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## Cobuz Cumanicus. Reconstructing the Instrument

*The Cumans, also known as Kipchaks and Polovtsians, were a nomadic Turkic people living in the western Eurasian steppes in the eleventh to the fourteenth centuries. Their main musical instrument, the cobuz, is known from written sources, rare images, and archaeological artifacts. Its traces can be found in several folk traditions of the region and its related instruments include the South Asian sarinda and the Tibetan kokpo, among others. Two Cuman cobuzes (dating from the thirteenth to fourteenth centuries) are known from archaeological sites in modern day Ukraine and Russia and have been reconstructed by different researchers, though a lack of details means that the results achieved are ambiguous. The cobuz remains relatively unknown among other researchers and the public.*

*This article proposes new, detailed reconstructions of the cobuz, based on comparisons with a wide range of instruments. In addition, it presents drawings of two reconstructed instruments so as to convey a better understanding of their structure. Another aim here is to contextualise the cobuz within similar traditions. This can both help to bolster our ideas on the instrument's reconstruction and offer clues for reconstructing its repertoire.<sup>1</sup>*

### Overview and materials for the reconstruction

The *Codex Cumanicus*, a dictionary of the Cuman language created in 1330, gives the word “cobuxçı” [qobuzçı] and its Latin translation “sonator” as words for a musician in general.<sup>2</sup> In Cuman and other Turkic languages, the ending -çı is a mark of occupation. So the word stem ‘cobux’ is the basis of the reconstructed word ‘cobuz’ [qobuz]<sup>3</sup> that is known from various Turkic languages in different forms: *qobız*, *kopuz*, *homus*, *kous*. In most of these languages, this term means a bowed or plucked lute, though in some cases the meaning has shifted to other musical instruments – such as the Jew’s harp or even the accordion. Some etymologists even think that there is a link between cobuz and the Mongolian *khuur*.<sup>4</sup>

This instrument name can be associated with two archaeological artifacts. The first was found by Yakiv Hershkovych at a burial site in a tumulus near Kirove (nowadays Lymanets) in the Kherson region, Ukraine, and was dated to roughly the thirteenth or fourteenth century.<sup>5</sup>

1 The preliminary results of my research on the cobuz were first presented at the online conference on historical musicology “Lute in Ukraine” in November 2020. The ensuing discussion helped to improve some of the crucial details that are presented in this article.

2 *CodCum*, fol. 45r.

3 Garkavets 2015, pp. 1069 and 1195.

4 Levitskaya et al. 1997, pp. 68–70.

5 Hershkovych 2011.

The overall length of the instrument is 87 cm. Three wooden parts of the instrument are well preserved: a large piece of the body, the pegbox and a tiny bridge. The body is monoxyle, that is, it is carved from a single piece of ash wood. It is quite long, narrow, and has a boat shape. There are rectangular cut-outs on the sides of the body, roughly in its middle, and three round holes of different sizes in the back. The upper part of the body narrows down and forms the lower part of the neck. On the neck there are several narrow horizontal slots that probably mark fingering positions. The upper part of the neck was broken (likely before the burial, as the other wooden parts were preserved quite well), with only tiny bits of it left around the joints (Fig. 1). The kite-shaped (deltoid) pegbox was cut from a separate piece of wood and has three broken tuning pegs inside. A horizontal hole below the pegbox bears the tracks of strings, suggesting that these were attached on the back of the pegbox. The heads of the pegs have broken off. The lowest part of the body is not preserved, but at the moment of excavation, according to Hershkovych, there were two holes in the back where a special tiny bridge was inserted. This bridge itself is almost completely preserved.

A simple arched bow originally lay on the top of the cobuz, but it was too thin and fragile and the archaeologists failed to preserve it. The instrument belongs today to the Institute of Archaeology of the National Academy of Sciences of Ukraine in Kyiv.

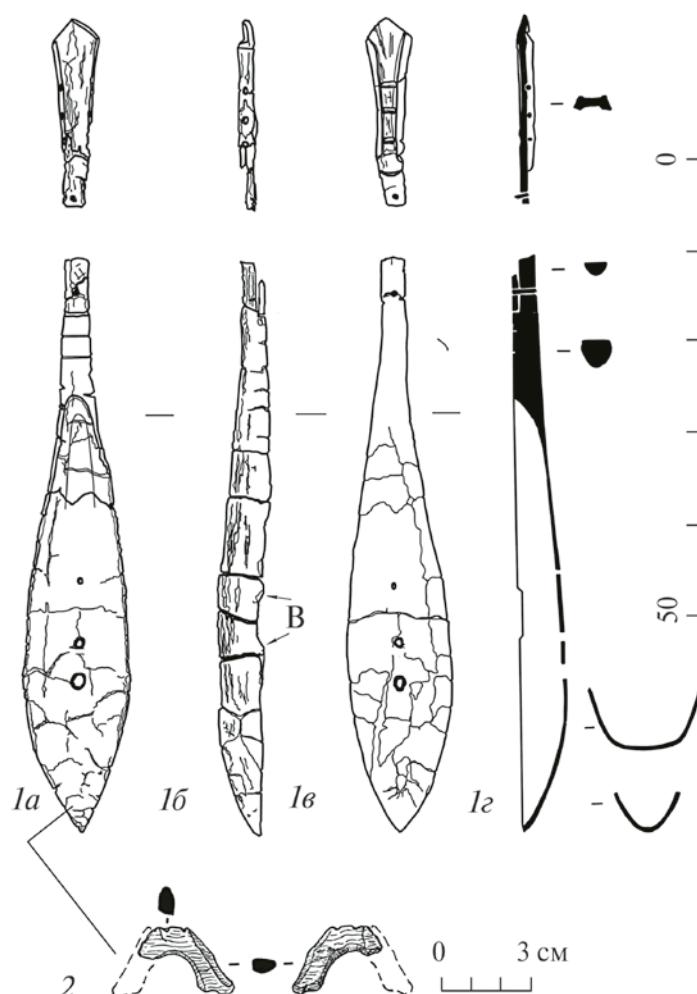


Fig. 1 Three parts of the cobuz from Lymanets as they were excavated: body, pegbox and bridge (Illustration: Hershkovych 2011, p. 85).

The second cobuz known from archaeology was excavated in 1963 in a tumulus in Ust'-Kurdium near Saratov in Russia (Fig. 2).<sup>6</sup> The instrument is in quite good physical condition. It belongs to the Saratov Regional Museum, where it can be seen today. Unfortunately, it was not documented very accurately by the archaeologists who found it. At roughly 95 cm in length<sup>7</sup> it is larger than the cobuz described above, and in this case both the body and neck have been carved from a single piece of wood. The shape of the body is close to the boat-shape of the previous cobuz discussed above. It has a single round hole in the middle of the back, but its lower part also resembles the lower part of certain Kazakh *qobız* specimens (the ladle-like shape, c-shaped when seen from the side) – which gives a clue as to how we might reconstruct it. The neck is long, straight and fretless, thereby revealing similarities with Eastern Asian instruments such as the Mongol *morin-khuur*. The pegbox has holes for three tuning pegs and resembles the deltoid shape of the head of the previous cobuz. Neither the bow, pegs nor bridge has been preserved.



Fig. 2a Cobuz from Ust'-Kurdium (Illustration: Garustovich 1998, p. 215).



Fig. 2b Reconstruction of the cobuz from Ust'-Kurdium by I. Khodzhaniiazov (3D illustration: Iryna Shykura, 2021).

While the cobuz from Ust'-Kurdium was not described in as much detail as the one from Lymanets, the latter has a much more complex structure which is harder to interpret. Several researchers and luthiers have tried to provide their own interpretation of the cobuz from Lymanets, namely Gennadij Evdokimov,<sup>8</sup> Mykola Budnyk<sup>9</sup> and Yakiv Hershkovych, but each solution is in some way problematic. Budnyk and Hershkovych both assumed that there was no top to the instrument's body. Hershkovych also missed the hole with string traces below the pegbox (he

6 Garustovich et al. 1998, p. 336, and Shvetsov 2017.

7 According to the figure in Garustovich et al. 1998, p. 215.

8 Evdokimov 1991, pp. 281f.

9 The replica is seen in MalvaTV 2013, 1:08:44.

interpreted it as a crack), so he located the hole too low on the neck. Budnyk's replica was made from a single piece of wood and did not have any frets or fret marks. Yevdokimov assumed that the top was fully covered by an animal skin with a bar inserted in the cut-outs. Yevdokimov's reconstruction also had a spike on the bottom – though in fact he here added a separate artifact to the cobuz that was found at the same burial site. Nor did he use the correct measurements. None of the researchers tried to interpret the fret positions. The aim of the present article is to offer what seems the most convincing, least problematic interpretation of the cobuz.

### The Lymanets cobuz: problems of interpretation

The larger part of the body and the neck, the pegbox and a tiny bridge have been preserved, though there are still several details that require reconstruction and interpretation: the instrument's top, the cut-outs on the sides, the holes in the back of the body, the tiny bridge at the bottom, the frets and the location of the bridge.

#### The top

Neither of the preserved instruments has a top, nor have any traces of one survived, which makes me assume that they originally had a skin top, given that this material has less chance of surviving over time. And we are lucky enough to see the shape of a very similar instrument with a long, narrow neck and a boat-shaped body, on a Cuman ritual stone stele preserved in the Simferopol museum (Fig. 3).<sup>10</sup> Roughly the lower two thirds of the body are covered with



Fig. 3 Cobuz carved on a stone stele (Illustration: Veselovski 1915, Appendix, Table VI).

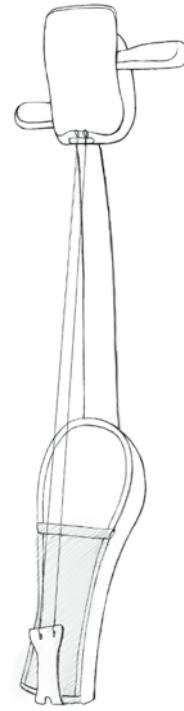


Fig. 4 Kazakh *qilqobız* with a bar inserted into the cut-outs to hold the upper part of the skin top. It belonged to *baqṣı* Zereğül. Astana, Ykhlas Folk Musical Instruments Museum, exhibition No. 405 (Illustration by Olena Shykura 2023).

10 Veselovski 1915, appendix, Table VI; Pletneva 1974, pp. 105 and 181.

a top, while the upper third seems to be open. The same partially open top can be seen in modern-day instruments like the Kazakh and Karakalpak *qobız* (Fig. 4) or the South Asian *sarinda*. The fact that Kazakh and Karakalpak cultures to a large extent are descended from Cuman-Kipchak culture makes this hypothesis more credible.

There are three clusters of bowed string instruments that have a skin top which partially covers the body, leaving a large upper part open:

- cobuz and *qobız* (Central Asia, Eastern Europe): long-necked, ladle-shaped or lens-shaped body;
- *sarangi*, *sarinda* (Southern Asia): short-necked body in the form of an ‘8’;
- *kokpo*, *piang* (Tibet): long-necked body in the form of an ‘8’.<sup>11</sup>

Putting these clusters on a map (Fig. 5) can be highly illuminating. The first cluster roughly forms the shape of Cumania, or Dešt-i Qipčaq (the Kipchak steppe), the area dominated by the Cuman-Kipchak confederations in the tenth to thirteenth centuries. The second cluster forms the shape of the Mughal Empire in its borders of the early seventeenth century, while the third, mixed zone lies between the previous two zones. This distribution suggests that this family of instruments originated in the Kipchak steppe and then spread to the south with the Mughals and their Turkic armies, though this is a topic that needs to be researched further.

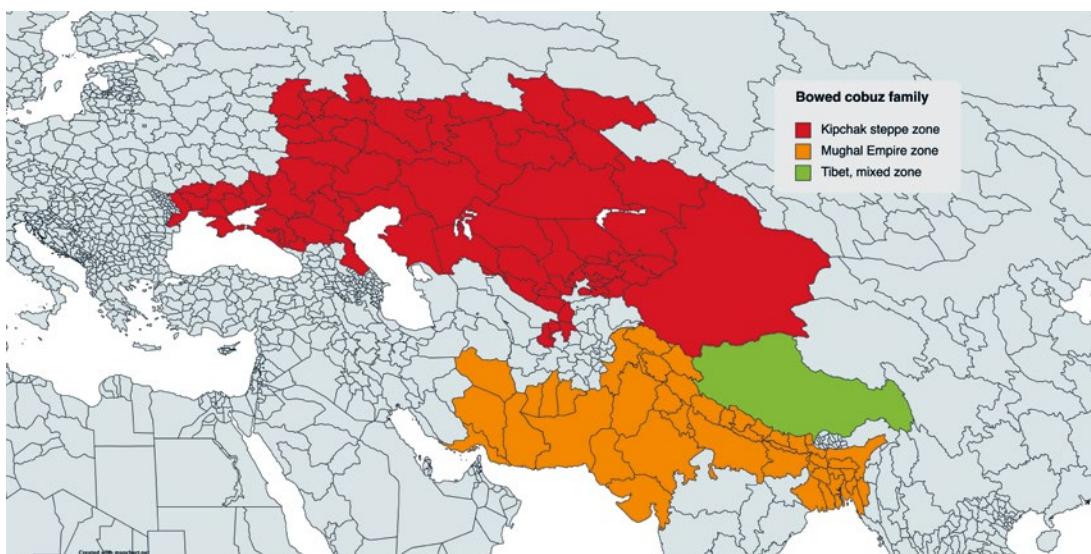


Fig. 5 Distribution of bowed string instruments with a partially open top from the thirteenth to the twenty-first centuries. Illustration created by I. Khodzhaniiazov with mapchart.net.

### Cut-outs in the sides

The cut-outs in the sides of the body of the Lymanets cobuz (marked B in Fig. 1) have an almost rectangular shape and are about 5 mm deep. This lets us assume that there might have been a rectangular insert, most likely wooden, that fitted in these cut-outs. In the same manner, the Karakalpak and Kazakh *qobız* also often have cut-outs on the body sides. A piece of wood inserted in the cut-outs is used to stretch the instrument’s skin top and makes the construction more robust. Sometimes this piece of wood is just placed between the side walls of the body without being inserted in cut-outs on the sides.

11 See Sutherland 2017, pp. 301–304.

### Holes in the back of the body

It is common in various traditions to drill or cut holes in the body of a monoxyle instrument, as has been noted by Mark Slobin when describing Turkmen *damburas* (two-stringed long-necked lutes) with a sound hole in the back: "Instrument builders and performers alike maintain that the hole serves to improve resonance rather than to fulfil an ornamental function."<sup>12</sup> This might also be the case with the sound holes in the back of the cobuz. All the same, the overall approach differs a little: the *dambura* has a wooden top with multiple small sound holes while the cobuz has a half-open top. The sound holes in the back of the *dambura* are smaller and are located on each side of the instrument body.

The sound holes in the back of the cobuz from Lymanets are all in a line. Each of them has a different size and is located in a distinct section of the body: the lowest holes under the skin top, the middle holes under the wooden insert, and the highest under the open area of the soundbox. It is possible that the holes were not just made for acoustic reasons, but also for magical, ritual or spiritual purposes. There are several features on this instrument that also seem organised in threes: three strings (each having its own size and voice), three pieces of wood for the body, the neck and the pegbox, and three materials (wood, skin, and hair or gut strings). The kazakh shamans named *baqsi* used their *qobiz* as a ritual instrument until the 1930s when it was banned by the communists. According to Saida Daukeyeva:

Kazakhs associated the *qobyz* with images of totemic animals – the camel, horse, and swan. This association supported the idea of the instrument as a vehicle for transporting the shaman during the healing séances to the mythical upper, middle, and lower worlds in search of a patient's soul seized by evil spirits.<sup>13</sup>

In traditional cultures, spirits were often connected to different types of moving air. Especially if this air brings smells or sounds.<sup>14</sup> In my opinion, it is more than likely that the shape and number of holes on the cobuz have both a practical and a spiritual function.

### The bridge

The tiny bridge that has been preserved is probably the most problematic, obscure part of the Lymanets cobuz, as it is very narrow (the gaps between the strings are approximately 5 mm) and it was also positioned very unusually: not at the top of the instrument, but on the inside of

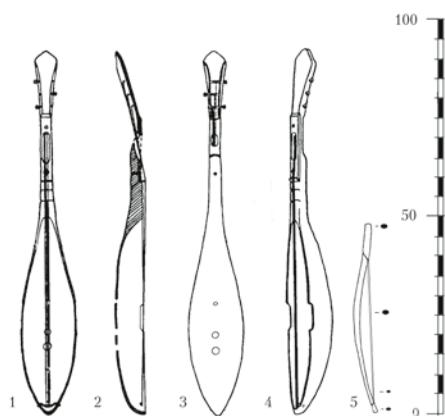


Fig. 6 Reconstruction proposed in Hershkovych 2011, p. 86.

12 Slobin 1976, p. 215.

13 See Daukeyeva 2016, p. 289.

14 See for example Kersalé n.d. and Vovk 2015, p. 215.

the back, placed into special grooves in the very lowest part of the body. No other bridge was preserved at the burial site. This led Hershkovych to believe that the cobuz did not have a top at all, and that the sound was transmitted from the strings via the bridge directly to the back of the body.<sup>15</sup> In this case the cut-outs on the sides could allow the player to operate the bow (Fig. 6).

From the point of view of physics, such an instrument would be very unlikely. It is also contrary to the practice of known luthiers. To produce a well audible sound, a lute-like instrument has to have a sound box with a top through which the strings can transmit their vibrations.

My hypothesis for this tiny bridge is that it was not used to transmit sound from the strings to the body of the instrument, but was used instead as a type of nut to redirect the strings to the holes in the bottom of the body where they were attached with a knot from the back. Alternatively, the bridge might indeed have been used for acoustic purposes, but had been placed at the bottom only while it was being transported, so that it would not be lost.<sup>16</sup>

#### Fret-slots and the location of the main bridge

The fret-slots are a distinctive feature of the Lymanets cobuz. They are to my knowledge not an aspect of any broader tradition and are very rarely seen on related instruments. Three parallel fret-slots, each less than 1 mm wide, have been preserved on the neck of the Lymanets cobuz. They are approximately 7 mm deep. It is unlikely that there was any type of insert in them – for that they are too narrow, nor do they bear any traces of intrusion. They were probably used just as a visual guide on the surface of the neck. The two upper fret-slots were cut across the full width of the neck, while the lowest one only extends halfway across.

Having three fret-slots and knowing the overall length of the instrument, it is possible to calculate the bridge location. I used a 12-tone, equal temperament scale that naturally was not in use in the fourteenth century, but provides us with an adequate understanding of how the instrument functioned. When I tried different combinations, the most reasonable was the one that puts the seventh semitone on the upper fret (the fifth in relation to the empty string or the upper nut); the middle fret is then a little lower than the eighth semitone (roughly the minor sixth in relation to the empty string); and the lower fret is on the tenth semitone (the minor seventh in relation to the empty string).

To test this reconstruction, I compared it with the measurements given by al-Fārābī. He mentions the *rabāb* as a bowed instrument. Elsewhere, he says that in rare instances there might be frets on the *rabāb*, though it is more usual for there to be special marks on the fretboard. Al-Fārābī gives the finger positions for them: they form the minor tetrachord.<sup>17</sup> If applied to our reconstruction, the finger positions given by al-Fārābī would fall on the frets number 2, 3, 4, 6 – with the little finger falling precisely on the border between the reconstructed and preserved parts of the fingerboard.

With these fret-slot positions, the bridge would be located on the bottom edge of the wooden part of the top, in front of the middle hole. This location for the bridge allows one to put it in a slanted position so that one of its legs stands on the wooden part of the top, the other on the skin part. Such a slanted position, with the two legs standing on different surfaces, is very typical of the *qobuz*. In the opinion of my fellow luthier Yuriy Synepolskyi, who has experimented with skin-covered Turkish bowed instruments (*rebab*), this practice helps to remove unwanted

15 Hershkovych 2011, p. 86.

16 See the bridge tied to the body with a rope on the *qobuz* from Afghanistan collected by Mark Slobin (MET 2015).

17 Kuckertz 1965, pp. 16f.

ed frequencies, especially if the strings are made from horsehair. This could be an additional argument for this reconstruction of the fret-slot positions.

### A new reconstruction of the Lymanets cobuz

My above deliberations allow me to propose a new reconstruction of the Lymanets cobuz (Fig. 7).

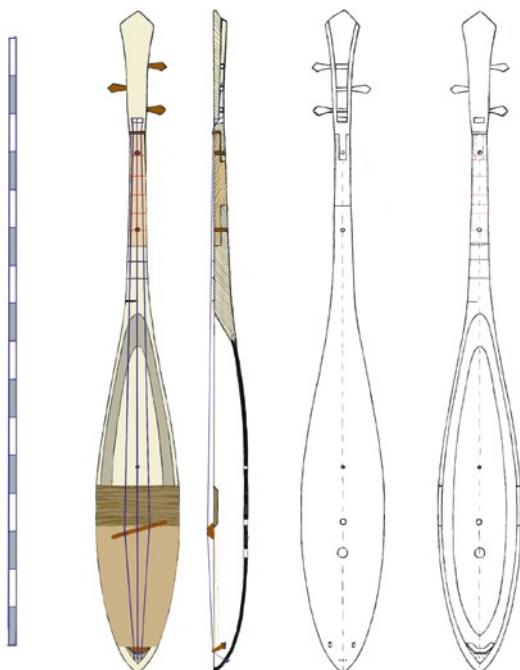


Fig. 7 Reconstruction of the Lymanets cobuz by I. Khodzhaniiazov (Illustration: Olena Shykura).

The instrument would have a top that is half-open, half-covered with skin, and with a thin bar placed into the cut-outs onto which the skin is attached; this bar also serves to support one foot of the bridge. As described above, the holes in the back are placed under the different parts of the top and are both functional and symbolic/ritual. The tiny additional bridge directs strings to the back to guide them to the rear, where they are hidden from sight. The frets are probably just indentations, and the reconstructed range is up to 10 semitones per string (= a minor seventh). The strings were probably made of horsehair. As the wood of the preserved artifact is overdried, it might have lost up to 20% of its original thickness.<sup>18</sup>

### Conclusions

With this research, I propose a new hypothesis for reconstructing the Cuman cobuz of the fourteenth century, also basing my ideas on other traditional string instruments both historical and modern. The design shown in Figure 7 is a blueprint with measurements that could be used by luthiers to produce replicas. This in turn would allow us to attempt to reconstruct the repertoire of the instrument, or at the very least the characteristic features of its playing style. My plans to build a replica and test the reconstruction were disrupted by the ongoing Russian-Ukrainian war. As of Summer 2025 this project is still in the planning phase.

<sup>18</sup> I did not consider the general wood shrinkage in my reconstruction, as this would require additional, practical research.

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