Prehistoric and ancient occupations near Kesseldorf and Rittershoffen: archaeological surveying excavations along the underground heat network

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Keywords: archaeological excavations, Neolithic, Celtic and Gallic settlement, roman potters' kilns, roman graves, medieval metallurgical site.

ABSTRACT

L'archéologie préventive est un mode de recherche archéologique mis en œuvre lorsque des travaux d'aménagement menacent de détruire des vestiges. Lorsqu'un terrain ou un bâtiment à fort potentiel archéologique fait l'objet d'un projet d'aménagement, le Service Régional de l'Archéologie prescrit un diagnostic archéologique par arrêté préfectoral. Si le diagnostic révèle des vestiges significatifs, une fouille est prescrite afin d'étudier le site de manière exhaustive avant sa destruction par les travaux d'aménagement. À l'issue de la fouille la contrainte archéologique est levée et les travaux d'aménagement peuvent être réalisés. L'ensemble des résultats fait ensuite l'objet d'un rapport de fouilles validé par la Commission Interrégionale de la Recherche Archéologique.

Suite au diagnostic réalisé le long du tracé du réseau de chaleur souterrain ECOGI par le Pôle d'Archéologie Interdépartemental Rhénan, deux fenêtres ont été prescrites, la première à Rittershoffen (2200 m²) et la seconde à Kesseldorf (3800 m²).

Le site de Rittershoffen a livré les traces d'occupation datées de la fin de l'époque Néolithique (4300 av. J.-C.) ainsi que les vestiges d'un quartier médiéval du 12e siècle apr. J.-C. consacré à la transformation du minerai de fer.

Les vestiges de Kesseldorf concernent essentiellement une occupation rurale datée de l'époque tibérienne (15-30 apr. J.-C.). Deux fours de potier en excellente conservation ont pu être étudiés ainsi qu'une petite nécropole aristocratique fonctionnant probablement avec une villa proche.

1. INTRODUCTION

The installation of an underground heat network between the villages of Rittershoffen and Beinheim (ECOGI works) resulted in an archaeological survey, which was carried out in April 2015 on the entire route of the network and was followed by further preventive excavations on an area of some 6,000 m² in and around the villages of Kesseldorf and Rittershoffen between 15 June and 10 August 2015.

2. KESSELDORF – *Reiherbach*

Two distinct sectors were specified in this section: the first at the foot of the hill in an area of clay, and the second on a loess plateau.

2.1 Remnants from the Celtic and Gallic periods

These two areas were occupied from the end of the Celtic period, between 800 and 480 BC (during the so-called Hallstatt period). Some pit silos were uncovered, in which grain was preserved in the ground under anaerobic conditions. One contained significant quantities of grain: its base was covered with carbonized seeds, probably millet (analysis in progress). This small area of silage brings to mind many burial mounds, often very rich, such as the aristocratic tombs of Hatten and Soufflenheim that contained imports from ancient Italy, illustrating the relationship that was nurtured between the local elite and the Mediterranean world (Roth-Zehner 2013).

Occupation of the loess plateau continued during the Gallic period. Only a few pits and post holes have been unearthed in this location, probably the remains of a farm. The Gallic period, also known as the 'Late La Tène period' (180/170 to 40-30 BC) is well-represented in the surrounding villages. A large farm was discovered in Hatten, consisting of a substantial building (surface area of approx. 100 m²) together with a barn and two small granaries on four posts. The inhabited area was delineated by a ditch. A series of cremations was discovered a few meters away, remnants from the small family necropolis probably operating with the rural settlement (Zehner 2001).

Remnants from this period are also reported on the route of the underground heat network, having been uncovered during the diagnostic survey: a second farm in Rittershoffen whose perimeter ditch was identified, and an aristocratic tomb in Hatten (Roth-Zehner 2010). A funeral urn containing the remains of the pyre (burnt bones, ceramics, iron components and glass beads) was recovered from the center of a structure with four posts that protected the tomb. This

type of fixture, deliberately ostentatious, was reserved for a wealthy section of the Gallic population. Similar structures can be found over a large area of northern Gaul dating from the 2nd century BC. This funerary architecture continued to exist up until the Early Roman Empire in Alsace, as evidenced by the two buildings on posts discovered recently in Colmar-Houssen (68 ; Base de Loisirs/rue Denis Papin), which date from the 2nd century AD. Also worthy of note is the discovery of a Gallic sword and cremations in the barrow necropolis in the neighboring village of Seltz (in the locality *Hesselbuch)* (Zehner 2001).

2.2 The Roman occupation of Kesseldorf: crafts and necropolis

This territory was repopulated at the end of the reign of Tiberius (first quarter of the 1st century AD). Two potters' kilns and a work area were excavated in the lower part of the site (Fig. 1). These were exceptionally well preserved, and have retained a large part of their vault. The kiln floors, furnace chambers, heating chambers and fireboxes were all still in place. Both have a quadrangular floor plan. The kiln floor, on which the jars were stacked, was supported by lateral supports and a central wall, all cut into the ground when the pit was dug out (Fig. 2).

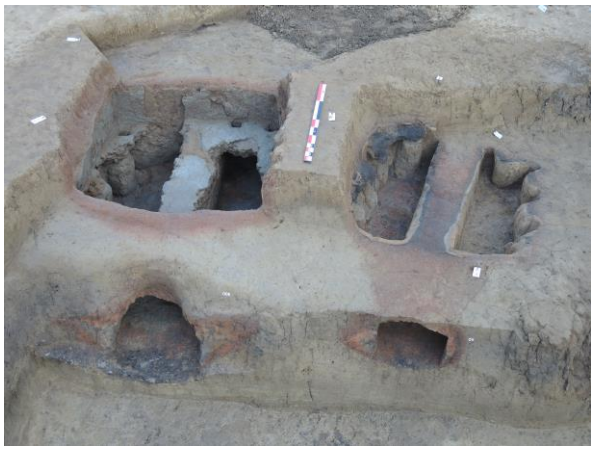

Figure 1: Two potters' Kilns (Tiberius period). ©PAIR.

The potter's workshop (building, wheel location) could not be ascertained during these excavations. These structures are often short-lived, and hard to detect on the ground. Only a few pits containing the waste from the two kilns were observed. Nevertheless, the superb flint smoother discovered in the waste from the kilns located in the service area is worthy of note.

The two kilns and the work area revealed 8,850 ceramic shards, representing some 930 jars. Around 20 different shapes were produced, seemingly items related to drinking: bowls, goblets, bottles, kegs, jugs, etc. All these ceramics were made on a wheel, and some were decorated. Most of the pottery has a grey/black coating, while some is covered in red-brown slip.

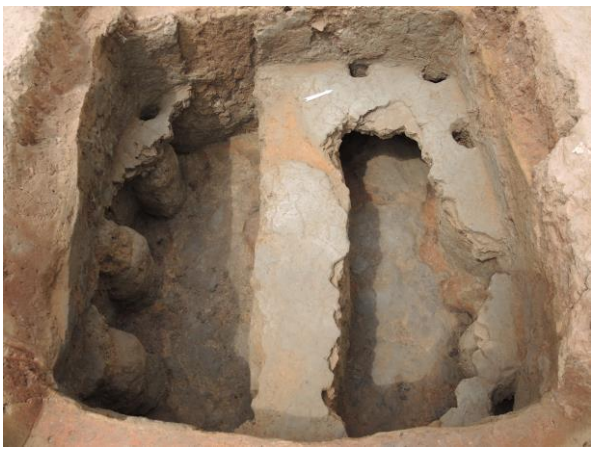

Figure 2: Kiln floor, lateral supports and central wall (Kiln 6). ©PAIR.

Other amenities for crafts, contemporary to the potters' kilns, were established on the plateau, together with a cremation necropolis.

The workshops uncovered have been largely flattened. A smokehouse/drying room was built from Roman tiles, refractory components that were essential to the proper functioning of this type of facility. It was used to smoke meat or dry grain. The purpose of a further quadrangular structure discovered in front of this smokehouse/drying room is still uncertain (perhaps the site of a ratchet for hanging a cooking pot?). A small circular oven is the final element of these facilities. It may be a domestic oven (a bakery?) or a grain dryer. Examination of samples from this oven will probably provide a better understanding of its function (carpological study in progress).

The necropolis, built on the rim of the plateau and identified over an area of 945 m², consists of nine cremation tombs. Two of these tombs have proved particularly fruitful, with a number of metallic, ceramic and glass objects.

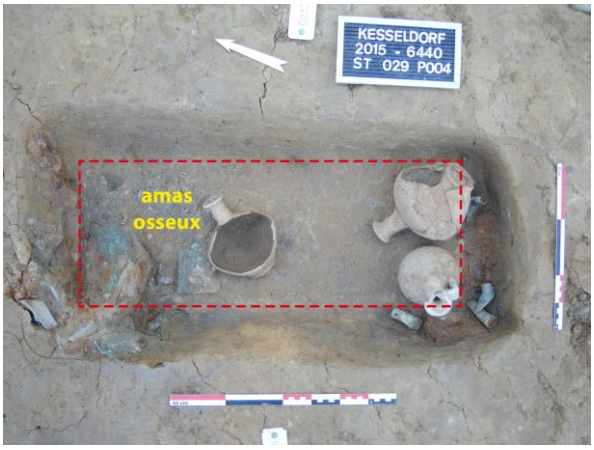

Figure 3: Tomb 29 ©PAIR

Traces of wood and evidence of side walls mark the site of a wooden chest about 1 foot by 2.5 feet (1 Roman foot = 29.57 cm) that occupied the central area

of the grave (tomb 29), and held the charred bones of the deceased (Fig. 3). Two small jugs in clear clay had been placed on the chest. Objects in copper alloy, some completely distorted by fire, were recovered from either side of the chest: four legs and a hinge from a folding seat (Fig. 5) (Franken 1996), metal components from a chest (a lock, corner beads), what appears to be a cooking pot, and a sieve (from a *simpulum*? - a large, long-handled spoon that was used during religious rituals to draw off a small amount of wine from a receptacle, or for libations), a receptacle (a basin, sacrificial bowl or jug), and a small chain (from a bracelet?) (Fig. 4). This find also included an iron handle from a container, which probably correlates with the cooking pot fragment, and 38 iron joinery nails, which had also been through the fire.

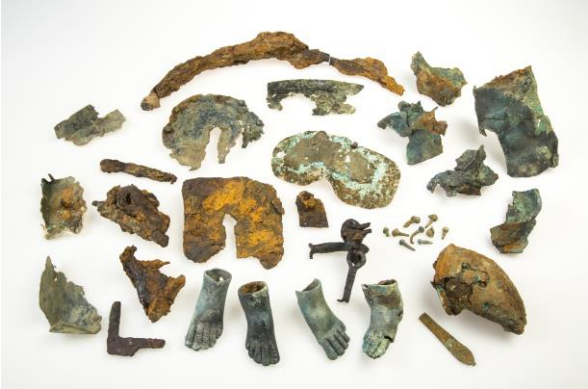

Figure 4: Metal objects of the grave 29. ©PAIR

This early Roman tomb (first half of the 1st century AD) is exceptional for this region. Its specific collection of objects places it among the series of traditional tombs known as 'Late Republican', which are found primarily in Treviri territory (the region around Trier and Spire, as far as Luxembourg). These tombs contain bronze tableware of ancient Italian origin and other luxury objects. With its amphorae from Campania and bronze receptacles used for drinking, this tableware recalls the ancient Greco-Italian symposium, and the drinking of wine, which was very popular among Gallic aristocrats in the 1st century AD. There is however some functional inconsistency between the drinks consumed and the receptacles discovered in these Late Republican tombs since the beginning of the modern era: the tableware placed in the tombs is more an indication of the aristocratic rank of the deceased than of usage for drinking wine (Barbau 2014).

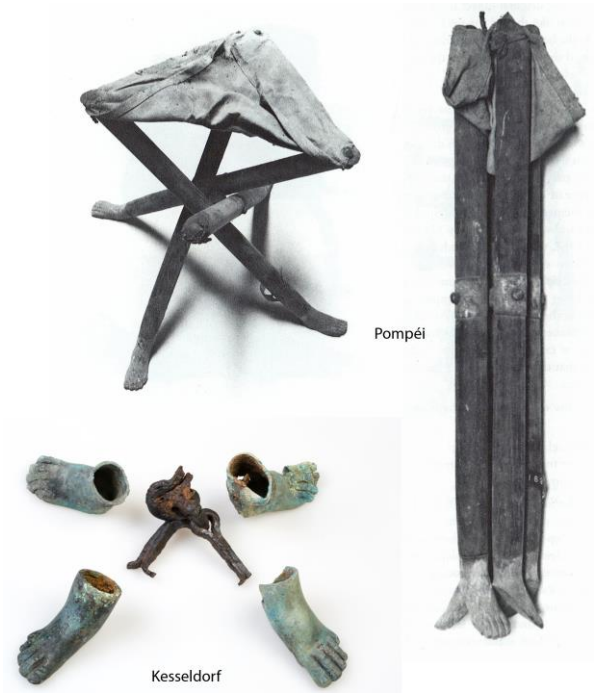

Figure 5: Grave 29_four legs and hinge from a folding seat. ©PAIR

The second exceptional tomb (tomb 26) consisted of a glass jug that held the burnt bones of the deceased. This tomb also contained a funeral repository consisting of a *terra sigillata* bowl and two intact small jugs (Fig. 6). This find was completed by residues from the pyre, which filled the grave and in which many joinery nails, shoe nails and coins (undetermined Roman sesterces) were found.

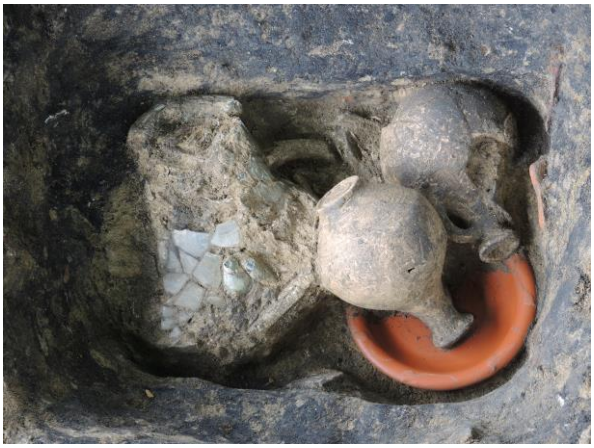

Figure 6: Tomb 26. ©PAIR

In tomb 17, a flattened and poorly preserved tomb, a fragment of gold fabric was discovered when the incinerated remains were sifted. This unexpected and rare find adds further weight to the aristocratic image of this little necropolis.

The existence of this (family?) necropolis and of facilities for crafts (potters' kilns, smokehouse/drying room) suggest that a 'villa'-type rural settlement stood

nearby. Funeral areas as well as craft facilities using fire were often located away from the living area. Therefore it is possible that a wealthy residence, as suggested by the excavated tombs, stood on the plateau. This rural settlement is located not far from Seltz/*Saletio*, where a town was established in the Early Empire that may have had Gallic origins.

3. RITTERSHOFFEN – *Ruestlang*

Two distinct sectors were specified in this section: the first at the foot of the hill in an area of clay, and the second on a loess plateau.

3.1 Finds from the Neolithic Period

Occupation of the Rittershoffen site began between 4300 and 4000 BC. Artefacts from a culture known as 'Bruebach-Oberbergen/Bischheim Rhénan' were recovered from a pit, which contained a fine collection of ceramics and stone tools (Fig. 7). Neolithic sites are rare in the *Outre-Forêt* region: any finds tend to be accidental and/or made during field surveys (axes, adzes, flints, etc.). This site is currently the most northerly recorded in Alsace.

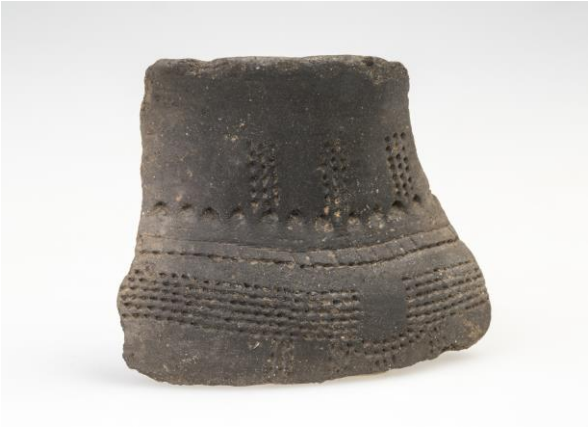

Figure 7: Ceramic of the cultural group Bruebach/Oberbergen. ©PAIR

3.2 A medieval metallurgical site

Most of the site, which dates from the 11th to the 12th century AD, revealed traces of metallurgical activities. The various ditches and pits revealed some pisolithes (granular iron-ore/*Bohnerz*) which suggest the existence of an iron ore reduction workshop not far from the site. The main activity recorded at Rittershoffen is the forge, with slag and other forge refuse observed together with a set of stone tools that were essential for making metallic objects: millstones, hand-held grindstones, a grinder or sharpener, abraders, tables and abrasive blocks.

This medieval village lies at the center of a layer of pisolithic deposit known as Sulzerland, which has been mined since the Middle Ages (first mentioned in 1381: the Zutzendorf deposit). Sixty-four deposits and mines (open-cast quarries) were recorded in northern Alsace between this first date and the 19th century. The closest deposit to Rittershoffen is at Oberbetschdorf (now Betschdorf), a village adjacent to the site (Le Minor 1983).

Figure 8: Medieval well 1202. ©PAIR

As washing crude ore and forge work both require large amounts of water, three wells were constructed on the site (Eschenlohr et al. 2005). These have been exceptionally well preserved. Two of them consisted of piles and woven hazel (plessis) (Fig. 8). A rope was uncovered in one of these two wells (Fig. 9). The shaft of a third was made using a hollowed trunk (Fig. 10). A large number of seeds and kernels were collected from the foot of these wells (analysis in progress), together with the remains of a leather sole.

Figure 9: Rope in the medieval well 1192. ©PAIR

The medieval village of Rittershoffen casts new light on the 11th and 12th centuries AD in the countryside around Seltz. This find is representative of the iron-working that had assumed particular importance during this period. Forges were almost entirely abandoned as the Roman period ended in the 5th century, but current archaeological research has identified a tentative recovery from the Carolingian Period onwards. In the early Middle Ages, iron production developed on a small scale in many areas.

The sites appear in areas where the raw materials could be obtained, and generally involve different phases of the production process. Output was on a small scale, and was dispersed and distributed to meet local needs.

Figure 10: Medieval well 1189. ©PAIR

The imposition of a tax on ore, which became distinct from land ownership, led to many changes from the 11th century onwards. In other words, the Lords allowed iron ore to be extracted while reserving the use of the forest for themselves, for example for hunting. Iron became an important material with implications for both productivity (the growth of tool usage in agriculture and industry) and military capacity (manufacture of various weapons, the increasing importance of knights and their armour). Since commerce developed very little until the end of the 12th century, the various local elites encouraged iron production in their own fiefdoms as a way of increasing the economic value of their land. In fact, this transition period in the 11th and 12th centuries is characterized by the increase in feudal management of this productive activity, with feudal control increasing until the 13th century. The 'public authorities' then rapidly took control of metallurgical activity, the forges and the mines, and demanded corresponding payments.

Figure 11: Slag of forge. ©PAIR

4. CONCLUSIONS

The surveys and excavations carried out on the two sections of the underground heat network in this part of Alsace, which has been little documented by archaeological surveys, has filled a number of gaps in our knowledge of land occupation from the Neolithic Period to the Middle Ages. The discovery of a site from the Bruebach/Oberbergen culture is a first in this area, and builds on the accidental finds and field surveys that have taken place in this region. Evidence of crafts (potters' kilns and smokehouse/drying room) and the remains of elitist tombs from the early 1st century AD are indicative of an early Roman presence around the town of Seltz/*Saletio*. Gallic aristocracy had already occupied this territory since the 2nd century BC (farm and tomb at Hatten), and these aristocrats appear to have continued to live in this part of the *Outre-forêt* at the start of the Roman era. And finally, the early medieval period is illustrated by the discovery of a metallurgists' site, which is most likely linked to the presence of substantial pisolithic deposits in northern Alsace. These metallurgical activities presage a long tradition of crafts and then of industry that was to make this region wealthy, particularly under the leadership of the De Dietrich family.

REFERENCES

Barbau, C.: Symboles et fonctions de la vaisselle métallique tardo-républicaine en Gaule, In : Alberti, G., Féliu, C. and Pierrevelcin G. (Ed.) Transalpinare, Mélanges offerts à Anne-Marie Adam, *Mémoires*, 36, 473-481, *Ausonius*, Bordeaux, (2014).

Eschenlohr, L., Juillerat C. and Rais, F.: La production du fer au Moyen Age. Expérimentations dans le Jura, Groupe d'Archéologie du Fer, *L'œil et la mémoire, Société Jurassienne d'Emulation*, Porrentruy (2005).

Franken, N: Die antiken Bronzen im Römisch-Germanischen Museum Köln. Fragmente von Statuen. Figürlicher Schmuck von architektonischen Monumenten und Inschriften. Hausaustattung, Möbel, Kultgeräte, Votive und

verschiedene Geräte, *Kölner Jahrbuch*, 29, Köln, (1996), 7-203.

Le Minor, J.-M.: Fer, *Encyclopédie d'Alsace*, 5, 2949-2954, Strasbourg, (1983).

Roth-Zehner, M.: Les établissements ruraux de la fin du Hallstatt et du début de La Tène dans la plaine d'Alsace. Etat de la question, *Cahiers Alsaciens d'Archéologie, d'Art et d'Histoire*, 56, Strasbourg (2013), 53-90.

Roth-Zehner, M.: Les établissements ruraux de La Tène finale dans la plaine d'Alsace. État de la question, *Cahiers Alsaciens d'Archéologie, d'Art et d'Histoire*, 53, Strasbourg, (2010), 31-62.

Sprandel, R.: La production du fer au Moyen Age, *Annales. Economies, Sociétés, Civilisations*, 24e année, N.2, 305-321 (1969).

Zehner, M.: Les nécropoles de La Tène moyenne au début de l'époque romaine en Alsace, *Cahiers Alsaciens d'Art d'Archéologie et d'Histoire*, 44, Strasbourg, (2001), 13-31.