

The Vlfberht sword blades reevaluated

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To my friend and mentor in archaeology, Jenny-Rita Næss, Stavanger.

Background

Readers of archaeological literature about Viking Age weapons are familiar with the male name Vlfberht which is welded onto Viking Age Sword blades. The name is in the archaeological literature also written Ulfberht; V and U were used interchangeably for the semi-vowel [w], but the sword blade signature is with one single exception "written" <V>. He is regarded as a Frankish blacksmith and the name is Frankish, from the lower Rhine Area, and it is generally supposed that his sword blades were traded from the Frankish Realm to pagan Europe. During preparations for the publication of the Norwegian-Russian Sword Project it struck me that these "axioms" need a renewed discussion (on the Norwegian-Russian Sword Project: Stalsberg 1994). I also realized that there, - to the best of my knowledge -, is no typology of the variants of the Vlfberht signatures and geometrical reverse marks usually accompanying the Vlfberht signature. To be able to discuss production and trade of the Vlfberht blades, a typology of the variants of signatures and reverse marks is needed, and the chronological and geographical distributions of these variants must be analysed to form a basis for the reevaluation of the Vlfberht blades.

Some Vlfberht signatures are clearly not correctly "written", but lack letters, letters are turned upside down or turned back to front. They have been interpreted as falsifications, imitations or failed (Menghin 1975, Stalsberg 1989, Geibig 1991:121-122). To solve this question the forging and welding techniques have to be examined, both of genuine and possible imitations or falsifications, inside as well as outside the Frankish Realm. Different forging techniques may also reveal working methods of different smiths. This important and huge work is a task for future international research and will not be discussed here.

Also other signatures than Vlfberht have been found on Viking Age sword blades, such as the rarer Ingelrii (Geibig 1991:195 lists 37, of which I accept 32), and the unique signatures Leutlrit, Pulfbrii, Cerolt, Ulen, and Людога коваль (in Cyrillic letters) (Kirpičnikov 1966:tabl. XIV; tabl. XVII:2, 3, 4, Bergman & Kirpičnikov 1998: Abb. 2,2). Since only the Vlfberht blades are numerous enough for a broader analysis of the signature and reverse mark typology and their chronological and geographical distributions, only the Vlfberht blades will be discussed here.

The finds

The number of extant sword blades with the signature Vlfberht is not known. Every time archaeologists have searched for them in collections (e.g. Leppäaho 1964, Bergman & Kirpičnikov 1998). Probably the most extensive search project has been undertaken by the Norwegian-Russian Sword Project in 1992, headed by the Museum of Natural History and Archaeology in Trondheim, Norway and sponsored by the Norwegian Research Council. The project will be published by A.N.Kirpičnikov and Anne Stalsberg (Kirpičnikov & Stalsberg in prep.). During the project period A. N. Kirpičnikov examined 111 blades in the archaeological university museums in Trondheim, Oslo and Bergen. Out of these 111 blades 98 were well enough preserved to be documented by X-ray photographs, drawings and descriptions, and Vlfberht signatures were found on 30 blades; 18 of them were previously unknown, which increased the number of Vlfberht blades found in Norway to 44 (Kirpičnikov & Stalsberg 1993, Stalsberg 1993, Stalsberg 1994, Kirpičnikov & Stalsberg 1995,

Kirpičnikov & Stalsberg 1998b.). The unpublished material is included in the find list of the present study. More Vlfberht blades will undoubtedly be unearthed in the future.

For this study it was possible to collect information about 166 blades found in 23 European countries. The available published information varies from a sword only being mentioned by a competent archaeologist to fully examined and scholarly published swords. Since then I have learnt about a few more Vlfberht blades, mainly unpublished (a couple in the university museum in Trondheim; one from England; one from Czech Republic; one published from Poland with the signature variant I, reverse varian I; handle type Petersen 1919:X. Kola & Wilke 2000:66; thanks to colleague Piotr Pudło for bringing this to my attention). These have not been included into this study, but the 166 swords included are sufficient for this more or less preliminary study. To check *all* found blades for inscriptions is an enormous task; in Norway alone at least two and a half thousand double edged blades have to be examined.

A.N. Kirpičnikov's findings in Norway clearly indicate that there may also be a considerable number of blades with a variety of marks, but *without* signatures: 30 of the 98 documented blades have marks of the same type as the reverse marks of Vlfberht blades, and 20 of the 98 have different, but mostly geometric signs welded into the blade (examples from Norway, Sweden, Russia, Ukraine, Poland, and Germany are published by Kirpičnikov & Stalsberg 1992:Fig. 2-5, Kirpičnikov & Stalsberg 1995:Рис.4, рис. 5, рис. 6, Kirpičnikov & Stalsberg 1998a:Рис. 1, Kirpičnikov & Stalsberg 1998b:Fig. 2, Bergman 2005:33 passim, Kirpičnikov et al. 2001:Figs. 8-15, Bergman & Kirpičnikov 1998:Abb. 3-5, Kirpičnikov 1966:Табл. XVIII, 1, 2, 4-10, Kirpičnikov 1966:Табл. XVII, 6, 7, A.N. Kirpičnikov's documentation published in Kola & Wilke 2000:Abb. 51, Geibig 1991:Abb. 35, Taf. 2, 25, 51, 69, 71 and 73). This indicates that geometrical and other marks were frequently welded into sword blades which have no signature, and it demonstrates that the technique of welding rods into the blade to make marks and signatures was known in many countries in Europe, This is a point to be kept in mind when discussing the question if Vlfberht blades or signatures may have been copied or falsified.

	A D V E R S E							R E V E R S E							HILT	TY-	PE
	1	2	3	4	5	6	7	I	II	III	IV	V	VI	VII	EVA	MVA	LVA
B-1	x																X
-2						x								x			X It
BY-1	x							x								V	
CH-1	x								x								X
CZ-1			x														Y
-2							x	x								T	
D-1						x		x									X
-2 *							x									W	
-3	x								x								X
-4	x							x								R	
-5	x											x					X
-6	x													x			Y
-7 *	x											x					X
-8						x			x						Mh		
-9		x										x			Mh		
-10	x											x					X
-11							x										X
-12	x							x									X?
-13 *							x							x			X It
DK-1							x									S	
-2	?	?														V	
-3							x									S	
E-1		x										x					X

reverse marks and their combinations is a basic tool for analysing the chronological and geographical distributions when trying to find out when the Vlfberht blades were made and some were dispersed outside the Frankish Realm. Fig. 2 is such a typology or systematization of the variants.

The signatures and reverse marks are without exception found on the upper third of the blades, beginning a few centimeters below the handle. The distance between the handle and the beginning of the signature and reverse may differ within a very few centimeters. The signatures without exception start at the handles, and read from the left near the handle to the right, towards the point of the blade. Thus, the signatures are read from the enemy if the owner holds the sword in front of him with his right hand. If the owner should read the signature, it had to hold the handle in his left hand and the point in the right hand. This is also the case for other signatures.











1. +VL FBERH+T	(46 - 51 ex.)	I		(29 ex.)
2. +VL FBERHT +	(18 - 23 ex.)	II	 † 	(8 ex.)
3. VLFBERH+T	(4 - 6 ex.)	III	 	(9 ex.)
4. †VL FBERH+T †	(1 - 2 ex.)	IV	 	(19 ex.)
5. + VL FBERH†	(10 ex.)	V	  	(23 stk.)
6. +VL EBERHIT +VL FBEHT + +VL FBERH + +VL FBERH† +VL FBERTH	(17 ex.)	VI	+ INGEFLRII + + VL FBERH+T C † † IINIOMINEDMN	(5 ex.)
7. non definable	(31 - 32 ex.)	VII	non definable	(6 ex.)

Fig. 2. Chart of variants of Vlfberht signatures and reverse marks. The number of blades in brackets. © Anne Stalsberg.

The typology of the variants on Fig. 2 is based on 135 Vlfberht signatures and 99 reverse marks, which are well enough documented in publications and by A.N. Kirpičnikov's mainly unpublished drawings from the Norwegian-Russian Sword Project (Kirpičnikov & Stalsberg in prep.). The numbers of signatures and reverse marks in each variant are given brackets. The numbers are not exact for all signature variants, since not all signatures are clearly enough visible or preserved to be read and included in one of the defined groups of variants.

Seven variants of both signatures and reverse marks may give the impression of a great variety of signatures, but when one takes into regard the number of blades in the different variants, it is clear that there are in reality only two main variants of Vlfberht signatures, namely variant 1 with 46-51 blades, and variant 2 with 19-22 blades, the only difference between them being the location of the second cross. It may be, that variant 5 with 10 blades should be included into variant 1, since the sequence of letters and crosses is the same. I separated the variant 5 signatures where the <H> and the <+> do not seem to be made as separate signs, but the horizontal rods in <H> and <+> are made with *one* horizontal rod, and not one separate for the <H> and > <+>, that is a simplified way of forging. The signature

variants 3 and 4 are more like exceptions, and variant 6 consists of 6 unique variants. Variant 7 consists of signatures which are badly preserved or the blades too corroded to allow deciding how the signatures were „written”, and therefore could not be included in one of the defined variants.

The shapes of the reverse marks proved easier to include into the defined variants, since only 6 of them had to be collected into variant VII with undefinable marks. The most numerous variants of marks are variant I with 29 blades, variant V with 23 blades, and also variant IV with 19 blades. The marks in variants I and IV are well made. The reverse marks in variant V are simpler and often less precise in the way the rods are forged into position without the ends of the rods meeting. The variants II and III are comparatively rare. The marks in variant II struck me intuitively as being less successful imitations of variant I, but I may be wrong; only a further examining of the sword blades themselves can reveal any possibly lesser quality of work. Variant VI consists of 5 unique reverses (the fifth, not shown on table 1, is a simple Greek cross). Two reverses in variant VI are quite interesting: on one side of a blade from England the name +Ingeflrii+ is welded in, and on the other side +VFLBERHTCC+; both names incorrectly written. The other blade is from Norway, and has a correct Vlfberht signature variant 1 on both sides.

Marks with omegas are also found on blades without signatures. The <+IINIOMINEDMN> is found on a blade with a handle type Petersen 1919: X, and is the only Vlfberht signature combined with a clearly Christian inscription: "in nomine domini". It was found in Eastern Germany, and the publishers date it to the 11th.-12th. century, thus making it the youngest or one of the youngest sword with an Vlfberht blade (Herrmanns & Donat 1985:376). Since it is a stray find, a dating by complex is excluded, and the dating must rely on the typological dating of the handle. Jan Petersen dates his type X to a period from the first half of the 10th. century throughout the Viking Age, i.e. 11th. century (Petersen 1919:165). Variant VII consists of 6 reverse marks, which due to bad preservation of the mark or of the blade, cannot be included into one of the defined variants.

Even if there are 7 variants of both signatures and reverse marks, the regularity or uniformity is striking, with mainly two different ways of writing the signatures (variants 1 and 2), and two, perhaps three variants of reverse marks (variants I, V, perhaps IV). It is difficult to believe that these regularities do not reflect a reality, the blades were not signed at random, the signatures and the reverse marks *mean* something. The reverse marks may designate for example a smithy, a quality, or for which army unit, or special guards, or which officers, the blades were forged. The reverse marks will not be more closely discussed here, since it takes a special study, and the aim of *this* outline is to discuss who Vlfberht was and how the blades were spread in Europe.

Chronological and geographical distribution

It might be expected that the chronological and geographical distribution of the different signatures, reverse marks, and the combinations of signatures and reverse marks would reveal patterns which reflect the place and time of origin and of the dispersion of the blades. To obtain easily and clearly readable distributional surveys, wide chronological and geographical units are applied. Narrower chronological and geographical units are needed for further studies, but on this stage of the discussion, it is more important to get an overview. For the same reason the find locations are marked only within the boundaries of the modern states, which is sufficient for a survey on this stage of the study.

Chronological distribution

There is no servicable chronological typology of Viking Age sword *blades*. Only two types in Alfred Geibig's blade typology belong to the Viking Age and they nearly overlap one another (Geibig 1991:84-90). Geibig's type 2 is dated to the middle of the 8th to the middle of the 10th centuries, while his type 3 begins and ends slightly later (Geibig 1991:84-86, Abb. 22; 153-158; Abb. 40, cf. Peirce 2002:22). In addition, the blades are often not well enough preserved to enable a typology or to see the type of the blades.

	8th. cent.	9th. cent	10th. cent	11th.
Mannheim	—————			
Type E		—————		
Type H	—————			
Type K		—————		
Type M		—————	—————	
Type N		—————		
Type O - II		—————	—————	
Type O - III		—————		
Type I		—————	—————	
Type Q			—————	—————
Type R			—————	
Type S			—————	
Type T			—————	—————
Type V			—————	
Type W			—————	
Type X			—————	—————
Type Y			—————	—————
Type Z			—————	—————

Fig. 3. The chronology of the sword handles found with Vlfberht blades, according to Petersen 1919 with adjustments.

However, the *handles* may be dated, even if there is a real possibility that the two independent parts of a sword - handles and blades, are not contemporary. Old blades might have been equipped with newer handles, or old handles might have been mounted on newer blades. The most widely applied chronological and typological system is Jan Petersen's classical study from 1919 (Petersen 1919:Fig. 3). Some adjustments of his datings are needed, but surprisingly few, since he based his system on the study of a large number of swords. However, his datings of the handle types with Vlfberht blades do need correction, since he dated all swords with a handle type which only once was found on an Vlfberht blade, to the first half of the 10th. century, which was the current dating of the Vlfberht blades at the time when he wrote his doctoral dissertation (Petersen 1919:101, 131f., 141, 148, 152). This dating of the Vlfberht blades is obsolete, since Vlfberht blades are found on handle types from around AD 800 to the 11th. century, possibly also as late as from the 12th. century. In the pagan countries swords are found in pagan graves and may be contextually dated by the grave goods. The datings of the graves often rely on Petersen's datings of the swords, which means that there are risks of circle datings. However, so many swords have been found in Norway (at least 2500 double-edged), that one should expect that serious mistakes would have been revealed (as they have in the mentioned case of Vlfberht blades).

The datings of the sword handles with Vlfberht blades overlap (Fig. 3), and are for the sake of clarity grouped into three chronological periods: Early Viking Age - includes the sword blades with their main existence in the 9th. cent., Middle Viking Age - swords with their main existence in the 10th. cent, and Late Viking Age - first half of the 10th. century - 11th. century. None of the Norwegian finds may be dated later than early - middle 11th. cent., since they have been found in graves, and the pagan burial rites with gravegoods were not performed later. All swords with Vlfberht blades whose find circumstances are known from the Frankish Realm and Christian England have been found in rivers, and they can be dated only typologically. Some of them may be as late as the second half of the 11th. cent. One of the late swords, a a stray find from eastern part of Germany has been dated to the 11th.-12th. century. (Herrman & Donat 1985:376, *vide supra*).

Signature 1: <11-20-13>
 Signature 2: <15-4-3>
 Signature 3: <1 or 2-0-4 or 3>
 Signature 4: -
 Signature 5: <4-4-1>
 Signature 6: <6-4-4>

Reverse mark I: <5-11-5>
 Reverse mark II: <2-2-2>
 Reverse mark III: <4-4-1>
 Reverse mark IV: <7-4-4>
 Reverse mark V: <11-2-9>

Sign.1 / Rev. I: <2-8-2>
 Sign.1 / Rev. II: <1-2-2>
 Sign.1 / Rev. III: <1-3-1>
 Sign.1 / Rev. IV: <2-0-1>
 Sign.1 / Rev. V: <3-0-4>

Sign.2 / Rev. I: <1-0-0>
 Sign.2 / Rev. II: <->
 Sign.2 / Rev. III: <2-1-0>
 Sign.2 / Rev. IV: <6-0-1>
 Sign.2 / Rev. V: <4-1-2>

Sign.3 / Rev. I: <->
 Sign.3 / Rev. II: <->
 Sign.3 / Rev. III: <->
 Sign.3 / Rev. IV: <0-0-2>
 Sign.3 / Rev. V: <1-0-0>

Sign.4 / Rev. I: <->
 Sign.4 / Rev. II: <->
 Sign.4 / Rev. III: <->
 Sign.4 / Rev. IV: <->
 Sign.4 / Rev. V: <0-0-1>

Sign.5 / Rev. I: <1-0-1>
 Sign.5 / Rev. II: <->
 Sign.5 / Rev. III: <1-0-0>
 Sign.5 / Rev. IV: <0-1-0>
 Sign.5 / Rev. V: <1-1-0>

Sign.6 / Rev. I: <1-1-1>
 Sign.6 / Rev. II: <1-0-0->
 Sign.6 / Rev. III: <->
 Sign.6 / Rev. IV: <1-1-0>

Sign.6 / Rev. V: <1-0-0>

Fig. 4. List of chronological distribution of signatures, reverse marks, and their combinations. Includes only definable signatures and reverse marks. The "code" is the number of blades with the given signatures and reverse marks from the periods EVA, MVA, and LVA (cf. discussion in the text and Table <EVA-MVA-LVA>)

The most important point of the datings of signatures and reverse marks on Fig. 4 is that variants of Vlfberht blades were being used throughout the Viking Age. *No* signature or reverse mark is datable *only* to the 9th, 10th, or 11th century; 8 combinations of signature and reverse mark are datable to *one* century, while 12 combinations are datable to only one century.

It is not known if the blades with the same signatures, reverses and their combinations were being forged during the entire period of the Viking Age. It may be that the Vlfberht blades were held in such esteem that old blades were used for a long period with handles which were renewed. But, it may also be that the Vlfberht blades were reserved for special army units, guards, officers, etc., and that they were kept in arsenals for them. Arsenals obviously existed in the Frankish Realm (Bachrach 2001:57, *Annales Bertiniani sub anno* 869, ed. Nelson 1991:163). The fighting technique did not change enough from the 9th. to the 10th. century to make sword blades forged in the 9th. century obsolete in the 10th. century. If, for example, a warrior who in AD 925 had achieved the right to carry an Vlfberht blade, was from the arsenal given a blade forged in AD 845, and had it equipped with a handle made recently before AD 925, then he contributed to the archaeologists' difficulties a millennium later of explaining the chronology of swords with Vlfberht blades.

A find in Sweden is interesting in this connexion. Five sword blades with unfinished tangs and without handles were found together. Two of the blades are Vlfberht blades, and it may be that these blades were acquired in the Frankish Realm (at least they were probably made there), and would be equipped with handles in Sweden (Bergman 2005:51, Arbman 1937:232). The question of how they were acquired in the Frankish Realm will be discussed later. It cannot be said how long time after the blades came to Sweden the handles would have been mounted on them, and how much it would affect the dating of the swords.

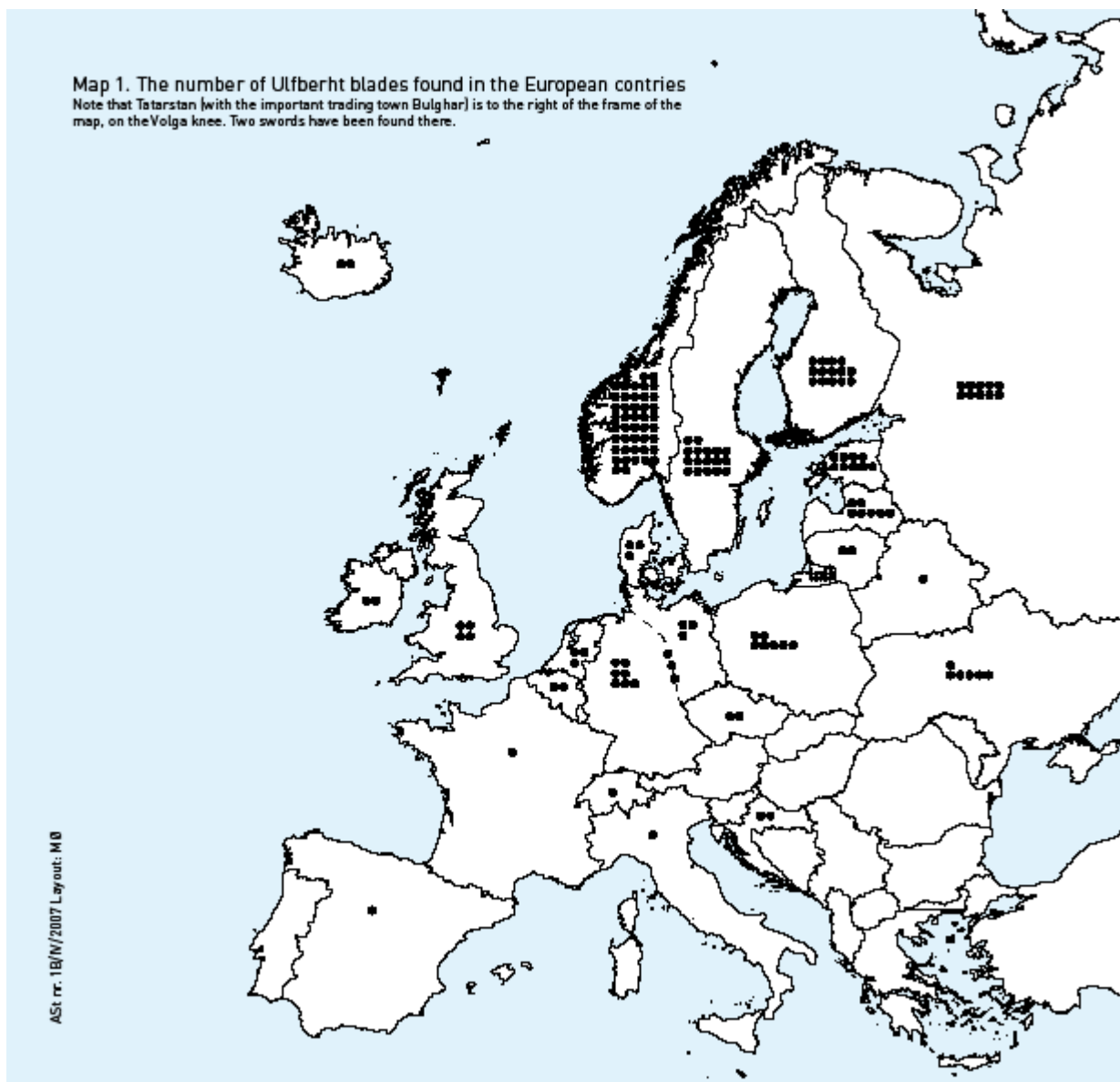
Geographical distribution

On the distribution maps (Maps 1-7) the find locations are marked within the boundaries of the modern states, for two reasons: the exact find locations are not known for all blades, and this way of mapping shows at a glance the distribution of the blades. This is sufficient for this study.

Map 1 shows the general distribution of the 166 Vlfberht blades about which I have found reliable information. The few more which have come to my knowledge too late to be integrated into this paper do not alter the *way of thinking* in this paper, and probably do not change the main trends in the find material.

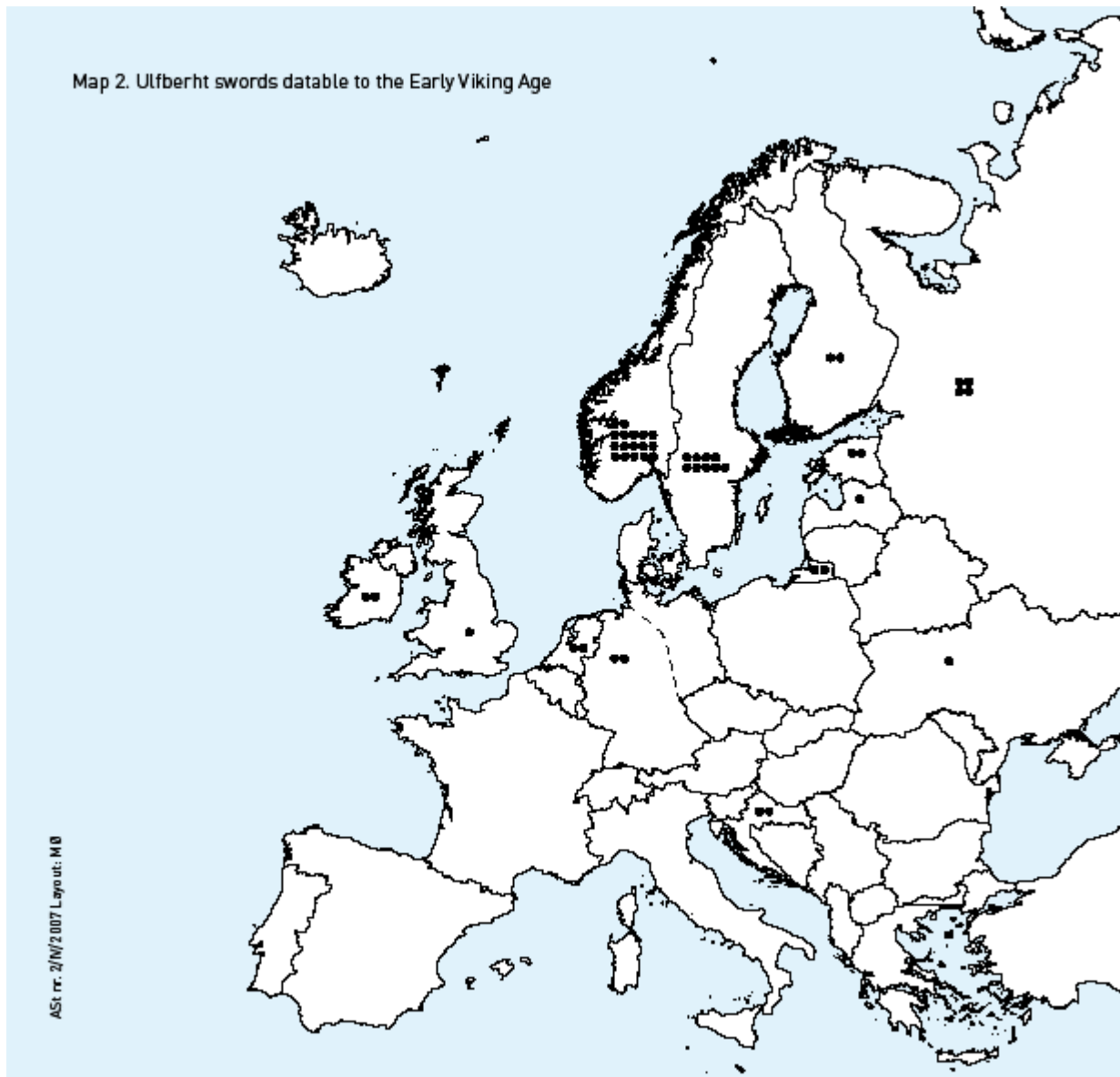
The number of blades found in the Frankish Realm, Vlfberht's homeland (Belgium, France, western Germany, Italy, the Netherlands, Spain, Switzerland) is surprisingly small, a total of 16-19 blades, compared to 144-147 from pagan Europe plus 4 from Christian England. This ratio is observed throughout the Viking Age (information in Fig. 1 and Maps 2-4). It is especially improbable that Norway with a small population should have had so many more Vlfberht blades than the Franks themselves. Two factors greatly affect the distribution of the

swords: find circumstances and present research activity. A large part of the blades from pagan Europe comes from graves equipped with grave goods, while the blades from the Frankish Realm all come from rivers, or are single finds whose find circumstances are not known. Grave goods was not supposed to be given in Christian countries. The large number of swords found in Norway is the result of an especially generous burials rites. In Norwegian museums there are at least two and a half thousand double-edged swords and some six-seven hundred single-edged swords from the Viking Age. Modern research activity also influences the number of known Vlfberht blades, since more Vlfberht blades have been discovered each time the blades were examined for inlays. Especially two archaeologists have been active: A.N.Kirpičnikov examined a large number of blades in Norway, Sweden, and Old Rus' (in Russia and Ukraine). Jorma Leppäaho did the same in Finland. But, all the same, the distribution reflects one indisputable reality: there must have been many swords during the Viking Age where many swords have been discovered.



Map 1. Ulfberht blades found in the European countries (2007). Note that Tatarstan (with the important trading town Bulghar) is to the right of the frame of the map, on the Volga knee. Two swords have been found there. Constructed by Mona Ødegården. © Anne Stalsberg.

The dotted line marks the border between the Frankish Realm and the pagan Germans. The marks on this line indicate that it is unknown whether these blades have been found inside or outside the Frankish Realm



Map 2. Ulfberht swords datable to the Early Viking Age. Constructed by Mona Ødegården.
© Anne Stalsberg.



Map 3. Ulfberht swords datable to the Middle Viking Age. Constructed by Mona Ødegården.
© Anne Stalsberg.

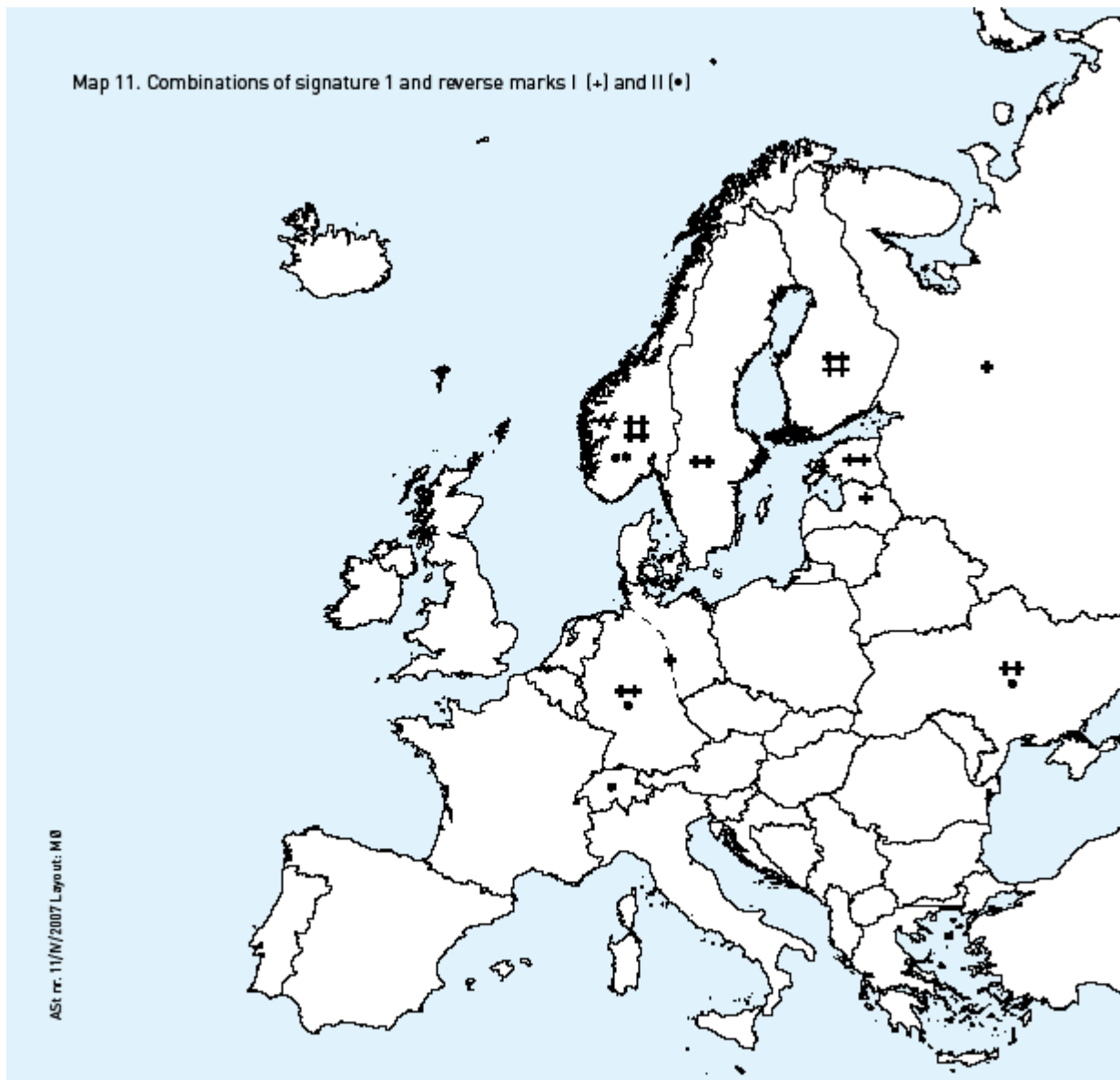
Heiko Steuer has suggested that probably not more than 1 per mille of the original number of objects has been discovered (Steuer 1999:408). On this basis the number of Ulfberht blades in pagan Europe is huge, while it is unrealistically small in the Frankish Realm. It is hard to believe that the Franks exported/smuggled such a part of their production of Ulfberht blades to their pagan enemies (discussion *vide infra*). The Christian burial rules explain the low number in the Frankish Realm.

The general distribution with few blades in the Frankish Realm and the overwhelming majority in pagan Europe characterizes the Early and Middle Viking Age (Maps 2-3). The distribution is different in the Late Viking Age, with 9, perhaps 12 blades from the territory of previous Frankish realm, 2 from Christian England, and 22-25 from pagan Europe, or previously pagan Europe (Map 4). During the late Viking Age Christianity spread to most of previously pagan Europe, which means that grave goods was no longer supposed to be given into the grave. From previously rich in sword blades Norway only 5 Ulfberht blades are known, but 4 of them are from graves. Perhaps the increased number of blades found on the territories of the previous Frankish Realm is more remarkable, - that swords were more often

lost in rivers? This takes a detailed study to compare battle grounds and lost swords. Further discussions are speculative.

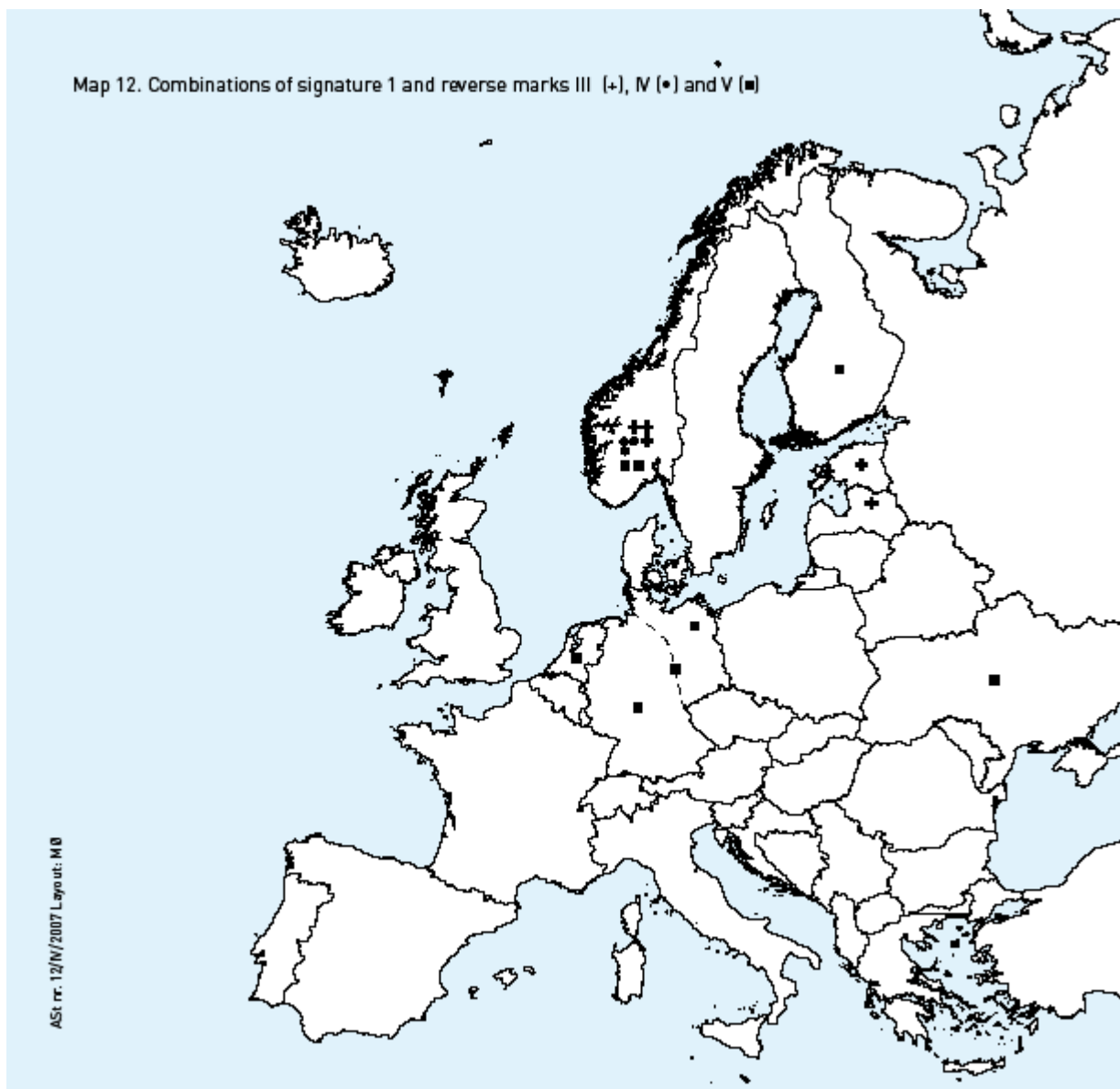


Map 4. Ulfberht swords datable to the Late Viking Age. Constructed by Mona Ødegården. © Anne Stalsberg.



Map 5. Combinations of signature 1 and reverse marks I (+) and II (□). Constructed by Mona Ødegården. © Anne Stalsberg.

When it comes to the combinations of variants of signatures and reverse marks, there are so few blades in each combination group that the distribution is difficult to understand (Maps 5-7). For example, there are two possible readings of the last two signs of the signature of the Gravråk sword (N-30) (the reverse is clearly read as variant IV). If the signature belongs to variant 2, as A. N. Kirpičnikov reads it, it belongs to a group of 7 blades: two from Norway, two from Sweden, one each from Finland, Russia and Ireland, with handles datable to all three periods of the Viking Age (Map 7). If, on the other hand, the Gravråk signature is variant 1, there are three known blades with this combination, all from Middle Norway, and with one handle from each of the three periods of the Viking Age (Map 6). It is tempting to suggest that these three blades may have been looted from one arsenal with weapons made for one special army group, officers or something else (arsenals will be discussed below). It seems far-fetched to think that these blades had been forged in Middle Norway, even if Norwegian Viking Age blacksmiths were very capable.

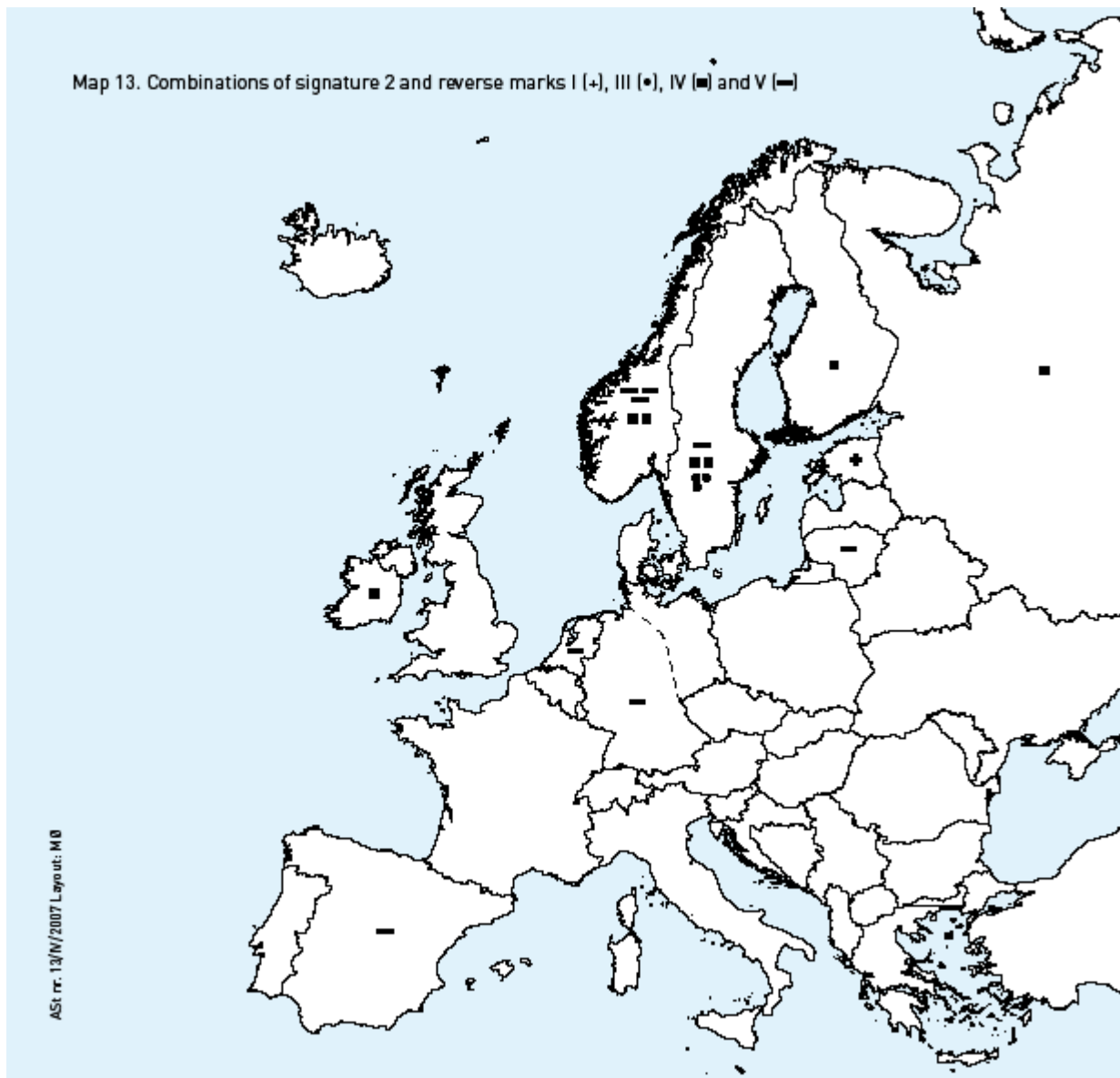


Map 6. Combinations of signature 1 and reverse marks III (+), IV (□), and V (□).
Constructed by Mona Ødegården. © Anne Stalsberg.

The enigmatic Vlfberht signature

If the objects on the distribution map 1 had been mute objects, as archaeological objects usually are, archaeologists would have concluded that these objects originated in Norway, where they are most numerous, and includes both the early types and the most numerous types of signatures, reverse marks and handles, and that from Norway the objects had spread to the east and southeast, and very few and mostly late swords came to the Frankish Realm. However, these objects are not mute, they have signatures in Latin letters, or Carolingian letters: VLFBERHT. The tradition of welding Latin letters into the blades must have originated in the Frankish Realm, where such letters were developed during the Carolingian Renaissance in the decades around AD 800. This assumption is supported by the name Vlfberht being *Frankish* (e.g. Lorange 1889:15-20, Jankuhn 1951:217-218). The name Vlfberht/Ulfberht written like this is unknown in contemporary sources (cf. Jankuhn 1951:218-220). Linguistically the form Ulfberht would at face value be Scandinavian, since the initial <w> around 800 had disappeared there, while it still was retained in Germany (personal information from runologist Aud Beverfjord at the Museum of Natural History and

Archaeology at the Norwegian University of Technology and Science (Trondheim), and professor of Nordistics at the same university, Jan Ragnar Hagland). Professor emeritus at the same university, Finn-Henrik Aag (personal communication), pointed out that there are no phonological or orthographical differences between the spelling Vlfberht/Ulfberht and the spelling WVlfberht, since they sound as the semi-vowel [w]. There were several dialects and spellings in the Frankish Realm. The *Libri Confraternitatum Sancti Galli* (Piper 1884) lists several spellings of the name from 9th.-11th. centuries: Uolfberht, Uolfbernt, Uolfbernus, Uolfberht/ Wolfbert, Uolfbertus/Wolfbertus. These people had a close relation to the St. Gallen abbey, and should be remembered in the prayers, -monks, abbots, founders, benefactors. In AD 802 a man gave a *villa* to an abbot in the Lower Rhine area to be used for alms for himself and his father *Wulfberti* (genitive). (Jankuhn 1951:218). Both the abbey St. Gallen and the Lower Rhine area were in the Frankish Realm. The connection between these differently spelled names and the sword signature Vlfberht has to be disussed by linguists. The Confraternity books of other abbeys should also be examined for the various spellings.



Map 7. Combinations of signature 2 and reverse marks I (+) III (□), IV (□), V (-).
Constructed by Mona Ødegården. © Anne Stalsberg.

Archaeologists and historians usually regard Ulfberht as a blacksmith. However, this is only an assumption, I have not seen any adequate argumentation in favor of it. Even during the Carolingian Renaissance, when the modern letters were shaped, and when the upper classes and clerics were taught reading and writing, it is unlikely that mere blacksmiths were literate. Ulfberht had a signature, a strong indication that he was a literate man. Literate persons did not work at the anvil, unless they had been caught as slaves. Ulfberht may have been a man in charge of or an overseer of the sword blade production, or of the production of complete swords with handle and blade. Numismatist, professor Jon Anders Risvaag at the Museum of Natural History and Archaeology, the Norwegian University of Technology and Science (personal communication), pointed out a highly relevant analogy, namely the medieval monnyers, as known from England and France. They had a licence from the king to strike coins, or they were his servants, and they were responsible for the coins being struck according to settled shape, inscriptions and quality, and the monnyers had their name on the coins.

The key to coming closer to who Ulfberht was, may perhaps be found in the signature itself. With the exception of not more than 6 signatures of variant 3, all signatures have an initial cross, shaped like a Greek cross, in front of the V. With the exception of very few signatures of variant 6 all signatures also have a second cross either after or before the final T. One, possibly 2 signatures even have 3 crosses, one initial, one before and one after the final T. The crosses must have a significance or else they would not have been welded into the signatures nearly without exception, and in the same positions of the names, and all shaped like a Greek cross. They were not shaped at random.

Also other sword blade signatures have the initial cross: the rarer Ingelrii has the cross on 9 out of 32 signatures (Geibig 1991, page 195, lists 37 Ingelrii signatures; I accept only 32). The unique signatures <+Leutrit> and <+Pulfbri+/Pulfbri>, also have initial crosses (Kirpičnikov 1966, Tabl. XVII,4; Bergman et al. 1998:Abb. 2,2). The reverse abbreviation on the sword from Eastern Germany (D-13) <+IINIOMINEDMN> has an initial cross. Crosses in the signatures are so frequent that they must have a significance or meaning, probably common to the crosses in all the signatures since they are in the same positions in the sequence of letters.

There are also blade signatures without crosses, like most Ingelrii signatures, and the unique Cerolt and Ulen (Kirpičnikov 1966:table XIII, 3, table VIII, 2). The relations between blade signatures with and without crosses is a separate question which must be studied further.

The clue to Ulfberht's position in his signature may be that there are three groups of persons whose signatures had and have an initial cross: Roman Catholic abbots, bishops, and monasteries. The cross in the prelates' signatures is a Greek equal-armed cross, slightly smaller than the letters, exactly as in +VLFBERH+T. (Fig. 5). The Right Reverend bishop of Oslo, +Bernt Eidsvig, has kindly answered my questions about the prelates. His E-mails were signed +Bernt Eidsvig and +BE. He informs that earlier the bishops signed with name and see, e.g. +Bernardus Osloen(sis), as his signature would have been, but now only Anglican bishops sign this way (+George Cantuar (Canterbury)); as far as he knows. Since abbots also have an initial cross in their names, the Right Reverend informs that the cross is connected with jurisdiction, not with the consecration of bishops. The Right Reverend did, however not know how old this tradition is, but he cautiously suggested the Gregorian reforms under pope Gregory the great who died AD 604. Or, as soror Hanne-Maria from the Cistercian Monastery Sancta Maria de Tuta insula, Norway, formulated it: abbots are on the same level as the bishops, since they both are independent heads of their congregations, in the case of the abbots - the brethren in the monastery (personal communication).

The Right Reverend also mentioned that monasteries also might put initial crosses in their names, but monasteries can obviously be excluded, since Vlfberht is not a place name (Jankuhn 1951:217).

This is most important information, since bishops and abbots were also warlords who waged war, and not least because weapons, from throwing machines for stone missiles to lances and swords, were produced at the episcopal seats and even more in the large abbeys (Verhulst 2002:78-84). Blacksmiths living on Abbey or aristocratic lands, could be obliged to pay land rent with lances. Numerous abbeys produced weapons: St. Gallen, Lorsch, Fulda, Corbie, St. Riquier, St. Quentin, Bobbio, Vincenzo al Volherno, and others (Verhulst 2002:78-79). I am not saying that Vlfberht was a bishop or an abbot, not until his title and name have been found in contemporary sources (preferably in connexion with weapon production!), but the cross indicates a position in ecclesiastical or monastic hierarchy.

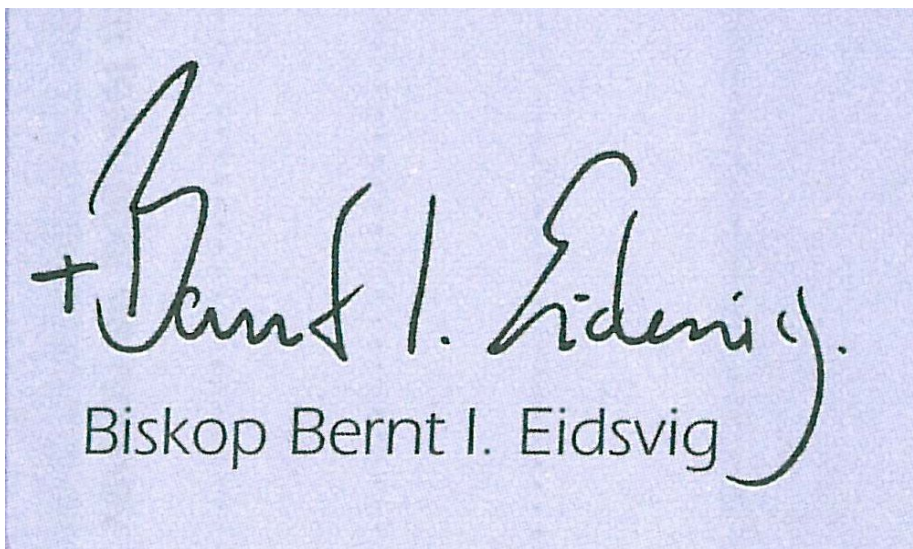


Fig. 5. The signature of the Right Reverend Roman Catholic Bishop of Oslo. Published with the Right Reverend 's permission.

The *second* cross, mentioned above, *may* indicate another position than bishop or abbot in the ecclesiastical and monastic hierarchy, such as a "*swordmaster*"? (not *swordsmith*). In the published documents in the Stiftsarchiv St. Gallen I have so far seen no signatures with a second cross, nor did the Stiftsarchivar know any.

It might be that the two main variants of the signature, +Vlfberh+t (variant 1) and +Vlfberht+ (variant 2) indicate two persons, two men Vlfberht in the same position in the sword blade production, not least since there is a certain tendency that variant 1 is slightly younger than variant 2 (Fig. 4).

It is important that *abbots* signed their names with an initial cross, since they were key men in the weapons production, obviously more important than the bishops (at least it seems so, but it has to be kept in mind that more abbey archives than bishops' archives are preserved). It remains to study more closely the age of the tradition of writing the initial cross in abbots' and bishops' signatures, and also to find names with more than one cross, since Vlfberht and other sword blade signatures have two crosses in their names.

Contemporary documents contain names with crosses. So far I have only briefly examined the publication of 8th. century charters, mainly from the abbey St. Gallen in Switzerland (Bruckner & Marichal 1956, Introduction). The documents mainly comprise transfers of movable and immovable property as donations, or conveyances for temporary or hereditary use. The charters are mainly written by a scribe, but there are cases of autographs. The charters are "signed" by the scribe, who also wrote the signatures of the originator and witnesses. They may all be signed with a cross, signum and the name in the genitive case. The scribe could be a priest: † signum Rodperti presbiteri (nr. 113), or a witness: signum † Benedinct teste. In one case a woman, Himma, donated a property to St. Gallen: signum † Himmanae qui hanc donationem fieri rogavit (who wished this donation to be given). The charters could also open with a cross, as an invocation: † in Christi nomine (Bruckner & Marichal 1956, page IX). The function as an invocation might perhaps be kept in mind when searching for the meaning of the Vlfberht signature.

The significance of the geometrical marks on the reverse of the blades is not known. It has been suggested that they were workshop marks (e.g. Jankuhn 1951:216, Müller-Wille 1970:81). Analogous and identical marks are also found on blades without any signature, often on both sides (Müller-Wille 1971:81, Kirpičnikov's unpublished drawings from the Norwegian-Russian Sword Project). These marks are not just some figures, they have been meticulously shaped because they had some significance. They have not been given due attention by archaeologists, and they definitely should be further studied. It may be that such patterns are to be found on illuminations or other pictures, architectural details or other pictures.

The blacksmiths

The literate man Vlfberht, or men Vlfberhts, scarcely forged sword blades or weld the rods to signatures and reverse marks. The answer to who actually forged the blades is close at hand: slaves. Slave energy was very important in the Frankish Realm. The slave trade had enormous dimensions, slaves were traded for use not only inside the Frankish Realm, but were in large numbers exported to Arab Spain and the Near East (Verlinden 1970, Verhulst 2002:105-107). Slaves came from many countries, preferably from pagan countries, and Slav prisoners of war were a steady source of slaves. Slaves did farm work on the demesnes, they served as soldiers, as craftsmen (e.g. Verlinden 1955, Verlinden 1977, Bachrach 2001:53, 76, Verhulst 2002:34-36, 105-107). Two examples demonstrating the dimensions of the slave energy inside the Frankish Empire may be mentioned: Alcuin, Charlemagne's Anglo-Saxon adviser, was abbot of four abbeys which had more than twenty thousand slaves (Duby 1974:86). In AD 822 the Emir of Cordoba bought five thousand slaves for use in his troops and administration, and also in his harem (Steuer 1999:410). It is improbable that working slaves like slave smiths were literate; educated elite slaves probably did not work in a smithy (elite slaves served at the Merovingian royal court (Iversen 1997:24-26) but I have not found any mentioning of them under the Carolingians). Smiths belonging to at least some monastic houses were required to pay their dues in weapons they produced, *in casu* 7 spears (Bachrach 2001:93).

The use of illiterate slaves in the smithy makes it easy to explain why one of the oldest Vlfberht blades has a misspelt signature: +VLFBEHT+, - the <R> is missing in what would have been a signature variant 2 (D-8, an expensive sword from the Altrhein at Mannheim). An illiterate slave blacksmith could easily have misspelt his master's name. A signature already welded into a blade cannot be altered. The blade from Mannheim may be regarded as a genuine Vlfberht blade (as also Menghin (1976:12) thinks).

This way of thinking changes the discussion of imitation and falsifications of signatures, since misspelt signatures cannot straight away be regarded as imitations or falsifications. Only a study of the forging technique may separate false and genuine Vlfberht blades.

It may be objected to regarding the sword blade smiths as slaves, that four of the Ingelrii signatures add a <fecit>- *made*: Ingelrii fecit, Ingelrii feci, +Ingelrii me fecit+, and one sword from Ukraine which on one side of the blade has the male name <Ljudota/Людота>, on the other side the "title" <koval/коваль'>, both in Cyrillic letters, and meaning: "Ljudota forged". A.N. Kirpičnikov dated it to the first half of the 11th. century (Kirpičnikov 1966:84-85, No. 87). These examples seem convincingly contradictory to what I have written about Vlfberht as a sword master. The explanation may be as simple as a statement like *the king won the war*, or *built the church*: he did not do that personally and single-handed, but had the work done.

It may also be objected that the blacksmiths had a special position in society, and therefore could not have been slaves. In many societies they did have special positions, but none of the literature I have so far read about the society in the Frankish Realm mentions this. On the contrary, for example the *Capitulare de Villis vel Curtis Imperialibus* from around AD 800 states that "every steward shall have in his district good workmen, that is blacksmiths" and further mentions a large number of other workmen, without special stress on the blacksmiths, gold- and silversmiths. The steward is also instructed to make annual statement of all the king's income, and mentions from forges, from iron-working among a long list of other incomes (Loyn & Percival 1976:70, 72).

The diffusion of the Vlfberht blades into pagan Europe

Archaeology as a study of mute objects cannot tell anything about how Ulfberht blades ended up in pagan Europe, - as traded goods, loot, ransom, or gifts. The generally accepted notion that weapons were exported from the Frankish Realm under the Carolingian dynasty to pagan Europe has since the very first publication about Scandinavian Viking Age Swords in 1889 been based on the prohibition in the Carolingian *capitularia* (edicts and laws issued by the Merovingian and Carolingian kings of the Frankish Realm until ca. AD 900) to sell weapons to foreigners, as evidence that such trade did take place (Lorange 1889:45, Kirpičnikov 1966:48-49, Solberg 1991 with references). In 2000 Signe Horn Fuglesang critically reviewed what the relevant capitularia really said, and convincingly argued, that the capitularia do *not* support the idea that weapons were exported from the Frankish Realm to Scandinavia (Fuglesang 2000 with references). Her main conclusion is that the Carolingian capitularia tried to hinder that Scandinavian pirates, i.e. Vikings in the correct sense of the word, or other pirates, *who already* were in the empire, got hold of weapons. The most sought-after obviously were defensive weapons like *bruniae*, leg guards, and horses, which were inconvenient to bring on the war ships. Professor Fuglesang does not, however, doubt that weapons were exported from the Frankish Realm; on the contrary, she writes, it must have been a problem, especially in the eastern border area, as she argues on the basis of the Thionville capitulare from AD 805, which, in her opinion, reflects normal weapon trade to the Avars and Slavs (Fuglesang 2000:181-182).

The capitularia in question are the capitularia from Herstal from AD 799; from Mantova from AD 781; Capitulare missorum from AD 803; from Thionville from AD 805; from Boulogne from AD 811, and Edictum pistence from AD 864). There is one aspect that should be stressed in the texts of the capitularia: *who* could sell weapons to foreigners, inside or outside the Empire (quoted in Fuglesang 2000); for full texts in Latin, see Loyn & Persival 1976:49-90):

- Capitulare Herstattense, AD 779: *no one* should dare to sell *bruniae* outside our kingdom.

- Capitulare Mantuanum, AD 781: let *no one* sell arms or stallions outside our kingdom.
- Capitulare missorum, AD 803: *Merchants* must not get leg guards or bruniae. In the Vatican manuscript *merchants* „foras marcas” must not get guards, bruniae, or swords. „Foras marcas” means Bretagne, Spain, Avars, Slavs and Saxons.
- Capitulare from Thionville, AD 805, says that *merchants* who travel in the territories of Avars and Slavs must not take arms and bruniae with them to sell.
- Capitulare from Boulogne, AD 811, says that no *bishop, abbot or abbess, or rector or custos for a church or any of their vassals* may without the king's permission sell bruniae or swords to any foreign man.

Edictum Pistence, AD 864, says that *no man* may without the king's permission give or sell bruniae or weapons to a foreign man, and further that greedy priests must not let the *nortmanni* have bruniae, weapons or horses.

The way I understand the capitularia, they do not forbid trade in the meaning of an activity undertaken with the king's permission and whose agents paid customs and taxes, but they forbid smuggling. Two capitularia prohibit letting *merchants* get weapons. Adriaan Verhulst (2002:78) points out, that „several abbeys had arms manufactured for the military services of their vassals, and only for them. Selling them to other persons, particularly to merchants was repeatedly forbidden”. This sheds another light on the prohibition in the capitularia to let merchants have weapons, it was obviously imperative to keep strict control on the weapons, so that they did not get into the hands of merchants. If there had been a regular weapon trade, one would not expect bans on letting merchants get hold of weapons, even such general bans which Adriaan Verhulst refers to, which may have been internal trade. It certainly does not support the idea of a considerable export of weapons to Scandinavia. Also it does not sound reasonable that the Frankish authorities would allow a large export of weapons to such a fierce enemy as the Vikings were; they were well known in the Frankish empire. It is tempting to draw a parallel to our times: to-day the Vikings (pirates, in the original meaning of the word), would have been on UN's list of terrorist organizations, and their homelands, Norway and Denmark, would have been among the countries on USA's *axis of evil*. The victims of the Vikings' fury would scarcely export weapons to those, about whom they in the churches prayed: *Summa pia gratia nostra conservando corpora et custodita, de gente fera Normannica nos libera, quae nostra vastat, Deus, regna,* / Our supreme and holy Grace, protecting us and ours, deliver us, God, from the savage race of Northmen which lays waste our realms (antiphony for churches dedicated to St. Vaast or St. Medard. Roesdahl 2001:illustration page 209, Magnusson 1980:61).

However, there were other methods of acquiring weapons from the Frankish empire: smuggling, ransom, and plunder. The archaeological material cannot tell *how* Frankish weapons ended up in pagan graves to the east and north of the realm, whether trade, plunder, ransom, gifts or other ways. The capitularia clearly tell about *smuggling*, since merchants should not get hold of weapons and trade them to the neighbors (*vide supra*). Heiko Steuer (1999, p.408-410) also points out that although the trading centres on the borders were strictly controlled, it did not stop smuggling, as seen by the hundreds of Frankish weapons from Croatia to the Baltic and Scandinavian and Ireland. As far as I have been able to find out, the sources say nothing about royal trade or trade approved by the king.

Ransom, either for persons or for leaving the country without plundering, was practiced both by the Arabs in the Mediterranean and the Vikings on the northern coasts of the realm, and partly along rivers. In AD 869 an Arab prince abducted the archbishop of Arles, and demanded for his release 150 pounds of silver, 150 coats, 150 slaves, and 150 swords, which he got (Annales Bertiniani sub anno 869, ed. Nelson 1991:163). The Vikings also demanded

ransom, but I have not yet found any explicit mentioning of weapons, they demanded gold and silver.

Plunder was practiced not only by the Vikings, but they became famous for it; the Arabs also plundered in the Mediterranean (e.g. Loyn & Percival 1976:16). The Franks under Carolingians did not have a good fleet, and the Vikings could come unexpectedly and leave unhindered. As mentioned, capitularia mention sale of weapons and horses to the Vikings. Plundering the fallen enemy and their country was part of the ritual of war, „Das Plündern als Symbol des Sieges“, as Malte Prietzel formulates it (Prietzel 2006:Kapitel IV:2,2). There obviously were arsenals of weapons in the Frankish Realm, as indicated by the fact that Arles could collect 150 swords as part of the ransom for their archbishop (Annales Bertiniani sub anno 869, loc.cit.). Charlemagne's requisition to abbot Fulrad to bring with him to the campaign machines for throwing stones, also indicates that there were not only ready weapons in the Abbey, but also men skilled in their use (Bachrach 2001:57).

As long as no sources clearly indicate legal and taxpaying trade of weapons to fierce enemies, as the Vikings, it must remain less probable than the Viking weapons of Frankish origin being loot or ransom.

Conclusion

It has not been possible to draw any conclusions as to when blades with the different variants of Vlfberht signatures and reverse marks have been produced and used, nor when they were spread in pagan Europe. The widespread notion that Vlfberht was a blacksmith is rejected because he obviously was a literate man, and it is improbable that a literate man worked in a smithy. He may have been an overseer ("swordmaster"?) in the ecclesiastical or monastic hierarchy since there were two crosses in his signature. The widespread notion that weapons were exported from the Frankish Realm to pagan Europe is rejected, because it is improbable to sell as legal trade, weapon to one's enemies who repeatedly terrorized the Frankish realm, and because the capitularia forbade letting merchants get hold of weapons. Masses of weapons could be acquired by demanding ransom for dignitaries or for leaving the country, or by looting weapon arsenals and slain enemies. Archeology cannot say anything about how the swords came into pagan Europe.

Neither the various ways the name Vlfberht was "written", nor the position of the crosses, nor the shape of the reverse marks have been welded into the blade at random, they had a significance, which only can be found by studying archivalia from the Carolingian period. Only then can Vlfberht's position or identity be revealed.

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