Abstract. The reign of the Doukas dynasty in 1059–1078 was a time when new threats to the Byzantine Empire emerge in Europe and Asia. One of them was the increased activity of Turkmen who were penetrating the lands belonging to the Byzantines. A manifestation of these threats was visible during the rule of Constantine X Doukas (1059–1067) in 1064. We have there an invasion of the tribe of Uzes, who crossed the Danube. They ventured so far, as the vicinity of Thessalonica and the province of Hellas, plundering everything in their path. Their actions surprised the defense of the Byzantines. This attack on the empire was related to their crossing of the Danube, about which Michael Attaliates and Skylitzes Continuatus provides us with interesting information. The main aim of this paper therefore will be related to issues linked to the types of vessels used by Uzes to cross this river, as well as an attempt to assess their boatbuilding skills.

Keywords: Byzantine Empire, Constantine X Doukas, Uzes, Danube, Nomads’ knowledge of river crossings

The decline of the Macedonian dynasty was the end of an era for the Byzantines. The immediate successors of this family faced the threat of the violent pressure of nomadic peoples on the borders of the Roman Empire, both in Asia Minor and in Europe. This was not a new phenomenon for the inhabitants of the Empire, but its scale exceeded all the previous ones. During the reign of Constantine X Doukas (1059–1067) in 1064, there was another successful attempt to cross the Byzantine border. This was done by the nomadic people of Uzes (Oghuz Turks-Torks), who at this time crossed the Danube and poured into the Balkans.

These people used various types of vessels for this purpose. Therefore, this study aims to try to determine the skills of the Uzes ethnos in the field of boatbuilding and crossing watercourses. However, before I go directly to this issue, it is worth mentioning at this point, the course of this military expedition of the Uzes people to the lands of the Empire. The Uzes found themselves on the Danube as a result of the campaign of the Rus princes and also because of the expansion of their Cuman neighbors, who gradually pushed them west².

Our main source of information about events near the Danube are the accounts of the Byzantines, the Continuator of John Skylitzes and Michael Attaliates³. The border on the Danube when Uzes arrived, was guarded by the magistros Basil Apokapes and the magistros Nikephoros Botaneiates, who were there to respond to any attempts to cross that river⁴. These Turkmen crossed the Danube with all their possessions in long “dugouts” and on rafts fashioned from stalks and hides (…τὸν Ἴστρον περαιωθὲν ξύλοις μακροῖς καὶ λέμβοις αὐτοπρέμνοις καὶ βύρ-σαις…)⁵. Sources further report that both Byzantine commanders, forces of Romans accompanied by Bulgarians, tried to stop Uzes, but they were crushed by them with a sudden attack. Basil Apokapes and Nikephoros Botaneiates were taken prisoner by the nomads, who then plundered the lands on the Byzantine

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⁵ Skylitzes Continuatus, p. 114; Byzantium in the Time of Troubles, 5 (114), p. 62; Miguel Ataliates, IX, p. 63; Michael Attaliates, XIV, 6, p. 152.
bank of the Danube. In the ranks of the Uzes were to be 600,000 people (ethnos) (60,000 according to Zonaras), and a contingent of considerable strength was sent out south and penetrated as far as Thessalonike and the theme of Hellas, plundering all the lands of the empire in their way. On the way back to the Danube, this horde was surprised by the weather conditions (violent storms), as a result of what, that Uzes lost the spoils they had captured from the Byzantines.

The arrival of these Turks on the banks of the Danube is a testimony to the determination of the Uzes. The term “ethnos” used by Attaliates to refer to these newcomers from the East represent not so much a group of lonely warriors, but also their families, i.e. women, children, and the elderly. These people, relying on the care of men, had to be looked after, and also they had to be transferred to the other side of the river. Therefore, if we assume that for one horse warrior there were 3–4 members of his immediate family, it had to be between 10 and 15 thousand people capable of fighting and conducting offensive actions. It is also clear that on this part of Uzes the obligation was laid, to provide them and their families with means of transport to cross the Danube. Even today, such a task would be a logistical nightmare.

Constantine X Doukas, after hearing about these events, did not immediately proceed to the warfare against Uzes. The emperor did not take such actions, because according to sources, he did not want to spend money on the army, and he was also afraid of a clash with such a huge horde of enemies. Instead, he sent envoys to the chiefs of Uzes, and also tried somehow to get them to his side. The hostilities of Uzes’ in the Balkans led to the fact that some of the inhabitants of the provinces they invaded, decided to leave their places of residence and settle somewhere else. The lands most affected by nomad plunder were Bulgaria,

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7 Zonaras, p. 678.


9 Skylitzes Continuatus, p. 114; Byzantium in the Time of Troubles, 5 (114), p. 62; Miguel Attaliates, IX, p. 63; Michael Attaliates, XIV, 6, p. 152.

10 Skylitzes Continuatus, p. 115; Byzantium in the Time of Troubles, 6 (115), p. 62; Miguel Attaliates, IX, p. 64; Michael Attaliates, XIV, 7, p. 152; A. Paroń, Pieczyngowie..., p. 394.
Macedonia, and Thrace, and it did not escape the public attention in the capital, which forced Constantine to act more decisively\textsuperscript{11}. However, before that happened, the emperor received information that the Uzes had ceased to exist. Their leaders abandoned them and crossed the Danube in boats (σκάφεσι). Also, hunger and the plague thinned the ranks of the Uzes, to such an extent that they became easy prey for their enemies – Bulgarians and Pechenegs, and were crushed under the wheels of their wagons\textsuperscript{12}.

Alexandru Madgearu, when he described the course of this expedition of the Uzes to Byzantium, draws our attention to the archaeological material preserved after the passage of the Uzes, as well as the seals of the Byzantine commanders found at the sites of the alleged activity of that nomads. The Byzantine outposts in Garvăn, Oltina, Nufăr, Pâcuuiul lui Soare, were the points that resisted the Uzes during their crossing of the Danube\textsuperscript{13}. Citing the finds of three Basil Apokapes seals found near Silistra, Bradvari, and Popina, that researcher shows us the fact that Byzantine commanders moved troops west expecting an attack from the valley of the Mostiștea\textsuperscript{14}. A. Madgearu also suspects that the nomads may have used fords near Dervent, Garvăn, and perhaps Isaccea\textsuperscript{15}. Another author, Victor Spinei, suggests that the Uzes made their way into the Balkans via the Danube at Bugeac\textsuperscript{16}.

The Main account of Uzes’ expedition to the lands of Byzantium is a testimony left by Michael Attaliates, which was later repeated after him by the Continuator of Skylitzes. After serving on the court, in the vicinity of Emperor Constantin X, Michael was probably also an eyewitness to the actions taken by this ruler to hold the invasion of the Uzes. We can consider the information he quotes as reliable, with the possible exception of some 600,000 Uzes, who invaded Byzantium\textsuperscript{17}.

\textsuperscript{11} Skylitzes Continuatus, p. 115; Byzantium in the Time of Troubles, 6 (115), p. 62; Miguel Attaliates, IX, p. 63; Michael Attaliates, XIV, 8, p. 154; J. Bonarek, Bizancjum..., p. 89; J. Dudek, Ludy..., p. 90; P. Stephenson, Byzantium’s..., p. 95; В.П. Степаненко, А.С. Мохов, Балканский..., p. 68.


\textsuperscript{13} A. Madgearu, Byzantine..., p. 130.

\textsuperscript{14} Ibidem, p. 131.

\textsuperscript{15} Ibidem.

\textsuperscript{16} V. Spinei, The Romanians..., p. 115.

\textsuperscript{17} The number of 60,000 people given by Zonaras is more credible. Michael Attaliates, XIV, 6, p. 152; Zonaras, p. 678; J. Bonarek, Bizancjum..., p. 88; A. Madgearu, Byzantine..., p. 129; O. Pritsak, Uzes..., p. 2148.
Therefore, the data provided by Attaliates about the vessels used for river crossing by these nomads, which are hidden under the names ξύλοις μακροῖς καὶ λέμβοις αὐτοπρέμνοις καὶ βύρσαις, is extremely intriguing. We can, at this point raise the questions of whether the names described by this Byzantine author should in fact be regarded as evidence of the boatbuilding skills of the nomadic Uzes? Or are we dealing here rather with the use of the boatbuilding skills of the population (Slavs, Wallachians) living near the banks of the Danube?

The first of the terms, ξύλοις μακροῖς, quoted by the sources simply means a raft or a dugout, are one of the oldest means of transport, both by river and sea, which were particularly well known to the Slavs. They could be made from any type of wood, but the most durable were those made of oak. The nomads knew the technique of building wooden rafts but used it extremely rarely. The presence of dugouts or long rafts may also suggest that some local element was involved, which could make rafts of this type for Uzes. Representatives of the local community could have been forced to make this type of transport, or the Uzes had seized all the vessels they have used daily. It was also possible with this type of rafts by connecting them, to create much larger units, which could be necessary for transport across the Danube, especially the wagons of the nomads. However, in this case, we should completely not dismiss the possibility that the Uzes themselves prepared their rafts. Having a large amount of wood on-site, they had the full possibility of making them on their own, because it was easy to cut down a sufficient number of trees and then tie them together. Therefore, it was not even necessary to waste time on making the dugouts. Besides, such versions seem to be confirmed by the sources, when they mention the sudden attack of the Uzes on the Byzantines.

The situation is slightly different in the case of λέμβοις αὐτοπρέμνοις καὶ βύρσαις. In Asia and Europe, the technique of crossing rivers using bags made of animal skins has been known since ancient times. Thanks to the bas-reliefs in the Palace of Sennaelemb, at Koulanjik, Iraq, we know that the ancient Assyrians had a raft called "kelek", made of inflated ox-hides. As depicted on the surviving reliefs, they were used to transport building materials. This method was also known to the Greeks, and it was used quite effectively for military purposes by Alexander...

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the Great. During his campaign on the Danube against the Geats, where, without enough boats and dugouts to cross the river, he ordered his soldiers to sew the skins of their tents together to make bags, which they filed with hey. Thanks to this method, he transferred 1,500 cavalry and 4,000 infantry to the other side of the Danube. This technique was also used by the ancient Romans, for which we have evidence in the iconography. We found proof in the depiction of crossing a river by the Roman auxiliary infantry, probably on the Danube, on a pontoon bridge, the basis of which was made of inflated ox-hides. That event takes place during the emperor Trajan’s Dacian wars, and it is presented on one of the panels from Trajan’s Column.

Knowledge of how to use animal hides to build primitive boats or rafts was therefore widely popular in both Europe and Asia. This technique was also familiar to nomads. We find evidence of this in the sources related to other peoples from Central Asia, written down by the Franciscan, Giovanni di Plano Carpini. He introduced the following information about the Tatars crossing the river:

<12>. Quando autem ad flumina perveniunt, hoc modo transeunt illa, etiam si sunt magna. Maiores unum rotundum et leve corium habent, in quo in summitate per circuitum crebas faciunt ansas, in quibus funem imponunt et stringunt, ita quod in circuitu faciunt quemdam ventrem quem replent vestibus et aliis rebus, et fortissime ad invicem comprimunt; post hec in medio ponunt sellas et alias res duriores. Homines etiam in medio sedent, et ligant ad caudam equi navem hanc taliter preparatum. Et unum hominem, qui equum regat, faciunt pariter cum equo ante natare; vel habent aliquid duo remos et cum illis remigant ultra aquam, et sic transeunt flumen. Equos vero pellunt in aquam, et unus homo iuxta unum equum quem regit natat, et alii equi omnes illum sequuntur; et sic transeunt aquas et flumina magna. Alii vero pauperiores unam bursam habent de corio bene consutam (unusquisque tenetur habere), in qua bursa vel in quo sacco, vestes et omnes res suas imponunt, et in summitate saccum fortissime ligant, et suspendunt ad caudam equi et transeunt, ut superius dictum est.

Whenever the Tartars come upon rivers they cross them this way even if they are large: most men have a light round leather hide and they make loops all around the edge of it through which they put a cord and tighten it, and thus make a sack which they fill with clothing and other things, and draw it together tightly. After this

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they put saddles in the middle of them as well as other heavy things. The men sit in the middle of them and tie the boat they have prepared to the tail of a horse. They make one man, swim before the horse and lead it; or they sometimes have two oars and paddle over the water with these and cross the river. In fact, they drive the horses into the water and one man swims next to a horse which he leads and all the other horses follow it, and they cross water and large rivers this way. Other Tartars who are poor have a leather sack sewed up well (everyone must have one) into which they put all their clothing and their possessions and they tie up the mouth of the sack strongly and hang it from the horse’s tail and cross as explained above.25

This description of an eyewitness shows that the nomads were well acquainted with building primitive, one-person boats, for which the hull was made of animal hide and the skeleton was made from a saddle. These boats could be tied to horse-tails so that the animals were their main driving force in the flow, or two oars could be used to cross a water obstacle. The poorer Tatars used leather bags filled with their belongings to cross the river, which were tied to the horses’ tails. Nomads were able to build much larger boats or rafts from animal hides, which could then be transported with them and used in times of need. Evidence of this is provided by the account of Ahmad ibn Fadlan, a 10th-century Muslim traveler who traveled through lands inhabited by various tribes of the Turks. In one of the fragments of his report of the expedition towards the Volga, he wrote the following relation:

Halfway into Shawwal of 309 [February, 922], the season began to change and the Jayhūn melted. We set about acquiring the items we needed for our journey. We purchased Turkish camels, constructed the camel-skin rafts for crossing all the rivers we had to cross in the realm of the Turks, and packed provisions of bread, millet, and cured meat to last three months.26

This passage in the context of camel-skin rafts is related to the later one:

We pushed on as far as the Bghndī River, where the people got their camel-hide rafts out, spread them flat, put the round saddle frames from their Turkish camels inside the hides, and stretched them tight. They loaded them with clothes and goods. When the

rafts were full, groups of people, four, five, and six strong, sat on top of them, took hold of pieces of khadhank and used them as oars. The rafts floated on the water, spinning round and round, while the people paddled furiously. We crossed the river in this manner. The horses and the camels were urged on with shouts, and they swam across. We needed to send a group of fully armed soldiers across the river first, before the rest of the caravan. They were the advance guard, protection for the people against the Bāshghird. There was a fear they might carry out an ambush during the crossing. This is how we crossed the Bghndī River. Then we crossed a river called the Jām, also on rafts, then the Jākhsh, the Adhl, the Ardn, the Wārsh, the Akhtī, and the Wbnā. These are all mighty rivers.  

From the account of Ahmad ibn Fadlan, it is clear that such camel skin boats were strengthened by the use of camel saddles as a frame, and their primary propulsion was the strength of human muscles, which was provided by those people who sat on them. These rafts were extremely difficult to steer, so horses and camels swam across. It is also important that rafts were easy to transport after unfolding and could be used repeatedly. The information about sending armed soldiers ahead is also noteworthy. After landing on the other bank of the river, these armed men were supposed to protect the caravan from a sudden attack by a potential enemy, Bāshghird, which we can also associate as neighbors of the Uzes.

The above-mentioned technique of building leather rafts was also known to the opponents of the Uzes-Cumans. We know this from the account of Niketas Choniates, who mentions an interesting event during the reign of Manuel Komnenos (1143–1180). In a time of this emperor’s wars with these nomads, they also proved that they did not need bridges or fords to cross the Danube. Choniates mentions that common Cuman tightly stitched leather (διφθέρα) filled with hay (κάρφης) so that the resulting bag was waterproof. Then he tied that pontoon to a horsetail next placed his saddle on it and stood straddling, navigating with the strength of a horse which, in Choniates’ opinion, served as a sail (διαπλωΐζεται), while the pontoon was a boat (σκάφος), with which it was possible to sail on the waters of the Danube.

With all the knowledge presented above, we can therefore speculate that the Uzes also used similar techniques to cross rivers, including the Danube. Perhaps, each of the Uzes was equipped with light and durable leather, which allowed him to build a primitive one-person boat, similar to one we called a coracle, with

27 Ahmad ibn Fadlan, 34, p. 58–59.  
29 Such a boat resembles a basket in its shape. D.A. Agius, Classic Ships of Islam. From Mesopotamia to the Indian Ocean, Leiden–Boston 2008 [= HOS.NME, 92], p. 130; Coracle it was not a kayak-type unit, but much more primitive. Classic kayaks are much better adapted to sailing and more manue-
using a frame made of a saddle and branches or roots, or they acted similarly to the Tatars and Cumans described above, using a leather dinghy tied to a horsetail. Unfortunately, we do not know what kind of animal hides they could have used for this purpose. Probably oxen or sheepskin. Any piece of wood could be used as an oar or oars. The use of such a technique of boat assembling made it possible, to quickly transfer the troops to the other bank of the river and to surprise the enemy because only the warriors themselves and their mounts crossed water obstacle. After taking over the other side, the wagons were transported on wooden rafts, along with the rest of the nomad’s belongings. The Uzes, in crossing the Danube, did not do so in one place, but rather in many points, also using the fords on this river for this purpose. The momentum of this operation and its speed must therefore have been the factors that surprised the Byzantines.

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