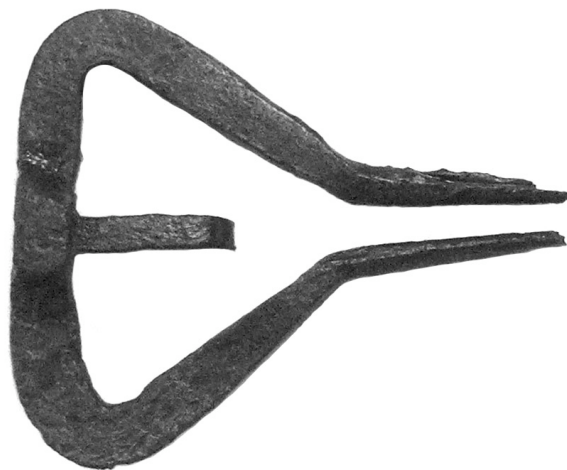


THE PÄRNU TYPE OF WEDGED JEW'S HARP

Quest for Historical Sources and Manufacturing Techniques

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Thesis

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for the Masters Degree in
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Introduction

The subject of this study is the Pärnu type jew's harp. It's probably the oldest known type of wedged jew's harps, being also rather unconventional and contradictory in many aspects.

The type has an unusually wide range – it's found all over Europe. But the finds are mostly single, very far from each other. Only 8 harps are known found altogether, 3 of them in Estonian area.

Furthermore – remarkable homogeneity throughout the group despite the harps complicated design almost certainly refers to a connection between them.

That's where the first and main contradiction lies – we have a group of rather homogeneous finds with exceptional design, yet there are so few of them found and the finds are outrageously wide spread.

The main aim of the study is to find out as much as possible about the type, to gather information and knowledge about the making of wedged jew's harps and in the end – based on that knowledge – remake some jew's harps of the Pärnu type.

The search for the roots is mostly based on the database of archaeological jew's harp finds in Gjermund Kolltveit's monograph „Jew's Harps in European Archaeology“ (2006). Most of the typology and terminology also originates from the same source.

Arrangement of the thesis

Part 1, Extinction and revival

Chapter one tries to see the reasons behind the strange phenomena of revivals in folk music scene. Our modern world sees more and more revivals of every kind – people digging out old, forgotten ways for doing things, including music, despite all the modern possibilities. Why is that so? Has it always been like this?

Part 2, Quest for history

The history part is aimed on finding an explanation to the types contradictory archaeological data and checking if there's possible to put up any theories about its source.

Chapter two gives a brief overview of the history of jew's harp in general and points out some reasons why the jew's harp datings may have to be taken with some extra precaution.

Chapter three concentrates on the two types (Pärnu and Höxter) of wedged jew's harps and analyses the spread and its connection to the sources on the subgroups of the Höxter type.

Chapter four includes the search for the roots of the Pärnu type by comparing its archaeological features to the other groups of wedged jew's harps analysed in previous chapter. It also brings to notice some essential differences between wedged and hammered harps that may make them appear differently in archaeological material.

Possible theories about the sources are analysed.

Part 3, Gathering knowledge and remaking the Pärnu type jew's harp.

This part of the thesis is about gathering the practical knowledge from jew's harp makers and about making the Pärnu type harps.

Chapter five gives an overview of the techniques of three Norwegian jew's harp makers – Ole Bjørn Skoe, Folke Nesland and Bjørgulv Straume and analyses their rather different approaches from the perspective of usefulness on making the Pärnu type harps.

The sixth chapter is about practical making of the harps, from beginning to the end. As the making of a jew's harp contains two major phases, the chapter is also divided in two parts – the smithy part and the workshop part.

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The figures section includes photos or drawings and data of all archaeologic Pärnu type harps, two replica harps made in the course of the project and example photos of four Höxter subgroups.

Two Pärnu type replica jew's harps are attached to the original thesis, a demo CD is included with sound examples of the harps. There's also a digital copy of the written part to be found on the CD, as well as some photos I've taken during the process.

PART I

1. Extinction and revival of the traditional music

There's nothing original in the idea of remaking a forgotten music instrument. We have seen it happen a lot in folk music area, mostly in the past 50 years. One could even say that most of Estonian folk music and folk instruments are revivals in one way or the other and it's more or less the same with most Western and Nordic countries.

Why do people go to the museums to dig out and remake the extinct instruments?

We know a bit about the history of our folk music instruments – the early string instruments (*kannel*) arrived already a few thousand years ago. The bagpipes appeared probably about one thousand years ago and stayed the main, even the *only* party and dance music instrument for at least half a millennium, being so different in function, that they were probably not really competing for position with *kannel*. The fiddle appeared and, being more versatile and bringing new possibilities to the instrumental folk music, slowly overtook most of the folk party scene in 18.-19. century. In 19. century the whole world was struck by the squeezebox revolution. The possibility of playing both melody and harmony alone on the same instrument was very attractive and the instruments were also pretty easy to learn. Every kind of accordions took over very fast in the second part of the 19. century. A very special type, Teppo squeezebox was born. (It's named after the maker August Teppo, who invented the type because he could not afford to buy the imported accordion. So he made a squeezebox of his own, much better than the imported ones. The type has later been copied by many makers.) Different boxes were played all over the country, but – depending on peoples taste caused by strong traditions in some areas, lack of squeezeboxmakers, the high prices of imported squeezeboxes etc. – there were still areas with traditional Estonian fiddlers and even some bagpipers left around for the beginning of 20. century. The much smoother sounding *kannel* had been around all

the time and, under German influences, slowly transformed into a much bigger, zither-like form.

Nevertheless - the squeezebox tradition (mostly the Teppo type in south-Estonia) was the only one to survive continuously until present day.

This rather brief overview included just the main turns and main instruments in Estonian folk music, but it's enough to see that things have been changing since the beginning of time. New music, dances, songs and instruments appeared, old ones were forgotten, and the process has been accelerating all the time together with people's awareness of the world. Still – no one seemed to feel the need of reviving anything before the second half of 20. century.

Why is that so? Why do the forgotten things suddenly seem so important?

1.1. The general processes leading to extinction

To find the reasons for that, we first have to find the reasons why the ancient folk music died out so suddenly in 20. century. One of the most important influences was obviously the appearance and development of recording and communication technology.

Before Thomas Edison's first phonograph on 1877, music was a live phenomenon. All music had to be played by someone on the spot. The early playback systems of the turn of century were not yet able to replace live music, but the technology developed rapidly. Another new phenomenon – means of mass communication, mainly radio and later television – gave raise to mass culture and the recorded music soon conquered the Western world. People have always liked the music they are used to, so the process itself is actually very natural. Young people didn't grow up with the music of their village fiddler, instead they heard the american mainstream music from the radio. The recording companies started to shape the taste of masses. Suddenly there was more music everywhere than ever before, in the same time the importance of local music decreased

dramatically and young people did not take much interest in it. Instead they wanted to play radio music on guitars and drums.

Another factor is the full-scale mess throughout 20. century. The changes in society and polity, raise of Soviet Union and Hitler's III Reich, World Wars and other big wars, mass emigration and rapid globalization, and in the end – all the unnecessary noise-information that were (and is) brought to everyone by means of mass communication. It has just been carrying peoples attention away from noticing that their cultural identity – something that has always been taken for granted – is fading away.

1.2. Local processes

There were some more processes that worked against the traditional culture in Estonia, some of them much older than the main ones we just analysed. One of the more lasting ones is, of course, the cristian occupation since 13. century and continuing today, but also some things that may not seem so obvious – for example the national movements starting in 19. century.

The Baltic-German's generous idea of giving the Countryfolk some German education and culture was not at all in favour of traditional culture. The smarter sons of the Countryfolk got educated in cities and started to feel embarrassed for the old local music and dances back home, instead they wanted to be like the German high-society.

The activists of the national movement, some of them also originating from the Countryfolk, but already with strong German influences, started to produce items of Estonian culture, copying German songs and styles. An epic story „Kalevipoeg“ was written after Finnish epos „Kalevala“, with not too much in common with real song heritage of the Countryfolk. No one paid attention to the fact that Countryfolks culture and traditions were much older and richer than the Germans, instead they wanted to turn the „aboriginals“ into something they thought was really good – a new nation with a new shallow culture similar to their own.

Musical taste of the Countryfolk started to change under the influences of cityculture and professionally composed music. On the contrary to the old instrumental mainly *solo* folk music that was meant for dancing or other functions and *not* for concerts, the new choir and orchestra music was dedicated to concert playing. It spreaded a totally new way of thinking among the Countryfolk, resulting in specially fast vanishing of old folk instruments and traditional instrumental music in the areas of more choir and orchestra activities. The more „culturally advanced“ a region was, the less was left of old music.

One can say that the whole „Estonian“ nation was in the beginning just a Baltic-German fantasy, a project of integrating the Countryfolk into the German high-society. Unexpectedly for them, the fantasy actually came true and culminated in nationhood and Estonian Republic in 1918.

As the republic was actually a child of the movements very compactly described above, practically the same processes continued with similar ideas. The city-people wanted to be „Europeans“.

In 1940 Estonia was occupied by Soviet Union. That's when the real destruction began. The life of village communities changed dramatically, farms were expropriated, many people killed or brought away from their homes. The society was totally disarranged and our entire history overwritten once again.

The Soviet government centralized everything, also the folk culture. They were „kindly“ demanding that all the nations will have to maintain their cultural identity, and for achieving that goal folk music groups were made official. The music was made or at least arranged by composers and had to get approval from Moscow before allowed to use.

Huge song and dance festivals were organized, where all the best groups played and sang that professionally composed, centrally arranged music and songs in monster orchestras and choirs of hundreds of musicians and singers. These popular, but relatively shallow events were made a symbol of Estonian folk music and culture.

Folk dance, that has always been a main reason for the folk music, was also totally destroyed and, in a strangest way, transformed into a show dance. We still have plenty of „folk dance“ show groups in Estonia even nowadays, dancing choreographer made compositions with almost nothing in common with traditional dances. Music for those compositions comes from recordings and has rarely any traditional music background. Of course there are many exceptions here also and the real traditional dances are also being danced more and more, but generally the term „folk dance“ marks a kind of character dance that's choreographically fixed, rehearsed and then showed on stages and dance festivals.

As a result – the thing called „Folk music“ was brought so far from it's roots that people didn't recognize it anymore as their own music. It started to mean something totally boring and unprofessional, an old people's dilettanteish note-reading hobby. For the masses this delusion still remains until present day, forcing us to use different terms for the *real* traditional music and dance.

1.3. Revival process

So that's how the traditional music almost died in Estonia (as well as in many other European countries) – people just preferring the things they felt were more interesting (with some help from high-society and political forces on making their own tradition less interesting), the process itself is totally natural. But if everything happened so naturally – what could have made it rise up again?

Basically – after a while of mainstream radio music and all the young musicians playing guitars and drums, some open-minded people started to feel their cultural identity disappearing. They soon found that most of the traditional music was gone already, with the last players dying away just a few years earlier, and started to make efforts to keep it. As the cultural identity had always been so natural that it had never even really felt important before, these efforts to keep the traditional music going were a totally new phenomenon. (Efforts had of course also been made before, but then it was mostly about

recording the heritage, in some cases also showing the old players to the people on concerts, but never before really *making* new things with the intention of getting the extinct traditions to go and keeping the remaining traditions from going extinct.)

It's the need for identity that make people look for their own music and own instruments. The details have been different for each case – often there has been some music recorded or written down that creates the need for making an instrument (f.e. Norwegian jew's harp), sometimes the other way around – the instrument has been remade after museum examples, but the repertoire has to be made from scratch, as there's very few of it recorded or written down (f.e. Swedish bagpipes). Sometimes the tradition is not even broken yet, but lacking young players and instrument makers (f.e. Estonian Teppo type squeezebox). Sometimes there's even nothing left at all except for some enthusiasts and a strong reason to believe the instrument has been played in the area. The enthusiasts follow the instrument's historical path and try to reinvent the local instrument after the old versions of neighbouring areas (f.e. Norwegian bagpipes).

1.4. Why remake the Pärnu type jew's harp

Compared to most other folk music instruments, the Pärnu type jew's harp is rather exceptional. Not just because of its interesting form, but also because it's very hard to tell where it comes from. Still, with more than 1/3 of them found in Estonian areas, it's intriguing enough to make an Estonian enthusiast want to study and remake it to have Estonian musicians playing on a jew's harp that's been played here so long time ago. In the end it doesn't even matter where the original harps were made – we can make them ours by making and playing them.

There's plenty of jew's harps of different types in use already in Estonia, some quite decent harps are made locally, very good Norwegian harps are just an e-mail away etc., but having an own type of jew's harp, deriving from the oldest of wedged harps... Isn't that another big, significant leap towards an identity!?

2. History of the jew's harp

The jew's harp is a very old instrument. According to the most common theories it first appeared in Southeast Asia and Polynesia, arrived Europe for 13. century, from there it was brought to Africa and the Americas and is nowadays found worldwide.

The earliest forms of the jew's harp are *idioglottic* - made out of a single piece of organic material – wood, bamboo or bone, later sometimes also out of a thin sheet of metal. The idioglottic harps are centered in Asia.

The wooden or bamboo specimens have probably not survived thousands of years in the ground, so the earliest known jew's harps are idioglottic harps made of bone. Two oldest so far are found in Mongolian areas, one of them dated back to the first century BC, the other might be as old as 8.-5. century BC. There's also a metal idioglottic harp known to be found in a burial mound in Bashkortostan, Russia. It is made out of a thin sheet of silver and dated to 8.-9. century AD.

Later, probably together with the spread of metal working skills and materials, a *heteroglottic* (with the lamella and frame being different pieces, connected by hammering or using a wedge) form appears. Almost all heteroglottic harps are made out of metal, usually forged (seldom just bent) out of steel or cast out of copper alloys, and they seem to be centered in Europe. The idioglottic harps however remained in use and are still made traditionally in many places mostly in Asian areas.

The earliest reliably dated heteroglottic (metal) harps known by now are two Japanese specimens dated to 1000 AD. There are also some finds with earlier datings, like for example a find from Yekimauts, Moldova, dated to 9.-10. century AD, but as the excavators do not report find circumstances, and as there are no other reliably dated harps to be found anywhere in Europe before around 1200, this dating is presently considered as unverified.

The jew's harp arrived Europe presumeably around 13. century, most probably in fully formed heteroglottic form.

2.1. Doubtful datings

But why do we consider some datings less reliable than others? Aren't they all given by archaeologists who actually were on spot and should have known better? It's rather hard to tell an authentic dating from a doubtful one, especially if the artefacts have been found and dated long time ago or in areas that are hard to get contact with.

Mistaken datings are often caused by the excavators unawareness of the history of the found item, which allows them to assume that the presence of it in the estimated time is normal. If they'd be aware that they are dating a find 300 years earlier than the earliest find so far on the entire continent, they would definitely pay more attention to the circumstances and possibly reconsider their opinion. It is, of course, totally understandable that one can't be an expert on everything one may find during archaeological excavations, so a jew's harp may just not get enough credit from the finder. It's commonly known to be an ancient instrument, so it can accidentally end up dated to 9. century with no second thoughts.

Just imagine an archaeologist, knowing the history, finding a jew's harp he has a reason to believe is earlier than 13. century. It's definitely one of the most important finds on the site – wouldn't he write down very exactly *why* does it have to be so old? Sadly, that's not the case with our doubtful datings.

With not enough information recorded about the excavation circumstances and no contact to the actual excavators there's no way for us to prove it wrong, but on the other hand – we can not rewrite the whole history because of a case that is most likely to be a human error.

It does not take long for an excavator to forget the details of finding a certain object if the object didn't attract his attention on the moment it was uncovered as being special enough. Thus I'd doubt that interviewing the people who have discovered something years ago but haven't included the details in the excavation report could ever be much of a success.

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There's another way for a too early dating to occur – it's when the finder knows the history, but very much *wants* the find to be early and thus he dates it early without really having totally waterproof evidence. May happen for example in places where people are proud of their long traditions.

Also in this case – looking at the big picture can help us avoid falling for the mistaken datings.

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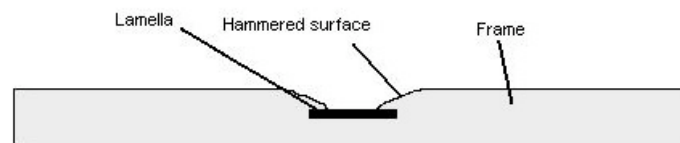
But what if some of these datings are actually true? Of course it's possible – f.e. a single early piece somehow travelled there from asia, maybe even not being used as an instrument in the new circumstances. It's even possible that there has actually been a very early local tradition that's vanished without leaving any other trace, but it needs some trustworthy proof to lift something like the appearance of jew's harp in Europe so much earlier. We'd all welcome it, but until we don't have the proof, it's just wise to stick to the big picture.

3. The wedged jew's harps

The heteroglottic metal harps can be divided in two main categories by the method of attaching the lamella to the frame.

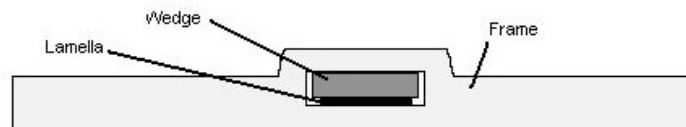
The most common method is hammering (fig.1) – a notch is cut to the frame in the spot where the lamella is to be attached, the end of the lamella is inserted to the notch and the edges of the notch are hammered down on the lamella to keep it fixed.

Fig.1.



The other, newer way is to use a wedge (fig.2). In that case a hole is punched through the frame of the harp, the end of the lamella is inserted to the hole and fixed with a wedge.

Fig.2.



The wedged harps are again divided in two types – **the Pärnu type** and **the Höxter type**. The Pärnu type has a large triangular bow with a rather wide and thin rectangular cross-section and short thin arms. The Höxter type is a compound group with some subcategories in it, divided by the shape of the bow being more or less oval or circular. Three harps of the Höxter type have twisted bows.

All wedged harps have a rectangular cross-section bow, on the Pärnu harps it is very wide and thin (ratio ca 3:1 or more), on the Höxter harps it is usually close to square. The exceptional three twisted-bowed jew's harps are also twisted out of square cross-section rods.

3.1. Pärnu type

The wedge seems to appear first on the jew's harps of **Pärnu type** (Kolltveit 2006: 68). There are 8 of these harps found in Europe, three of them are found in Estonia. One Estonian harp (found in Pärnu, 1990) (Fig. 4, p. 51; Kolltveit 2006, catalogue no 411), is dated to the end of 14. century due to the excavation circumstances (it was found in a layer from fire together with a coin from the end of 14. century), another (Pirita, St. Brigittas Convent) (Fig. 5, p. 51; Kolltveit 2006, catalogue no 412), to 15.-16. and third (Tallinn, old cemetery of St. Nicolais church) (Fig. 6, p. 51; Kolltveit 2006, catalogue no 413), to 15.-18. century.

There are two harps of Pärnu type found in Denmark, one of them (Fig. 7, p. 52; Kolltveit 2006, catalogue no 13) dated to be medieval-1774 (thus possibly fitting in the same era with the Estonian finds), the second one is a chance find with no dating (Fig. 8, p. 52; Kolltveit 2006, catalogue no 2).

One harp is found in Germany (Fig. 9, p. 53; Kolltveit 2006, catalogue no 151) and dated medieval/post-medieval (again meeting the same era as the Estonian and Danish ones), one in Norway (Fig. 10, p. 53; Kolltveit 2006, catalogue no 390) with no dating and one in the Netherlands (Fig. 11, p. 54; Kolltveit 2006, catalogue no 675), dated to 19. century (with a question mark behind the dating, for some unknown reason).

All the datings seem to cover the 15.-16. century, except for the presumeably oldest one. However – the dating of the Pärnu specimen should not be mistaken for a fact. Of course it is most likely that the coin and the jew's harp were lost together – some valuable things

(among them these two metal pieces that survived the heat and time) may have been held together and lost in the fire – that makes sense. But I can not see a good reason why the 14. century coin couldn't have been in use for a while and lost later? Considering that and keeping in mind the datings of the other finds, the find circumstances may also easily refer to 15. or even 15.-16. century.

I have talked to Ülle Tamla, the archaeologist who was leading the excavations in Pärnu, Munga str. 2 in 1990 and she could not add much to what we already know.

Despite the distinguished appearance of the Pärnu type jew's harp we can not find it documented anywhere, except for dr. Wilhelm Ludwig Schmidt's "The Aura of Mouth-Harmonica Presented as a Musical Instrument" (Schmidt 1840/1988) where he shows two instruments of the type to illustrate an *older* form of the instrument (p.130, plate 1). He describes the wedged technique and writes: " the oldest form of this instrument that I have been able to discover is the triangle".

3.2. Höxter type and its subgroups

The second type of wedged harps is the **Höxter type** (Kolltveit 2006: 69), named after an oval-bowed wedged jews harp from Höxter city, Germany (Fig. 12, p. 55; Kolltveit 2006, catalogue no 155). The harp was found in 1986, in a well that was destroyed during the Thirty Years War, 1618-48 (Andreas König, Stadt Höxter, Stadtarchäologie, pers. Comm.; Kolltveit 2006: 69; 143, no. 155).

As mentioned above, it is a compound group of wedged harps with oval or circular bows. It can be divided in four subgroups by the variations in the shape of the bow:

Oval bow – four **German** harps (Kolltveit 2006: catalogue nos 155, 159, 163, 169) share the same kind of oval bow as the Höxter specimen.

Narrow oval bow – found mainly in **Norway** (example: Fig. 13, p. 55; Kolltveit 2006, catalogue no 504). One German find (Kolltveit 2006: catalogue no 161) also shows a bit narrower oval bow, something between the German oval and the Norwegian narrow oval (Kolltveit 2006: catalogue nos 141-3, 504-5, 824)

Circular bow – harps with circular or only slightly oval bow (example: Fig. 14, p. 56; Kolltveit 2006, catalogue no 696) are found in the **Low Countries** (Kolltveit 2006: catalogue nos 674, 696, 698, 724-9, 770), one circular harp is also found in Norway (Kolltveit 2006: catalogue no 139)

Twisted bow – two harps from **England** (Kolltveit 2006: catalogue nos 214, 265) and one from **Belgium** (Kolltveit 2006: catalogue no 699) have a twisted bow (example: Fig. 15, p. 56; Kolltveit 2006, catalogue no 699).

3.2.1. The sources of Höxter subgroups

Unlike the Pärnu type – Höxter subgroups are mostly found in specific areas, so there seems to be no big questions about where they were made. But there are some exceptions also. Let's now see how hard it'd be to figure out possible ways for these exceptions to occur. I use only the same sort of archaeological data that I have at my disposal about the Pärnu type to figure out some simple logical explanations. These are definitely *not* attempts of revealing the truth, rather just creating a background for similar speculations about the roots of the Pärnu type later on.

First the German harp that's placed in the group with Norwegian narrow oval bowes. Well – we can admit that it really has a slightly narrower oval bow than the other four German harps, but it's also definitely *not* the same shape as Norwegian harps. It is most likely to be just a variation with no connection to Norwegian traditions.

On the contrary to the previous example – all the three twisted bowed harps, two in England and one in Belgium, look very much alike, making it a bit closer to the case of the Pärnu type. But again, looking closer, it's easy to imagine a number of ways for the instruments to be from the same source. The English specimens are both found on Thames foreshore in London, they look very much alike and despite the difference in size they share exactly the same overall width/overall length/arm length ratio. The Belgian one is held in Antwerpen, with no record of provenance, also very close to the same OW/OL/AL ratio.

There has been a lot of traffic between these two cities for hundreds of years, it can, for example, easily be that the harps are all from mainland, the English ones brought to London to be sold and lost in the river together for some reason also not too hard to imagine. In that case there can easily be more of them there waiting to be found.

So the circular norwegian harp remains. As it is the oldest safely dated wedged harp in Norway, it can be an early version made here right after the wedge-connecting method had reached Norway. It's a harbor city, it wouldn't be a wonder if the wedged harps would have entered from there. Or it can be an episodic one-of-a-kind form, experiment in the early days of wedged harps. Or it may have simply been imported.

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Once more – these were mere speculations, example-theories based *only* on the limited archaeological data.

But on the Pärnu type, the archaeological data is all we have – is it possible to figure out where it comes from? With only *eight* Pärnu harps found all over Europe, varying so little in their exceptional appearance that a coincidence seems to be out of question, with the German and Norwegian specimens being found notably inland – it is clearly not similar to any of the other groups. There has to be something essentially different about it.

4. Dating and source of the Pärnu type jew's harp

4.1. About jew's harp datings

The **Pärnu type** jew's harp is most probably the oldest type of wedged jew's harps. Even if we find the 14. century dating of the Pärnu specimen questionable (as discussed above), it may still be the oldest wedged harp known. All the harps with *any* datings seem to have a common era of 15.-16. century, except for the presumeably oldest one and the one from netherlands dated to 19.century with a question mark.

However – the late 14. century dating of the harp found in Pärnu in 1990 (Fig. 4, p. 51; Kolltveit 2006, catalogue no 411) should not be mistaken for a fact. It is of course most likely that the coin and the jew's harp could have been lost together – some valuable things (among them these two metal pieces that survived the heat and time) may have been held together and lost in the. But I can see no reason why the coin couldn't have been in use for a while and lost later? Concidering that and keeping in mind the datings of the other finds, these circumstances may also easily refer to 15. or even 15.-16. century.

I have talked to Ülle Tamla, the archaeologist who was leading the excavations in Pärnu, Munga 2 in 1990 and she could not add much to what we already know.

The question-marked dating of the Netherlands harp (Fig. 11, p. 54; Kolltveit 2006, catalogue no 675) does also not qualify as reliable, but even if it would be, it does not necessarily mean the harps can't be made on the same time. Here we have to direct our attention to an essential difference between hammered and wedged harps – *the lamella of a wedged jew's harp is replaceable*.

The jew's harp has not been changing much in time, so the design will not get out of date. It will not rot away if taken any care of, and you'll never wear out a steel jew's harp

frame. Slight bends that happen to the frame can just be bent back with little fear of destroying the instrument. The lifespan of the wedged jew's harp is virtually unlimited.

So a harp made in 15. century can be completely functional, used and lost in 19. or 21. century. But the dating shows the estimated time of the item *getting lost*, so even a rock solid dating won't really tell us much about the real time of it *being made*. In case of unlimited lifespan it's not much of a help, on the contrary – the dating may confuse us more than it helps.

There are no punch marks known to be found on any of the Pärnu type harps, and there's not enough material to run metallographic analysis on the jew's harps without destroying them, so the dating and finding circumstances remain their only links to the timeline.

4.2. How could the wedged technology have affected the archaeological appearance of the jew's harps?

It turns out that it may be a considerably confusing factor.

If the lamella fails on a hammered harp, the harp is not to be repaired. One just has to get another instrument for playing, but as the broken harp is too small to recycle and is likely to have some sentimental value for the owner, it's probably not thrown away. It hangs around the house, eventually it gets lost together with the man and the house and is to be found during possible excavations on the site of human occupation. A player probably breaks more than one harp in his life, which increases the chance of an archaeological find to occur.

The wedged jew's harp, however, can be repaired when broken, therefore it's more seldom to be lost inside the houses. It can be passed from father to son, for centuries if lucky, maybe lost and found by someone else etc. Most probably the harp eventually still gets lost for good, but it's likely to do so somewhere where it's not to be found. So there

could have been wedged harps around with no trace of them in the places where the archaeologists look for material. It's unlikely to find jew's harps that have been lost in the woods and even if found, it's hardly possible to set datings on this kind of chance finds.

If so - how come the 8 instruments of Pärnu type are found at all? Let's take a look at the Estonian examples.

The presumably earliest one was found in the old town of Pärnu, in the layer from fire, dated to the end of 14. century, because found together with a coin of that time. Rather obvious – fire took them together with the house.

The next one was found in a convent in Pirita, near Tallinn, dated to 15.-16. century. I don't have more information about the circumstances, but considering the nature of the institution, well – the things that are once in there are likely to stay in there. And be found later by excavators.

Third one was found in the old cemetery of Niguliste, in Tallinn, dated to 15.-18. century. That's a known way for an item to end up in archaeologists hands without getting lost first. It has been put there on purpose.

No one knows where any of the harps came from or how old they could have been before they ended up in the places where they were found.

So – even if we have a trustworthy dating, it just shows us the time when the item was lost. It has to be made earlier than getting lost, but how much earlier? Well, the common era of the Pärnu type jew's harp datings is 15.-16. century.

4.3. The source

We can not overlook the fact that the harps in the Pärnu type are not just all with triangular, remarkably thin and wide cross-section bow and a wedge, but the group is more homogeneous and at the same time more widespread than any other jew's harp type

in Europe. Their dimensions vary in just a few millimeters here and there, yet there are only 8 found so far from each other.

There's one thing that seems pretty obvious – there has been much more of these harps, but when? And where did they come from?

So – the intriguing questions about the Pärnu type harps:

- Despite being so remarkably homogenous as a type, the finds are pretty wide spread all over Europe and at the same time there's so few of them. Unlike the other types, the source itself is questionable. How do we explain that?
- Is it a local type that has been carried all over Europe by sailors and travellers or has it been made so very similarly in different areas?
- Why is the type not to be found in use anywhere anymore and no one even remembers it? Why isn't it documented anywhere?

Let's now see what possibilities we have:

1. The harp is post-medieval, the early datings are mistaken.

I would really doubt that the type is so recent – there is too few of them found on too wide area, with no documentation about them. I can't figure out any convincing theories for that to happen. The only documentation about the type – Dr. Wilhelm Ludwig Schmidt's comments from 1840 (p. 19; Schmidt 1840/1988) also very clearly refers to an *old* type (cf. p. 19)

2. The type is from around 15.-16. century and it's made by several makers in different countries.

How come there are *only* 8 of them found? There has to be a remarkably strong tradition to keep the form so homogeneous in different places. One would also expect some documentation of a harp that's made in the very same form in so wide areas, but there is almost nothing to be found.

Could it be that the makers in different places made them, following an old, vanishing tradition of the triangular wedged harp? Again – considering how similar the harps are and how long time it used to take for anything to spread – that would have had to be a remarkably strong tradition indeed. *Very* unlikely, just for not to use the word “impossible”.

3. The harps are all made by a single workshop or a group of workshops following a local tradition, some time around 15.-16. century and spread out to other countries.

This workshop (or area) had to produce a huge amount of harps, so that they could travel all over Europe and we've actually managed to find a whole 8 of them. It is unbelievably lot, isn't it? How big percentage of lost things are ever found by archaeologists? The archaeologists look in the places where they expect to find something – towns, castles, battlefields etc. but as we all know – things tend to get lost in other places also. The wedged jew's harp, as discussed above, might have a tendency to do so rather than getting useless and laying around in the houses. And the old European towns are mostly still there, new streets and houses built to replace the old ones, so you can only find things after something is taken down and before new is built. Most of the artefacts of old towns are still down there waiting to be found.

If the harps are all coming from the same source, shouldn't there be a bit bigger concentration of archaeological finds around it? Well – we have 3 out of 8 harps found

in Estonia and 2 in Denmark. Is it enough to mark a place where thousand similar harps were made? Cause there has to be very many for as much as 8 to be found.

How come this kind of a huge local production has left no trace? The place had to be famous because of it's jew's harps, but we can't find anything like this.

But would it be possible that the harps were made for export *only*? For example a foreign maker in a harbor city, making instruments that were not used much in local areas and selling them mostly to sailors and merchants? Some of course find a way to the local market, but the lack of general local use would indeed answer some of the questions above.

But where were the harps made? And why did they disappear without a trace?

The Pärnu specimen may have a clue hidden in its brief record of excavation circumstances – it was found in a layer from *fire*.

A fact is that Pärnu city burned down totally not even once, but several times in 15.-16. century, whereby in 1524 also the city archive was destroyed. A total destruction like that could have easily wiped out an export-oriented jew's harp making tradition, together with all memories about it.

4.4. The theory

So after all – it seems that we can figure out at least one theory that'd explain the mystery of Pärnu type jew's harp.

The harps *could have* been made locally in some trading city around 15. (maybe 15.-16.) century and sold in the harbor for foreign merchants and sailors, with no wide use among

local people. That'd explain the lack of concentration of archaeological finds around the place the harps were made – they were carried abroad. The target group – merchants and sailors – are known to be people of travelling nature, that'd explain how the harps ended up where they are.

The number of harps needed to be made for 8 of them to be found all over Europe refers at least to a professional maker with decades of heavy practicing, more likely a long-time family business, or maybe even several makers in a tradition. As an export-oriented manufacturing tradition is inarguably more vulnerable than normal ones, the tradition together with all traces about it could have been wiped out by some disasters (war, fire, pestilences) that were not too rare back in Middle Ages.

A fact is that the biggest concentration of the type is in Estonian areas, with the presumably oldest found in Pärnu. At the time, the city of Pärnu was a part of the Hanseatic League, populated mostly with merchants and craftsmen. It was a real European harbor city where the ends of the inland waterway to other Hanseatic towns Viljandi, Tartu and Novgorod met the seaway to Western Europe. The town was also totally destroyed in fire a number of times in 15.-16. century, whereby in 1524 also all historical documents got destroyed, therefore it seems plausible that the harps *could have* actually been made in Pärnu and travelled out where they're found.

Some of the harps may have carried on for a long time due to the advantage of the wedged construction, causing the different datings to occur, but most of the finds seem to have a common era of 15.-16. century in their datings.

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We have to keep in mind that the theory is basically still a result of similar speculations as demonstrated in the previous chapter. It is a possibility to explain the contradictory data, but it should not yet, before further investigations, be taken as a statement. And it should by no means be considered as the revealed history of the Pärnu type jew's harp.

4.5. Possible ways for investigating the theory

First solution that would cross ones mind – metallographic analysis of the harps, that might point out a connection with some area or era.

Unfortunately there's an amount of material needed for the analysis that's not possible to get without totally destroying the harps. and the analysis itself may not be so much help either – in case the harps were made in an area with no local iron/steel supplies (f.e. Estonia), they have to be made of imported materials, and with the workshop probably being close to some international harbor the material could have come from very different sources. Small things like jews harps could have been also occasionally made out of some bigger items with different backgrounds that are broken or worn out. So the analysis could actually end up even more misleading, with the cost of destroying the original artefacts. That's just not worth it, at least not with the technology available for us on present day.

What we could do, is to look up the harps one by one, investigate the excavation documents, the history of the area and the very place where the harp was found. We'd have to check out the ethnographic sources of the area and talk to people in the museum who might know (or people in the area who might remember) something that's not written down.

Finally, if we don't find enough proof with the first steps, we could check the ethnographic material wider, ideally all over Europe. I say *we could*, cause it's extremely hard to gather sufficient information about such special things. One has to do it personally, or at least using real specialists, and still some of the important material may remain undiscovered – the museum staff simply doesn't know what they have nor even what these little metal things are. That might seem to be a bit thin lead for finding a medieval harp, but it's actually totally possible to find something – the construction of wedged harps could have easily ended them up in the ethnographic material. That being

said, the work needed to do all that systematically is far beyond ones normal interest, it would take a bunch of real hardcore fanatics to pull it off.

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Regrettably – the fact that the harps are all so far from each other has kept me from running this research (at least the first part of it). It would still require much more time and resources than I have, and together with gathering sufficient ethnographic material it would have been way out of the bounds of a masters project.

PART III

Making the Harps

Despite not being able to provide incontrovertible evidence to prove Estonian areas as the source of the Pärnu type jew's harp, I still found myself increasingly interested in trying to make some of these harps. After all – the biggest concentration of them is to be found on this small flat North-European country. As no one makes wedged jew's harps in Estonia these days, the closest, most obvious and probably also the best place for gathering the knowledge was Norway.

Norwegian jew's harps are known to be among the best in the world and despite being of a different (Höxter) type, the only detectable difference between it and the Pärnu type harp lies in the shape of the frame. Closer looks on all known Pärnu type harps and examples of Höxter subgroups are to be found on pages 50-56.

Of course there may have been (and probably have been) some differences in sound and lamella response also, but there is no way for us to find out how the archaeological finds sounded or responded.

5. Gathering knowledge

To be able to make some conclusions, I visited three makers with different views and approaches and was surprised to see them use rather different methods and tools for achieving basically the same results. Everyone makes the harps in the way they find most comfortable for themselves and everyone has made special tools and invented interesting gadgets to simplify some parts of the process. I was actually looking forward to find some orthodox way of making the harp, but it seems that even if it has ever existed, it sure has been changed a lot by modern tools and technology.

A short overview of how the harps are made by different makers:

5.1. Ole Bjørn Skoe, Bø kommun

A 6mm rectangular rod is hammered thinner in the ends on a hand driven(!) forge, leaving a wider part for the lamella hole, then the hole is punched with a special drove. After that a special gadget appears, a die, selfmade out of a cramp (photos available on the CD-attachment). It centers the rod, which then is bent and hammered to the right shape on the cramp. The arms are *twisted* 45° so that the sharp edges will be facing the lamella and the flat sides form a surface for the players teeth. (Note the difference between the other makers methods of forming the arms – traditionally it has been done by twisting. As a rule.) Minimal filing follows to sharpen and clean the edges that face the lamella.

Adjusting:

A principal difference with the other makers I managed to visit is that Ole Bjørn cuts the lamella out of the sawblade with a pair of shears, not an electrical angle grinder. During the process the lamella-to-be gets a bit bent towards the arm of the shears and despite

being bent back, it remains slightly curvy and he is not afraid to bend it further more during the adjusting process. Bending of the lamella is avoided by some makers, who claim it to reduce sound cleareness, but considering the sound quality of Ole Bjørns harps that does not seem to be the case. Once cut out and straightened, the lamella is filed to right dimensions and the end bent to shape on a gas flame.

He uses an adjustable wrench to bend the arms to follow the lamella, so there's not much filing in the tuning process either.

Ole Bjørns way of making the jew's harps is obviously the most traditional of the three makers I've visited. His frames are practically ready when leaving the smithy, there's no more filing or grinding needed to shape them, just the minor inevitable filing to sharpen the edges that face the lamella. That seems to be the way of making a harp with the less waste of resources – it might seem insignificant, but with the use of shears for cutting the lamella and the hand driven forge he does not necessarily need *any* electricity for making his harps. I do not think that the medieval harpmakers would have wasted their prescious files to do what could have been done with a hammer and adjusted by bending. So it's probably very close to how the harps may have been made in medieval workshops.

Ole Bjørns harps are rather small, about 50mm in overall length, but the bow is made as short as possible so it still leaves plenty of arm length. One good point of making so small instruments is that she shorter the frame is the more stable it is (The length is hereby meant as the total length of the *rod* that forms the frame. Ole Bjørns model has a total rod length of about 13cm, while f.e. the Pärnu harps are bent out of a rod 20+cm long). Stability is vitally important for a jew's harp frame – the edge of the frame has to follow the edge of the lamella perfectly and the gap between them has to be as narrow as possible. If the frame is soft, the pressure applied by the players teeth and hand may be bending the arms slightly while playing, so you can not make the gap too narrow, otherwise the lamella may become in contact with the frame. The more stable your frame is, the narrower gap you can have.

It's safe to say that Ole Bjørns harps look pretty rough, as he does not give much credit to the fancy appearance, but with the time and effort he spends on fine tuning the sound quality and response ends up to be, the least to say, superior.

5.2. Folke Nesland, Bykle.

Starts up pretty similar to Ole Bjørns methods, except that Folke uses an 8mm rod. He hammers the inner edges of the arm sections slightly down to reduce the need of filing, because he is not going to twist the arms. The die is slightly different (photos available on the CD-attachment), the frame is held steady on it by the same drove that is used to punch the hole. The arms are formed and the whole final shape given with belt grinder and files, in the end the whole frame is polished.

Adjusting:

The lamella is cut out of a sawblade with an angle grinder, filed to right dimensions and the end bent to shape on a gas flame. The arms are bent to face the lamella and forced closer to it with a punch of a small hammer, then the edge of the frame is filed where it starts to meet the lamella. Then another punch to get it closer, and filing again, intending to set the gap equal and minimal all the way. The result is a strong, well adjusted, good looking polished harp. You can not see a hammered surface on Folkes harp.

There were quite a few good tips and tricks that I learned from Folke, some small simple things that may take years of experience to stumble across. Some of his tools were also brilliant in their simplicity and functionality.

5.3. Bjørgulv Straume, Setesdal.

While Ole Bjørn and Folke are both making around 20 harps an year, Bjørgulvs yearly production is closer to 200. A need to make the production process less time consuming and physical has given rise to some interesting inventions. I didn't have so much time to spend there as I did with other makers, but it was enough to recognize the most important differences.

He uses a thinner, 5mm rectangular rod, heats it up and punches a hole in the middle of it with a special gadget selfmade for that purpose only. Then the rod is heated up again and bended to shape on another special gadget. No hammering, no twisting of the arms, the whole smithy process takes just a couple of minutes per frame. The frame is then grinded and filed to shape.

Bjørgulv also adjusts his harps by filing, different grinding machines have a part in making the job easier. The lamella is cut out of a sawblade with an angle grinder.

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So we have three quite different approaches to the making of a wedged jew's harp, with the final products differing basically just in the shape and looks. All three makers can provide superiour quality harps.

5.4. Which parts of the different methods could we use on Pärnu harp?

Bjørgulv Straumes method of bending a frame out of an unhammered rod seems to work fine with his model of a harp – a square cross-section, pretty small oval bow and about 60mm of overall length, but I couldn't probably use this way of making a frame on Pärnu type jew's harps. The frame of a Pärnu harp is a lot longer and weirder in shape than Bjørgulvs model and without the hammering it would just not achieve the strength

required for the stability. Also the profile of the Pärnu harps bow (about 8x3mm in some places) would require a big fat 8mm rod that has to be grinded down a huge amount, which is not wise.

His frame making equipment, however, is very interesting, well reasoned and totally usable on Pärnu harps. The other makers have not felt the need to go so thorough on the gadgets, but with the production numbers Bjørgulv has, special tools are inevitable, and they'd sure be a lot of help on smaller productions, too.

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Some of **Folke Neslands** methods may prove very useful for larger production of the Pärnu harp. The frame has to be hammered, but grinding the arms instead of twisting means it's not necessary to shape them with a hammer. The otherwise pretty complicated rod can be left a bit thicker in the ends, the arm section will be machined to shape afterwards.

Of course, that will lose most of the nice hammered appearance of the harp, making it look more modern. It remains to be seen if the advantage in time and effort is worth paying that price.

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Ole Bjørn Skoes methods are, like described plenty above, probably the closest to medieval harpmaking one could get, I'm almost convinced that this is how the Pärnu harps have been made. At least in general terms. But there are some differences between Ole Bjørns model and Pärnu harp that make the latter more complicated to produce.

First – the cross-section of Ole Bjørns harp is square all the way, narrowing just slightly on the arms. The bow of a Pärnu harp has a rather thin, wide cross section that narowens rapidly towards the arms, reaching square where the arms begin. From there they continue square, getting even thinner towards the end of the arms.

Hammering out such a frame needs exact calculating for the point where flat bow turns into square arms to occur exactly where needed. And it can still end up wrong in the bending process – the point where the arms begin is pretty much predetermined, so if you leave the straight end section too long or short, the other two sections will be accordingly slightly shorter or longer and the final angles of the bow will need to be different than expected.

Second – the bending process itself is more difficult. Two rather sharp bends have to be made over the thin edge of the frame, ideally the three sections of the triangle would have to remain straight and equal in length.

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That being said, I never had second thoughts about the decision that the replicas of Pärnu harp have to be made this way, with minimum filing, grinding and electrical tools. For a real production though – it would be a lot easier to leave the arm section a bit thicker when hammering and grind it down later as Folke does, and use something close to Bjørgulvs sophisticated equipment. His hole-punching gadget is rather impressive indeed.

6. Making the Pärnu type jew's harps

After seeing Ole Bjørn and Folke work and making one harp together with Folke, the time came to start experimenting on my own.

The HIT Institutt for Folkekultur i Rauland happens to have a smithy and a metalworkshop, so there was no need to search for a place to work. However, every single tool in the metal workshop from hammers and anvils to the bench clamps is shiny and polished for soft metals like silver and brass, so I couldn't go anywhere near them with my steel jew's harps. I needed to get all the tools on my own, also for the smithy, as there was only forge and anvil available for public use. No pair of tongs suitable for smaller items nor even hammers.

So started to figure out what I need for making the harps. I found some pliers and tongs and a hammer from the trunk of my car, got a bag of coal and four critically important files from Folke Nesland and bought a blacksmith's hammer, hacksaw blades, a pair of shears and protective aluminium guards for not to destroy the polished bench clamps in the metal workshop. Equipped, I was ready to start experimenting in steel.

There are two important phases in making a jew's harp – a smithy phase and a workshop phase. The raw frame is made in the smithy and taken to the workshop, where lamella is made and the whole thing gets filed and adjusted.

6.1. In the smithy

The frame of the Pärnu type jew's harp is, as described above, pretty unreasonably complicated in form, so it took quite some struggling to get satisfying results. My aim was to experiment on as much different ways as possible to find out the best solutions.

6.1.1. Hammering process

I started off with 8x8mm steel rod (a piece from Folkes funds), but as the dimensions of the frame are rather thin in most places, I had to hammer it out a whole lot. It didn't take me long to discover that if I didn't want to end up with a waste of material by virtue of way too long arms, I had to start with no more than 6cm tall piece of the rod. The normal length of Pärnu harps frame rod when ready is about 20cm or even a bit more, I had to hammer 10 cm half of the jew's harp frame out of about 3cm of workpiece on both sides of the center. That's a lot of hammering.

Situation improved when I started using 6x6mm rod (originating from Ole Bjørns supplies) - a 10cm workpiece was pretty good with more length to start on and much less hammering than before.

Next in the line was the hole punching operation. It's one of the most critical points in the whole process, cause the frame rod is almost formed by then and a lot of work is in stake in case anything goes wrong.

It's one of the design crotchets of the Pärnu harp – the sections next to the center (next to the thicker part where the hole is punched) are very thin. The center part is thicker and needs to be heated up to the maximum so it would take the hole in it with as few punches as possible, without overheating the neighboring thinner sections. The rod can not just be left in the fire to heat the middle part up as much as one'd like to, cause the thinner parts can easily overheat, catch fire and be destroyed.

It takes some experience to punch the hole that way. Gathering that experience turned out fatal for numerous frames of the Pärnu jew's harps...

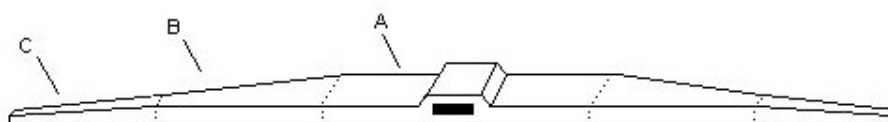
I had to figure out something new. So far I was just following the procedures as I had seen them done by other makers. But as the norwegian harps do not have so thin bow, the problem does not occur on them. Soon after I had discovered the catch, I started trying on punching the lamella hole before hammering the frame. I ended up with two thin walls around the hole before a lot of heating and hammering in the neighboring areas on both

sides. The threat of overheating was smaller, but it was still risky and took a lot of time and effort.

So I took the middle road – I hammered the frame about half way down, punched the hole and finished the hammering after that. It worked better than the earlier attempts.

Finally the rod is ready (fig.3): the hole is centered, flat wide section starting next to it (A) continues for ca 3cm and narrows down to square in about 4.5 cm (B), continuing square for at least 3-4cm (C), narrowing towards the end of the rod.

Fig.3



6.1.2. Bending process

In the bending process, once again, the character of the Pärnu harp reveals itself. The frame has to be bent about 120° over the thin edge of the flat rectangular rod. That requires again a good heating and apparently also good material. On the very first frame I ever made, under Folkes supervision, the bend resulted in small cracks all over the curve. It was perfectly hot and I didn't bend it too fast. We made the other bend even more carefully just to see if the cracks would still occur – and they did. However – Folke had made some harps of his own model out of that very rod and hadn't experienced any problems.

I did not have a die for Pärnu harp, so I tried to bend the first frames just with the pliers. This is a spot where the design shows an advantage – the long straight sections of the harp let you do it perfectly with two pairs of pliers, without the die. I still felt a need to try something to hold the frame centered for the initial bends, so I made a gizmo for that

purpose. The frame rod is centered on it with the hole punching drove to start bending the two corners of the bow in right place. That done, all the other bends and twists were made with the pliers only.

After the shape is given and the arms twisted to position, the frame is ready. As I did not want to use the first attempts for the project, I continued making the frames and experimenting until I could choose four good and different examples out of them. With the frames ready, I picked up some small pieces of steel for the wedges, left the smithy and headed to the metal workshop.

6.2. In the workshop

The basic theory of making a good jew's harp is rather simple. One has to line the sharpened edges of the lamella up with the sharpened edges of the arms, with minimal gap between them and the main bending area of the lamella before the beginning of the arms.

Achieving this simple goal is somewhat harder. Even the experienced makers can sometimes use 7-8 hours to fine tune a harp and they all admit that it's always possible make it even better by spending some more hours on it.

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First, I sharpened the inner parts of the arms with a square file. I also filed the outer surfaces of the arms to make the harp more comfortable for the teeth.

Next, a small file is used to file the wedgehole straight and slightly narrowing, the whole frame is cleaned of the smithy dust and sanded slightly to make it sit comfortably in the hand. With that done, the frame is ready.

I used the same lamella material as the Norwegian makers – a stainless steel industrial meat saw blade. Folke Nesland was kind enough to provide me with the material.

A strip is cut out of the saw blade, ca 10 cm in length, ca 7mm width in one end and ca 2mm in the other. It's filed narrower and slightly thinner to meet the makers preferences, the edge is sharpened, the end of the lamella is bent to shape on a gas flame.

The wedge is filed out of a small piece of steel and left slightly longer than necessary – that makes it easier to remove (which usually happens quite a few times during the tuning process).

Now we have all the parts of the harp ready and the tuning process begins. I avoided filing as much as possible and bent the frame to follow the lamella, starting from the beginning and continuing towards the end of the arms. Sounds easy, even too easy for spending more room on describing it, but it takes time and obviously some experience for getting good results.

After adjusting the harps are ready to be played.

Photos of two replica harps are to be seen on figures 12 – 13, p. 54-55.

Sound examples of two harps, as well as some additional pictures are to be found on the attached CD.

6.3. About the design

A thing that I noticed all the way during the process of making the Pärnu harps – the design with it's thin and wide bow and thin arms is rather tricky to produce compared to the other jew's harp types we know of. Why is the design so complicated? It kept bringing me back to all the contradicting facts about the type – could the design be connected to the strange archaeological appearance?

For example – could the flat surfaces have been used for engravings? If so – could the wedged construction may have invented for the beautiful frame to last longer than one

lamella? And could the exclusiveness be one of the reasons for the harps to travel so far from home?

What an intriguing perspective, unluckily there's no way to prove it on any of the heavily corroded museum pieces.

A fact is, that the Pärnu harp feels very comfortable to hold. It forms a perfect flat surface for the thumb, the narrowing sections of the triangular bow are also flat enough for being comfortable for the fingers. If that was the goal, the design is close to perfect. The width of the frame is needed to provide adequate rigidity, it's hammered thinner to reduce the bulk. And the thin arms are always comfortable.

It seems that everything about this harp is made in concern of comfort and practicality, in the cost of more complicated production process.

So, even without knowing how the surface of the Pärnu type looked like, it seems to be a medieval top-of-the-line luxury jew's harp.

Conclusion

Remaking and rediscovering the Pärnu type jew's harp has been full of surprises. It's just different from other harps, any way you look at it.

The original aim of the project was to gather sufficient information and knowledge for making the Pärnu type jew's harps and give an overview of what's known about it. I did not even hope to come up with any theories about the origins, because there is almost nothing known about the type. But the little data turned out to be so totally contradictional that it seemed to rule out all the common ways jew's harps have normally been made and spread, making it hard to find *any* logical explanation to the facts. Surprisingly for myself, I still managed to figure out a possible explanation. On one hand it may be slightly hasty to call it a theory, but on the other hand – why not? After all – it is based on the facts.

The main points about the type are all contradictional to each other:

- The spread is very wide, among the widest of all types – all over Europe, from Estonia to Netherlands, from Norway to south Germany, in the same time the concentration is rather low – only 8 specimens all together, 3 in Estonia, 2 in Denmark, 1 in Norway, Germany and Netherlands.
- The type is more homogenous in shape and size than any other type of jew's harp.
- The type is, despite its spread, not known to be documented almost anywhere.
- The design is more complicated than on most of the other harps, it's hard to produce, but on the other hand it's very comfortable.

Looking for the source

Comparison with other subcategories of wedged harps had very interesting results. The archaeological facts about this type are so totally different than on other types that they do not give us any clear explanations, but in the same time they also reduce the number of possibilities.

I could not figure out any theories to meet the facts listed above, until I came to the thought that the spread can be caused by different target group – a way for the harps to end up so far from each other is that they were *not* made for local community, but sold to foreign travellers.

According to the archaeological data and the historical situations, with 3/8 of all Pärnu harps found and dated (not too punctually, but still – they are no chance finds) in Estonia, I find it reasonable to assume that the harps *may have* been made in Estonian areas or at least somewhere very close, around 15. century, but probably not by (nor for) the Countryfolk, but by a city workshop and sold in harbor to foreign sailors and merchants. That could have been a way for the harps to travel so far – the target group was travelling long distances, while an average countryman of the time usually didn't go much further than the neighboring villages.

The lack of any documentation as well as any continuity of the type was another factor in need of explanation, leading to a thought that the harps *may* actually originate from the town of Pärnu, where the presumeably oldest one is found *in a layer from fire* – the city was totally destroyed in fire several times in 15.-16. century, whereby also the city archives were destroyed in 1524. This kind of (export-oriented) jew's harp making tradition could have been just wiped out by fires and following pestilences, and without the city archive there's not much more we could find out locally. Unless we'd discover the remains of the makery itself, together with its tools and harps, but the old town of Pärnu is standing in the same location these days and excavation opportunities are rare.

I would have liked to study all the 8 Pärnu type harps closer, but the types rather wide spread and low concentration makes deep investigations way more time (and resource) consuming than I had in my disposal for this project.

Nevertheless – I figured out some ways for doing it, these are described in chapter four: „Dating and source of the Pärnu type jew’s harp“.

Remaking of the Pärnu type jew’s harp

The basic theory of making a very good jew’s harp is rather simple. One has to line the sharpened edges of the lamella up with the sharpened edges of the arms, with minimal gap between them and the main bending area of the lamella before the beginning of the arms.

Achieving this simple goal is somewhat harder. Even the experienced makers can spend 7-8 hours to fine tune a harp and they all admit that it’s always possible make it even better by spending some more.

Luckily, making the perfect jew’s harp was not the aim of the project. The aim was to figure out the techniques for making a Pärnu type harp and from that point of view the project was a real success. I visited three norwegian jew’s harp makers (Folke Nesland, Ole Bjørn Skoe and Bjørgulv Straume) known to have slightly different approaches and goals, found unexpectedly many differences, lots of tips and tricks, and learned enough to make the Pärnu type jew’s harps on my own. I experimented a lot, 4 frames of far more than 10 attempts ever qualified to leave the smithy, 2 of them were finished as Pärnu type jew’s harps. Photos of these and 2 earlier harps made together with Folke Nesland, as well as a few other photos made during the process are to be found on the attached CD. There are also sound examples of both harps.

.....

The Pärnu type's design turned out to be a real surprise, well worth of the earlier riddle it gave for analysing its archaeological background.

In the beginning it looked like we're just dealing with different shapes of wedged harps, but the process of making the frame was actually way more complicated than it is on Norwegian harps. The profile of the frame is changing constantly from the beginning to the end (fig. 3, p. 40), the changeover from bow to arms has to be forged in precisely, then the sharp bends have to be made to the right positions. It is, of course, good to produce this ancient type of jew's harp using methods close to what they were in middle ages, but in this case the proportion of hand forging just can not be reduced much even if wanted to (f.e. for larger production).

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Once the harp's ready, one can not overlook how comfortable it feels in the hand. The wide bow provides enough rigidity to the frame for fine adjusting, in the same time forming flat areas for the players fingers. It's also not notably heavier than other harps, despite its somewhat large appearance – it's large only when looked flat upon, but rather slim when looked from the side. The profile may actually be hammered so thin to reduce the bulk. Result – a strong and lasting, comfortable jew's harp with replaceable lamella.

The benefits of the project

Finding out that there's a special type of wedged jew's harp with the oldest specimens found in Estonian areas was a real surprise for me. I knew there are some wedged harps found in Estonia but nobody here had ever realized that it's a special type, one of only two known types of wedged jew's harps.

The wedged connection is an important detail that gives a reason to make a good, lasting frame, and I immediately decided I had to find out as much as possible about these harps and try to make some of them one day.

Now, after one and half year, I have the knowledge for doing so. I have done some research on it's history to find its roots and came up with a theory, according to which *it is possible* that the harps can actually originate from Estonian areas. I've also met three important Norwegian harp makers, whose variety of methods now give me a good choice of how to do things in the most comfortable and reasonable way.

.....

This research may well become a base for continuation in the search for the source of the Pärnu type jew's harp. I have no answers – I only have theories, and I'd welcome anyone to try proving them right or wrong.

References

- Kolltveit, G.** (2006), *“Jew’s Harps in European Archaeology”*, Oxford, England: Archaeopress, Publishers of British Archaeological Reports
- Schmidt, W. L.** (1840/1988), “The Aura of Mouth-Harmonica Presented as a Musical Instrument”, in Kolltveit, op. cit.
- Wright, M.** *“The Search for the Origins of the Jew’s Harp”* Oxford, England
<http://www.silkroadfoundation.org/newsletter/vol2num2/Harp.htm>
- “Rapapallit ja Lakuttimet”* 1985. Kansanmusiikki-instituutti (Finnish Folk Music Institute)
- Tampere, H.** 1975. *“Eesti rahvapillid ja rahvatantsud”*, Tallinn: “Eesti raamat”
- Tõnurist, I.** 1996. *“Pillid ja pillimäng Eesti külaelus”*, Tallinn: Estonian Academy of Science, Institute of History
- Õunapuu, L.** 2002. *“Üliõpilaste kirjalikud tööd. Metoodiline juhend magistri-, diplomi-, kursusetöö, referaadi ning essee koostamiseks ja vormistamiseks”*, Viljandi Culture College

Figures

All images are close to the real size of the artefacts. The data next to the figures is arranged as follows:

First section includes the provenance, time of finding and dating.

Second section gives possession (museum or private collection) and accession number.

Third section – the measures:

OL – overall length of the item from the back of the bow to the end of the arms, mm. (In case the arms are broken or heavily corroded, OL is measured to the farthest remaining point of the frame)

OW – overall width of the bow section, mm.

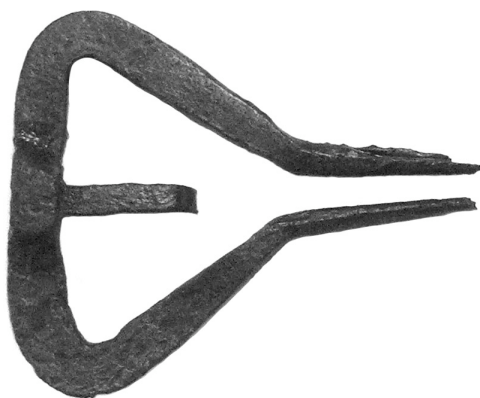
AL – length of the arm section, mm.

LL – lamella length, mm. (no entire lamellas have survived on any of the used examples, so it's the length of what's left of the lamella)

Fourth section includes references to other information about the find. All pictures (except for the Pärnu specimen and the replica harps) and information are taken from Gjermund Kolltveit's publication „Jew's Harps in European Archaeology“ (2006).

All known archaeological harps of **Pärnu type** (Kolltveit 2006: 68):

Fig. 4



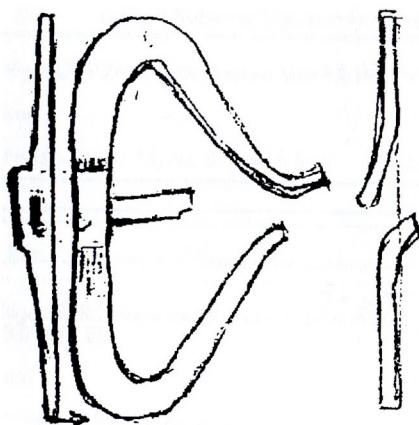
Estonia, Pärnu, Munga str. 2.
(Found 1990) 14. century (?)

Pärnu Museum, Päm 14350 A2501/118.

OL:62/OW:50.8/AL/:26/LL:24.5

Tamla 1992: 290: plate 14, no. 6;
Tõnurist 1996: 116; Kolltveit 2006, 185,
catalogue no 411. Photo: author.

Fig. 5



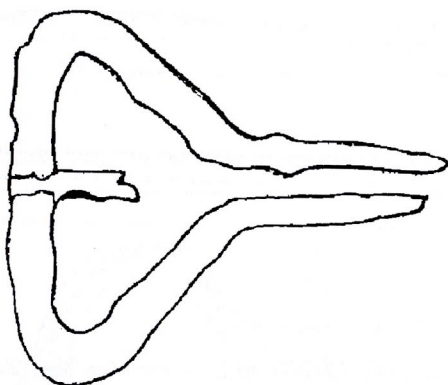
Estonia, Harju County, Pirita, St.
Brigittas Convent. 15.-16. century

Tallinna Linnamuuseum,

OL:34/OW:52/LL:15.8

Tõnurist 1996: 116, 123 (note 5);
Kolltveit 2006: 186, catalogue no. 412.
Illustration by Igor Tõnurist

Fig. 6



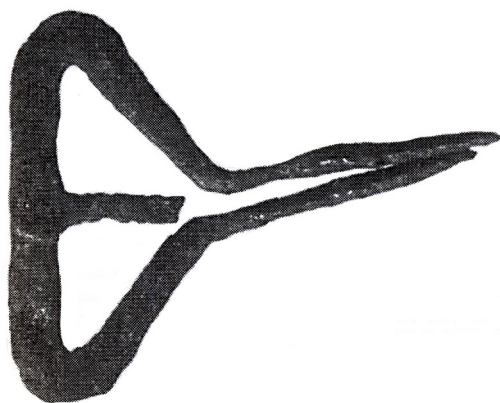
Estonia, Tallinn, Niguliste (old cemetery
of St. Nicolais ch.), 15.-18. century

Tallinna Linnamuuseum

OL:59.2/OW:49.2/AL:33.3/LL:17.6

Tõnurist 1996: 116, 123 (note 5);
Kolltveit 2006: 186, catalogue no. 413.
Illustration by Igor Tõnurist

Fig. 7



Denmark, Sjælland: Fredriksborg
County, Store Valby, Farm no. 3
(Found 1952) Medieval-1774

7302/1952

OL:64/OW:51/AL:38/LL:30

Steensberg and Østergaard Christensen
1974:402-3, and Pl. 191, no. 3; Kolltveit
1996: 46, no. DK13; *Kolltveit 2006, 119,*
catalogue no. 13

Fig. 8



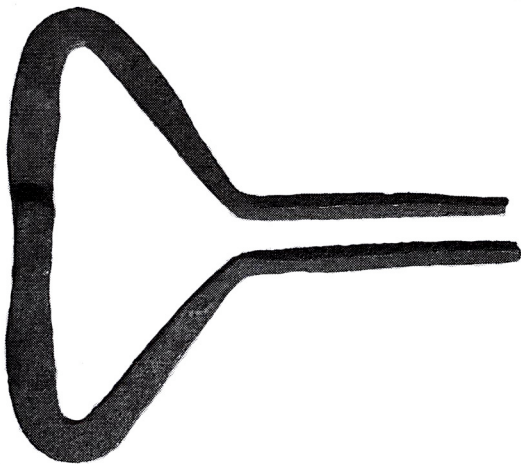
Denmark, Jylland: Vejle County,
Kolding, Vestergade. Chance find.

Kolding: Museet på Koldinghus, 5192.

OL:70/OW:50/AL:33/LL:33

Skov 1657 (with photo); Crane 1972: 23,
no. 411.36; Müller 1972: 34, no. 40;
Kristensen 1994: 193, no. 131; Kolltveit
1996: 42-4, no. DK-2; *Kolltveit 2006:*
117, catalogue no. 2. Photo: Tenna
Kristensen

Fig. 9



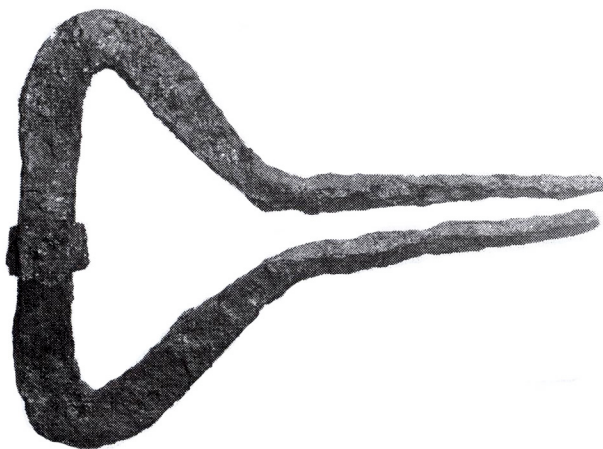
Germany, Hessen, Taunus: Eppstein,
Eppstein castle. (Found 1906-1939)
Medieval – Post-medieval

Stadt- und Burgmuseum Eppstein,
GO/392.

OL:70/OW:60/AL:38

Kolltveit 2006: 142, catalogue no 151.

Fig. 10



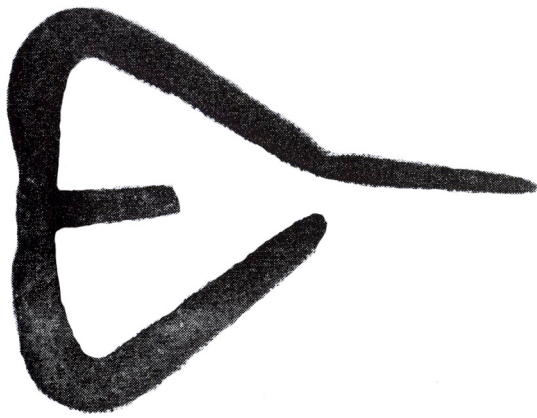
Norway, Oppland, Gjøvik (county):
Vardal, Bråstadsetra (summer pasture).
(Found 1970)

Gjøvik: Eiktunet Kulturhistorisk
Museum, EKM 4635.

OL: 79.2/OW:57.7/AL:45/LL:11.2

Kolltveit 2006: 182, catalogue no 390.

Fig. 11



The Netherlands, Noord-Holland,
Amsterdam, 19th century(?)

Archeologisch Depot Amsterdam, MZ-5-
278,

OL:70/OW:53/AL:30/LL:22

Kolltveit 2006: 230, catalogue no. 675.
Photo and information: Annemies
Tamboer

Replica jew's harps of Pärnu type, made in the course of the project:

Fig. 12. Harp nr. 1, made of 8x8mm steel rod.

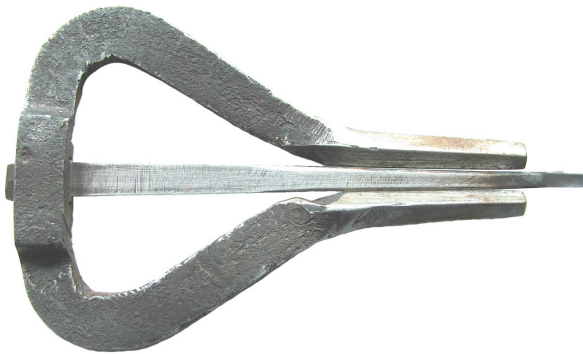
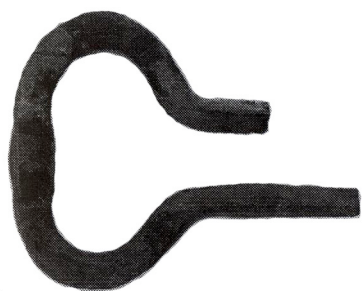


Fig. 13. Harp nr. 2, made of 6x6mm steel rod.



Höxter type (Kolltveit 2006: 69). Examples of the four subgroups:

Fig. 12



Oval bow:

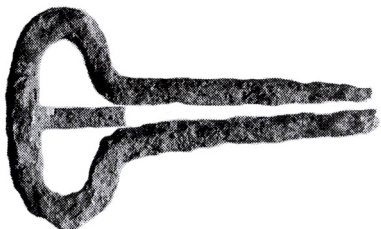
Germany, Nordrhein-Westfalen, Höxter, Rosenstrasse. (Found 1986), 1618-1648.

Höxter city, Stadtarchäologie, HX155/45.

OL:46.8/OW:36.8

Kolltveit 2006: 143, catalogue no. 155

Fig. 13



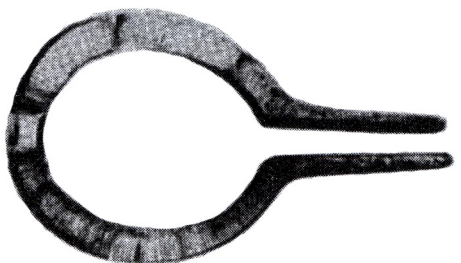
Narrow oval bow:

Norway, Telemark, Vinje.
(Found before 1997)

Bykle, Folke Neslands private collection
OL:49.8/OW:29.4/AL:35/LL:15.9

Kolltveit 2006: 202, catalogue no. 504

Fig. 14



Circular bow:

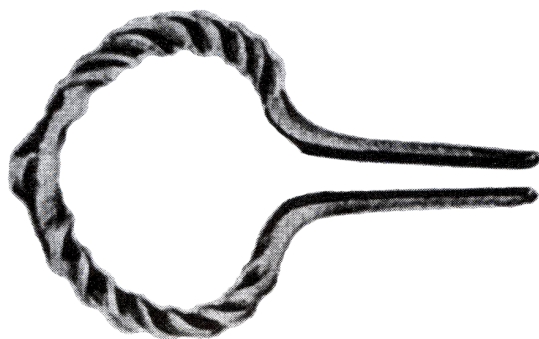
Belgium, (Found before 1962)

Stad Antwerpen: Museum Vleeshuis

29.4.18-4/8, OL:58/OW:34/AL:22

Ypey 1976: 217-19; Boone 1972: plate V, p. 37, no.5, and no. 9 in catalogue (p.45); Boone 1986: 40 (map), and fig. 5, p. 16, no. 5; *Kolltveit 2006: 233, catalogue no.696.*

Fig. 15



Twisted bow:

Belgium, (Found before 1962)

Stad Antwerpen: Museum Vleeshuis

29.4.18-8/3, OL:72/OW:44.5/AL:32

Ypey 1976: 217-19; Boone 1972: plate IV, p. 35, no.6, and no. 11 in catalogue (p.46); Boone 1986: 40 (map), and fig. 6, p. 17, no. 6; *Kolltveit 2006: 233, catalogue no.699*

More photos of the harps, as well as of some tools and the making process are to be found on the accompanying CD.

Contents of the attached CD

The Pärnu Type of Wedged Jew's Harp – the written part of the project in .pdf format

Title

Table of contents

1. Extinction and revival of the traditional music

2. History of the jew's harp

3. The wedged jew's harps

4. Dating and source of the Pärnu type

5. Gathering knowledge

6. Making the Pärnu type jew's harps

Conclusion

References

Figures

Contents of the attached CD

Sound examples:

Harp nr. 1, "Sarvelugu" ("Horn tune", played on harp nr. 1, Fig. 12, p. 53) –
EÜS IV 509 (50), Tarvastu (ca 1882). Written down by A. Grenzstein.

Harp nr. 2. “Kuimetsa Kaie labajalg” (“Kuimetsa Kaie’s Flatfoot”, played on harp nr. 2, Fig. 13, p. 54) – ERA, Pl. 6 A 2, Tori (1936). Recorded by H. Tampere. played by Mart Männimets (64-years old) and Mihkel Toom (63-years old)

Photos:

The Pärnu find

- 01.- 20. Photos of the presumeably oldest, Pärnu specimen
- 21.- 33. Photos together with dimensions of the frame

Ole Bjørn Skoe

- 01. Hand driven forge
- 02.- 03. Outdoor smithy
- 04. Hammering
- 05. Hole punching
- 06. The cramp
- 07.- 09. Bending
- 10. Cramp detail
- 11.- 12. Hammering on the cramp
- 13. Shape given
- 14.- 15. Arm twisting
- 16. Cramp
- 17. Lamella bending
- 18.- 21. Lamella filing
- 22. Adjusting

Folke Nesland

- 01.- 05. Hammering
- 06. Hammering the twist of arm (for Pärnu replica)
- 07. Twist of arm (for Pärnu replica)
- 08. Frame rod
- 09. First bends
- 10.- 11. The die
- 13. Twist some more (for Pärnu replica)
- 14. Frame ready
- 15.- 16. Filing the arms
- 17.- 26. Grinding the frame
- 27.- 28. Filing the lamella