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LATE GACIAL SETTLEMENT AT THE SITE OF SALEUX (SOMME, FRANCE)

Abstract

The site of Saleux, situated in the Selle valley 6 km southwest of Amiens, was excavated from 1993 to 2011. Some ten find concentrations (*loci*) attributable to the *Federmesser* tradition (*Azilien*) have been studied over an area of about one hectare. They are dispersed over three distinct excavation sectors, spatially separated by relatively large sterile areas (100 to 200 m). Given this, the site cannot be considered a single Late Palaeolithic camp, but rather a series of diachronic settlements, documented within each area by one or more concentrations of remains.

The different settlements appear to have been small residential camps, each of which was only occupied once, over a limited time period, by a small or extended family unit, as demonstrated by the diverse range of activities observed at the different *loci*. If we consider all the data available for the Somme basin, the settlement mode in the region during the Allerød oscillation appears to have been based on the residential mobility of human groups, whose subsistence was derived from non-migratory game (e. g., red deer and aurochs), which represented a stable, regular resource over time and space.

Almost all the settlements at the site represent a recent phase of the *Federmesser* tradition (*Azilien récent*), which can be placed into the end of the Allerød oscillation at around ~ 11,000 ^{14}C BP (i. e., ca. 12,900 cal BP). An initial occupation of the site, attributable to the early phase of the *Federmesser* tradition has been identified, but could not be precisely dated, due to the absence of associated organic remains. This very characteristic lithic industry is comparable with that of the lower level in Quarry III.1 in Hangest-sur-Somme, located in the Somme valley, between Amiens and Abbeville.

Keywords

Late Glacial, Allerød oscillation, Final Palaeolithic, *Federmesser*, Somme basin, camps and territories, land-use

INTRODUCTION

The site of Saleux was discovered in August 1990 during exploratory surveys prior to the construction of the A16 motorway connecting northern Paris and the Franco-Belgian border (Coudret, 1992). In 1993, the positive appraisal of the site led to a series of rescue excavations over an area of ~ 760 m^2 (Coudret, 1995, 1997). From 1993 onward, an excavation programme was carried out over the course of several years alongside the motorway limits in order to obtain more comprehensive archaeological information about the Late Glacial human occupation of the region. This programme was the subject of 19 different excavation campaigns over the summer periods. As a result, around ten find concentrations (*loci*) attributable to the *Federmesser* tradition were identified between 1993 and 2011, over an area of about 1 ha.

The site of Saleux lies on Cretaceous bedrock in the northwest of the Paris Basin. It is located in the Selle river valley, one of the main tributaries on the left banks of the Somme, less than 6 km southwest of Amiens, near the town of Saleux, in a place known as *La Vierge Catherine* and *Les Baquets* (**Fig. 1**). The site is situated on the edge of the Selle floodplain, at the bottom of a gentle loamy slope (**Fig. 2**). This geomorphological position is comparable with that of most Late Glacial sites of the region (Fagnart, 1993, 1997).

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In this region, the Selle river valley shows the classic asymmetry frequently observed in the valleys of the Picardy and northern France (Demangeon, 1905; Antoine, 1990). The gentle, loamy western slope contrasts with a much steeper, chalky eastern slope. Flint outcrops from the Coniacian stage are present at different altitudes on both sides of the valley.
In this part of the valley the main Late Glacial palaeochannel, identified during surveying, is located in the immediate vicinity of the sites, just along the edge of the lowest terrace (**Fig. 3**). During the Allerød oscillation, the archaeological settlements overlooked the active river channel, 2-3 m above the valley bottom (Antoine in: Coudret, 1995).

GEOMORPHOLOGICAL AND STRATIGRAPHIC CONTEXT

The first stratigraphic surveys carried out along the planned route of the A16 motorway were performed by P. Antoine (Antoine in: Coudret, 1995). Over the following years, the different excavation trenches were laid out by the excavation teams. Finally, a major transect through the Selle valley was carried out by Antoine with a hydraulic auger over a distance of about 600 m. This operation made it possible to obtain a complete cross-section of the valley down to the chalky top of the bedrock (Antoine in: Coudret, 1995).
The sectors investigated are located at the contact between the slope deposits and the fluvial formations of the present floodplain. The archaeological settlements are located on a loamy bluff, which is slightly inclined towards the southeast, forming a 20-metre-wide bench on the edge of the floodplain. This landform is related to the existence of a strip of fluvial gravel beneath the silt, which has been preserved along the valley edge. The height of the gravel relative to the deepest incision of the valley allows it to be attributed to the lowest terrace of the Somme. The fluvial gravel formation is about 1.5 to 2 m thick and lies on the chalk at an altitude of 30 m above sea-level (a. s. l.). This fluvial formation at the edge of the present floodplain is

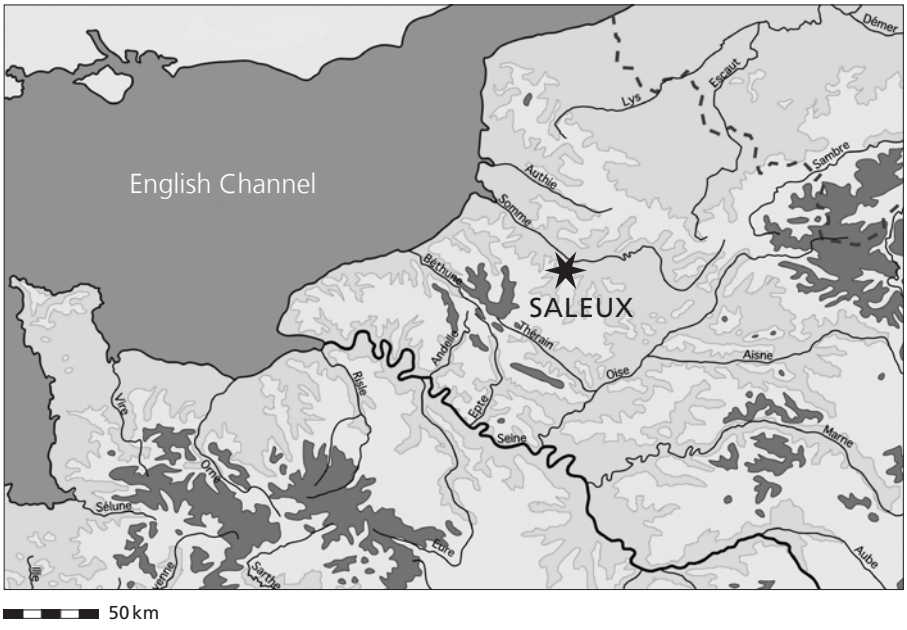


Fig. 1 Saleux, *La Vierge Catherine* and *Les Baquets* (Somme). Geographical location of the site.

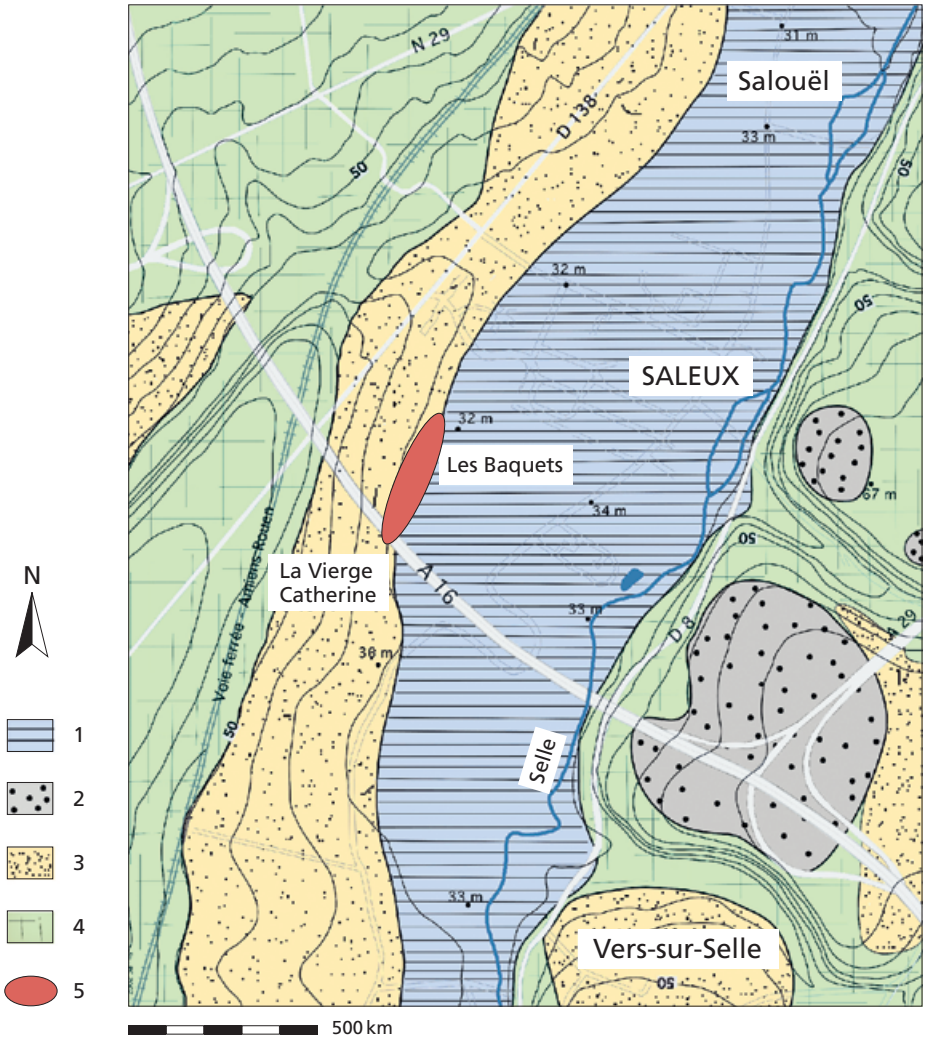


Fig. 2 Saleux, *La Vierge Catherine* and *Les Baquets* (Somme). Geomorphological and topographical context of the site. **1** floodplain; **2** alluvial gravel; **3** loess and colluvial loam; **4** chalk; **5** extent of the site on the edge of the floodplain.

the *Nappe d'Étouvie* (Antoine, 1990, 1993), which is prevalent in the Amiens region. This gravel layer corresponds to the most recent stage of the Low Terrace Complex of the Somme (i. e., of late Saalian age) with a basal level of 24.5 m a. s. l. A Weichselian gravel layer was subsequently deposited in the valley bottom during an early phase of the last glacial period.

The fluvial gravel formations of the lowest terrace and the valley bottom are covered by a thin layer of loessic colluvial deposits. The different lithostratigraphic observations made in the Somme basin have allowed these deposits to be attributed to the end of the Upper Pleniglacial of the Weichselian (Antoine, 1990, 1993; Fagnart, 1993) or to an early phase of the Late Glacial (Limondin, 1995; Limondin-Lozouet, 1997).

An organic loam with or without chalk granules and varying from greyish brown to greenish grey in colour (depending on waterlogging) formed at the top of the loessic colluvial deposits. This loam corresponds to a prominent phase of soil formation and relative geomorphological stability. It is this organic horizon that provides the evidence of Final Palaeolithic occupations (*Federmesser* tradition) and that is correlated on lithostratigraphic and pedostratigraphic grounds with the *Belloy-sur-Somme* soil, which has been attributed

Sector	Locus	Material	Laboratory code	^{14}C Age [BP]	Age [cal BP]
1	114	*Bos primigenius*	OxA-4932 (Lyon-81)	11,010 ± 80	12,813-13,035
1	114	*Bos primigenius*	OxA-4933 (Lyon-82)	10,800 ± 140	12,641-12,922
2	234	*Bos primigenius* (femur)	GrA-15945 (Lyon-1141)	11,200 ± 70	12,978-13,216
2	234	*Bos primigenius* (M2 inf.)	GrA-15946 (Lyon-1142)	11,160 ± 70	12,937-13,192
2	244	*Bos primigenius* (metapodial)	GrA-18832 (Lyon-1566)	11,640 ± 70	13,387-13,670
3	284	diaphysis (non determined)	Lyon-4303 (GrA)	11,440 ± 50	13,233-13,480
3	294	*Cervus elaphus* (diaphysis)	Beta-170949	11,180 ± 50	12,968-13,200

Tab. 1 Radiocarbon dates for the *Federmesser* settlements at the site of Saleux (Somme). Calibration was performed with CalPal (quickcal2007 vers.1.6: www.calpal.de), using the calibration curve CalPal2007_Hulu.

to the Allerød oscillation (Fagnart, 1993; Antoine, 1997; Antoine et al., 2000, 2003). This attribution is confirmed by the palynological analyses carried out by A.-V. Munaut and A. Defgnée (1997) and by radiocarbon dates obtained from the different archaeological concentrations excavated from this horizon (Tab. 1).
Younger Dryas deposits are missing from the bluff of the lowest terrace and are only observed below the present floodplain. In the area of the archaeological excavations, the peodogenesis of the Allerød is directly masked by Holocene slope formations, preserving settlements attributed to the Middle Mesolithic (Boreal). A large part of the site is then covered by peat and calcareous tufa deposits that formed during the filling of the floodplain. Finally, loamy colluvial sediments from the cultivation on the slopes in historical periods have masked the old topography, leading to the present stable landscape.
In parallel with the research carried out at Saleux, a multidisciplinary study of the site of Conty, located a little less than 15 km upstream of the valley, has made it possible to reconstruct the history of the Selle river system in close relation to the climatic changes that took place between the end of the Weichselian Pleniglacial and the beginning of the Holocene (Antoine, 1997; Antoine et al., 2000, 2003, 2012).

THE ARCHAEOLOGICAL SETTLEMENTS

Three particularly dense areas of Late Glacial remains have been studied (Fig. 3). Between these different areas, systematic test trenches have indicated the absence or extreme rarity of any remains.
Sector 1 is located in the southern part of the site, along the current route of the A16 motorway; Sector 2 is located 200 m to the north, and remains of a human skull (*Homo sapiens sapiens*) were documented there in 1998; Sector 3 is located almost a further hundred meters to the north. The different *loci* investigated in these excavation areas (Tab. 2) cover a strip of land about 20-30 m wide, over a distance of about 400 m, corresponding to the flat bench of the lowest terrace. The site therefore covers an area of around 1 ha.

Sectors 1 and 2 at Saleux

In Sectors 1 and 2 at Saleux, six *loci* have been identified that have been attributed to the *Federmesser* tradition (*Azilian*). *Loci 114* and *109* (Sector 1) are located on the route of the A16 motorway and were excavated as part of a rescue operation in 1993 and 1994. *Locus 234*, and the three *loci* in area 244 (and

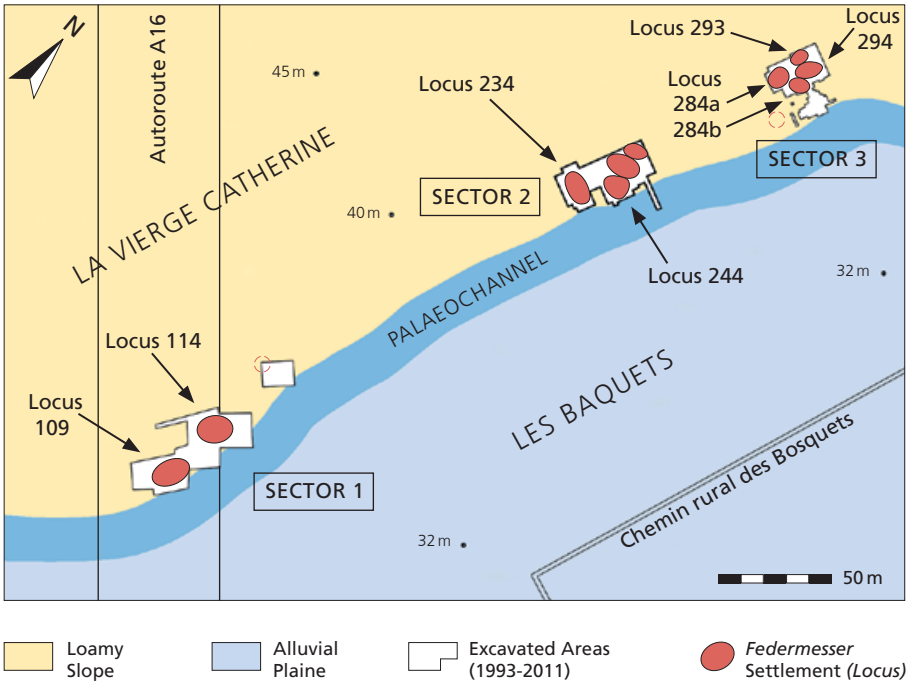


Fig. 3 Saleux, *La Vierge Catherine* and *Les Baquets* (Somme). Location of the three excavation sectors and the principle areas of investigations into the Final Palaeolithic on the edge of the Late Glacial palaeochannel.

254) (Sector 2), were explored as part of a long-term excavation programme between 1996 and 2002, with an additional field campaign in 2011. Sector 1 was excavated entirely manually over an area of 760 m^2, and Sector 2 over an area of 696 m^2.

Locus 234 is a good example of the spatial organization of the Palaeolithic camps at Saleux. The remains were found over an oval-shaped area, about 60 m^2 in size. A little more than 6,500 lithic and bone remains have been collected, not including fragments and chips < 1 cm in size. The general organization of the *locus* is based around a hearth, where most of the activity was concentrated, as shown in find distribution plans (**Figs. 4-5**). Evidence of the combustion structure is provided by a small collection of heated flints, concentrated in a small area. It involves a flat hearth, which is quite typical of most Azilian and *Federmesser* sites (Leesch et al., 2004; Baales and Street, 1996). According to initial counts, 262 blanks transformed into tools have been documented in this concentration. The lithic industry is divided into three main categories of tools: backed points, burins, and retouched backed knives (**Fig. 6**). Backed bladelets are present in relatively modest percentages, as at most of the *loci* within Sectors 1 and 2. The scarcity of end-scrapers in *Locus 234* is also noteworthy in comparison with the neighbouring *loci*. The diversity of the toolkit (projectile points and tools for domestic use, such as retouched backed knives and burins) shows that domestic activities were just as important as hunting activities.

The projectile points were very often found fragmented at their site of manufacture and involve single pointed curve-backed pieces made on small blades. No bipoints have been found. The breakage types clearly indicate that most specimens were fractured during shaping. Only a very small number of projectile points have been found with impact marks, and very few complete examples have been found. This situation reflects the state of abandonment of the site, where objects no longer of great use were left discarded on the ground. In *Locus 234*, the remains of a human skull were found during the 1998 excavation cam-

Sector	Area [m²]	*Locus* no.
1	760	109 114
2	696	234 244 (3 *loci*)
3	375	284a 284b 293 294
Total	1,831	10 *loci*

Tab. 2 Saleux, *La Vierge Catherine* and *Les Baquets* (Somme). Excavation sectors and concentrations (*loci*) of Final Palaeolithic settlement.

paign (Fig. 7). Their unique location on the edge of the camp is related to the presence of a dump zone where flint slabs and heated blocks have also been found (Coudret and Fagnart, 2004). The specimen was resting with its base on the base of the Allerød layer. The condition of the cranial sutures indicates that the skull represents a young adult aged between 18 and 25.

The three *loci* in area 244 are situated about 20 m north of *Locus 234* (Fig. 5). The remains are more loosely distributed and are organized around four small, flat hearths, one of which probably served for domestic use (R10). The others are further away from the denser concentrated remains and were probably related to satellite activities (B13, L8 and H10). The abundance of end-scrapers in *Locus 244* could indicate its functional complementarity with *Locus 234*, unless it involved an occupation at a different time, during another season.

In Sector 1, *Loci 114* and *109*, which are located at about 15 m distance, occupy a markedly different stratigraphic position, suggesting that these camps do not correspond to the same time period (Fig. 3). These two domestic units, which are spatially relatively isolated, thus appear to have functioned individually and autonomously (Coudret, 1995, 1997).

As at most of the Late Glacial *loci* at Saleux, the state of bone conservation in Sectors 1 and 2 is relatively poor. Several dozen bone remains have nonetheless been collected, but they have not yet been the subject of an in-depth zooarchaeological study. We can note, however, the presence of red deer (*Cervus elaphus*), aurochs (*Bos primigenius*) and most likely horse (*Equus* sp.) in the hunted prey of the Palaeolithic groups.

The typological and technological characteristics of the lithic assemblages allow to the camps in Sectors 1 and 2 at Saleux to be attributed to the recent phase of the *Federmesser* tradition or the *Azilian récent* (Fagnart and Coudret, 2000a, 2000b; Coudret and Fagnart, 2004, 2006; Valentin, 2005, 2008; Naudinot et al., 2019). These industries are characterized by relatively simple technical processes aimed at extracting straight blades of medium size using a soft stone hammer. The best comparisons with the Seine basin have been made with the "intermediate level" at the site of Le Closeau, excavated by P. Bodu in Rueil-Malmaison (Bodu, 1995, 1998, 2000; Bodu and Valentin, 1997) and with *Locus 33* at the site of Ambenay, in the Eure valley (Valentin et al., 2004). According to the stratigraphic position of the *Federmesser* industry in Sectors 1 and 2 at Saleux, the available radiocarbon dates (ca. 11,640-10,800 ^{14}C BP, i. e., ~ 13,530-12,780 cal BP; Tab. 1) and the palynological data, the occupations can be placed into the second half of the Allerød oscillation (i. e., Greenland Interstadial GI 1a-1c$_1$; cf. Rasmussen et al., 2014).

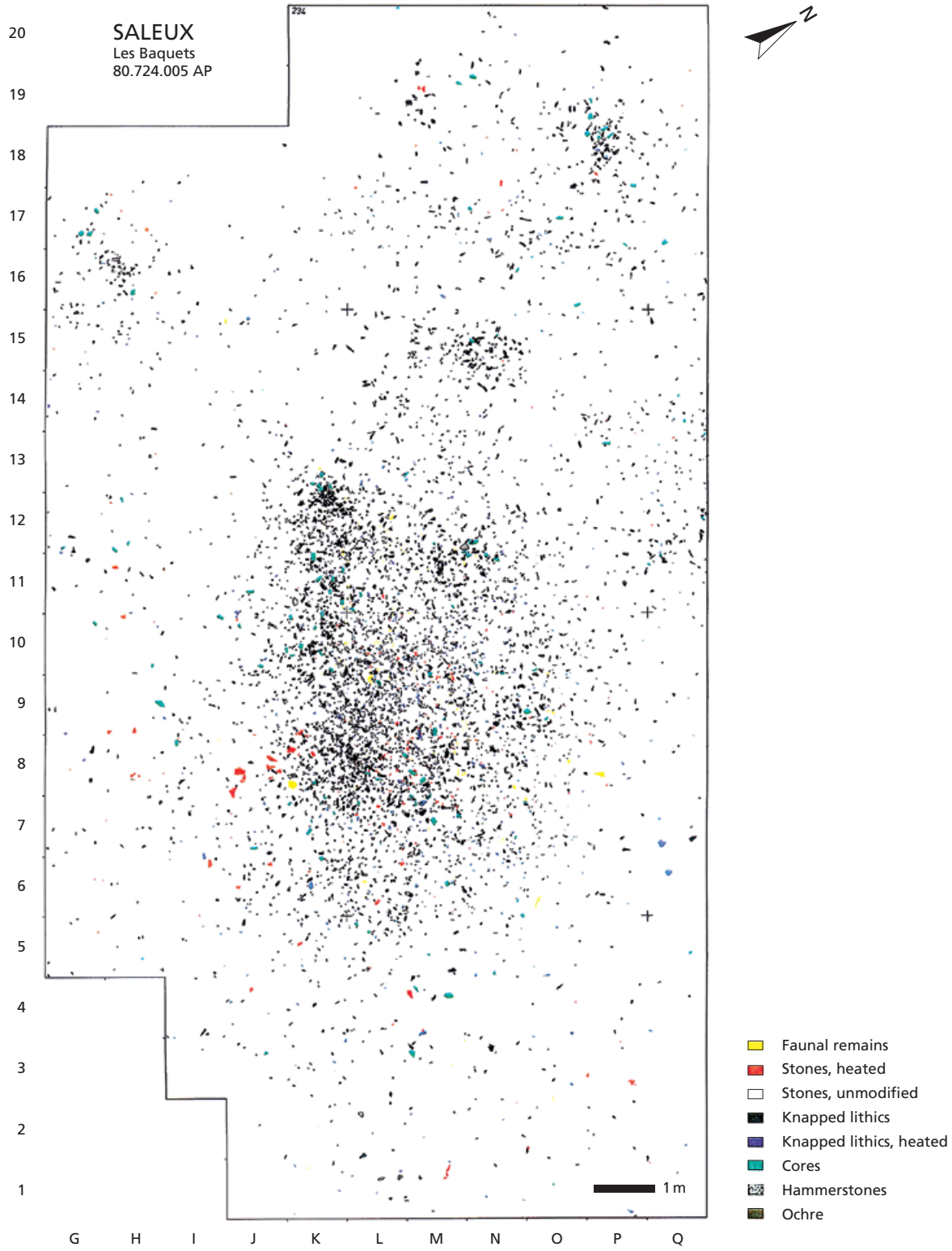


Fig. 4 Saleux, *Les Baquets* (Somme). Distribution of the archaeological material in *Locus 234*.

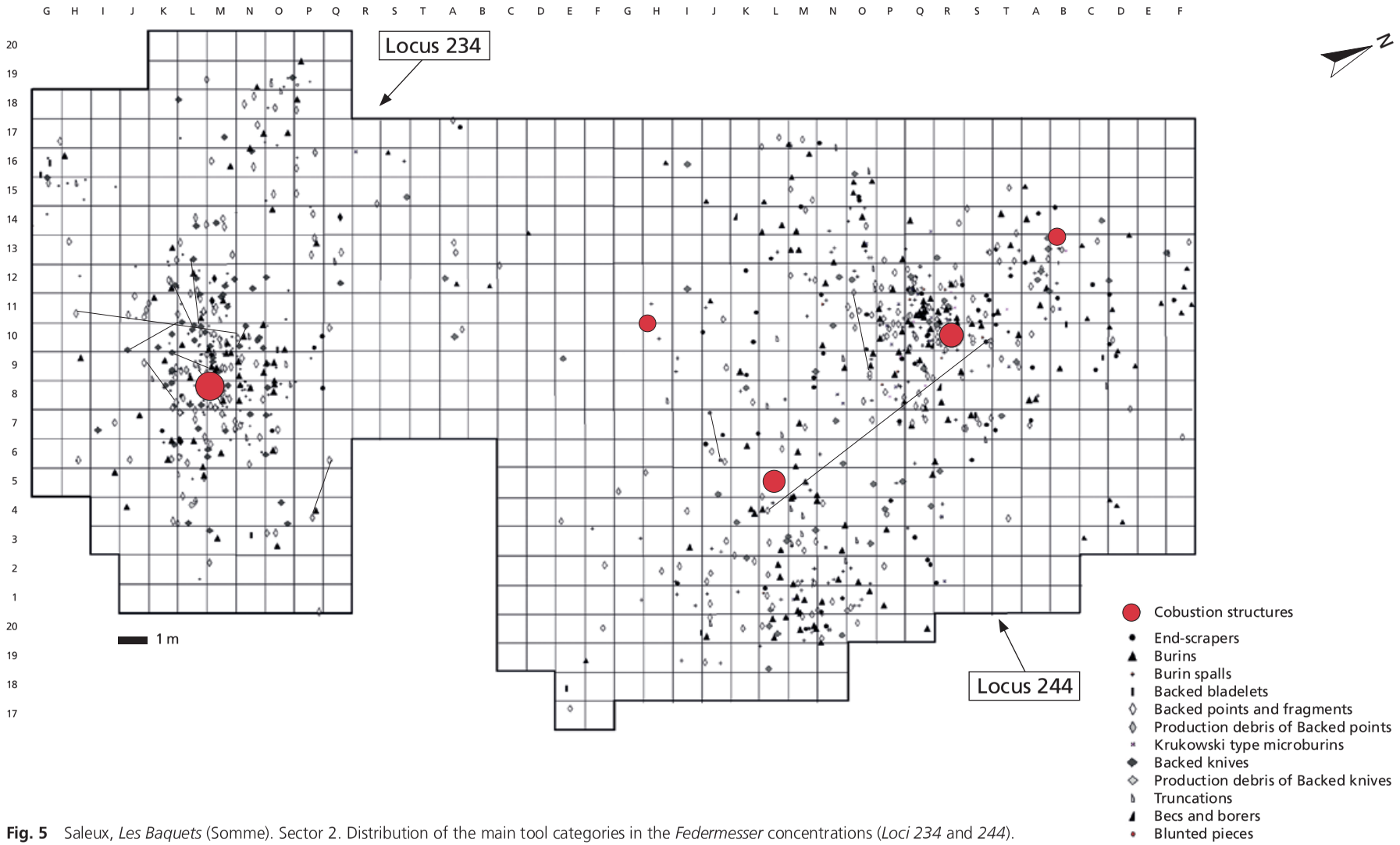


Fig. 5 Saleux, *Les Baquets* (Somme). Sector 2. Distribution of the main tool categories in the *Federmesser* concentrations (*Loci 234* and *244*).

Sector 3 at Saleux

Sector 3 has been only partially studied covering some 479 m^2 (of which 375 m^2 are attributed to Final Palaeolithic *loci*). A zone adjoining the excavated area, approximately 400 m^2 in size, has been preserved as archaeological evidence for future research. In this third sector, the typological and technical characteristics and the physical aspects of the lithic remains have made it possible to distinguish two assemblages pertaining to the Final Palaeolithic; however, the site's stratigraphy makes it difficult to distinguish between them altimetrically.

A first – largely predominant – assemblage with a white or greyish white matt patina consists of artefacts in Coniacian flint (Zone B according to Monciardini). It is distinguished by original technical processes which characterize the recent phase of the *Federmesser* tradition. This occupation, which is very widely represented in most of the *loci* of Sectors 1 and 2 at Saleux, has been attributed to the second half of the Allerød oscillation or its end. The second assemblage, which has a bluish or greyish patina which is sometimes slightly vermiculated and very soft to the touch, is mainly composed of flints from the base of the Coniacian (Zone A according to Monciardini) which is not present in the immediate environment of the site. This occupation presents knapping methods identical to those of the lower level at Hangest-sur-Somme, which has been attributed to the end of the Bølling oscillation or an early phase of the Allerød oscillation (Fagnart, 1997; Valentin et al., 2006).

The main occupation in Sector 3 at Saleux: the white, matt patina assemblage

The main occupation in Sector 3 produced ~ 12,000 bones and lithic artefacts as well as several thousand fragments and chips < 1 cm in size, which have not yet been the subject of a detailed inventory. At this stage of the study, the lithic material from Sector 3 has been treated as a whole, given the close proximity and occasional overlapping of the different *loci*. In a subsequent stage of the analysis, the counts will be established concentration by concentration (*Loci 293, 294, 284a, 284b*). From a typological perspective, a total of 803 tools have been identified in Sector 3. The inventory includes 119 cores and around 30 fragments or other debris. A dozen un-knapped blocks and two stone hammers complete this assemblage as well as several hundred pieces of heated flint and resulting fragments.

The raw material used by the Palaeolithic groups during the main occupation of Sector 3 involves flint from local Coniacian chalk, which is present on both slopes of the valley. The industry discovered presents a fairly homogeneous patina that is white or a matt greyish white in colour, but sometimes also bluish white.

Knapping is focused on the production of straight, relatively short or medium-sized blades (generally < 14 cm in length). There is a fairly good preparation and relative regularity involved in the blank manufacture during the phase of blade production (*plein debitage*). The initial phase of blade production is much less standardized, however. Various morpho-technical indications (Pelegrin, 2000) suggest that the blade preparation and extraction phases were carried out with a soft stone hammer.

As the analysis of the industry is still in its preliminary stages, the results presented here are provisional and could evolve at a later date. Four main categories of tools dominate the lithic industry as a whole (**Figs. 8-9**): backed bladelets, burins, backed points and retouched backed knives. End-scrapers and truncated pieces are a little less frequent, and only a few examples of other tool types have been found. It is noteworthy, however, that in Sector 3, backed bladelets represent over 30 % of the finds, which is far more than is the case in Sectors 1 and 2 (between 2 % and 10 %). The typological and technological characteristics of the industry make it possible to attribute the main occupation of Sector 3 at Saleux to the recent phase of the

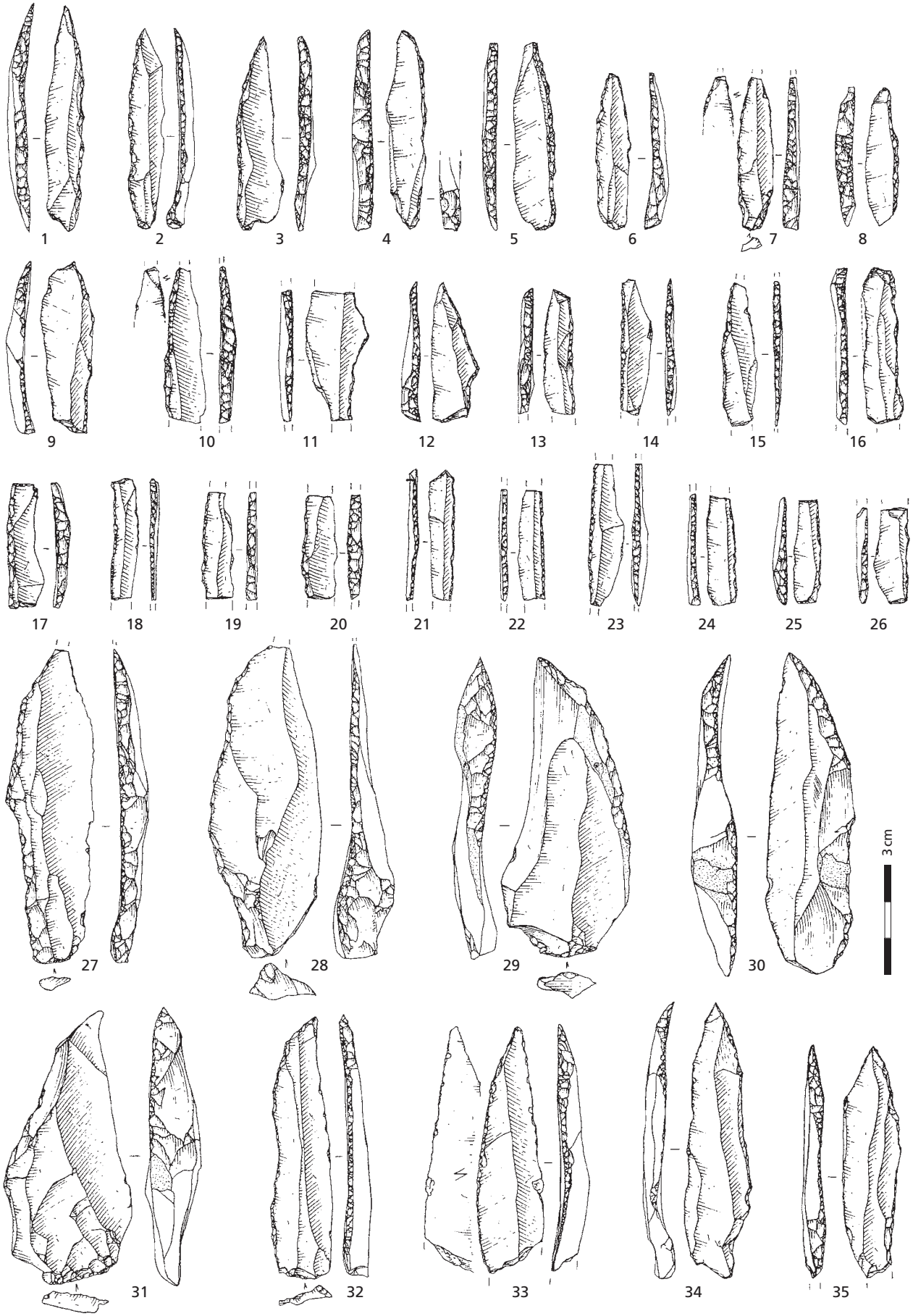


Fig. 6 Saleux, *Les Baquets* (Somme). Lithic industry from *Locus 244*. **1-26** backed points (*Federmesser*) and backed bladelets, **27-35** retouched backed knives. – (Drawings: P. Alix).

Federmesser tradition (Fagnart, 1997; Coudret and Fagnart, 1997, 2004, 2006, 2015; Fagnart and Coudret, 2000a, 2000b).

As with the *loci* in Sectors 1 and 2 at Saleux, few bone remains have been documented in Sector 3. So far, the species that have been identified are red deer (*Cervus elaphus*) and aurochs (*Bos primigenius*).

In Sector 3, the 12,000 remains were spread over an area of 375 m^2. At least five flat hearths have been found in the occupied area (**Fig. 10**). Hearths S12, C16 and L10 all have a similar layout and organization, involving sub-circular combustion structures approximately 60 cm in diameter, evidenced by heated flint nodules from the gravel of the lowest terrace (**Fig. 11**). However, no ashy or reddened zones could be identified within these structures. The location of the other hearths is much more discreet, the initial location of the combustion structures only being evidenced by a small scattered group of heated flints (structures J1 and L16).

Fig. 7 Saleux, *Les Baquets* (Somme). Human skull from *Locus 234*. – (Photo: S. Jousse).

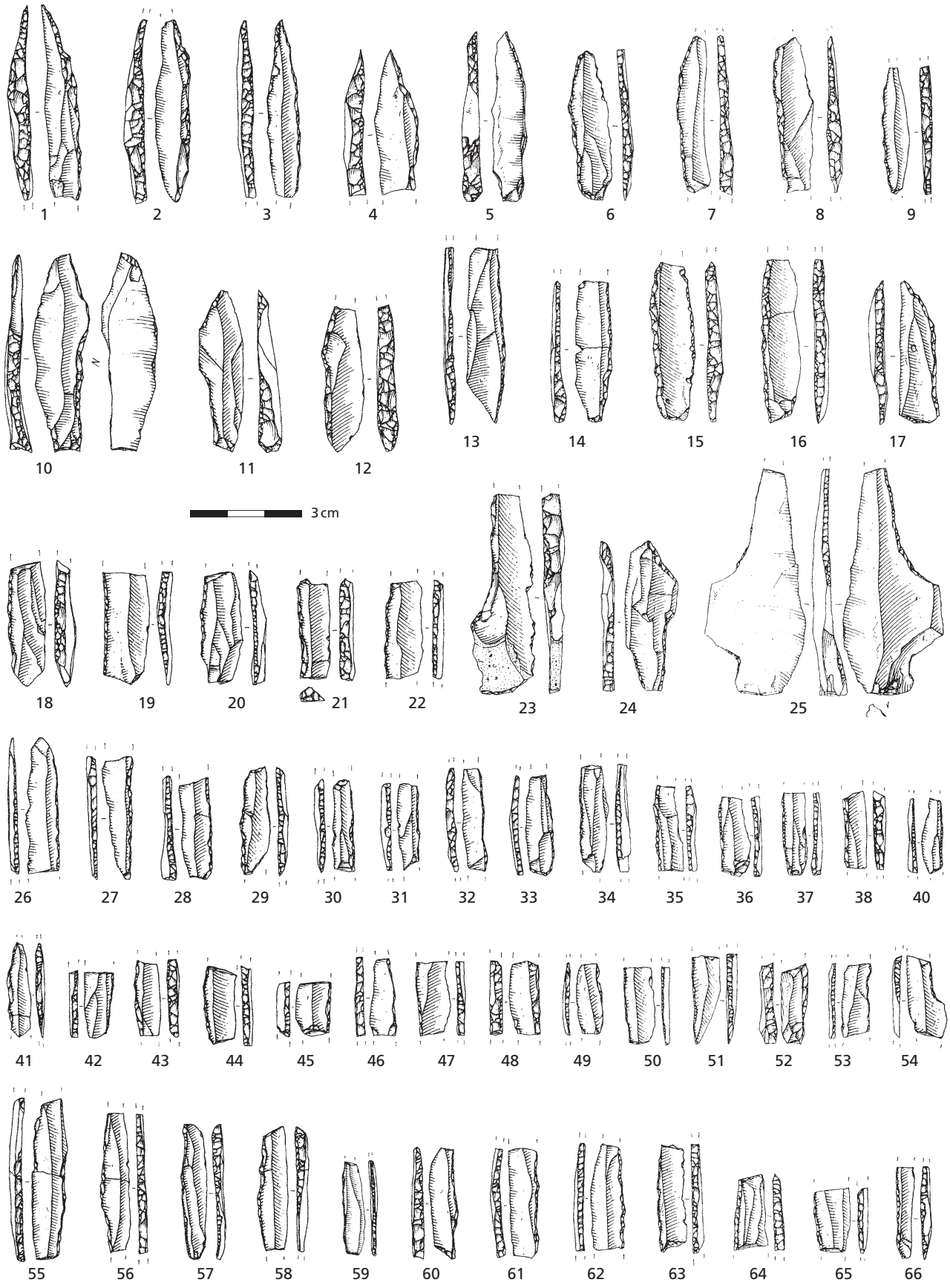


Fig. 8 Saleux, *Les Baquets* (Somme). *Federmesser* lithic industry from Sector 3 (matt, white patinated assemblage). **1-17** backed points, **18-22, 27-66** backed bladelets, **24-26** technical pieces related to the manufacture of backed points. – (Drawings: P. Alix).

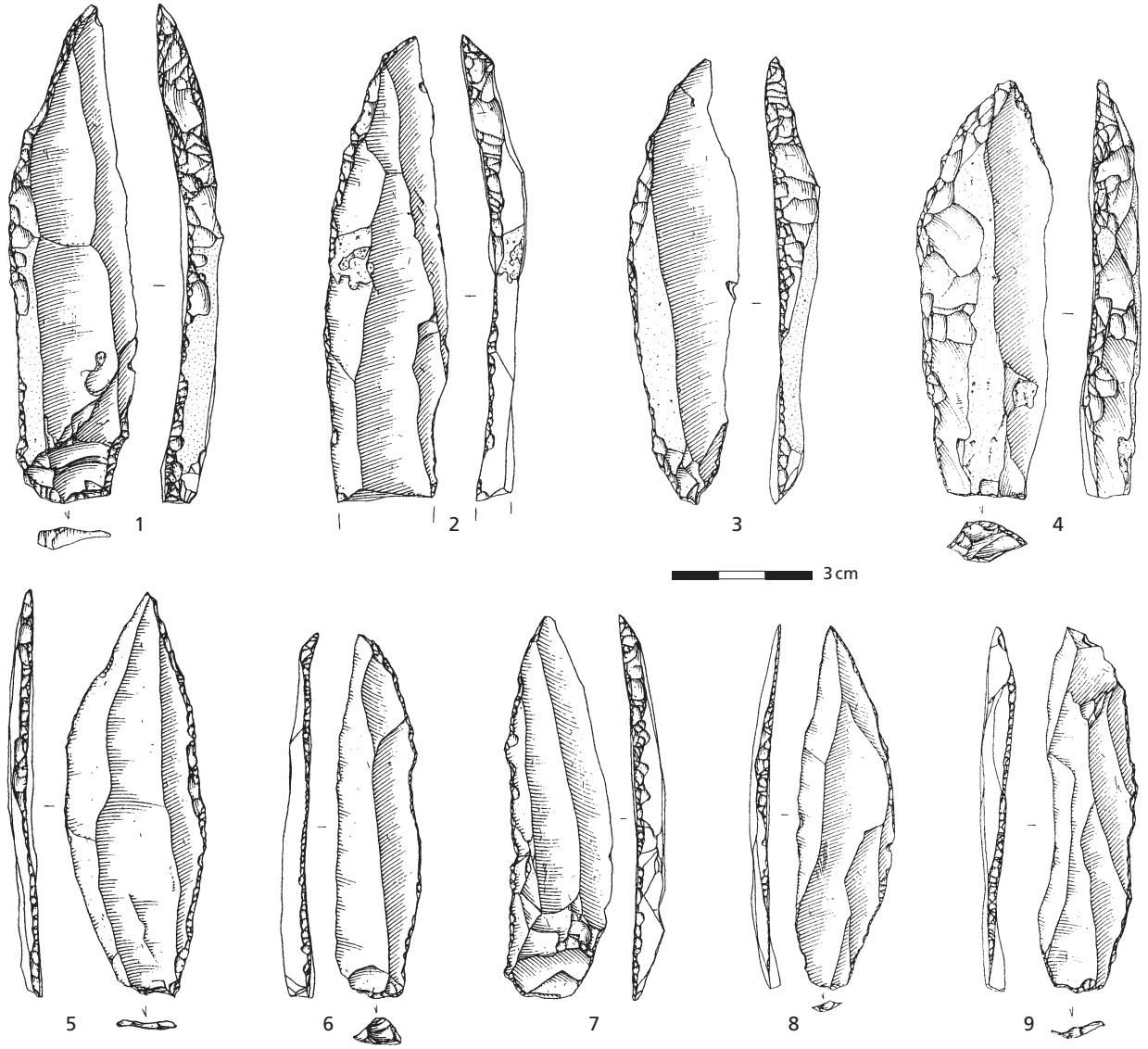


Fig. 9 Saleux, *Les Baquets* (Somme). *Federmesser* lithic industry from Sector 3 (matt, white patinated assemblage). **1-9** retouched backed knives. – (Drawings: P. Alix).

Within the *loci*, the lithic and bone remains are generally found around the combustion structures (**Fig. 10**). This observation is particularly true of the spatial distribution of the backed bladelets, backed points, and to some extent for the burins. No functional specialization could be identified, each *locus* presenting a diverse spectrum of activities (**Fig. 12**). As at most of the *loci* studied at Saleux, the cores are often found in the periphery of the find-rich areas. This phenomenon is related to the discarding of exhausted cores towards the margins of the occupied space.

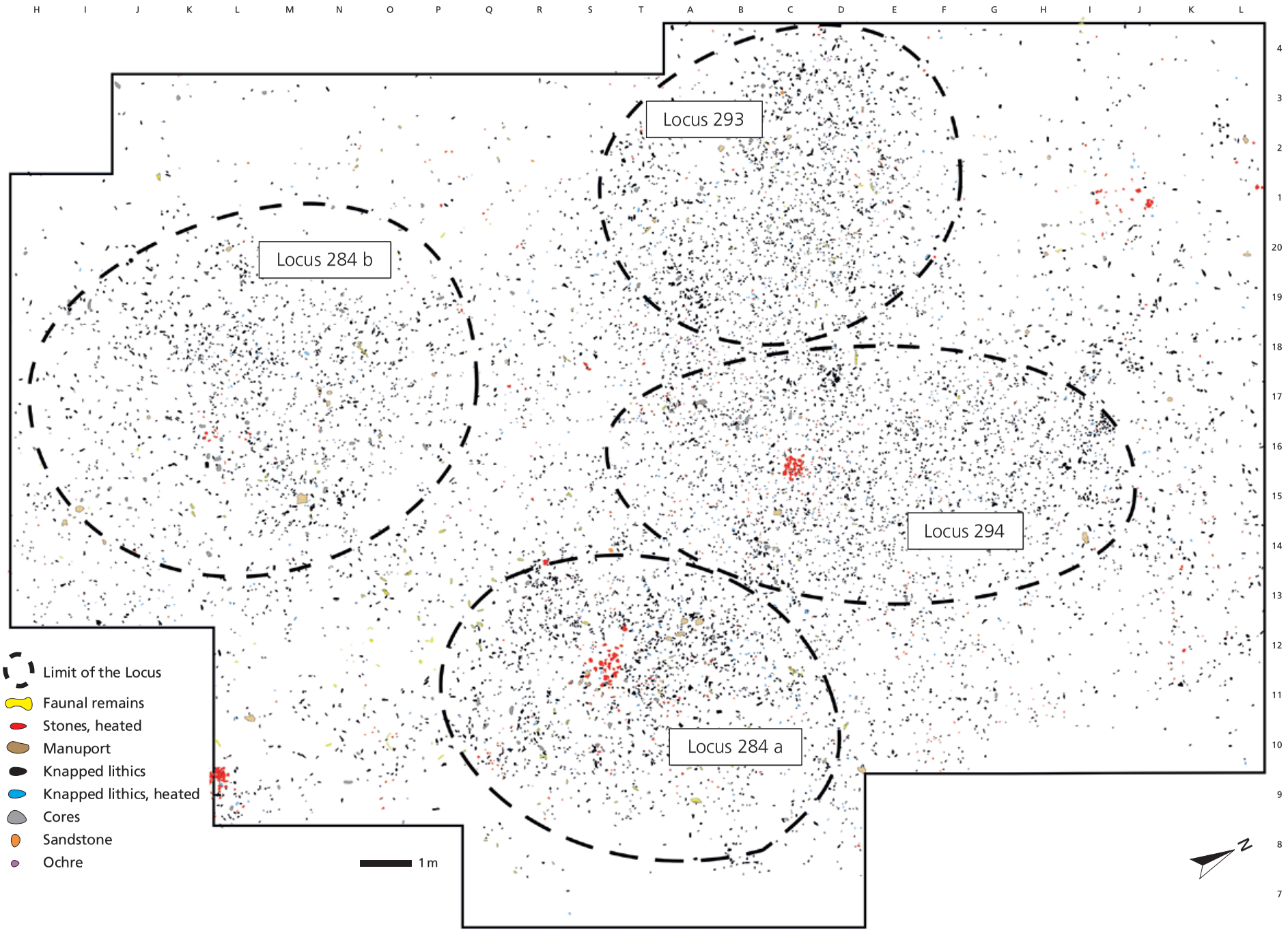
An initial proposal has been put forward, marking out the limits of the *loci* excavated in Sector 3 (**Fig. 10**). Four *loci*, which are all relatively close to each other, appear quite distinct on the distribution plans of the remains. They have been labelled according to their location on the excavation grid: *Loci 293, 294, 284a* and *284b*. The remains delineate sub-circular or oval surfaces with an average diameter of 8 m. The area of each unit covers about 60 m^2. Most of the *loci* are organized around a single hearth which generally occupies a

central position (hearths S12, C16 and L16). However, other combustion structures are located at clearly peripheral position in relation to the different *loci* (hearths J1 and L10).
The occupied area in Sector 3 is therefore characterized by the close proximity of several concentrated zones of activity. In Sectors 1 and 2 at Saleux, the distance between the different *loci* is generally greater and ranges around 15-20 m. In Sector 3, the spatial limits and thus the distinction between the *loci* is more difficult to establish, given the presence of overlapping areas in the periphery of the different occupation zones.

The assemblage of bluish-white patina on "Turonian" flint of Sector 3 at Saleux

The analysis of the archaeological material in Sector 3 has made it possible to isolate an assemblage of lithic remains with very distinctive characteristics. This assemblage is distinguished by its use of a very specific raw material, its unique physical appearance, and its original techno-typological characteristics. This industry is also present, but much more sporadically, in trenches *234* and *244* at Saleux.
The raw material from this assemblage has not yet been entirely sorted. Only the cores and tools have thus far been documented. It will be necessary to sort all the material in Sector 3 in order to group together all the lithic remains from this level, which were difficult to distinguish during excavations due to limited sedimentation, indicating that a comparably short time elapsed between the two periods. The assemblage currently includes 57 tools and 4 cores.
The raw material used by the Palaeolithic groups exclusively involves a very fine-grained homogenous flint with a thick yellowish-white, beige-white or rose-coloured cortex. It is the flint that is found at the top of the Turonian sequence or the base of the Coniacian (Zone A according to Monciardini).
Knapping in this assemblage primarily involved the manufacture of regular blades and bladelet blanks, which tend to be well-prepared and generally straight or, sometimes, slightly curved. In some cases, the butts of the artefacts, which have generally been well prepared and finely abraded, have a small lip at the junction with the ventral face. The blades were produced by percussion with a soft stone hammer used in a tangential movement (Pelegrin, 2000). The rare cores associated with this level demonstrate elaborate preparation and management, which is absent in the other Late Glacial settlements at Saleux.
The proportions of the different categories of tools are provided here. The lithic industry can be divided into five major classes of tools: burins (37 %), backed bladelets (21 %), backed (or *Federmesser*) points (14 %), retouched backed knives (14 %) and end-scrapers (3 %). The rest of the industry is made up of a few fragments of retouched blades.
The backed or *Federmesser* points (8 artefacts) essentially resemble relatively elongated curve-backed points that have been made from small blades. A single fragmented piece could be classified as a real bipoint. The other armatures are all monopoints and often have a small transverse or oblique truncation at the base.
The typological and technical characteristics of the "Turonian" flint industry at Saleux allow comparisons to be drawn with the lower level of Quarry III.1 at Hangest-sur-Somme, which has been attributed to the early phase of the *Federmesser* tradition (Fagnart, 1997; Fagnart and Coudret, 2000a, 2000b; Coudret and Fagnart, 2015).

Fig. 10 Saleux, *Les Baquets* (Somme). Distribution of the archaeological material in Sector 3 (matt, white patinated assemblage) and proposed spatial limits of the different *loci*.


H I J K L M N O P Q R S T A B C D E F G H I J K L
4 3 2 1 20 19 18 17 16 15 14 13 12 11 10 9 8 7
Locus 293
Locus 284 b
Locus 294
Locus 284 a
Limit of the Locus
Faunal remains
Stones, heated
Manuport
Knapped lithics
Knapped lithics, heated
Cores
Sandstone
Ochre
1 m
N

The archaeological material made from "Turonian" flint appears relatively uniformly and loosely distributed over the entire excavated area. The slight degree of wear on the ridges of the artefacts suggests that some pieces have been slightly displaced on the slope by erosional processes and that the industry may not be in its original position, which could explain the spatial distribution of the lithic material.

GENERAL REMARKS AND CONCLUSIONS ABOUT THE LATE GLACIAL CAMPS AT SALEUX

The extent of the site of Saleux, which covers a distance of about 400 m along the edge of the Selle floodplain, and the presence of three spatially distinct and well-separated sectors of archaeological material, means that the site cannot be considered as a single large campsite. While certain *loci* appear to have been functionally complementary, the large areas documented through extensive excavations appear above all to have been the result of repeated occupations of the site over different time periods. The numerous lithic refits weave a dense network of links within the different *loci*, but aside from a few rare exceptions, they do not draw links between the main concentrations. The relative abundance of lithic remains (4,000 to 6,000 artefacts > 1 cm in size for each of the *loci*) and the use of a relatively homogeneous and poorly distinguishable raw material do not facilitate refits over longer distances.

Overall, the areas occupied by the Palaeolithic groups at Saleux present fairly consistent characteristics for the different *loci*. The lithic and bone remains are often dispersed within a clearly limited radius, giving the impression that the sites were only occupied once, during residential occupations that took place over a relatively limited time. Given the diversity of activities represented in the different *loci*, it appears that an entire small or extended family unit was present at the site, each time. A few refits demonstrate poorly skilled knapping, suggesting the presence of children.

The archaeological material collected for each *locus* is scattered over an oval or circular area of 40 to 60 m^2. The domestic space is generally organized around a single hearth, where most of the activities took place. The combustion structures are generally flat hearths evidenced by small heated or fire cracked flints. The number of blanks that have been transformed into tools is ~ 150-250 for each of the *loci*, and the diversity of tools (projectile points, end-scrapers, burins and retouched backed knives) suggests that domestic activities were as important as hunting activities. No real functional specialization is observed in the different *loci*, which tend to display a wide range of activities. In Sectors 1 and 2, groups of two or three *loci* are separated by large sterile areas in between. In Sector 3, the different *loci* are much closer together, and the empty spaces between the different areas of activity or camps are much smaller. The dynamic analysis of these *loci* sometimes suggests that they had possible functional complementarities, as seems to be the case between *Locus 234* and the *loci* in trench 244 in Area 2.

In general, the Saleux find concentrations appear to be fairly similar to those identified at various sites attributed to the recent phase of the *Federmesser* tradition (*Azilian récent*), in particular to the sites in the Neuwied Basin (Street, 1998; Street and Baales, 1997, 1999; Street et al., 2002, 2006; Baales, 2002, 2006; Baales and Street, 1996, 1999; Wenzel, 2009; Gelhausen, 2011), the Meuse (De Bie, 1998; De Bie and Caspar, 2000), the Seine (Bodu, 1998, 2000, 2011; Bodu et al., 2012; Mevel and Bodu, 2018), and the Loire valleys (Marchand et al., 2004, 2009, 2011).

The Late Glacial *loci* studied, can be attributed to the *Federmesser* tradition of the Final Palaeolithic. From a chrono-stratigraphic perspective they can be placed in the second half of the Allerød oscillation (i. e.,

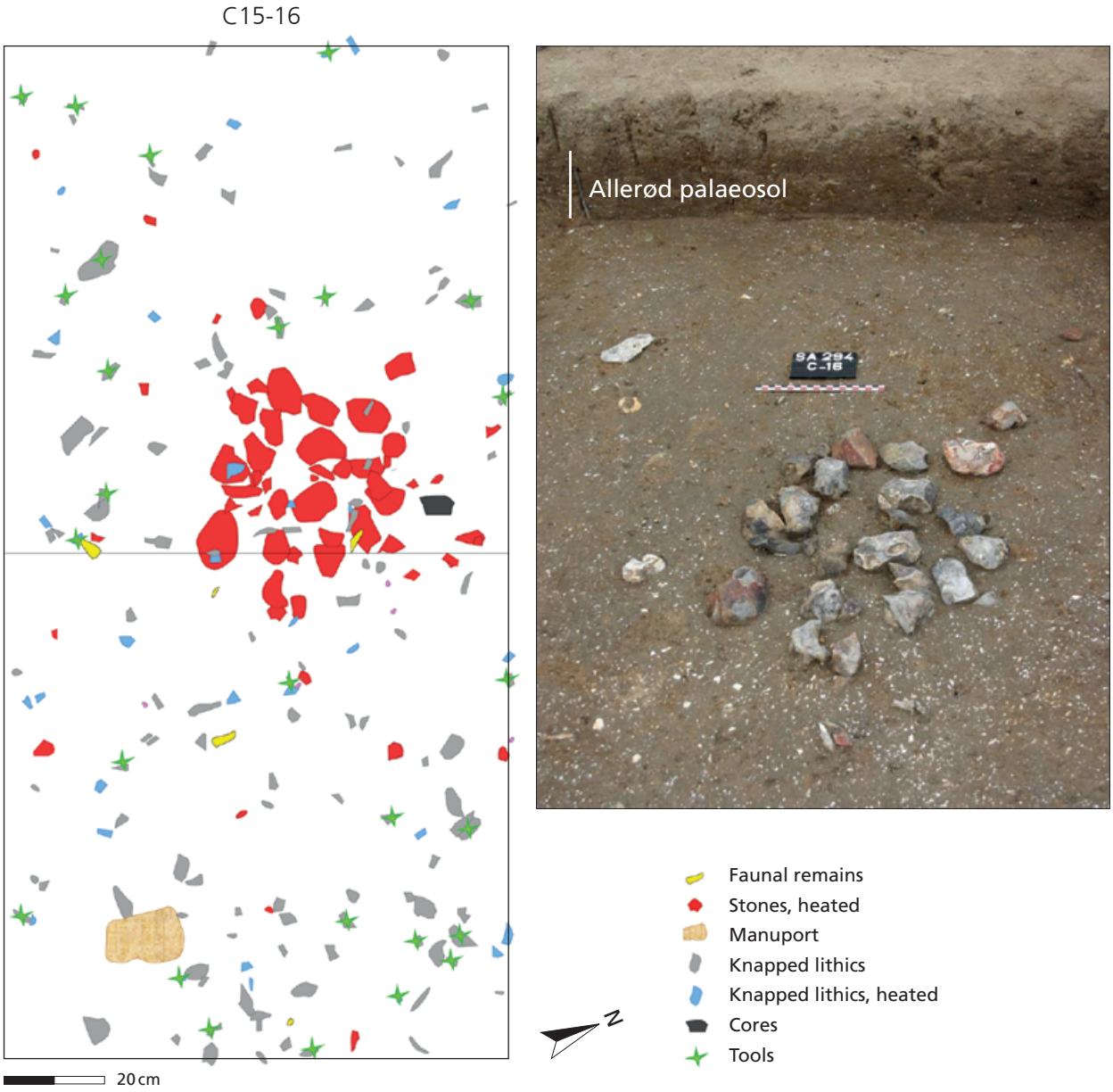


Fig. 11 Saleux, *Les Baquets* (Somme), Sector 3. Left: plan of hearth C16 and the associated lithic and bone remains; right: views of hearth C16 under excavation.

~ GI 1a-1c$_1$), but an assemblage made on "Turonian" flint also testifies to an earlier occupation of the site around the end of the Bølling or the beginning of the Allerød interstadial.

The territory in which human groups were present in the Somme basin during the Allerød oscillation can only be partially identified by studying the origin of the siliceous materials, due to the omnipresence of chalk flint and a certain homogeneity of its facies. At Saleux, the very local acquisition of flint – flint imports from the Conty region to the southeast, in the upper Selle valley, as well as from the region of Amiens region to the northeast, at the confluence between the Selle and the Somme rivers – nevertheless suggests some limited movement within a very small radius (not exceeding 15 km within the Selle basin. At the site of Prouzel in the Selle valley, less than 5 km upstream of Saleux, rescue excavations lead by T. Ducrocq prior to

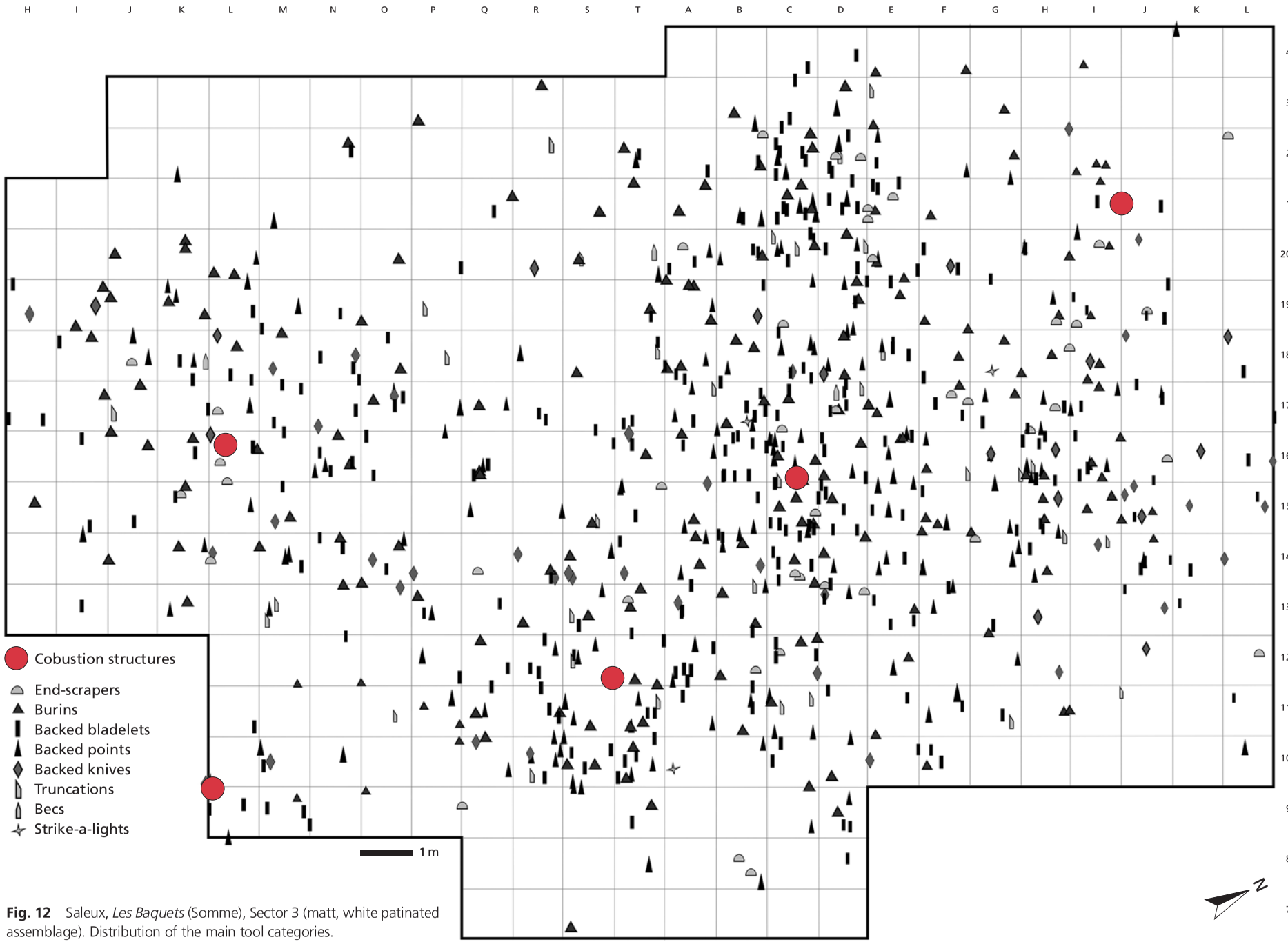


Fig. 12 Saleux, *Les Baquets* (Somme), Sector 3 (matt, white patinated assemblage). Distribution of the main tool categories.

the construction of a housing estate have revealed a backed point and two Bartonian tertiary flint debitage products at a settlement attributed to the *Federmesser* tradition (Bostyn, 2019). At the current point of research, this is the only example in the Somme basin for importing non-local exogenous flint from the tertiary plateaus of the Île-de-France around 60 km further south.

The abundance of hunting armatures amongst the common tools makes it possible to interpret the settlements from the recent phase at Saleux as small hunting camps, involving small groups, which were probably very mobile within a limited territory. According to the activities documented in these *loci*, the mode of land exploitation appears to have involved residential mobility of the groups, whose subsistence came from non-migratory game (red deer and aurochs). As such, animal food resources during the Allerød oscillation appear to have been stably and evenly distributed over space and time.

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