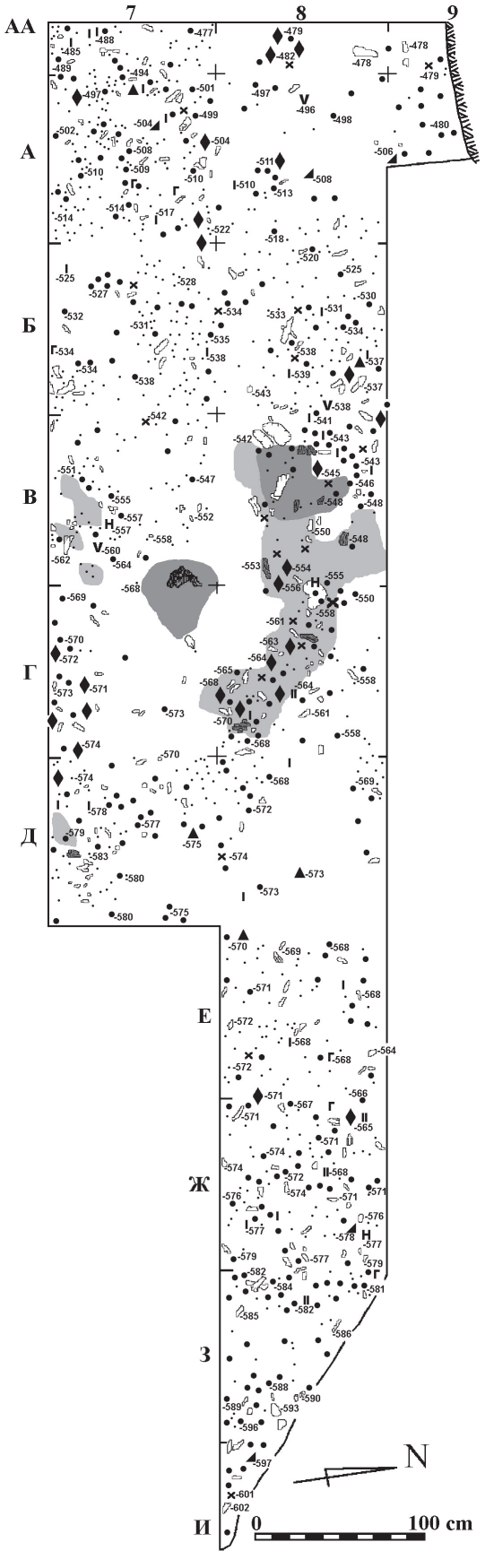


Fig. 1-9 Kabazi V, level III/1. Site plan.



carpet of finds no thicker than a single artefact or bone (Fig. 1-10). In fact, the thickest (8 cm) cultural bearing deposits were discovered on the southern part of square line 7, from square АА through square Г. The overall density of artefacts is among the lowest in Kabazi V (Table 1-2). One clear hearth, as well as an amorphous sooty scatter, were revealed in level III/2 (Chapter 2, this volume).

Level III/2A was found in squares 8И, 8З, 8Ж and 8E, about 8-10 cm below the lowest finds of level III/2 (Table 1-3). For the most part it concentrates in square 8Ж. The depositional characteristics of this level are very approximate (Table 1-2). In the aforementioned squares it is likely that the periphery of a much larger occupational area, which continues southwards, has been revealed.

Taken into account the thickness of cultural bearing deposits, level III/2 is a palimpsest of several occupations. Nothing is clear with level III/2A: it was exposed on a very small area. These levels were deposited under harsh stadial climatic conditions (Chapter 4, this volume). Some bone surfaces from level III/2 exhibit traces of prolonged weathering (Chapter 6, this volume). Artefacts edges are fresh. It can be safely assumed that both levels III/2 and III/2A lie in primary context. The base of lithological layer 12 upper shows traces of erosion (Table 1-1), however, this erosion did not affect cultural deposits from sub-unit III/2.

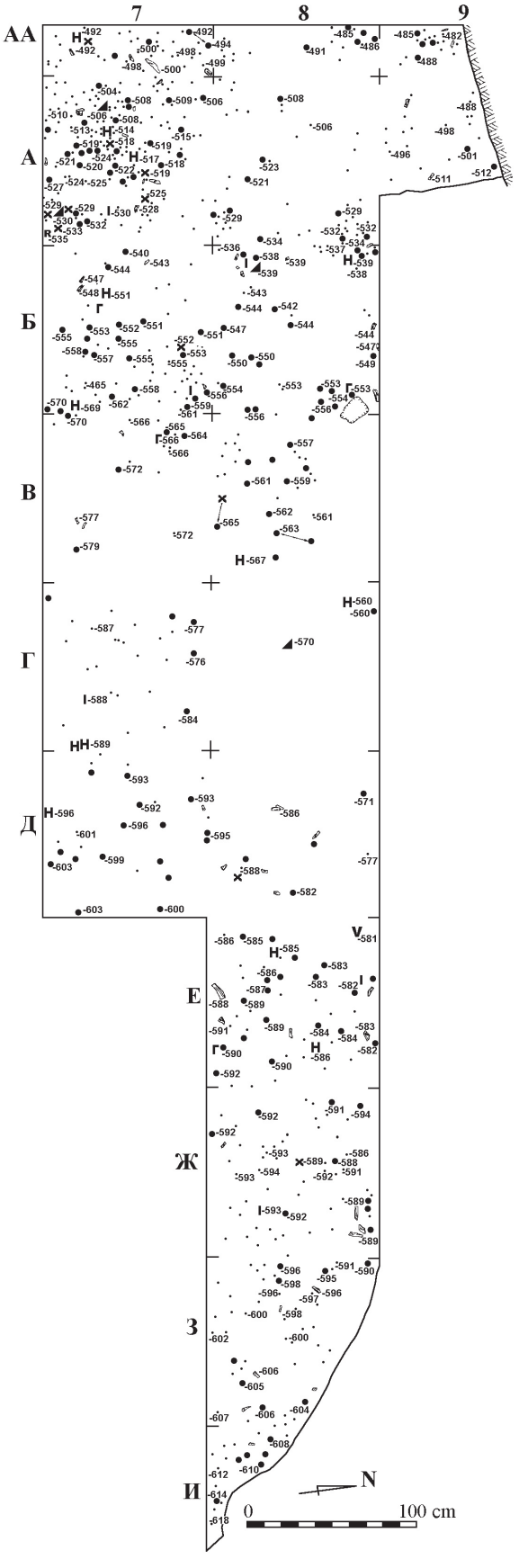
Sub-unit III/3

Sub-unit III/3 consists of nine levels: III/3-1; III/3-1A; III/3-1B; III/3-1C; III/3-1D; III/3-2; III/3-2A; III/3-3; III/3-3A.

On square lines АА, А, Б, В, Г and Д, level III/3-1 is separated from level III/2 by a 4-15 cm thick accumulation of sterile deposits. Similar accumulations of sterile sediments were also observed between level III/3-1 and level III/2A in squares 8И, 8З, 8Ж and 8E (Table 1-3). The west-east and north-south gradients resemble those observed for the uppermost levels (Table 1-2; Fig. 1-7; 1-8). Cultural deposits of level III/3-1 are 2 cm thick (Table 1-2), i.e. are no thicker than a single artefact or bone. The thickness of sooty concentration on square lines АА, А, Г and Д range from 0.5 to 3 cm. The density of artefacts is 1439.1 per m³.

On square lines АА, А, Б, В, Г and Д, level III/3-1A is separated from the uppermost level III/3-1

Fig. 1-10 Kabazi V, level III/2. Site plan: for conventional signs see Fig. 1-9.



by 5-12 cm thick accumulation of sterile sediments. However, in squares 8И, 8З, 8Ж and 8E these sterile accumulations are not quite as thick (Table 1-3). The characteristics of the cultural deposits of level III/3-1A are similar to those of level III/3-1 (Table 1-2; Fig. 1-7; 1-8). In level III/3-1A two areas of material concentrations occur, in the west and in the east (Fig. 1-11). The western concentration was found on square lines АА, А, Б, В, and the eastern on square lines Г, Д, Е, Ж, З, И.

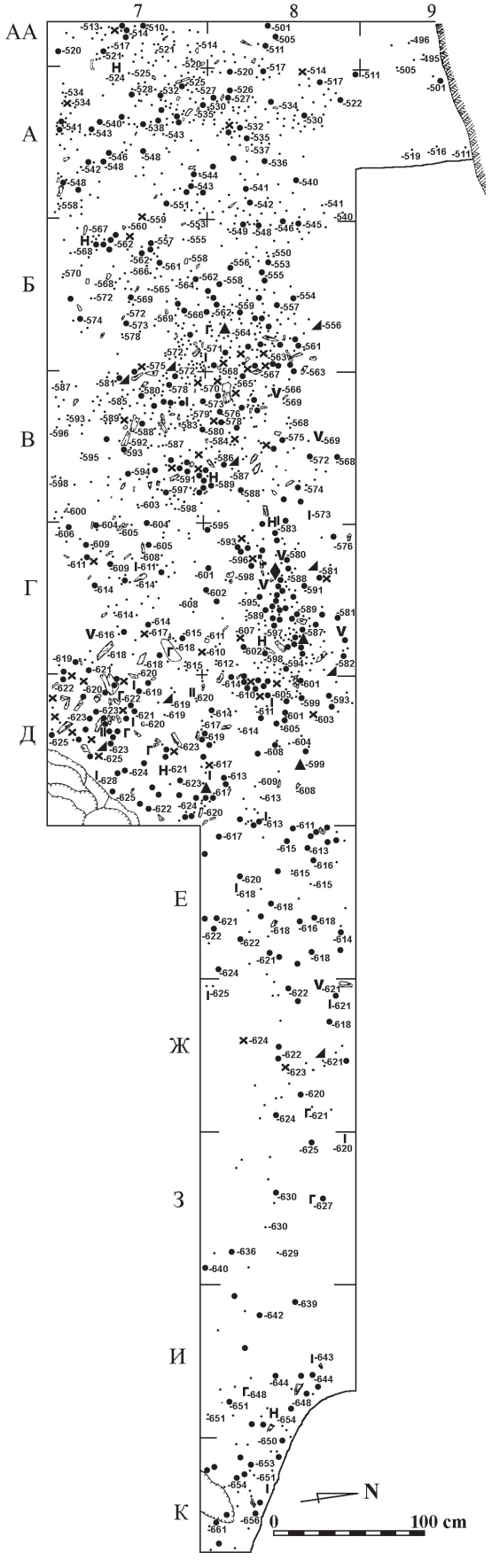
Levels III/3-1B, III/3-1C and III/3-1D were exposed in only a very small area, in squares 8E, 8Ж and 8З. There are very few bones and artefacts associated with these levels. The formal depositional characteristics of levels III/3-1B, III/3-1C and III/3-1D are listed in the Table 1-2 and 1-3.

On square lines АА, А, Б, В, Г and Д, level III/3-2 is separated from level III/3-1A by a 3-9 cm accumulation of sterile deposits. In squares 8И, 8З, 8Ж and 8E, level III/3-2 is separated from level III/3-1D by 3-7 cm thick sterile sediments (Table 1-3). The gradients of level III/3-2 fall within the same range as the uppermost occupations (Table 1-2; Fig. 1-7; 1-8). Cultural deposits of level III/3-2 are no thicker than a single bone or artefact, whereby the same thickness (about 2 cm) is also characteristic for the encountered sooty concentrations in squares 7Б, 7В, 8Б and 8В (Chapter 2, this volume).The density of artefacts is not impressive (Table 1-2).

Level III/3-2A was found in squares 7В, 7Г, 7Д, and partially 8В. In these squares level III/3-2A is separated from the uppermost occupation of level III/3-2 by a 2-4 cm thick accumulation of sterile sediments. The west – east gradient for level III/3-2A is 8.5°. The thickness of level III/3-2A is equal to the thickness of a single artefact or bone. The density of artefacts is extremely high: 1,583 artefact per m^3 of cultural bearing deposits. The sooty concentration is ovoid in shape (length, 79 cm; width, 47 cm) and is associated with level III/3-2A. It is likely that level III/3-2A lies at the periphery of a larger occupation.

Level III/3-3 is separated from both level III/3-2A and level III/2 by 3-5 cm and 4-10 cm thick accumulations of sterile deposits, respectively (Table 1-3). Level III/3-3 is characterised by a relatively steep gradient from north to south (about 12°), especially in squares 8Г and 8В, while in squares 7 Г and 7 В its gradient is not so pronounced (Fig. 1-8). The west-east gradient of level III/3-3 is about the same as that observed for the uppermost occupations (Table 1-2; Fig. 1-7). Cultural deposits are 2 cm thick, i.e. are

Fig. 1-11 Kabazi V, level III/3-1A. Site plan: for conventional signs see Fig. 1-9.



equal to the thickness of a single bone or artefact. The density of artefacts is 1,452.2 flints per m³. Both the hearth and the sooty concentrations were found in squares 7Г and 7Д. The thicknesses of the hearth and the sooty concentrations range from 0.5 cm to 2.0 cm (Chapter 2, this volume).

Level III/3-3A is one of the most densely occupied levels in Kabazi V (Table 1-2). The main concentration of flint and fauna material was found in square lines Б, В, Г and Д (Fig. 1-12). The thickness of sterile sediments between levels III/3-3 and III/3-3A varies from 4 cm in squares 8E – 8K, and up to 9 cm on square lines AA – Д. The gradients of level III/3-3A are similar to those observed for level III/3-3 (Table 1-2; Fig. 1-7). Also, the north-south gradient is nearly the same as defined for level III/3-3 (Fig. 1-8). Although artefact density is high, the thickness of the cultural bearing sediments is minimal, that is equal to the thickness of a single bone or flint item (Table 1-2). Neither sooty concentrations nor hearths were found in level III/3-3A.

There is no evidence for any kind of disturbance of the sediments associated with levels of sub-unit III/3. Bone surfaces and artefacts are in excellent condition. The numerous thin sooty concentrations and thin hearths from the different occupations are separated by sterile sediments (Chapter 2, this volume). Thus, levels III/3-1, III/3-1A, III/3-2, III/3-2A, III/3-3, and III/3-3A were found in primary context. It cannot be excluded that the same also applies for levels III/3-1B, III/3-1C and III/3-1D, although the small numbers of finds, as well as the small excavated areas, do not permit this conclusion. Taking into account the thickness of the cultural bearing sediments of each level, all are good candidates for single occupational episodes. At the same time, it is unlikely that the thickness of cultural bearing deposits can be directly interpreted in terms of occupational episodes. Sub-unit III/3 was found in the upper part of lithological layer 12 lower. According to the environmental studies, these sediments accumulated under stadial conditions (Chapter 4, this volume).

Sub-unit III/4

Sub-unit III/4 is subdivided into six levels: III/4-1, III/4-2; III/4-3; III/4-4; III/4-5; III/4-6. These six levels were found at the base of lithological layer 12 lower. The base of this lithological layer appears to be erosional. In total, sediments forming sub-unit III/4 are

Fig. 1-12 Kabazi V, level III/3-3A. Site plan: for conventional signs see Fig. 1-9.

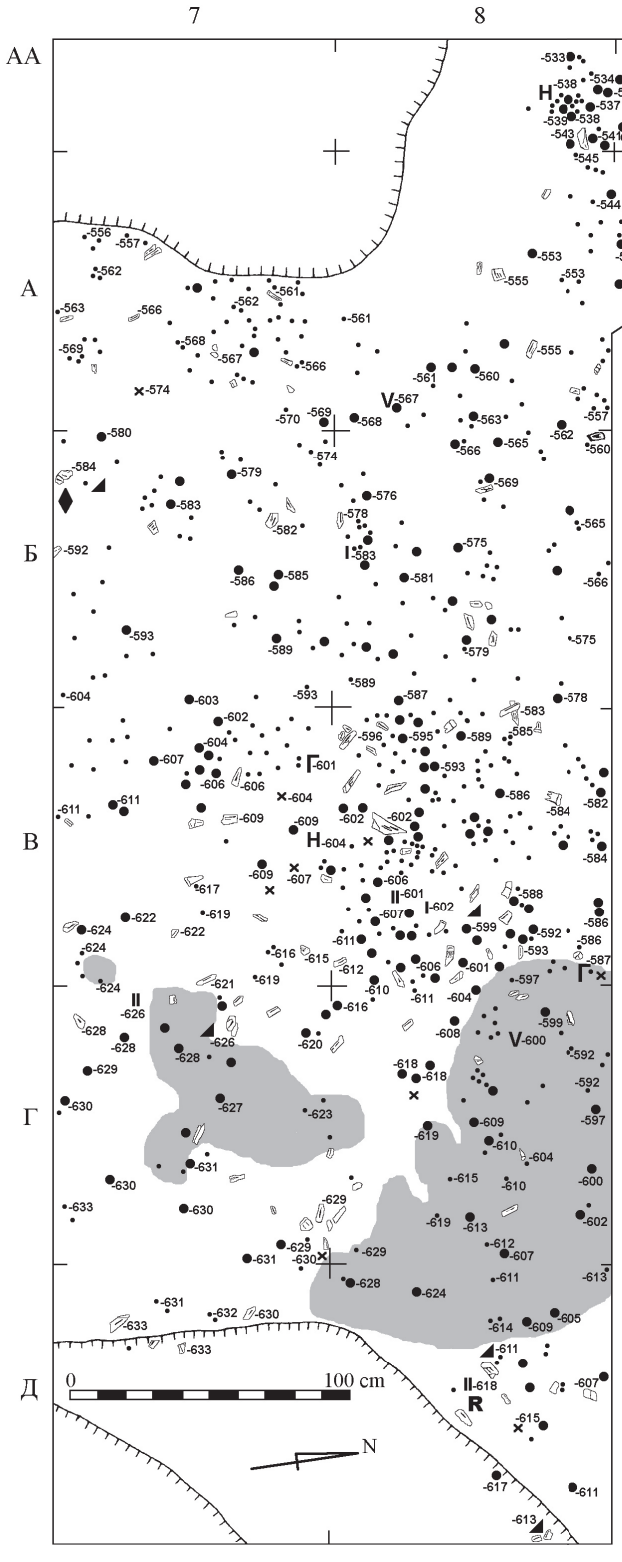


Fig. 1-13 Kabazi V, level III/5-1. Site plan: for conventional signs see Fig. 1-9.

no more than 10 cm thick. In most cases, there were no real sterile sediments between the defined levels (Table 1-3). During excavation several features were used to differentiate between the different occupation comprising sub-unit III/4. The most important of these was the occurrence of sooty concentrations, and/or of different kinds of structures. Unfortunately, sooty scatters were not encountered in all six levels; further, the sizes of these features (the largest being 30 cm long and 25 cm wide) were of little help in the definition of different levels. An artificial pit was found in level III/4-2 (Chapter 2, this volume). One more observation, which was used when differentiating the different levels belonging to sub-unit III/4, was the position of limestone boulders, the base of the boulder indicating the ancient floor; however, even boulders were rare in this part of the sequence. Thus, the breakdown of the 10 cm thick cultural deposits of sub-unit III/4 into six levels mostly reflects the attempts of archaeologists searching for expressive and convincing criteria for subdivision, than it is based on any kind of either archaeological or geological realities. The formal depositional characteristics are given in Table 1-2. The only feature of particular note is the increasing angle of gradients in both north-south and west-east directions (Fig. 1-7; 1-8). The preservation of both artefacts and fauna is good.

Thus, sub-unit III/4 is obviously a 10 cm thick palimpsest, which, unfortunately, could not be reliably subdivided into different occupations. Also, erosion affected this part of lithological layer 12 lower. In the sense of archaeological homogeneity, it is the most problematic sub-unit in the Kabazi V sequence.

Sub-unit III/5

Sub-unit III/5 is subdivided into seven different levels: III/5-1A, III/5-1; III/5-1B; III/5-2; III/5-3; III/5-3B and III/5-3B2.

Level III/5-1A was discovered on square lines АА, А, Б, В, and partially Г. Level III/5-1A is separated by a 3-8 cm thick layer of sterile sediments from level III/4-6 (Table 1-3). The gradients (both north-south and west-east) are somewhat slighter than those observed in sub-unit III/4 levels (Table 1-2; Fig. 1-7; 1-8). The thickness of artefact and bone bearing sediments is about 4 cm, though the density of artefacts is among the lowest to have been noted at Kabazi V (Table 1-2). Hearths and sooty concentrations were not encountered.

Although the sterile sediments observed between levels III/5-1A and III/5-1 are not pronounced (Table 1-3), level III/5-1 differs from the uppermost occupation, it being of a markedly more intense grey colour. In fact, this colour difference is the main attribute for differentiating between these levels. Also, level III/5-1 occupies a much larger area (square lines AA, A, Б, B, Г and Д), and presented relatively large, amorphously shaped sooty concentrations (Fig. 1-13). These sooty scatters are about 0.5 cm thick, and as such correspond to the overall thickness of level III/5-1 that is no thicker than a single bone or flint artefact. The density of artefacts can be described as "medium" for Kabazi V standards (Table 1-2). For level III/5-1 gradients of 12°-13° in both directions (north-south and west-east) are characteristic (Table 1-2; Fig. 1-7; 1-8). The most peculiar feature of level III/5-1 is its position within a natural depression, which was limited by the back-wall of the rock-shelter to the north, the brecciated hillock (lithological layer 14Bb) to the west, and the upper part of limestone debris from roof collapse (lithological layer 13) to the east (Fig. 1-13). Also, a relatively large collection of both bones and artefacts stems from cracks and fissures in the limestone block – lithological layer 13. The association of these collections with level III/5-1 is vague, they more likely originating from lithological layer 12A sediments.

The sterile sediments between levels III/5-1 and III/5-1B are barely visible. Again, the main attribute considered upon the differentiation between these levels was the more intense grey colour of level III/5-1. Level III/5-1B, as well as level III/5-1A, was found on square lines AA, A, Б, B, and partially Г. Level III/5-1B is no thicker than a single bone or artefact. All remaining depositional attributes of level III/5-1B are very similar to those of level III/5-1A (Table 1-2).

Whereas on squares lines AA, A, Б and B, level III/5-2 is separated from level III/5-1B by a 3-5 cm thick layer of sterile sediments, on square lines Г and Д, these same two levels are separated by a 4 cm thick interrupted lense of sterile sediments. A further attribute to have served in the differentiation of these two levels was the varying intensity of sooty concentrations; in level III/5-2 these are much greyer in colour, and are also characterised by quite different shapes (Fig. 1-14). Further, the sooty concentrations in level III/5-2 include three hearths, which is not the case for level III/5-1 (Chapter 2, this volume). The thickness of the sooty concentrations in level III/5-2 varies from a few millimetres up to 3 cm, whereby the average thickness of artefact and bone bearing deposits overall barely reaches 4 cm. The density of artefacts in level III/5-2 is once again "medium", and gradients lie within the same range as observed in the uppermost occupation of sub-unit III/5 (Table 1-2; Fig. 1-7; 1-8). The natural limitations in the level III/5-2 habitation area are the same as those for level III/5-1 (Fig. 1-13; 1-14).

The thicknesses of sterile sediments separating levels III/5-3 from III/5-2 range from 2 to 4 cm. The habitation area of level III/5-3 is limited in just the same way as levels III/5-1 and III/5-2, but the latter being a little wider. Artefacts and bones from level III/5-3 were found on square lines E, Ж and З. Whereas the west-east gradient of this layer is significantly less pronounced than was the case for the uppermost occupations of sub-unit III/5, the north-south gradient is roughly the same as defined for uppermost levels of sub-unit III/5 (Table 1-2; Fig. 1-7; 1-8). Level III/5-3 is 2 cm thick. In fact, this means that it is no thicker than a single bone or artefact. The same thickness is characteristic for the amorphous, relatively large sooty concentration in squares 8B and 8Г (Chapter 2, this volume). The density of artefacts in level III/5-3 is once again "moderate" for Kabazi V standards (Table 1-2).

Sterile sediments measuring 1 to 4 cm thick separate level III/5-3 from III/5-3B (Table 1-3). The gradients of level III/5-3B hardly differ from those of the uppermost levels of sub-unit III/5 (Table 1-2; Fig. 1-7; 1-8). The thickness of cultural bearing deposits ranges from 2 to 4 cm, or in other terms, is not thicker than one or two bones or artefacts. Hearths and sooty concentrations found in level III/5-3B were also of the same thickness (Chapter 2, this volume). The density of artefacts is relatively high (Table 1-2). The habitation area of level III/5-3B is limited by the back-wall of the rock-shelter, the brecciated hillock, and the limestone block, i.e. in exactly the same way as was the case for the uppermost levels of sub-unit III/5.

Level III/5-3B2 is separated from the uppermost level III/5-3B by a 3-10 cm thick accumulation of sterile deposits. The remains of the level III/5-3B2 habitation area were found on square lines B, Г and partially Б and Д (Fig. 1-15). The western part of level III/5-3B2 (square lines A, and partially Б) appears to be eroded. The larger part of level III/5-3B2 is taken up by a hearth. Gradients for level III/5-3B2 are the smallest noted for sub-unit III/5 (Table 1-2; Fig. 1-7; 1-8). Level III/5-3B2 is from 2 to 4 cm thick, and the density of artefacts encountered is close to that defined for the uppermost level III/5-3B (Table 1-2). The hearth from level III/5-3B2 is referred to as III/5-3B1. It is of note that the (AMS) dated charcoal sample (Chapter 3, this volume) stems from level III/5-3B2.

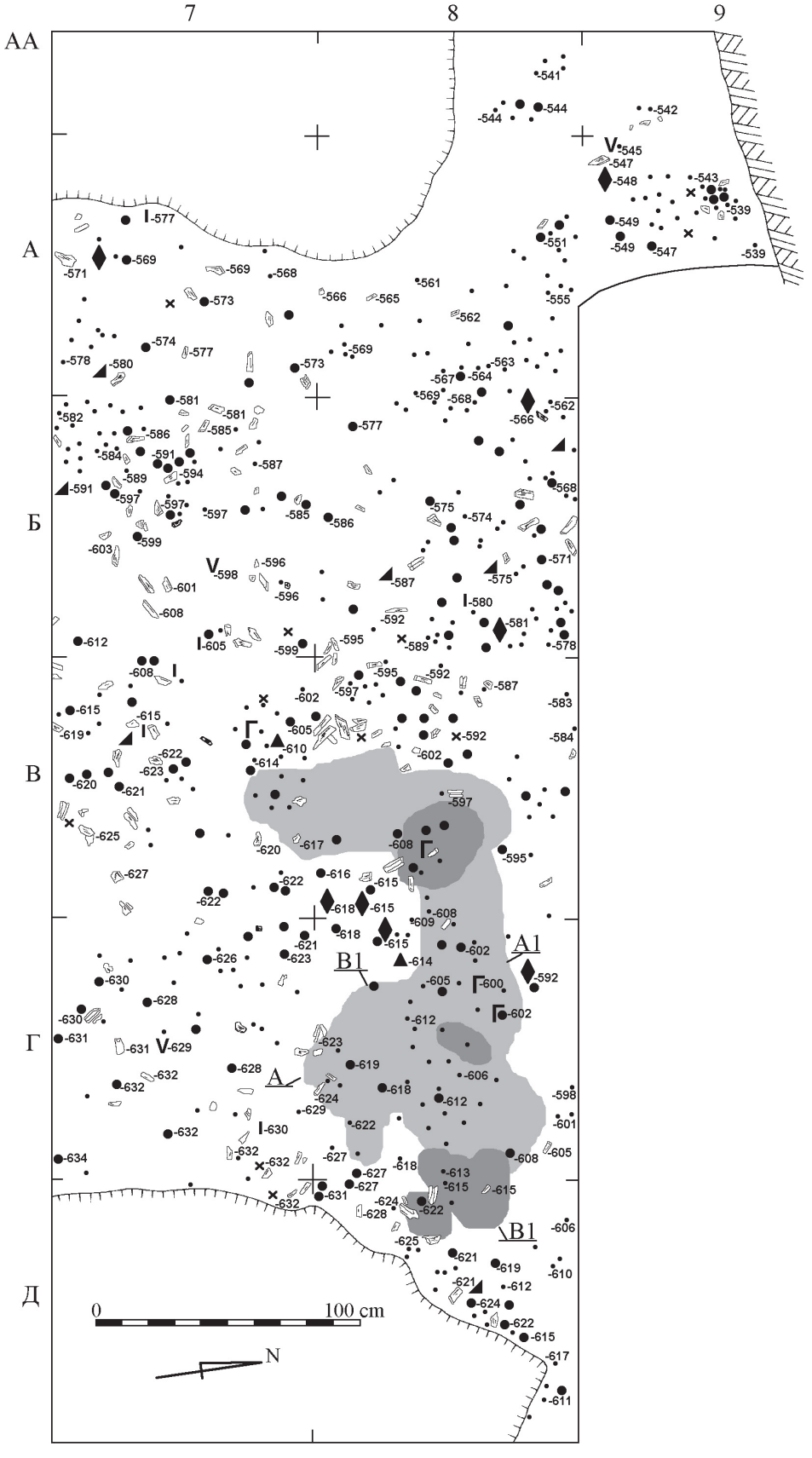


Fig. 1-14 Kabazi V, level III/5-2. Site plan: for conventional signs see Fig. 1-9.

There are no doubts as to the primary position of the levels composing sub-unit III/5. Thin, densely packed with fauna, artefacts and burnt material, archaeological levels alternate with thin accumulations of sterile sediments. Thin concentrations of burnt material are also associated with archaeological occupations. The gradients of these layers suggest that some post-depositional transportation of archaeological finds has probably taken place. At the same time, there is no clear evidence of such processes. Bone surfaces and flint edges are of excellent preservation.

Sediments from lithological layer 12A, which envelop sub-unit III/5, show the features of weak pedogenic processes. This observation is supported by environmental studies: lithological layer 12A was formed under interstadial climatic conditions, which led to the formation of forest-steppe landscapes (Chapters 4 and 5, this volume). Two pieces of charcoal found in the hearth of level III/5-3B2 (Fig. 1-15) may represent additional direct evidence of the existence of forest vegetation in the vicinity of the site. The easternmost piece of charcoal from this hearth provided the sample for the radiocarbon date OxA-14,726 (38.78±0.36 ka uncal. BP) (Chapter 3, this volume). Sub-units III/4 and III/5, which formed under the same climatic conditions, demonstrate very different degrees of stratification; whereas sub-unit III/5 levels, which are thin and densely packed with finds, are separated by thin sterile levels, levels from sub-unit III/4 are 10 cm thick monotonous accumulations of sediment, fauna and artefacts. In the latter case, this might be explained by the influence of erosion.

Sub-unit III/6

Sub-unit III/6 consists of two levels, III/6-1-2 and III/6-3. Both levels were found on the eroded boundary between lithological layers 12A and 14A/14B. In general, levels III/6-1-2 and III/6-3 were concentrated in squares adjacent to the rock-shelter wall. Between levels III/5-3B2 and III/6-1-2 there lies a circa 5 cm thick layer of sterile sediment. A slightly thinner sterile layer is located between levels III/6-1-2 and III/6-3 (Table 1-3). Both these latter levels are thin and densely packed with artefacts (Table 1-2). The gradients of levels in sub-units III/6 and III/5 all lay within the same range (Table 1-2). There are no hearths or sooty concentrations associated with levels III/6-1-2 and III/6-3. Although the edges of flints are well preserved and not at all rounded, bone surfaces are heavily eroded. Thus, it is likely that levels III/6-1-2 and III/6-3 are the remnants of eroded occupations.

Sub-unit III/7

Sub-unit III/7 comprises three different levels (III/7-1, III/7-2 and III/7-3), all of which were found in erosional pockets and trenches cutting into the upper part of lithological layers 14A and 14B (Fig. 1-16). All of these erosional pockets/trenches, which are between 5 and 10 cm deep, were filled with sediments from lithological layer 12A. The formal depositional characteristics of levels III/7-1, III/7-2 and III/7-3 are listed in Table 1-2. The homogeneity of archaeological material from these levels is highly problematic.

Unit IV

Unit IV is subdivided into three levels, IV/1, IV/2 and IV/3, all of which were encountered within the 20-30 cm thick lithological layer 14A. In most of the excavated area (square lines *Д* – *И*), layer 14A is sandwiched between thick limestone blocks from collapsed parts of the rock-shelter roof (lithological layers 13 and 15) (Fig. 1-2; 1-3; 1-6, *B*). In other words, the sterile deposit above level IV/1 comprised a 50-100 cm thick limestone block. The block (lithological layer 13) is not monolithic, it showing numerous cracks and fissures. The upper surface of the block is heavily weathered, though it would appear that it was at some point covered by sediments from lithological layer 12A; some accumulations, including artefacts and faunal remains, from this layer penetrated into the cracks and fissures. This means that these cracks and fissures might represent the potential source of post-depositional intrusions of sub-unit III/5 material in level IV/1 fauna and artefact collections.

Artefacts and fauna belonging to level IV/1 were found on square lines Г, *Д*, Е, Ж, З, *И*, К, and *Л* (Fig. 1-17). The west-east gradient is 10.5°, while a north-south gradient is practically absent (Table 1-2; Fig. 1-7). There are two concentrations of archaeological material. The first was found in squares 7*Д*, 8*Д*, 9*Д* and 8Е; the second was uncovered in squares 10Е, 11Е, 10Ж, 11Ж, 10З, 11З, 10*И*, and 11*И* (Fig. 1-17). The thickness of level IV/1 is defined as equal to the thickness of one find. The density of artefacts is relatively high (Table 1-2). Neither fire-places, nor sooty scatters were found.

Level IV/2 is separated from level IV/1 by a 7-10 cm thick sterile layer (Table 1-3). The gradients observed in level IV/2 resemble those encountered in the uppermost level (Table 1-2; Fig. 1-7). Again, level IV/2 is as not thicker than a single bone or artefact, and the density of artefacts can be described

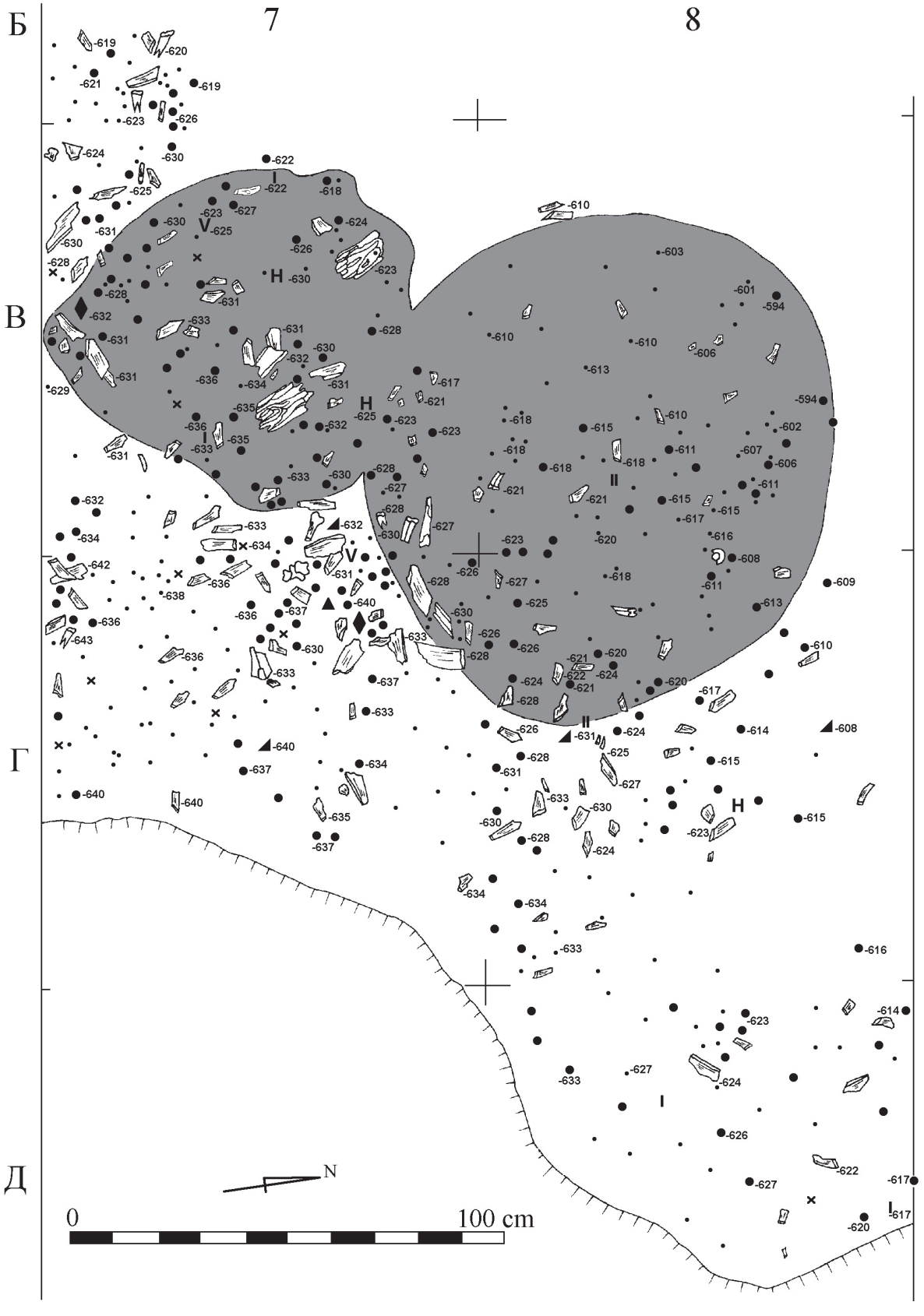


Fig. 1-15 Kabazi V, level III/5-3B2. Site plan: for conventional signs see Fig. 1-9.

as moderate (Table 1-2). A small sooty concentration was exposed in square 10И.

Levels IV/3 and III/2 are separated by a 3-5 cm thick accumulation of sterile sediment (Table 1-3). The gradients of these levels do not really differ from those observed for the uppermost levels of Unit IV, though the density of artefacts is much lower (Table 1-2). The thickness of level IV/3 is equal to the thickness of a single bone or artefact. A small and thin sooty concentration was detected in square K10. It should be noted that the area covered by level IV/3 (square lines: Ж, З, И, K and Л) is smaller here than it was the case in the uppermost levels of Unit IV.

All levels of Unit IV were found in primary context. There is no clear evidence of post-depositional disturbance of levels IV/1, IV/2 and IV/3. At the same time, in spite of the excellent preservation of stone artefacts, the preservation of faunal remains is not so good. First, bones are generally rare, and second, their surfaces are heavily weathered. This might be explained by the stadial climatic conditions that were prevailing at the time of Unit IV accumulation (Chapter 4, this volume), although alternative explanations are also just as likely. It is widely known that limestone blocks draw moisture, which at the same time is bad for bone preservation. The fauna from Unit IV was sandwiched between thick limestone blocks, and therefore would have been influenced by permanent post-depositional high moisture conditions.

Conclusions

There are two main groups of occupations at Kabazi V. Whereas the first group comprises levels found in primary contexts with minimal, or even absent, post-depositional disturbance (levels in sub-units III/1, III/2, III/3, III/5 and in Unit IV), the second group incorporates levels which feature the remnants of human occupations to have been affected by erosional processes (levels in sub-units III/4, III/6 and III/7). Thus, it follows that occupations from the first group are characterised by a higher degree of homogeneity in both artefact and fauna assemblages than those from the second group. Be this as it may, homogeneity is an absolutely relative value; there are no clear depositional attributes which aid in the definition of single occupations or palimpsests of occupations, although a high density of artefacts and a sufficient thickness of cultural deposits might be viewed as evidence for the latter. At Kabazi V levels III/1, III/1A and III/2 are the most likely candidates for palimpsests, while all remaining occupations require additional technological, typological and zooarchaeological definitions.

The one and a half metres of in situ soft sediments of Kabazi V contain at least 25 primary context occupations, the most of which are separated from one another by sterile sediments. In most cases the preservation of both fauna and flint artefacts are excellent, which is suggestive of a relatively rapid conservation process. Upon due consideration of the radiocarbon measurements (Chapter 3, this volume) and results from environmental studies (Chapters 4 and 5, this volume) the accumulation of lithological layers 14A, 12A and 12 probably straddled a period of some 10 to 15 thousands years. An apparently slightly shorter periods of time – about 10 thousands years (Hengelo – Denekamp) – would have probably been required for the accumulation of the 1.2 metre thick sediments of lithological layers 12 and 12A. This interprets to an average sedimentation rate for these latter layers of 0.12 mm per year, which is not particularly impressive; for example, at both the open-air site Kabazi II and in the buried rock-shelter Zaskalnaya V, also under conditions prevailing during Hengelo – Denekamp, sediment is known to have accumulated at twice this rate (Chabai 2004c). Also, in the buried rock-shelter Chokurcha I about 1 m of sediments of Unit IV accumulated under Hosselo Stadial conditions (Chabai 2004a). On the other hand, the amount of accumulated sediments in layers 12 and 12A at Kabazi V, is larger than has been recorded for the rock-shelters of Kiik Koba, Prolom I and Buran Kaya III, where during the OIS 3 period less than one metre of sediment was accumulated, respectively (Bonch-Osmolowski 1940; Kolosov 1979; Monigal 2004). It would appear that the closest sedimentation analogy for Kabazi V is another buried rock-shelter, Zaskalnaya VI. The dated part of the Zaskalnaya VI sequence includes cultural layers II, III and IIIa. According to radiocarbon studies by P. Pettitt, these layers can be dated to 30 – 40 ka BP (Pettitt 1998). The total thickness of Zaskalnaya VI, II, III, and IIIa is about one metre (Kolosov 1986, pp. 8), and cultural layers are much thicker than those observed at Kabazi V. On the other hand, Zaskalnaya VI, cultural layer II displays a complicated stratigraphy, comprising a number of "charcoal lenses". In spite of the not very impressive sedimentation rates, the fauna and artefacts from both sites are excellently preserved.

To summarise, the in situ archaeological occupations discovered at Kabazi V accumulated at

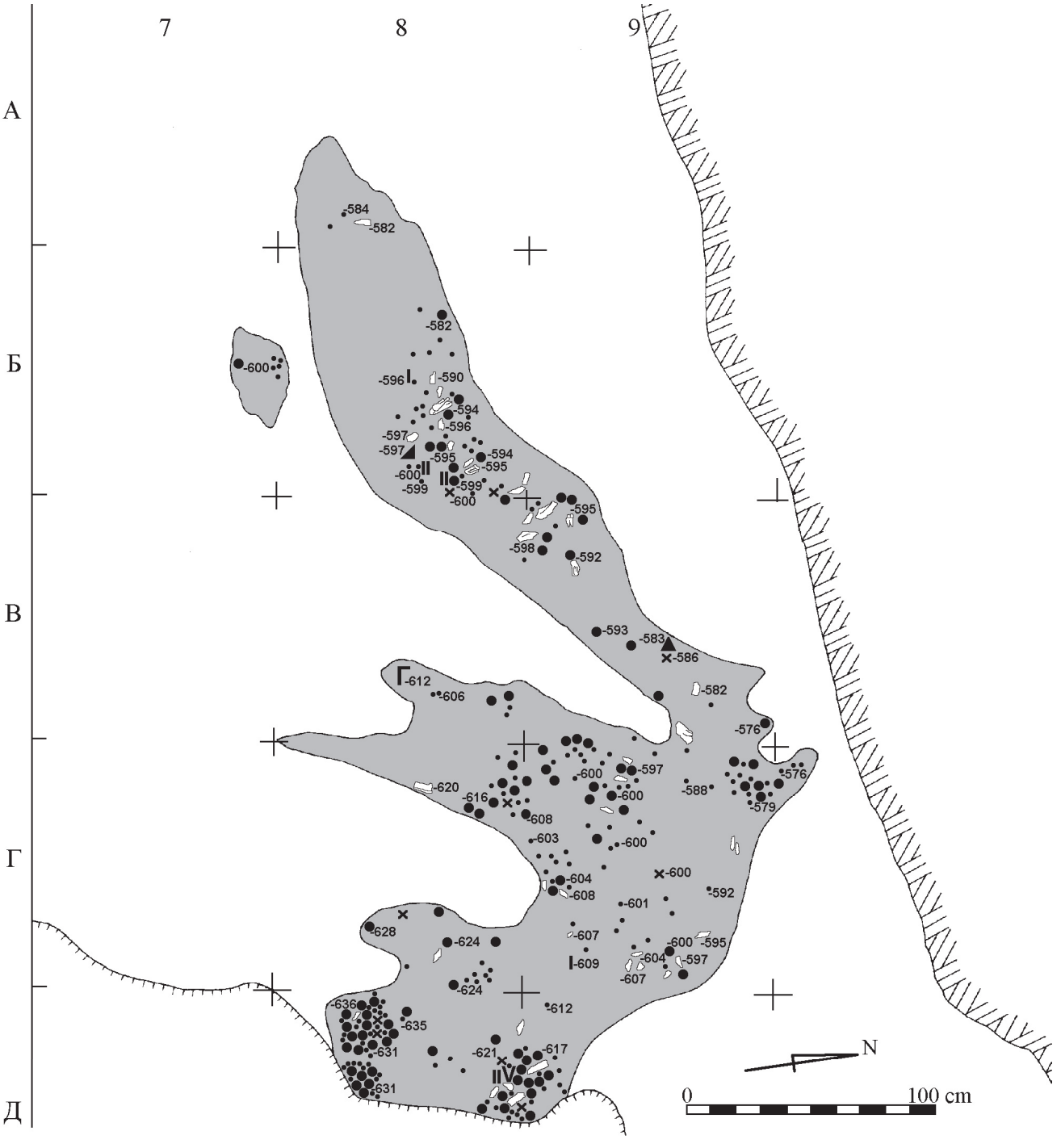


Fig. 1-16 Kabazi V, level III/7-2. Site plan: for conventional signs see Fig. 1-9.

the end of OIS 3 (see Chapter 3, this volume for other arguments). The main natural agents of site formation include the exfoliation of both the back-wall of the rock-shelter (soft Eocene fossil clay) and the rock-shelter roof (the Eocene nummulitic limestone), as well as the deposition of colluvium, which reached at least into the western part of the rock-shelter. The sedimentation rate was low, and human visits were frequent and characterised by quite intensive economic activities. All of these factors resulted in a relatively small sequence of *in situ* sediments, heavily saturated by thin occupational levels that were often separated by thin beds of sterile sediments.

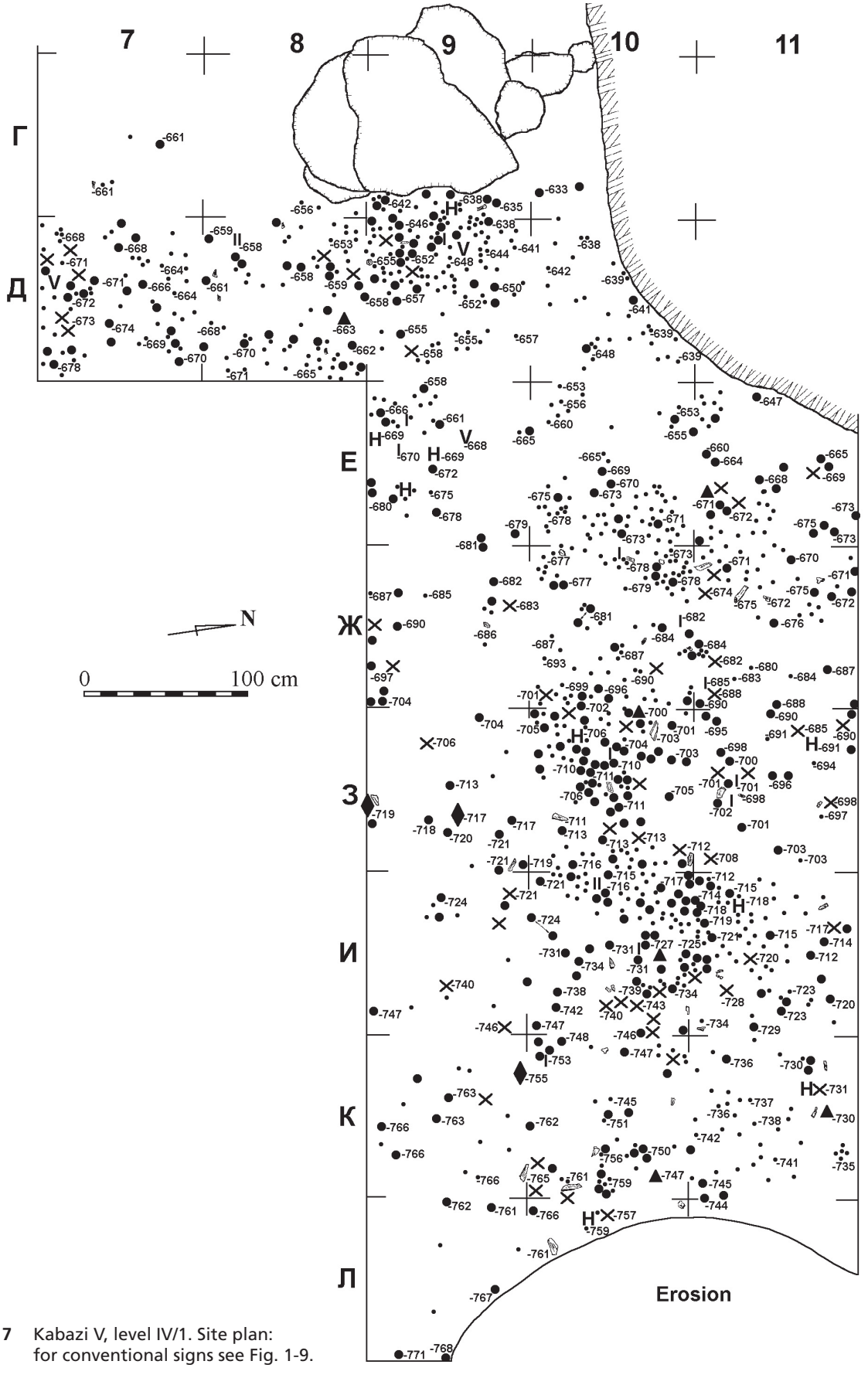


Fig. 1-17 Kabazi V, level IV/1. Site plan: for conventional signs see Fig. 1-9.

Abstract

КАБАЗИ V:
СТРАТИГРАФИЯ ЛИТОЛОГИЧЕСКИХ И КУЛЬТУРНЫХ ОТЛОЖЕНИЙ

ЧАБАЙ В.П.

Погребенный грот Кабази V находится непосредственно под известняковыми выходами южного обрывистого борта куэсты, на высоте 360 метров над уровнем моря и 150 метров над уровнем р. Альма. Стоянка входит в «кабазийский куст» среднепалеолитических памятников (Fig. 1-1). Локализация Кабази V связана с разрушенным в древности неглубоким гротом, камера которого сформировалась в толще эоценовых (Eb) фоссилизированных окаменевших глин, подстилающих нуммулитовые эоценовые (Ea) известняки, слагающие поверхность куэсты. В шестиметровой пачке отложений Кабази V выделено 11 стратумов, которые подразделяются на 27 литологических слоев (Table 1-1; Fig. 1-2; 1-3; 1-4; 1-5; 1-6). Основную роль в понимании эволюции скального убежища Кабази V играет его положение относительно борта куэсты. Борт куэсты почти параллелен линии север – юг, тогда как задняя стенка Кабази V почти параллельна линии восток – запад, то есть, скальное убежище было расположено под прямым углом к борту куэсты. Такое положение способствовало заносу коллювиальных седиментов с борта куэсты на площадку перед гротом. Геологическая история Кабази V представлена тремя основными стадиями. Во время первой стадии аккумулировались седименты стратума G, происхождение которых связано с действием карстового источника. Для второй стадии характерно формирование пещерных и коллювиальных отложений стратумов F, E4, E3, E2 и E1. В отложениях стратума E4 отмечены остатки наиболее древних поселений IV (Unit) культурного слоя (Table 1-1). В отложениях стратума E3 обнаружены пачки археологических горизонтов (sub-units) III/7, III/6, III/5, в отложениях стратума E2 – пачки горизонтов III/4, III/3, а в отложениях стратума E1 – пачки горизонтов III/2 и III/1. Во время отложения указанных стратумом отмечаются следы эрозионных процессов и обвалов козырька навеса. После очередного обвала козырька грот прекратил свое существование, и началась третья стадия аккумуляции седиментов. На третьей стадии формируются эоловые и коллювиальные отложения характерные для открытых стоянок. Данные отложения обнаружены в стратумах D, C, B2, B1 и A. Наряду с переотложенным археологическим материалом, в коллювиальных отложениях были законсервированы в первичном положении некоторые археологические горизонты (levels) II культурного слоя.

Характер образования литологических отложений оказал определяющее влияние на гомогенность и сохранность поселений Кабази V. Артефакты и фаунистические остатки культурных слоев I, IA и IIA были снесены с участка, располагавшегося выше раскопа. В значительной мере переотложены артефакты ряда горизонтов II/1 и II/2, которые относятся к IIA культурному слою. Эрозионными процессами частично переотложены пачки горизонтов III/4, III/6 и III/7. В первичном залегании обнаружены горизонты II/3, II/3a, II/3b, II/4, II/4a, II/5, II/5a, II/6 и II/7, пачки горизонтов III/1, III/1A, III/2, III/3, III/5 и горизонты IV культурного слоя (Table 1-1).

В целом, заселение стоянки во время образования отложений стратумов E4–E1 было достаточно интенсивным: насыщенность горизонтов артефактами колеблется от средних

до высоких значений, толщина многих горизонтов составляет несколько сантиметров и при этом они разделены незначительными по мощности стерильными прослойками (Tables 1-2; 1-3).

Исходя из радиометрических и биостратиграфических данных (Главы 3 и 4), представляется возможным утверждение о том, что аккумуляция 1,2 метра отложений стратумов E3, E2, E1 заняла не более 10 тыс. лет. Ближайшей аналогией темпам аккумуляции внутригротовых отложений (E3, E2, E1) Кабази V является скорость образования почти метровой пачки седиментов 5-11 литологических слоев Заскальной VI.