

The weaponry in the tombs of the necropolis warriors Merovingian of Erstein (Bas-Rhin)

Thomas fischbach

► To cite this version:

Thomas Fischbach. The armament in the graves of warriors of the Merovingian necropolis of Erstein (Bas-Rhin). *Medieval Archeology*, CRAHAM, 2016, *Medieval Archeology*. ??? halshs-01478305 ???

HAL Id: halshs-01478305

<https://halshs.archives-ouvertes.fr/halshs-01478305>

Submitted on 28 Feb 2017

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are scientific research level, published or not, listed or not. The documents may come from educational and teaching and research institutions in France or French or foreign research, laboratories abroad, or from public or private research centers. public or private.

The multidisciplinary open archive **HAL**, is

Weapons in the graves of warriors in the Merovingian necropolis of Erstein (Bas-Rhin)

Thomas F ischbach *

Keywords : weapons, Merovingian, necropolis, burial, social status, warriors, Alsace

Summary : The necropolis of Erstein (Bas-Rhin) is, to date, the largest discovery in Alsace, with 248 burials, but also one of the most remarkable, in particular for the abundant furniture that has been discovered there. As part of a Master's degree supported in 2010, the weaponry and social status of warrior graves were studied, and publishing the data collected during this work seemed essential. The dates obtained by the typological study of weapons range between the end of the 5th and the beginning of the 7th century, but a very high concentration is observed during the last two thirds of the 6th century (phases MA2 to MA3). The proportions of the different types of weapons rather plead in favor of Alamane or Thuringian influences, but the latter can only be confirmed by a complete study of the site. In addition, there is a group of warrior burials that can be considered privileged, giving the site of Erstein a special status as a 6th century, which will also have to be studied in depth.

Keywords: weapons, Merovingian, necropolis, burial, social statuses, warriors, Alsace

Abstract: Weapons in the Warrior Graves of the Merovingian Necropolis at Erstein (Bas-Rhin, Alsace). The Merovingian necropolis at Erstein (Bas-Rhin, Alsace) is so far the biggest one discovered in Alsace, with 248 graves, but also one of the most notable, especially regarding the extensive grave goods found there. The weapons and the social statuses in these warrior graves were studied in a Master's thesis in 2010 and it seemed important to publish the results of this work. The dating drawn from a typological study of the weapons ranges from the late 5th century to the early 7th century, but a high concentration can be observed during the two latter thirds of the 6th century (phases MA2 to MA3). The proportion of various types of weapons seems to show Alemannic and Thuringian influences, which will only be confirmed by a complete investigation of the site. Moreover, a group of warrior graves can be considered as having a privileged situation.

Schlüsselwörter: Waffen, Merowingerzeit, Friedhof, Bestattung, soziale Stellung, Krieger, Elsass

Zusammenfassung: Die Bewaffnung in den Kriegergräbern des merowingerzeitlichen Friedhofs von Erstein (Unterelsass). Mit 248 Bestattungen ist der Ersteiner Reihengräberfriedhof bis heute der größte im Elsass aufgedeckte; es ist auch einer der bemerkenswertesten, ua durch seinen Beigabenreichtum. Die Bewaffnung der dort begrabenen Krieger und ihre soziale Stellung wurden 2010 in einer Masterarbeit erforscht; ihre Ergebnisse zu publizieren schien unerlässlich. Die typologische Untersuchung der Waffen ergab eine Streuung zwischen dem Ende des 5. und den Anfang des 7. Jhs., Mit einer sehr starken Konzentration in den zwei letzten Dritteln des 6. Jhs. (Phasen MA2 bis MA3). Das Zahlenverhältnis zwischen den verschiedenen Waffentypen scheint für alemannische oder thüringische Einflüsse zu sprechen, was aber nur durch eine vollständige Untersuchung des Gräberfeldes bestätigt werden kann. Außerdem fällt eine Gruppe von Kriegerbestattungen an, die man als Adelsgräber ansprechen mag, was dem Friedhof von Erstein für das 6. Jh. eine Besonderheit verleiht, die ebenfalls eingehender zu erforschen sein wird.



* Antea Archeology; doctoral student at the University of Strasbourg / Albert-Ludwigs-Universität Freiburg.

INTRODUCTION

The town of Erstein is located in the Bas-Rhin (67) about 20 kilometers south of Strasbourg. Crossed by the Ill, the city is bordered to the east by the "Grand Ried" of the Rhine and to the west by the Alsatian Loess plain.

The discovery of the Merovingian necropolis in 1999 follows an archaeological diagnosis, carried out prior to the construction of a shopping center. The excavation, which was carried out by Afan between August 1999 and April 2000, was completed in 2003 by a smaller-scale operation, a few tens of meters from the first site, entrusted to Inrap. A total of 248 burials from the Merovingian period containing the remains of 256 individuals have been unearthed. The western and northern limits of the necropolis were reached, but the site was partly destroyed in the south by the establishment of a loessière in the 18th century.¹ The site appears to be in use between the start of vi^e and the beginning of vii^e century, with greater use during the third third of the vi^e century. The rich furnishings found in the tombs quickly showed that the population buried at Erstein seemed to be largely privileged, but it also testifies to various cultural influences, with in particular Frankish components confronting influences from central Germany, Thuringians in particular. We thus find fibulae in 35 tombs, consisting of partitioned discoid fibulae, in "S" form, with two opposite monster heads or even aviform fibulae. A large part of the tombs containing fibulae also yielded handled fibulae (20 tombs). In accordance with the chronology of the site, these ornamental objects are found mainly during the vi^e century. We can also mention the large number of combs made of hard animal materials which have been discovered there (120 copies). Other rarer deposits can be mentioned, such as the weaver's blade from tomb 239, the goldsmith's scale found in the tomb

traces of violence on his bones.⁵ In addition, the skeletons from Erstein were fully studied by C. Baillif-Ducros as part of his doctoral thesis entitled *The cavalier practice of*

Merovingian elites (v^e-viii^e century): social identity and identity

organic. Armament was the subject of a master's thesis, carried out under the direction of J.-J. Schwien and defended in 2010 at the University of Strasbourg, on the typochronology of weapons and on the social status of the graves of warriors.⁶

This article is taken from this thesis.⁷ Indeed, in the absence of a synthetic study of the necropolis, it seemed necessary to publish the available data, the largest in Alsace, of which a complete study and a monographic publication are still sorely lacking.

1. ARMAMENT OF THE ERSTEIN NECROPOLIS

There are 56 burials with weapons out of a total of 248.

The spearhead is the weapon found in the greatest number, 38 copies, or more than half of the graves with weapons. Then comes the scramasax, 32 copies, and the long sword and the *umbo* shield, 17 copies each. 41 arrowheads were found, from six graves. Finally, the axe is represented only in three burials. The dates obtained range from the end of the v^e and the beginning of vii^e century (w. 1). They have been reported in the chronological system of R. Legoux, P. Périn and F. Vallet, which has the advantage of being compatible with German chronologies.⁸

1.1. LONG SWORDS

Present in 16 burials out of the 56 including weaponry, the long swords were all in "Morken" type burial chamber tombs.¹⁰ A longsword was discovered outside the structure¹¹, bringing the total number of this weapon to 17. For two of them, the remains of a ditched circular enclosure and the empty space of structures around the pit suggests that the tomb was reported on the surface (mound or enclosure by example), and we can advance the same hypothesis for a third tomb presenting only this empty space.¹²

253, or even the wooden box enhanced with copper alloy sheet metal appliques stamped with tomb 49. A horse's tomb has also been unearthed (tomb 68), again betraying Thuringian, Avarian or Saxon influences.⁹ The necropolis was the subject of an exhibition at the Strasbourg Archaeological Museum in 2005, the exhibition catalog currently being the main reference work. Only a preliminary report was issued in 2000, the study of which covers around twenty burials.¹ However, several ad hoc studies have been carried out. The scabbards of long swords were the subject of a study by C. Pillard within the framework of a DESS in archeology.² An article devoted to the textile remains observed on the objects was published in 2006 in the

Eastern archaeological review.³ Certain anthropological aspects have been mentioned in two works. First, in 2005, in the exhibition catalog *History (s) of skeletons: archeology, medicine and anthropology in Alsace*, two articles by P. Georges are dedicated to the Erstein site.⁴ A second work includes an article by P. Georges and E. Boës, published in 2008, evoking the case of the individual from burial 17, which presented several

1. Châtelet, Georges and Rohmer 2000.

2. Raider 2000.

3. Médard, Rohmer, Moulherat *et al.* 2006.

4. Georges 2005a; Georges 2005b.

5. Charlier 2008, p. 337-339.

6. Fischbach 2010.

7. We would like to thank P. Rohmer, P. Georges, M. Châtelet and J. Guillaume for their invaluable help in this study, as well as P. Périn for his invaluable advice and his wise rereading during the writing of this article.

8. Legoux, Périn and Vallet 2009.

9. Böhner 1958; Ament 1977.

10. Burials 25, 41, 47, 59, 83, 110, 153, 192, 193, 198, 204, 208, 209, 241, 253 and 262.

11. Burial 241.

12. Burials 25, 47 and 192.



Fig. 1 Plan of the Merovingian necropolis of Erstein and dated weapons' tombs (from the survey by M.-D. Waton and P. Rohmer and the plan by M. Châtelet, A.C. Fischbach).

The dotted circles represent the reconstructions of enclosures, ditches and / or mounds that may have surrounded certain graves.

The position of long swords in relation to the body of the deceased is variable: they can be placed either along his left arm (nine cases)¹³ or his right arm (two cases)¹⁴, either along his left leg (two cases)¹⁵ or straight (two cases)¹⁶.

The longsword is associated with the scramasaxe and the spear in ten cases¹⁷, in two cases with scramasaxe alone¹⁸ and in three cases with the lance alone¹⁹. In ten cases it was associated with a *umbo* shield²⁰.

The blade lengths are between 75 and 100 cm, for a width ranging from 4.7 to 6 cm. The silks have a length ranging from 8.5 to 13 cm.

For only four long swords, it was possible to determine the presence of a damask blade²¹. In all four cases, the damask is in the form of two twisted bands assembled together forming a line of rafters, which corresponds to the technique of "Volldamast" defined by

W. Menghin²². This type of damask, quite common, has also been identified in Alsace on three copies of the necropolis of Vendenheim²³ and on a single copy in Matzenheim²⁴. This technique, in addition to the aesthetic aspect it brings to the weapon, would make the blade more resistant²⁵.

The materials used for the handles of Erstein's swords could be determined in four cases. In graves 110 and 209, it is ash, in grave 193 with alder and in grave 195 with bone or antler. The latter may also be found on the long swords of tombs 3 and 54 of Osthouse as well as tombs 8 and 19 of Matzenheim²⁶. Traces of glue were also observed on these swords. In Vendenheim, the handles are mostly made of horn, with the exception of burial 435 where it is made of an assembly of wood and horn²⁷.

Only seven long swords have a metal pommel, five are copper alloy²⁸ and two are made of iron²⁹ (fig. 2).

13. Burials 47, 59, 83, 153, 192, 193, 204, 208 and 209.

14. Burials 110 and 198.

15. Burials 41 and 253.

16. Burials 25 and 262.

17. Ten cases: graves 25, 47, 83, 153, 192, 193, 204, 208, 209 and 262.

18. Burials 41 and 253.

19. Burials 59, 110 and 198.

20. Burials 25, 59, 83, 110, 153, 192, 198, 204, 208 and 209.

21. Burials 110, 198, 209 and 253.

22. Menghin 1983, p. 17.

23. Barrand-Emam, Chenal and Fischbach 2013b, p. 278.

24. Châtelet 2009, p. 62-63.

25. The core of the blade is made of wrought steel, which is softer than the cutting edges which are made of steel. In the event of an impact, the steel cutting edges resist, while the power of the impact is absorbed by the core of the blade, preventing it from breaking (France-Lanord and Salin 1946, p. 588-590).

26. Châtelet 2009, p. 63.

27. Barrand-Emam, Chenal and Fischbach 2013b, p. 55-56.

28. Burials 41, 47, 110, 192 and 262.

29. Burials 153 and 198.

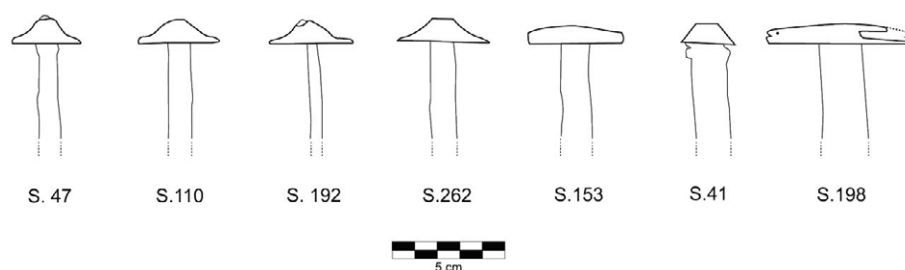


Fig. 2 The pommels of the long swords from the necropolis of Erstein (graves 47, 110, 192, 262 and 41: pommels in copper alloy; graves 153 and 198: iron pommels; drawings M. Châtelet, T. Fischbach).

The end of the tang passed through the pommel by a perforation of the latter, the whole being held in place by hammering the end of the tang. The other swords were devoid of pommels, or presented the remains of pommels in organic materials (wood and horn). None of the swords had a metal hilt. The hilt of the sword from Grave 110 was found to be ash, and the sword from Tomb 83 had preserved wood remains that may have belonged to a guard but the essence of which could not be determined.³⁰

1.1.1. Pyramidal pommels

Four swords have pyramidal pommels with a rectangular base in copper alloy (graves 47, 110, 192 and 262), while that of tomb 153 is made of iron. According to the typology of W. Menghin, the specimens from burials 47, 110 and 192 are close to type 2.b "Brightampton-Ciply" and are dated to the middle of the 6th century.³¹ Those of Erstein are however closer to several specimens found in the German necropolis of Schretzheim (Bavaria), where they are found throughout the entire 6th century.³² A pommel of a similar type is also noted in burial 1138 in the Alsatian necropolis of Odratzheim (about twenty kilometers north-west of Erstein). In Erstein, this type of pommel is found from phase MA2 (burial 47) to phase MA3 (burial 192). Tomb 110 dates from the end of phase MA2 or the start of phase MA3.

The pommel of burial 262 is similar to type 2.a "Chessel-Down-Friedrichsthal" by W. Menghin.³⁴ This type corresponds to a small group of pommels dated to the first half of the 6th century.³⁵ The longsword of Erstein Tomb 262 was, however, associated with furniture relating to the tomb to phase MA3. We can cite parallels in tomb 17 of the necropolis of Saint-Vit "Les champs traversains", in the

Doubs, also dated phase MA3³⁶ in burial 5 in Basel-Bernerring, Switzerland, dated 540/550³⁷ as well as in Schretzheim, where we find this type of pommel during the second half of the 6th century.³⁸ Alsatian examples also exist in Baldenheim and Hochfelden, for example.³⁹

The pommel of burial 41 has different characteristics, since it is made of iron, longer and more flattened. The tomb was dated to phase MA3, in particular because of the short scramasaxe that was there. In Alsace, similar examples have been identified on the Osthofen Matzenheim sites⁴⁰ and Odratzheim⁴¹. This knob has a profile close to the type 2. "Krefeld-Gellep – Stora Sandviken"⁴².

One can also quote the copy of the tomb 530 of Cutry (Meurthe-et-Moselle) which approaches it, the latter having been dated in phase MA1.⁴³ In Germany, several parallels exist, notably in Hemmingen⁴⁴ or in Kösingen and Neresheim⁴⁵, where this type seems to be found rather during the second third of the 7th century (MR2).

1.1.2 The trapezoidal pommel of the tomb 41

Tomb 41 yielded a long sword with a trapezoidal pommel with a rectangular base in copper alloy, related to type 3 by W. Menghin.⁴⁶ This type of pommel, which appears between 480 and 520 (MA1), is found mainly between 530 and 570 (MA2), and in greater numbers around 600.⁴⁷ Burial 41 has been dated to the end of phase MA3 or the start of phase MR1, by the belt fittings, ax and scramasaxe associated with it. In the region, we can cite

30. We thank W. Tegel for sharing the results of his study with us.

31. Menghin 1983, p. 66-309.

32. Koch 1977, p. 95.

33. Koziol, Abert, Pélissier *et al.* 2012a, p. 228.

34. Menghin 1983, p. 308.

35. *Ibid.*, p. 64.

36. Urlacher, Passard-Urlacher, Gizard *et al.* 2008, p. 92.

37. Martin 1976, p. 215.

38. Koch 1977, p. 95.

39. Schnitzler, Arbogast and Frey 2009, p. 49-188.

40. Châtelet 2009, p. 62.

41. Koziol, Abert, Pélissier *et al.* 2012a, p. 228.

42. Menghin 1983, p. 311.

43. Legoux, Buchet, Calligaro *et al.* 2005, p. 24-175.

44. Müller 1976, p. 95-96.

45. Knaut, Hundt and Hahn 1993, p. 108.

46. Menghin 1983, p. 319-320.

47. *Ibid.*, p. 76.

the longsword found out of context in Hochfelden⁴⁸, but we also find a parallel in Switzerland, in Schleithem, in tomb 766⁴⁹.

1.1.3. The zoomorphic pommel of the tomb 198

The sword from the tomb has a zoomorphic pommel with an oval base, one end of which is missing. A similar copy is to be noted in tomb 301 of the necropolis of Schretzheim which is dated to phase 2 of the necropolis, i.e. 545 / 550-565 / 570⁵⁰. The *umbo* shield was used to assign the tomb at the end of phase MA2 or at the beginning of phase MA3.

1.1.4. Swords without pommel or pommel in organic material

The other long swords did not have metal pommels⁵¹. Four had remains of a pommel made of perishable material, probably wood or bone⁵².

The dates show that longsword devoid of metal pommels are represented throughout the occupation of the necropolis (in one case in phase MA1⁵³,

in three cases in phase MA2⁵⁴, in three cases during phase MA3⁵⁵, and once at the end of phase MA3 or at the start of phase MR1⁵⁶).

1.1.5. Organic remains from long sword scabbards

All of Erstein's long swords had remains of wood and organic material on the blade, the whole of which was studied by C. Pillard. The identification of the wood constituting the scabbard and certain handles was carried out by W. Tegel. The sheaths are mostly made of alder, which is partly explained by the technical qualities of the wood which makes it a light and easy to work material. In addition, alder is a hardwood that grows in a humid plain, which suggests that the manufacture of these sheaths is local. Thus, 13 scabbards are made from this essence⁵⁷. Alder was also found on the blades of long swords at Matzenheim Grave 38 and Osthouse Tomb 3, about four kilometers south of Erstein⁵⁸, as well as in burials 165 and 166 in Vendenheim, about thirty kilometers north of the town⁵⁹. The other copies

studied in Erstein are either in willow⁶⁰ either lime⁶¹. Willow was also observed on the scabbard of the sword of burial 435. The other woods found on the longsword of the sites of Matzenheim-Osthouse and Vendenheim are beech⁶², maple⁶³, poplar⁶⁴ and the tree⁶⁵. The technique of assembling the scabbards of Erstein's long swords is similar to that observed at Osthouse and Matzenheim. They are made up of two adjoining pieces of wood, surrounded by leather and held together by strips of vegetable material.⁶⁶

There was some fur on the inner side so that the sword would not accidentally come out of the scabbard. These observations are similar to those made in Germany, at Marktoberdorf, Niederstotzingen and Obermöllern⁶⁷, but also in the region, in the tomb 212 of Illkirch-Graffenstaden⁶⁸. It is interesting to note that the scabbards of Vendenheim long swords have a different construction, since they are made of a first internal layer of fabric, then two long and thin wooden plates glued to the fabric, and finally a outer layer also made of fabric. In some cases, strips of leather or vegetable material locally encircled the sheath⁶⁹.

1.2. THE SCRAMASAXE

The scramasaxe is the weapon that appears most frequently in the tombs just after the spearhead, since there are 32 examples.⁷⁰ for 38 spearheads. Of these 32 specimens, 29 could be studied.

In five cases, the tombs are arranged in narrow pits, all the others being in burial chambers. In 15 cases, the scramasaxe was at the level of the pelvis of the deceased⁷¹ which suggests that it was worn on the belt at the time of burial. In 11 cases, the weapon was placed along the individual's left arm, against his rib grill⁷². The scramasaxe of tomb 189 was at the eastern end of the burial chamber, which can be explained by the fact that the tomb seems to have been looted. In the case of tomb 204, the scramasaxe was between the legs of the deceased.

48. Schnitzler, Arbogast and Frey 2009, p. 188.

49. Burzle, Hönel, Leicht *et al.* 2002, vol. 2, p. 317.

50. Kott 1977, p. 95.

51. Burials 25, 59, 83, 193, 204, 208, 209 and 253.

52. Burials 59, 83, 193 and 209.

53. Burial 208.

54. Burials 59, 193 and 209.

55. Burials 25, 83 and 253.

56. Burial 204.

57. Burials 25, 47, 59, 83, 110, 153, 192, 193, 198, 204, 208, 253 and 262.

58. Châtelet 2009, p. 63.

59. Barrand-Emam, Chenal and Fischbach 2013b, p. 280.

60. Burial 209.

61. Burial 241.

62. Burials 19 from Matzenheim and 54 from Osthouse.

63. Burial 8 of Osthouse.

64. Burial 147 of Vendenheim.

65. Burial 149 of Vendenheim.

66. Châtelet 2009, p. 63; Schnitzler and Rohmer 2004, p. 55.

67. Menghin 1983, p. 18.

68. Baudoux 1997, p. 158.

69. See the study by M.-F. Turlier, Barrand-Emam, Chenal and Fischbach 2013, p. 280.

70. Burials 4, 15, 20, 25, 32, 41, 47, 83, 114, 136, 153, 160, 168, 185, 188, 189, 192, 193, 200, 202, 204, 208, 209, 210, 217, 218, 236, 237, 253, 262, 270, 280.

71. Burials 15, 25, 32, 47, 153, 185, 168, 192, 200, 208, 217, 236, 237, 253 and 280.

72. Burials 4, 20, 41, 114, 160, 188, 193, 202, 210, 262 and 270.

In sixteen cases, the scramasaxe is accompanied by at least one spearhead⁷³, in at least twelve cases by a long sword⁷⁴ and in at least nine cases by one *umbo*. Two of the tombs containing a scramasaxe also included two of the three axes identified on the site. In six cases, the scramasaxe is associated with both a long sword, a spearhead and a *umbo* shield. All of these elements thus constitute the complete "panoply" of the warrior.⁷⁷

Eleven scramasaxes have a reinforcement between the handle and the blade, in the form of an iron plate which surrounded the handle, acting as a ferrule. Among them are the only three examples equipped with a pommel.⁷⁹

The lengths of the bristles are between 5.5 and 18.5 cm. According to the inventory of J. Wernard, the bristles not exceeding 20 cm long are found in greater number in its phases 1, 2a and 2b⁸⁰. This corresponds to a chronological range located between the first quarter of the 6th century and 630/640 (ie phases MA1 to MR1). The same dates are given for the northern half of France, where silks with a length between 18 and 25 cm are characteristic of the Late Merovingian (7th century; type 63 of the *Standardized timeline*).⁸¹

Five scramasaxes are straight back⁸², the 23 others have the back and the blade symmetrical. For the copy from tomb 28, it was not possible to determine the shape of the back and the blade.

J. Wernard detected a slight chronological evolution of blade shapes of the scramasaxes: those with a straight back and curved edge are found mainly from the end of the fifth to the beginning of the seventh century, while those with a curved back and straight edged are more recurrent from the beginning of the seventh to the beginning of the seventh century. On the other hand, the scramasaxes with edge and symmetrical back are found throughout the Merovingian period. In Erstein, specimens with a straight back and curved edge appear in phase MA2 (tomb 193) and are most common in phase MA3 (tombs 153, 192 and 253). One copy dates from the end of phase MA2 or the beginning of phase MA3 (tomb 20).⁸¹

1.2.1. Typochronological study of scramasaxes

Based on J. Wernard's typochronology established for southern Germany, six types have been identified (fig. 1).

73. Burials 74, 20, 25, 47, 83, 153, 168, 188, 192, 193, 200, 208, 209, 218, 237 and 262.

74. Burials 25, 41, 47, 83, 153, 192, 193, 204, 208, 209, 253 and 262.

75. Burials 25, 208, 209, 192, 83, 153, 204, 20, 218.

76. Burials 41, 101 and 202.

77. Burials 25, 83, 153, 192, 208 and 209.

78. Burials 4, 20, 32, 41, 47, 160, 188, 192, 202, 236 and 280.

79. Burials 41, 47 and 202.

80. Wernard 1998, p. 760.

81. Legoux, Périn and Vallet 2009, p. 30.

82. Burials 20, 153, 188, 192, 193 and 253.

83. Wernard 1998, p. 749-750.

1.2.1.1. Long scramasaxes with a narrow blade

Three specimens are of the earliest type, i.e. the long scramasaxe with narrow blade⁸⁴. The blade dimensions given by J. Wernard are between about 36 and 45 cm long, and about 2.7 to 3.2 cm wide. J. Wernard places this type before 500 (i.e. the PM phase), or even at the very beginning of the vi^e.

century (phase MA1)⁸⁵. Type 55 of the *Standardized timeline* corresponds to the "small narrow scramasaxe (blade <50 cm)", which also dates from phases PM to MA1⁸⁶. The blade of the copy of tomb 280 measures 38 cm long and 3 cm wide. The rest of the tomb's furnishings do not allow the dating to be refined. The specimen from tomb 236 has substantially similar dimensions (the blade is 38 cm long and 3.5 cm wide). The latter was associated with a knotted silver Roman type ring. The dating retained is therefore between phase PM and MA1 (450–520 / 530) without the ring being a chronological indicator, the reuse of Roman objects in Merovingian tombs being regularly reported. In tomb 208, the *umbo* of shield with flat terminal button and flat rivets indicates a dating which would be in the first third of the vi^e century (MA1). A scramasaxe of the same type as those of Erstein was unearthed in burial 14 of the necropolis of Niedermal "Kirchbuehl" (about ten kilometers east of Erstein)⁸⁷, of which the majority of dated tombs are between the second half of the v^e century and the first half of the vi^e century. In the German necropolis of Heide-Altheim (Baden-Württemberg), six scramasaxes of the same type (*Lange Schmalsax*) are listed in tombs dated from the second half of the v^e century for five of them, the last being from the beginning of the sixth century.⁸⁸

1.2.1.2. The Grave Combat Knife 200

A combat knife (*Kampfmesser*) was discovered in the tomb 200. This type, defined by R. Reiss on the German necropolis of Westheim (Bavaria) dates from 530/540–560/570 (MA2) and is characterized by small blade dimensions, located between 13 and 20.7 cm long by 2.4 to 3.7 cm wide⁸⁹.

In Erstein, the blade is 17.4 cm long by 2.8 cm wide. This tomb has been dated to phase MA2, in accordance with observations made at Westheim. Although it is not strictly speaking a scramasaxe, its morphological criteria, unique edge and small size, have prompted us here to integrate them into the study of the latter.

1.2.1.3. Narrow-bladed scramasaxes

The narrow-bladed scramasaxe is found in seven cases⁹⁰.

In southern Germany, it is dated between 500/525 and up to 570/580 (late MA1-MA2)⁹¹ and is characterized by a length

84. Burials 208, 236 and 280.

85. Wernard 1998, p. 772-773.

86. Legoux, Périn and Vallet 2009, p. 29.

87. Zehnacker 1996, p. 15.

88. Beilharz 2011, p. 142-146.

89. Reiss 1994, p. 63.

90. Burials 20, 185, 188, 189, 193, 210 and 217.

91. Wernard 1998, p. 774-775.

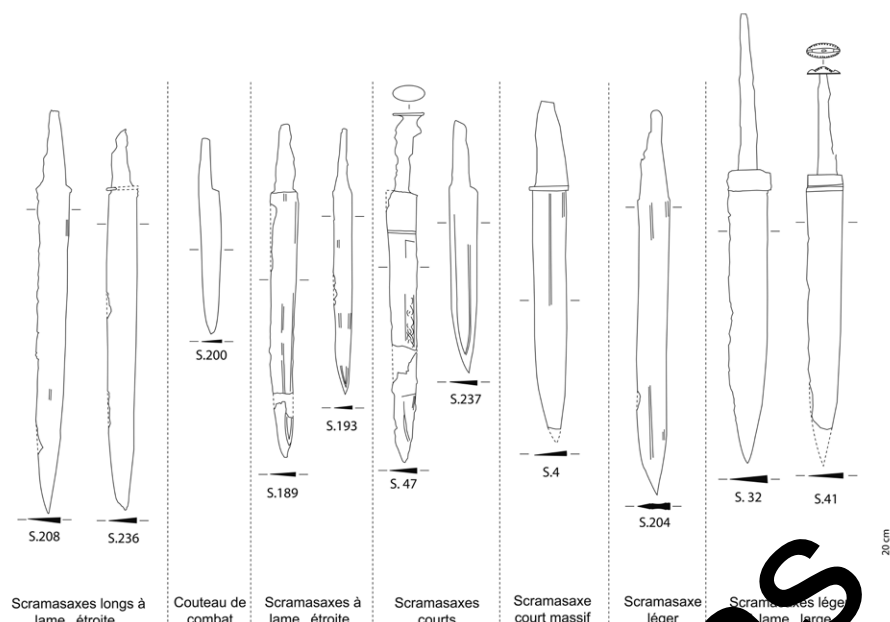


Fig. 3 Typology of the scramasaxes of the necropolis of Erstein (drawings P. Rohmer, M. Châtelet, T. Fischbacher)

blade ranging from 30 to about 35 cm, for a width between 2.5 and 3.5 cm. The blades of Erstein's copies are 12 to 13 inches long and 2.9 to 3.8 cm wide. Five copies have been dated to phase MA2 (burials

185, 189, 193, 210 and 217) and two from the end of phase MA2 or the start of phase MA3 (graves 20 and 188).

1.2.1.4. Short scramasaxes

Short scramasax is found in twelve cases⁹². This type is found during phases 1 and 2a of J. Wernard (500/525

- 600/610, late MA1-MA3), with a tendency to become more massive during the last third of the vi^e century⁹³. The dimensions of the blades are between about 18 and 30 cm long, for 2 to

3.5 cm wide. In Erstein, it is characterized by a blade length between 20.9 and 30.5 cm for a width between 2.9 and 3.7 cm. The specimen from burial 185 had the point broken; the exact length is therefore unknown. However, its dimensions and the shape of the back and the edge make it possible to offer a blade length of around 20 cm, which prompted us to classify it in the category of short scramasaxes. Its dating is between phases MA2 and MA3. In burial 47, a coin was discovered deposited in the mouth. The latter is a coin of the Byzantine emperor Justinian I^{er}, dated 527-565. The tomb is therefore not earlier than phase MA2. Another coin was found in tomb 237. It is a silver half-symbol of King Ostrogoth Badila, dated 541-552, indicating a *terminus post quem* corresponding to the middle of phase MA2. The graves 202 and 209 were also

dated to phase MA2, while the last six⁹⁴ are dated phase MA3.

1.2.1.5. Massive short scramasaxes

The massive short scramasaxe is represented by two copies⁹⁵. This is a type that is found during phases 2a to 2c (570 / 580-630 / 640, or MA3-MR1) of

J. Wernard⁹⁶. In the south of Germany, they are represented by specimens whose blades measure between approximately 22 and 30 cm long, and 3.5 to 4 cm wide. However, the width of the blades of those of Erstein not exceeding or very little the 4 cm wide, they seem rather to resemble those of phase 2a (570 / 580-600 / 610, or MA3) of J. Wernard. Indeed, the two blades measure 30 cm long, for 4.4 cm wide in tomb 4 and 4 cm wide for tomb 114. The latter was indeed dated MA3 by the copper alloy belt buckle at broad oval section and barb with scutiform base, but burial 4 seems slightly later, since it was dated to the end of phase MA3 or the beginning of phase MR1.

1.2.1.6. Light scramasaxes

Only tomb 204 contained a light scramasaxe. This type is dated phase 2b (600 / 610-630 / 640, or MR1) of

J. Wernard⁹⁷ and has dimensions between 30 and about 36 cm long, and 3.5 to 4 cm wide. In Erstein, the blade measures between 14 inches long and 1.5 inches wide. The associated furniture (*umbo* shield and round buckle plate in

92. Burials 15, 25, 47, 153, 160, 192, 202, 209, 237, 253, 262 and 270.

93. Wernard 1998, p. 774-776.

94. Burials 153, 160, 192, 253, 262 and 270.

95. Burials 4 and 114.

96. Wernard 1998, p. 775-777.

97. *Ibid.*, p. 776.

iron) indicates a dating being at the end of phase MA3 or at the beginning of phase MR1.

1.2.1.7. Lightweight scramasaxes with wide blades

The light broad-bladed scramasax appears in southern Germany between phases 2a and 3b of J. Wernard, ie the last third of the vi^e century and until the second third of the vii^e century (MA3-MR2)⁹⁸. It is characterized by a blade ranging from about 26 cm to about 42 cm long, and 4 to 5 cm wide. At Erstein, two copies have been identified⁹⁹. They are similar by their dimensions, and in particular the width of the blade which exceeds 4 cm, to the specimens of its phase 2b (600 / 610-630 / 640, or MR1). This date was retained for tomb 32, in particular because of a damascene iron belt lining.¹⁰⁰ Tomb 41 would rather date from the end of phase MA3 or the beginning of phase MR1, the ax and the pommel of the sword which accompanied it dating rather from the second half of the 6th century.¹⁰¹

1.2.2. The decorations on the blades

Thirteen copies have incised decorations on the blade¹⁰¹. In nine cases, the decoration consists of a pair of parallel striations on the blade¹⁰². On that of tomb 189, the state of conservation shows that the two parallel striations meet at the end of the blade. The scramasaxe of tomb 160 is also decorated with a pair of parallel striations, but these latter frame a row of points. In two cases, the blades have two pairs of parallel ridges on the blade¹⁰³.

On that of tomb 204, the two pairs of parallel striations frame a center which runs the length of the blade. Finally, the small scramasaxe of tomb 47 is decorated with interlacing, inscribed in a frame. Several similar examples have been unearthed, notably in Germany in the tomb 6 of Klepsau¹⁰⁴ as well as in tomb 127 of Schretzheim¹⁰⁵. According to U. Koch, this type of ornamentation is found mainly at the end of vi^e century¹⁰⁶. It is related to J. Wernard's group B¹⁰⁷, which is found from phase 1 to phase 3b (525-660 / 670; ie from phase MA2 to MR2). However, he observes that the shapes become more stylized and more geometric, almost forming zigzags, on the later examples. At Erstein, the state of conservation does not allow us to determine the presence of zoomorphic elements associated with the interlacings. If so, then it would be related

to group A, dated from the end of vi^e century¹⁰⁸. This type of blade decoration is found in both Alaman and Frankish territory. For example, decorations similar to Erstein's example are present in tombs 59 and 158 of the necropolis of Saint-Vit, in Franche-Comté.¹⁰⁹ In Alsace, two specimens belonging to group A with zoomorphic decoration were discovered at Roeschwoog, in graves 1074 and 1083¹¹⁰, but also in Lorraine, in Ennery¹¹¹ and in Switzerland, in Schleithem, in burial 488¹¹².

1.2.3. The sheath trim elements

Four tombs contained elements of the scramasaxes sheaths¹¹³ (fig. 4). Burial 4 yielded three copper alloy rivets with a round and flat head. Three ocelli are distributed on the edges of the rivet, framing a central ocellus. They are similar to type 69 of the *Standardized timeline*¹¹⁴, although he does not wear ocelli but perforations. These elements are generally found in burials from the first half of the 6th century. They meet frequently in Switzerland, for example in Kaiseraugst and Schleithem¹¹⁶, but also in Germany¹¹⁷. In France, we can cite parallels to Saint-Vit¹¹⁸ and Doubs¹¹⁹ in Franche-Comté and in Alsace, Odratzheim¹²⁰, Roeschwoog¹²¹ and Wasselonne¹²², but also copies similar to those of Erstein, provided with ocelli and not with perforations, which were discovered in Molsheim¹²³. The elements of the sheath of tomb 32 consist of 30 small copper alloy rivets with a domed head, a large silver rivet with a flat head and a collar and two rivets with a flat head provided with a collar, in silver too, fixed between them by a small iron plate. The latter find parallels to Saint-Vit, in burial 114¹²⁴, but also in Switzerland, in Schleithem, in burial 608¹²⁵. The scramasaxe of tomb 41 was accompanied by six circular rivets in copper alloy and decorated with a cross framed by a hallmarked circle. In burial 210, it is an iron barrel center that was found alongside the scramasaxe, for which we can cite a parallel in Switzerland, at Kaiseraugst¹²⁶.

108. Wernard 1998, p. 752.

109. Urlacher, Passard-Urlacher, Gizard *et al.* 2008, p. 101-102.

110. Koziol, Abert, Pélissier *et al.* 2012b, p. 191.

111. Simmer and Buchet 1993, p. 78.

112. Burzler, Höneisen, Leicht *et al.* 2002, vol. 2, p. 269.

113. Burials 4, 32, 41 and 210.

114. Legoux, Périn and Vallet 2009, p. 30.

115. Martin 1991, p. 142-143.

116. Burzler, Höneisen, Leicht *et al.* 2002, vol. 2, p. 501.

117. Koch 1977, p. 108.

118. Urlacher, Passard-Urlacher, Gizard *et al.* 2008, p. 108.

119. Urlacher, Passard-Urlacher and Manfredi 1998, p. 81.

120. Koziol, Abert, Pélissier *et al.* 2012a, p. 99.

121. Koziol, Abert, Pélissier *et al.* 2012b, p. 192.

122. Waton, Laverne and Thomann 2005, p. 63.

123. Schnitzler, Arbogast and Frey 2009, p. 292-293.

124. Urlacher, Passard-Urlacher, Gizard *et al.* 2008, p. 109.

125. Burzler, Höneisen, Leicht *et al.* 2002, vol. 2, p. 293.

126. Martin 1991, p. 142-143.

98. *Ibid.* p. 755-778.

99. Graves 3 and 4.

100. Damascene, obtained by hollowing out a decorative pattern in the iron, these incisions then being filled in with one or more different metals, generally silver and brass (Salin, 1951; Urban 1997).

101. Burials 4, 20, 47, 153, 160, 188, 189, 192, 193, 204, 208, 237 and 253.

102. Burials 4, 20, 153, 188, 189, 192, 193, 208 and 253.

103. Burials 204 and 237.

104. Koch 1990, p. 178.

105. *Ibid.*, p. 106.

106. Koch 1977, p. 106.

107. Wernard 1998, p. 752-753.

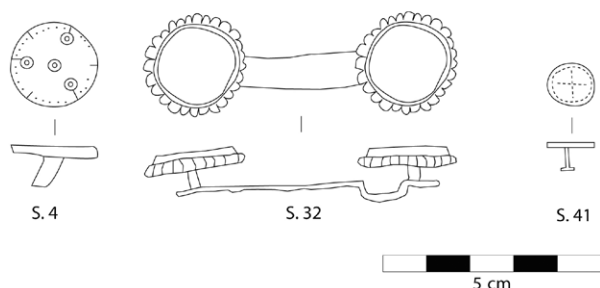


Fig. 4 Sheath rivets of the scramasaxes of tombs 4, 32 and 41 (drawings P. Rohmer, M. Châtelet).

1.2.4. Typochronological evolution scramasaxes

By comparing the groups defined by J. Wernard identified with Erstein, we notice that three types of scramasax present similar dimensions, in accordance with what he observed for the south of Germany: these are light scramasaxes, Lightweight wide-bladed scramasaxes and massive short scramasaxes¹²⁷. The length of the blades of these three types ranges from

27.8 cm to 35.2 cm, for a width ranging from 3.8 cm to 4.5 cm. In Erstein, they are dated from phase MA3 to phase MR1, while in southern Germany these three types are found together with phase MR1 (600/610 - 630/640)¹²⁸. Considering these three examples together, a chronological distribution of the different types of scramasaxe emerges. (fig. 3). At the end of the v^e and at the beginning of vi^e century (phases PM to MA1), there are only long scramasaxes with a narrow blade (three examples). In the second third of the vi^e century (phase MA2), the narrow-bladed scramasaxis slightly predominates (five copies), closely followed by the short scramasax (four copies). It is in this phase that we find the combat knife of the tomb 200. In the third quarter of vi^e century (end of phase MA2 or beginning of phase MA3), there are only two narrow-bladed scramasaxes, the latter completely disappearing in the third third of the sixth century (phase MA3). At this phase, the short scramasax dominates largely (eight copies), but we notice the appearance of a massive short scramasaxe. The short scramasax disappears completely at the end of the vi^e or at the beginning of the vii^e century (end of phase MA3 or beginning of phase MR1), while there are three examples of short massive / light / light scramasaxe with wide blade. In phase MR1, only one is identified, constituting a single specimen (fig. 5).

1.3 THE SPEARGUNS

The spearhead is the weapon most represented in the necropolis, 38 copies for 56 burials containing weaponry, that is to say in almost two thirds of the corpus. In six cases,

127. Wernard 1998, p. 776.

128. Wernard 1998, p. 776.

129. Burials 15, 18, 20, 25, 27, 30, 47, 51, 52, 59, 82, 83, 100, 110, 115, 123, 132, 136, 141, 149, 153, 160, 168, 170, 177, 188, 192, 198, 200, 208, 209, 218, 235, 237, 262, 266 and 293.

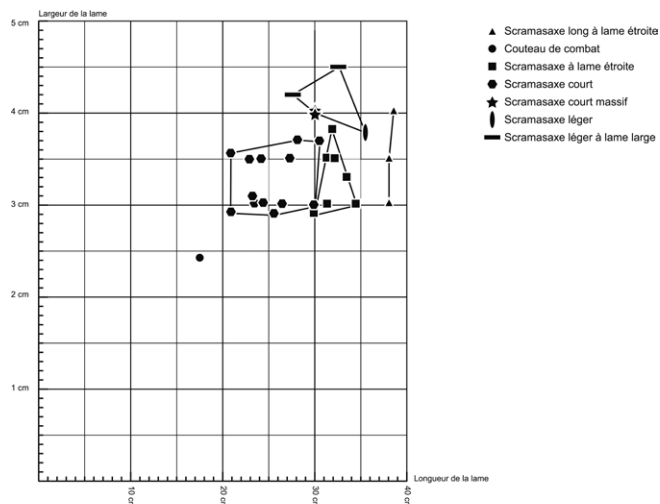


Fig. 5 Morphological distribution of scramasaxis blades and chronological distribution of the different types of scramasaxes identified.

he is accompanied by a scramasaxe, a long sword and a *umbo* shield¹³⁰. The spearhead appears next to 15 *umbos* shield out of the 17 found¹³¹. It accompanies the scramasaxe in 17 cases¹³². It is found five times in a tomb arranged in a narrow pit¹³³, the other 33 tombs being in burial chambers.

The spearhead is found next to the individual's right foot, south side, in six cases¹³⁴, which suggests that the spear was placed along the body pointing east. In eleven cases, it was located east of the tomb¹³⁵, in its southern part, with the rest of the funeral deposits. Six spearheads were found west of the tomb in the southern part¹³⁶, the spear being also deposited with the rest of the funeral offerings. In seven tombs, the spearhead rested against the right side of the individual's skull¹³⁷.

the lance having probably been placed along the body of the

130. Burials 25, 83, 153, 192, 208 and 209.

131. Burials 18, 20, 25, 59, 82, 83, 110, 153, 192, 198, 208, 209, 218, 266 and 293.

132. Burials 15, 20, 25, 47, 83, 136, 168, 188, 153, 192, 193, 200, 208, 209, 218, 262 and 237.

133. Burials 15, 51, 115, 123 and 132.

134. Burials 20, 59, 123, 188, 200 and 266.

135. Burials 25, 52, 83, 141, 192, 198, 208, 209, 218, 237 and 293.

136. Burials 30, 47, 51, 100, 160 and 170.

137. Burials 82, 132, 168, 177, 153, 235 and 262.

deceased, pointing west. In burial 18, the spearhead was placed in the northeast corner of the tomb, stratigraphically higher than the skeleton and its furniture, suggesting that the spear was placed on the rigid container in which the deceased. This is also the case in burial 110, in which the spearhead was in the northwest corner of the chamber. In tomb 15, it appears that the spear was placed alongside the individual, buried in a narrow pit, on his left side, northwest of the tomb. In two other cases¹³⁸, the spearhead was found in the northwest corner of the chamber, but these are disturbed burials and therefore may not be in their original position. This is also the case in tomb 136, where the spearhead was in the northern part of the tomb.

1.3.1. Typochronological study of spearheads

If, in the north of France, the spearheads with open casings meet during the vi^e century while those with closed casings are found during the vii^e century¹³⁹, such typochronological differences do not seem consistent in Germany, where the spearhead with closed socket is found from phase 2 (MA1; 470 / 480-520 / 530)¹⁴⁰. In fact, the dating of a tomb solely by its spearhead is uncertain, even if certain particular types are well datable. This is why we find different types, open or closed, long or short, during the different phases of use of the necropolis. Even if the well-dated tombs are isolated from the rest of the furniture, no typochronological characteristics seem to exist. A typochronological comparison was nevertheless made with other necropolises when the spearhead was the only element dating from the tomb.

The short socket / long socket was determined by calculating the ratio between the length of the latter and the length of the former. A socket is considered long when this ratio exceeds 1. In order to facilitate the reading of these different types, codes have been allocated. Thus, spearheads with a closed sleeve bear the letter A and those with an open sleeve bear the letter B. They are followed by the number 1 when it is short and by the number 2 when it is long (fig. 6). However, this limit being defined in an arbitrary way, one observes some spearheads with similar proportions, nevertheless of two different types. Finally, there is a third subtype (fig. 7), which corresponds to spearheads with a very long socket (whose socket length / flame length ratio exceeds 2).

1.3.1.1. Closed sleeve lance heads (A)

Spearheads with short closed socket (type A1)

Eleven specimens with a short, closed case were found¹⁴¹. All of them have bay leaf shaped flames. The

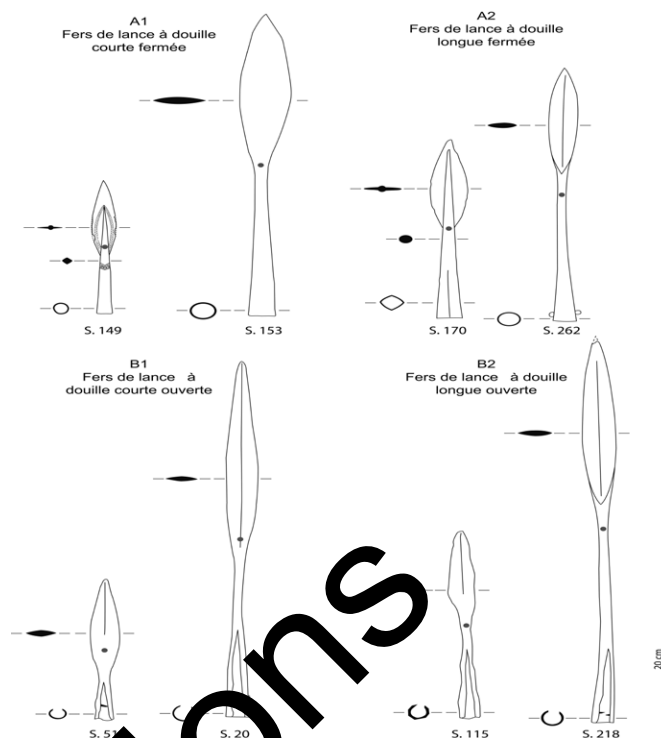


Fig. 6 Typology of type A2, B1 and B2 spearheads from the Erstein necropolis (drawings P. Rohmer, M. Châtelet, T. Fischbach).

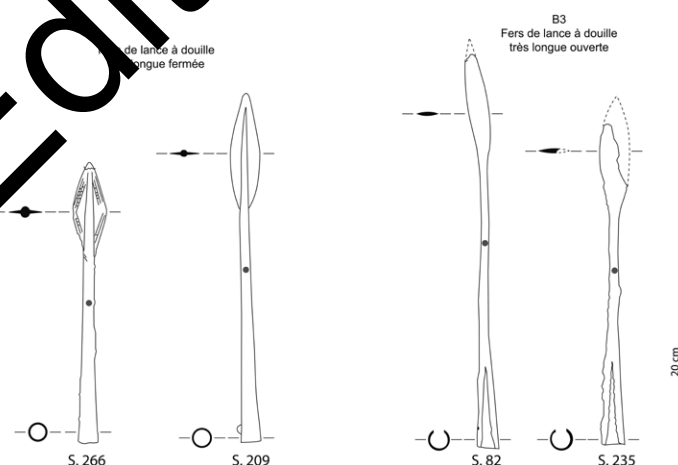


Fig. 7 Typology of type A3 and B3 spearheads of the necropolis d'Erstein (drawings P. Rohmer, M. Châtelet, T. Fischbach).

Sleeve lengths are between 9.3 cm and 23 cm, those of the flames between 11.7 cm and 27.3 cm for widths between 2.5 and 5.8 cm. This type is attributed to the second third of the vi^e century (MA2) by M. Martin in the Swiss necropolis of Bâle-Bernerring¹⁴², as well as by M. Knaut in the German necropolises of Köisingen and Neresheim¹⁴³. The spearhead with short, closed socket corresponds to types B1 and B2 of

K. Böhner, that he dates from his phase 3 (MA2 to MA3), or even from his phase 4 (MR1 to MR2) when a wide-bladed scramasax is

¹³⁸. Graves 27 and 115.

¹³⁹. Legoux, Périn and Vallet 2009, p. 54.

¹⁴⁰. Böhner 1958, p. 151.

¹⁴¹. Burials 18, 52, 100, 110, 136, 141, 149, 153, 177, 200 and 293.

¹⁴². Martin 1976, p. 49.

¹⁴³. Knaut, Hundt and Hahn 1993, p. 120.

associate¹⁴⁴. In the *Standardized chronology*, this type corresponds to types 34 and 36 (closed socket and long flame), dated mainly from MA3 to MR1 for type 34 and especially from MR2 for type 36¹⁴⁵. Six of these spearheads were located in graves dated to phase MA2¹⁴⁶. The specimen from burial 149 has the socket that penetrates the flame forming a central rib. A decoration of incised striations framing zigzags begins at the base of the flame to join the end of the central rib. It is related to the Hellmitzheim type of U. Koch¹⁴⁷ and the Dorfmerkingen type of

W. Hübener¹⁴⁸. We can cite parallels in tomb 3 of Osthause, in Alsace¹⁴⁹, or in Germany in Kössingen¹⁵⁰

and in Pleidelsheim in tomb 231¹⁵¹. According to Mr. Knaut, this type is found from the end of the vi^e century in the first half of the vii^e century¹⁵². The *Standardized timeline* indicates a dating located at MA3 for its type 38¹⁵³. K. Böhner the similar to type B6, which we find especially in saphase3 (MA2àMA3), some specimens associated with wide-bladed scramasaxes would rather be of its phase 4 (MR1 to MR2)¹⁵⁴. Copies of Schretzheim have been dated to the second third of the vi^e century¹⁵⁵.

A chronological precision can be brought by the ceramic vase discovered in the tomb 149 of Erstein. This is a stocky globular pot made of fine non-turned ceramic from Germanic tradition. The form is similar to type A1 defined by M. Châtelet¹⁵⁶, whose dating is mainly in the second half of the vi^e and at the beginning of the vii^e century¹⁵⁷. This spearhead therefore seems to date from the end of phase MA2 to the start of phase MR1, so we can propose dating at phase MA3. A ceramic vase of the same type was found in tomb 136, dating the spearhead of this same period, as was tomb 18. Burial 110 was dated to the end of phase MA2 or the beginning of phase MA3. Finally, the specimen from burial 153 has a laurel leaf flame 24.4 cm long and 5.5 cm wide and a 23 cm long socket. This type is generally found during the MA2 and MA3 phases¹⁵⁸. The associated objects in the tomb have made it possible to date it from phase MA3.

Spearheads with long closed socket (type MA2)

Long, closed socket spearheads were found in two graves¹⁵⁹. The spearhead of burial 262 is a bay leaf flame 15.6 cm long, for

a width of 3.4 cm. K. Böhner does not differentiate the size of the socket in relation to the flame for closed socket types, only the shape of the flame¹⁶⁰. The copy of Erstein's tomb 262 is in a tomb dated phase MA3. The oval flame spear, central rib, long closed socket of tomb 170 is a type comparable to those dated to phase 4 (MR1) in the necropolis of Schretzheim¹⁶¹. In the *Standardized chronology*, it is similar to type 38 (short lance L <35 cm closed socket with long ribbed flame) which is mainly found in phase MA3¹⁶². K. Böhner classifies it in his group B6. This type is mainly found in its phase 3 (MA2 to MA3), but some specimens associated with wide-blade scramasaxes would rather be in its phase 4 (MR1 to MR2)¹⁶³. This dating between the end of vi^e and the beginning of vii^e century is also given by Mr. Knaut for the necropolises of Kössingen and Neresheim¹⁶⁴. Erstein's copy was accompanied by an oval copper alloy buckle with a straight iron barb and a large iron chaplain clasp with aviform ends. The latter belongs to the type Bb.1.b defined by L. Roinné and whose use is located throughout the vi^e century¹⁶⁵, excluding a vii^e dating¹⁶⁶. The belt buckle is similar to the C1 type of Mr. Martin on the Kaiseraugst necropolis¹⁶⁶. This type is found from phase ZS C to ZS E. However, he points out that it mostly appears in phase ZS C (510 / 530-580). This spearhead is probably rather from the end of the vi^e century, therefore phase MA3.

Spearhead with very long closed socket (type A3)

Two spearheads are divided into this category¹⁶⁷. Tomb 209 has been dated phase MA2 due to the accompanying short scramasaxe. The spearhead therein has an oval flame 12.4 cm long by 3 cm wide and a 15.3 cm long socket which extends into the flame forming a central rib. The socket has a rivet on one of its sides. Tomb 266 yielded a diamond spearhead with a central rib and a very long closed socket. Its socket measures 20.6 cm while the flame is much shorter, since it is 9.6 cm long. The flame was adorned with incised streaks framing dots and the socket of two incised chevrons. In Schretzheim (Bavaria), we find irons with a very pronounced central rib during phases 3 and 4 (MA3 and MR1) and models with short flame and very long socket dated from phase 3¹⁶⁸. The copy from tomb 266 was accompanied by a *umbo* shield dated phase MA3, as well as a biconical fine ceramic pot turned type B2 dated 520-530 to 600¹⁶⁹. This spearhead is

144. Böhner 1958, p. 153-154.

145. Legoux, Périn and Vallet 2009, p. 28.

146. Burials 52, 100, 141, 142, 200 and 29.

147. Koch 1977, p. 111.

148. Hübener 1967.

149. Châtelet 2009, p. 16.

150. Knaut, Hundt and Hahn 1993, pl. 64.

151. Koch 1990, pl. 171.

152. Knaut, Hundt and Hahn 1993, p. 121.

153. Legoux, Périn and Vallet 2009, p. 28.

154. Böhner 1958, p. 158.

155. Koch 1977, p. 110-111.

156. Châtelet 2002, p. 47.

157. *Ibid.*, p. 116-118.

158. Christlein 1966, p. 32-148; Koch 1977, p. 110; Châtelet, Georges and Rohmer 2000, p. 39.

159. Burials 170 and 262.

160. Böhner 1958, p. 151-158.

161. Koch 1977, p. 108.

162. Legoux, Périn and Vallet 2009, p. 28.

163. Böhner 1958, p. 158.

164. Knaut, Hundt and Hahn 1993, p. 121.

165. Roinné 2010, p. 155-156.

166. Martin 1991, p. 83-86.

167. Burials 209 and 266.

168. Koch 1977, p. 109.

169. Châtelet 2002, p. 111-112.

therefore in a tomb of phase MA3. This date corresponds to that given by the *Standardized timeline* for his type 41 ¹⁷⁰.

1.3.1.2. Open socket spear heads (B)

Spearheads with short open sleeve (type B1)

The spearhead with short open socket is found in eleven cases ¹⁷¹. We can compare it to the type A4 of K. Böhner, dated its phase 3 (MA2 to MA3) ¹⁷², and types 30 and 32 of the *Standardized chronology*, that we find throughout the Old Merovingian ¹⁷³. The lengths of the casings are between 8.5 cm and 24.8 cm, those of the flames between 11.5 and

26.5 cm for widths ranging from 3 cm to 5.7 cm.

As we have seen previously, graves 47 and 237 benefit from a *terminus post quem* being placed in phase MA2, thanks to the presence of a coin in each of the tombs. Tomb 47 is therefore no earlier than 565, while the individual from burial 237 could not have been buried before

552. Graves 20, 51, 188 and 198 have been dated to the end of phase MA2 or the beginning of phase MA3. Finally, in three cases, the spearhead was in a tomb of phase MA3 ¹⁷⁴.

For graves 27 and 132, the furniture collected in the tomb is not sufficiently dating to allow going beyond a dating located between phases MA2 and MA3.

Spearheads with long open socket (type B2)

The long open socket spearhead is found in seven cases ¹⁷⁵. This guy is dated all vi^e century in northern France ¹⁷⁶. As for the spearheads with short open casing, it corresponds to K. Böhner's type A4, indicating a dating between MA2 and MA3 ¹⁷⁷. The lengths of the sockets range from 15 to 44 cm, the flames having lengths ranging from 11.2 to 28 cm, and 2.5 to 4 cm wide. The oldest was found in tomb 208, dated phase MA1. Graves 59 and 168 were dated to phase MA2, but it was not possible to specify the dating for the specimen of grave 115, the latter is therefore attributed to phases MA2 to MA3. In phase MA3, three spearheads with long open casings are identified.

Spearhead with very long open socket (type B3)

The examples of tombs 82, 123 and 235 stand out for their proportions. The cartridges measure between 25.5 and 28.5 cm, for a flame length ranging from 8.4 to 11.5 cm. The copy of tomb 82 was provided with a transverse rivet at the socket. These three models are dated to phases MA1 and MA2 in the German necropolises of Schretzheim and Pleidelsheim ¹⁷⁸. In northern France, they are related to type 33 of the *Standardized chronology*, that we find

throughout the Old Merovingian ¹⁸⁰. For burial 123, it was not possible to specify whether it was a tomb of phase MA1 or MA2. On the other hand, tombs 82 and 235 are dated to the end of phase MA2, and this because of the presence, in each of these burials, of a fine non-turned ceramic vase of Germanic tradition, which can be found from the middle of the vi^e century and until the beginning of the vii^e century (type A1 in tomb 235 and type A2 in tomb 82) ¹⁸¹. By analogy, we therefore propose to place the spearhead of burial 123 in the same phase (MA2).

The spear of the grave 192

In tomb 192, the spearhead unearthed presents morphological criteria which classify it in the category of spikes. Its socket, massive, round section extends continuously in a point of diamond section (L. of the socket: 10.5 cm; L. of the flame: 17.5 cm). The socket is decorated at its base with four parallel incisions, as well as at the base of the point, followed by two incised chevrons (fig. 8).

We find three similar copies in the German necropolis of Mengen (about 50 km south-east of Erstein), including one which is in a particularly rich tomb belonging to a small group of individuals who would represent a social elite ¹⁸². Other parallels exist in tomb 44 of Neresheim (Baden-Württemberg) ¹⁸³ or in graves 104, 339, 557 and 580 of Schretzheim (Saarland) ¹⁸⁴.

Erstein's tomb has been dated to phase MA3, due to the presence of a bronze pot (type B2) made of fine turned ceramic (whose squat shape places it in the earliest in the second third of the vi^e century, at the latest at the beginning of the vii^e century ¹⁸⁵) and a brass alloy belt trim with moving contours and interwoven monster decorations, dated to the end of the 6th century.

or early vii^e century ¹⁸⁶. This form of spearhead is said to have a stingy influence. The horse harness elements in the tombs of Erstein and that of Neresheim are in line with this influence, reinforced in Erstein by the presence of a stirrup ¹⁸⁷. Such assemblies are also known in Hungary and Serbia ¹⁸⁸. Erstein's copy is similar to G. Csiky's type L.1 ¹⁸⁹. According to the author, this type of spear, by its shape, is made to resist a frontal load without bending or breaking, and seems to correspond to the spikes used to penetrate the breastplates of the adversaries. It would then be to put in relation with the heavy cavalry which played a considerable role in the vi^e and vii^e centuries due to the democratization of the stirrup, the latter significantly increasing the efficiency of this military body. We therefore notice here the association of this spear and the stirrup that we find in the tomb 192. In

170. Legoux, Périn and Vallet 2009, p. 28.

171. Burials 15, 20, 25, 27, 47, 51, 83, 132, 188, 198 and 237.

172. Böhner 1958, p. 149-150.

173. Legoux, Périn and Vallet 2009, p. 27.

174. Burials 15, 25 and 83.

175. Burials 30, 59, 115, 160, 168, 208 and 218.

176. Legoux, Périn and Vallet 2009, p. 27.

177. Böhner 1958, p. 149-150.

178. Burials 30, 160 and 218.

179. Koch 1977, p. 109; Koch 2001, p. 274.

180. Legoux, Périn and Vallet 2009, p. 27.

181. Châtelet 2002, p. 116-117.

182. Walter 2008, p. 177.

183. Knaut, Hundt and Hahn 1993, p. 121.

184. Koch 1977, p. 112.

185. Châtelet 2002, p. 111-113.

186. Simmer and Buchet 1993, p. 86; Koch 2001, p. 87.

187. We would like to thank M. Kazanski, I. Bede and D. Glad for their invaluable assistance in the study of this stake.

188. Curta 2008, p. 306.

189. Csiky 2013, p. 2.

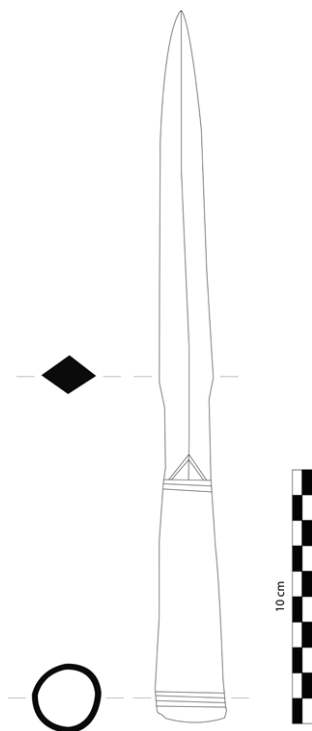


Fig. 8 Spearhead of Erstein's 192 burial
(drawing T. Fischbach).

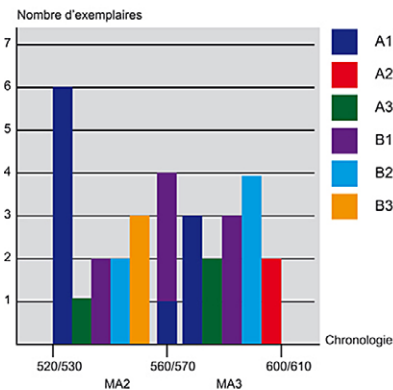
Byzantine sources, this type of cavalry mainly used a large lance, called "kontos" or "kontarion"¹⁹⁰,

which perhaps corresponds to this type of spear. The rest of the real estate (the scramasaxe, the longsword and the buckle plate) are of types known within the necropolises of the Frankish and Germanic worlds, and this spear is therefore probably either a locally made replica or an imported object.

1.3.2. Typochronological evolution spearheads

At first glance, the spearheads do not seem to present a typochronological evolution. If the different types seem to coexist on the three identified phases (MA1 to MA3), we notice however that type A1 irons, with short closed sockets, are clearly in the majority in phase MA2 (six copies). In the same phase, however, we find an equal number of type B spearheads of different lengths (two of type B1, one of type B2 and three of type B3). In phase MA3, there is an almost equal distribution of the different types, with three type B2 spearheads (long sleeve open), for two type A1 spearheads (short sleeve closed) and two type B1 (short sleeve open), and two for type A2 (long closed socket) and A3 (very long closed socket).¹⁹⁰ century.

If the one takes into account only the criterion of the socket (closed, type A, or open, type B), this coexistence of the two types is all the more striking. There are 15 copies with closed cases for 21 copies with open cases. At phase MA2,



	A1	A2	A3	B1	B2	B3
MA1	-	-	-	-	1	-
MA2	6	-	-	2	1	3
fin MA2 - début MA3	1	-	-	4	-	-
MA2 à MA3	-	-	2	2	2	-
MA3	-	2	-	3	3	-

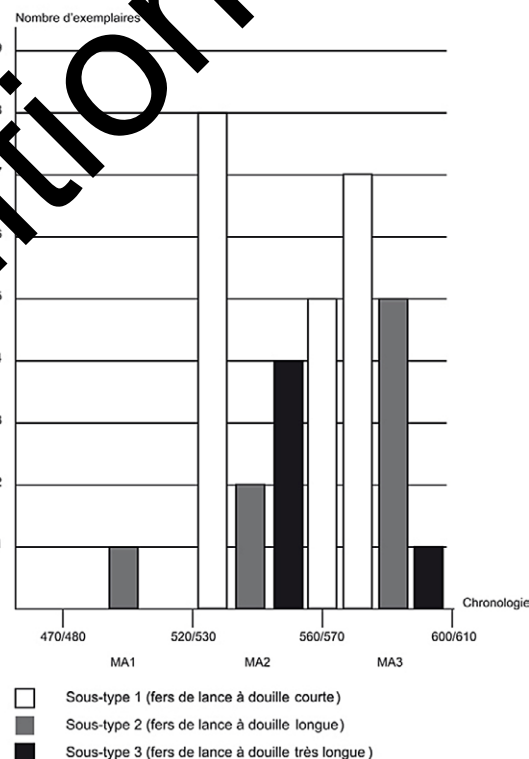


Fig. 9 Chronological distribution of the different types of spearhead.

there are seven examples of type A for six examples of type B. At the transition between phases MA2 and MA3, those with open socket (type B) are predominant (four with closed sockets for one with open socket). Finally, in phase MA3, the spearheads with closed sleeves (type A) and those with open sleeves (type B) meet in almost equal numbers (seven units of type A for six units of type B, fig. 9).

190. Csiky 2013, p. 91.

On the other hand, if we take into account the length of the socket relative to the flange, whether it is open (type B) or closed (type A), a tendency seems to exist. Spearheads with short sleeves (subtype 1) are in the majority in the MA2 phase since there are eight examples, for two examples with long sleeves (subtype 2) and four examples with very long sleeves (subtype 3). At the transition between phases MA2 and MA3, this is the only type listed (five copies). In phase MA3, there are seven for five with long sleeves (subtype 2). A very slight decrease in the use of the spearhead with a short socket is thus observed between phase MA2 and phase MA3. For long socket spearheads (subtype 2), the opposite effect is observed. The oldest copy dates from phase MA1. Then, there are two examples in phase MA2, none at the transition between MA2 and MA3, and five in phase MA3. If we compare these data with the small corpus of nine spearheads from the Merovingian necropolis of Vendenheim, we observe the same trend. If the small number of copies of this corpus limits interpretations, it is of interest to have benefited, for certain tombs, from radiocarbon dating crossed with the dating of the furniture.¹⁹¹

1.4. THE UMBOS OF SHIELD

The *umbo* shield was found 17 times on the 58 weapon tombs of the necropolis¹⁹². For four of them, they were only fragments that did not allow an in-depth study (burial 27, 69, 136 and 149). In addition, two copies could not be studied. They will therefore not be treated in this study. That of tomb 192 is not entirely preserved but nevertheless presents criteria allowing a typo-chronological approach. The examples of tombs 69 and 83 are only represented by fragments which do not allow a detailed study.

All were in tombs in burial chambers. It can be assumed that seven of these were marked on the surface, due to the empty area surrounding the tomb.¹⁹³ The *umbos* were all deposited in the southern half of the tomb: in four cases they were in the center¹⁹⁴, in four cases also in the south-east¹⁹⁵ and in six cases in the southwest. In burial 190, the *umbo* was on the individual's upper right limb while in tomb 192 it was at his shoulder level. We can assume for these two tombs that the shield was placed on the lid of the rigid container which housed the body. Upon decomposition of the container, the *umbo* fell on the individual. Concerning the four tombs where only fragments of *umbo*, they are looted graves. The skeleton, the furniture and what remains of *umbos*

were therefore no longer in the initial position.

In six cases, the *umbo* shield was found alongside the scramasaxe, long sword and spearhead¹⁹⁷. It is systematically associated with the latter except for burials 69 and 204. In burial 69, it was only found with arrowheads, but this grave was looted and it is possible that other weapons accompanied it. In burial 204, he was discovered alongside a scramasaxe and a long sword. In six cases, it is only associated with the spearhead¹⁹⁸ and it is accompanied by at least the scramasaxe in nine cases¹⁹⁹.

The *umbos* all have very similar dimensions, without these allowing chronological distinctions. The diameters are between 16 and 18.2 cm. The total heights range from 8 to 10.3 cm, for a collar height between 2 and 3.5 cm. The skirts are between 2 and 2.6 cm wide, the latter all having five rivets. Five of them have partially preserved the manipulator²⁰⁰.

1.4.1. Typo-chronological study of *umbos* shield

The shape of the rivets used to fix the *umbo* to the shield and which are distributed over the skirt is one of the most striking typo-chronological criteria. In Basel-Bernerring (Switzerland) as in Schretzheim (Germany), the flat rivets seem to be found more in the graves of the second third of the VI^e century, while we find hemispherical rivets rather in those dated to the third third of this century. In the north of France, the same differences are observed, with types 80 ("Silver leaf pastilles") and 83 ("Bronze leaf pastilles"), which appear in phases MA1 to MA2, while the type 84 ("Bronze bushes") is in phase MA3²⁰².

To facilitate the study, they have been separated into two major types, themselves subdivided into two. Group A is that of *umbos* with flat rivets covered with copper alloy and group B that of *umbos* with hemispherical rivets covered with a copper alloy. Subgroup 1 is that of *umbos*

with flat terminal buttons, subgroup 2 that of *umbos* without end buttons (fig. 10).

1.4.1.1. The *umbos* shield with flat rivets (A)

The umbo s shield with flat rivets and terminal buttons (type A1)

The A1 group is characterized by a conical cap, topped with a flat end button, a slightly tapered collar and five flat rivets covered with copper alloy on the skirt.²⁰³ This type is dated to phases 1 and 2 (525 / 530-545 / 550 and 545 / 550-565 / 570) of the necropolis of Schretzheim (Bavaria) by the association of the flat terminal button with the flat rivets

191. Barrand-Emam, Chenal and Fischbach 2013b, p. 294.

192. Burials 18, 20, 25, 27, 59, 69, 82, 83, 110, 136, 149, 153, 192, 198, 204, 208, 209, 218, 266 and 293.

193. Burials 18, 25, 192, 204, 208, 218 and 266.

194. Burials 20, 59, 83 and 204.

195. Burials 25, 192, 266 and 293.

196. Burials 18, 82, 198, 208, 209 and 218.

197. Burials 25, 83, 153, 192, 208 and 208.

198. Burials 18, 27, 82, 149, 266 and 293.

199. Burials 20, 25, 83, 153, 192, 204, 208, 209 and 218.

200. Burials 25, 110, 198, 208 and 266.

201. Martin 1976, p. 52-54; Koch 1977, p. 114-116.

202. Legoux, Périn and Vallet 2009, p. 31.

203. Burials 59, 82, 208 and 293.

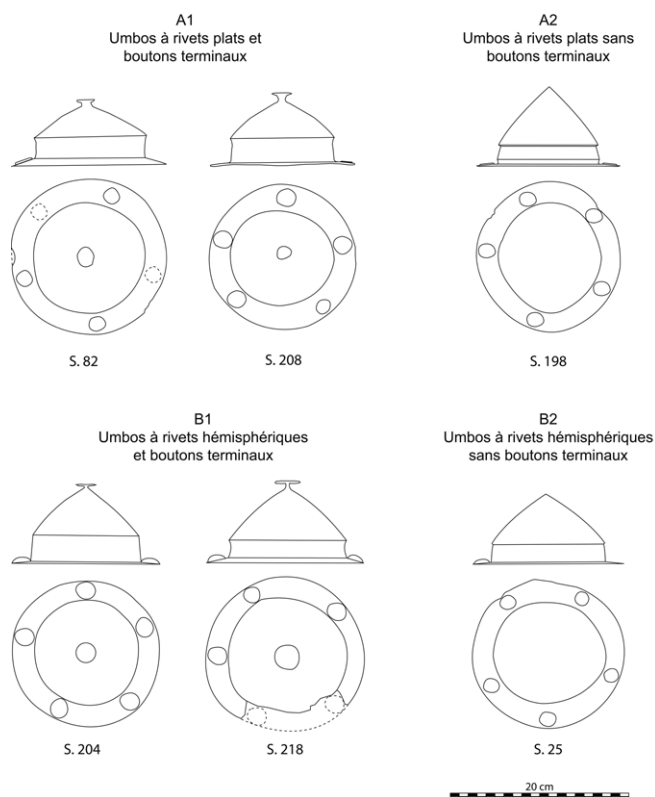


Fig. 10 Typology of umbos shield of the necropolis of Erstein
(drawings P. Rohmer, M. Châtelet, T. Fischbach).

coated with copper alloy²⁰⁴. In Bâle-Bernerring (Switzerland), the same dating is given by M. Martin²⁰⁵. The oldest specimen was unearthed in tomb 208, dated phase MA1. The other three were in tombs in phase MA2. Tomb 59 has been dated by the presence of a small biconical fine ceramic pot turned type B2 dated 520/530 to 600²⁰⁶. In tomb 82, a fine non-turned ceramic of Germanic tradition of type A2, which appears during the second half of the 6th century²⁰⁷,

and the spearhead, whose parallels date from phase MA1 to MA2²⁰⁸, have made it possible to date the tomb from phase MA2. Tomb 293 has been dated to the same phase because of the spearhead that can be found essentially from this date.

The umbos shield with flat rivets and without end buttons (type A2)

The *umbos* burials 198 and 209 are of type A2. They have an elongated conical cap without a terminal button and are provided with flat rivets covered with copper alloy. They correspond to the dated types of phase 3 (565-590 / 600) and 4 (590 / 600-620 / 630) of Schretzheim²¹¹.

In Bâle-Bernerring, Mr. Martin proposes the same dating²¹⁰. In tomb 198, the pommel of the longsword corresponds to

a type dated from Schretzheim phase 2 (545 / 550-565 / 570)²¹¹,

which makes it possible to date this tomb between the end of phase MA2 and the start of phase MA3. Tomb 209 is dated to phase MA2 by the short scramasaxe which was there, whose width less than 3 cm encourages its placement in phase 1 of

J. Wernard²¹².

1.4.1.2. The umbos shield with hemispherical rivets (B)

The umbos shield with hemispherical rivets and terminal buttons (B1)

Group B1 is represented by six units²¹³. They have a slightly rounded conical cap, a high frustoconical neck (with the exception of that of tomb 218 which is concave) and provided with five rivets with a hemispherical head covered with copper alloy. They are all surmounted by a flat terminal button (disappeared on the copy from tomb 59 but whose trace is still visible). This type is dated to phase 3 of the necropolis of Schretzheim²¹⁴, which corresponds to 565-590 / 600, ie phase MA3. It is also at the third third of the vi^e century that are attributed to the necropolis of the Basel-Bernerring necropolis²¹⁵.

In Erstein, two are dated from the end of phase MA2 or the beginning of phase MA3 (burial 20 and 116), three from phase MA3 (burials 18, 204, 218 and 266) and one from the end of phase MA3 or the start of phase MR1 (burial 266).

The umbos shield with hemispherical rivets and without end buttons (B2)

Both *umbos* burials 25 and 153 are of type B2. Their caps are slightly rounded conical, without terminal button and hemispherical rivets covered with copper alloy. The copy of tomb 25 has a lower cap than that of 153, as well as a lower neck. As a parallel, we can cite the examples of graves 8 and 24 of Klepsau²¹⁶. That of tomb 24 is similar to the copy of tomb 25 of Erstein, while that of tomb 8 of Klepsau, with its neck and its high cap, is comparable to the *umbo* from Erstein's grave 153. These two comparisons are also consistent on the dates obtained. The *umbo*

from tomb 24 of Klepsau is dated to the second half of the vi^e century while that of burial 8 was dated to the last third of the 6th^e century. The two copies of Erstein are dated phase MA3.

The umbo and the burial shield appliques 192

The *umbo* from tomb 192 is fragmented. It presents three domed rivets in copper alloy and a fragment of the cap on a high neck. The presence of hemispherical rivets encourages it to be dated in the last third of the vi^e century, i.e. phase MA3²¹⁷.

It has the particularity of being associated with decorative elements

204. Koch 1977, p. 115.

205. Martin 1976, p. 54.

206. Châtelet 2002, p. 111-112.

207. Koch 1977, p. 116-117.

208. *Ibid.*, p. 109; Koch 2001, p. 274.

209. Koch 1977, p. 115.

210. Martin 1976, p. 54.

211. Koch 1977, p. 95.

212. Wernard 1998, p. 774-775.

213. Burials 20, 110, 204, 218 and 266.

214. Koch 1977, p. 115.

215. Martin 1976, p. 54.

216. Koch 1990, p. 187.

217. Martin 1976, p. 52-54; Koch 1977, p. 114-116.



Fig. 11 Umbo in iron and sconces in iron and copper alloy from burial 192 (© Musée de la Préhistoire, Jarville-la-Malgrange).

in the form of five wall lights²¹⁸. Three of them are aviform. One is larger than the others, made of sheet iron, and is only partially preserved. The eye of the stylized bird is made of a garnet mounted in a socket. The other two are smaller and made of golden copper alloy. One of the two small aviform sconces is only partially preserved, while the other was discovered on the crown of the *umbo* (fig. 11). These two appliques were therefore probably riveted to the *umbo*.

shield. They can be compared to those unearthed in Italy, notably at Castel Trosino, in tombs T and Q²¹⁹, as well as Stabio²²⁰, even if they are of different shapes (cruciform, mainly). Other similar objects have been identified in some German necropolises, such as Giengen an der Brenz for example²²¹. An aviform sconce substantially similar to Erstein's was also found in tomb 48 of Donzow²²², but it did not appear to belong to the shield. The large aviform applique was probably riveted to the wood of the shield,

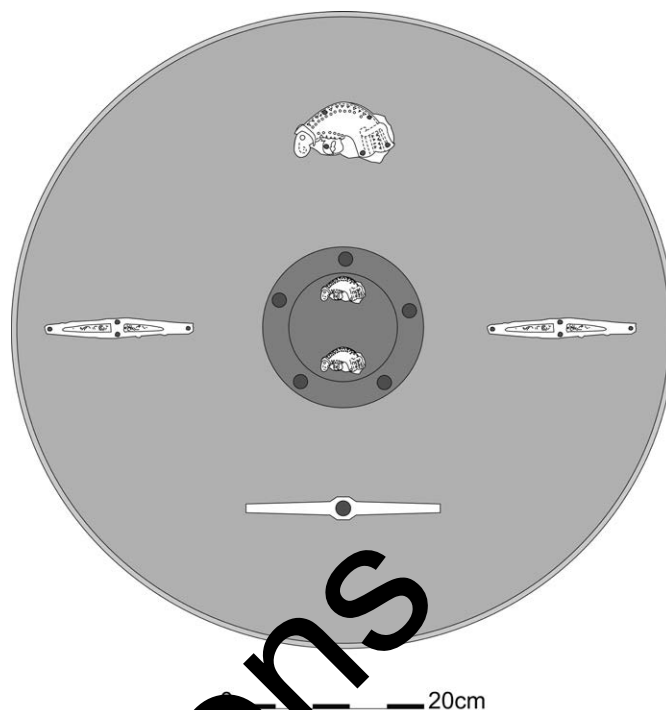


Fig. 12 Proposal for the restitution of the burial shield 192 (drawing T. Fischbach).

just above the *umbo*. On either side of the *umbo*, two oblong iron sconces were also unearthed. They were thus to "frame" the *umbo*, riveted to the wood (fig. 12). They can be compared, although they are smaller in size and come from a much less exceptional funerary context, with those of shields found in northern Europe, especially in Sweden, for example shields 1 and 3 of Valsgärde²²³ and those from Tomb 11 of Vendel²²⁴.

A fragment of a diamond-shaped iron plaque with a hemispherical copper alloy rivet found in Erstein's tomb 192 could be a remnant of a similar applique to those found at these Swedish sites. We can also cite the Sutton-Hoo shield in Great Britain, which combines an oblong applique and two aviform appliques, the latter perhaps having been made in Sweden.²²⁵ As part of this study, no parallel was found in France, Germany or Switzerland for this type of wall lights.

1.4.1.3. Typochronological evolution of umbos shield

In accordance with what has been observed in the north of France, Switzerland and Germany, a predominance of *umbos* shield with flat rivets in the first half of the VI^e century, while the *umbos* with hemispherical rivets are found rather in the second half of the same century.²²⁶ In phases MA1 and MA2, only the

218. We would like to thank S. Fischer for his help in identifying these sconces.

219. Paroli, Ricci Marco and Spagnoli 2007, pl. 24-34.

220. Windler, Marti and Niffeler 2005, p. 303.

221. Paulsen 1978, p. 96.

222. Neuffer 1972, p. 74.

223. Arwidsson 1942, p. 35-44.

224. Stolpe, Arne and Sörling 1927, p. 41, pl. XXIX.

225. Green 1963, p. 70-71.

226. Martin 1976, p. 52-54; Koch 1977, p. 114-116; Legoux, Périn and Vallet 2009, p. 31.

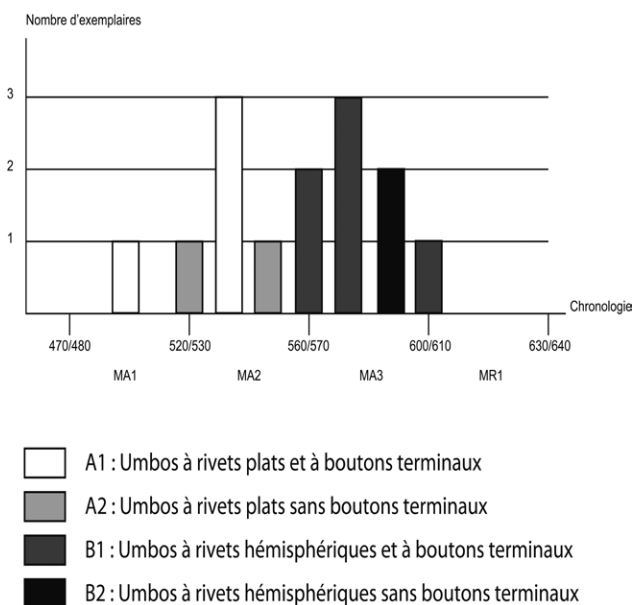


Fig. 13 Chronological distribution of the different types of umbos.

umbos type A (with flat rivets), whereas in phase MA3 and at the start of phase MR1, type B (with hemispherical rivets) predominates. In the three tombs dated from the end of phase MA2 or the beginning of phase MA3, we find one specimen of type A for two specimens of type B, thus constituting a transitional phase (fig. 13).

1.5. ARROW TIPS

There are twenty arrowheads in eleven graves in total²²⁷. In one case they are associated with the scramasaxe and the spearhead²²⁸, in one case with the scramasaxe, spear and shield, in two cases with the lance,²²⁹ in one case with the scramasaxe, long sword and shield and in three cases only with the scramasaxe²³⁰. In the case of burial 69, which was looted, only a fragment of an umbo of a shield alongside arrowheads. The graves 163 and 166 did not yield any other piece of armament than the latter.

In three cases, the individuals were buried in a narrow pit²³¹. All the other burials were burial chambers.

The different types of arrowheads found (oval flame, bay leaf or diamond, and open or closed socket) are not particularly dating and their forms are therefore generally common to the entire Merovingian period.²³⁴ (fig. 14).

227. Burials 4, 15, 30, 69, 136, 163, 166, 170, 204, 210 and 280.

228. Burial 15.

229. Burial 136.

230. Burials 30 and 170.

231. Burial 204.

232. Burials 4, 210 and 280.

233. Burials 15, 163 and 166.

234. Böhner 1958, p. 162-164; Legoux, Périn and Vallet 2009, p. 26.

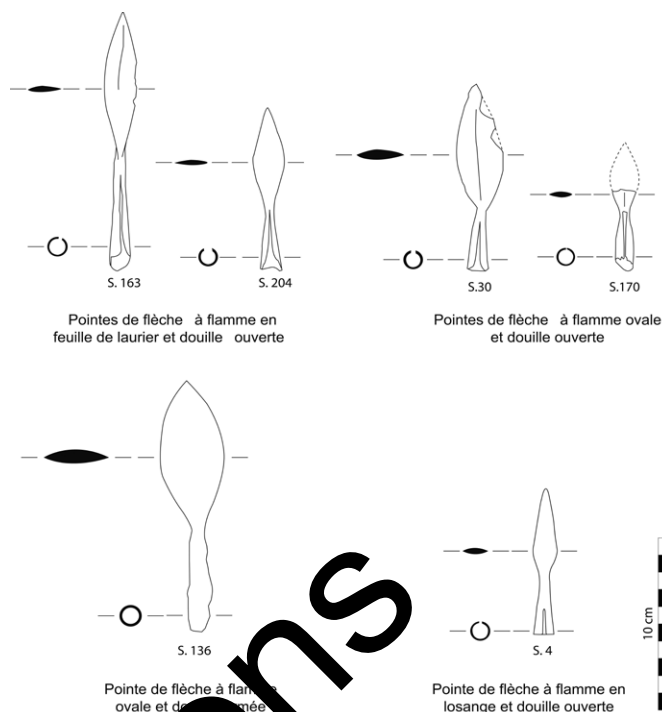


Fig. 14 Typology of arrowheads in Erstein's necropolis

(following B. Rohmer, M. Châtelet, T. Fischbach).

1.5.1. Chronological study of arrowheads

1.5.1.1. Laurel leaf flame arrowheads and open casing

Laurel leaf flame arrowheads and open casing are found in seven tombs²³⁵. A second arrowhead in Tomb 210 only had the laurel leaf flame preserved. The socket lengths are between 2.8 and 6.9 cm for flame lengths ranging from 4.7 to 8 cm, their width being between 1.5 and 2.6 cm. The copy of burial 280 is the oldest since this tomb dates from phase PM to MA1. Then come the two copies of tomb 210 which was dated phase MA2. Burial 136 was dated to the end of phase MA2 or the start of phase MA3, tomb 30 to phase MA3 and tomb 204 to the end of phase MA3 or the start of phase MR1.

1.5.1.2. Arrowheads with oval flame and open socket

The other type found in large numbers is the arrowhead with oval flame and open socket. The casings are between 3 and 4.6 cm long for a flame length ranging from 4 to 8.5 cm, their width being between 2 and 2.7 cm. They were found in six graves. As we have just mentioned, tomb 280 is the oldest, since it dates from phase PM to MA1. Burial 163 is placed in a

235. Burials 30, 136, 163, 166, 210, 204 and 280.

236. Seven copies in tombs 30, 136, 163, 170, 280 and two copies in tomb 15.

chronological range from phase MA1 to the beginning of phase MA2. The latter delivered an oval flame tip, but its socket was not preserved. Grave 15 is dated phase MA3, as are graves 30 and 170, which contained an arrowhead with a broken flame, but a restitution suggests an oval flame.

1.5.1.3. The oval flame arrowhead and closed casing of the tomb 136

An arrowhead with an oval flame and closed socket was found in burial 136, dated to the end of phase MA2 or the beginning of phase MA3.

1.5.1.4. Arrowheads with diamond flame and open casing

Finally, three arrowheads with diamond-shaped flame and open casings were identified. Two were in burial 4 and one in burial 69. Burial 4 was attributed at the end of phase MA3 or at the beginning of phase MR1. They were both deposited in the southern part of the tomb, at the level of the right arm of the deceased. The sockets are open and measure

3.4 cm long. Only one is whole. Its flame is diamond shaped and measures 5 cm long and 1.3 cm wide. Tomb 69 was looted, but the presence of a fragment of a fine non-turned ceramic biconical pot of Germanic tradition allows us to hypothesize a dating located in the second half of the 6th century. ²³⁷ century (end of MA2 to MA3). The found tip has an open socket and a diamond-shaped flame, the width of which is 2 cm for a total length of 10.9 cm.

1.5.2. Typochronological evolution of arrowheads

The arrowheads do not seem to present characteristic morphological criteria from one phase to another and do not present precise dating elements. In tomb 166, we find the two types of arrows (with an oval flame and a laurel leaf flame) which appear in the other tombs, not allowing their functions to be determined according to their morphology. The arrowheads from burial 180 were accompanied by a quadrangular-shaped loop of copper alloy, located northwest of the tomb, north of the skull, which may have belonged to the quiver harness in which the arrows were located. .

1.6. THE AXES

The axe is the weapon that is least well represented in Erstein, this category being identified in only three graves ²³⁸

(fig. 15).

In graves 41 and 101, the axes were placed in chambers (graves 41 and 101), with grave 202 in a narrow pit. They were all on the right side of the individual,

²³⁷. Châtelet 2002, p. 116-118.

²³⁸. Burials 41, 101 and 202.

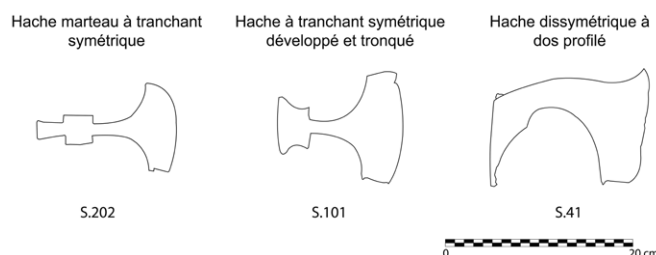


Fig. 15 The three axes of the necropolis of Erstein (drawings P. Rohmer, M. Châtelet, T. Fischbach).

at the height of his knee. They can be accompanied by a scramasaxe and a longsword in tomb 41, only by a scramasaxe in tomb 202. The axes are each of a different type.

1.6.1. The symmetrical-edged hammer ax from tomb 202

The copy in burial 202 is a hammer-ax with a symmetrical edge and a lug, corresponding to the shape of W. Hübener. This type is dated to the second half of the

and the first half of the 7th century (PM to end of MA2) ²³⁹. It is associated with a belt buckle rather used during phase MA2 and with a small scramasaxe which dates from phases MA2 and MA3, we can therefore propose a dating for the tomb located at the beginning of phase MA2.

1.6.2. The developed and truncated symmetrical-edged ax from tomb 101

Tomb 101 contained an ax with a symmetrical edge developed and truncated with a lug and a protuberance at the shaft. This is type G by W. Hübener, which dates from the second half of the 6th century. ²⁴⁰ century, although it is still occasionally found at the beginning of the eighth century. ²⁴⁰. The accompanying fine non-turned ceramic biconical pot of Germanic tradition type A1 indicates a dating also located in the second half of the sixth century. ²⁴¹ century (finMA2 to MA3).

1.6.3. The asymmetrical contour-backed ax of the tomb 41

In tomb 41, it is an asymmetrical ax with a contoured back, which belongs to the K form of W. Hübener. This type is found during the second half of vi^e century ²⁴². In franc territory, it still appears during phase MR1 ²⁴³. It is associated with two buckle plates and a light scramasaxe with a wide blade dated from phase MR1. The date used for the tomb is between the end of phase MA3 and the start of phase MR1.

²³⁹. Böhner 1958, p. 171; Hübener 1980, p. 85.

²⁴⁰. Böhner 1958, p. 174; Hübener 1980, p. 83; Koch 2001, p. 171; Legoux, Périn and Vallet 2009, p. 54.

²⁴¹. Châtelet 2002, p. 116-118.

²⁴². Böhner 1958, p. 171; Hübener 1980, p. 84.

²⁴³. Legoux, Périn and Vallet 2009, p. 54.

1.7. SUMMARY ON THE ARMAMENT OF THE MEROVINGIAN NECROPOLIS OF EERSTEIN

The dates obtained by the study of the weaponry and associated objects have revealed a very high concentration of weapon graves in the second half of the 6th century. Of the 56 graves involved, two are dated to the end of the 5th or the beginning of 6th century (PM / MA1 phases)²⁴⁴ and burial 208 is the only one that has been dated to the first third of the 6th century (phase MA1). Tomb 163 covers the first half of the 6th century (phases MA1 to early MA2). Only one burial has been attributed to the first third of the 7th century (phase MR1)²⁴⁵

and three others are from the end of 6th or early 7th century (end of phase MA3 to start of phase MR1)²⁴⁶. All the other tombs are distributed between the last two-thirds of the 6th century (MA2 to MA3). Eighteen graves belong to the second third of the 6th century (phase MA2), 15 in the last third of the 6th century (phase MA3), seven at the end of the second or beginning of the third third of the 6th century (end of phase MA2 to start of phase MA3), three in the second half of the 6th century (end of phase MA2 to MA3) and four in the last two-thirds of the 6th century (phases MA2 and MA3).

From the end of 5th at the very beginning of 6th century (phases PM to MA1), only tomb 208 presents a heavy weaponry, consisting of the long sword, the scramasaxe, the spearhead and the *umbo*.

The other three tombs²⁴⁷ of this phase contained only the scramasaxe and / or arrowheads. During the last two thirds of the 6th century (phases MA2 to MA3), almost all of the rest of the site's weaponry is distributed within these burials, even if a group of more heavily armed tombs appears in the last third of this century (phase MA3)²⁴⁸. At the end of the 6th

and at the beginning of the 7th century (end of phase MA3 to phase MR1), the three tombs have in common the presence of a scramasaxe, only still has a long sword and an ax²⁴⁹, while in another arrows accompanied him²⁵⁰.

A scarcity of weaponry in the tombs therefore seems to begin at the beginning of the 7th century, in accordance with the funeral practices of the time, but the lack of burials from this century within the necropolis of Erstein prevents this phenomenon from being observed in continuity. The female burials, although not having been studied with precision, also seem to follow this trend, leading to several hypotheses: either the later tombs were in a part of the necropolis outside the excavation area or the burial area has been moved. Radiocarbon dating of the skeletons devoid of furniture or badly dated could perhaps make it possible to reveal these later burials, as was done recently on certain Alsatian sites, considerably lengthening the period of use of the necropolis.

2. THE QUESTION OF THE SOCIAL STATUTES OF THE TOMBS OF WARRIORS IN ERSTEIN AND ALSACE IN VI. AND AT THE BEGINNING OF THE VII. CENTURY

Without taking up the important bibliography on the interpretation of the social statutes of Merovingian tombs, moreover already summarized by S. de Longueville²⁵², we will attempt to analyze the data for the graves of Erstein's warriors, especially those which seem to be the most privileged. The term "warrior" can be debated. We should in fact rather speak of "weapon graves" or "weapon bearers", since graves without weapons could also be those of a warrior, buried without weapons. The term warrior refers to a social rather than an archaeological reality. For simplicity, however, it has been kept in this article, but it should therefore be borne in mind that this may only be a part of the warrior population.²⁵³

A comparative study was undertaken between the tombs of Erstein and those coming from several necropolises excavated recently in Alsace, containing weaponry and dating from the second half of the 6th century or early 7th century.²⁵⁴

These are in the Bas-Rhin the sites of Osthouse "Galgen", Matzenheim "Bodengewann"²⁵⁵, Odratzheim "Sandgrube"²⁵⁶

and Vœlkelheim "Atelier Warehouse"²⁵⁷, and in the Haut-Rhin of the necropolises of Illfurth "Buegelen"²⁵⁸ and Hégenheim

"5, route Hœpfigue"²⁵⁹. It is important to insist on the fact that these are only reflections and hypotheses, which in no way want to be an analysis of the hierarchical and social organization of populations in the Merovingian period. This approach is indeed difficult to carry out, in particular because the data are incomplete. For example, until now in Alsace, no necropolis has been explored on its entire hold. It is also very difficult to verify the original presence of furniture made from perishable materials in a geological context where it keeps very poorly, if at all, and the view of the furniture placed in the tombs is therefore truncated. We must also point out the lack of knowledge of beliefs and funeral rites for this period when the old "pagan" religions still seem to be confronted with Christianity, the latter having an influence on funeral practices. This hierarchy is therefore purely archaeological and in no way claims to reflect an absolute social hierarchy. Its purpose is to highlight differences in the treatment of the deceased during his burial which may refer to a certain status.

252. de Longueville 2007.

253. Périn 2006, p. 107.

254. We would like to thank M. Châtelet (Inrap GES; UMR 7044), A. Koziol (Pair; UMR 7044), H. Barrand-Emam (Antea Archéologie; UMR 7044), M. Rother-Zehner (Pair; UMR 7044) and D. Billoin (Inrap GES; UMR 6298) for having kindly shared the data and documents concerning these necropolises.

255. Châtelet 2009.

256. Koziol, Abert, Pélissier *et al.* 2012a.

257. Barrand-Emam, Chenal and Fischbach 2013b.

258. Roth-Zehner and Cartier 2007.

259. Billoin 2007.

244. Graves 236 and 280.

245. Burial 32.

246. Burials 4, 41 and 204.

247. Burials 163, 236 and 280.

248. Burials 25, 83, 153 and 192.

249. Burial 41.

250. Burial 4.

251. Koziol, Abert, Pélissier *et al.* 2012b; Barrand-Emam, Chenal and Fischbach 2013a.

	SP	Pillée	Enclos/ Tertre	Architecture funéraire	Épée longue	Umbo	Scramasaxe	Fer de lance	Pointe de flèche	Hache	Boucle simple	Garnitures de ceinture	Aumônière	Forces	Couteau	Ustensiles (briquets, pincettes, etc.)	Peigne	Monnaie	Harnachement de cheval	Faune	Céramique	Verre	Autres réceptifs	Datation
Groupe 1	25		?	Morken	X	X	X	X			A						X			X				MA3
	83			Morken	X	X	X	X				A				X				X	X			MA3
	153			Morken	X	X	X	X			F				X	X	X				X			MA3
	192		?	Morken	X	X	X	X				A	X			X			X		X			MA3
	208			Morken	X	X	X	X				A			X		X			X	X		Ba	MA1
	209			Morken	X	X	X	X			F		X		X	X	X			X	X	X		MA2
	110			Morken	X	X	X	X			A				X	X	X			X	X		C/Ba	fin MA2-début MA3
	59			Morken	X	X		X			F		X		X		X			X	X			MA2
	198			Chambre funéraire	X	X		X					X		X	X								fin MA2-début MA3
	204			Morken	X	X	X		X			F	X		X		X	X		X	X	X		fin MA2-début MA3
	262			Morken	X		X	X			A						X			X	X			MA3
	193			Morken	X		X	X			A				X	X	X			X	X			MA2
	47		?	Morken	X		X	X			A				X	X	X				X			MA2
Groupe 2	41			Morken	X		X			X		F			X		X							MA3-MR1
	253			Morken	X		X				F				X		X							MA3
	20			Morken		X	X	X			F				X		X	X			X			fin MA2-début MA3
	218		?	Morken		X	X	X			A						X			X				MA3
	18			Morken		X		X			F						X			X	X			MA3
	82			Morken		X		X			F						X			X	X			MA2
	266			Morken		X		X					X		X	X				X				MA3
	293			Morken		X		X			A	X			X		X			X	X			MA2
	69	X		?		X			X						X					X				fin MA2 à MA3
	15			Morken			X	X	X		A				X	X	X			X	X			MA3
Groupe 3	160			Morken			X	X				A	X		X	X				X				MA3
	168			Morken			X	X			F		X				X	X		X				MA2 à MA3
	188			Morken			X	X				A			X	X	X			X				fin MA2-début MA3
	200			Morken			X	X			A				X		X			X	X			MA2
	237			Fosse			X	X					X		X	X				X	X			MA2
	4			Morken			X		X			F	X		X	X				X				fin MA3-début MR1
	210			Morken			X		X		A		X		X	X				X				MA2
	280		?	Morken			X		X		A				X	X	X			X		X		PM à MA1
	30			Morken				X	X		F				X					X	X	X		MA3
	136	X	?	?				X	X						X					X	X			fin MA2-début MA3
	170			Morken				X	X		A					X				X				MA3
	202			Fosse			X			X	A						X							MA2
	32			Fosse étroite			X					D								X				MR1
Groupe 4	114			Morken			X				A													MA3
	185			Morken			X				F		X		X			X		X	X			MA2
	189	X		Morken			X								X			X		X	X			MA2
	217			Fosse étroite			X				F				X	X		X				X		MA2
	235			Fosse étroite			X						X		X	X	X							MA2
	236			Morken			X				F		X		X	X	X							PM à MA1
	270			Fosse étroite			X				F													MA3
	27	X		?							F					X								MA2 à MA3
	51			Fosse étroite			X				F									X				fin MA2-début MA3
	52			Morken			X				F		X		X	X				X	X			fin MA2-début MA3
	100	X		Morken																X				MA2
	115	X		?			X									X				X	X			MA2 à MA3
	123			Fosse étroite			X				F				X	X								MA2
	132			Fosse étroite			X				A				X	X	X							MA2 à MA3
	141	X	?	Morken			X				F									X				MA2
	149	X	?	?			X				F				X					X	X	X		fin MA2 à MA3
	177			Morken				X			A				X		X			X				MA2
	163			Fosse étroite					X		A		X		X	X					X			MA1 à début MA2
	166			Chambre funéraire					X						X	X								Indéterminé
	171			Morken						X			X				X			X	X			fin MA2 à MA3

Fig. 16. Assembly table of furniture from the tombs of Erstein's warriors, divided into wealth groups.

Preferred graves are shown in gray.

(A.: Copper alloy; F.: Iron; D.: Damascened iron; Ba.: Copper alloy basin; C.: Wooden box; Document T. Fischbach).

of the buried individual. In addition, as H. Steuer wrote, for the study of social status through tombs to be meaningful, funeral practices would have to be uniform over an area stretching from northern France to northern Italy, i.e. over 1,000 km, and over a period of 500

to 750 AD, nearly 250 years²⁶⁰. This is why it has been chosen here to deal with this question in a tight chronological and geographical framework, Alsace in the second half of the vi^e century and early vii^e century.

260. Steuer 1989, p. 104.

2.1. METHODOLOGY

For the warrior graves at the Erstein site, four groups of furniture wealth were created, based on the *Qualitätsgruppen* by R. Christlein²⁶¹, the first criterion chosen being armament (fig. 16). These are indeed the most significant pieces of furniture, and they have the advantage of being, a priori, objects that belonged to the deceased. This distinction is in line with the point of view of B. Young, who differentiates the personal objects of the deceased (armament, items of clothing, etc.) and funeral deposits (crocery, faunal deposits, etc.), the latter coming from the entourage of the deceased during the burial²⁶². We can put forward the hypothesis of clothing items specifically made for funerals, such as buckle plates or fibulae for example. However, such objects having undergone repairs are frequently found in Merovingian necropolises, some being sometimes closer to "patchwork". This is the case at Erstein with the copper alloy buckle plate from tomb 192. The latter plate was broken in two, then repaired with copper alloy sheets and rivets (fig. 17). The implementation of a similar repair should be noted on a Longueuil loop plate (Seine-Maritime, Haute-Normandie)²⁶³, but we can also quote the fibula from burial 516 of the necropolis of Schretzheim (Bavaria, Germany)²⁶⁴ and the buckle plate from tomb 40 of Krefeld-Gellep (Nordrhein-Westfalen, Germany), the fibula from burial 1103 of Odratzheim (Bas-Rhin, Alsace)²⁶⁵ as well as the repaired buckle plate which was unearthed within the necropolis of Vendenheim (Bas-Rhin, Alsace)²⁶⁷. All this seems to indicate that the object accompanying the deceased during the burial was worn during his lifetime, worn, broken and then repaired to be able to continue to be used, until the death of its owner. We can therefore suppose that these objects of adornment or clothing belonged to the deceased before his death and that they are not only ceremonial accessories.

The classification into wealth groups according to the furniture contained in the tomb does not therefore represent the social and hierarchical organization of Merovingian society, but it highlights the differences in the treatment of the deceased and funeral practices. By observing the privilege granted to certain individuals during their burial, we can thus propose an extrapolation of these data to the living, and suppose that these privileged funerals were the remains of individuals who may have had an important role in the society in which they lived. We must insist on the fact that these are only avenues for reflection that only ask to be checked and debated.

It would have been interesting to combine these different aspects with the available anthropological data. However, according to the study conducted by C. Bailly-Duclos within the framework of



Fig. 17. Buckle plate from Erstein's grave 192 (© Museum of the History of Art, Jarville-la-Malgrange).

historiography²⁶⁸ of the 56 warrior graves, only nine were of sufficient state of preservation for age determination and 20 for biological sex determination. Thus, an individual belongs to an age group between 20 and 29 years old.²⁶⁹ three are at least over 30 years old²⁷⁰, two are between 30 and 49 years old²⁷¹, one is over 40 years old²⁷² and two over 50²⁷³. All those for whom the sex could be determined are male²⁷⁴.

2.2. THE TOMBS OF WARRIORS OF EERSTEIN

Four wealth groups were therefore created based initially on weaponry. By taking as the first criterion the presence of a longsword in the tomb to characterize the most privileged tombs, the other groups were made in a decreasing manner (fig. 18). The first group, called group 1, is therefore characterized by the presence in the tomb of at least one long sword and has fifteen burials. They are systematically associated with at least one other weapon (one case), but are mainly associated with two other types of weapons (seven cases) or three others.

268. Doctorate entitled "The riding practice of the Merovingian elites (viii^e-viii^e-century): social identity and biological identity". We would like to thank her here for sharing this data concerning the graves of Erstein's warriors.

269. Burial 237.

270. Burials 100, 262 and 266.

271. Burials 110 and 123.

272. Burial 18.

273. Burials 168 and 177.

274. Burials 18, 59, 100, 110, 123, 132, 160, 163, 168, 177, 185, 189, 193, 202, 208, 237, 262, 266, 270 and 280.

261. Christlein 1973.

262. Young 1977, p. 36.

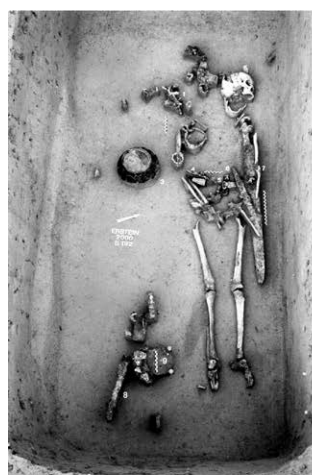
263. Lorren 2001, pl. XXX.

264. Koch 1977, pl. 132.

265. Pirling 1966, p. Pl. 5.

266. Koziol, Abert, Pélissier *et al.* 2012a, p. 105.

267. Barrand-Emam, Chenal and Fischbach 2013b, p. 312.



Groupe 1 : Sépulture 192



Groupe 2 : Sépulture 18



Groupe 3 : Sépulture 237



Groupe 4 : Sépulture 132

Fig. 18 Graves of wealth groups 1, 2, 3 and 4
(cl. Pascal Rohmer: Inrap).

types of weapons (seven cases). Next comes group 2, that of the tombs not containing a long sword but at least one *umbo* shield. The latter is associated with the spearhead and the scramasaxe in two cases, and only with the sword in four cases. One was associated with arrowheads, but this tomb having been looted, it is likely that other weapons were originally found in the tomb. It can be seen that for groups 1 and 2, the funerary architectures are only tombs in a burial chamber or in a "Morken" type burial chamber, thus reinforcing the privileged aspect of these burials. The third group is that of tombs without a long sword or *umbo*, but whose armament consists of at least two different types of weapons. Thirteen tombs correspond to this criterion. A single tomb contained three types of weapons, namely the spearhead, scramasaxe and arrowheads. In five cases, we find the spearhead associated with the scramasaxe, in three cases, the spearhead associated with arrowheads, in three cases also, the scramasaxe associated with the arrowheads, and in one case, an associated scramasaxe to an ax. These tombs all seem to be in a "Morken" type burial chamber, with the exception of two individuals buried in a narrow pit, and one whose looting of the tomb does not identify any funerary architecture. Finally, group 4 includes the 21 graves which yielded only one type

weapon. There are eight tombs containing a scramasaxe, ten tombs containing a spearhead, two tombs containing arrows and one tomb containing an ax. Eight graves are narrow pits, nine are of "Morken" type, three are of indeterminate type due to the looting of the grave and only one is in a burial chamber.

The study of the weaponry put in relation with the rest of the furniture and the funerary architecture revealed the presence of a group of six tombs that could be considered as privileged within group 1.²⁷⁵ A date of phase MA1²⁷⁶, another from phase MA2²⁷⁷ and four are dated phase MA3²⁷⁸. This group is characterized by the presence of a "panoply" of weapons, consisting of the long sword, the *umbo* shield, scramasaxe and spearhead. We can also include in this group tomb 110 (dated at the end of phase MA2 or the beginning of phase MA3), which certainly did not contain scramasaxe, but a basin made of copper alloy. We have therefore integrated into this small group the tombs that do not necessarily contain the "panoply" of weapons, but a deposit of copper alloy crockery (mainly basins) or wood (buckets or boxes), sometimes enhanced with rights in copper alloy or iron, or horse harness elements. This also makes it possible to take into account possibly looted graves. Indeed, the looting seems to focus generally on the body of the deceased, and not on the area dedicated to the deposits, in the southern half of the tomb. This is precisely where these wood or copper alloy containers, or the depots of harness elements, are usually found. A looted tomb can therefore possibly be interpreted as potentially privileged by the furniture discovered in the southern half of the burial chamber. Graves of heavily armed individuals and accompanied by items of harness and crockery made of copper alloy or wood are therefore considered as privileged.

In this small group, one grave seems to stand out from the rest. This is burial 192, the latter having delivered elements of horse harness (the only ones in the necropolis), but also, rare, an iron stirrup. The presence of this object, found alone and not in pairs, is explained by the fact that it is a "mounting bracket"²⁷⁹. This element may suggest possible avaricious influences²⁸⁰, which are also found in the iron stake contained in this tomb. We've also already touched on the oblong-shaped shield appliques, which perhaps refer to influences from Northern Europe, Great Britain and Sweden. These aspects make tomb 192 the most privileged warrior burial in Erstein's necropolis.

275. Burials 25, 83, 110, 153, 192, 208 and 209.

276. Burial 208.

277. Burial 209.

278. Burials 25, 83, 153 and 192.

279. Lazaris 2005, p. 276.

280. *Ibid.*



Sépulture 369 de Vendenheim
« Atlas-Fly » (cliché : Antea Archéologie)



Sépulture 1087 d'Odratzheim « Sandgrube »
(cliché : PAIR)



Sépulture 19 de Merxheim « Obere Reben »
(cliché : Antea Archéologie)



Sépulture 47 de Héguenheim « rue de
Hésingue » (cliché : David Billoin)

Fig. 19 Burials corresponding to wealth group 1
from other Alsatian necropolises.

2.3. WHAT COMPARISONS IN ALSACE

In the region, and in the corpus studied, a single tomb contains the "panoply" of weapons as we find in Erstein (Fig. 19). It is the tomb 1087 of Odratzheim, which contained the long sword / scramasaxe / spearhead / *umbo*²⁸¹. This unique assemblage can be qualified if we consider that some privileged graves may have been looted. This is for example the case of tomb 369 of Vendenheim, which only contained in armament a spearhead and a pyramidal element of a long sword harness. However, it delivered elements of horse harness, which allows us to assess the original richness of the tomb, also taking into account the funerary architecture of the "Morken" type.²⁸² On this same site, we can also take the case of tomb 121, which was also looted. She delivered a *umbo* shield, a spearhead, and a long sword pommel, found in the filling of the plunder cone. In the southern half of the tomb, a ceramic vase, glass goblet and deposits of fauna were also found.

The funerary architecture is also of the "Morken" type and the tomb was dug deep into the ground (1.60 m from the stripping surface)²⁸³. We can also mention the case of tomb 47 of Héguenheim²⁸⁴. The latter, although having been looted, was converted into a "Morken" type burial chamber, and placed under a mound. The weaponry that escaped looting included a spearhead and a *umbo*. We can suppose the original presence of a scramasaxe and a long sword, which would have been taken by the looters. The spearhead and the *umbo*

would have escaped them because they were in the southern half of the tomb, untouched by the looting. There are also two very close parallels for the tombs of Erstein in the necropolis of Merxheim, excavated in 2014, and whose study is underway.²⁸⁵ Burial 19 contained the "panoply" of weapons consisting of the long sword, the scramasaxe, the spearhead and the *umbo*, the deceased wore a belt at the waist consisting of a buckle plate, a back plate and an iron back plate. In the southern half was a copper alloy basin, a glass goblet and a wildlife depot. The first observations seem to indicate that this tomb could date from the last third of the vi^e century or early seventeenth^e century, dating which will be refined during the study of the necropolis. On the same site, burial 91 presents substantially similar criteria. Although not containing copper alloy buckery, the deceased was buried in a "Morken" type burial chamber, accompanied by the "panoply" of weapons, a triple iron belt garnish (plate-buckle, against -plate and back plate), as well as a glass goblet and a small ceramic vase. The dating obtained is then the same as that of tomb 19, i.e. the last third of the sixth century or early vii^e century. Tomb 19 of Merxheim is the only tomb in the corpus studied where we find the assembly of the "panoply" of weapons, a copper alloy basin and a "Morken" type burial chamber. Erstein's burial 110 did indeed contain a copper alloy basin, but the "panoply" of weapons is not complete, since the scramasaxe is missing.

By taking into account only the criterion of presence / absence of the longsword in the tomb, we also notice that certain graves containing a longsword do not seem to be able to be considered as privileged. This is the case, for example, of all the graves on the Vendenheim site that delivered this weapon (if we exclude the pillaged graves 121 and 369 mentioned previously) and the graves 1068 and 1078 of Odratzheim. These burials were arranged in narrow pits with rigid containers, sometimes as a burial chamber. The rest of the furniture deposited in the tomb is limited to ceramics and fauna, with the exception of a glass goblet in tomb 1078 of Odratzheim. These tombs seem to form a particular type of burial, which deserves to be studied in more depth,

281. Koziol, Abert, Pélissier *et al.* 2012a, vol. 2, p. 312.

282. Barrand-Emam, Chenal and Fischbach 2013b, vol. 2, p. 281-283.

283. Barrand-Emam, Chenal and Fischbach 2013b, vol. 2, p. 25-33.

284. Billoin 2007, p. 99.

285. Barrand-Emam forthcoming.



Fig. 20 Copper alloy basin containing a bone comb from Erstein's 110 burial (© Museum of the history of iron, Jarville-la-Malgrange).

2.4. A WARRIOR ELITE IN ERSTEIN?

2.4.1. The furniture accompanying the deceased

We can therefore identify with Erstein a first large group of warriors' graves, whose determining criterion is the presence of a long sword. We can isolate in this group a set of cases which stand out from the others by the presence of rare objects or in greater number and of a tomb in burial chamber of the "Morken" type. Armament seems to be the most determining element when it is varied and present in large numbers. In addition, the deceased is sometimes accompanied by "prestigious" deposits such as crockery in copper alloy or in wood, enhanced with appliques in copper alloy, or else by elements of harness, which allow, according to Mr. Martin, to link the individuals buried to the "small aristocracy"²⁸⁶

(fig. 20). R. Christlein also integrates the deposit of copper alloy crockery and horse harness elements into his group C²⁸⁷. The funeral deposits and crockery, which would come from the entourage of the deceased, seem to reinforce the privileged status of the buried person. We would then touch on two aspects, as proposed by B. Young: the personal objects of the deceased, which refer to his own "wealth" or to his status, and those deposited by his entourage at the time of burial.²⁸⁸ One could suppose, for example, that the copper alloy basin or the wooden boxes covered with copper alloy appliques are also objects that belonged to the deceased, simply deposited in the southern part of the tomb for lack of space in the container of the body of the deceased.

Faunal deposits were not specifically analyzed in this study. We can however mention the article by O. Putelat on the animal food deposits of the Alsatian necropolis of Eckwersheim "Burgweg Links", where he compares the discoveries of Eckwersheim and those of several Alsatian sites, in particular Matzenheim "Bodengewann", Osthouse "Galgen", Hégenheim "45, rue de Hésingue" and Illfurth "Buergelen".²⁸⁹ He notices that, if the original bone remains

animal deposited in the tombs are varied and as the assemblages of these different deposits are just as varied, it does not seem that some of these deposits or some of these associations are characteristic of so-called privileged tombs, or of which the furniture and the funerary architecture would indicate a higher social status.

2.4.2. Funerary architecture

The privileged group of tombs identified with Erstein, and whose parallels have been found in the region, are all housed in bipartite burial chambers of the "Morken" type. This type has generally larger dimensions than narrow pits or elongated chambers and requires more work to set up (fig. 21). According to Martin, a man can dig an average of 4.5 m³ per day. The larger pits therefore required a larger workforce. In Belgium, the best endowed tombs with furniture are also the most voluminous, and S. de Longueville concludes that "[...] the dimensions and volumes have a good relationship with the personality of the deceased [...]"²⁹⁰.

In some cases, we observe the presence of empty areas around some graves in Erstein. These voids would be the result of the presence of surface development, such as a mound or enclosure. We note that in some tombs, which only one piece of weaponry remains present in this empty area, which could lead to the view of privileged tombs that have been looted. Some of them also had post hole-like holes on some of their sides. These may be vestiges of a surface marking, such as a kiosk for example, or else cross beams. We note, however, that substantially similar funerary architectures are sometimes described differently from one excavation to another. This is for example the case for the sites of Vendenheim and Odratzheim,²⁹¹ and "extended burial chambers" in Odratzheim.²⁹² Even if in the latter case the negatives of the split planks were not observed, the tombs show similarities in the dimensions, in the form (long and narrow) and in the associated furniture (few weapons and few burial deposits.). They may indeed be different types, but their similarities should be analyzed in more depth. It is in this sense that the creation of a regional typology of funerary architectures will be approached within the framework of a collective research project currently being created.²⁹³

286. Martin 1978, p. 192.

287. Christlein 1973, p. 153.

288. Young 1977, p. 36.

289. Putelat, Châtelet, Latron-Colecchia *et al.* 2014.

290. de Longueville 2007, p. 112.

291. Barrand-Emam, Chenal and Fischbach 2013b, p. 208.

292. Koziol, Abert, Pélissier *et al.* 2012a, p. 47.

293. Entitled "Funeral spaces and practices in the Merovingian and Carolingian eras in Alsace (v. 8-9 centuries)", it is co-managed by the three regional operators: Antea Archéologie, Le Pair and Inrap.

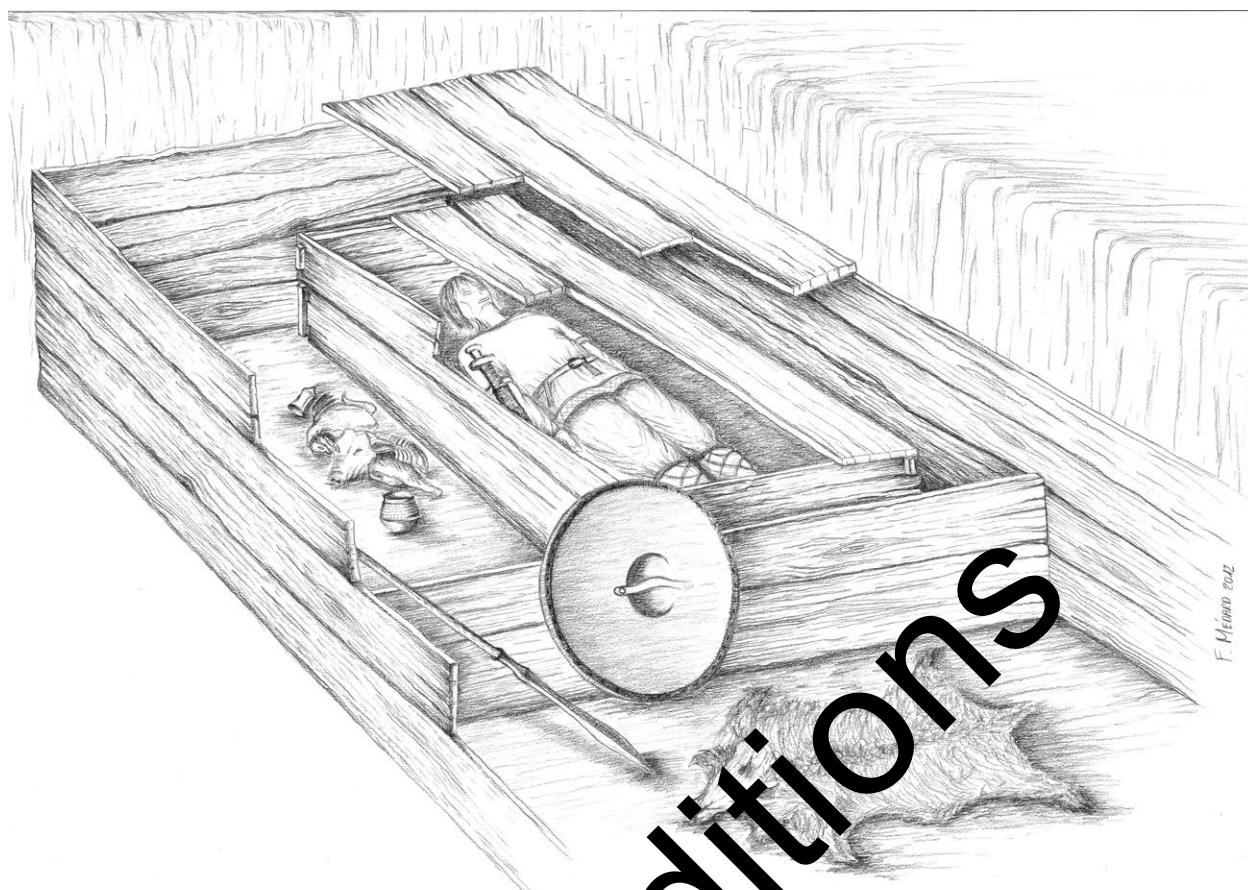


Fig. 21 Proposal for the restitution of tomb 121 of Vendenheim "Atlas-Fly warehouse", housed in a "Morken" type tomb
(© Antea Archaeologie, drawing F. Médard).

2.4.3. Topographical location of the graves

The topographical position of the privileged burials of warriors within the necropolis of Erstein did not seem to be decisive. In the case of privileged tombs of warriors from other Alsatian necropolises, none seems to be located at a decisive place within the funerary complex (in height or near a building for example), with the exception of tomb 19 of the necropolis of Merxheim. This burial was located on a ridge line, with the rest of the necropolis developing on the slope. However, it is important to keep in mind that these interpretations are based on sites, none of which has been explored in full and on sometimes very small areas (at Orléans, Matzenheim and Hégenheim for example).

influences are also noticeable by the large number of fine unturned ceramics of Germanic tradition, as well as the large number of deposits of fauna present in the tombs²⁹⁵. Only a complete study of the necropolis and a careful examination of all aspects of the site will be able to confirm these initial results.

Erstein's small group of seven privileged warrior graves do not seem to find any parallels in the region. Even within large funeral complexes, such as Illfurth "Buegelen" (193 tombs), or Odratzheim "Sandgrube" (145 tombs, including 118 excavated), we do not find such a proportion. Indeed, in Erstein, these tombs represent 12.5% of the tombs of warriors of the vi^e century of the site, against 3.57% for Odratzheim. In Hégenheim, the proportion is 20%, corresponding to one in five graves. In Illfurth, no burial places of warriors of the vi^e century does not present comparable criteria in terms of furniture and funerary architecture with those of Erstein. Other Alsatian necropolises were not included in this study, but were treated as part of a master's thesis on privileged burials in Alsace during the Merovingian period.²⁹⁶ On the corpus studied in

CONCLUSION

The armament of the necropolis of Erstein seems to present similarities in its composition with the corpora studied in southern and central Germany. The high proportion of long swords and *umbos* of shield, as well as the very low number of axes would go in the direction of rather Thuringian or Alamane influences²⁹⁴. These

294. Siegmund 2000, p. 184.

295. Putelat 2013, p. 440; 29 cases: burials 15, 18, 25, 30, 32, 52, 59, 82, 83, 101, 110, 136, 141, 160, 163, 168, 177, 188, 189, 193, 200, 208, 209, 218, 237, 253, 262, 266 and 280.

296. Simon 2002.

this memoir, four male tombs stand out for the richness of the funerary furniture. These are tomb 42 of the site of Niedernai "Kirchbuehl", tomb 212 of Illkirch-Graffenstaden "Colonne", tomb 250 of Colmar "Place Haslinger" and tomb 56 of Strasbourg "Clinique Sainte-Barbe".²⁹⁷ Tomb 42 of Niedernai "Kirchbuehl" contained the skeleton of an individual buried in a large pit whose traces of wood suggest a bipartite burial chamber of the "Morken" type. Important weaponry was discovered there (arrowheads, spearhead, angon, ax, long sword and shield umbo), accompanied by three ceramic vases and a glass vessel. It has been dated to around 500, so this tomb is earlier than Erstein's group.²⁹⁸

Concerning the tomb 212 of the site of Illkirch-Graffenstaden "Column", the dating located in the second third of the vii^e century limits comparison with the tombs of Erstein. The tomb, in a narrow pit, contained a long sword with a damascened pommel accompanied by numerous elements of the harness, and a three-part damascened iron belt lining.²⁹⁹ Colmar's tomb 250 delivered a copper alloy harness element, a *umbo* shield, a spearhead, as well as the imprint and microfragments of what could be a scramasaxe. The tomb is quite large, but nothing indicates whether it is a tomb in a "Morken" type burial chamber. No dating is proposed in the final operation report.³⁰⁰ Finally, the deceased from tomb 56 in Strasbourg "Clinique Sainte-Barbe" was accompanied by a three-part copper alloy belt lining, fitted with thong-type appliques intended to suspend the scramasaxe sheath which was deposited in the tomb. A longsword and its harness fittings were also found alongside the individual, buried in a narrow pit.³⁰¹ The tomb has been dated to the end of the second third of the vii^e century.

Apart from tomb 42 of Niedernai, which dates from around 500 and which presents common criteria with the small group of privileged warrior tombs of Erstein, the other three tombs of Colmar, Strasbourg and Illkirch-Graffenstaden are not comparable. If they are considered as privileged compared to the remains of the tombs excavated in the three respective sites, the tombs of Erstein present a more consequent, more "prestigious" furniture and a more imposing funerary architecture. In addition, the dates are different between these tombs and those of Erstein (end v^e - beginning of vi^e century in Niedernai and vii^e century for others).

Erstein's female graves have not yet been fully investigated as is the case with warrior graves. However, the privileged character of many of them, by the richness of the furniture that has been discovered there, is not in doubt, giving the Erstein site a special character. Explaining the presence of these privileged tombs is difficult because, as with many towns, little is known about the history of Erstein in the early Middle Ages. Occasional and often old discoveries are listed throughout the territory of the municipality, but

none makes it possible to make the link with the necropolis discovered at the place called "Beim Limersheimerweg" and to explain the presence of this privileged population. However, we know that a convent reserved for the daughters of the nobility was founded in Erstein in 850 by Irmengarde, wife of Lothaire I^{er}. The "*Villa Regia Herinstein*" is given to Lothair by his father Louis the Pious in 817, and a palace, called "*Pfalz*", would have been there since the Merovingian period.³⁰² The supposed place of this palace was the subject of an archaeological diagnosis, which provided no evidence of anthropogenic occupation before the xvi^e century.³⁰³ The outstanding question is therefore that of the link between the necropole mérovingienne and its privileged character and the supposed presence of this palace in the Merovingian period, as well as that of the convent founded some two hundred years later. Until very recently, no trace of Merovingian or High Middle Ages habitat was known around the necropolis, and the occasional and very tenuous discoveries made in the current city did not allow us to put forward any hypotheses.³⁰⁴ In November 2014, a diagnosis carried out by the Rhine Interdepartmental Archeology Pole unearthed, about 350 meters east of the necropolis, the remains of an important settlement from the early Middle Ages (vii^e - xi^e century). The area occupied by the remains during the diagnosis made it the largest alto-médiéval settlement site in Alsace.³⁰⁵ The excavation, carried out in the spring of 2016 by the Rhine Interdepartmental Archeology Pole, will therefore probably enable us to learn more about Erstein's occupation in the early Middle Ages.

In a more general chronological framework, the presence of a group of privileged graves of warriors in the second half of the vi^e century is perhaps related to certain events. When Théodebald, great-grandson of Clovis, died in 555 without leaving any descendants, Clothaire I^{er}, son of Clovis, seized his kingdom, corresponding to the eastern part of *Regnum Francorum* by Clovis. When Chilperic I^{er}, brother of Clothaire I^{er}, died in turn in 558, the kingdom was again unified.³⁰⁶ This period of peace exacerbated rivalries and internal conflicts,³⁰⁷ and it is perhaps in this context that the privileged individuals of Erstein emerged. The last years of vi^e century are also marked by recurring stays of Chilperic II in the region and the displacement of the capital of the kingdom from Reims to Metz, but also by the conflict between Théodebert II and Théodoric II, son of Chilperic II, and whose stake was the possession of Alsace.³⁰⁸

The strong presence of graves of warriors in these years on the site of Erstein as well as the presence of graves of privileged warriors may therefore also be explained in view of these events.

A global and exhaustive study of the necropolis is however necessary to better understand the chronological evolution of the site and to better apprehend the population which was buried there, through different approaches, be it anthropological, chronological, cultural or historical. Vigilance

297. Simon 2002, p. 132.

298. Zehnacker 1996, p. 69.

299. Baudoux 1997, p. 59.

300. Nilles 1995, p. 81-83.

301. Flotté, Blaizot, Baudoux *et al.* 1998, vol. 2, p. 67-74.

302. Holfert, Lausecker, Graff *et al.* 1992, p. 11.

303. Koch 2000.

304. Schnitzler and Rohmer 2004, p. 11; Hamm 2004.

305. Schneikert 2015.

306. Gauvard 2004, p. 49; Weber 2011, p. 46.

307. Durlat 2014, p. 154.

308. Weber 2011, p. 66.

increased archeology on the town is necessary in order not to lose any information that could enrich our knowledge on this major site for the Merovingian period in Alsace, in eastern France and in the upper Rhine valley.

BIBLIOGRAPHY

- Ament H.
1977, "Zur Archäologischen Periodisierung der Merowingerzeit", *Germania*, not.55, p. 133-140.
- Arwidsson G.
1942, *Valsgärde 6*, Uppsala, Almqvist (Die Gräberfunde von Valsgärde, 1).
- Barrand-Emam H.
Forthcoming, *Merxheim "Obere Reben", Alsace, Bas-Rhin (67)*, Final preventive archeology operation report, submitted to Drac Alsace (SRA), *Study in progress*.
- Barrand-Emam H., Chenal F. and Fischbach T.
2013a, *Artzenheim, "Allotment the Violettes" »Alsace, Haut-Rhin (68)*. A funerary complex from the First Middle Ages (end of the 6th - end of the 9th) and an occupation from the early Bronze Age, Final report of preventive archeology operation, filed at Drac Alsace (SRA), 3 vol.
- Baudoux J.
1997, *Archaeological interventions on the section 5 of the Strasbourg - Illkirch-Graffenstaden tramway. Urgent rescue of a Merovingian necropolis at a place called Colonne. Network monitoring*, Final report, document, deposited at Drac Alsace (SRA).
- Beilharz D.
2011, *Das frühmerowingische Gräberfeld von Horb-Altheim. Studien zu Migrations- und Integrationsprozessen am Beispiel eines frühmittelalterlichen Bestattungsgemeinschaft*, Stuttgart, K. Weiss (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden- Württemberg, 121).
- Biloin D.
2007, *Hégenheim (68), "45, rue deHésingue"*, Final report of preventive archeology operation, submitted to Drac Alsace (SRA).
- Böhner K.
1958, *Die fränkischen Altertümer des Trierer Landes*, Berlin, Gebr.Mann (Germanische Denkmäler der Völkerwanderungszeit, 1), 2 vol.
- Burzler A., Höneisen M., Leicht J. and Ruckstuhl B.
2002, *Das frühmittelalterliche Schleithelm - Siedlung, Gräberfeld und Kirche*, Schaffhausen, Baudepartement des KantonsSchaffhausen, Kantonsarchäologie (Schaffhauser Archäologie, 5), 2 vol.
- Charlier P.
2008, *Osteo-archeology and techniques: forensics, trends and perspectives: for a practical manual of human paleo-anthology*, Paris, Éditions J. Bocco (Pathologie, 2).
- Châtelet M.
2002, *Ceramics from the early Middle Ages from the Upper Rhine Valley (Alsace and Baden): typology, chronology, technology, economy and culture*, Montagnac, Monique Mergoil (Medieval Europe, 3).
- Châtelet M., Georges P. and Rohmer P.
2000, *Erstein "Beim Limersheimerweg" (Bas-Rhin). A Merovingian necropolis of the vi. - vii. century*, Preliminary report, submitted to Drac Alsace (SRA).
- Christlein R.
1966, *Das alamannische Reihengräberfeld von Marktoberdorf im Allgäu*, Kallmünz / Opf., M. Lassleben (Materialhefte zur bayerischen Vorgeschichte, 21).
- Csiký G.
2013, "A history of the Avar-Age close-combatweapons. Afunctional approach ", in *Dolgozatok az Erdélyi Múzeum erem-és régiségtárolból*, Uj sorozat VI-VII. (XVI-XVII.) Kötet, 2011-2012, Kolozsvár, Erdélyi Múzeum-Egyesület, p. 71-91.
- Curta F.
2008, "The earliest Avar-age stirrups, or the" stirrup controversy "revisited", in *The Other Europe in Middle Ages: Avars, Bulgars, Khazars and Cumans*, Leiden, Brill, p. 297-326.
- Curta F.
2014, *From Antiquity to the Middle Ages: the West from 313 to 800*, Paris, Ellipses (Pocket Ellipses).
- Fischbach T.
2010, *The armament and the warriors of the Merovingian necropolis of Erstein (vi. - vii. century). Typochronology and social status*, master's thesis, University of Strasbourg, supervised by Jean-Jacques Schwien.
- Flotté P., Blaizot F., Baudoux J. and Boës X.
1998, *Sainte-Barbe Clinic, Strasbourg, 29, rue du Faubourg-National*, Final summary document, deposited at Drac Alsace (SRA), 2 vol.
- France-Lanord A. and Salin É.
1946, "The long sword of the great invasions. Parallel between monuments, sources and laboratory work ", *Reports of the meetings of the Academy of Inscriptions and Belles-Lettres*, not.4, 90 vol., p. 586-595.
- Gauvard C.
2004, *France in the Middle Ages of the v. to xv. century*, Paris, Presses Universitaires de France (Quadrige - Manuals).
- Georges P.
2005a, "Anthropological approaches to the Merovingian necropolis of Erstein ", in (eds.), *History (s) of skeletons: archeology, medicine and anthropology in Alsace*, exhibition catalog, Archaeological Museum of Strasbourg, 20 October 2005-31 August 2006, Strasbourg, Museums of Strasbourg, p. 253.

- Green C.
1963, *Sutton-Hoo: the excavation of a royal ship-burial*, London, Merlin press.
- Hamm E.
2004, *Archaeological survey carried out at Erstein, 2 rue du vieux marché, February 25 to March 24, 2004*, Final summary document, deposited at Drac Alsace (SRA).
- Holfert L., Lausecker R., Graff A. and Fischbach A.
1992, "The Abbey of the Canonesses of Erstein", *Directory of the Historical Society of the Four Cantons: Benfeld, Erstein, Geispolsheim, Illkirch-Graffenstaden*, p. 9-21.
- Hübener W.
1967, "Zum merowingergewaltigen Kriegergrab von Dorfmerkingen", *Fundberichte aus Schwaben*, n 18, p. 207-232.
- Knaut M., Hundt H.-J. and Hahn R.
1993, *Die alamannischen Gräberfelder von Neresheim und Kösen, Ostalbkreis*, Stuttgart, K. Theiss (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg, 48).
- Koch J.
2000, "Erstein. ZAC Spinning", *Archeopagus*, n°1, p. 40.
- Koch U.
1977, *Das Reihengräberfeld bei Schretzheim*, Berlin, Mann (Germanische Denkmäler der Völkerwanderungszeit, Series A, 13), 2 vol.
- Kozioł A., Abert F., Péliissier A. and Putelat O.
2012a, *Odratzheim, Bas-Rhin, Sandgrube, Wehland housing estate. A necropolis from the early Middle Ages (end of v. century - VIII century)*, Final report of preventive archeology operation, deposited at Drac Alsace (SRA), 2 vol.
- Kozioł A., Abert F., Péliissier A., Putelat O., Schaaf C., Vigreux T. and Simon F.-X.
2012b, *Rœschwerg, Bas-Rhin, Housing estate "Am Vasserdum". Rural settlement and funerary complex from the early Middle Ages (end of the 6th century - end of 9th century)*, Geomorphological study of a portion of the alluvial plain of Ried Nord, Final report of preventive archeology operation, filed at Drac Alsace (SRA), 3 vol.
- Lazaris S.
2005, "Considerations on the appearance of the stirrup: contribution to the history of the horse in late Antiquity", in Gardeisen A. (ed.), *Equines in the ancient mediterranean world*, Proceedings of the colloquium organized by the French School of Athens, the Camille Jullian Center and the UMR 5140 of the CNRS, Athens, 26-28 November 2003, Lattes, Association for the Development of Archeology in Languedoc-Roussillon, p. 275-288.
- Legoux R., Buchet L., Calligaro T., Dhénin M. and Liéger A.
2005, *The Merovingian necropolis of Cutry (Meurthe-et-Moselle)*, Saint Germain-en-Laye, French Association of Merovingian Archeology (Memoirs of the French Archeology Association Merovingian, 14).
- Legoux R., Périn P. and Vallet F.
2009, "Standardized chronology of Merovingian funerary furniture between Manche and Lorraine", *Bulletin of the French Association of Merovingian Archeology*, special issue n. 3.
- Longueville S. from
2007, "Interpretation of funeral contexts. Principle of analysis of the criteria associated with the definition of so-called privileged tombs", in Verlypse L. (ed.), *Towns and countryside in Neustria: societies, economic territories, Christianization*. Acts of XV^e International Days of Merovingian Archeology of Grammont, Montagnac, Monique Mergon, Memoirs published by the French Association of Merovingian Archeology, 16), p. 103-120.
- Longueville S.
2001, *Fibulae and plate loops at the time Merovingian in Normandy: contribution to the study of settlement, exchanges and influences of the end of the V^e century at the beginning of the VIII^e century*, Saint-Germain-en-Laye, French Association of Merovingian Archeology (Memoirs of the French Archeology Association Merovingian, 8).
- Martin M.
1976, *Das fränkische Gräberfeld von Basel-Bernerring*, Mainz, Ph. Von Zabern (Basler Beiträge zur Ur- und Frühgeschichte, 1).
- Médard F., Rohmer P., Moulherat C. and Guillaume J.
2006, "The Merovingian necropolis of Erstein (Bas-Rhin): study of mineralized textiles in contact with fibulae", *Eastern Archaeological Review*, t. 55, p. 307-322.
- Menghin W.
1983, *Das Schwert im frühen Mittelalter: chronologisch - typologische Untersuchungen zu Langschwertern aus germanischen Gräbern des 5. bis 7. Jahrhunderts n. Chr.*, Stuttgart, K. Theiss (Wissenschaftliche Beihefte zum Anzeiger des Germanischen Nationalmuseums, 1).
- Müller HF
1976, *Das alamannische Gräberfeld von Hemmingen (Kreis Ludwigsburg)*, Stuttgart, Müller & Graff, Kommissionsverlag (collection Forschungen und Berichte zur Vorund Frühgeschichte in Baden-Württemberg, 7).
- Neuffer EM
1972, *Der Reihengräberfriedhof von Donzdorf (Kreis Sigmaringen)*, Stuttgart, Müller und Graff (Forschungen und Berichte zur Vorund Frühgeschichte in Baden-Württemberg, 2).
- Niles R.
1995, *Colmar, Place Haslinger*, Document final synthesis, deposited at Drac Alsace (SRA).
- Paroli L., Ricci M. and Spagnoli E.
2007, *The altomedievale necropoli di Castel Trovino, Borgo San Lorenzo, Italy*, All'Insegna del Giglio (Ricerche di archeologia altomedievale e medievale, 32-33), 2 vols.
- Paulsen P.
1978, *Das alamannische Gräberfeld von Giengen an der Brenz (Kreis Heidenheim)*, Stuttgart, Müller und Graff (Forschungen und Berichte zur Vorund Frühgeschichte in Baden-Württemberg, 10).
- Périn P.
2006, "Does funerary archeology faithfully reflect the composition and evolution of Merovingian weaponry?", in *Materiam superabat opus. Tribute to Alain Erlande-Brandenburg*, Paris, Meeting of National Museums: National School of Charters, p. 94-111.
- Pirling R.
1966, *Das römisch-fränkische Gräberfeld von Krefeld-Gelley*, Siepen M., Deutsches archäologisches Institut. Römisch-germanische Kommission and Rheinisches Landesmuseum (eds.), Berlin, Gebr. Mann (Germanische Denkmäler der Völkerwanderungszeit. Serie B, Die fränkischen Altertümer des Rheinlandes, 2), 2 vol.

- Putelat O.
2013, "Animal remains in a funeral context in Alsace from the first Middle Ages and its geographical margins", *Anthropozoologica*, No.48 (2), p. 409-445.
- Putelat O., Châtelet M., Latron-Colecchia A. and Réveillas H.
2014, "Animal food deposits of the necropole mérovingienne of Eckwersheim "Burgweg Links" (Bas-Rhin)", in *Encounter around the animal in a funeral context: acts of the IV^e GAAF meeting*, Saint-Germain-en-Laye, Sigmund F.
- Anthropology and Funeral Archeology Group,
p. 165-181.
- Reiss R.
1994, *From the Merovingian to the Reihengräberfriedhof von Westheim (Kreis Weissenburg-Gunzenhausen): Forschungen zur frühmittelalterlichen Landesgeschichte im südwestlichen Mittelfranken*, Nürnberg, Verlag der Germanischen Nationalmuseums, (Weissenburger Beiträge zum Anzeiger des Germanischen Nationalmuseums, 10).
- Roinné L.
2010, *Vintage chaplain clasps Merovingian*, research paper (2^e year of 2^e cycle), Louvre school, Paris, 2 vols.
- Roth-Zehner M. and Cartier E.
2007, *Illfurth Lieu-dit Buergelen, Housing estate "Les Hauts du Buergelen"*, Final report of preventive archeology operation, deposited at the Drac Alsace (SRA), 4 vol.
- Salin É.
1951, "The techniques of damasquining in Merovingian Gaul", *Gallia*, t. 9, p. 31-52.
- Schneikert F.
2015, *Erstein, Bas-Rhin, "Untergasse"*, Kraft road. A medieval alto settlement site (7th-11th century) associated with two funeral complexes from the end of the 9th century, Diagnostic report, submitted to Drac Alsace (SRA).
- Schnitzler B., Arbogast B. and Frey A.
2009, *The Merovingian finds in Alsace*, Mainz, Verlag des Römisch-Germanischen Zentralmuseums.
- Schnitzler B., Minor J.-M. Le, Ludes B. and Boës E. (dir.)
2005, *Skeleton history (s): archeology, medicine and anthropology in Alsace*, exhibition catalog,
- Strasbourg Archaeological Museum, 20 October 2005-31 August 2006, Strasbourg, Museums of Strasbourg.
- Schnitzler B. and Rohmer P.
2004, *Merovingian treasures of Alsace: the Merovingian necropolis of Erstein (vi^e-vii^e century AD)*, exhibition catalog, Archaeological Museum of Strasbourg, 22 October 2004-31 August 2005, Strasbourg, Museums of Strasbourg (Recent excavations in Alsace, 6).
- 2000, *Alemannen und Franken*, Berlin, W. de Gruyter (Ergänzungsbände zum Reallexikon der germanischen Altertumskunde, 23).
- Simmer A. and Buchet L.
1993, *The Merovingian necropolis of Ennery (Moselle): excavations by Émile Delort (1941)*, Rouen, French Association of Merovingian Archeology (Memoirs of the French Archeology Association Merovingian, 4), 1 vol.
- Simon S.
2002, *The "privileged" burials in Alsace in the Merovingian period (vi^e-vii^e century)*, Master's thesis supervised by Bischoff G., Henigfeld Y., Gild R., University Marc Bloch Strasbourg.
- Steuer H.
1989, "Archeology and history: Proposals on the social structure of the Merovingian kingdom", in Randsborg K., Accademia di Danimarca (ed.), *The birth of Europe: archeology and social development in the first millennium AD*, Rome, L'Erma di Bretschneider (Analecta Romana Instituti Danici, 16), p. 100-122.
- Stolpe H., Arne TAJ and Sörling O.
1927, *The necropolis of Vendel: explored by Hjalmar Stolpe*, Stockholm.
- Urban B.
1997, *Die hohe Kunst der Tauschierung bei Alamannen und Franken: Untersuchungen zur Technik und ein Katalog aller tauschierten Funde in Württemberg und Hohenzollern*, sl, Gesellschaft für Vor- und Frühgeschichte in Württemberg und Hohenzollern.
- Urlacher J.-P., Passard-Urlacher F., Gizard S., Legoux R. and Pilet-Lemière J.
2008, *Saint-Vit, the Cross Fields, Doubs: Merovingian necropolis, vi^e-vii^e century AD AD, and protohistoric enclosure, ix^e-v^e century BC AD*, Besancon,
- University press of Franche-Comté (Literary Annals of the University of Franche-Comté, 839).
- Urlacher J.-P., Passard-Urlacher F. and Manfredi S.
1998, *The Merovingian necropolis of Grande Oye in Doubs: Department of Doubs, vi^e-vii^e centuries AD.*, Saint-Germain-en-Laye, French Association of Merovingian archeology (Memoirs of the French Association of Merovingian Archeology, 10).
- Walter S.
2008, *Das frühmittelalterliche Gräberfeld von Mengen (Kr. Breisgau-Hochschwarzwald)*, Stuttgart, K. Theiss (Materialhefte zur Archäologie in Baden-Württemberg, 82).
- Watson M. D., J. J. and Thomann E.
2005, *The Merovingian necropolis of Waslonne at a place called Wiedbiehl (Bas-Rhin)*, Saverny Society of History and Archeology of France.
- Werner K.
2011, *Die Formierung des Elsass im Regnum Francorum - Adel, Kirche und Königtum am Oberrhein in merowingischer und frühkarolingischer Zeit*, Ostfildern, Thorbecke (Archäologie und Geschichte, 19).
- Wernard J.
1998, "Hic scramasaxi loquuntur. Typologisch-chronologische Studie zum einschneidigen Schwert der Merowingerzeit in Süddeutschland", *Germania*, not.76, p. 747-787.
- Windler R., Marti R. and Niffeler U. (eds.)
2005, *Die Schweiz vom Paläolithikum bis zum frühen Mittelalter: Vom Neandertaler bis zu Karl dem Grossen*, Basel, Verl. Schweizerische Gesellschaft für Ur- und Frühgeschichte.
- Young B.
1977, "Paganism, Christianization and Merovingian funeral rites", *Medieval archeology*, 7, p. 5-81.
- Zehnacker M.
1996, *A Merovingian necropolis in plain of Alsace. Niedernai "Kirchbuehl"*, Final summary document, deposited with Drac Alsace (SRA), 2 vol.

© CNRS Éditions