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KABAZI II:
THE 70 000 YEARS
SINCE THE LAST INTERGLACIAL

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Chapter 8

Kabazi II, Level II/8: Import and Evacuation of Lithic Material

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Level II/8 of Kabazi II was excavated during two field seasons in 1987 and 1994. On a surface covering approximately 30 m² a comparatively extensive lithic and faunal assemblage came to light. A total of 3,981 artefacts comprising 2,796 chips were documented. The lithic material clusters in two zones in the middle and southern part of the excavation area (Fig. 8-1). Unfortunately, more than 9 m² had been previously destroyed by illegal excavations, especially in rows 6 to 8 in lines A and M (Patou-Mathis, Chabai 2003, p. 229).

Level II/8, like the upper half of the archaeological levels of Unit II, is situated in the lower part of geological layer 7 which is assigned to MIS 3. Together with archaeological level II-8c, level II-8 comprises the lowermost part of geological stratum 7. Levels II-8c and II-8 are separated from each other by sterile sediments ranging in thickness from between 3 and 15 cm. The thickness of the archaeological level varies from the thickness of a single artefact on its periphery to 15 cm at the centre of the concentration (Chabai 2005a, p. 12.).

There are two absolute ESR-dates for level II/8, both taken on the same tooth: EU 27±2 and LU 39±3 ka, and EU 30±2 and LU 44±5 ka (Rink et al. 1998, p. 333). These dates are in rough accordance with the pollen sample which dates Levels IIA/1, II/8C and II/8 to the Hengelo-Interstadial. On the basis of the U-series dates Mc Kinney (1998, p. 348) assumes that the whole sequence is one unit with an approximate age of 39.8±5 ka.

FAUNA

In level II-8 the faunal remains of successive hunting events on four family herds of the small wild horse *Equus hydruntinus* could be attested (Patou-Mathis, Chabai 2003). A composition of “catastrophic curve” after Levin (1983) could be documented on the faunal assemblage comprising females, juveniles and foetus. The hunting events took place in spring and

in autumn. There were traces of dismemberment and defleshing. Skeletal elements bearing highly nutritional parts were missing from the assemblage. The hunters of Kabazi II exploited the carcasses according to a “reverse gourmet strategy” in which only the parts with the highest “value” were removed from the site to a place of final consumption.

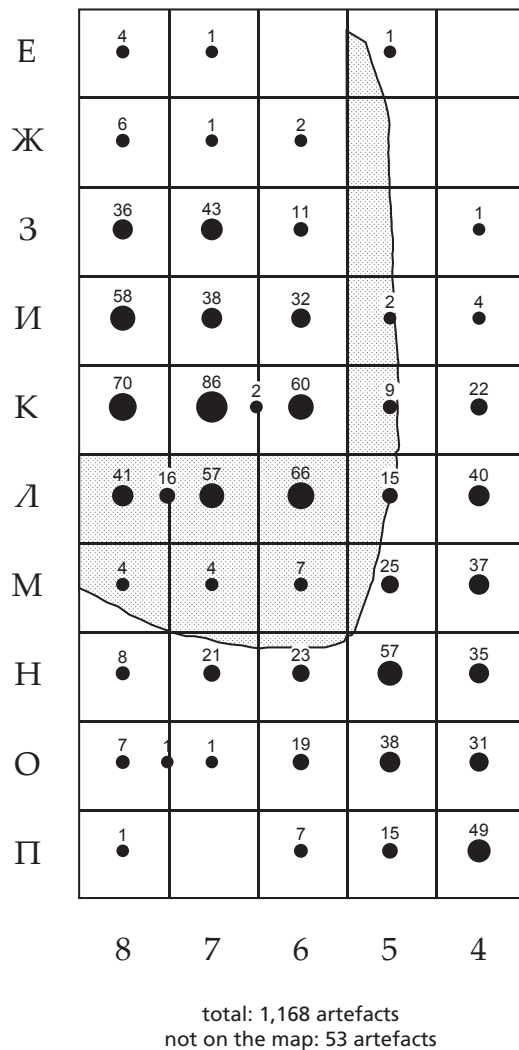


Fig. 8-1 Kabazi II, level II/8: distribution of all artefacts (including sorting rest).

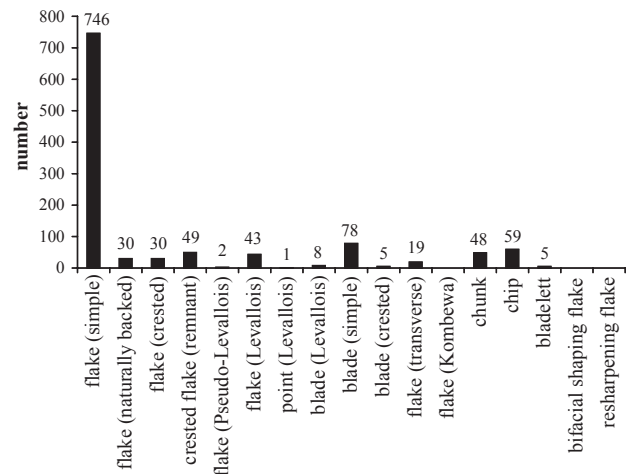


Fig. 8-2 Kabazi II, level II/8: number of blank products (including formal tools and sorting rest).

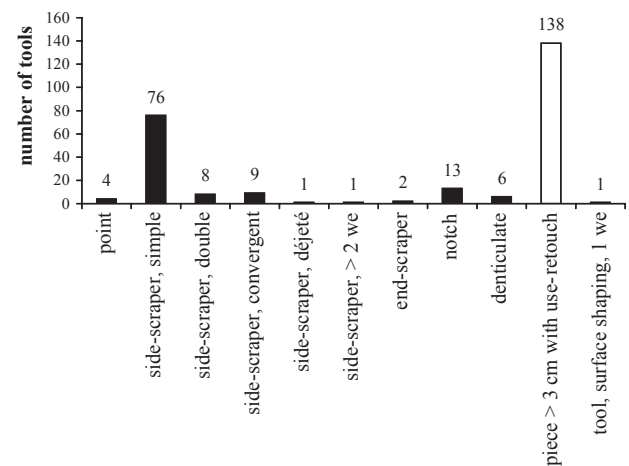


Fig. 8-3 Kabazi II, level II/8: number of formal tools.

LITHIC ARTEFACTS

The stone assemblage of level II/8 is attributed typologically to an early variant of the Western Crimean Mousterian. The lithic material larger than 3 cm, comprising 1,168 pieces, has been subject to a transformation analysis. However, since the final results are still pending, they being the focus of an MA-thesis still in progress, only some preliminary results can be reported here.

The blank products are clearly dominated by simple flakes (Fig. 8-2). Simple blades, comprising 78 pieces, represent the second most important blank type. The majority of Levallois blank types is represented by Levallois flakes, while only 8 Levallois blades and 1 Levallois point occur. A total

of 79 artefacts attest on-site core correction (crested flakes and flakes with remnant crests). Although Kombewa cores are present in the assemblage of II/8 no Kombewa flake was found. The 121 formal tools, which are included in the blank products just mentioned, make up 10.36% of the total assemblage > 3cm (Fig. 8-3). These are dominated by simple side scrapers (76 pieces). Convergent side scrapers (9), double side scrapers (8), notches (13), denticulates (6) and points (4) are less important. Exclusive artefacts are one Limace-like unifacial point and two carinated end scrapers, one of them double (bi-truncated faceted, according to Chabai, this volume). On 138 pieces use retouch has been observed.

RAW MATERIAL

From the total of 1,168 lithic artefacts, 956 pieces could be sorted to 114 workpieces. A further 215 patinated artefacts were excluded from the transformation analysis.

Of the 114 workpieces, the raw material sources of 97 could be identified (Fig. 8-4), the bulk stemming from primary flint outcrops (65 workpieces). This is indicated by fresh white cortex, predominantly chalky, sometimes slightly yellowish. Sometimes the cortex is covered by light brown concretions of calcium carbonate. A total of 26 workpieces were procured from residual sources. These display either a more rugged or even cortex of a yellow-white or white-brown colour (Bodrak Valley). Owing to the limited cortical remnants on four workpieces, the source (primary or residual) could not be ascertained. Only two pebbles with yellow and smooth cortex were attested (RMU's 60 and 119).

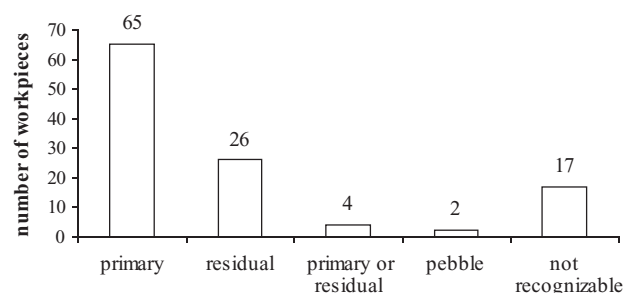


Fig. 8-4 Kabazi II, level II/8: raw material source.

The original shape of nodules has been evaluated for 82 workpieces (Fig. 8-5). Plaquettes were only observed in one unit, while round (28) or flat (24) pieces prevail. 24 pieces were probably either round or flat, and 5 either flat or plaquette.

Considering the raw material source, the shape of the original nodules, and the macroscopical features of the matrix it is clear that much of the raw material was collected in the direct vicinity of Kabazi II. The fresh primary cortex and the dark grey and medium grey coloured matrix of many workpieces speak for Mount Milnaya as a "favoured" flint outcrop (Uthmeier 2004a, p. 175; Patou-Mathis, Chabai 2003, p. 232).

The residual character of the cortex of white-brown colour and the light greyish brown coloured matrix of raw material unit 64 also suggests that the Bodrak Valley served as a raw material source.

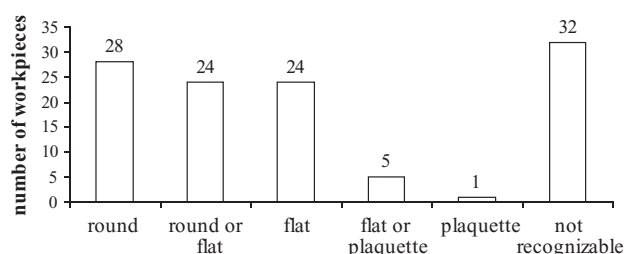


Fig. 8-5 Kabazi II, level II/8: shape of nodules.

RAW MATERIAL SORTATION

In spite of the moderate number of tools the frequency of transformation sections attesting on-site tool production in level II/8 is pronounced (Fig. 8-6). In altogether 42 raw material units, either belonging to transformation section Cm or Nm, tools were produced on-site (36.84% of total workpieces). The biggest transformation category is the on-site production of blanks. The 47 workpieces belonging to transformation sections Cb and Nb amount to a share of 40.35% of the total assemblage (without sorting rest).

Thus, the "long" sequences (C/Nb, C/Nm = 78.07% of total workpieces) clearly dominate over the shorter ones. Nevertheless, the ratio of isolated

objects is, at 18.42% of all raw material units, still pronounced. These raw material units, which contain 19 isolated objects, were brought in as "single pieces" (Bw, Tw, Cw, Nw), or are represented by two isolated tool tips (Ei), making up 16.6% and 1.75% respectively. It is striking that transformation sections representative of on-site rework of formal tools are absent in this assemblage (TT, Mi and TM). Imported nodules were consumed to a certain extent, a point to be discussed later in this paper. In no case was a raw nodule ever imported exclusively for preparation, which would have been attested by preparation blanks stemming from one raw material unit only – for this reason, raw material units of transformation

section Np are absent. In five workpieces the exclusive correction of imported cores could be attested, after which they were exported (Cc). Whether this is an indice for a highly economical stone material exploitation is to be discussed further below.

Comparing transformation category “C” and “N”, the former clearly dominates over the latter. Focusing only on the “dynamic” objects, excluding sections “w” and “Ei”, a dominance of category “C” (64 units, 68.81 %) over category “N” (29 units, 31.18 %) is also observed.

Those statistics give an impression of the tasks conducted during the group’s stay at Kabazi II. The production of blanks and also tools prevails while the preparation and correction of cores are clearly subordinate issues. Since level II/8 was interpreted as a repeatedly visited kill and butchering station it is suggestable that lithic exploitation and lithic economy is connected with hunting activities and the resulting subsistencial aims which follow and preceed the occupations (Patou-Mathis, Chabai 2003, p. 251). Due to the suggested repeated visits of very short duration an interpretation of the lithic economy is quite difficult, as it is neither clear how many visits we are dealing with nor how many people were involved.

Most workpieces constitute numbers between 1 and 15 artefacts, whilst the majority of workpieces comprise between 1 and 3 pieces (Fig. 8-7). There is one cluster of altogether 15 workpieces with between 19 and 34 lithics. Only 2 workpieces represent really extensive raw material units, with 43 and 58 pieces respectively (RMUs 70 and 26). Both are long sequences featuring on-site raw nodule exploitation: the whole sequence from initial preparation of a raw

nodule, core facetting, blank production and tool production is present. The sizes of different blank products from these workpieces show that a large nodule must have been imported. The Levallois technology was present in both cases. Size relations between different artefacts show that large quantities of the original raw nodule were re-exported. Whether the economic treatment of lithic raw material is generally characteristic of level II/8 has to be discussed below. Looking again at the artefact numbers per workpieces this suggestion seems justifiable. The main part of raw material units, namely 97 (85.09 % of all workpieces), are composed of low or moderate artefact numbers. So, on the one hand, the economical exploitation of lithic material, and on the other, export-oriented activities are suggested.

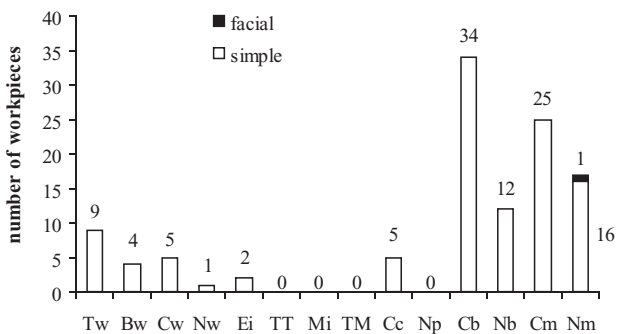


Fig. 8-6 Kabazi II, level II/8: frequency of transformation sections.

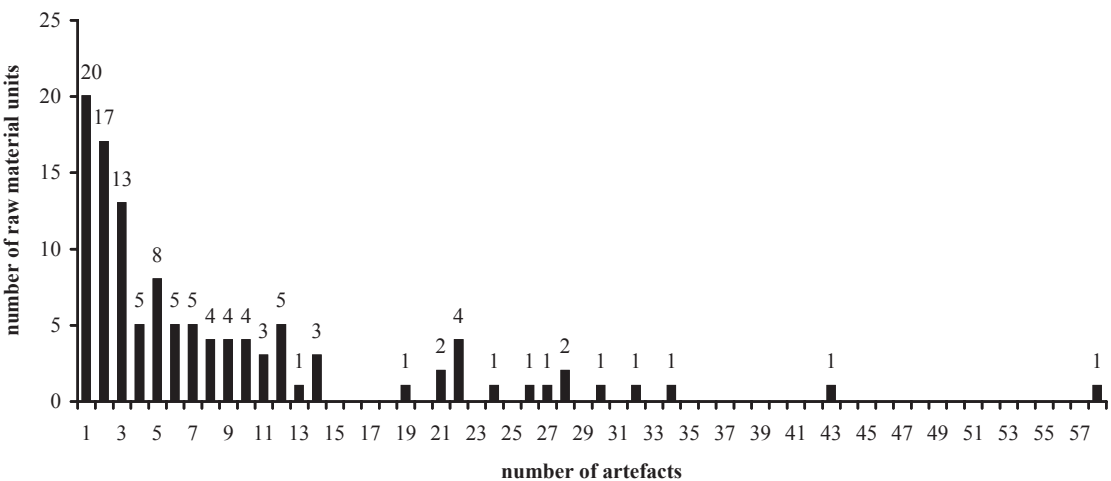


Fig. 8-7 Kabazi II, level II/8: number of artefacts in raw material units.

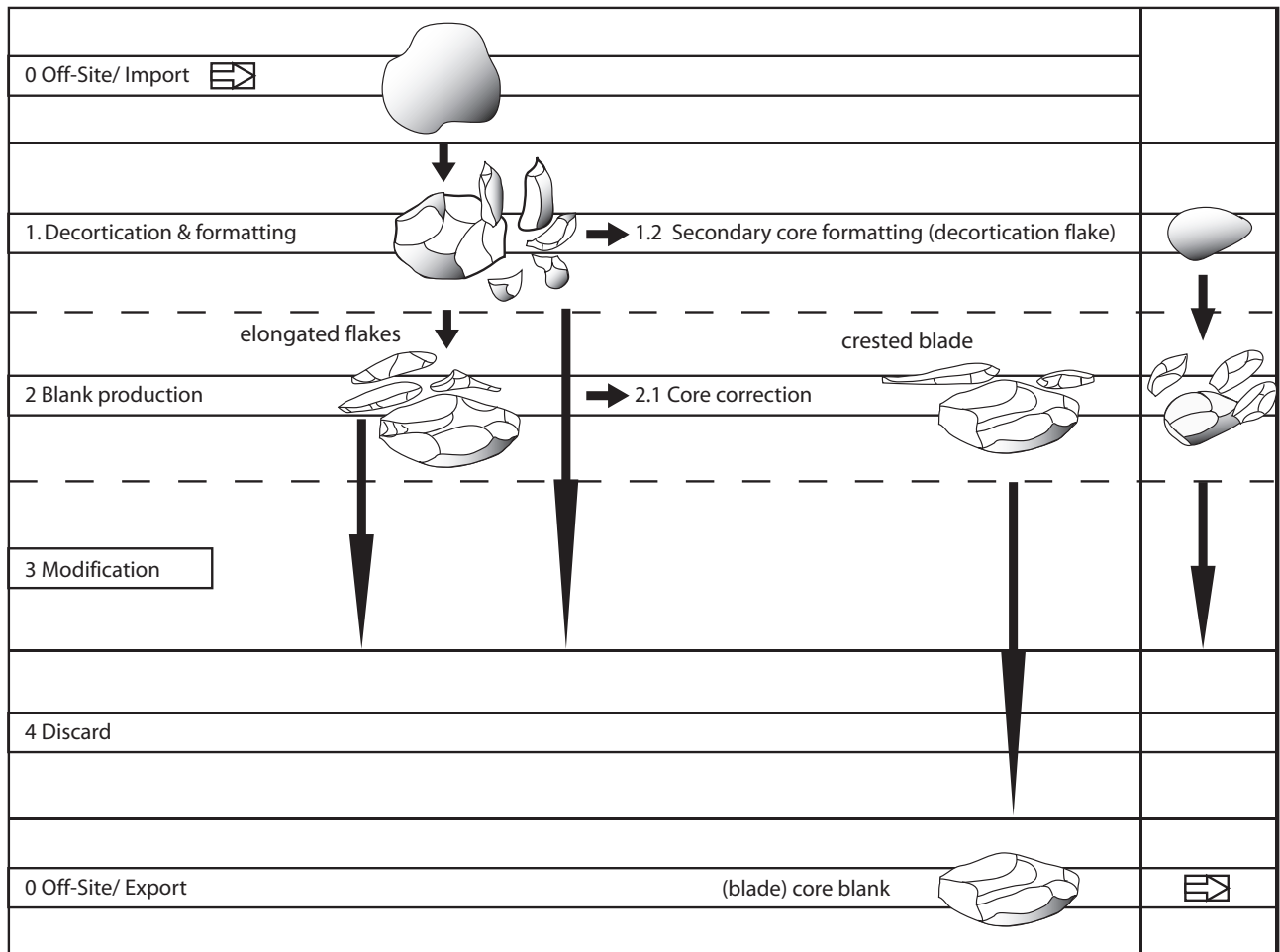


Fig. 8-8 Kabazi II, level II/8: chaîne opératoire: RMU 7.

CHARACTERISTICS OF THE LITHIC EXPLOITATION ECONOMY OF LEVEL II/8 BASED ON SELECTED OPERATIONAL SEQUENCES

An economical exploitation of lithic raw material has already been postulated (see above). This seems to be a characteristic feature of many of the sorted raw material units. Since the MA-thesis focusing on level II/8 is in still progress, only preliminary results can be given at this time.

Long sequences with a characteristic raw material treatment may be indicative of the systems lying behind the provision with lithic resources. However, this said, those raw material units associated solely with blank and not with tool production also provide a good insight into lithic exploitation.

An economic exploitation can be observed in RMU 7, which falls into transformation section Nb

(Fig. 8-8). Here a very large imported nodule was initially prepared and formatted (Transformation section Nb). The presence of a more than 10 cm long crested blade with cortical remnants gives an impression of the size of the original nodule. Blank production is attested by eight flakes, some of them elongated. Those elongated flakes fit to the shape of the dorsal scars of the crested blade. Core preparation is also attested by one further flake with crested remnant. A large decortication flake was faceted. The possible attempt to produce a blade core failed, and the piece was discarded after a short blank production. The size relations of the discarded pieces, especially of the crested blade and the core, show

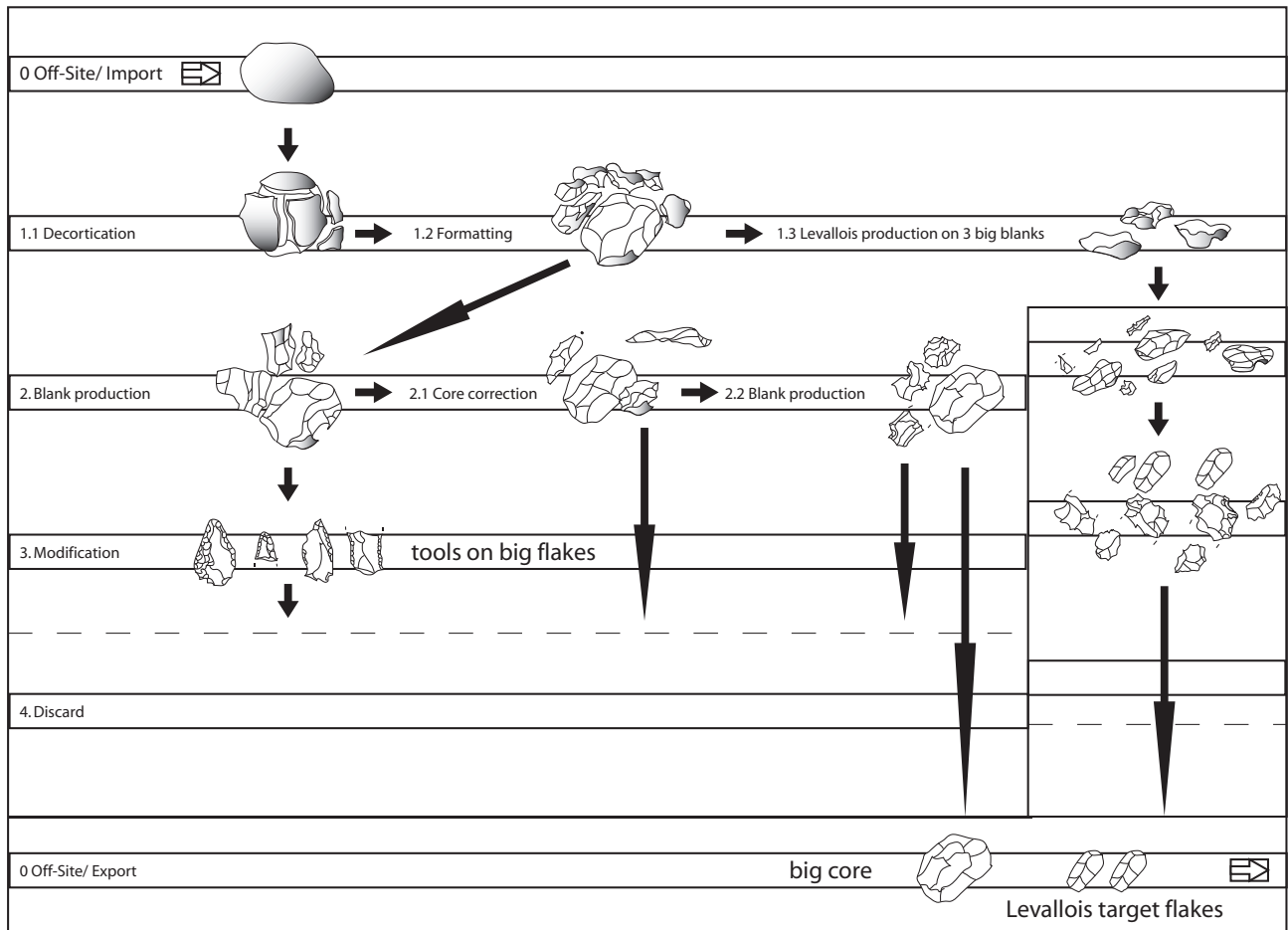


Fig. 8-9 Kabazi II, level II/8: chaîne opératoire: RMU 70.

that the original nodule was exported again as a large core blank. Thus, the aim of this raw material unit would appear to have been the production of a large blade-core for export. For on-site purposes the large decortication flake was transformed into a smaller blade core. Most flakes and the crested remnant flake belonging to this piece were discarded. The producer of this core probably only intended to exploit the small “secondary” core for on-site activities, and to “save” the large core blank for future use.

A similar kind of exploitation can be studied in RMU 70 (transformation section Nm) (Fig. 8-9). A large raw nodule was brought to the site, where upon a large core was prepared. Several large flakes were detached, some of which were modified to side scrapers (1 simple, 1 double, 1 convergent and 1 tool tip of a convergent side scraper). These tools were discarded, probably after their usage for on-site activities. Following the flaking of three large blanks

the core was rejuvenated. The three flakes were prepared as Levallois *tortoise* cores; some small blanks seem to stem from the convexial shaping. Three Levallois target flakes from the small Levallois cores were discarded together with the fragments of the Levallois remnant cores and the other blank products. Since these do not fit to the remnant cores, further target flakes must have been produced which, together with the large original core, were removed from the site. So, it may be concluded that in this workpiece both an export-oriented production of a main core as well as a discard-oriented provision of blank products from secondary cores for on-site application is also attested. The tools were also produced for on-site usage and consequently discarded.

The pieces from RMU 69 demonstrate that tool production was usually conducted upon large flakes, often decortication flakes (Fig. 8-10). The preparation of a large raw nodule is attested by

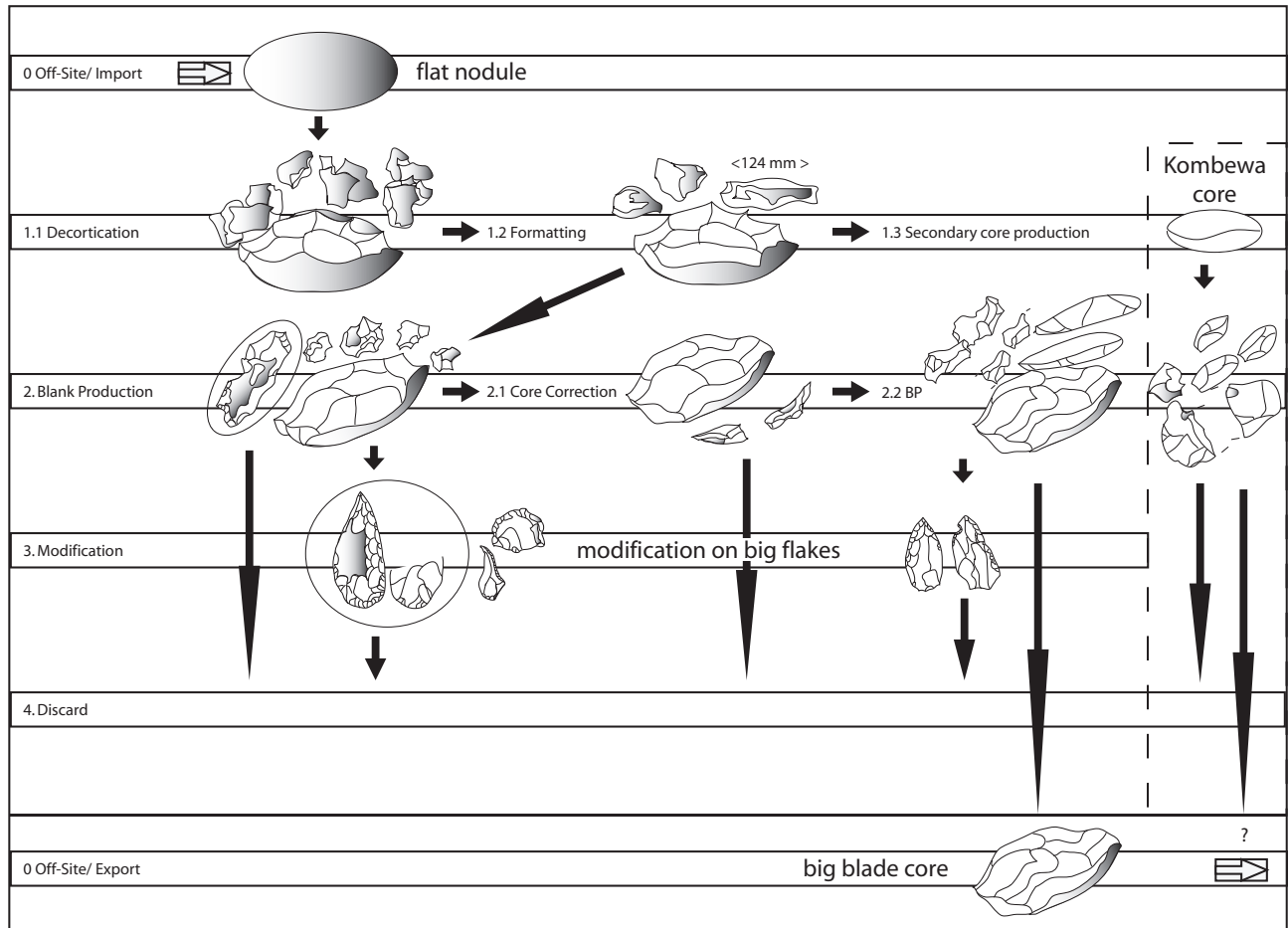


Fig. 8-10 Kabazi II, level II/8: chaîne opératoire: RMU 69.

cortical flakes and blades. Tools were produced on large flakes from both the facetting and blank production phase. Among them is the only surface shaped tool of this assemblage: a Limace-like unifacial point. A secondary Kombewa core production was undertaken upon a large flake. As in the other raw material units this secondary core exploitation was related to on-site activities, and most of the pieces were discarded. On the other hand, the main core exploitation was related to off-site activities – the large blade core was removed from the site. Only the tools were produced for on-site activities, and discarded with the by-products of core exploitation and core correction.

Core exploitation for the production and exclusive export of blank products can only be assumed for some of the workpieces. The discard of cores can be due to either a problematic shape or a problematic raw material. This may be the case for RMU 1

(Fig. 8-11). Here the core was discarded, probably due to its shape, following an entire chain of core preparation of an imported raw nodule via flaking, core correction and tool production. Further larger blanks might have been exported.

Often the exclusive export of blank products is limited to sets of target flakes (RMUs 25, 49 and 64). Here nodules or cores were prepared and exploited on-site (Fig. 8-11). In RMU 49 the core correction could be documented by one small Levallois core and one fragment of a large preparation flake with crested remnant – the size relations of both pieces show that further (target) flakes are missing.

While secondary target flakes were discarded, primary and other flakes are missing. This leads to the impression that nodules or cores of bad or moderate quality were exploited to the extent that a sufficient set of blank products was available for export while cores and by-products were discarded.

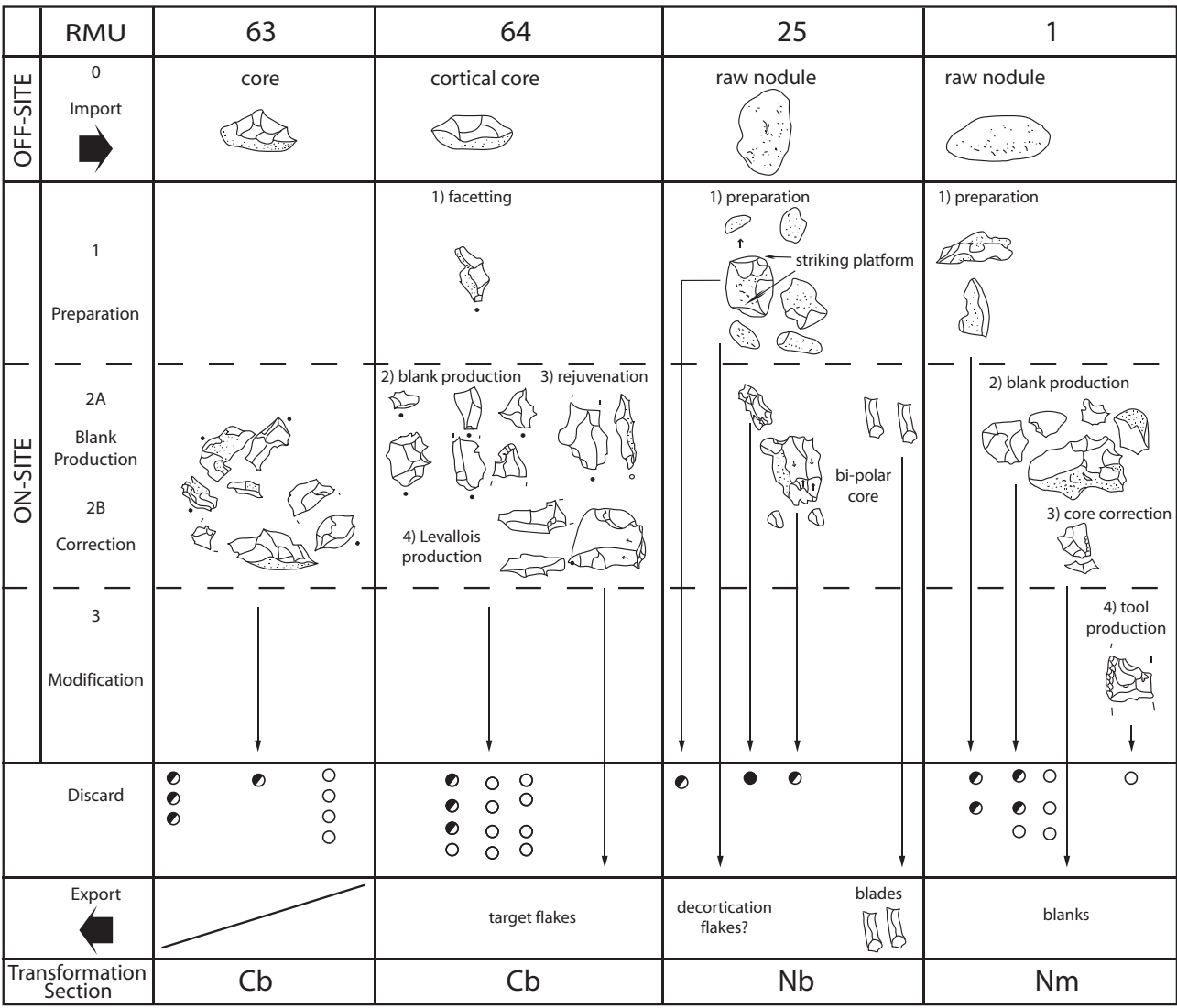


Fig. 8-11 Kabazi II, level II/8: selected raw material units.

INTERPRETATION OF IMPORT AND EXPORT ACTIVITIES

Above an export-oriented character of the site has been suggested. However, several functions of the site may have led to the actual assemblage recovered. Firstly, there is the dismemberment of wild game. One focus of stone material exploitation would certainly have been the primary butchering of these animals. For this task predominantly imported cores and raw nodules would have been exploited. Whereas only a small part might have been flaked for on-site activities, the main volume of the original imported products was re-exported. Here the second aim becomes clearer: the shaping of cores and sometimes the procurement of blank sets and rarely tools.

In this context it is striking that no case of exclusive raw nodule preparation could be attested. Perhaps there was a more pronounced emphasis on hunting activities than on lithic production.

In general the import of cores is more pronounced than the site procurement with raw nodules (Fig. 8-12). This fits the picture of a certain "value" being attributed to lithic raw material. The highly dominating import of cores, the economical exploitation of lithics, and the re-export of the same cores points to either a temporary scarcity of lithic raw material or a highly mobile migrational behaviour of the human groups concerned. The first

suggestion does not seem likely since lithic material was directly available at the adjacent Mount Milnaya flint outcrop, and also from the gravels of the Alma River. However, on the other hand, a certain scarcity of raw material could be the case when snow cover prevented a good raw material procurement in winter-time. This could be the case in the hunting events thought to have taken place during this season (Chapter 2, this volume).

The second proposal cannot be answered with any satisfaction either, particularly as long as the high amount of imported and evacuated faunal and lithic material is attributed to one single event. Altogether 38 individuals of *Equus hydruntinus* were hunted in successive events in late spring/early summer, and some of them in winter (Chapter 2, this volume). A total volume of 3960 kg of meat was brought to the site in successive events. If we take into account the palimpsest character of level II/8, with several sojourns in connection with faunal and lithic exploitation, the second proposal concerning a high mobility can again be assumed. Level II/8 may have the character of a successively visited ephemeral task

station with several different functions: for instance, the nearly complete on-site exploitation and discard of a large core that could be refitted (Chapter 9, this volume; Usik 2003, p. 32) is possibly interconnected with faunal exploitation during one event. The high amount of large fossil inclusions, which might prevent a faultless blank production, was an important factor for choosing this very nodule for complete exploitation and discard.

As mentioned above the import of cores, followed by nodules, for on-site blank production prevails among the 94 workpieces (Fig. 8-6). Most of the time cores were removed from the site, sometimes blank products and in only a few cases tools (Fig. 8-13).

It is now interesting to compare import and export activities concerning different transformation categories (Table 8-1).

The removal of on-site produced or reworked cores can be seen in altogether 77 workpieces. This pattern is present in both long and short chains of transformation. Long transformations of category "C" dominate the removal of cores, as well as of "other artefacts", i.e. blank sets and tools. In sections Cb and Cm 26 and 22 cores respectively were exported.

Altogether 20 workpieces show no removal at all, all containing single pieces (transformation sections "w") and one example of each of the sections Cb and Cc. The exclusive removal of other artefacts, such as blanks, tools or tool fragments, is attributed to a limited number of transformation sections of all categories occurring in this level (17 workpieces).

While in three of five cases of transformation section Cc on-site corrected cores were re-exported, one core was brought to the site and corrected but discarded together with a crested flake: in RMU 65 a cortical core of bad quality, featuring many fissures,

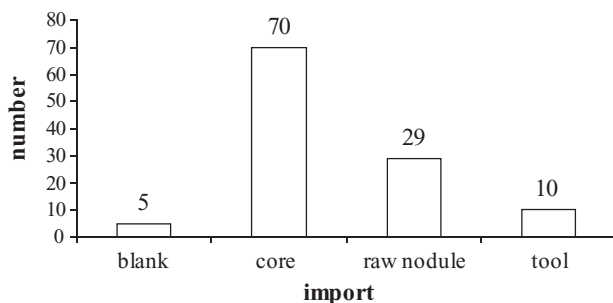


Fig. 8-12 Kabazi II, level II/8: import state of workpieces.

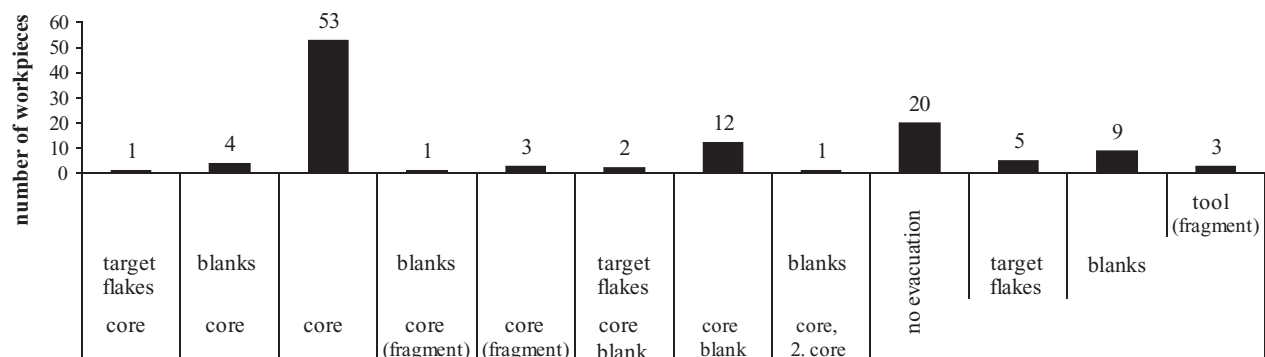


Fig. 8-13 Kabazi II, level II/8: exported objects.

Transformation Sections	Evacuated Objects													
	blade core	blade core blank	core	core (fragment)	core blank	Levallois core	Levallois core (fragment)	Levallois core (récurrente unipolaire)	Levallois core blank	Levallois core blank (Levallois récurrent bipolaire)	Levallois core, 2. core	no evacuation	other artefacts	transformation sections / total
Bw	5	.	5
Cb	.	.	18	3	2	1	1	.	1	.	.	1	7	34
Cc	.	.	3	.	.	.	.	.	.	.	.	1	1	5
Cm	1	.	9	.	.	7	.	3	2	.	.	.	3	25
Cw	5	.	5
Ei	2	2
Nb	.	.	6	.	3	1	.	.	1	.	.	.	1	12
Nm	.	1	8	.	2	1	.	.	1	.	1	.	2	16
Nm/f	1	.	.	.	1
Nw	1	.	1
Tw	7	1	8
evacuation / total	1	1	44	3	7	10	1	3	5	1	1	20	17	114

Table 8-1 Kabazi II, level II/8: exported objects in transformation sections.

was imported. During the attempt of core correction the piece broke. Two resulting chunks and the un-specific core were discarded without further attempt of exploitation.

The number of workpieces with long operational sequences in which removal from the site did not occur is very limited. Only the assemblage of RMU 63 was more or less completely discarded. The above mentioned RMU 95 could be attributed to this category, but since a Levallois target flake could not be found in the assemblage, the export of at least a few blanks must be assumed. Both workpieces belong to transformation section Cb.

Among the 26 workpieces belonging to transformation sections Nb, Nm and Nm/f in only three cases were artefacts other than cores exported. In RMU 25 an imported raw nodule was formatted but discarded after blank production – the missing

flakes were probably exported.

In transformation sections belonging to category “N” the highly economical raw material exploitation of level II/8 is emphasised. On-site produced cores, fragments of cores, core blanks, and in one raw material units even two cores, were removed from the site, sometimes in connection with blanks or tools. In all raw material units belonging to transformation category “N” the removal of pieces could be attested. Indeed, valuable raw nodules were not only used for on-site activities but were maintained for future activities. This is also true for most of the imported cores, although here the exploitation mode is higher probably due to the higher reduction state of the cores. In cases of core discard on-site produced blanks and/or tools were exported for later usage. The same is true for most cases of transformation sections Cb and Cm.

PRELIMINARY REMARKS

An export oriented treatment of flint artefacts can be assumed for level II/8. The reasons for the relatively highly economical exploitation of lithic raw material must, however, remain unanswered until all raw material units have been evaluated. Nevertheless, some characteristics concerning level II/8 have already come to light.

The preponderance of core import speaks for a longer usage of lithic material preceeding the sojourns at Kabazi II. Although a great deal of the raw material of transformation category "C" was collected at the nearby flint outcrop of Mount Milnaya, it was introduced to the site in a reduced state. This might contradict the assumption that the groups directly visited the site following raw material procurement, at least with respect to potential sojourns connected with this transformation category. However, as mentioned above, it is possible that at least a part of those raw material units reflect visits to Kabazi II when snow cover prevented a safe exploitation of known flint sources. Maybe the preponderance of imported cores in those raw material units is a result of the utility to maintain lithics over a longer time period. Only the absence of tool rework might contradict this assumption.

On the other hand, at present, nothing can be said about the interconnection of different transformation sections concerning the reconstruction of different occupations.

In contrast to the exploitation of cores and nodules the activities interconnected with tool use were

intense. The quite high amount of exported blank kits might serve as an indication of the high ratio of imported tools at an ephemeral station like Kabazi II. Such blanks can be used and easily modified into tools as and when required, which is particularly practical for a highly mobile migratory system. Maybe the tools and blanks brought to level II/8 as isolated objects (transformation category "w") are the remnants of whole blank kits which found their final "destination" in activities such as primary butchering at Kabazi II. All in all the high amount of discarded blanks speaks for intensive activities at level II/8. Such an intensity is also indicated in the few cases of nearly complete on-site core exploitation, as in the above mentioned raw material unit 95. This fact emphasises the potential high "value" of cores: on-site produced blanks and tools were used intensely and immediately for special tasks, while the connected cores were reduced as little as possible to export an as high raw material volume per piece as possible.

One might even assume a quite high mobility of the groups concerned. Maybe level II/8 had the function of an ephemeral task station, at least partially, for primary butchering activities. Taking into account several short stays which constitute the whole artefacts assemblage, this task station is embedded in a circulating settlement pattern with several ephemeral camp sites (EC) which function as places of final consumption of prepared resources (see chapter 18, this volume).

ABSTRACT

КАБАЗИ II, ГОРИЗОНТ II/8: ИМПОРТ И ЭКСПОРТ АРТЕФАКТОВ

Г. БАТАЙЛИ

Кремневый и фаунистический комплексы горизонта II/8 образовались во время интерстадиальных (Хенгело) условий. Горизонт II/8 интерпретирован как палимпсест кратковременных стоянок по разделке, по крайней мере, четырех стад гидрунтинусов. Сезон охот – весна/начало лета. Модель использования кремневого сырья основана на расщеплении блоков сырья на территории стоянок с последующим экспортом нуклеусов и заготовок. На стоянках горизонта II/8 остались истощенные нуклеусы и некоторые орудия, в том числе, те, что были принесены в готовом виде. Иными словами, в материалах горизонта II/8 представлена «длинная» редукционная последовательность, главной целью которой было обеспечение непосредственных потребностей данных стоянок. Вместе с тем экспорт мяса и некоторых артефактов указывает на то, что стоянки горизонта II/8 являлись составными частями сложной системы поселений.