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THEORETICAL RECONSTRUCTION OF THE OTTOMAN PALACE IN SZOLNOK

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The architectural results of the archaeological excavation of the large, rectangular, eastwest oriented Ottoman palace, measuring approximately 18.5×9.0 m, identified in 2018 in the centre of the Early Modern Age castle of Szolnok, were presented in the previous issue of <u>Hungarian Archaeology</u>. This palisaded, representative, two-storey building with two wings, which stood from the second half of the 16th century until 1685/1687 and was

built in an architectural style typical of the Ottoman Balkans, was the palace and residence of the actual sanjak-bey (sancakbeyi) of Szolnok. The study provides an overview of the sporadical archaeological, visual, and written sources known from the territory under Ottoman rule, as well as similar buildings and wall structures from Anatolia and the Balkans. The main focus is the presentation of the construction phases and the theoretical reconstruction of the palace in Szolnok. This post-framed building with clay brick walls reinforced with a horizontal beam structure is currently unique in the once-occupied part of Hungary.

Keywords: Early Modern Age, Szolnok, sanjak seat, palisade fort, Ottoman architecture, palace, theoretical reconstruction

BUILDINGS SIMILAR TO THE SZOLNOK PALACE IN THE TERRITORY UNDER OTTOMAN OCCUPATION

Archaeological investigations in 2018 identified the stone wall foundations (*Fig. 1*) with the remains of an about 70 cm thick post-framed mud brick wall at the southern end of Trench 3 (*Fig. 2*). The remains belonged to a large, rectangular palace at the centre of the palisade fort of the sanjak (*sancak*) seat in Szolnok, at the confluence of the Zagyva and Tisza rivers on the Great Hungarian Plain. The lowermost courses of the wall

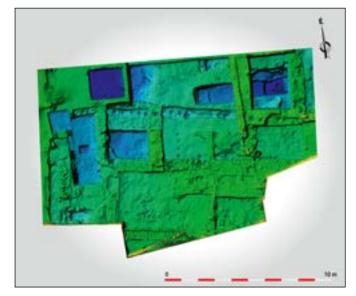


Fig. 1. Elevation model of the Ottoman palace partially unearthed in the southern zone of Trench 3. Szolnok Castle, second half of the 16th century–1685/1687 (by Pazirik Ltd, 2018; after Kertész 2021, 400, a detail of Fig. 429)



Figs. 2. Unearthed sections of the gravel-in-clay foundation and the mud brick walls of the palace. Szolnok Castle, Trench 3 (drone image by Z. Lescsinszki, 2018; after Kertész 2021, 531, Fig. 554)

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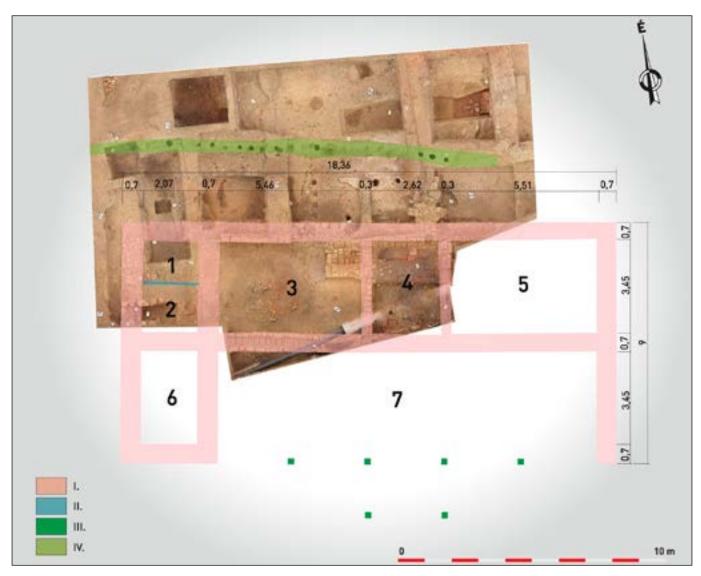


Fig. 3. Reconstruction of the ground floor of the Ottoman palace in Szolnok; building phase: second half of the 16th century. 1, Small room or niche with wooden plank flooring; 2, small room or niche with a cesspit; 3–4–5, rooms of different sizes; 6, room opening to the inner courtyard, from which the plank floor- and cesspit-rooms could be entered; 7, sofa. Colour legend: I, post-framed clay brick wall; II, post-framed wall; III, ground floor sofa and supporting posts of the stairs in front of it; IV, identified section of the single-row palisade wall around the building in the north (ortophoto by Pazirik Ltd, 2018; design by R. Kertész, graphics by S. Horváth; after Kertész & Szőke 2024, 47, Fig. 4)

survived *in situ*. A continuous wall, identical in structure and thickness to the outer walls, ran at the centre of the excavated building part, separating its two wings; three short wall sections joined it at a right angle from the north, dividing the space to rooms there (*Fig. 3, I*; Kertész 2019, 12; 2021, 526–527, Figs. 549–550, 531–535, Figs. 554–556, 542–549, Figs. 565–574, 552, Fig. 578; Kertész *et al.* 2021, 36; 2024; Kertész & Szőke 2024, 47, Fig. 4, I). A room with coeval walls of the same structure as the main walls, divided by a post-framed wall, occupied the northwestern corner of the palace (*Fig. 3.1–2, II*). Of the two niches, the northern one had a wooden plank floor (*Fig 3.1*), while a cesspit was identified in the southern one (*Fig. 3.2*). Based on the analogy of the Genç Ağa House in Tekirdağ (Eldem 1984, 74; Kertész & Szőke 2024, 51–52, Figs. 15–16), the cesspit was directly connected to the toilet on the upper floor (*Fig. 4.2*; Kertész 2021, 538, Fig. 559, 553, Fig. 579; Kertész & Szőke 2024, 47–49, Fig. 4.1–2, II, 53, Fig. 17.1–2, III).

The housing conditions of Ottoman high officials in the occupied part of the Kingdom of Hungary were different from those of the locals. When appointed to the conquered towns and border forts, they usually did not move into former royal or aristocratic residences—those were reserved for the army and often turned even into stables. The Ottoman Empire's compensation system and the Ottoman elite's power structure did

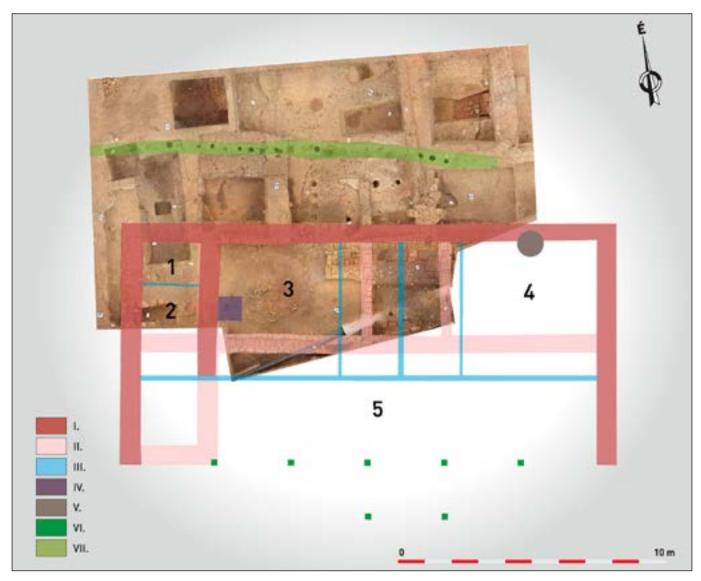


Fig. 4. Reconstruction of the upper floor plan of the Ottoman palace in Szolnok; building phase: second half of the 16th century—1685/1687. 1, Air vent (havalık); 2, toilet (hela); 3, living room (oda); 4, living room (oda); 5, sofa. Colour legend: I, post-framed clay brick wall (ground floor); III, post-framed wall; IV, tile stove from Mihály Miskolci's workshop; V, fireplace; VI, ground and upper floor sofas and the supporting posts of the stairs in front of them; VII, identified section of the single-row palisade wall around the building in the north (ortophoto by Pazirik Ltd, 2018; design by R. Kertész & B. Szőke, graphics by S. Horváth; after Kertész & Szőke 2024, 53, Fig. 17)

not allow officials to maintain seats similar in splendour to those of Hungarian nobility. The newly built or converted buildings used as residences differed in both structure and architectural details, representing a housing culture typical of the centre of the empire or the Balkans.

Thus, even the *pashas* of Buda did not set up their court and offices in the royal palace when they moved from the Viziváros quarter to the fortified Castle Hill in the 17th century (as it had become the property of the *sultan* when it was conquered) but built a new centre suiting Ottomans' needs north of the Franciscan monastery, on the site of the former Szapolyai and later Werbőczy Palace (Gerő 1999; Papp 2013; 2018a, 111–113; 2018b, 257–262; 2019; Papp *et al.* 2017). According to the engraving made by the Italian military engineer Giovanni Domenico Fontana in 1686 (Rózsa 1963, Tab. XXXIII. Cat. 27), the main wing of the *pasha's* palace, a building complex organised around several courtyards, 3 stood at the eastern castle wall and faced the

We thank the Budapest History Museum, Judit Benda, Head of Collection (Medieval Photographic Collection), Eszter Krisztina Molnárné Aczél, and Anikó B. Nagy, Head of Department (Department of Fine Arts, Kiscell Museum – Budapest Picture Gallery) for providing us with the engraving.



Fig. 5. Giovanni Domenico Fontana's engraving representing the pasha's palace of Buda. 1686 (detail, Budapest History Museum, Kiscell Museum – Budapest Picture Gallery, archive of etchings, inventory no.: 52.54.1.)

The pasha of Kanizsa had a similar building constructed at Szentgyörgyvár near Lake Balaton in the 17th century (V. Molnár 1987, 83–84). Descriptions of Ottoman buildings are known from Kanizsa from the time when it was reconquered; the survey mentions one- and two-storey timber houses on stilts, with as many as six or seven rooms in a narrow, marshy area that still existed within the castle walls at the time (V. Molnár 1987, 110-111; Tóth 1990; Ván-DOR 1992, 11). Moreover, excavations in the centre of Babócsa Castle revealed a large brick building with a bathhouse attached to its eastern side. The building complex stood in a prominent position in a garden surrounded by a wall; it was identified as the palace or seraglio of the Ottoman commander of castle (MAG-YAR 1990, 56–57, 128, 138, 135, 208, Figs. 17, 43–44, 16; 1994, 78-79, 82, Figs. 4, 7; 2002, 93-98, Figs. 2-3, 5; NAGY 1990, 389-390). However, the published data do not allow for an exact reconstruction of either the building or the baths (PAPP 2018a, 126).

Danube (*Fig. 5*), and its layout was very similar to the palace identified in Szolnok Castle. The floor plan revealed by excavations broadly matches this image. It was built upon the Árpád Age town wall, through which a gateway opened onto the garden of a bastion erected later. According to the details of Fontana's *veduta*, the large, rectangular, tent-roofed, one-storey building had closed *odas* (heated living rooms) or *kösks* (garden pavilions or unheated summer halls) but with façade windows like the *odas*' on the two sides and a *sofa* supported by posts between them.

The beylerbey (beylerbeyi) in Timisoara did not live in the former castle, but had a rather large palace built in town to suit his needs. Ferenc Watthay, the vice-captain of Székesfehérvár, who fell into Ottoman captivity in 1602 (Nagy & Belia 1976, II. 163), gives a detailed and authentic description of this building. In 1603, Watthay was taken as a prisoner of war to Timişoara (NAGY & BELIA 1976, II. 155–158); the hymnbook he wrote and illustrated preserved the view of the vilayet seat with the castle, the walled town, and the 'Basa háza' ['Pasha's House'], a one-storey building engirded by a palisade wall at the centre (Fig. 6; NAGY & BELIA 1976, I. 31a). The Ottoman palace amidst a palisade ring wall at the centre of Szolnok Castle is practically identical to the one in Ferenc Watthay's ink and watercolour drawing (Kertész 2021, 541).



Fig. 6. Water painting by Ferenc Wathay representing the pasha's palace of Timişoara, ca. 1603 (detail of page 31a of the songbook of Ferenc Wathay, Library and Information Centre of the Hungarian Academy of Sciences, manuscript collection, pressmark: K 62)

ANALOGIES IN ANATOLIA AND THE BALKANS AND THE THEORETICAL RECONSTRUCTION OF THE PALACE

In the theoretical and digital reconstruction of the building, our aim was to create an easily understood, lifelike image (accessible for non-experts) of the exterior and interior. Therefore, the reconstruction is based on the archaeological evidence discovered in Szolnok but also comprises details not discovered there but preserved in buildings considered analogies. Coeval Ottoman analogies can be found in Turkey (Kertész 2021, 543), the most important of which are the mid-16th-century building in the Sarayönü *mahalle* in Bursa in northwest Anatolia (Eldem 1984, 50), the 17th-century Halici İzzet House (Eldem 1984, 64), and the aforementioned Genç Ağa House in Tekirdağ on the northern shore of the Sea of Marmara, also a 17th-century building (Eldem 1984, 74; Kertész & Szőke 2024, 51–52, Figs. 15–16). However, the eastern part and practically the entire southern wing of the palace in Szolnok were outside the excavation area and remained unearthed (*Figs. 1–4*; Kertész 2021, 526, Fig. 549, 537, note 2013). Based on analogies from Turkey, the southern side of the building in Szolnok had a wing almost as wide as the northern one (*Figs. 3.6–7, 4.5*; Kertész 2021, 510–511, Fig. 530, 524–525, Fig. 548, 527, Fig. 550; Kertész & Szőke 2024, 45, 47, Fig. 4.6–7, 50–51, Fig. 12.6–8, 53, Fig. 17.5).

In light of the above analogies, the eastern side of the building certainly concluded in a U-shaped load-bearing wall. It remains unclear whether symmetrically arranged rooms stood once on the other side of this wall, like at the western end of the building. Based on Ottoman analogies from Turkey (*Figs. 7–11*; ELDEM 1984, 50, 64–65, 74–75), the main façade was likely partially asymmetrical, with no additional row of rooms attached to its eastern side (*Figs. 3, I, 4, I*) due likely to the development of the building complex and the characteristics of its use (Kertész 2021, 527, Fig. 550; Kertész & Szőke 2024, 47, Fig. 4, I, 50, Fig. 12, I, 53, Fig. 17, I). The ground and upper floors of the southern wing were probably open *sofas* supported by posts (*Figs. 3.7, III, 4.5, VI*; Kertész 2021, 541, 570–572. Fig. 605–606; Kertész & Szőke 2024, 47–48, Fig. 4.7, III, 50–53, Figs. 12.7, III, 17.5, VI). A recent analogy found in Pristina, Kosovo, suggests that the main façade of the palace in Szolnok may have been symmetrical (*Figs. 12–13*). In light of the analogies of the *pasha*'s palace in Buda (Gerő 1980, 112–115; Papp 2018a, 111–113) and the palace of the commander of Babócsa Castle (Magyar 1990, 56–57, 128, 138, 135, 208, Figs. 17, 43–44, 16; 1994, 78–79, 82, Figs. 4, 7; 2002, 93–98, Figs. 2–3, 5; Nagy 1990, 389–390, Fig. 9; Papp 2018a, 126) it cannot be completely excluded that the *beys*' palace in Szolnok also included a private bath attached perhaps its eastern, still unexcavated part.

The ground floor of Ottoman palace buildings was usually made of stone, brick, adobe, beaten clay, stone in mud, and often mud-brick, depending on the local conditions (Magyar 1990, 128, 138; Papp 2013, 170–171; 2018a, 32; Yeğin 2019; Yalçın *et al.* 2022). In almost all cases, these walls were reinforced with a horizontal beam sructure—a common solution in Ottoman buildings. These bracing elements in the walls of the palace in Szolnok are independent of the half-timbered structure and count as almost

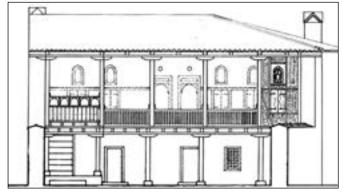


Fig. 7. Drawing representing the main façade of the building in the Sarayönü mahalle. Bursa, Turkey, mid-16th century (after ELDEM 1984, 50)

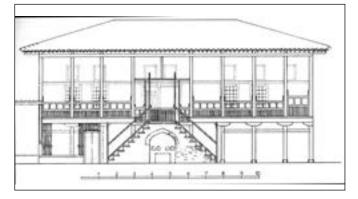


Fig. 8. Drawing representing the main façade of the Halici İzzet house. Bursa, Turkey, 17th century (after Eldem 1984, 64)



Fig. 9. Main façade of the Halici İzzet house in Bursa. Turkey, 17th century (after Eldem 1984, 65)

obligatory in any stone, brick, adobe, or mud-brick Ottoman building. The primary reason for the use of horizontal beams was the substantial risk of earthquakes in the region. These structures act as horizontal bracing that absorbs horizontal displacement, thus protecting the building from immediate collapse during an earthquake (Tsakanika 2017; Gashi 2019, 141-145). Analogies from Bursa, Tekirdağ (Figs. 7, 10–11; Eldem 1984, 50, 74–75; Kertész & Szőke 2024, 51–52, Figs. 15–16) and Pristina (Figs. 12-13) show that such walls stood in a U-shape on the floors, engirding the post-framed living spaces. A post-supported *sofa* occupied the southern parts (Figs. 7–12; ELDEM 1984, 50, 64–65, 74–75). The upper floor could be reached through a single flight of stairs in the sofas (Figs. 7, 10–11; ELDEM 1984, 50, 74-75; Kertész & Szőke 2024, 51-52, Figs. 15–16) or a symmetrical staircase front of them on either side of a small, tower-like, protruding structure (Figs. 8–9; ELDEM 1984, 64–65). The coloured drawing by Ferenc Watthay depicting the palace of Timişoara features a similar decorative central staircase (Fig. 6; NAGY & BELIA 1976, I. 31a; KERTÉSZ 2021, 541).

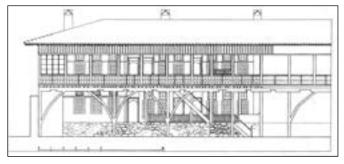


Fig. 10. Drawing representing the main façade of the Genç ağa house. Tekirdağ, Turkey, 17th century (after Eldem 1984, 74)

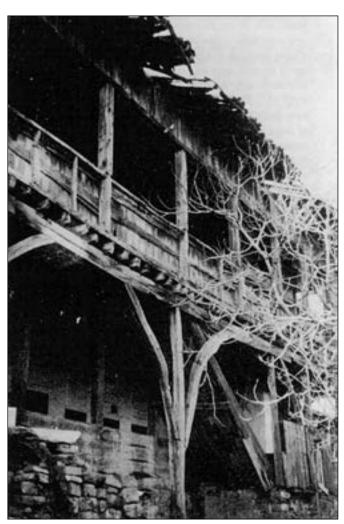


Fig. 11. Main façade of the Genç ağa house in Tekirdağ. Turkey, 17th century (after Eldem 1984, 75)

The construction phases of the palace in Szolnok could be modelled based on the above (*Fig. 14.1–11*). In addition to the inner post-framed structure (Kertész 2021, 546–550, Figs. 571–575; Kertész & Szőke 2024, 49, Figs. 9–11) observed in the thick clay brick wall of the building in 2018, it was likely also braced with horizontal beams (given the Ottoman architectural background of the building; *Figs. 14.5–8, 15*). The small beams or thick laths at the edges of the walls on both sides may have been connected perpendicularly. Horizontal beams could also be detected in the wall fabric of the adjacent barracks erected immediately before the Ottoman occupation, as indicated by the double niches (beam sockets) appearing very close to the outer and inner wall faces on several levels (Kertész





Figs. 12–13. A nearby analogy to the palace in Szolnok is a U-shaped one-storey building with stone plinth and mud brick walls. Originally, it had an open sofa with posts, which was later replaced with windows and a cantilevered closed balcony protruding from the façade. 65 Afrim Loxha Street, Pristina, Kosovo, 18th century (photo by R. Kertész, 2024)

2021, 370–371, Fig. 398, 382–388, Figs. 410–417, 404). Similar systems have been observed, for example, at the junction of the foundation and ascending walls of the buildings (*turbe*, *djami*, Halveti dervish monastery) discovered in the *turbe* complex of Sultan Suleiman in Szigetvár (Hancz 2017, 96, 104, 108, Fig. 12; 2020, 227; Fodor 2020), as well as the mud brick walls of the building in Pristina (*Figs. 12–13*).

Based on analogies from Turkey (*Figs. 7–11*; ELDEM 1984, 50, 64–65, 74–75) and Kosovo (*Figs. 12–13*), the floor-to-ceiling height of the ground floor of the palace in Szolnok was smaller than the upper floor, and the ground floor consisted mainly of rooms for economic use (*Figs. 14.9–11, 15–16*). Two or three large living rooms (*oda*), i.e. the core of the Ottoman house, must have been in the northern wing of the upper floor. Some believe that the antecedents of these large rooms can be identified as the yurts of Turkish peoples (Küçükerman 1996). The upper floors of buildings like the one in Szolnok usually consisted of two large *oda*s, smaller room (*küçük oda*) opening from the *sofa* between two *odas*, or a third main room, *baş*

oda, next to the two odas, with a part of the sofa with the toilet (hela and havalık) separated from the rooms by a post-framed wall (ELDEM 1984, 50, 64, 74; Kertész & Szőke 2024, 52, Fig. 16).

Since the room with the cesspit (Figs. 1, 3.2) and the niche connected to it from the north and separated by a timber-framed wall were identified in the northwestern corner on the ground floor of the Ottoman palace in Szolnok (Figs. 1, 3.1, II; Kertész 2021, 538, Fig. 559, 553, Fig. 579; Kertész & Szőke 2024, 47, Fig. 4.1–2, II, 50, Fig. 12.1–2, II), the reconstruction of the ground and upper floors is based on the Genç Ağa House of Tekirdağ (ELDEM 1984, 74; Kertész & Szőke 2024, 51–52, Figs. 15-16). Based on that, all rooms in the northern wing could be accessed from the *sofa* on the upper floor in the southern wing (Figs. 4.5, 15–17): the toilet (hela) (Fig. 4.2) and the small niche connected to it, the air vent (havalik) (Fig. 4.1), and the two rooms (Fig. 4.3-4). In late-15th-century Ottoman houses, the space framed by three thick main walls

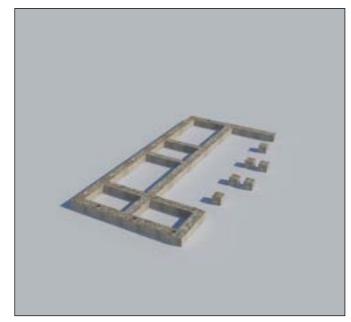


Fig. 14.1–11. Theoretical reconstruction of the construction phases of the palace in Szolnok, the internal post-frame structure of the masonry and the horizontal beam structure (3D model by B. Szőke).

Please click this link to view the animation.



Fig. 15. Reconstructed cross-section of the palace building. Szolnok Castle, second half of the 16th century (3D model: B. Szőke)



Fig. 16. Southern façade of the palace and the barracks (theoretical reconstruction). Szolnok Castle, second half of the 16th century (3D model by B. Szőke)

was divided and closed on the southern side using wattled post-framed structures or ones completed with mud bricks.

Based on analogies from Anatolia and the Balkans, the ceiling of the upper floor could have been relatively high (*Figs. 7–13*; ELDEM 1984, 50, 64–65, 74–75), as appearing in the reconstruction of the palace in Szolnok (*Figs. 14.9–11, 15–16*). A building of this scale might have four-and-a-half or

even five-metre-high rooms with thin, post-framed walls. The rooms were mostly lit by complex, wood-framed windows with rectangular wooden shutters below (*Figs. 16–18*); these frames were later glassed in. The openings above them were pointed arc-shaped and filled with small glass discs set mostly in mor-



Fig. 17. Upper floor sofa of the palace in Szolnok with the groups of windows of the odas in the northern wing and the entrances of the two rooms opening from the sofa (theoretical reconstruction), second half of the 16th century (3D model by B. Szőke)



Fig. 18. One of the odas on the upper floor of the Ottoman palace, with its stove and a group of windows overlooking the sofa (theoretical reconstruction). Szolnok Castle, second half of the 16th century (3D model by B. Szőke)

tar or stucco (*Figs. 7–9*; ELDEM 1984, 50, 64–65). These openings were arranged in uniform compositions, usually groups of three panels. A single living room was usually lit by two or three such groups of windows on one or on two sides, most of them on the southern side (*Fig. 18*) or, commonly, in a corner-symmetric arrangement.

The slabs and ceilings had beam structures. The top and bottom of the joists were nested in the beam frame that braced the building horizontally. The design of the posts of the *sofa* was typical of both Ottoman-Turkish Anatolian and Central Asian architecture (Figs. 14.9–11, 16–17). The rooms were heated by stoves in the middle of an uninterrupted wall (Eldem 1984, 50-51, 74; Kertész & SZŐKE 2024, 51–52, Figs. 15–16). The characteristic pointy smoke outlets of these stoves were usually made of planks and plastered (Figs. 4.4. V, 19); they were supported by richly carved wooden corbels. Historical illustrations show that these stoves had tall chimneys that extended from the roof. Chimneys of this type can be seen in authentic 15th- and 16th-century views of Constantinople (Fig. 20; WESTBROOK et al. 2010); the smoke from the stove of the palace of Szolnok may have also risen from one like those (Fig. 21).

Fragments of stove tiles by the Mihály Miskolci workshop circle were identified amongst the stray finds recovered from the bank of the Tisza River in front of the Vízi-kapu ['Waterside Gate'] of Szolnok Castle in the second half of the 20th century. Originally, they were part of stoves installed in the last third of the 16th century, certainly before the start of the Long Turkish War (Kertész & Ádám 2021, 97, 99). These stove tiles from the Nógrád/ Gömör pottery region are typically found in castles in northeastern Hungary, which were partly in Hungarian and partly in Ottoman hands. Examples of the former are Csábrág (Čabrad', Slovakia; RAKON-CZAY 2018), Eger (KOZÁK 1963; HOLL 1993; FODOR 2002), Diósgyőr (Boldizsár et al. 2010), Ónod (Pusztai & Tomka 2002; Tomka 2005; 2009), Szendrő (Tomka 2002; 2005), while the latter include Szabadka [Sobôtka] Castle (Subotica, Serbia; Drenko 1970), Fülek (Fil'akovo, Slovakia; Kalmár 1959; Anderko 2018), Szécsény (Bodnár 1988), and Nógrád (Tomka 2005). Lighter and darker shades of green predominate amongst the pieces recovered from Szolnok Castle, but specimens with



Fig. 19. The other oda with a stove on the upper floor of the palace (theoretical reconstruction). Szolnok Castle (3D model by B. Szőke)



Fig. 20. Panorama of Constantinople by Melchior Lorck, ca. 1559 (after Westbrook et al. 2010, 66, Fig. 5)



Fig. 21. View of the rear façade of the palace and its chimneys from the northwest, from the courtyard of the barracks (theoretical reconstruction), second half of the 16th century (3D model by B. Szőke)



Fig. 22. The room heated by a stove from 'Mihály Miskolci's workshop on the upper floor of the Ottoman palace (theoretical reconstruction). Szolnok Castle, second half of the 16th century (3D model by B. Szőke)

a rust brown and mahogany brown glaze, as well as bicolour green and rust brown variants also occur (Kertész & Ádám 2021; 2023). Since only the elite could afford to buy 'Mihály Miskolci'-type stoves, it can be reasonably assumed that at least one of the two upstairs rooms of the palace was heated with such a tile stove in the last third of the 16th century (Figs. 4.3, IV, 15, 18, 22).

Most rooms upstairs had rich coffered wooden ceilings (*Figs. 18–19, 22*). Their floors were also made of planks and covered with carpets. Long, low benches connected to the floor and covered with rugs and cushions stood in front of the windows and often also by some other walls. Sometimes, a side of the room was divided with latticed woooden panels, creating a separate place where women could stay while the head of the house received male guests (*Fig. 23*; ELDEM 1984, 50–51). All these structural arrangements were already common in Ottoman architecture in the 15th century. Therefore, it is reasonable to assume that the rooms of the palace in Szolnok,

built in the second half of the 16th century, had a similar appearance (*Figs. 18–19*). However, the upper floors with cantilevered extensions and, bay windows, and balconies, very characteristic of present-day Ottoman-Turkish architecture, were more typical of the late 17th and, even more the 18th and 19th centuries (*Fig. 12*; ELDEM 1984, 100–291). Their presence cannot be assumed in the territory under Ottoman rule before

the second half of the 17th century based either on authentic representations or the known ground plans.

The most common roof type in Mediterranean lands under Ottoman occupation was the low-pitched roof with overhanging eaves and round ridge tiles. Fragments indicating such roofs are known from several sites in Hungary (e.g., PAPP 2013, 170; 2019, 233; Hancz 2017, 92-93, 97, 103-105, 121, Figs. 2, 5; 2020, 226, 237), and Evliya Çelebi also mentions them (e.g., Sudár 2012, 59). However, some mosques and other domed buildings, such as baths and madrasas, were covered with lead sheets, a solution also present in the Balkans. That made the roofs considerably more watertight, which was especially important during frosty winters in the Carpathian Basin. Similarly, well-insulating, waterproof roofs were needed in the snowy and rainy climate of the high Dinaric Alps. In contrast, in the Serbian and Bosnian high mountains (partly inhabited by Albanians) in the central Balkans, houses commonly had extremely steep roofs covered, unlike Hungarian shingle roofs, with dránica, 1.5–2 m-long long planks (Tóth 1990). These, like the Gothic roofs of medieval Hungary, could have a pitch of up to 60

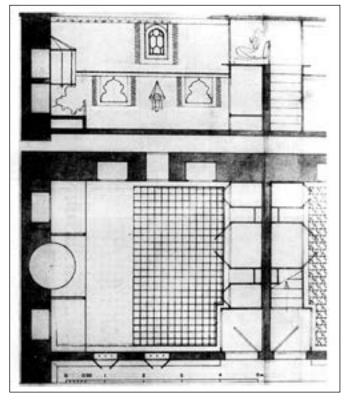


Fig. 23. Section (top) and ground plan (bottom) of one of the odas on the upper floor in the Sarayönü mahalle. Bursa, Turkey, mid-16th century (after Eldem 1984, 51)

degrees (Vándor 1996, 79–91). Many houses with such roofs still stand today, mainly in Bosnia and Herzegovina (*Fig. 24*; Veljković 2014).

Ferenc Watthay's watercolour painting of the pasha's palace in Timişoara also shows such a very high, plank-covered roof (Fig. 6; NAGY & BELIA 1976, I. 31a). Moreover, Ferdinand Graf von Zinzendorf, commander of the imperial garrison in Eger, also depicted similar buildings covered with dránica in his ink drawing of the town in 1704 (Fig. 25). A mosque/djami with a minaret, already converted into a Jesuit church at that time, can be identified in the centre of the drawing; five large and twelve smaller houses were depicted around it in 1690 (Breznay 1933, 49; Kovács 2006, 97). The mosque/djami was demolished in 1749 (Szmrecsányi 1937, 234; Sudár 2014, 254).



Fig. 24. Bosnian house with traditional roof structure. Gračanica, Bosnia and Herzegovina, 1840 (source)

In the descriptions of Evliya Çelebi, the most common elements appearing on the settlements in the occupied territories are high, plank-roofed houses (e.g., Sudár 2012, 59). Such buildings are also known to have stood in Szolnok (Zoltai 1903, 310; 1936, 59; Fekete 1926, 60), and sources from the time when the Ottomans were driven out of the country also mention this type most often (Tóth 1990). Evliya describes a dome, while a late-17th-century source mentions its lead roof (Badál 1976, 302; Kertész *et al.* 2012, 117, 119, 123, note 9; Sudár 2017, 122; Kertész 2021, 527, 535, 695) in the context of the Sultan's mosque (*Hünkâr camii*) that once stood near the southern palisade wall of the castle, close to the Vízi-kapu overlooking the Tisza River. Besides, likely lead sheets covered the domes of the Turkish baths not far from the mosque (Kertész 2021, 44–47, Fig. 36, 545, 547, 578–582, Figs. 613–616). The absence of round ridge tiles suggests that the other buildings, including the palace (*Figs. 16, 21*), were covered with planks.

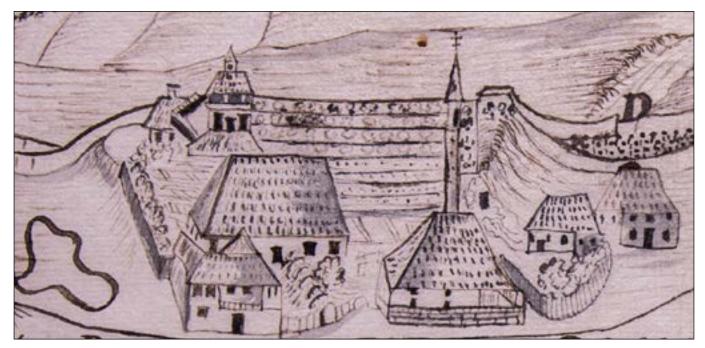


Fig. 25. Bosnian-style buildings with plank roofs of the Jesuit monastery in Eger. Ink drawing by Ferdinand Graf von Zinzendorf, 1704 (detail, Österreichisches Staatsarchiv, Wien; Kriegsarchiv, Kartensammlung, without pressmark, deposited by the Starhemberg family)

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