Hasty Foragers: The Crimea Island and Europe During the Last Interglacial

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Victor Chabai, Jürgen Richter, Thorsten Uthmeier (eds.), Kabazi II: Last Interglacial Occupation, Environment and Subsistence. Palaeolithic Sites of Crimea, Volume 1, Simferopol - Cologne, 275-286

2005

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Chapter
16

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The last interglacial or Eemian Interglacial, from 126.000 to 115.000 B.P., saw warm and humid climatic conditions in Europe similar to those of the present time, or even a little more favourable (overview: Van Kolfschoten & Gibbard 2000). Thus, archaeological sites from the last interglacial offer the opportunity to observe the behaviour of Middle Palaeolithic humans under similar climatic conditions and in, potentially, comparable environments as they prevail today.

Unfortunately, Eemian archaeological sites are extremely rare in Europe (Fig. 16-1), and a recent comprehensive study lists only 30 sites for Central Europe (Wenzel 1998, 3). For Western Europe (cf. Monnier et al. 2002) the situation is even worse, and human traces dated to the last interglacial from the British Isles are completely lacking. Very few sites in Eastern Europe are tentatively attributed to the Eemian, most of the claimed Eemian ages still being highly questionable (Chabai et al. 2004, 425). On the other hand, Eemian human occupation might have stretched as far east as Siberia, as new finds from the Yenisei area indicate (Chlachula et al. 2003).

Given the short duration of the Eemian, of only 11.000 years or 0.5% of the Quaternary, there are still more sites than one might expect, especially in Central Germany and in Slovakia, where many travertine sites with excellent preservation of organic matter are concentrated. Eemian archaeological sites are mostly preserved in travertines and caves, and more rarely in lake basins, fluvial and beach deposits and volcanic deposits (Wenzel 1998, 3).

Eemian Navigation: the Kabazi II Evidence

In the Crimea, Kabazi II is the only site containing archaeological layers which date with relative certainty to the last interglacial. Due to the fact that the sea level of the Black Sea had risen considerably at that time, the Crimea must have been an island throughout a large part of the Eemian interglacial. According to radiometric dates from fossil molluscs from the shores, the Eemian sea level of the Black Sea, known as the Karangat transgression, was between 10 and 20 m higher than today. The mollusc shells yielded Th/U dates of between 125 and 95 ka (Arslanov et al. 2002). With respect to the

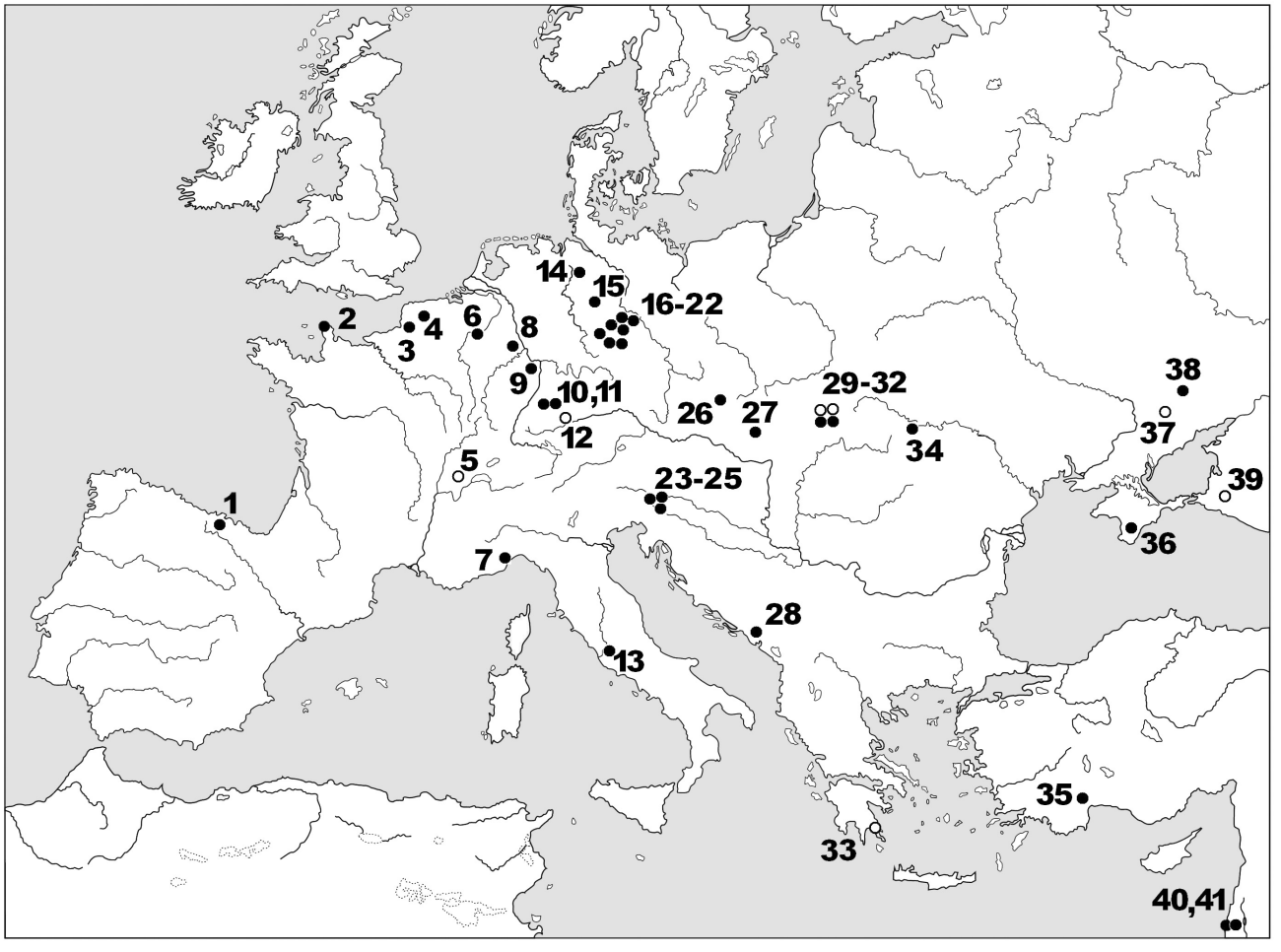


Fig. 16-1 Eemian sites in central and eastern Europe (compiled after Wenzel 1998,3; Chabai et al. 2004; Campy et al. 1989; Cliquet 1994; Otte et al. 1998).

List of sites:

1. El Castillo, layers 24-26
2. Saint-Germain-des-Vaux
3. Caours
4. Seclin
5. Baume de Gigny, layer XXI (?)
6. Sclayn, layer VIII-XIII (not occupiedby humans)
7. Balzi Rossi/Menton
8. Tönchesberg 2B
9. Wallertheim
10. Stuttgart-Untertürkheim
11. Stuttgart-Bad Cannstatt
12. Vogelherd-Höhlensohle (?)
13. Saccopastore
14. Lehringen
15. Veltheim-Steinmühle
16. Burgtonna
17. Weimar-Parktravertin
18. Taubach
19. Rabutz
20. Grabschütz
21. Neumark-Nord
22. Gröbern
23. Vindija, layer K
24. Krapina, layer 2-4
25. Veternica Cave, layer j
26. Kulna Cave, layer 11
27. Bojnice III
28. Crvena Stijna, layer XXIX-XVIII
29. Gánovce
30. Horka-Ondrej
31. Hranovnica-Hincava (?)
32. Beharovce-Sobotisko (?)
33. Elaea (?)
34. Yezupil III
35. Karain
36. Kabazi II, unit V/VI
37. Antonovka I (?)
38. Belokuzminovka 1
39. Ilskaya (?)
40. Tabun C
41. Skhul

Crimea Island, it seems highly improbable that a small, isolated island population would have been able to survive over 10.000 years without any contact with groups from the outside. Thus, the Kabazi II interglacial occupations resulted rather from the presence of continental visitors, than from the remnants of island eremites. This would imply the use of boats as early as 120.000 years ago!

The Eemian age of the lower layers of Kabazi II has resulted from different perspectives and disciplines contributing to the present volume. The analysis of the archaeological remnants can alone neither support nor contradict any chronological hypothesis, because particular typological features of the stone industry that might securely indicate an Eemian age have not been found anywhere in Europe.

Archaeozoological analysis stresses the importance of *Equus hydruntinus* as the principal hunting prey not only during the interglacial, but also throughout the whole sequence of overlying strata of Kabazi II. In the interglacial layers, rhino, red deer and bovids are present in small numbers, but it remains unclear whether humans hunted or scavenged them. The microfauna shows a continuous sequence of species of more or less open landscapes throughout both the Eemian and Weichselian layers of Kabazi II, eventually accomplished, in the Eemian layers, only by a few species of humid and forested landscapes. The snails seem to indicate, in the lower layers, a whole interglacial cycle from the beginning over the climatic optimum to the final climatic deterioration.

Palynology, however, argues for the deposition of the lower layers only during the second half and the end of the Eemian. The pollen record mirrors the famous sequence from Tenaghi Phillipon in Greece, thus revealing the importance of the Crimea as a refugium for hornbeam and other broad-leaved trees during periods of climatic deterioration. Thus, the palynological record of Kabazi II delivers strong arguments for a chronological position of layers V/3 to VI/17 within late MIS 5e and early MIS 5d. Consequently, the age of the lower layers of Kabazi II lies between 120.000 and 110.000 B.P.

On the one hand, the moderate climate of the Crimean region constitutes a dominant feature of the whole Kabazi II stratigraphy. Forests and steppe-forests with both coniferous and broad-leaved trees prevailed during the interglacial and early glacial periods, and boreal steppe landscapes became only dominant during the second half of oxygene isotope stage 3 (Gerasimenko, this volume). On the other hand, the vicinity of the southern Russian plain with its permanently continental climate and its open landscapes has always played an important role as a supplier of ungulate biomass, such as *Equus hydruntinus*.

Humans could always survive in the Crimea, and the principal hunting prey within the Kabazi region, *Equus hydruntinus* was always available. The climatic alterations of the last interglacial-glacial cycle are thus visible in the stratigraphic record of the Kabazi II sequence; however they were not strong enough to compel human populations to change either their nutrional preferences nor their technological systems. For nearly ninety thousand years, Kabazi II, the small place in the shade of a limestone boulder, remained essentially the same: As many as fifty times or more, people occupied this place for some hours to butcher *Equus hydruntinus* that had been killed nearby.

Transformation analysis indicates, for the interglacial layers, the existence of a circulating mobility pattern. Kabazi II was a short halt within a chain of similar locations related to hunting. Campsites of that time differed probably not much from the hunting locations, and we cannot exclude that people stayed for a night or two at Kabazi II. The fires, which burnt from time to time nearby, might support this view. The principle activity, however, remained always (at least 19 times) the same: people came to butcher usually two or three *Equus hydruntinus*, sometimes 4 animals, but only once as few as one (layer V/4) or as many as 5 animals (layer VI/8). During their activities, they discarded usually between 40 and 100 stone artefacts, among them less than 10 retouched tools at each time (Chabai, this volume).

Such continuity of an economic and functional pattern of a long series of human occupations, as well as the particular environmental setting of the Crimea, constitutes a fundamental difference to what is generally known about interglacial human adaptation from the rest of Europe.

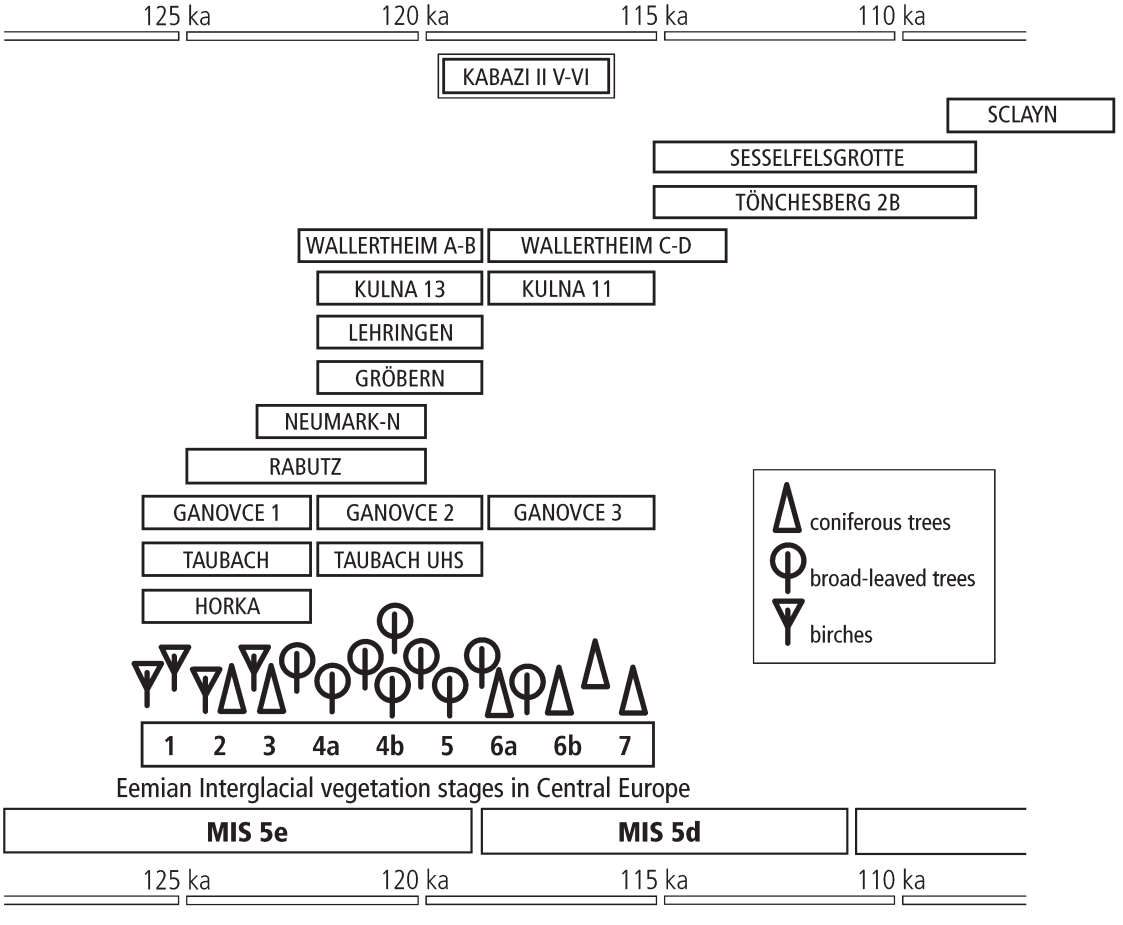
A Short Look on the Eemian Archaeology of Europe

125.000 years ago, climatic amelioration came very rapidly. Whereas the Greenland GRIP ice core would appear to indicate short, cold interruptions in the interglacial climate, the terrestric pollen record from more than 100 localities in northern Central Europe argues for relatively stable climatic conditions during the last interglacial (Kühl and Litt 2003).

A simultaneous drop in steppe landscapes and a rise in forested landscapes in Central Europe characterised the vegetation at the beginning of the Eemian interglacial (Fig. 16-2). When the Eemian period began at about 125.000 B.P., the polar ice caps had already reached their minimum extension, as such contrasting the situation in the early Holocene. Birches dominated (pollen stage E1), followed by pine-birch (pollen stage E2), pine-oak-mixed forest (pollen stage E3), oak-mixed forest-hazel (pollen stage E4a) and hazel-yew-linden tree (pollen stage E4b), stage E4 representing the climatic optimum in Central Europe, when the *Helicigona banatica* mollusc fauna appeared north of the Alps. The second part of the interglacial displays a dominance of hornbeam (pollen stage E5), hornbeam-spruce (pollen stage E6a), pine-fir-spruce (pollen stage 6b) and finally pine forest (pollen stage E7).

Recent correlations between the deep sea chronology and terrestric records have shown that the Eemian vegetational stage „appears to be about 6000 years younger than the base of MIS 5“ (Shackleton et al. 2003, 155) and survived into marine isotope stage 5d (MIS 5d) „at the same time as substantial continental ice was accumulating in North America“. This offset was taken into account when calculating the chronological position of the Kabazi II pollen record (Gerasimenko, this volume).

The term “Eemian” occurs, in this chapter, in its strict sense (126 ka to 115 ka B.P.). It should be mentioned that some West European authors use the term in a broader sense (126 ka to ca. 70 ka B.P.), thus underlining the relative climatic equality between the Eemian (strict sense) and the early Weichselian interstadials (f.e. Otte et al. 1998) of MIS 5 as a whole.



Hunting, Trapping, Scavenging at Lake-Sides and Springs

The carrying capacity for ungulate biomass is lower in densely forested landscapes than in open landscapes, and the large herds of steppe animals like mammouth, wholly rhino, reindeer and horse disappeared. As ungulate-hunting prey decreased during the Eemian, a parallel decrease of human population was often assumed. Population density of palaeolithic humans, however, might have been so low, in relation to ungulate biomass, that a possible decrease in available prey might not have had any effect on human nutrition. Aurochs and red deer were well adapted to woodlands and required hunting strategies focused on multi-species exploitation of single animals of relatively moderate mobility. Moreover, forest elephant and forest rhino kept large areas free of dense forests and facilitated grazing by other species such as horse and giant deer.

Most surprisingly, humans often exploited elephant and rhino, as many archaeological sites show (Fig. 16-3). It is not clear weather elephants were hunted or trapped or just scavenged.

At the famous site of Lehringen in Germany, an elephant skeleton was buried at a lake-side together with a 2,4 m long wooden spear and 27 stone artefacts of Levallois character (Wenzel 1998, 194). Whether humans really hunted elephant, or just happened to kill this particular animal which had become trapped in the swamp, remains open to discussion. It was certainly butchered, as is equally attested for an elephant skeleton found at Gröbern, again at a lake-side, and again along with 27 artefacts of Levallois production (Mania 2000; Wenzel 1998, 202). The nearby Neumark-Nord site, formerly dated to MIS 7 and recently redated to the first half of the Eemian interglacial (Böttger et al. 2005), yielded several in-situ butchery zones. Elephant (*Palaeoloxodon antiquus*), forest rhino (*Dicerorhinus kirchbergensis*) and aurochs (*Bos primigenius*) were exploited by humans, and abundant stone artefacts from discoid and Levallois concepts were found along with their bones (Mania 2000, 27). Lehringen, Gröbern and Neumark-Nord all have a similar ecological setting in common, with butchery of megafauna in the vicinity of small lakes.

Another important group of interglacial sites occurs near springs, and travertine deposits have usually led to a good conservation of the embedded archaeological remnants. Several sites in northern Germany (Veltheim-Steinmühle), central Germany (Taubach, Burgtonna), southwest Germany (Stuttgart), and Slovakia (Ganovce, Horka-Ondrej etc.) belong to this group. All these belong - together with the lake-side group - to the first half of the Eemian, with the exception of Ganovce, layer 3, a possibly later occurrence, which is famous for its travertine cast of an early Neanderthal brain. At Taubach, the age profile of forest rhino and bear connected with abundant cut-marks attest the hunting or trapping of these dangerous animals. The minimum count of individuals at Taubach was 76 rhinos and 52 bears (Wenzel 1998, 231). Large numbers of rhinos have also been found in El Castillo Cave, layer 24 (steppe rhinos) and, along with aurochs and beaver, at Krapina Cave (Wenzel 1998, 232). At Ganovce, forest elephant was again found along with forest rhino, but taphonomic analysis is yet lacking.

Less spectacular, but perhaps more important as a daily source of meat, were cervids, such as red deer and bovids such as aurochs. Red deer served as primary hunting prey in Eemian southern France (Boyle 1998) and was possibly exploited at Rabutz (along with rhino and aurochs), and certainly at Stuttgart-Untertürkheim and Tönchesberg 2B (Wenzel 1998, 232).

Tönchesberg 2B, on top of a middle Rhine volcano, belongs to a later phase with steppe elements, dating to the beginning of MIS 5d (Conard 1992), which explains the exploitation of two horses along with the mentioned three red deer. At the same time (MIS 5d), a minimum number of 59 Bison priscus were hunted at Wallertheim (Rheinhessen; Gaudzinski 1992), thus attesting specialised, mono-specific hunting which is so far absent from the MIS 5e sites, and which obviously occurred only from MIS 5d onwards, when the climate changed to glacial conditions.

The comparably late occurrence, at the end of the Eemian, of mono-specific hunting, coincides well with our evidence from Kabazi II, where *Equus hydruntinus* was repeatedly and exclusively hunted, and some cervids, bovids and rhinos were possibly scavenged (Patou-Mathis, this volume).

◄ **Fig. 16-2** Chronology of Eemian sites, after botanic remnants (compiled after Wenzel 1983, 221; Böttger et al. 2004; Kühl & Litt 2003).

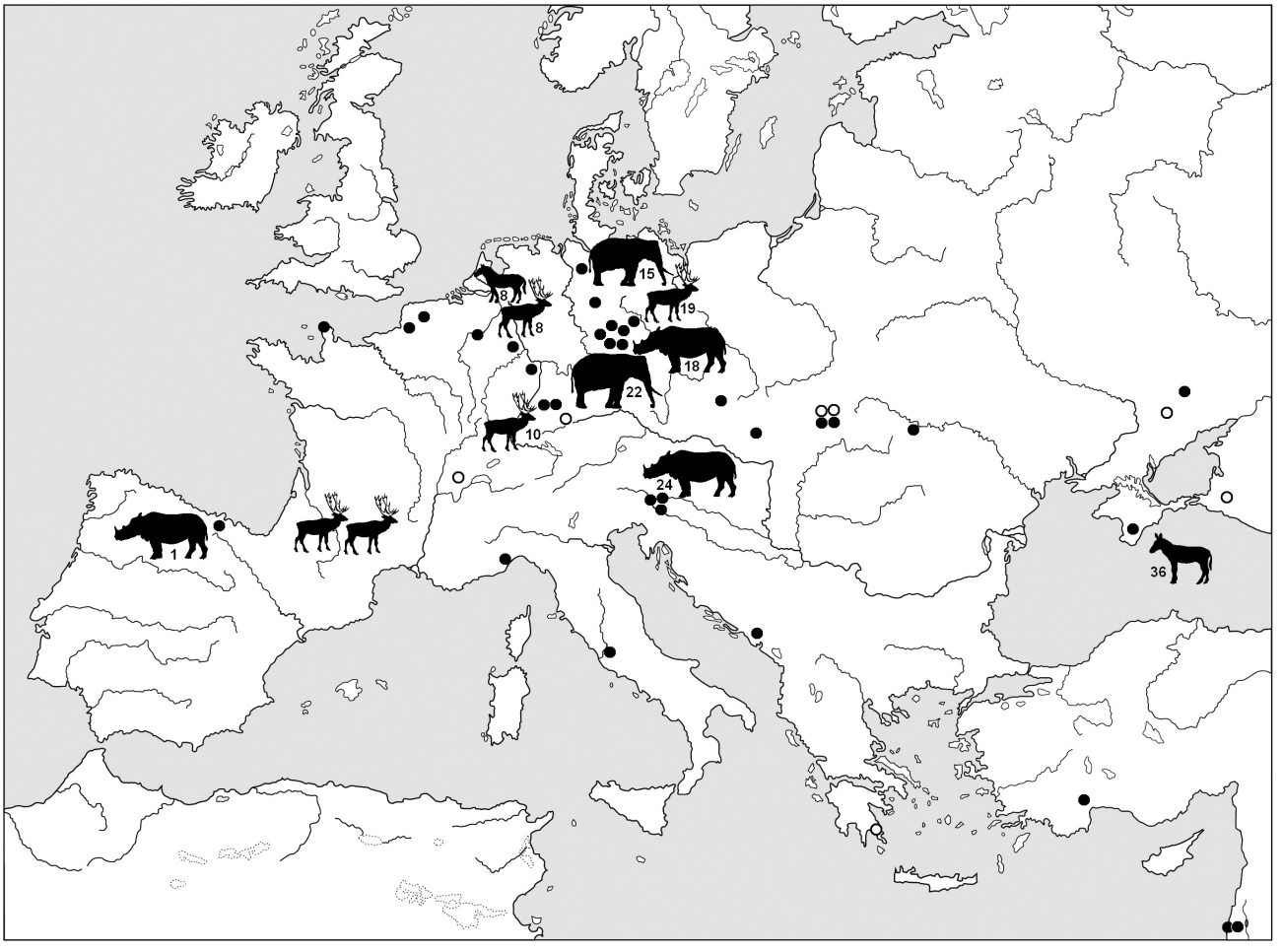


Fig. 16-3 Principal mammals exploited by Eemian humans from selected sites with taphonomic data (after Wenzel 1983, 229-234, for site numbers see fig. 16-1, red deer as principal prey for several sites from southern France added after Boyle 1984).

Fish, Shells and Vegetables

Generally speaking, the beginning of the present interglacial, with its supposed decrease in ungulate biomass, led to „broad spectrum adaptation" of subsistence. Meat from hunted animals was now increasingly accomplished by other kinds of diet. Among recent hunter-gatherers, particularly in the Southern Hemisphere, plant diets often supply more than half of the daily caloric demand of humans. If vegetables play a major role in nutrition, humans must obtain additional protein from animals. Molluscs and shells, rich in proteins, can cover such nutritional gaps, given that mainly proteins are needed - molluscs contributing little to the caloric budget. Reciprocally, should the remaining part of diet be reliant on plants, the exploitation of molluscs makes a good deal of sense. However, exclusive subsistence on molluscs is impossible for humans, except for short periods when other dietry means are scarce.

During the last decade of research, reasoning as to a possible broad spectrum adaptation of Neanderthals appeared to be quite meaningless, seeing as isotope analysis of Neanderthal bones had repeatedly proven them to be pure carnivores, comparable to wolf and hyena (Bocherens and Billiou 1998, 324). This holds not only for Neanderthals living in a cold and dry climate, as attested for the 40/45.000 years old Neanderthal remains from Marillac/Charente (France), but also for Neanderthals living in a moderate climate. Such evidence comes from an individual from Sclayn (Belgium), layer 4, which is attributed to MIS 5c, a moderate

interstadial (Brörup) of the Early Weichselian about 100.000 years ago (Bocherens and Billiou 1998, 316). Nevertheless, isotope data from MIS 5e/5d Eemian Neanderthals are still lacking, thus encouraging speculation about interglacial Neanderthal diet.

Possibly indicative of plant diets (Wenzel 1998, 230) are burnt nuts (*Corylus avellana*) from Rabutz, and the burnt fruits of the linden tree (*Tilia*) and burnt fruits from Kornel cherry (*Cornus mas*) from the second-last interglacial at Ehringsdorf.

Use of molluscs is highly likely at Eemian seashore sites, such as at Balzi Rossi and Elaea. The large site of Saint-Germain-des-Vaux can be best explained as a campsite especially devoted to the exploitation of marine resources. It is, by the way, the only Eemian settlement site in Central and Western Europe, which has yielded zones of activity such as hearths, pits, areas of lithic production, etc. (Cliquet 1994; Monnier et al. 2002). Of course, some of the travertine (f.e. Taubach) lake-side places (f.e. Lehringen) delivered fish remnants, but human exploitation is not proved.

Eemian Stone Artefacts

As for a large part of all Middle Palaeolithic archaeology, stone artefacts are not specific, and it is impossible to attribute any assemblage to the Eemian period only by typological argument.

The recurrent centripetal Levallois method is often applied (Untertürkheim, Lehringen, Rabutz, Taubach, Kabazi II), sometimes perhaps the discoid concept (Veltheim-Steinmühle, Kulna, layer 11), but never the Quina concept of flake production.

In most sites, humans produced all tools on simple blanks, bifacial technology (surface shaping of tools) is rare. Bifacial tools occur only as single pieces. Scrapers are common, points are sometimes present, and notched/denticulated pieces are sometimes abundant. Generally, denticulate artefact assemblages tend to occur under mild and temperate climatic conditions (in France during MIS 5 and 3; see Rolland 2001, 558) and are connected with the processing of wood and plants, and possibly bone. Rolland also suggests profligate raw material exploitation with opportunistic, less selective procurement, mostly from local sources.

Presumably, all mentioned factors, and particularly function and opportunistic procurement, evoked a general perception of Eemian assemblages as small-scale scraper and denticulate industries, derived from "microlithic" flake production, which were then labelled "Taubachian" and consequently misunderstood as remnants of a common cultural entity (cf. Schäfer 1993, 83 and Moncel 2001). The "Taubachian" was since controversially debated, and it turned out that Taubach itself did not display all of the required attributes. K.Valoch applied the term to the Kulna, layer 11 assemblage that is very close to Sesselfelsgrotte U-A08 and U-A09 (Weißmüller 1995, 225). Kulna, layer 11 dates to the very end of the Eemian or to the earliest Weichselian, and the lower layers of Sesselfelsgrotte, perhaps a little later, to the beginning of the Weichselian (cf. Richter 200, 129). Late MIS 5e, 5d and early (?) MIS 5c turned out to be the principal time-span to produce "microlithic" or "Taubachian" occurrences. Dimensions of cores are sometimes very small and the length of flakes averages at only 2-3 cm (Weißmüller 1995, 225). This applies not for Taubach and Weimar-Belvederer Allee, which had given reason to coin the term. It is now clear that the latter retained small sizes of artefacts only by secondary modification, not by production of "microlithic" blanks. Weißmüller has classified Kulna 11 and Sesselfelsgrotte U-A08/U-A07 as "primary microlithic" and Taubach/Weimar-Belvederer Allee as "secondary microlithic", and therefore as a result of reduction of usual Levallois assemblages. As Taubach and Weimar-Belvederer Allee are earlier within the Eemian, we may propose that "usual Levallois" assemblages prevailed in the first half of MIS 5e, whereas "Taubachian" attributes tend to occur somewhat later. As a *caveat*, one should not take mentioned vague technological tendencies as properties of cultural entities. "Taubachian" attributes can occur everywhere in the Middle Palaeolithic, with a tendency to concentrate in MIS 5e/d.

In the same sense, different technical realisations of blade production tend to occur even later then that, during the MIS 5c interstadial (f.e. Seclin D7-D2, Rocourt, Riencourt-les-Bapaume), but it is not totally absent from Eemian/Early Weichselian assemblages. At Tönchesberg 2B, excavation yielded some small blades along with backed points, which seem to be unique for the time. Furthermore, at Wallertheim D, small, thick prismatic non-Levallois blades occur together with steeply retouched points and burin spalls (Conard 2001, 233). Only in this issue, does Wallertheim D parallel the broadly contemporaneous "Taubachian" Levallois assemblages of Sesselfelsgrotte U-A08 and U-A07, where burins are also common.

Blade production, along with the recurrent Levallois concept, is also attested for the large assemblage

from the Eemian horizons of Saint-Germain-des-Vaux (Cliquet 1994, 12-13, Monnier et al. 2002). The Eemian levels of Karain Cave near Antalya in Turkey have yielded a similar technological context. The Karain horizon H assemblage contained a Levallois-Mousterian of laminar tendency, rich in scrapers (Otte et al. 1998, 467).

Bifacial production was generally uncommon during the Eemian (Fig. 16-4). Only some small bifacial tools come from Stuttgart-Untertürkheim (Wenzel, Fig. 20.1), Wallertheim B1 (Gaudzinski 1992, 288) and from a later stage, from Kulna, layer 11. A large bifacial scraper from Burgtonna (Wenzel Fig. 78) is exceptional. A large Micoquian handaxe is known from Baume-de-Gigny, layer XXI, but its attribution to the last Interglacial is in a broad sense and thus inapt to prove the presence of handaxes particularly in MIS 5e (Campy et al. 1989). North-western France - where the chronological research of MIS 5 has resulted in a very detailed record - is void of bifaces during MIS 5e, and they only seem to occur in large numbers in MIS 5a or later (Monnier 2002). At that time, the use of bifaces obviously coincided with the extension of open landscapes and of the Mammoth steppe. By contrast, inhabitants of forested landscapes preferred unifacial tools.

Such an hypothesis might also match the occurrence of so many bifacial pieces in Kabazi II, interglacial layers, at a time when bifacial production was almost absent from the rest of Europe. Northern Crimean steppe or forest-steppe environments supported herds of large mammals, and specialisation on selected species was possible. Specialised, mono-specific hunting might have required curated tools with long-term biographies. Humans produced only a small amount of blanks and tools at the Kabazi site, and at that time it appears that most cores and tools arrived at the site transported "in the pockets" of incoming people. When leaving the site, people took many pieces with them. Such "pocket inventaries" might have reduced the risk of running out of tools when one needed them urgently and unexpectedly. Thus, the availability of bifacial tools reduced the need for early planning and for long-term anticipation. This allowed for opportunistic raw material procurement, totally embedded in residential mobility.

The Kabazi II bifacial pieces represented a standard part of a lithic inventary that had always to be at hand. The pieces display standardized shapes of narrow bi-convex leaf-points, often about 5 cm long at time of discard. By contrast, the small number of bifacial pieces from all other Eemian sites in Europe are heterogeneous and of random character.

Eemian humans used small-elongated nodules and plaquettes to produce the Kabazi II leaf-points and other bifacial pieces. At the same time, they produced blanks, mainly from preforms and cores. A number of blanks remained unretouched to be used as cutting implements. Many blanks were transformed into different types of unifacial scrapers. Unifacial points and denticulated pieces were rare. Averaging at 4 cm, the blanks from Kabazi II are considerably larger than the blanks of the "Taubachian". Thus, the unifacial parts of the Kabazi II Eemian assemblages have little resemblance to the "Taubachian" assemblages of Central Europe. On the contrary, they are quite unspecific. In this sense, they do not differ much from MIS 5e assemblages with recurrent Levallois blank production and which are rich in scrapers, such as at Neumark-Nord and Taubach.

Evidence from the Eemian Kabazi II stone inventaries is thus threefold: One third of the tools are bifacial, standardized leaf-points playing an important role. One third of the tools are unifacial scrapers of different types, and about one third is made up of other unifacial tools. Two different modes of production were involved: Levallois concepts for blank production, and surface shaping for bifacial tool production.

A Note on Eemian Humans

Many archaeologists consider that humanity took an important step towards "modern behaviour" (in its broader sense) during the last interglacial. The interglacial/early Weichselian layers of Klasies River Mouth Cave in the Southern Cape Region (South Africa), for example, yielded skeletal remains of anatomically modern humans connected with "Howiesons´s Poort" stone industry (blades, backed pieces and geometric microliths) and faunal remains indicating the exploitation of marine resources. Presumably, several thousand years earlier, anatomically modern humans had already reached Eurasia.

In the Near East, the interglacial/early Weichselian layers of Quafzeh and Skhul Caves delivered remnants of the earliest anatomically modern humans on the Eurasian continent. Contrasting the progressive appearance of the Klasies artefacts, the Mount Carmel moderns came up with an old-fashioned "Tabun C type" industry. In the Tabun C type industry, "common tools are scrapers, mostly single-sided, a few burins and borers, notches and denticulates" and the blanks are struck from "Levallois cores

after centripetal and/or bi-directional preparation" (Bar-Yosef 2000, 116). They are, although focused on Levallois points, technologically, not far from much older occurrences such as Biache or Rheindahlen B3, from the second-last interglacial. Bifacial tools are absent from the Tabun C type, and Bar-Yosef has presumed that "diets were based primarily on fruits, seeds, leaves, and some tubers", whereas bovids and gazelle played an important role among the faunal remains (Bar-Yosef 2000, 119 and Table 1). He reports also small game such as large reptiles, birds and hares from the same time at Hayonim Cave, horizon E. All these issues hint at broad-spectrum adaptation during the Eemian interglacial.

Thus, the Eemian saw (technologically) progressive Moderns in Africa, old-fashioned Moderns and Neanderthals in the Near East and old-fashioned Neanderthals in the Central European forests. Kabazi II delivers a special case within the European context, as it is the only Eemian site with a considerable number of bifacial tools, and one of few sites with mono-specific hunting. Now, there is not much reason to doubt that Neanderthals were responsible for the Kabazi II, Units V and VI assemblages.

Several Neanderthal remains have been uncovered from Eemian contexts in Central Europe. Eemian early Neanderthals have been found at Krapina (670 Fragments), Saccopastore (adult female and adult male), Ganovce (brain cast) and Taubach (12-14 years old child). The Neanderthal remnants from Sclayn, layer 4, are now dated to the MIS 5c period.

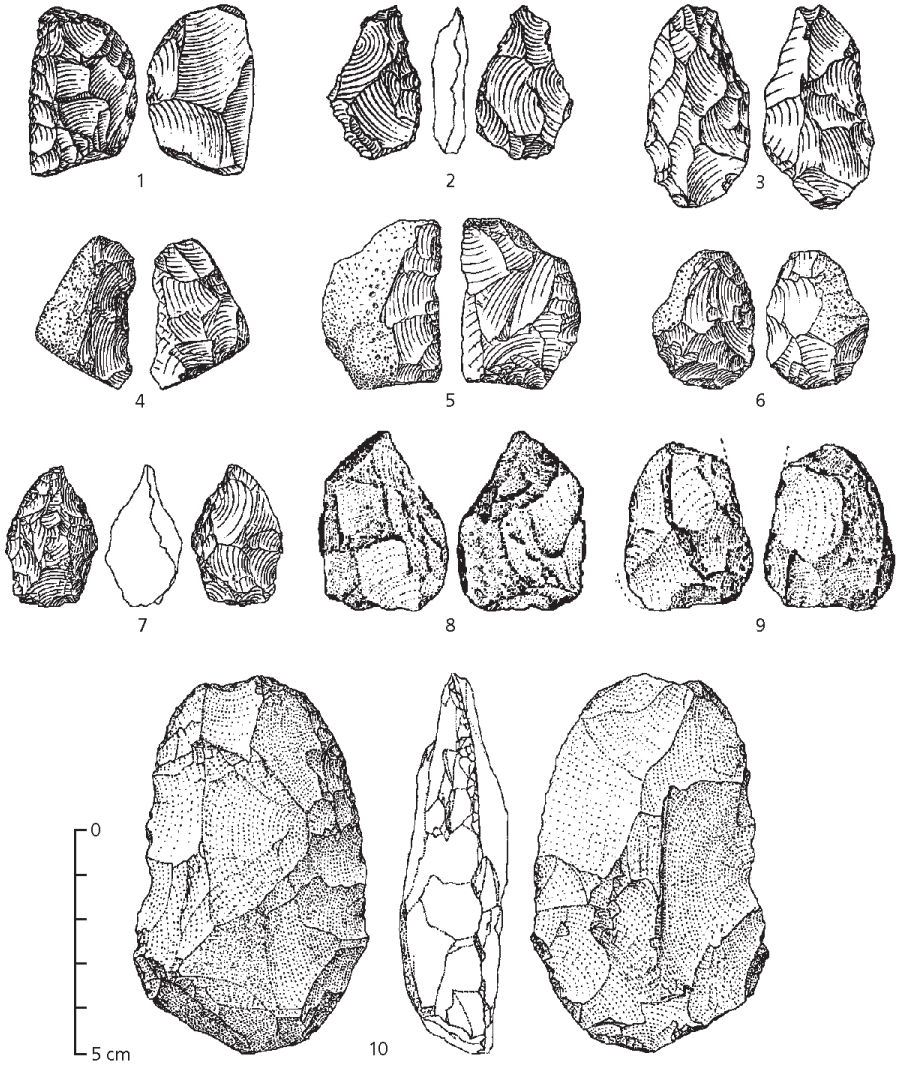


Fig. 16-4 Some bifacial tools from last Interglacial assemblages: 1,2,3 – Kulna Cave (Valoch 1988), 4,5,6,7 - Stuttgart-Untertürkheim (Wenzel 1984), 8,9 Wallertheim B (Gaudzinski 1992), Burgtonna (Wenzel 1984).

Conclusion

The last interglacial or Eemian (126.000 – 115.000 B.P.) was of crucial importance to the history of mankind. Homo sapiens sapiens, which had developed during the preceding 100.000 years on the African continent, now moved into the Near East. However, prior to 35.000 B.P., they did not proceed any further north, Europe having produced only the remains of Neanderthals.

Several Neanderthals are securely dated to the Eemian period. Forest landscape dominated throughout Europe. Land-use concentrated around springs and watercourses, and sometimes near seashores. Hunting and scavenging included a variety of different species, including deer, bovids and even megafauna such as rhino and elephant. Broad-spectrum nutrition is most probable, but positive evidence for plant diets is poor. Eemian sites are usually small and were occupied only briefly, with more circulating than radiating mobility patterns. Settlement locations are not known, except at Saint-Germain-des-Vaux, which is exceptional because of the extensive marine resources in the area open to exploitation.

Eemian stone technology is usually very unspecific. Levallois and discoid technologies are safely attested. Bifacial technology is rare, and Quina technology is totally absent. Later (MIS 5e/5d), "microlithic" flake production occurred along with increasing numbers of denticulate pieces. Partially at the same time, and in MIS 5d, technological variation becomes more evident, with unique laminar and backed-point assemblages.

Kabazi II, units V/VI are exceptional in their considerable number of bifacial tools, particularly leaf-points and in specialised, mono-specific hunting of Equus hydruntinus, which probably resulted from its extraordinary environmental advantages. The patchwork of the Crimean landscape allowed for continuous hunting of *Equus hydruntinus*. Whereas the southern Crimea was forested, the northern Crimea shared the continental climate of the southern Russian plain.

The Crimea was an island and could, at least for a prolonged period, only be reached by sea. This issue needs careful consideration, as it would imply one of the earliest pieces of evidence for navigation, worldwide. Land-use was ephemeral and based on circulating, residential mobility with only brief stays and little differentiation between individual locations. One gets the impression of highly mobile groups within a relatively small territory, and who might have visited the Crimea for a particular season only.

Abstract

ТОРОПЛИВЫЕ ДОБЫТЧИКИ: ОСТРОВ КРЫМ И ЕВРОПА ВО ВРЕМЯ ПОСЛЕДНЕГО ИНТЕРГЛЯЦИАЛА

Ю. РИХТЕР

Последний интергляциал или Эем (126 – 115 тыс. лет назад) – это время огромных перемен в истории человечества. Сто тысяч лет, предшествующие эемскому интергляциалу, *Homo sapiens sapiens* существовал только на африканском континенте. В эеме сапиенсы появились на Ближнем Востоке. Однако Европа, по крайней мере, до 35 тыс. лет оставалась населенной только неандертальцами.

Во время последнего интергляциала лесные ландшафты доминировали в Европе. Неандертальцы использовали территории, прилегающие к речным долинам и, иногда, морским побережьям. Достаточно широкое разнообразие видов – благородные олени, быки, носороги и слоны – составляли рацион эемских гоминид. Известны случаи, как охот, так и собирания падали. Свидетельства употребления растительной пищи невыразительны. Поселения эемского времени кратковременны, невелики по размерам и, скорее всего, являются элементами циркулирующей системы. Единственным исключением является только стоянка Сетн-Жермен-де-Во, которая ассоциируется с интенсивной эксплуатацией морских ресурсов.

Технология камнеобработки эемских комплексов основана на использовании леваллуазских и дисковидных методов расщепления. Двусторонние технологии редки, а Кина отсутствует полностью. Позже (MIS 5e/5d), появляются «микроотщеповая» технология, сопровождающаяся производством зубчатых орудий, и уникальное пластинчатое расщепление (MIS 5d), дополненное изготовлением острий с притупленной спинкой.

Среди упомянутых комплексов материалы культурно-хронологических слоев V и VI Кабази II выглядят скорее исключением, чем правилом. Выразительная двустороння технология камнеобработки, производство двусторонних листовидных острий и специализированная охота на гидрунтинусов – основные характеристики интергляциальных комплексов Кабази II. Скорее всего, для эксплуатации среды обитания использовалась циркулирующая модель.