

IVANA R. S. ŽIVALJEVIĆ, University of Novi Sad, BioSense Institute, Novi Sad
SONJA I. VUKOVIĆ-BOGDANOVIĆ, University of Belgrade, Faculty of Philosophy,
Department of Archaeology, Laboratory for Bioarchaeology, Belgrade
IVAN S. BOGDANOVIĆ, Institute of Archaeology, Belgrade

***AD PALATINAS ACIPENSEM MITTITE MENSAS:* FISH REMAINS FROM VIMINACIUM**

e-mail: ivana.zivaljevic@biosense.rs

Abstract – The paper presents the results of archaeozoological analysis of fish remains from three locations at Viminacium (the Amphitheatre, Nad Klepečkom and Pirivoj), discussed jointly with finds of fishing equipment and relevant written sources on the subject. Albeit small and biased due to the hand-collection of animal bones, the fish faunal assemblage from Viminacium provides valuable data on the choice of exploited species, fishing and fish transportation practices, and patterns of consumption and deposition in the city and its surroundings. In addition to remains of locally available freshwater fish, occurring at all three sites, the Amphitheatre sample contained the remains of large anadromous sturgeons, possibly obtained from the downstream, Iron Gates area. Their size, contextual provenance, as well as their exceptional status according to written sources, indicates that there had been notable differences in access to high-quality fish among the different social classes at Viminacium.

Key words – Viminacium, Amphitheatre, Nad Klepečkom, Pirivoj, fish remains, fishing equipment, fish trade, sturgeons

INTRODUCTION

The location of the Roman city and legionary camp of Viminacium, situated in the vicinity of the rivers Mlava and Danube (Fig. 1), suggests that fish must have contributed (at least to some degree) to the diet of its inhabitants. Nevertheless, relatively little is known about Roman fisheries in this part of the Danube, and determining the scale of fishing activities and the dietary role of fish is often elusive. This is mainly due to the selective, hand-collection of faunal remains, biased against small and fragile fish bones, which remain underrepresented even in large faunal assemblages.¹ For instance, in the faunal assemblage from

Viminacium, fish remains are represented by as little as several dozen bones, as opposed to several thousands of mammal bone specimens. However, although much fewer in number, they warrant attention and provide unique insights into fishing and fish consumption in Viminacium and, consequently, in the Upper Moesian frontier, as the faunal assemblage from this site is the only one that has been analysed from this part of the *limes*. In this paper, we present and discuss the results of archaeozoological analysis of fish remains recovered

¹ Wheeler, Jones 1989; Bartosiewicz, Bonsall 2004.

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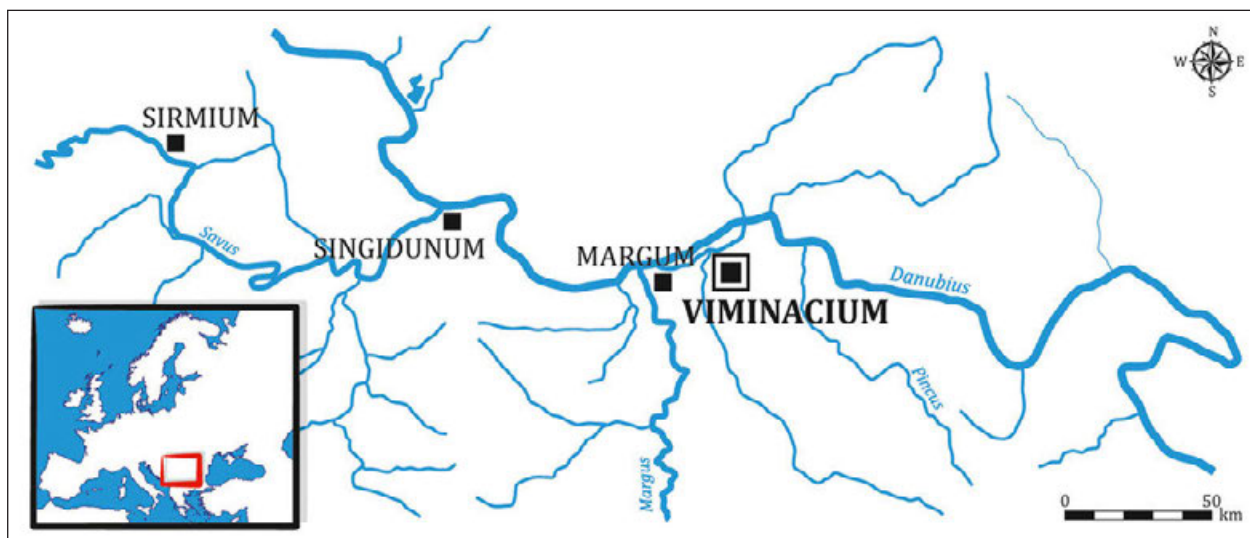


Fig. 1. The location of Viminacium

Сл. 1. Локација Виминацијума

from three different locations at Viminacium (the Amphitheatre, Nad Klepečkom and Pirivoj) (Fig. 2), provide a brief overview of fishing tools and equipment from the site, and look into relevant written sources on the subject. Albeit small and biased, the analysed sample (cross-referenced with archaeological and historical data) sheds more light on the choice and size of exploited species, fishing and fish procurement and transportation practices, and patterns of consumption and deposition across the wider city area. Moreover, the paper explores the possible meanings attributed to specific kinds of fish, the ways they could have constructed and expressed particular identities, and their role in defining and maintaining social relationships.

ARCHAEOLOGICAL BACKGROUND

Viminacium

Viminacium is located in eastern Serbia, on the right bank of the River Mlava, close to its confluence with the River Danube (Fig. 1). Initially it was a fortress, where the VII Claudia legion was stationed from the second half of the 1st century AD. Next to the fortress, a city arose and became the capital of the province *Moesia Superior*, and later of the province *Moesia Prima*. Based on archaeological and historical data, Viminacium achieved great prosperity at the end of the 2nd and the beginning of the 3rd century AD. It was destroyed by Huns in 441 AD and consequently, after the collapse of the Hunnic reign, the area was populated by

Germanic tribes. In the early Byzantine Period, Viminacium was renewed, and it was ultimately destroyed during the invasions of Slavs in the 7th century AD.²

Archaeological research at Viminacium commenced in 1882, and since then salvage excavations have been focused on the areas surrounding the city and the fortress, where mostly cemeteries have been investigated.³ However, just a small portion of the city has been explored. More recently, large scale systematic excavations of the legionary fortress started.⁴ The faunal remains (including the fish remains that were the object of this study) uncovered so far at Viminacium originate from three different sites: from the area of the Roman amphitheatre, from the area of the eastern necropolis (Pirivoj) and from the industrial-economic zone (Nad Klepečkom) (Fig. 2).⁵

The sites

The amphitheatre was built at the beginning of the 2nd century AD, 60 m from the legionary fortress (Fig. 2). Over time, the city walls were built and the amphitheatre was incorporated into the city area, situated in its

² Mirković 1968; Поповић 1968; Спасић-Ђурић 2015.

³ Mrđić 2009; Спасић-Ђурић 2015.

⁴ Nikolić et al. 2018.

⁵ The excavations at the mentioned locations have been conducted by the Institute of Archaeology in Belgrade, directed by dr M. Korac.

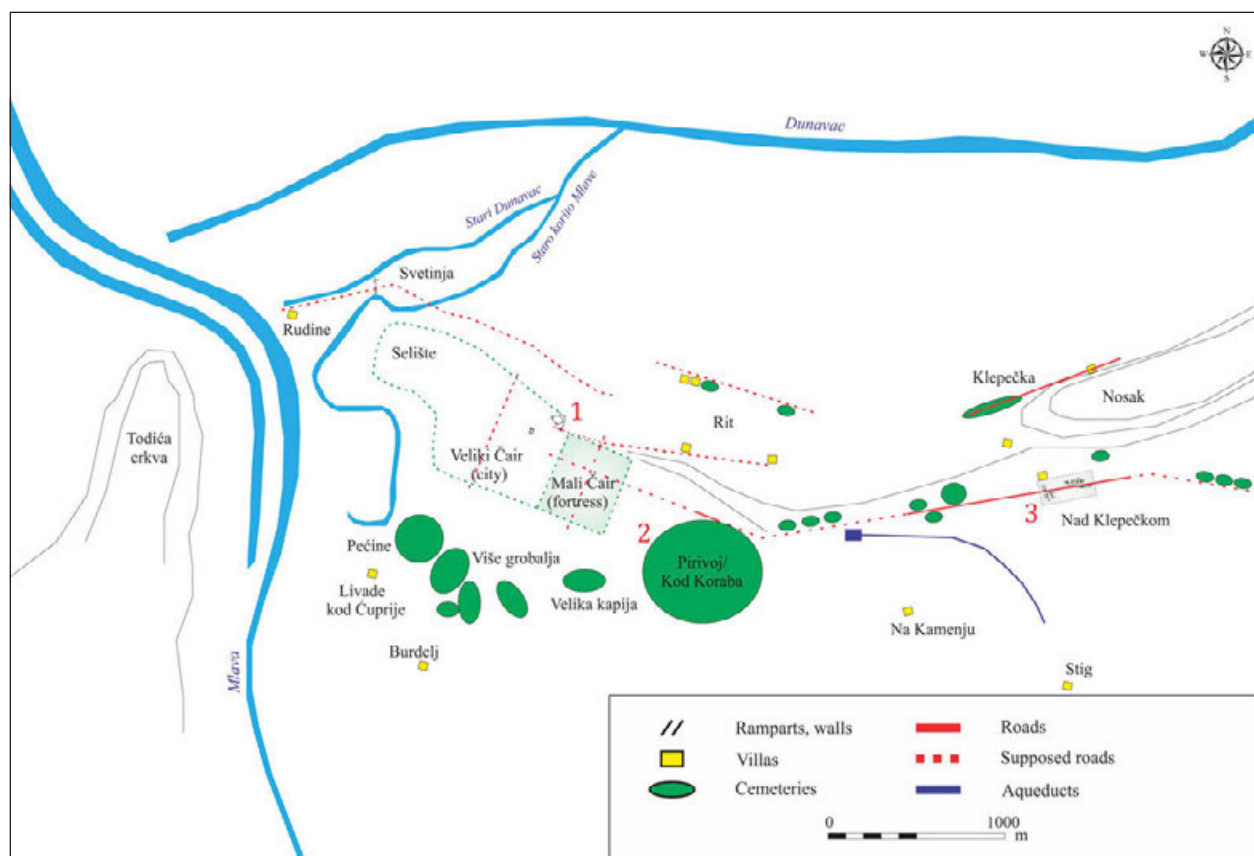


Fig. 2. Plan of Viminacium: 1) Amphitheatre; 2) Pirivoj; 3) Nad Klepečkom

Сл. 2. План Виминацијума: 1) Амфитхеатр; 2) Пиривој; 3) Над Клејечком

north-eastern corner. It remained in use until the first half of the 4th century AD, after which it was abandoned. The building was damaged and the whole surface of the amphitheatre was filled up in the second half of the 4th century. By the end of the 4th century AD this area was used as a cemetery.⁶

The Pirivoj site is part of the eastern necropolis, located c. 450 m southeast of the legionary fortress (Fig. 2). The cemetery, which was in use from the 2nd to the 4th century AD, was set along the road leading from the *porta principalis dextra*. Apart from burials, a brick kiln and a dump were discovered during the excavations of this area.⁷

The Nad Klepečkom site is located c. 2.5 km to the east of the legionary fortress and is situated on the right bank of the small river Klepečka that used to flow into the Danube branch (Fig. 2). At this site, archaeological features indicative of human occupancy spanning from the Aeneolithic to the Medieval period have been discovered. Features from the Roman period date

back to the 2nd and 3rd centuries AD. They include villas and a cemetery, as well as a partly excavated settlement that has been interpreted as an industrial-economic zone.⁸

ARCHAEOZOOLOGICAL DATA

The largest faunal assemblage (which is still being analysed) originates from the amphitheatre and its surroundings.⁹ One portion of the assemblage (NISP¹⁰ = 12,325), related to the period during which the amphitheatre was in use, was found in the area of timber

⁶ Nikolić, Bogdanović 2015; Bogdanović, Nikolić 2017; Богдановић et al. 2018.

⁷ Raičković, Milovanović 2010; Vuković 2010; Golubović, Korać 2015; Jovičić, Milovanović 2017.

⁸ Mrđić, Jovičić 2012; Redžić, Danković 2012; Jovičić, Redžić 2014; Redžić et al. 2014.

⁹ Vuković 2015.

¹⁰ Number of identified specimens.

TAXON	AMPHITEATRE		NAD KLEPEČKOM		PIRIVOJ		TOTAL per taxon	
	NISP	W (g)	NISP	W (g)	NISP	W (g)	NISP	W (g)
<i>Acipenser gueldenstaedtii</i> Russian sturgeon	1	0.4	/	/	/	/	1	0.4
<i>Acipenser ruthenus</i> sterlet	4	7.3	/	/	/	/	4	7.3
<i>Acipenser stellatus</i> stellate sturgeon	1	9.6	/	/	/	/	1	9.6
<i>Huso huso</i> beluga sturgeon	16	356.6	/	/	/	/	16	356.6
<i>Aspius aspius</i> asp	/	/	1	0.7	/	/	1	0.7
<i>Cyprinus carpio</i> common carp	8	21.8	21	13.2	1	1.7	30	36.7
Cyprinidae indet.	2	1.8	/	/	1	0.8	3	2.6
<i>Esox lucius</i> pike	2	11.5	/	/	/	/	2	11.5
<i>Sander lucioperca</i> pike-perch	1	2.1	/	/	/	/	1	2.1
<i>Silurus glanis</i> Wels catfish	11	133.2	/	/	2	7.1	13	140.3
Pisces indet.	2	1.4	/	/	/	/	2	1.4
TOTAL per site	48	545.7	22	13.9	4	9.6	74	569.2

Table 1. Taxonomic composition of the fish faunal assemblage from three locations (the Amphitheatre, Nad Klepečkom and Pirivoj) at Viminacium

Табела 1. Таксономски састав рибаље фаунистичке скућине са три локације (Амфићеатр, Над Клејечком и Пиривој) на Виминацијуму

stands/earth mound, entrances to the building and the adjacent areas related to the object, whereas the other portion (NISP = 7,221) was found in the infill of the amphitheatre, accumulated during the 4th century AD. The faunal assemblage from the Nad Klepečkom site (NISP = 2,080)¹¹ originates mostly from the area of the settlement – the economical industrial zone of the city, and the smallest assemblage comes from the Pirivoj site (NISP = 419)¹², more precisely from the dump area located within the eastern cemetery of Viminacium. The latter was associated with funerary practices and the deposition of leftovers of food offerings related to the nearby necropolis¹³, although, in addition to food waste, the Pirivoj assemblage also included several articulated and semi-articulated horse, dog and cat skeletons.¹⁴

Archaeozoological analyses¹⁵ suggest that beef consumption was the dominant dietary pattern in Viminacium, as remains of cattle constitute up to 48% of the assemblages. They are followed by pig, sheep and goat, whose meat was also consumed within the city and its surroundings. The remains of other domestic animals – equids (horses, mules and donkeys), camels, dogs, cats and fowl were also common. On the other hand, remains of wild animals (mainly red deer, roe deer, wild boar and hare) were fairly negligible (c. 3% in the Amphitheatre sample and less than 1% in two other assemblages).

The main differences between the three studied faunal assemblages, i.e. between those originating from the Amphitheatre and the surrounding areas, are reflected in the greater taxonomic diversity observed in the Amphitheatre sample. This is especially related to the presence of wild animals (bears, big cats and wolves), most likely participants in the amphitheatre spectacles, but also wild game which was probably considered a luxury food item, primarily available to the inhabitants of the city. Furthermore, the differences in the taxonomic composition of domestic animals, their size and butchery patterns suggest that particular areas in the periphery (mainly the settlement at Nad Klepečkom) served as production centres, which supplied the city of Viminacium with animal products.¹⁶ In addition to mammal bones, the Viminacium assemblages also included mollusc shells (mainly those of Mediterranean oysters), wild birds and fish; the latter are analysed in more detail within this study.

¹¹ Vuković-Bogdanović *in prep.*

¹² Vuković 2010.

¹³ Raičković, Milovanović 2010.

¹⁴ Vuković 2010.

¹⁵ Vuković-Bogdanović 2018.

¹⁶ Vuković-Bogdanović 2018.

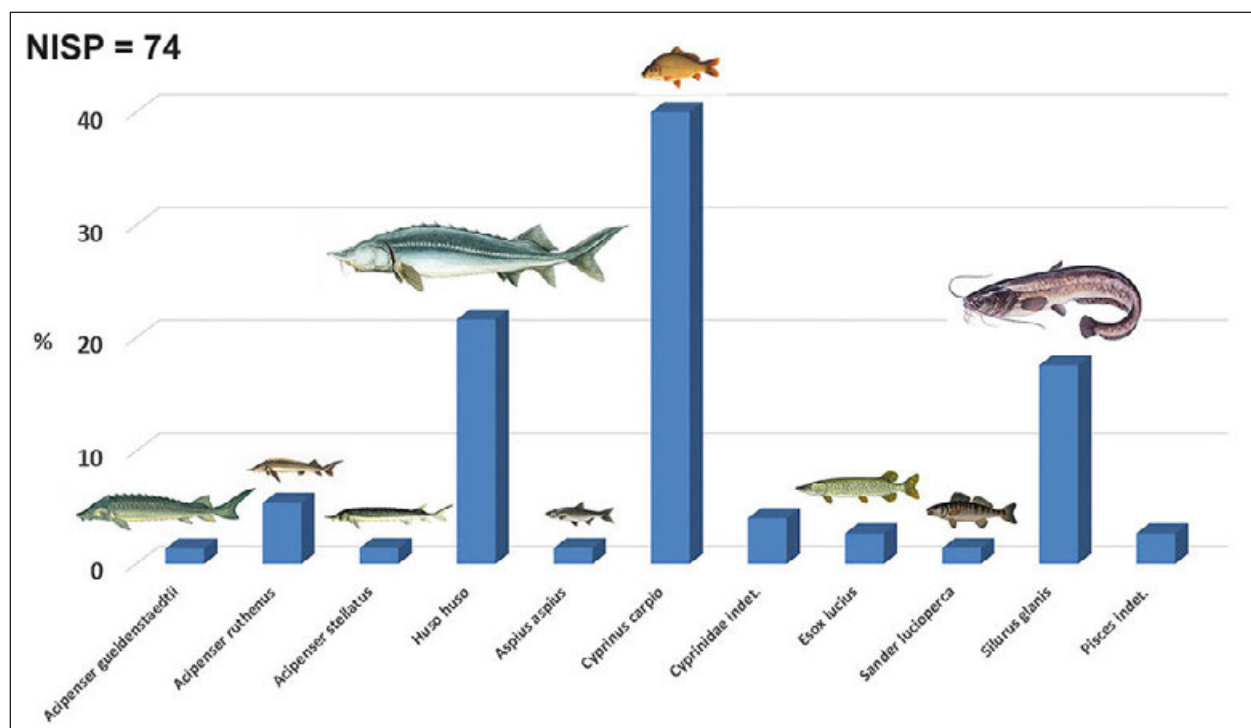


Fig. 3. Taxonomic composition of the fish faunal assemblage from Viminacium

Сл. 3. Таксономски састав рибе фауниситичке скујине са Виминацијума

FISH REMAINS FROM VIMINACIUM

The fish faunal assemblage from the three sites at Viminacium comprises 74 identified specimens (NISP) (Table 1; Fig. 3). Albeit small and biased against smaller bodied fishes, the analysed sample offers valuable insights into the choice of exploited species, fishing and fish procurement and transportation practices, and patterns of consumption and deposition in the city and its surroundings. As expected, given the vicinity of the Mlava and the Danube, the analysed sample contained the remains of freshwater fishes native to these rives: cyprinids (common carp *Cyprinus carpio* and asp *Aspius aspius*) (Fig. 4), pike (*Esox lucius*) (Fig. 5), pike-perch (*Sander lucioperca*) (Fig. 6) and Wels catfish (*Silurus glanis*) (Fig. 7). Due to their size and robusticity, bones of these species generally predominate in hand-collected assemblages from (Roman and other) sites in the area.¹⁷ At Viminacium, fish remains were somewhat more abundant in the Amphitheatre area (NISP = 48) (Table 1), with carp and catfish bones occurring in contexts related to both the use of the amphitheatre and its abandonment, whereas pike and pike-perch bones were found solely in contexts

related to its use. A couple of catfish bones from the Amphitheatre were burnt (a pectoral spine from sq. BC/6 and two abdominal vertebrae from sq. F/6), and one catfish pectoral spine from sq. D/7 bore numerous diagonal cuts, indicative of decapitation. As for the other two sites, only asp and carp bones (NISP = 22), and carp and catfish bones (NISP = 4) have been uncovered at Nad Klepečkom and Pirivoj respectively (Table 1). The latter originated from the dump area, representing either food waste or leftovers of offerings intended for the dead at the necropolis in the vicinity.

In several cases (all related to the fish faunal assemblage from the Amphitheatre area), the size of caught specimens could be estimated on the basis of bone measurements and regression equations¹⁸ (Table 2). Most measured specimens originated from large individuals, as expected given the recovery bias. Nonetheless, even though smaller-bodied fish were certainly

¹⁷ Bökönyi 1984; El Susi 1993; Takács, Bartosiewicz 1998; Bartosiewicz, Bonsall 2004.

¹⁸ cf. Brinkhuizen 1989; Radu 2003.

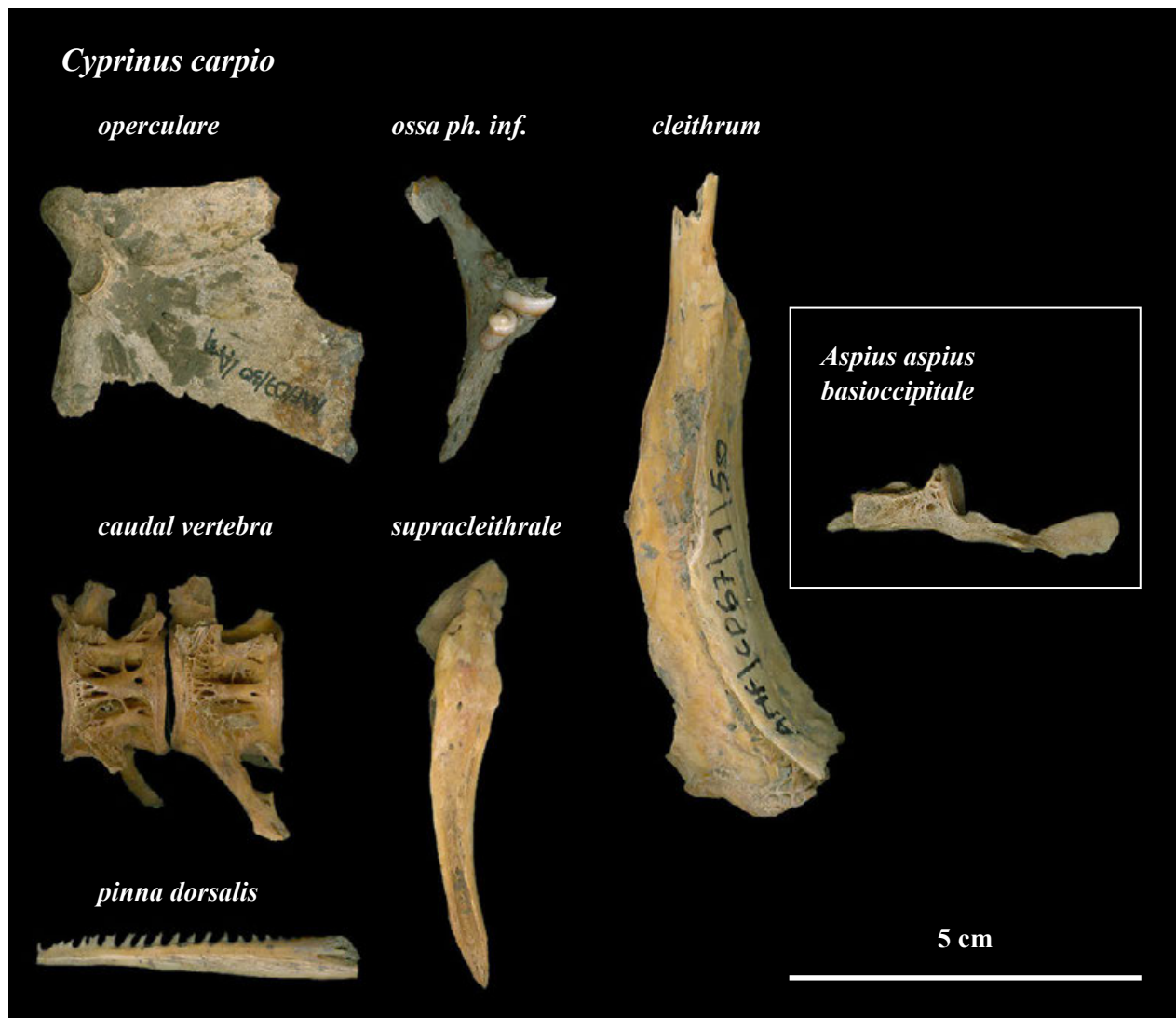


Fig. 4. Carp (*Cyprinus carpio*) and asp (*Aspius aspius*) remains

Сл. 4. Остаци шарана (*Cyprinus carpio*) и буџова (*Aspius aspius*)

consumed as well, the occurrence of large specimens is testimony that probably the best catch from the nearby rivers was selected for consumption at Viminacium. Fishing most likely took place in different seasons, coinciding with fish spawning patterns: winter to early spring (pike), spring (pike-perch) and spring to early autumn (carp, asp and catfish).¹⁹

Although often representing an amalgam of facts, fancy, legends and anecdotes, classical natural history and literary works provide insights into the ways some of these fishes could have been perceived. For example, in his extensive collection of short stories on natural history Περὶ Ζῴων Ἰδιότητος (*De Natura Animalium*),

envisaged as allegorical moral lessons and curiosities, Roman author Claudius Aelianus (Aelian, c. 170–235 AD) mentions several species of fish which dwell in the Ister (i.e. the Danube) – including carp and Sheatfish (catfish).²⁰ According to Aelian, carp fishing took place in late winter and early spring, by hacking through ice in order to create a circular hole, so that “multitudes of fish wishing to escape from the ice... and longing for the light, swim joyfully up to the opening

¹⁹ cf. Петровић 1998; Ristić 1977; Simonović 2001.

²⁰ Aelian 1959a, 171–183.

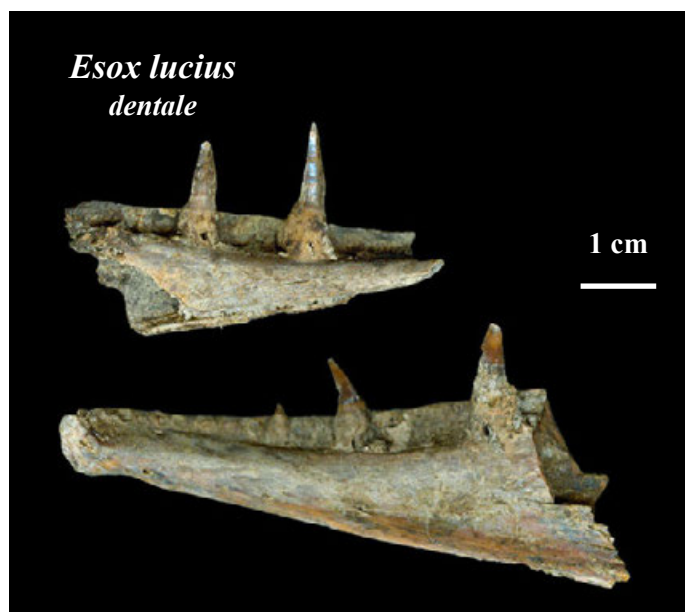


Fig. 5. Pike (*Esox lucius*) remains

Сл. 5. Остаци шљуке (*Esox lucius*)

Fig. 6. Pike-perch (*Sander lucioperca*) remains

Сл. 6. Остаци смуља (*Sander lucioperca*)



that has been made... and being in a confined hole are easily captured”.²¹ The catfish is described as a “glutton” and a “monster”, lured by beef (“its favourite food”) on a strong hook, which is attached to a rope pulled by a pair of oxen or horses in order to haul the fish ashore – “in a trial of strength”.²²

Decimus Magnus Ausonius’ poem *Mossella* (c. 371 AD), a celebration of the Rhine tributary and its aquatic life, describes catfish in a more sympathetic manner, with admiration even:

“Now, creature of the surface, shall thy praise be sung, O mighty Sheat-fish, whom, with back glistening as though with olive-oil of Attica, I look on as a dolphin of the river” (*Nunc, pecus aequoreum, celebrare, magne silure: quem velut Actaeo perductum tergora olivo amnicolam delphina reor*).²³

On the other hand, he considered pike (even if known by a Latin, i.e. human name – Lucius) as a lesser quality fish:

“...he, chosen for no service at banquets, is fried in cookshops rank with the fumes of his greasy flavor” (*hic nullos mensarum lectus ad usus fervet fumosis olido nidore popinis*).²⁴

The occurrence of bones of these freshwater species at Viminacium and other sites, as well as their mention in written sources indicate that they had been well known in the Roman world. Moreover, given that cyprinid and catfish bones occurred not only in the Amphitheatre but also in the peripheral areas, it might be assumed that these fishes were commonly consumed both

by the inhabitants of the city and its surroundings, and possibly served as food offerings at the necropolis at Pirivoj.

In addition to freshwater fish, the Amphitheatre sample contained the remains of anadromous²⁵ sturgeons (Acipenseridae): the Russian sturgeon (*Acipenser gueldenstaedtii*), stellate sturgeon (*Acipenser stellatus*) (Fig. 8), and the largest representative of this family – the beluga sturgeon (*Huso huso*) (Fig. 9). Remains of sterlet (*Acipenser ruthenus*), the only freshwater acipenserid in the Danube, have also been identified (Fig. 8). Sturgeons were consumed at Viminacium during the use of the amphitheatre as well as after its abandonment: the majority of beluga bones and a Russian sturgeon bone were found in contexts contemporaneous with the amphitheatre, and a smaller number of beluga bones, a stellate sturgeon bone and sterlet bones originated from subsequent infill layers. Given that the skeleton of the Acipenseridae species is predominantly cartilaginous, and only a few bony elements (bony scutes, elements of the branchiocranium (i.e. the jaw, mouth cavity and branchial arches), *hyomandibulare*, *ceratohyale*, *fulcrum* and the first pectoral spine)

²¹ Aelian 1959a, 187.

²² Aelian 1959a, 179–183.

²³ Ausonius 1921, 234–235.

²⁴ Ausonius 1921, 232–233.

²⁵ I.e., fish migrating from the sea to rivers to spawn.



Fig. 7. Catfish (*Silurus glanis*) remains

Сл. 7. Остаци сома (*Silurus glanis*)

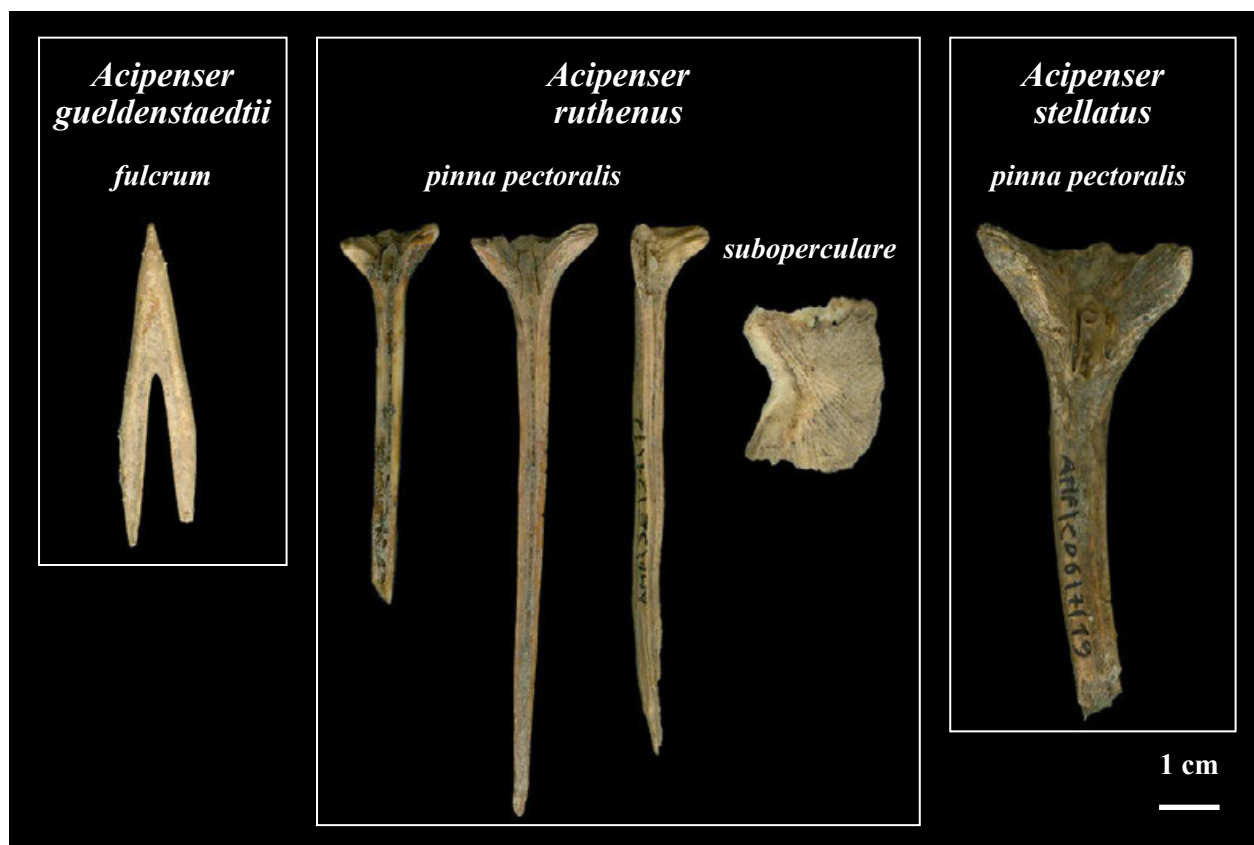


Fig. 8. Russian sturgeon (*Acipenser gueldenstaedtii*), sterlet (*Acipenser ruthenus*) and stellate sturgeon (*Acipenser stellatus*) remains

Сл. 8. Остатки руске жецеџре (*Acipenser gueldenstaedtii*), кечује (*Acipenser ruthenus*) и љацџпује (*Acipenser stellatus*)

are likely to survive in the archaeological record²⁶, sturgeon remains on archaeological sites tend to be significantly underrepresented.²⁷ Even though the analysed sample from Viminacium is far from representative, the fairly high number of sturgeon bones (occurring solely in the amphitheatre area) is indicative of their importance, and their possible status as luxury food items intended exclusively for consumption in the city.

Similarly to other fishes in the Viminacium sample, sturgeons were represented by particularly large individuals.²⁸ The estimated total length (TL) of a stellate sturgeon specimen was c. 1.6 m, however the most impressive catches were certainly beluga sturgeons. The majority of elements originated from individuals whose estimated TL ranged between 3 and 3.5 meters, but even larger specimens (c. 5.7 meters TL) were caught occasionally (Table 2; Fig. 10). Given the

occurrence of ossified elements of the branchiocranium (*dentale*, *maxillare*, *palatopterygoideum*, *suboperculare*) and the pectoral girdle (*cleithrum*), and a number of butchery marks indicative of decapitation and mouth/ cheek removal (Fig. 9), these large fishes were most likely transported to Viminacium whole (possibly smoked or salted, or perhaps even alive²⁹) and processed locally. In addition to butchery marks, a single beluga *dentale* (sq. A/7) bore traces of burning.

²⁶ Brinkhuizen 1986, 21.

²⁷ Bartosiewicz, Bonsall 2008; Bartosiewicz et al. 2008.

²⁸ Size estimated cf. Živaljević et al. *in press*.

²⁹ In his 1764 work *Tractatus de rustica Hungarorum* (quoted in Bartosiewicz, Bonsall 2008, 41; Bartosiewicz et al. 2008, 51), Hungarian naturalist Mátyás Bél describes how sturgeons were sometimes kept alive tethered to trees or strong poles on the shore, before being towed by boats to the markets in Buda and Vienna.

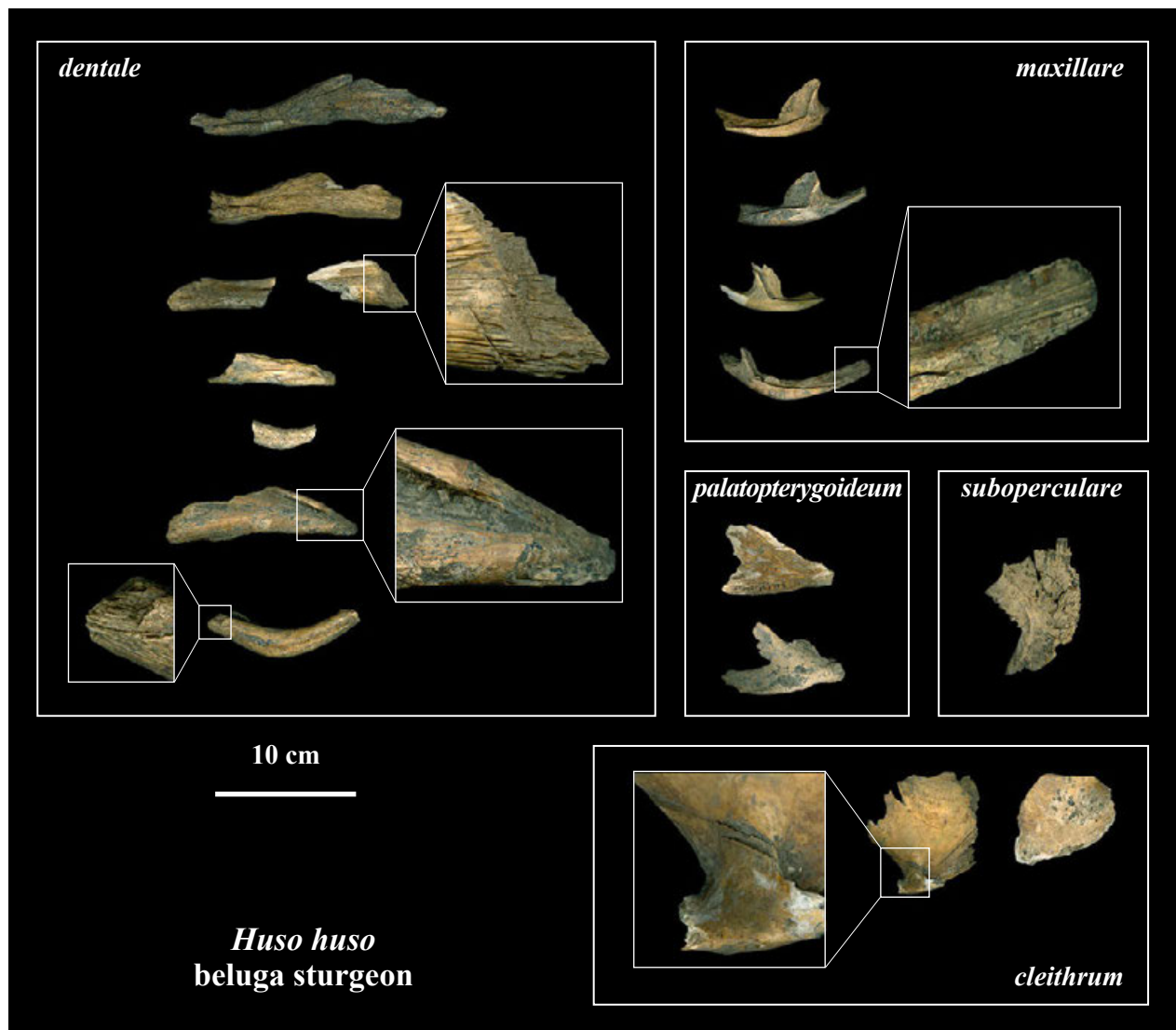


Fig. 9. *Beluga sturgeon (Huso huso)* remains with traces of butchery magnified

Сл. 9. Остаци моруне (*Huso huso*), са увеличаном израживом касиљења

Prior to the construction of the first of the Iron Gates dams in 1971, sturgeons used to undertake bi-annual spawning migrations from the Black Sea to the Danube in early spring and in autumn. From prehistory³⁰ to more recent times³¹, some of the best sturgeon fishing spots in the area were located about 100 km downstream of Viminacium, in the Iron Gates (Fig. 1). In Roman times, this area was part of the military frontier (*limes*), reinforced with numerous watchtowers, legionary camps and forts.³² At the same time, the Iron Gates environment (consisting of four narrow gorges interspersed by river valleys) provided optimal fishing conditions due to abrupt changes in the riverbed, river

currents, islets, protruding rocks and strong whirlpools that channelled the movement of migratory fish and drove them to specific locations in the shallows.³³ According to more recent (18th century and onward) written sources³⁴, various strategically placed fishing devices

³⁰ Borić 2003; Bartosiewicz, Bonsall 2004; Bartosiewicz et al. 2008; Živaljević 2017.

³¹ Петровић 1998; Zega 1927; Амедоски 2006.

³² Mirković 1968.

³³ Петровић 1998.

³⁴ Marsigli 1726; Antipa 1916; Zega 1927; Петровић 1998.

TAXON	n	TL range (cm)	MEAN TL (cm)
<i>Cyprinus carpio</i> common carp	2	39.5 - 61.9	50.7
<i>Esox lucius</i> pike	1	90.9	90.9
<i>Sander lucioperca</i> pike-perch	1	76.7	76.7
<i>Silurus glanis</i> Wels catfish	2	82.3 - 86.1	84.2
<i>Acipenser ruthenus</i> sterlet	3	51.1 - 86.3	64.9
<i>Acipenser stellatus</i> stellate sturgeon	1	161.7	161.7
<i>Huso huso</i> beluga sturgeon	11	307.3 - 570.6	364.0

Table 2. Size estimations of fish specimens from Viminacium.
n = the number of measured elements used in size reconstruction;
TL = fish total length (size estimations following measurements and regression equations in Brinkhuizen 1989; Radu 2003; Živaljević et al. in press)

Табела 2. Процена величине рибљих јединки са Виминацијума:
n = број измерених примерака који су коришћени у реконструкцији величине;
TL = тотаљна дужина рибе (процене величина на основу мера и регресивних једначина дајих у:
 Brinkhuizen 1989; Radu 2003; Živaljević et al., in press)

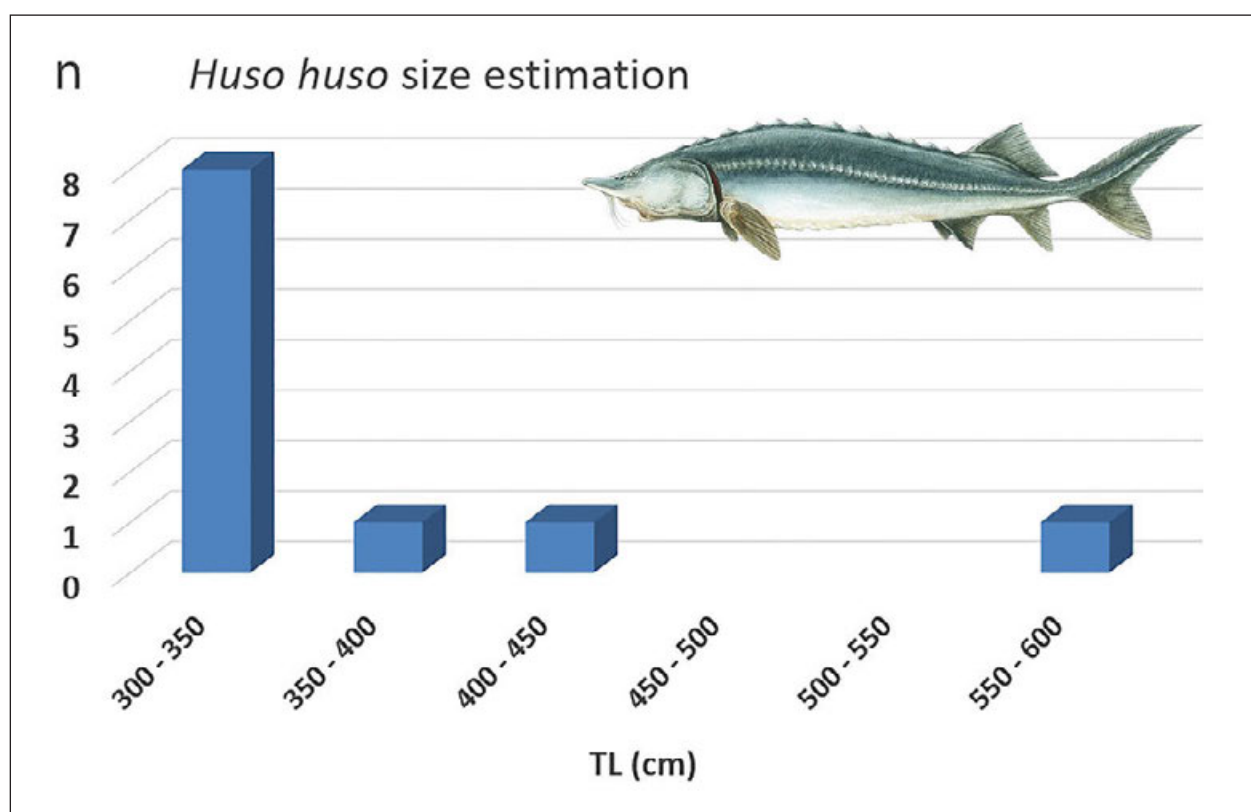


Fig. 10. Size estimations of beluga sturgeons from the Viminacium Amphitheatre area.
n = the number of elements used in size reconstruction; *TL* = fish total length

Сл. 10. Процена величина моруна са подручја амфитеатра на Виминацијуму:
n = број елемената коришћених у реконструкцији величине; *TL* = тотаљна дужина рибе

(nets, traps, enclosures and sturgeon weirs, Fig. 11) were therefore only an extension of the natural traps abundant in the local landscape.

Sturgeon fishing on the Danube were also described in the aforementioned *De Natura Animalium*. Nevertheless, Aelian's accounts need to be taken with caution, as he never travelled outside of the Italian Peninsula,

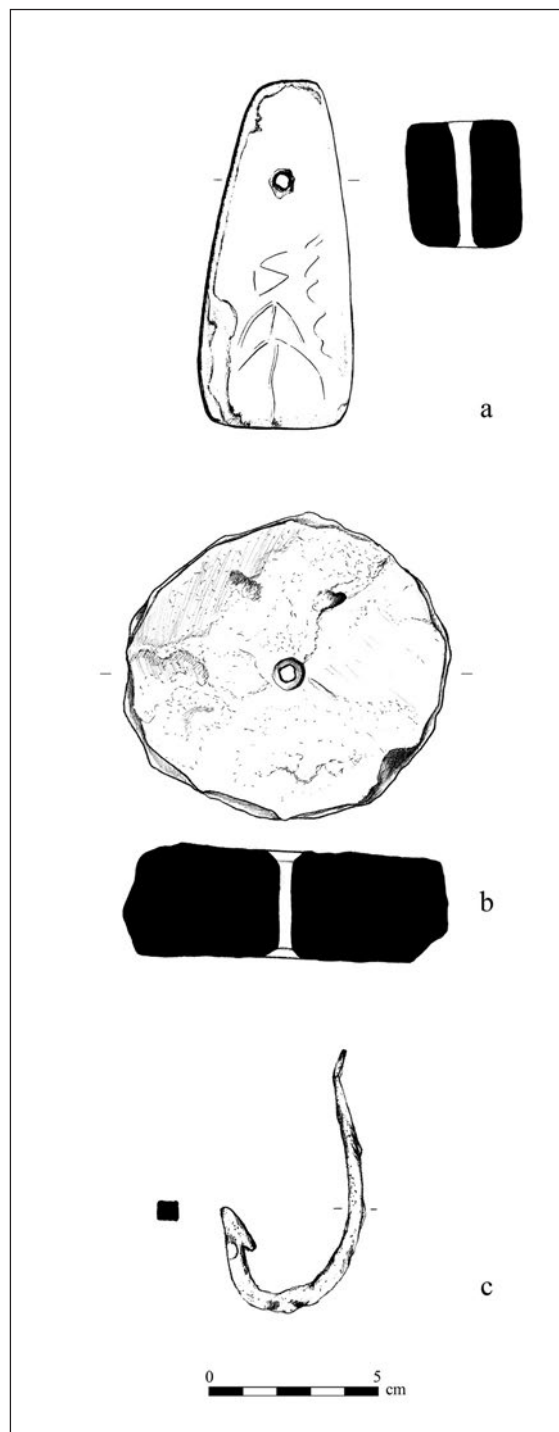
utilised a number of older (mainly Greek and often unnamed) sources, combined facts and fables, and often merged descriptions of various regions and places into one.³⁵ One particular description, however, bears a striking resemblance to the Iron Gates landscape, which could suggest that Aelian drew information from a source with first-hand knowledge of the area:

Fig. 11. Sturgeon fishing at the exit of the Danube Gorges, from L. F. Marsigli's Danubius Pannonico-Mysicus (1726)

Fig. 12. Fishing equipment from Viminacium, a) clay weight in the shape of a truncated pyramid (the Amphitheatre, C-8); b) clay weight in the shape of a trimmed disc with a central perforation (the Amphitheatre, C-613); c) iron hook (Nad Klepečkom, C-574)

Сл. 11. Риболов јесејровки на изласку из Бердајске клисуре, из Л. Ф. Марсиљијевој дела Danubius Pannonico-Mysicus (1726)

Сл. 12. Ојрема за риболов са Виминацијума: а) керамички теџе у облику зарубљене пирамиде (Амфијеаишар, С-8); б) керамички теџе у облику диска са кружном перфорацијом у средини (Амфијеаишар, С-613); в) гвоздена удица (Над Клејечком, С-574)



“There is also in the Ister a bay of immense depth and like the sea in its wide compass. ... merchant vessels which cross the sea put in to this bay, and, when the bay is angered by the winds that blow and lash it into waves and drive it mad, are just as afraid of it as they are of the sea. And there are also islands in it, and even creeks along the shore into which one can run for safety. There are besides, promontories and capes running out, on which the waves in their fury dash and burst whenever the river at its very fullest is... forced into a narrow space as it presses on to the sea.”³⁶

Aelian states that the winter season in the region was particularly harsh; with ice imprisoning merchant ships, and sailors and passengers abandoning them to fetch wagons to transfer the cargo. At the same time, late winter and early spring represented optimal seasons for catching sturgeons, described by Aelian as:

“...the large ones of mature age may be the size of the biggest tunny. The Sturgeon is extremely fat along the sides and the belly; you might say they were the dugs of a sow that was suckling its young. It has a rough skin and spear-makers actually polish their spear-shafts on it. ... When however the fish has grown to its full size one would not see it emerging from the ice... but either it slips beneath some all-sheltering rock or buries itself in deep sand and is only too glad to keep warm. And at the time it needs no vegetation, no other fish to eat, but prefers to remain inactive while the frost lasts, and is happy to be idle and consumes its own fat... But when the winter is over and spring is beginning and the Ister is flowing freely, it hates to be inactive and, swimming up to the surface, takes its fill of the foam of the water, and there is foam in abundance as the stream roars and boils in violent tumult. Then is the time when it is easily captured as the fishermen lie in wait for it and let down hook and line into the foam. The whiteness of the foam conceals the hook and the bright sheen of the bronze is invisible to the fish; hence, as it opens its jaws and takes a heavy draught of the afore-said food, it swallows the bait and meets its death from the very thing that before sustained it”.³⁷

Given that sturgeon fisheries in the Iron Gates were particularly lucrative in later historical periods, and possibly referenced as early as in Aelian’s writings, it seems plausible that the sturgeons consumed at Viminacium were also obtained from this area, although towing upstream by boats would have been difficult due the turbulent waters.

Apart from their meat output and tasty flesh, sturgeons are particularly valued for their delicious roe

used in caviar production. These impressive creatures, often larger and heavier than humans, seem to have been highly prized throughout the Roman world as well. Speaking of sturgeons in the Eastern Mediterranean (Pamphylia), Aelian describes them as “sacred fish”, and in the rare occurrences when they are caught

“...the fishermen deck themselves with garlands to celebrate their good luck; they garland the fishing boats as well, and put into port, as with cymbals and flutes they summon people to bear witness to their catch.”³⁸

Various written sources praise sturgeons as luxurious foodstuffs, available primarily to particular social classes. According to the Roman poet Marcus Valerius Martialis, they were considered a great commodity, worthy of elite feasting. In his *Epigrams*, published in Rome between 86 and 103 AD, he states:

“Send sturgeon to Palatine tables; let rare offerings adorn ambrosial³⁹ feasts” (*ad Palatinas acipensem mittite mensas: ambrosias ornent munera rara dapes*).⁴⁰

In Ambrosius Theodosius Macrobius’ 5th century work *Saturnalia*, a medley of various topics (from the divinity of the Sun to human digestion) discussed by eminent historical personalities at a fictional banquet, sturgeons are mentioned on more than one occasion – both as delicacies and displays of wealth and prestige. The banquet guests quote Plautus, who described feasting on this elusive fish with great gusto:

“What mortal was ever graced with good fortune as great as mine is now, when this procession is brought forth for my belly? Now the sturgeon that hid from me in the sea before this – my teeth and hands will see that its flesh is hidden away for good” (*Quis est mortalis tanta fortuna adfectus umquam Qua ego nunc sum, cuius haec ventri portatur pompa? Vel nunc, qui mihi in mari accipenser latuit antehac, Cuius ego latus in latebras reddam meis dentibus et manibus*).⁴¹

In another instance, Cicero is quoted, i.e. his anecdote regarding sturgeon as a delicacy too precious to be shared:

“For when Scipio was at home with Pontius in his property at Lavernium a sturgeon happened to be

³⁵ Scholfield 1959.

³⁶ Aelian 1959a, 183.

³⁷ Aelian 1959a, 187–189.

³⁸ Aelian 1959b, 215–217.

³⁹ I.e. of the emperor (comment by Kerr, in Martialis 1920, 423).

⁴⁰ Martialis 1920, 422–423.

⁴¹ Macrobius 2011, 108–109.

brought to him – quite a rare catch, but a fish, they say, that's *la crème de la crème*. But when he had invited to dinner a couple of those who had come to greet him, and it looked as though he was going to invite still more, Pontius said in his ear, 'Be careful, Scipio: that sturgeon of yours doesn't like a crowd'" (*Nam cum esset apud se ad Lavernium Scipio unaque Pontius, adlatus est forte Scipioni accipenser, qui admodum raro capitur, sed est piscis, ut ferunt, inprimis nobilis. Cum autem Scipio unum et alterum ex his qui eum salutatum venerant invitavisset, pluresque etiam invitaturus videretur, in aurem Pontius: Scipio, inquit, vide quid agas, accipenser iste paucorum hominum est*).⁴²

Perhaps most picturesque in *Saturnalia* is Serenus Sammonicus' mockery of lavish ceremonies accompanying the presentation of sturgeon at the banquet of the Emperor Septimius Severus:

"...the fish used to be held in such reverence that it was served by garlanded servants to the song of the flute, as if it were the procession, not of a delicacy, but of a god" (...*enerationem qua piscis habebatur, ut a coronatis inferretur cum tibicinis cantu quasi quaedam non deliciarum sed numinis pompa*).⁴³

Although Martialis and Macrobius do not explicitly mention sturgeons from the Danube, it seems likely that these impressive fishes would have been held in similar regard in the city of Viminacium – as luxury foodstuffs, possibly even as "royal" animals. Sturgeon bones have also been reported further upstream, at sites in the Danube Bend area in the Roman province of Pannonia (Transdanubia)⁴⁴, as well as at the site of Sirmium⁴⁵ located on the banks of the Sava (tributary of the Danube), suggesting that they were in great demand in Danubian provinces.

FISHING AT VIMINACIUM

Apart from fish remains, sporadic finds of fishing equipment provide additional insights into fishing techniques, and the role of fishing in the economy of Viminacium. It should be noted, however, that only a small number of objects related to fishing was identified within the huge assemblage of Viminacium finds. Fishing equipment included net weights for throwing and dragging nets (Fig. 12a, b) and hooks (Fig. 12c). The existence of harpoons, spears, and tools for making and repairing nets is still debatable, since these objects have not been recognised yet, while nets, fish traps, and floaters for keeping the nets afloat would not normally have survived in the archaeological record. Similar fishing equipment is attested at other Roman

sites on the Danube (Singidunum, Saldum, Pontes, Rt-kovo–Glamija)⁴⁶, and it represents a continuation of techniques used in pre-Roman times. The reliance on local fishing techniques could have been particularly influenced by specific features of the landscape. Moreover, some of the local species such as catfish would have been unknown in the Italian peninsula, as this fish was introduced to its waters from the provinces.⁴⁷

Fishing in the Viminacium area was most likely undertaken from the shore and from boats, as demonstrated in Ancient sea fishing.⁴⁸ Persons engaged in such activities must have been professional fishermen, whose task it was to supply the city with necessary food and make their own living in so doing.⁴⁹ Moreover, the observed butchery marks on beluga and catfish bones allow for the possibility of specialised fishmongers, responsible for selecting, purchasing, gutting, boning and filleting fish.

Apart from locally available freshwater fish and anadromous sturgeons (most likely obtained from the Iron Gates area), the presence of Mediterranean Sea molluscs at Viminacium⁵⁰ suggests that certain members of the society also had access to "exotic" raw materials, objects and foodstuffs brought from greater distances. Also, a specific type of amphorae discovered during the excavations of Viminacium and within the fortresses on the Moesian part of the Danube *limes* most likely represented transportation equipment used in the long-distance trade of fish products⁵¹, such as processed fish, salt-fish (*salsamentum* or *τανριχος*) and fish sauces (*garum*, *liquamen*, *allec* and *muria*). Furthermore, the usage of various objects depicting fish⁵², even if not manufactured locally, is another testimony to the significance of the aquatic domain and creatures which dwell in it.

⁴² Macrobius 2011, 108–111.

⁴³ Macrobius 2011, 112–113.

⁴⁴ Bartosiewicz 1989; Takács, Bartosiewicz 1998; Galik et al. 2015.

⁴⁵ Živaljević, unpublished data. Access to this assemblage was kindly provided by D. Nedeljković.

⁴⁶ Ilić 2012, 62, and references therein.

⁴⁷ Bökönyi 1984, 100

⁴⁸ Bekker-Nielsen 2005, 85–86; Beltrame 2010.

⁴⁹ Anderson 1985, 22.

⁵⁰ Спасић-Ђурић 2015, 22; Vuković-Bogdanović 2018.

⁵¹ Vjelajac 1996.

⁵² Спасић-Ђурић 2015.

CONCLUSIONS

Albeit small, the fish faunal assemblages from three locations at Viminacium provide important data on the fish supply of the city and legionary fortress. Corroborated with finds of fishing equipment, amphorae probably used in the transportation of processed fish products, and fish-related imagery, it indicates that aquatic resources contributed to the diet and the economy to a greater degree than originally presumed. Freshwater species such as carp and catfish, available locally and for most of the year, were consumed both by the inhabitants of the city and its surroundings, and possibly served as food offerings for the dead. On the other hand, several pike and pike-perch bones and more numerous bones of large sturgeons have been found solely in the city area (i.e. the Amphitheatre) so far. The latter could have been targeted during their early spring and autumn migrations, possibly in the Iron Gates fisheries. Even if consumed irregularly, on

specific occasions and festivities, or by particular members of the society, these fishes certainly played a significant part in social life and in the display of status and prestige. This is particularly related to the challenges and costs of their transportation, their impressive size, tasty flesh and possibly their caviar, which could have produced a stunning effect for the eyes as well as on the tongue. Imported fish products obtained from even greater distances would have been highly prized as well, however, so far, there is only indirect evidence of their consumption at Viminacium. Nevertheless, a greater role of smaller, locally available fish (whose steady supply would have provided more animal protein than occasionally obtained large specimens) should not be excluded, especially since these are generally underrepresented or completely missing in hand-collected assemblages.

Translated by the authors

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Резиме: ИВАНА Р. С. ЖИВАЉЕВИЋ, Универзитет у Новом Саду, Институт Биосенс, Нови Сад
СОЊА И. ВУКОВИЋ-БОГДАНОВИЋ, Универзитет у Београду, Филозофски факултет,
Одељење за археологију, Лабораторија за биоархеологију, Београд
ИВАН С. БОГДАНОВИЋ, Археолошки институт Београд

AD PALATINAS ACIPENSEM MITTITE MENSAS: ОСТАЦИ РИБА СА ВИМИНАЦИЈУМА

Кључне речи – Виминацијум, Амфитеатар, Над Клепечком, Пиривој, рибли остаци, опрема за риболов, трговина рибом, јесетре

Положај Виминацијума, римског града и легијског логора смештеног у близини ушћа Млаве у Дунав (сл. 1), указује да су његови становници имали директан приступ речним изворима хране, те је риба највероватније чинила део њихове исхране. Међутим, релативно се мало зна о риболову у римском периоду у овом делу Подунавља, а риболовачке активности често остају археолошки мање видљиве или недовољно проучене. Ова околност се може објаснити слабијим могућностима очувања риблих костију, њиховом порозношћу и генерално малим димензијама, што доводи до тога да се по правилу превиде (посебно у случају ситнијих врста) приликом ручног сакупљања материјала. Тако су у великој фаунистичкој збирци са Виминацијума рибли кости заступљене са свега неколико десетина примерака, за разлику од костију сисара чији број износи више од 20.000. Међутим, иако малобројни, рибли остаци са Виминацијума представљају важан извор података о исхрани и снабдевању рибом, риболовачким праксама, одабиру врста и величини улова, као и о потенцијалним разликама у прехранбеним навикама и приступу квалитетнијој риби у граду и у његовој околини. У овом раду су приказани резултати археозоолошке анализе риблих остатака који су до сада констатовани на три различите локације на Виминацијуму: на подручју амфитеатра, који се налази у ужем градском језгру, у отпадном простору, који се налазио у оквиру источне некрополе, удаљене око 450 м од легијског утврђења (локалитет Пиривој), и у насељу, које је представљало економско-индустријски центар, удаљен око 2,5 км од легијског утврђења (локалитет Над Клепечком) (сл. 2). Осим археозоолошких података, у раду су приказани и налази риболовачке опреме са Виминацијума, који пружају ширу слику о рибарским техникама, као и релевантни историјски извори у циљу бољег сагледавања могућих значења која су придавана различитим врстама риба.

Рибли фаунистички узорак са Виминацијума чине 74 примерка костију, а од тога 48 потиче са простора амфитеатра, 22 са локалитета Над Клепечком и 4 са Пиривоја (табела 1; сл. 3). У узорку су заступљене слатководне рибе, које су по свој прилици ловљене у Млави и Дунаву: врсте из породице шаранки (шаран *Cyprinus carpio* и буцов *Aspius aspius*, сл. 4), штука (*Esox lucius*, сл. 5), смуђ (*Sander lucio-perca*, сл. 6) и сом (*Silurus glanis*, сл. 7). Од тога се једино кости шаранки и сома јављају и изван градског језгра, што

би могло указивати на то да су се тим рибама хранили становници града и околине, али и да су се оне могле користити у оквиру погребних ритуала на простору источне некрополе Виминацијума. У случају узорка са амфитеатра, кости шарана, штуче, смуђа и сома биле су очуване у довољној мери, те је било могуће измерити их и реконструисати величину примерака (табела 2). Већином су у питању биле крупне јединке, што се могло и очекивати будући да остаци ситнијих риба вероватно нису сакупљени. Поред тога, може се претпоставити да је најбољи улов из оближњих река вероватно стизао на трпезу становника града и легијског логора.

Поред слатководних врста, у узорку са амфитеатра идентификовани су и остаци крупних риба из породице јесетровки, које су све до изградње Ђердапских брана мигрирале у Дунав из Црног мора. У питању су остаци руске јесетре (*Acipenser gueldenstaedtii*), паструге (*Acipenser stellatus*), кечиге (*Acipenser ruthenus*) (једине слатководне јесетровке) (сл. 8) и посебно бројни остаци моруне (*Huso huso*, сл. 9), највећег представника ове породице. Прилично велики број костију јесетровки у узорку, њихове импресивне димензије (табела 2), као и контекст налаза (искључиво простор амфитеатра) указују на то да су те рибе биле посебно цењене и вероватно намењене одређеним слојевима градског становништва. Најимпресивнији улов представљале су свакако моруне, будући да је већина измерених костију потицала од примерака који су били дуги између 3 м и 3,5 м, али су ловљени и крупнији примерци, дуги и преко 5 м (сл. 10). Посебан куриозитет је то што су те огромне рибе допремане у комаду, будући да већи број трагова касапљења на костима (сл. 9) указује да су припремане за конзумацију у самом граду. Овај податак постаје још значајнији ако се узме у обзир и то да су се од праисторије до изградње брана најбоља места за риболов на јесетровке налазила на подручју Ђердапа (сл. 11), низводно око 100 км од Виминацијума. Иако Елијаново дело *De Natura Animalium* не представља извор из прве руке, у њему описани риболов на дунавске јесетровке, у оквиру пејзажа који подсећа на Ђердап, наводи на претпоставку да је ово рибарско подручје било у употреби и током римског периода. Могло би се стога претпоставити да су и јесетровке које су се конзумирале у Виминацијуму стизале из ове области, могуће сушене, усолјене или чак и живе.

Одређени писани извори додатно указују на статус које су јесетровке уживале у римском периоду – и као посласнице на гозбама, али и као статусни симболи. Марцијал у *Eiui-igramma* (*Epigrammata*) наводи да су ове рибе достојне царске трпезе, а Макробије их у свом делу *Saturnalia* (наводећи речи различитих античких аутора) описује као ретке посласнице, превише вредне да би се делиле с другима, па чак и као божанства чије су изношење на трпезу пратиле слуге и звуци фруле. Иако се Марцијал и Макробије не осврћу конкретно на јесетровке из Дунава, може се претпоставити да су ове крупне рибе и доживљаване на сличан начин и у Виминацијуму, као и у другим подунавским градовима.

Поред рибљих остатака, одређен увид у риболовне технике пружају и спорадични налази риболовачке опреме са Виминацијума – тегови за мреже и удице (сл. 12). Осим на Виминацијуму, такви предмети познати су и са других локалитета на дунавском лимесу.

Поред локално доступне и миграторне рибе, која је вероватно допремана са Ђердапа, одређени становници Виминацијума су се по свој прилици снабдевали и морском

храном набављеном из удаљених области. Директна сведочанства о трговини из медитеранских области представљају љуштуре мекушаца, а она индиректна јесу одређени типови амфора које су вероватно садржале производе од прерађене морске рибе и рибље сосеве.

Иако малобројни, остаци риба са Виминацијума, као и налази риболовачке опреме и амфора коришћених вероватно за транспорт рибљих производа пружају важне податке о исхрани и снабдевању рибом на простору главног града провинције и његове околине. Локално доступне слатководне врсте, попут шарана и сома, конзумирале су се по свој прилици и у граду и у његовој околини, а могуће је и да су коришћене у оквиру погребних ритуала. Међутим, квалитетнија риба (попут јесетровки) вероватно је конзумирана у одређеним приликама и/или круговима, представљајући важан део друштвеног живота у граду и начин за истицање статуса. Не треба искључити ни могућност да су се ситније, локално доступне рибе, чији се остаци генерално превише приликом ручног сакупљања, конзумирале много чешће и међу свим слојевима друштва.