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Onomasticon of Levänluhta and Käldamäki region

The water burials in the Levänluhta (the Isokyrö parish) and Käldamäki (the former Vöyri parish) sites in Ostrobothnia have been a great mystery for the scholars because of their unique character. The dating of the burials is 5th–8th centuries AD. Similar burials are not known elsewhere in Finland or in its neighbouring areas. The results of an onomastic study show that the earliest Finnish maritime toponyms appeared in the 9th century and the earliest Swedish toponyms in the late 13th century. This means that the burials most probably were not conducted by Finnish or Swedish speaking populations. In Vöyri, no obvious Saami toponyms are found, but in Isokyrö, a few Saami names can be recognized. Baltic toponyms are completely unknown. The words behind the names of the largest local rivers could possibly be derived from Proto-Finno-Permian, but alternatively it is possible that they represent obscure names of Paleo-European origin. Thus, the most probable linguistic groups behind the water burials might be speakers of the West Uralic x-language or Paleo-European.

I. Introduction

The ethno-linguistic background of the population who practised water burials in Levänluhta in the Isokyrö parish and in Käldamäki in the former Vöyri parish during the 5th–8th centuries AD (Wessman 2009: 81; Formisto 1993: 42) has been a mystery for researchers for several decades. This type of burial is unknown elsewhere in Finland and the surrounding countries. The most similar burial type, so called bog-burials, is found in Denmark, but even these are not comparable with the burials in Levänluhta and Käldamäki (Wessman 2009: 91 and attached literature). In the present study I have endeavoured to determine whether the onomasticon of Isokyrö and Vöyri might reveal something of the ethno-linguistic background of the population who practised water burials.¹

The present article is constructed in the following way: In section 1, I present the ancient topography and the problems of toponyms originating from different periods, and briefly illustrate the former onomastic research. In section 2, I present the research question, the preliminary hypothesis and methods. In section 3, I discuss the earliest Finnish onomasticon in Southern Ostrobothnia, in section 4, the Saami onomasticon and in section 5, the non-transparent names of the large rivers of the region. Conclusions follow in section 6.

¹. The term “water burial” is used instead of “bog-burial” or “lake-burial”, because the geological models do not prove that a lake or a bay of the sea in Levänluhta or Käldamäki existed during the period of the burials. It is more probable that the deceased were buried in ponds which had their origin in natural springs. The botanic analyses show that Levänluhta was not a marsh during the period of the burials (Wessman 2009: 95).
1.1. Ancient landscape

Because of the land upheaval process in Ostrobothnia, it is most important to know what the topography was during the period of the burials. The seashore has retreated and many lakes are now marshes. Some lakes, marshes and brooks have dried up because of human activities. The topographic models of this study are drafted by Santeri Vanhanen (Maps 4–6). Although he insists that a cautious approach be taken when considering these models, the basic outlines are without doubt presented correctly.

The seashore reached the Isokyrö region in the Early Iron Age more than 2500 years ago. Thus, Levänluhta could not have been a bay of the sea during the burials in the 5th–8th centuries AD. In Isokyrö, no maritime toponyms are found. In the valley of the river Vöyri, the situation is different. On dry land, far away from the present seashore, there exist names of ancient bays, islands, rocky islands and river estuaries; e.g. Lotlax, Lotsor, Leplot, Syssu(backen).

1.2. Archaeological background of Levänluhta

Archaeological excavations have been conducted in Levänluhta since 1886. The first investigator was Oskar Rancken (see Wessman 2009: 82). Afterwards, famous Finnish archaeologists such as Tallgren (in 1912) and Hackman (in the years 1894, 1906, 1913) visited the site, as did several others later on (ibid. 82–84). Among the latest researchers, Tarja Formisto (1993) must be mentioned. She was the first to study all the bone material. She distinguished the bones of 98 individuals among the material. The ancient population of Levänluhta seems to have been on average somewhat shorter than other populations during this period (Wessman 2009: 85 referring to Niskanen 2006).

Twenty-two metal artefacts are found alongside the human bones. They are published by e.g. Anna Wessman (2009: 86–89).

1. A bronze cauldron of the so-called Vestland-type. These cauldrons were typical during the Roman and Migration period and are imports from the Roman Empire. Two similar types of cauldron are found in Vöyri as well.

2. Arm rings made of bronze. Seven of the ten examples are typical for the Merovingian period in Finland. Two of them are possibly of Baltic type and one of them is possibly from Gotland. This latter type of arm ring is known from Finnish and Baltic Tarand graves dating back to the Roman Iron Age.

3. A neck ring made of silver. This type is common in the Finnish cemetery context, mostly dating to the Merovingian period. Another neck ring made of bronze belongs to a type that is quite rare in Finland.

4. A total of five found brooches. Mostly they are of Scandinavian type, roughly from the Merovingian period.
Wessman (2009: 89–90) has cautiously dated the burials in Levänluhta to between the 5th century and the end of the 8th century and in Käldamäki to the end of the Migration period or to the beginning of the Merovingian period. Wessman (2009: 94 referring to Meinander 1946: 99 and Edgren 1993: 229–232) suggests that Southern Ostrobothnia was perhaps depopulated after the Merovingian period.

1.3. Toponyms as evidence

The onomasticon of each region reveals at least something of the linguistic (although not necessarily ethnic) background of former populations. In many cases, toponyms can also reflect their dating. The most reliable results can be achieved if there are literary documents in which toponyms or anthroponyms are mentioned. One must
remember that documents can only tell of datings *terminus ante quem*; i.e. the date when a name was used at the latest. But they can have emerged much earlier. In a wider sense, the regular documentation of names did not begin until the 16th century AD. There exists some sporadic information from the 14th–15th centuries. In order to define the linguistic background of the bearers of the water burial culture (5th–8th century), the literary documentation is almost 1000 years too late.

In some cases, the structure of toponyms may reveal at least some approximation of their dating. Oikonyms based on pre-Christian anthroponyms might, although do not necessarily, originate from the period before the Christianization in Finland ca 1100–1200 AD (Saarikivi 2009: 115); cf. *Hima, Ika, Kylliä, Toiva*. Some participle-constructions, which are based on anthroponyms, are usually early (Nissilä 1075: 123); cf. *Lemmetty, Vihattu, Isottu, Anettu, Kovettu* etc. German anthroponyms were adopted already in the pre-Christian period, but especially in the later Middle Ages, by the influence of the Catholic Church and the Hanseatic League (Mikkonen & Paikkala 2000; Vahtola 2003: 25; Nissilä 1975: 249–259). Later, Swedish names were particularly popular, even though in common speech they appeared in vernacular hypocoric forms. Unfortunately, we do not have any clear understanding of medieval Saami anthroponyms. Possibly the name of a farm *Turja* in Isokyrö, given by the Finns, is based on an ethnonym that means ‘Saami people’.

In principle, the names of large rivers or lakes represent the earliest stratum of toponyms (Ainiala 1997: 163; Rahkonen 2013: 5). Examples include Finland’s three largest lakes, Inari, Saimaa and Päijänne, whose names are etymologically obscure (see SPK s. v. *Inari, Saimaa, Päijänne*). Usually, non-transparent names are early (Rahkonen 2013: 5). Even hydronyms of medium-sized rivers and lakes are often earlier than those of oikonyms. The names of brooks, ditches, fields, meadows are usually late (Ainiala 1997: 207–225). More than ten oikonyms of old villages in Isokyrö (based on the names of farms), which were documented in the 16th century, most probably originate from the Middle Ages.

The basic limitations of onomastics are dating and especially connecting names with the available archaeological data. Therefore we must, in most cases, be content with presenting more or less relative datings and more or less high probabilities when we connect names with archaeological materials.

### 1.4. Earlier onomastic studies

Armas Luukko (1950) thoroughly studied the names of Southern Ostrobothnia, including Isokyrö and Vöyri. He concentrated especially in early oikonyms and anthroponyms. According to him, most of them have parallels in Upper Satakunta and Tavastia (Fi. Häme) territories. Archaeologist Carl F. Meinander (1950: 151–162) claimed that there was a settlement break in Southern Ostrobothnia during the Viking Age. Torsten Karsten (1921), who was a Germanist and a researcher of onomastics, was interested in the toponyms of Vöyri. Later, Matti Rajamaa (1964, manuscript in NA) studied the Finnish substrate names in mostly Swedish-speaking Vöyri extensively.
Among the above mentioned scholars, the investigation of Luukko is valid even today and his conclusions do not need to be updated. We must also mention Lars Huldén (1997), who has written of the toponyms in Vöyri. In Suomalainen paikannimikirja (SPK 2007) [in English: The Book on Toponyms in Finland], the following researchers have written articles on the present subject: Sirkka Paikkala s. v. Isokyrö and s. v. Kyrönjoki, Janne Saarikivi s. v. Kyrönmaa and Marianne Blomqvist s. v. Vöyri.

1.5. Do archaeology and onomastics correlate with one another?

Even though the present study is based on onomastics, it is placed within archaeological frameworks. It is therefore desirable to take a quick look at the problems associated with combining the results of these two disciplines. Several scholars have written on the subject. Researchers such as Mallory & Adams (1997), Ross (1997) and Tvauri (2007) should be mentioned. Recently, Saarikivi & Lavento (2012: 177–216) have emphasized the following problems: 1) ethnicity and linguistic identity do not always correlate, 2) different linguistic groups may have a rather similar material culture and 3) languages do not spread only by migrations, but also by language shift. Language shift easily spreads over culturally significant boundaries.

In the present study, the critical question is whether the cremation burials and water burials of the Merovingian period, which are archaeologically visible originating from the same period in Isokyrö and Vöyri, are conducted by one and the same linguistic group or by two different linguistic populations. Usually, the cremation burials are linked with Finnic groups, but the water burials are an isolated phenomenon found only in Isokyrö and Vöyri (Huurre 1995; Wessman 2009; see the map drawn by W. Perttola in Wessman 2010: 30). The only possible way to resolve the problem is to utilize the results of onomastics, i.e. do we find toponyms from the same relevant period being named by one language or several languages? The period (5th–8th centuries AD) is so early that the microtoponyms are most probably not preserved until the modern times. I studied all the toponyms of Isokyrö from the collections of NA [Names Archive] and did not find any candidates among the microtoponyms which could have originated from such ancient times.

1.6. The early ethnic and linguistic definition of the Finnic and Saami population

The Finnish language is thought to be a northern offspring of Late Proto-Finnic. Terho Itkonen has cautiously suggested that the northern Proto-Finnic was spoken in western Finland approximately on the eve of the beginning of the Common Era (Itkonen 1993: 156, 172). Upon this linguistic layer, SW Proto-Finnic impacts from Estonia did not occur until later (ibid. 158–159). Itkonen (1993: 159) has reasoned that the Ostrobothnian Finnish dialect can be explained as a result of the mutual influence of the Tavastian and southwestern Finnish dialects. On this basis, it is justifiable to
assume that early Ostrobothnian Finns spoke a language that was closely related to the western Finnish dialect of the first millennium AD.

It is difficult to define what exactly the southern Saami language in Finland was during the Migration and Merovingian period. Ante Aikio (2006: 43) speaks of the disintegration of the Proto-Saami language during 0–500 AD. The place names show clearly that a kind of Saami was spoken in southern Finland, especially in the lakeland of Finland (Aikio 2007; Salo 2000: 27–38). Salo (2000: 52) presents a map drawn by Karl Nickul showing that the Saami population had disappeared from the Isokyrö–Vöyri district by 1200 AD. However, Olaus Magnus (1539) has drawn a picture on his map Carta Marina illustrating Saami-looking people travelling by sleighs and reindeers in Ostrobothnia. It is probable that early southern Saami people spoke a language that was still close to Late Proto-Saami. Such southern toponyms as Änkää [Nummi] and Jänky [Savitaipale] hint that they were adapted by Finns during the period when in Saami language the denasalisation of -ŋk- or -ŋg- had not yet occurred (see modern SaaN ákkis ‘hunting fence’ and jeaggi ‘bog’), representing the forms of Proto-Saami (see Aikio 2006: 168).

It is totally another question whether so called Lappish groups (Fi. lappalainen) mentioned in old documents were Saami people in each instance. They could have been nomadic fishing and hunting Finns. It is possible that, during the first millennium AD, there were people who spoke a language that was an offspring from the West Uralic x-language assumed by Rahkonen (2013) or that remnants of Paleo-European populations still existed.

2. Preliminary hypothesis and methods

2.1. Preliminary hypothesis

Eero Kiviniemi (1980: 320–321) suggests that the languages behind toponyms in Finland could be Finnic, Saami or Scandinavian-Germanic. In addition, he mentions possible unknown pre-historical extinct languages. The latter ones in the Arctic area of the Nordic Countries have been studied by Ante Aikio (2004). The ancient substrate language in Lapland did not belong to the Uralic languages. He refers to those unknown languages as Paleo-Laplandic and in the inner parts of Finland Paleo-Lakelandic (Aikio 2004: 64, Fig. 1). Janne Saarikivi (2004) studied obscure substrate words in the Finnish language and called the source language(s) Paleo-European. Pauli Rahkonen (2013) treated such hydronyms in the inner parts of Finland that originate from a Uralic language as not being derived from Proto-Finnic or Proto-Saami. He, following Jalo Kalima (1942), calls the language in question West Uralic x-language. The onomasticon belonging to this group is located almost exactly in the area of the archaeologically defined Culture of Textile Ceramics (ca 1900–800 BC). These hydronyms are found between the Upper Volga area and Ostrobothnia of Finland (Rahkonen 2013: 181–183, Fig. 24; Häkkinen 2014).
In studying the onomasticon around Levänluhta and Käldamäki – in practice Isokyrö and Vöyri – we ought to classify the toponyms according to some preliminary hypotheses: 1) early Finnish stratum of toponyms, 2) Scandinavic-Germanic stratum, 3) early Saami stratum and 4) the stratum of possible unknown linguistic sources.

2.2. Methods

(1) I have used an “exclusive method”. This means that those of the above mentioned linguistic groups whose dating, based on toponyms, cannot fit to the water burials (5th–8th centuries AD), are excluded.

(2) In order to date names, I have utilized both Finnish and Swedish maritime toponyms of bays, islands, rocky islands and river estuaries that are found on dry land in Vöyri. Using the computer-generated modelling of the rising of surface of the earth and retreating of the seashore, it is possible to date toponyms quite reliably (see below).

(3) Because of the similarity of early Finnish oikonyms and anthroponyms in Vöyri and the Kyrönjoki catchment area, I have assumed that the Finnish speaking population spread to both areas at approximately the same time. Their distribution sheds light on the directions and original homelands of these toponymic types. The onomastic information has been compared to the knowledge on common settlement history in Finland and to the results of archaeology.

(4) Some etymologies of Ostrobothnian dialectal Finnish words are utilized in order to determine possible directions of migrations.

(5) The names of largest rivers, which are assumed to be the earliest ones, are studied as well.

3. Toponyms of Finnish origin

I have studied all the toponyms of Isokyrö which are found in the Names Archive of Kotus (NA). I then selected from among them early specifics of toponyms which differ from the later common Finnish language or later anthroponyms. My aim is to find out early directions utilizing distribution maps. These specifics were “out of fashion” already in the later period after 16th century. In Vöyri I have utilized the dating based on the retreat of the seashore. The names and their locations are found from the maps of Kansalaisen Karttapäikka.

2. For example, in the hydronym Swanriver the element swan is called specific and the element river generic.
3.1. Early Finnish onomasticon in Southern Ostrobothnia

3.1.1. Toponyms originating from Tavastia

Most of the early names I have studied have parallels in Tavastia (Häme) and Upper Satakunta. As an example we can mention toponyms such as Kelhänöja, Oitinjoki, Palhojainen, Pouttu- : Poutun-toponyms, Renkola-toponyms, Talsola, Välki- : Välkin- toponyms which originate, according to my distribution maps, from western Tavastia or Upper Satakunta. In order to get better acquainted with the early oikonyms in Ostrobothnia, one can read Luukko’s presentation (1950). His conclusions concur with mine. According to our knowledge of common settlement history and the typology of the toponyms, one can assume that these names originate from the (?late) Middle Ages. This idea is also supported by the fact that Hämeeenkyrö in Upper Satakunta and Ostrobothnian Kyrö belonged to the same administrative district during the late Middle Ages (Alhonen 1983). The Swedish administration of Southern Ostrobothnia was ruled from Satakunta district until 1374–75. At that time, Bo Jonsson Grip received Korsholm County (i.e. Ostrobothnia) as his administrative province (Vahtola 2003: 43).

3.1.2. Early Finnish toponymic type

In Isokyrö, a toponym Kiikanmäki is found. The stem kiikka represents a very early Finnic toponymic type. Such names are found in all the earliest Finnish areas in Finland Proper, Satakunta, Tavastia and Karelia. Corresponding toponyms are also found in Estonia, such as Kiikla in Ida-Viru County [the first documented occurrence in 1241] and Kiigevere in Järva County [the earliest documented occurrence in 1583] (EKR s. v. Kiikla and Kiigevere). The etymology and exact meaning of the stem is unclear. Some suggest associating it with the swinging movement of rapids; cf. the verb Fi. kiikkua ‘swing’ (SPK s. v. Kiikka, Kiikoinen). It is possible that the naming motif of kiikka-oikonyms is based on swings of villages. The youth of Finnish villages used to gather together in such sites. It is very probable that the toponym Kiikanmäki belongs to this category. But it is not impossible that the toponymic type is based on an anthroponym. This has been suggested by Sirkka Paikkala (SPK s. v. Kiikala) and Marja Kallasmaa (EKR s. v. Kiigevere). The first element of the Vepsian toponym Кико|элмерьярве < *Kiikko|ilmēr|jārvi (MAG 34) might belong to the same toponymic type.

3.1.3. Toponyms from Finland Proper and Satakunta

Some Ostrobothnian dialectal words might prove that, seemingly, the earliest Finnish wave of population came from northern Finland Proper. One of them is luoma meaning ‘brook’. It is very productive in the Ostrobothnian onomasticon as a generic of toponyms. In Isokyrö such toponyms as Jaurin|luoma, Kattila|luoma, Kortes|luoma,
Koto|luoma (2), Paha|luoma, Risti|luoma, Ulvilan|luoma and as a specific Luoman|oja are found (NA).

As mentioned above, the word *luoma* has the meaning ‘brook’ in Southern Ostrobothnia. In Kainuu and Kuusamo it is a generic connected with ponds and small lakes. In the Finnish dialect in northern Finland Proper it has the meaning of a fishing term ‘draught of seine’ and it usually appears as a generic in the names of bays (MA; NA). In southern Finland Proper *luoma* has the meaning ‘bend, curve’ (MA). SSA₂ presents two different sources for the word ‘luoma’: 1) *luoma₁* ‘brook, natural ditch’ and 2) *luoma₂* ‘draught’. It is interesting that in Lule Saami, unlike in any other Saami language, a parallel word *luopma* ‘hollow bank’ (SSA₂) is found.

I believe it is reasonable to assume that the words mentioned in SSA₂ (*luoma₁* and *luoma₂*) share a common source. The word has been imported most probably from the southern group of Finnic languages. In Estonian there is a dialectal word *loom* ‘bend of river’ and in Votic *lōmuz* ‘draught’. Both of these might originate from Baltic *lomá* ‘lowland, depression [landscape]’ (SSA₂ s. v. *luoma₁* and *luoma₂*). Thus, there is one origin for words which have different meanings, but which can semantically be connected with one another.

On these grounds, it is reasonable to think that the word *luoma* was adopted from the Estonian language into the dialects of Finland Proper with the meaning ‘bend, draught’ (see also Itkonen 1993: 168). From there, it spread to Southern Ostrobothnia and was adopted by the local Saami people as well. Some of the Saami people seem to have migrated over the sea to the Luleå region. In the map *Carta Marina* (Olaus Magnus 1539) is a picture illustrating their movement over the Quarken in the Gulf of Bothnia from Ostrobothnia to Sweden, travelling in sleighs drawn by reindeers. Because the Saami word has preserved the original meaning more accurately, it is probable that in the Ostrobothnian Finnish dialect the shift of meaning occurred later. Since the word *luoma* is not found in other Finnish dialects (such as Tavastian or Savo-Karelian), but only in the dialects of Finland Proper and Ostrobothnia, it was most probably adopted from Finland Proper into the Ostrobothnian dialect.

Another dialectal word that I have investigated is *luhta*. The word itself is found in practically every Finnish dialect, but with slightly different meanings. We can divide these roughly in two. In the western dialects spoken in Southern Ostrobothnia (everywhere) and sporadically in northern Finland Proper (e.g. Laitila, Honkilahti, Pyhämäa), in Tavastia (e.g. Tammela, Keuruu) and Upper Satakunta (e.g. Hämeenkyrö, Karvia, Honkajoki), the word has the meaning ‘meadow’ (MA).

Mostly in Tavastia and in the eastern dialects, *luhta* means something clearly wet: e.g. ‘wet meadow, meadow that is sometimes covered by flood, muddy meadow, swamp’ (MA). In Vepsian *luht* means ‘muddy place, wet place where hay is growing, draught, meadow by bay’ and in North-Russian dialects *łuhta* [luhta] means e.g. ‘bay, boggy shore’ (SRNG s. v. *łuhta*). The distribution of *Luhta-* and -*luhta* toponyms suggests that the Ostrobothnian meaning of the word originates from northern Finland Proper (Maps 2 and 3).
Map 2. -luhta toponyms (NA)
Map 3. Luhta specifics (NA)
3.2. Dating of Finnish and Swedish maritime toponyms in Vöyri

Because the seashore has retreated, the onomasticon in Ostrobothnia can be dated utilizing maritime toponyms on dry land (Map 4). The seashore reached Isokyrö in approximately 800–700 BC. Thereafter, a number of lakes appeared. Later they disappeared, but are still visible in toponyms Jauri (< Proto-Saami *jāvrē ‘lake’) and a hill called Järvimäki (< Fi. järvi ‘lake’) (Map 5).

Isokyrö was located by the sea so early that no maritime Finnish or Scandinavian-Germanic toponyms remained in modern times. Instead, the onomasticon of the river valley Vöyri is very informative. As mentioned above, the water burials were practised both in Levänluhta in Isokyrö and in Käldamäki in Vöyri. Therefore, the onomasticon of Vöyri is relevant from the point of view of the present study. The burial site of Käldamäki was still under the sea in the beginning of the Common Era. During the burials between 5th and 7th century AD (in Käldamäki), the seashore was rather close to the site (Map 6). Nowadays, Finnish maritime toponyms, such as the names of islands, bays, rocky islets, are found no further away than approximately ten kilometres from the present seashore. In ca 850 AD, the estuary of the river Vöyri was located approximately twelve kilometres from the present shoreline slightly north of modern Vöyri village.

According to the modelling of Santeri Vanhanen (Map 4), there were two large bays in the 9th century AD. Nowadays in their location there are dry land sites called Lålax < *Laalaksi and Lotlax < *Luotolaksi or *Lōtlaksi. The motif of the name *Luotolaksi was an island called *Luotosaari ~ *Lōtsaari, which was located in the bay. Now there is a site called Lotsor.3 The name Lotlax in modern maps is located at the bottom of the ancient bay (850 AD). Therefore, it is reasonable to assume that the name was given during the 9th century AD. At the same time, according to the modelling, there were islands called Kaitso < *Kaitasaari, Kōllot(backen) < *Kaulaluoto and close to it Gållos < *Kallonen. In approximately 1000 AD, two new islands were formed. They were called Leplot < *Leppäluoto and Vecklot < *Veikkaluoto. According to Wessman (2009: 94), archaeological evidence is not found in Vöyri from the Crusade Period (ca 1050–1200 AD). Apparently, some migration by Finnish-speaking people began during the Viking Period (800–1050 AD) or the naming of sites was due to the hunting and fishing journeys of Finnish-speaking people from somewhere else. It seems that the population that practiced water burials had disappeared or was assimilated by the Finns.

Afterwards, when the shore continued to retreat, two new bays were formed. Nowadays there are toponyms (Swedish) Viken and a bi-lingual site called Rajvik < Fi. raja ‘boundary’ and Swe. vik(en) ‘bay’.4 These names appeared ca 1200 AD. Accordingly, the general understanding has been that the Swedish-speaking population migrated to Ostrobothnia at the end of the 13th century (Salo 2000: 111).

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4. This kind of bi-lingual naming is often created in a situation when a new language becomes prestigious. This is visible in Russian Karelia where the old Karelian specifics remain and generics are replaced by Russian translations; e.g. *Säämäljärvi > Sjamozero.
Map 4. Toponyms in Vöyri originating from 850–1600 AD and seashore in 850 AD.
- Käldämäki = Burial site of Käldämäki || - - - - present shoreline (Map drawn by P.Rahkonen featuring Santeri Vanhanen. Names from Kansalaisen Karttapaijka.)
the same time, the estuary of the river Vöyri, or one of its tributaries, was called *Hiidensuu > modern Hidesu; cf. also Hidesukullen ‘Hiidensuu hill’. The shore was dislocated five kilometres from its situation in 850 AD. In Carta Marina (Olaus Magnus 1539), a river called Iomola vesi < *Jumalavesi ‘divine watercourse’ is illustrated close to the names Kyro < *Kyrö and Vyro < *Vörä (Swedish variant). The Finnish word hiisi : (Gen.) hiiden in pagan times referred to something divine, a deity or more usually sacrificial site. Those names connected with the Käldamäki burial site hint at the importance of the river valley as a cultic site (see discussion below).

During those days, the bay Luotolaksi disappeared and became dry land. The island Luotosaari became a hill. A new bay was formed which was called *Parkkilaksi > modern toponym Parklax. The motif of the names Parkkilaksi and possibly of a new island *Karvasaari > modern toponym Karvsor reflects the fur-trading period that spanned over 1200–1400 AD (Vahtola 2003: 63; Wuorisalo 2005: 114). Most of the Karvasaari names in Finland are located in the county of Central Finland or close to it (Hankasalmi, Viitasaari, Joutsa, Laukaa, Vesanto, Äänekoski, Kinnula). Those regions were the ancient hunting and fishing areas (Fi. erämaa) of the Tavastians and for this reason the names might possibly reflect their hunting-fishing activities. The islands do not have such regular locations in lakes that could give any hint at the motif of naming. They can be located in the midst of a lake, in bays or in straits. The last Finnish name of the estuary of the river Vöyri was *Sysisuu > modern Syssu(backen). The names of a bay *Tervalaksi > Tervlax and of an island *Tervaluoto > Tervlot originate from the same time. Both of them reflect the prospering tar-trade in the 16th and 17th centuries. The distance to the present shoreline was approximately three kilometres. The latest name of the estuary is Swedish Åminne ‘estuary’.

Some almost identical Finnish names of old villages/farms are found both in Isokyrö and in the inland of Vöyri, which might be transferred from one to another. Kylkkälä ~ Kylkis is a very rare type of oikonyms found only in Isokyrö, Vöyri and Vaasa. The unique oikonyms Yryselä ~ (Jyriselä) ~ Jörala are found in Finland only in Isokyrö and Vöyri. The name probably originates from Ancient Swedish Jöran/Yrian < Georg(ius) (Hellquist 1922 s. v. Göran). Antilankylä ~ Andiala, Antill names are found frequently almost everywhere in western Finland and do not have any particular evidentiary force. (See the lists in Suvanto 1987).

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<td>Antilankylä (1551)</td>
<td>Andiala (15th century), Antill</td>
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5. In Finnish hiisi : hiiden ‘divine holy site or deity’ and suu ‘mouth’.
6. The word karva/karvo has several meanings in Finnish dialects: ‘hair (of an animal)', karva(heinä) ‘(certain) hay’, karvo ‘small rocky islet’ (SMS VI: 423,426,443))

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The name of the medieval locality Miemosby < *Miemoinen in Vöyri village has parallels in Tavastia; e.g. Miemola in Lempäälä, Tammel and Lohja (NA). According to Luukko (1950: 51), a man called Martti Miemoi [memoj 1546] lived in Huittinen (see also Suvanto 1987: 107). A hill in Vöyri called Kondivor < *Kondi(e)vyor(i) may originate from Karelian language as a result of Karelian fishing activities in Ostrobothnia; cf. Karelian kontie, kondie, kondii ‘bear’ (KKS s. v. kontie). It seems that earlier Karelian privileges to fish salmon in Ostrobothnia reached remarkably further south; then, later, according to the Treaty of Noteborg [1323], between Sweden and Novgorod; cf. also Pedersöre ? < Karelian *Pedrasoari. One possibility is that this name derives from a form close to Proto-Saami *kontë ‘deer’ ? > *konde > SaaI kodde; cf. Kildin Saami kà˚nd or Turja Saami koñde ‘id’.

It is possible to draw the following conclusions from the abovementioned observations:

(1) The earliest Finnish onomasticon appeared in Vöyri during the Viking Period, apparently in the 9th century AD. Earlier Finnish toponyms – that is to say, deeper inland – are not found. One of the earliest individual toponyms is Lålax < *Laalaksi < *Laajalaksi.8 The following parallel names are found: Laajjoki [Mynämäki], Laalahti [Turku], Laalahti [Mouhijärvi], Laalahti (2) [Tampere] (Kansalaisten Karttapaikka). All of them are located in the area of the western Finnish dialects. Therefore we can draw a conclusion that the earliest Finnish population came to Vöyri from Finland Proper and/or from Upper Satakunta, but not from the principal Tavastia.

(2) Swedish toponyms appeared in the end of the 12th century or slightly later in the beginning of the 13th century.

(3) In the 13th–14th century new Finnish toponyms also appeared reflecting the flourishing fur-trade of that period; cf. Parkki|laksi < parki|ta ‘tan hide’ and possibly *Karva|saari < karva ‘hair (of animal)’.

(4) From the end of the 16th century and the beginning of the 17th century originate some Finnish toponyms reflecting international tar-trade; cf. *Sysi|suu < sysi ‘charcoal’ and *Terva|luoto < terva ‘tar’.

(5) Apparently, the Vöyri district remained bilingual (Finno-Swedish) for a long time.

The stem of the name of the burial site Käldamäki can be derived from Old Swedish *kælda ‘spring’ (Hellquist 1922 s. v. källä) + Fi. mäki ‘hill’. Rajamaa (1964: 59) suggests that the stem should be derived from Fi. kelta ‘yellow’. The site is located on a field where springs are found. Furthermore, in the onomasticon of Vöyri there are

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8. In Swedish earlier *-aa- > ä. Therefore the substitution of Finnish -aa- often is -å--; cf. Håp|örarna < Haapa|saaret (see SPK s. v. lax and s. v. Lapua; Rajamaa 1964: 50).
other cases where the specific is Swedish and the generic is Finnish, such as Låg|pelt ‘lower field’ and probably Hallon|paik ‘raspberry place’. This phenomenon might hint at a temporary strengthening of the Finnish-speaking population at the expense of the Swedish-speaking one in the bilingual society. Sometimes the order is vice versa, like Pärä|hagen ‘back pasture’ < Fi. perä ‘back’ and Swe. hagen ‘pasture’. The modelling of the landscape combined with the onomasticon shows that the first Finnish toponyms appeared in the 9th century and the first Swedish ones in the end the 12th century at the earliest. Therefore neither Finnish nor Swedish speaking populations could be the representatives of the water burial culture in the 5th–8th century AD.

4. Saami toponyms

A group of jauri-toponyms is found in Isokyrö. They originate from Saami language; cf. Proto-Saami *jävrē > later Ostrobothnian Saami *jauri ‘lake’. Indeed, there was a medium-sized lake where today is an area called Jauri and a marsh called Jaurinneva (Map 5). A brook emptied into this lake. In that very place there is even today a ditch called Konto-oja. The informant of Kotus Name Archives (NA) explains that the naming is based on a dialectal word konto ‘turf’. However, this can be folk-etymology and the original word behind the name might be derived from Proto-Saami *kontē ‘deer’. The name of a nearby site Wälmä (1699) and Välmä Luchta (1735) may originate from a word that can be derived from Proto-Saami *vēlmē ‘calm spot in a river’. A surname Välmä is found in the past in Kokemäki Antti Välmä [1545] and in Eura Lasse Välmä [1546] (Luukko 1950: 49; Suvanto 1987: 65,192). It is possible that the name was transferred from Upper Satakunta to Isokyrö. However, this anthroponym may be originally derived from the Saami language, because some Saami toponyms such as Köyliö < Proto-Saami *kēvlē ‘handle, ?bend’ are found in Satakunta (Aikio 2003: 102; Salo 2000; Lehtiranta 2001: 48). In Isokyrö there is a farm called Turja [earliest mention 1619]. The name once meant e.g. ‘witch’, but most probably also refers to the Saami people as an ethnonym (see SPK s. v. Turjanselkä; SSA3 s. v. turja; KKS s. v. turjalaine, turjalappalaine). If the name can be linked with the word turri, it may have the meaning ‘furry, bearded, uncommunicative’ (SSA3 s. v. turri). In Vöyri a toponym Lappkullen (Eng. Lappish hill) is found that may possibly, but not necessarily, hint at an early Saami population in Vöyri.

There is a word mukka ‘bend (of river)’ in the Finnish dialect of Southern Ostrobothnia. It is probably adopted from Saami language; cf. Proto-Saami *mokkē > northFi. mukka (Lehtiranta 2001: 76; T. I. Itkonen 1948: 158). However, SSA3 (s. v. mukka) presents the opposite loaning direction from Finnish on Saami. Because the Saami word occurred already in Proto-Saami and was inherited by all known Saami languages, it is difficult to believe that the term was adopted into Saami from a rare western Finnish dialectal word. This leads us to assume that the word in the Isokyrö dialect is based on a Saami substrate. The conclusion is that the word was borrowed from Saami into local Finnish in the period when the Saami and Finnish speaking populations co-existed in Southern Ostrobothnia.
Possible unknown ancient languages

I want to emphasize that the following suggestions below in this section cannot be verified for sure. However, I decided to publish these assumptions for the origin of the opaque names of three remarkable rivers in Ostrobothnia. In any case, they most probably represent the earliest preserved toponyms in the area in question and were in use during the period of the water burials. Those names are Vöyrinjoki,
Kyrönjoki ja Ähtävänjoki. They are evidently not of Finnish, Scandinavian or Saami origin. Therefore, my conclusion is that they must originate from some unknown source, from a Uralic or non-Uralic extinct language. For this reason I endeavoured to find out whether they can be derived from an earlier stratum of a Uralic protolanguage.

Among the names of the 85 largest lakes in Finland at least 25% are etymologically obscure. They cannot acceptably be derived from Finnish, Swedish or the Saami languages (Rahkonen 2013: 5). Therefore it is necessary to pay serious attention to the non-transparent names of large water objects (Kiviniemi 1980: 320–321). In speaking of disappeared unknown languages in Finland, excluding Lapland, Saarikivi (2004) calls them Paleo-European language(s) and Aikio calls them Paleo-Lakelandic (2004) or simply unknown languages (2006: 45, map 1). Rahkonen (2013), following Kalima (1942), writes of West Uralic x-languages. A population who spoke some unknown language during the period of the water burials in Levänluhta [Isokyrö] and Käl람äki [Vöyri] is a potential alternative because it seems (see above) that Finnish and Swedish speaking people migrated only later at least to Vöyri, but most probably to Isokyrö as well. We do not know with certainty from which language the names of three large rivers of the territory can be derived. These rivers are *Ätsävänjoki > Ähtävänjoki, Vöyrinjoki and Kyrönjoki (see Map 1). Therefore I have studied the etymological backgrounds and possible North-European (Finno-Russian) parallels of these three hydronyms.

5.1. Vöyri

Bror Åkerblom (1937: 34), following Karsten (1921: 119–121), has derived the toponym Vöyri from Ancient Swedish *vør ‘fishing harbour in estuary’. In older Norwegian there has been a word *ver ‘temporary fishing camp by sea’ (Fritzner 1886 s. v. ver). If the suggestion of Åkerblom and Karsten is correct, the toponym would be of relatively late origin. Ancient Swedish was spoken in the 13th–14th centuries AD, the period when the Swedish population had only recently arrived in Vöyri according to the present study (see section 3). However, in that time the settlement of Vöyri ~ Vörä was remarkably too remote from the estuary of the Vöyrinjoki and therefore could not be a harbour of the estuary or a camp by the sea.

Marianne Blomqvist (SPK s. v. Vöyri and attached literature), in accordance with Lars Huldén (1997), has suggested that the word behind the name should be derived from Finnish (old) *veeru > (modern) vieru ‘slope’. She points out that in some old documents from the 16th century the name is written Veru, Weru, Werä. However, this explanation faces three difficult questions which should be answered:

(1) Did the long -ee- become a diphthong -ie- so late in Finnish that the word still had the form *veeru when the Swedish-speaking population adopted it (after the 13th–14th centuries)? In the form vieru the word could absolutely not become Vörä.
Why would the suggested original Finnish -ee- have become -ö- in Swedish, and later in the Finnish variant -öy- even though some Finnish speaking population lived in Vöyri continuously since the Viking Period? Would it be not more probable that the Finnish-speaking population later used the name *Vieru < *veeru, or at least *Vööri? In addition, one should remember that there exist very early documentations of the forms Vøra [1367] and Vöro [1478] as well (Karsten 1921: 119).

Was the toponym Vöyri originally an oikonym or hydronym? If it was a hydronym, it most probably cannot be derived from *veeru because the specific vieru- is unknown in hydronyms in Finland. For example, Kansalaisen Karttaapikka recognises neither lakes nor rivers with the specific Vieru-.

The most decisive question, however, is how to explain the Finnish variant Vöyri and especially its diphthong -öy-. Why would the assumed original Finnish *Veeru have become Vöyri in spite of the continuous local Finnish speaking settlement history? The explanation to derive the name from *veeru or Swedish Vörå is phonetically impossible or at least highly improbable. Blomqvist (SPK s. v. Vöyri) reports that the earlier Finnish form of the name according to the oral tradition was vööri. The linguistic rules suggest the opposite development *vöyri > vööri as more probable. Räisänen (SPK s. v. Söyrinki) and Nissilä (1975: 255) point out that there have been such phonetic changes and adaptations as Latin Severinus (anthroponym) > Swedish Söffring > Finnish Söyrinki (oikonym) > dialectal Söörinki. According to the regular phonetic rules the diphthong -öy- cannot be derived from long Swedish ò, because it should result in -yö-, which happened much later [1821] *Vörå > Vyöri (SPK s. v. Vöyri). It is visible in Finnish adaptations from Swedish toponyms such as -böle ‘village’ > Finnish -pyöli (NA).

Thus, we face a serious problem in deriving Vöyri from earlier Finnish *Veeru. It is true that the word *veeru has dialectal variants vyöri, vyöry. But even in this case the diphthong is incorrect. According to the phonetic rules Finnish -öy- should be inherited from *-ök/-öég- or *-öt/-öéd- or *-öw- (the vowel can also be *e) ; see e.g. Fi. dial. köyri/ylä, keuri, keyri < *kekri (SMS s. v. kekri). In the map Carta Marina (Olaus Magnus 1539) the name is spelled Vjro. In this variant, f could represent y or v; i.e. Vöyr-, Vövr-.

In the form Vöyri, the name is unique in Finland. However, such variants as Veurun|pohja and Veurun|mäki [in Joutsa] are possible parallels. Even such toponyms as Voural|yuori [in Lappeenranta] and Vouril|aja [in Sodankylä] could have common roots with Vöyri. If the word behind the toponym can be derived from the assumed West Uralic x-language (Rahkonen 2013), it might have a historical phonetic connection with a theoretic Meryan word *voyra (or *vejra, *voyra) behind two different Meryan hydronyms called Vogra in the Yaroslavl oblast in Russia (AJO23B2; 99A2). The latter, however, has a variant Vorga (the unpublished collection of Arja Ahlqvist; personal information 24 January 2017). But if Vöyri really is connected with these toponyms, it is very old and could have been named by the population who practised water burials in the Levänluhta–Käldamäki district. However, we are obliged to state that the question of the etymological background of the name Vöyri has not been resolved.
It is very possible that the motif of the naming of Vöyri was an unusually high hill Dansanhällorna (51 meters above the present sea level). At the beginning of the period of the water burials in Käldamäki, this hill and the slightly lower hills Grannasberget and Kroksbacken were located by a long bay (Map 6).

Map 6. The Vöyri district approximately in 450 AD. (Modelling by Santeri Vanhanen.)

9. The landscape in Ostrobothnia is usually very low and even.
5.2. *Kyrö*

*Kyrö*-toponyms originate from three different linguistic origins. In western Finland they are often names of fields and meadows. Names in this category can be derived from the word *kytö* ‘burned soil of turf for agriculture’. The declined stem (weak grade) in official Finnish is *kydö*- but the phonetic rule *d (ð) > r* in western dialects results in *kyrö*-. The distribution map (Map 7) shows clearly that the toponymic boundary of *Kyrö*- fields and meadows runs almost exactly along the dialectal *ð > r* boundary (Kettunen 1940, map 66). Old medieval oikonyms in western Finland most probably do not originate from this word, because the habit to burn turf marshes in order to make them cultivated fields did not begin in Ostrobothnia until the 17th century (Historiallinen maatalous).

The *Kyrö*-names of natural sites have two concentrations. The smaller one is located in south-western and southern Finland and the wider one in Ostrobothnia and in northern Savo–Kainuu district (Map 8). Many of the sites are rocky hills, and other places which are difficult to reach (NA). In some dialects the word *kyrö* means ‘rocky cross-country’ (Vahota 1980; SPK s. v. *Kyrö, Kyrönnmaa*) and, in the Ylitornio dialect, ‘hiding place’ (Mikkonen & Paikkala s. v. *Kyrö*). One of my own informants from Alajärvi gave the local meaning *kyrö* ‘hinterland’. There exist four *Kyrövaara* (high tree covered ridges) names in Finland. Two of them might receive their names from a nearby farm (in Hyrynsalmi and Kittilä). Two others are clearly names from nature (a very steep hill in Kemijärvi and a hill in the hinterlands of Kuhmo).

In western Finland, the earliest *Kyrö*-oikonyms may originate from natural sites and later ones from burned fields (see the distribution Maps 7–8). The *Kyrö*-names of settlements and farms in eastern Finland might in several cases originate from an orthodox personal name < *Kyyros, Kyrillos*, because a personal name *Kyrö* and a surname *Kyröläinen* (Mikkonen & Paikkala 2000 s. v. *Kyrö*; SPK s. v. *Kyrönnmaa*) are found there. Eleven *Kypac* and one *Kypoc* hydronyms are found in the catchment area of the River Pinega in the Arkhangelsk oblast (TKSTE 104–105). It is difficult to know whether they are linked with the Finnic word *kyyrö* or the Permian word *kîr* > a Komi toponym *Kîrs* (see Saarikivi 2007: 63; Afanas’ev 1996 s. v. *Kûpc*).

Interestingly, as far as I know, no linguist has yet tried to trace down whether the dialectal word *kyrö* could be derived from any level of Uralic proto-languages or whether it has any cognates in other Uralic languages. If the word *kyrö* is an original Finnish word or a loanword from some unknown Uralic language, it could be derived from Proto-Finno-Permian *kūr(V)*, probably *kūrā*. In that case, even the Finnish verb *kūrallanna* ‘cast (secretly) sullen glances’ could be a metaphor for a hidden rough cross-country; cf. dialectal *kyrö* ‘hidden place’.

If there were a word *kūrā* in Proto-Finno-Permian, it would have been in Proto-Permian *kîr* and in Komi and Udmurt *kîr*. Indeed, in Komi there is a suitable word *kîr* ‘steep slope, high bank’ (Afanas’ev 1996 s. v. *Kûpc*) which is semantically close to the meaning of the Finnish dialectal *kyrö* ‘rocky hill, hinterland difficult of access’. In Mordvin, Mari and Saami, parallel words do not exist. Even in the Finnic linguistic
family, it is not found in the southern and eastern groups. In the northern (Finnish) group it is only a rare dialectal word. Instead, in the Meryan onomasticon hydronyms such as *Kera (AKO182A2) in the Kostroma oblast, *Kera (GBO234) in the Oka catchment area and Keroma (AJO17A4) in the Yaroslavl oblast, are found. The words behind these hydronyms could be derived from theoretical Proto-Finno-Permic *kūrā. In which case, a similar phonetic rule as found in Mordvin also worked in Meryan, so that the vowel *ū after the first consonant became > e (Bartens 1999: 57). I have no reliable cartographic evidence of the topography of those Meryan hydronyms. The river Keroma has its upper sources in a large marsh called Kurganovo ‘hill marsh’. The area is no doubt a hinterland, but this fact does not give any strong proof. According to Arja Ahlqvist (personal information 24 January 2017), however, the landscape supports, or at least does not resist, this idea.

If the Komi word kjr and Meryan *kera really are correspondences of Finnish kyrö, we should answer the question: why is the word found only in the northern Finnic group and even there only as a rare dialectal word? Furthermore, no parallels are found in the Estonian onomasticon, hinting at the probability that the word ever existed in the Estonian language (EKR). Therefore it is reasonable to take into consideration the possibility that the word kyrö is a substrate word in Finnish. In this case, the word may be borrowed from the West Uralic x-language (see Rahkonen 2013: 33–36).

It is possible, even probable, that the name of the river Kyrönjoki is linked with the name of the lake Kyrösjärvi which is located in Upper Satakunta. In the past, there most probably was a bifurcation period so that the modern lakes Sulkuejärvi and Korhosjärvi in the Kihniö parish emptied their waters both into the Kokemäenjoki water system via Kyrösjärvi and into the river Kyrönjoki via Seinäjoki. This means that there existed a passable water route from Kyrösjärvi to Kyrönjoki (see also Luukko 1950: 5–8). Even today in Kihniö there is only a very short and low neck of land between those two lakes and some ditches connecting the two water systems. Furthermore, one should remember that the medieval parish of Kyrö consisted of the entire area between Ostrobothnian Kyrönmaa and Hämeenkyrö in Upper Satakunta (Alhonen 1983). Both of these areas were earlier called simply Kyrö. The earlier bifurcation period and the naming of Kyrö might fit the period of the water burials of Levänluhta–Käldamäki. Kyrösjärvi was a hinterland of Tavastia and Satakunta in the Middle Ages.

5.3. *Ätsä-

The toponymic stem *ätsä- > Fi.Savo ähtä- is to be dated from the time when the lake Ähtärinjärvi < *Ätsäri and the river Ähtävänjoki < *Ätsävä still had connection with one another. This connection was cut off approximately 500 AD (Seppä & Tikkanen 2006: 89–92). In this respect, the date of the naming fits the dating of water burials in Levänluhta–Käldamäki.
Until now, no-one has been able to present a proper etymological solution for the word ätsä. There are no possible phonetic grounds to derive the word from Proto-Finnic or Proto-Saami. There has been a suggestion to link the name to SaaN ahcīt ‘to rise (of water)’ (see SPK s. v. Āhtāri). As a motif of naming this might be suitable, but there is a phonetic difficulty. The name must be very old (see above). The Saami word in question would have been either Proto-Saami *ęcē (Lehtiranta 2001: 10) or even earlier *icā ~ Fi. itāā. The phonetic development *i or *ę > ā would be difficult to explain. Some hydronyms resembling the stem ätsä- are found in the onomasticon of the Russian North. In the Kostroma oblast the name of the river Akča (AKO130A2) and in the Komi Republic the name Adźva (Afanas’ev 1996 s. v. Adźva) are found. Both of these might be based on a Permian word Komi adź ‘meadow’ > Proto-Permian *aţ (Lytkin & Guljaev 1970 s. v. adź). In theory, the word could have been *ānc(V) in Proto-Finno-Permic. In principle, the stem ātsä could be derived from an Uralic language in which *ānc(V) > *ācação > ātsä. It might have been the above assumed x-language. The motif would be suitable if we think of the coastal meadows in the estuary of the river Āhtavänjoki. Of course, the stem may have its roots in some unknown Paleo-European language instead.

6. Conclusions

The evidence presented by Wessman (2009) is convincing in proving that the Levänluhta and Käldämäki burial sites really were cemeteries. In particular, the fact that valuable items were buried with the deceased points to cemeteries on those sites. Therefore it is justifiable to speak of water burial culture, even though the geographic area of findings is rather limited. As written above, no confirmed Finnish, Scandinavian or Baltic onomastic traces are found originating from the Migration or Merovingian Period. On this basis, we can say that the population of the water burial culture most probably was not Finnish, Scandinavian or Baltic. Possible linguistic groups could be Saami people or people who spoke some unknown pre-historic language.

Saami people, or at least the Saami language, began to spread towards Lapland since the Early Iron Age, but supposedly mainly soon after the beginning of the Common Era (Aikio 2006: 44; Saarikivi 2011). However, the names of the large rivers Kyrönjoki, Vöyrinjoki and *Ātsävänjoki in the studied district do not originate from Proto-Saami. In addition, the Saami people never and nowhere else had the habit of water burials. If the word kyrō < *kūr(V) is a substrate word from some ancient Uralic language and if vōyr was related to a possible Meryan word *vojra and

11. In one case a bone was still inside the arm ring, proving that the deceased was buried with the ring around her arm. This means that the items made of metals were not separate offerings but belonged to the deceased.
Map 7. Kyrö- fields and meadows. (NA.)
Map 8. Kyrö- natural sites. (NA.)
*ätsä to Komi adž < *änč(V), a very possible language behind these hydronyms is the above mentioned x-language. Such stems of toponyms as vuoh-, voht- < Proto-Uralic *uktj ‘track over neck of land’ and vieksi-, vääksy-, viiks- ‘short river or sound between two larger waters’ are inherited from the language in question (Rahkonen 2013: 33–36, maps 24 and 25). The x-language arrived in Finland with the culture of Textile Ceramics (ibid.) and it is probable that its dialects were spoken for a long time alongside with Proto-Saami in the inlands of Finland. Levänluhta and Käldamäki are located on the approximate borderline of the culture of eastern Textile Ceramics.

However, it is also possible that the population who practiced water burials spoke some non-Uralic Paleo-European language. The uniting factor between the stems of the toponyms *ätsä- and vöyri- is that both of them are almost unique, especially if the stems veur- and/or vour- are not connected with vöyri. The rareness of these toponyms, together with the unique custom to practice water burials, hints at a linguistic and ethnic isolate. Even though it is possible to find a Uralic etymology for the main rivers of the district, we cannot prove the linguistic background of these hydronyms for sure.

It is most interesting that the onomasticon of the Vöyri district contains several linguistic traces hinting at its importance as a cultic centre. The names of the river Vöyri in Carta Marina, Jumalavesi ‘water of god’ (1539), the estuary called Hidensuu ‘mouth of divine Hiisi’ (13th century), and possibly the name Dansanhällorna ‘the dance rocks’ together with the cemetery of Käldamäki all strongly point at cultic activities. However, no archaeological finds connected with sacred activities have been found until now in Dansanhällorna or in the spot of Hidesu < Hiidensuu. However, in the Arkhangelsk oblast, the Kenozero district in an ancient Finnic sacrificial grove there is a big stone which is even today called ‘dance stone’ or ‘joy stone’ (Rahkonen 2015: 335–336). Wessman (2010: 20) mentions a pagan cemetery from the Late Iron Age in Kokemäki in modern times still called Leikkimäki ‘play hill’. In this case, playing meant dancing. During ancient Finnic cultic rituals, the local youth used to dance in sacred sites (Rahkonen 2015: 335–336). One should also remember that both of the burial sites are located where springs existed. In the Kenozero district, 29 sacred groves and several sacred springs are found, a reminder of the Finnic past of the area (ibid.). Therefore one can assume that the springs were essential factors for the holiness of the burials. It is possible that the word behind vöyri? < *vöksi, *veksi had a sacred meaning connected with the cultic activities. One weak possibility is to derive vöyri from *veksi that might have common roots with a known pagan deity Äkräs ~ Ekres. In this case, one must assume an initial (?prosthetic) v + ekre(s). This kind of omission of an initial v- is found in the name of Väinämöinen ~ Äinemöinen (Agricola, Psalttarin esipuhe 1551). This alternative is, of course, speculative.

It is strange that at approximately the same time as the water burials, cremation cemeteries were also located in the same vicinities; cf. Pukkila, Isokyrö [6th–9th century AD], Gulldynt, Vöyri [450–700 AD] (Wessman 2010: 96, Paper V). This fact seems to describe either a situation of two different cultures side by side or two different ways to bury within the same cultural group, possibly because of two different criteria.
It is possible that other water burial sites will be found. Because of the retreat of the seashore, those sites are likely to be located further inlands. A potential region would be the lower Ähtävänjoki area. It is evident that the toponymic material of the three main rivers of this area is not sufficient to define the language of the population who practiced water burials. However, the three names Kyrönjoki, Vöyrinjoki and *Ätsävänjoki form a limited entity of opaque hydronymys. Many of the names of the rivers north of Ähtävänjoki are no doubt of relatively late Finnish origin such as Vetelinjoki, Pyhäjoki, Kalajoki, Siikajoki. Some, such as Lestijoki and Lohtajanjoki which both empty into a bay of the sea called Lohtajanselkä (cf. Proto-Saami *lōkte ‘bay’), reflect some Ostrobothnian Saami dialect (SPK s. v. Lestijoki). The names of larger rivers south of Kyrönjoki can be explained as originally Finnish names (see SPK s. v. Närpiö, Lapväärti, Tiukka).

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