

The image shows a close-up of a traditional wooden building's exterior. The upper portion features a roof with grey, overlapping tiles, some of which are covered in moss. A large, gnarled tree branch with green leaves extends across the top right. Below the roofline, a decorative wooden eave is visible, featuring a repeating pattern of stylized, downward-pointing motifs. The lower part of the image shows a wooden wall with a similar decorative pattern, partially obscured by green foliage in the foreground.

Locating the wooden heritage of Pushcha-Vodytsia

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Introduction

Wood is one of the oldest building materials and Europe has boundless examples of architecture that is considered wooden heritage (Riggio et al., 2017), such as timber churches of eastern Europe, more specifically regions of Poland, Ukraine, and Romania. Nevertheless, the current state of this heritage is very diversified across the continent. Some countries face more struggles to preserve wooden heritage due to multiple reasons. For instance, Ukraine has quite a broad collection of wooden heritage architecture, but not all examples are sufficiently taken care of. A representative illustration would be wooden summer houses in Pushcha-Vodytsia and other suburban settlements in Kyiv. The timber buildings of Pushcha-Vodytsia were built at the turn of the 19th and 20th centuries. Until now, many of those structures have been lost, and the still present ones are in a state of decay despite being labeled as part of Ukrainian architectural heritage. Some scholars underline that locating heritage in people's cultural identity helps them understand the importance of preserving it (Wibowo, 2015). Therefore, this article aims to describe and locate amid other timber architecture the historical wooden housing of Pushcha-Vodytsia. More precisely, the wooden heritage of that region will be described in terms of its solids or floor plans and detailing of facades. Then to locate these housing enclaves, they will be compared to similar architecture built in the same period in neighboring Poland. The example of historical wooden housing in Otwock, Poland was chosen due to its similarities to Pushcha-Vodytsia housing, which will be described in detail in the paper. Based on those selections the research question was formed: What are the differences in architecture, particularly detailing approaches, between two comparable wooden housing types constructed at the turn of the 19th and 20th centuries in Otwock and Pushcha-Vodytsia?

To answer the above-stated question a base list of sources was gathered. It is divided into primary and secondary sources. Primary sources are the design books dated back to the turn of the 19th and 20th centuries. More precisely, there is a manual with wooden housing designs and detailing written by B. Liebold. According to different sources, ornaments from that book served as a prototype for the wooden houses in Otwock. Similarly, a few other books containing examples of wooden summer housing in Russia were most likely used to gather ideas for the design of Pushcha-Vodytsia wooden architecture. Secondary sources gather all kinds of information that was written and gathered concerning the two discussed housing enclaves. More precisely, those are news articles, research papers, and photographs from archives of the current state of the buildings. It is important to underline that found research articles mainly discuss and analyze different aspects of Otwock's wooden heritage. The research work on Pushcha-Vodytsia housing is rather limited. Therefore, the wooden heritage of Pushcha-Vodytsia will be analyzed and described with the use of design books stated in

the primary sources and all kinds of photo materials gathered. Subsequently, the results will be compared to the already existing analysis of wooden housing in Otwock.

This article aims to summarize the aspects of Otwock's timber heritage and to perform the multifaceted analysis of Pushcha-Vodytsia historical housing. Those two aspects have not been documented so far and have the potential to cover new grounds and open new courses for discussion.

Historical Context

Before analyzing the wooden housing of Pushcha-Vodytsia in Ukraine and comparing it to examples in Otwocks, the discussion about their development and historical context needs to be initiated. This chapter aims to precisely describe two regions and underline the possible resemblance in their chronicles.

Poland/Otwock

The village of Otwock, despite existing since the 15th century, started to rapidly develop after its connection to the newly built railroad system in the 19th century. Namely, the development of the Nadwislanska railroad was completed in 1877, connecting such cities as Lublin and Gdansk (Lewandowski, 2015) Then in 1880, Michał Elwiro Andriolli bought land near Otwock and created the discussed wooden housing type. Specifically, he purchased materials and reused part of the ornaments from the pavilions of the Agricultural and Industrial Exhibition that was happening in Warsaw. Subsequently, with the help of local inhabitants and carpenters, a summer housing colony of 14 buildings was constructed (Górski & Lach, 2022). Around that time, tourism was getting more popular across Europe and Otwock region was getting more recognition among tourists from Warsaw. Namely, the pine forests combined with sand soils and overall dry climate were perfect to cure respiratory-related sicknesses. This tendency was an additional reason for the rapid development of Otwock's wooden villas colony (Górski & Lach, 2016). Those new settlers used the houses constructed by Adriolli as a prototype but historians doubt that his designs were strictly followed in terms of detailing. It is assumed that new residents at the turn of the 19th and 20th centuries used the model book of woodcarving details by B. Liebold to create façade ornaments (Górski & Lach, 2022). An additional aspect that is worth discussing is whether Otwock summer houses are examples of vernacular architecture. Specifically, architecture is part of local tradition and is realized by unknown workers without any academic background. The houses of Otwock were mainly designed by less-known architecture ateliers from Warsaw and then constructed by local builders. According to available information, those designs did not include the ornaments of the facades, which

means that detailing was almost fully proposed and realized by residents and builders themselves (Krajewski, 2015). Based on that it's hard to judge whether Otwock's wooden houses are part of vernacular practices. Only their detailing meets all the requirements to be labeled as an example of vernacular architecture.

Ukraine/Pushcha-Vodytsia

The history of the development of Pushcha-Vodytsia also starts at the turn of the 19th and 20th centuries. More precisely, in 1883 a plan for summer houses village in Pushcha-Vodytsia was created. This development happened as a response to a growing demand among the upper class for countryside housing far from swiftly urbanizing Kyiv (Rybakov, 1997). For the first few years, the construction works were delayed due to a lack of connection between Pushcha-Vodytsia and Kyiv. Only in 1899 was the tram line constructed, and the development of the region accelerated (Mashkevych, 2012). The whole area of Pushcha-Vodytsia was rather equally divided and 600 plots emerged being rented out for the long term. Those plots were arranged symmetrically around the tram line, which to this day is the main axis of the discussed area. The development of houses was not initiated by the government. However, they provided the building requirements for future villas, that needed to be realized by residents. According to the literature, most summer houses were designed specifically for the residents, including their preferences. Additionally, some of the projects used structural solutions from the Russian wooden architecture manuals, which were published at the beginning of the 20th century. Nevertheless, it is not clear how the ornaments were designed. Therefore, it is hard to state whether summer villas in Pushcha-Vodytsia could be an example of vernacular architecture (Smolij, 2003).

Initially, the climate benefits of Pushcha-Vodytsia were overlooked since it was planned purely as a summer village for Kyiv elites. Nevertheless, the health advantages of the nature of this region are substantial. Namely, the mixed conifer forest together with a slightly dry climate is beneficial in the treatment of respiratory and heart-related diseases (Fisenko & Kovalska, 2005). The health resort potential of the Pushcha-Vodytsia was first acknowledged by Doctor Teofil Janowskyi. Due to his efforts in 1904, the health resort for patients with respiratory diseases was opened. Based on the historical background of Otwock and Pushcha-Vodytsia, a few similarities can be underlined. Firstly, the time and location of developments. Both housing clusters were built at the turn of the 19th and 20th centuries next to major cities. Secondly, in both cases, the question of transportation had a big influence on the development. Additionally, the recreational function of wooden houses and the health benefits of nature in the area, are also common denominators for Pushcha-Vodytsia and Otwocks. This aspect can be connected and explained by the emerging garden city movement at the beginning of the

20th century. Namely, the compact town in a rural area is connected to a big city but still is rather independent on its own (Szmelter & Zdunek-Wielgołaska, 2020). The colonies of Pushcha and Otwock do contain those qualities, therefore they could have been influenced by this movement. In addition, it is also worth mentioning that Kyiv and Warsaw were geopolitically both part of the Russian Empire at that time. But this aspect seems to have a diverse influence on the two discussed housing colonies. Namely, Otwock development mainly used Western examples for its architecture, while Pushcha-Vodytsia indeed partially relied on Russian solutions. The common aspect is the fact that residents still had the most influence on the final design and detailing of the housing. One of the main differences was the approach towards the development of discussed settlements. Namely, the creation of Pushcha-Vodytsia was a top-down decision. Due to that the city is precisely divided into plots and organized along strict lines. At the same time, the development of wooden settlements in Otwock was a bottom-up process. Residents themselves were buying land and creating a cluster of more freely located houses. This difference is also noticeable while analyzing the old maps of the discussed areas. The Pushcha village is methodically arranged along straight street lines, while the villas of Otwock seem to be placed freely in the area (Figure 1,2).

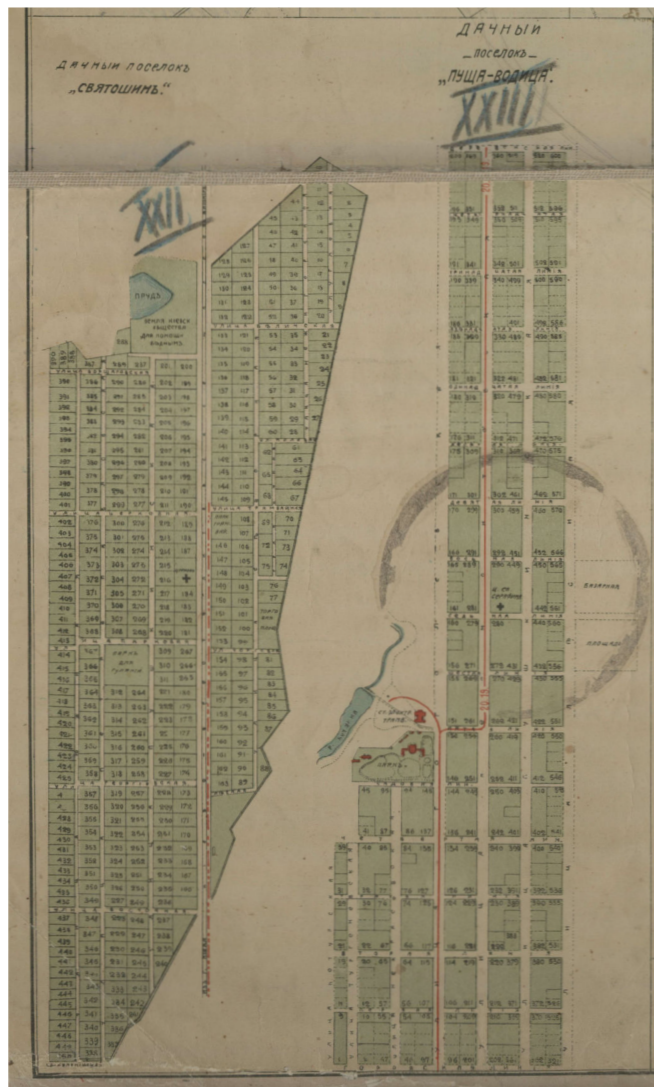


Figure 1 Part of the map of Kyiv from 1914 that shows Pushcha-Vodytsia settlement (Машина Часу і Простору, n.d.)

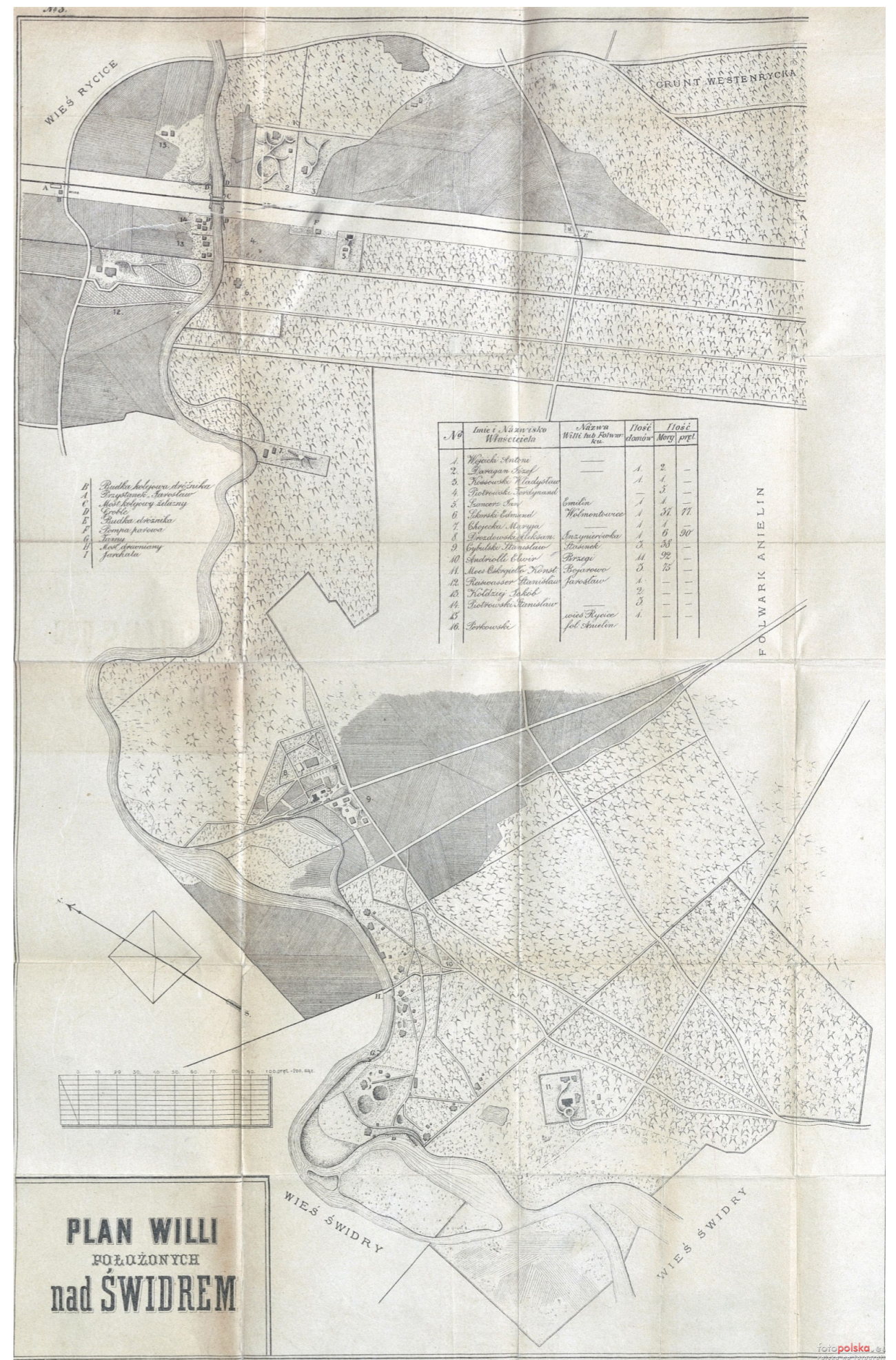


Figure 2 Map with plans of villas in Otwock in 1893. Settlements discussed in paper are marked as H. (Mapy i Plany, Otwock - 1892 Rok, Stare Zdj cia, n.d.)

Building masses

The second chapter aims to summarize the denominators for building masses and floor plans of historical wooden villas in Otwock and Pushcha-Vodytsia. Subsequently, the similarities and differences between the architecture of the two regions are underlined and discussed. This is achieved through the summary of related literature and analysis of photo materials

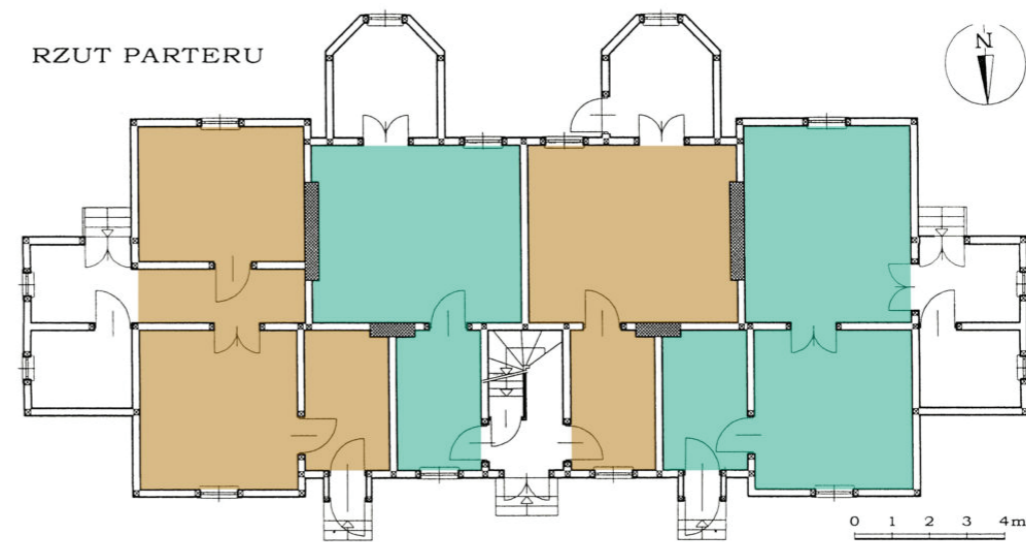
Poland/Otwock

This discussion can be started by first depicting the typical wooden housing of Otwock, which is predominately two-story high architecture. That was a practice to build two-level high buildings there because a lot of those houses were intended to be shared by a few families as a guesthouse. Therefore, the increased capacity of those buildings was highly valued. Subsequently, the inner arrangements were also influenced by the way this architecture was used. Namely, the typical two-bay houses with symmetrical layouts and corridors on the axis were usually subdivided to house multiple families (Radomska, 2001). The bays of the house were differentiated (Figure 3). The outside bay, facing the garden or street, contained bedrooms and living rooms, while the inside bay was usually smaller and intended for kitchen and utility rooms. Each residential unit had usually a set of two rooms that were extended by a veranda or a balcony on the second floor (Trzupek, 2023).

Stepping outside, a few aspects of the building mass of Otwock wooden architecture and its interplay with the above-described floor plan should be discussed. Firstly, the characteristic feature of those rectangular plan-based buildings is the avant-corps placed on 3 or all 4 sides of the building solid (Figure 4). Typically, those structures are also finished with open or glazed verandas, which are built on a base of square, rectangular, or polygon. It is important to underline that verandas were added to the form to no more than 3 sides (Trzupek, 2023). Another part of Otwock's villa are towers. This element is not that common and was most likely taken from Swiss wooden practices. Namely, small towers were applied purely for aesthetic purposes. On the other hand, the use of towers in Otwock had also functional reasoning. They were bigger and added to the middle point of the block to provide more lighting to the attic or the staircase (Radomska, 2001).

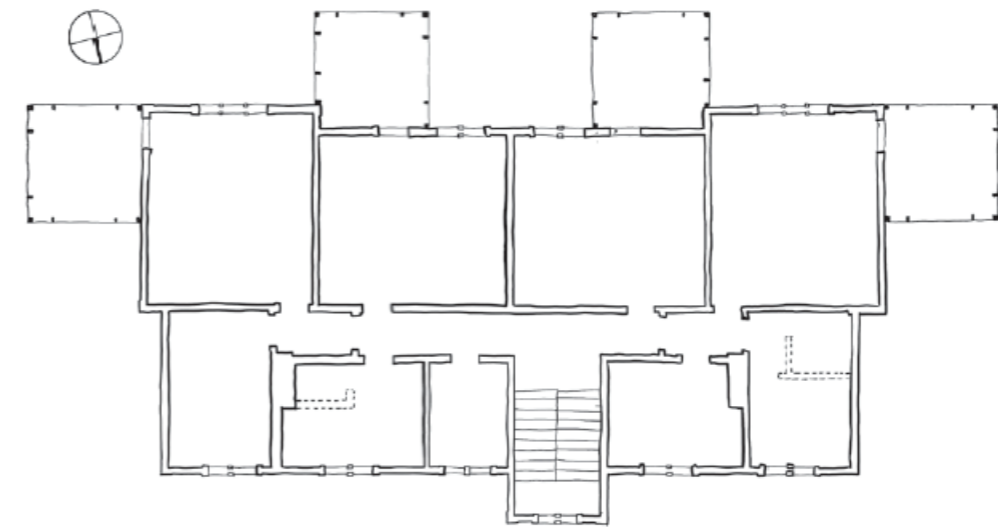
Lastly, the typical aspects of roofs in wooden Otwock's architecture should be discussed to have a complete picture of the building masses of those villas. Attics in the wooden architecture of Otwock were always made usable. Due to that, the roofs of those villas have a set of very specific elements that are listed in Figure 5 (Trzupek, 2023).

Example of ground floor (without inner corridor)



- Symmetrical
- Stairs as a central point
- Divided into 4 living units on the ground floor
- Each unit has its own entrance and veranda
- North bay (facing north) is the smaller bay that contains entrances to residential units, kitchens and other utilities

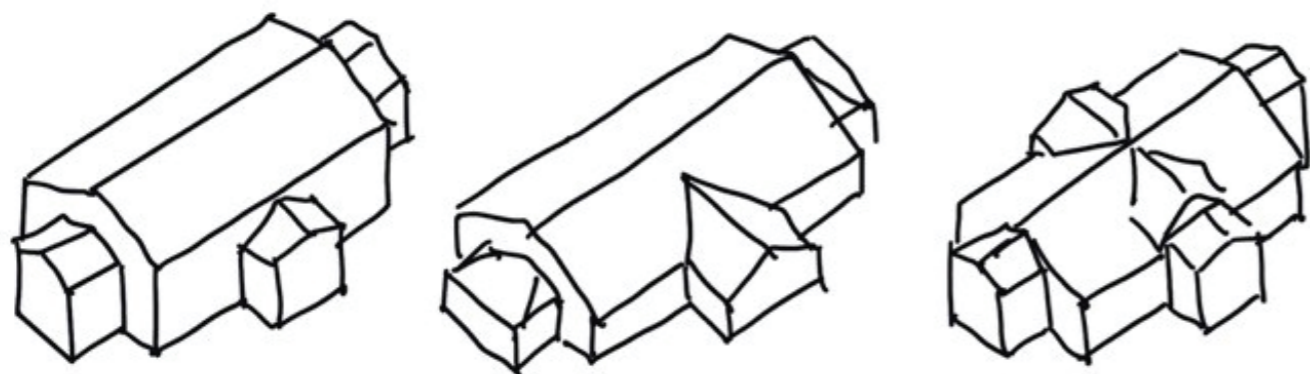
Example of ground floor (with inner corridor)



- Symmetrical
- Corridor as an axis dividing smaller and bigger bays of the house
- Stairs as a central point
- Divided into 4 living units on the ground floor
- Each unit has its own veranda (balcony)
- North bay (facing north) is the smaller bay that contains entrances, kitchens and other utilities

Figure 3 Examples of floorpland (with and without corridor) of Otwock wooden villas. Floorplans for collage sourced from work of Trzupek (2023)

Avant-Corps in wooden villas of Otwock



- Rectangular based villa
- 3 similar avant-corps
- Rectangular based villa
- 3 avant-corps
- 1 central avant-corp that is bigger than others--> a common practice
- Rectangular based villa
- 3 avant-corps
- Avant-corps higher than the main building mass --> a rare practice

Figure 4 Typical solutions concerning building masses and avant-corps in Otwock's wooden architecture. Information sourced in work of T.J. Trzuppek (2023)

The most common roof elements in wooden villas of Otwock

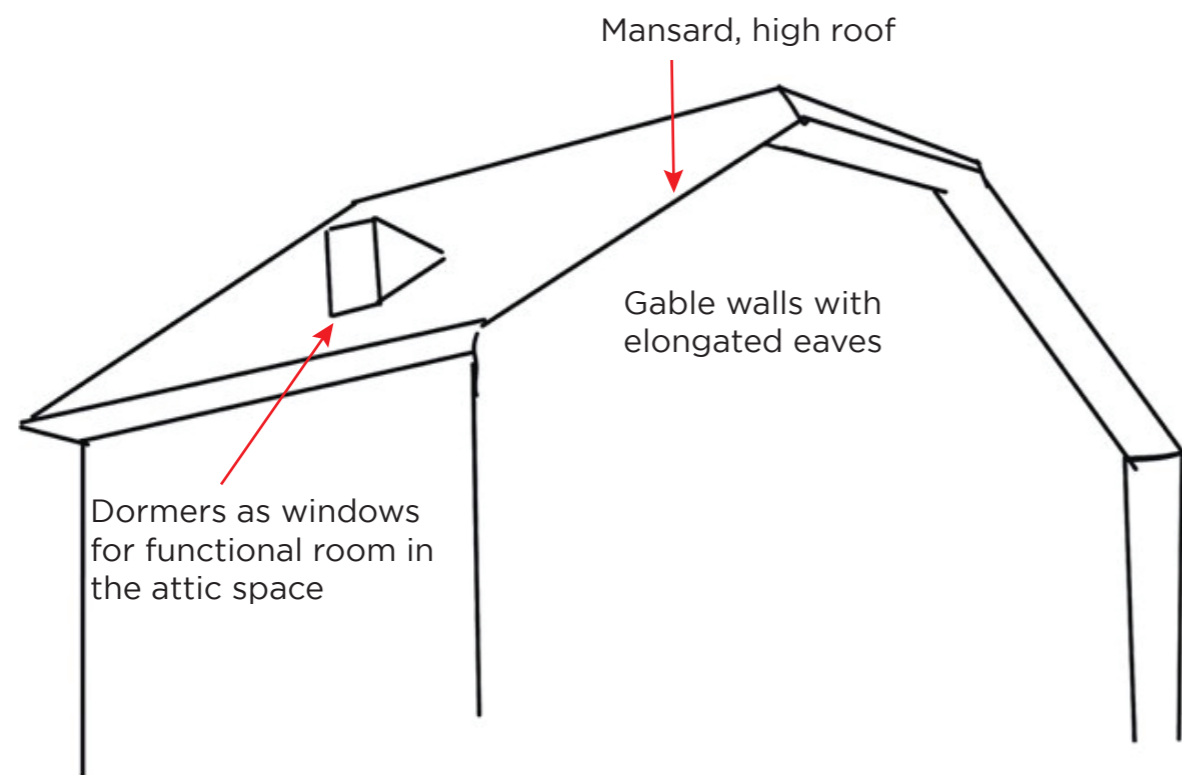


Figure 5 Typical roof elements in Otwock's wooden architecture. Information sourced in work of T.J. Trzuppek (2023)

Ukraine/Pushcha-Vodytsia

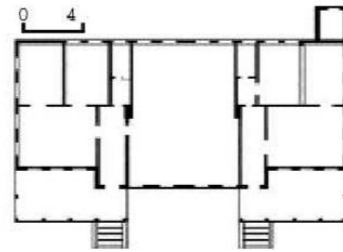
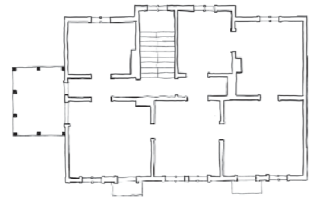
The characteristics of wooden architecture in Pushcha-Vodytsia are also gathered and presented in this chapter. They were sourced partially from existing literature and photo materials from archives and private collections.

The development of wooden summer housing in Pushcha-Vodytsia began in 1895 and the majority of the buildings were intended for one-family residence. The co-living of a few families was not envisioned as in Otwock. Nevertheless, the floorplans of villas in Pushcha-Vodytsia share a few similarities with wooden housing in Otwock. Firstly, they are also built on a square or rectangular plan. Secondly, according to the literature and available floor plans they tend to have a symmetrical layout, and the majority are examples of two-bay housing (Figure 6). The differences are also present. Namely, in Pushcha-Vodytsia housing some layouts are examples of point-reflection symmetry, which was not the case in Otwock (Smolij, 2003). This can be explained by the fact the bays of houses in the Polish case were differentiated due to their use and as it was mentioned above the bay containing the kitchen was always smaller. Pushcha-Vodytsia villas were not subdivided to house multiple families, and rooms inside were freely arranged, therefore symmetry could be achieved. Additionally, those houses are also one-story high because less living space was needed by one family.

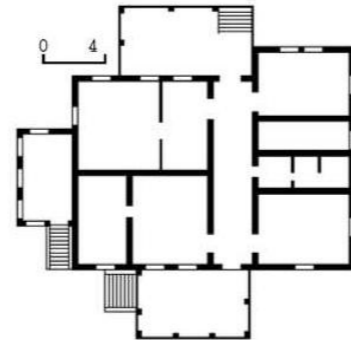
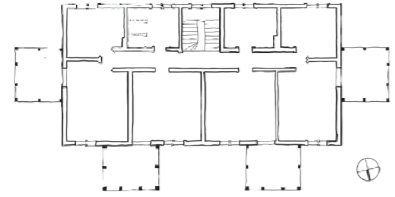
Concerning the building masses of wooden houses, the application of avant-corps and verandas is common, like the Polish example (Smolij, 2003). The avant-corps are usually the same height or even higher than the main block of the building, which is less typical in the case of Otwock and can be explained by the fact that houses in Pushcha-Vodytsia are typically one-floor high. Verandas are also part of the architectural expression of the region. They are typically symmetrically added to the building mass and most likely imitate the symmetry of the inside layout of the house. It was not rare to apply them to all 4 sides of the building block, which is not the case in Otwock (Машина Часу і Простору, n.d.)

Another element that needs to be addressed is towers. In Pushcha-Vodytsia housing there are mainly decorative and rather big towers that are located in different parts of the building block. An examples of a house with functional tower is the villa on Maksymenka 9, which has small ventilation vents (Figure 8). Also, the tower in the Yunkerova 37 building most likely used to have windows, which could indicate its function as an additional light source for the upper floor (Figure 7). Towers in other buildings, despite their size, seem to perform purely decorative function (Figure 9, 10).

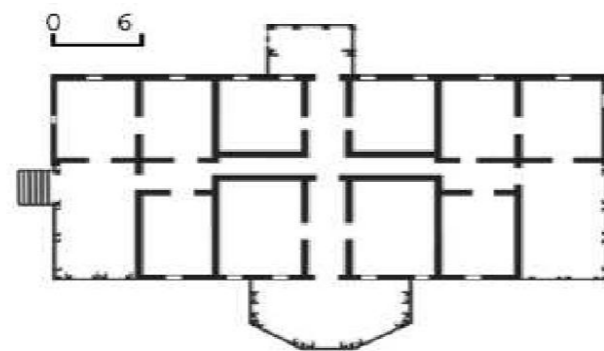
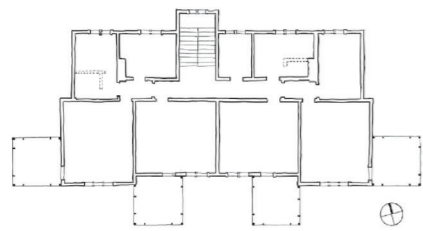
Visual comparison of floorplan of Otwock's houses (left) and Pushcha's houses (right)



- Floorplan of villa at Maksymenka 9
- Symmetrical
- Rectangular based floorplan
- Two front verandas
- Two-bay floorplan is not that noticeable due to main, big hall that is a central point of the building



- Floorplan of villa at Maksymenka 9
- Square based floorplan
- Symmetrical
- Two verandas
- Two-bay floorplan with corridor in the axis.
- The back bay smaller in size--->similar to Polish practices



- Floorplan of villa at Kvitky Cisyk 47
- Rectangular based floorplan
- Point-reflection symmetry
- Four verandas on four sides of building--> not typical in Polish example
- Two-bay floorplan with 2 corridors in 2 perpendicular axes.
- Bays similar in size --> not typical in Polish example

- .All drawings are scaled to 1:500--->
- Polish villas are smaller in size than Ukrainian wooden houses



Figure 7 Tower in the villa on Yunkerova 37 (ЗаПущений Спокій, n.d.)



Figure 8 Tower in the villa on Maksymenka 9 (ЗаПущений Спокій, n.d.)

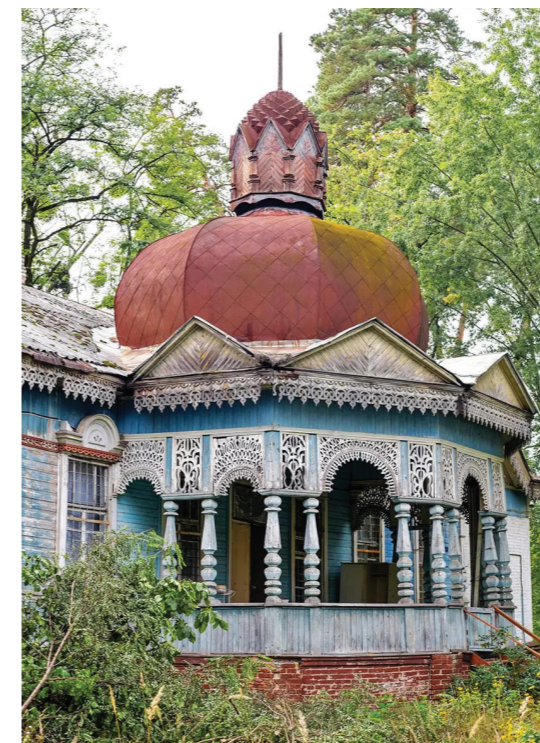


Figure 9 Tower in the villa on Kvitky Cisyk 47 (Главн, n.d.)

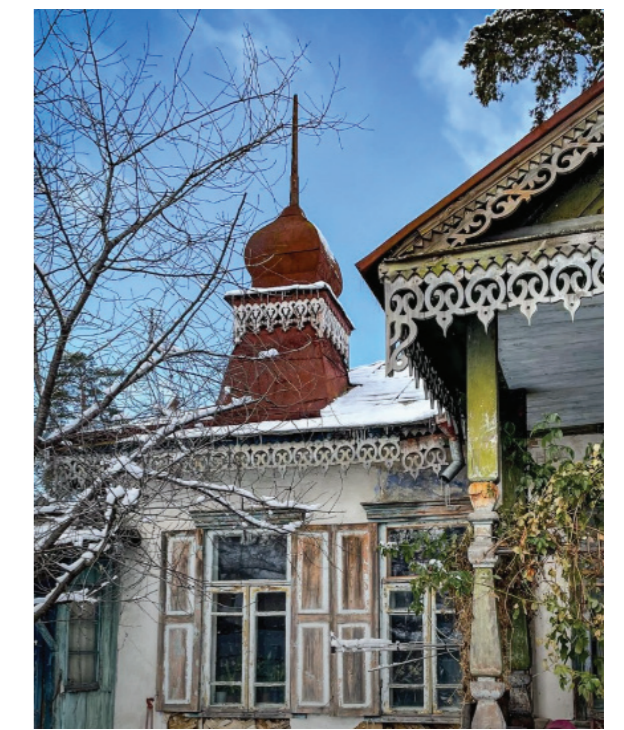


Figure 10 Tower in the villa on Kvitky Cisyk 75a (Главн, n.d.)

Figure 6 Example floorplans of Pushcha-Vodytsia compared to floorplans of Otwock's villas
Pictures for collage sourced from works of T.J. Trzuppek (2023) and Smolij (2003).

Lastly, the roof-related attributes of the wooden housing of Pushcha-Vodytsia. In the majority of villas, there are hip roofs with a gentle slope. It is low and attic space cannot be a fully functional space as in Otwock. Subsequently, there are usually no dormers. However, in some cases, there are small windows in gable walls. Those gable windows are smaller than normal windows and often not glazed (Figure 11,12). Additionally, gable walls in villas of Pushcha-Vodytsia have elongated eaves, which is like Otwock's example (Figure 11,12).

To summarize, the wooden villas of Puscha-Vodytsia have a few attributes in common with Otwock's wooden housing regarding their solids and floorplans. Some of those similarities are rather striking. The numerous verandas per block in Pushcha-Vodytsia despite the lack of functional need for this might indicate that the housing development of Otwock was known and considered by architects of Kyiv summer villas.

Some of the differences are also worth further elaboration. For example, the whole roof structure of Pushcha-Vosytsia housing is different from Otwocks approaches and it seems to rely on architectural practices of traditional Ukrainian houses (katas). Namely, the hip roof structure and application of gable vents. They were implemented for functional purposes such as ventilation and light in the attic. However, they also included symbolism. They were seen as the 'face' of the house or 'eye' watching over the family (Danyliuk, 2008).



Figure 11 Gable window in the villa on Yunkerova 91
(Главн, n.d.)



Figure 12 Gable window in the villa on Yunkerova 13
(Главн, n.d.)

Detailing

To complete the comparison between the summer villas of Otwock and Pushcha-Vodytsia, their ornamentation techniques need to be discussed. This chapter aims to do that by summarizing the information from literature about ornaments, their placement, and forms in the villas of Otwock. The detailing of Pushcha-Vodytsia will be analyzed based on the photo materials and subsequently compared to the Polish example.

Poland/Otwock

Façades of Otwock's villas were usually finished with wooden planks arranged according to the mixed shuttering approach. Additionally, the building elevations were often visually diversified by adding pinnacles, decorative corners, and horizontal decoration bands on specific heights of the elevation (Górski & Lach, 2022). The bands located between floors or under the frieze were additionally decorated with ornaments (Figure 13). Those were usually simple geometrical shapes or flower motives. Visually dividing the façade by uncovering the construction elements of the walls was also a common practice (Cichy, 2007).

Building elevations are also visually enriched by windows and their decoration, which also have the defining common elements that can be gathered and described. The most common are the double casement windows. Usually, they are decorated inside, by subdividing their glazing, and from outside by applying such elements as shutters on the windows, battens around the whole window frame, cornices above, and decorative bands below (Figure 14). The last two elements are not that common. All the above elements were very rarely applied to the same window simultaneously (Dwornik et al., 2019).

Additionally, the decorative practices concerning the verandas in Otwock wooden housing were also described by scholars. Their fronts are usually divided into 3 or 5 modules (Mycielski & Trzupek, 2021). The more recent examples are decorated with wooden openwork that was applied to filter the sun, while the older houses usually have modest, press-in decorations (Figure 15,16). This is because the methods of maintaining the wood were not advanced when the first examples of the discussed settlement were developing at the end of the 19th century (Krajewski, 2015). Lastly, it is important to underline that the style of the ornaments usually comprises the use of natural, geometrical, and more rarely zoomorphic motives (Radomska, 2001).

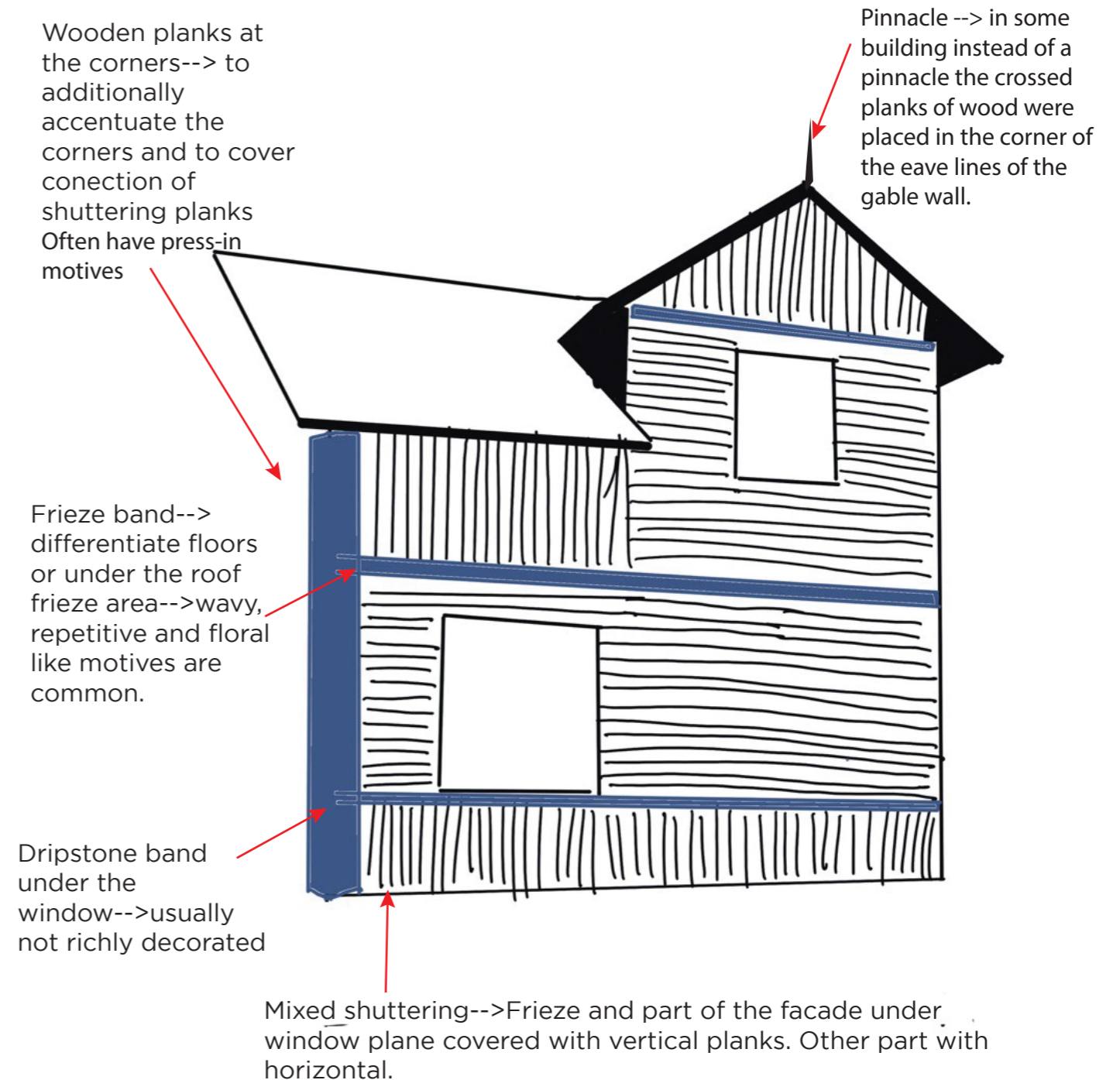


Figure 13 Summary of typical decoration elements of the facade of wooden villas in Otwock Information sourced in works of Krajewski (2015), Cichy(2007) and T.J. Trzupek with K. Mycielski (2021)

Window elements of wooden villas in Otwock

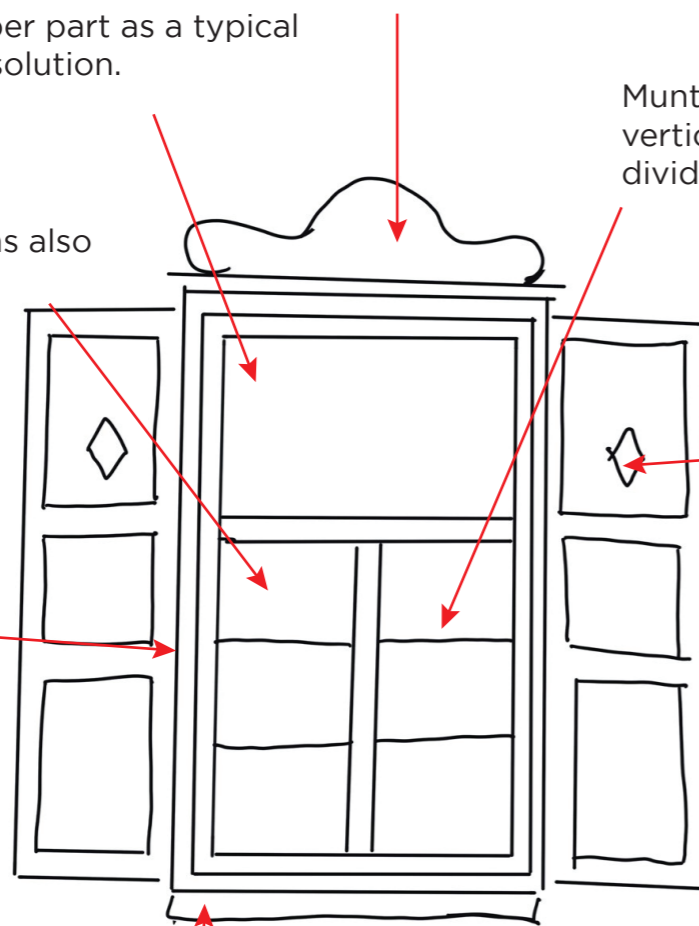
Cornice above is rarely applied. If so it has a simple pattern of teeth, dovetails or floral motives from Liebolds pattern book

Awning upper part as a typical ventilation solution.

Muntins --> can be cross or vertical and are applied to divide the window glass panel

Often one of the lites was also openable for ventilation

Decorative batten frame around the window was always present. It has a form of simple wood plank of darker color than facade.



Shutters are a common element.--> Most often are divided into 3 fields. A decorative cutout in upper part is often present--> heart, romboid, triangle of circle

Decorative band under the window is more rare than the cornice above. It usually is just a plank, simple geometry or rarely it has floral patterns from liebolds books

Figure 14 Summary of typical decoration elements of the windows of wooden villas in Otwock Information sourced in work of M. Dwornik (2019).



Figure 15 Example of wooden villa with older and less decorated veranda (Dalej, 2021).



Figure 16 Example of wooden villa with more decorated veranda that were built later (Kulturze, 2023) .

Ukraine detailing

The villas of Pushcha-Vodytsia were also analyzed with the use of available photo materials in terms of their façade, windows, and verandas detailing.

The facades of the villas of Puscha-Vodytsia have a few elements that are often applied and should be summarized. Firstly, the facade shuttering and its decoration are similar among all the buildings. The mixed arrangement of wooden planks is a typical solution. Then the facades are visually divided with the decorative bents running along the building. There are usually three of them present (Figure 17) and the band connecting window cornices is enriched with repetitive ornaments. Otwock's villas usually do not have the band connecting window cornices. Another specific element that is not mentioned in the Otwock wooden housing is the presence of a decorated frieze that connects the upper band with an ornamental roof cornice, which creates the layering of ornaments. This element can be seen in two villas of Pushcha-Vodytsia (Figure 18,19). Lastly, many facades of the Pusha's villas contain decorated wooden boards that cover the edges of the buildings (Figure 20,21,22). Those imitations of pillars are also applied in Otwock's houses. Only the level of detail differs. Namely, in Pushcha they are usually more richly decorated.

In the Ukrainian example, the double casement windows with top light above the transom were also the most common. They usually have a small ventilation window just below a transom, which differs from the Polish practice of having the awning upper part for wind circulation reasons. Additionally, the addition of thin wood planks into glass panels to visually divide it is also a common practice based on the gathered photo materials (Figure 23). Coupled windows that share the decorative band and cornice are present in a few examples of Pushchas villas (Figure 23). At the same time, this type of window arrangement was never mentioned in research works concerning Otwock's architecture. In terms of decorative elements, the windows of Pushcha-Vodytsia seem to be more richly decorated than Otwock's examples. Windows of Pushcha always have the decorative batten around the windows, the cornices above, and the bands under, while in Otwock presence of all those elements at once is rare. Additionally, in the Ukrainian example, all those elements are enriched with floral motives that are sometimes combined with geometrical patterns. Other specific



Yunkerova 37



Maksymenka 9



Kvitky Cisyk 47



Yunkerova 13



Yunkerova 47



Yunkerova 91

Figure 17 Collage of the elevation of chosen wooden villas in Pushcha-Vodytsia
Pictures partially sourced from ЗаПущений Спокій (n.d.) and Главн (n.d.).

aspects that can be underlined can be seen in Figure 24.

The structures of verandas in Pushcha-Vodytsia share a few similarities with the examples of Otwock. They are also usually divided into 3 modules and richly decorated with openwork arcades that are also a common denominator of later wooden villas in Otwock (Figure 25,26,27). The elements that are realized differently are the pillars of the verandas. Firstly, their sculpture seems to integrate more complicated geometry. Secondly, in the verandas of Pushcha, a set of 2 or 3 pillars is a common denominator for a few villas (Figure 25,27). Those practices are not traceable in the literature concerning Otwock or the photo materials. Another specific aspect that is often visible in the Ukrainian villas is the interplay between the veranda's openwork and the frieze cornice. Namely, the cornice is slightly awning over the veranda, which creates a dimensional appearance and enriches the structure overall (Figure 25,26).



Figure 18 Decorated frieze in Yunkerova 13 (Кайдан, 2019)

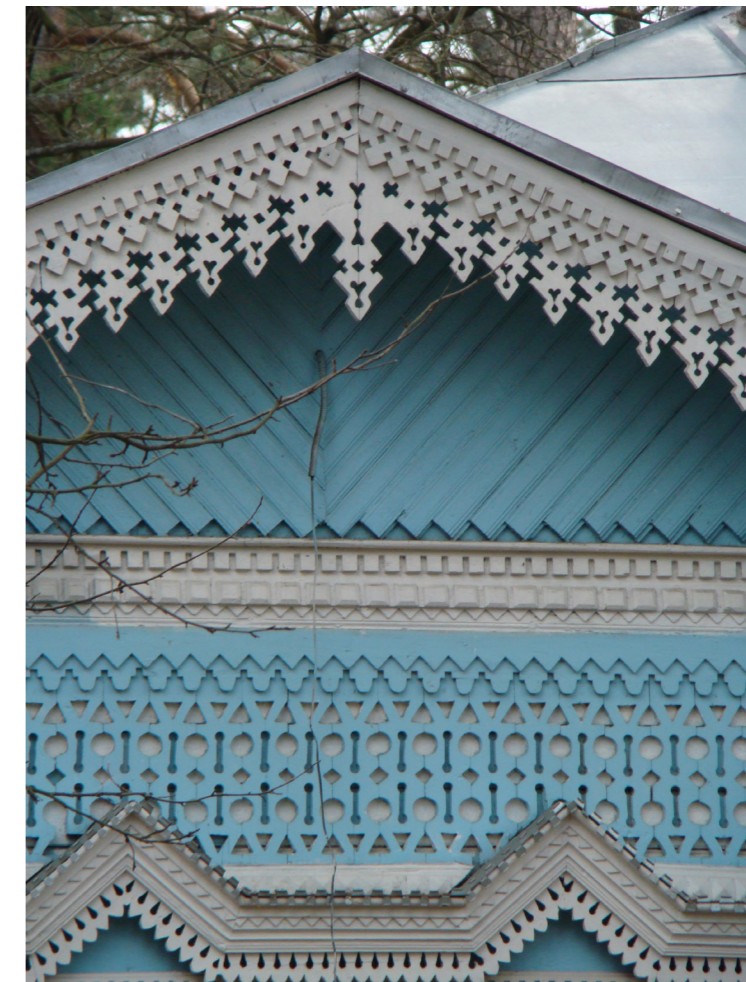
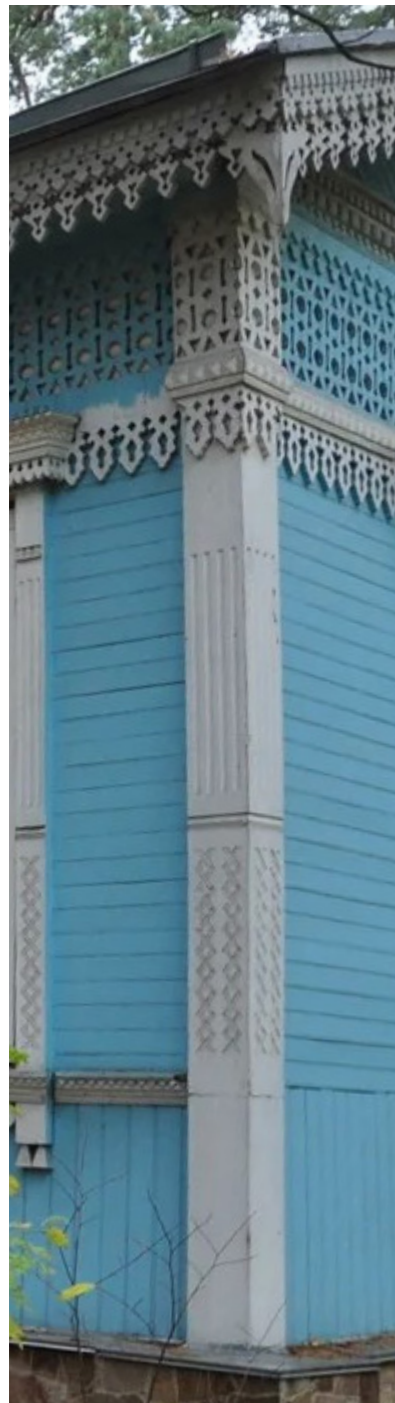


Figure 19 Decorated frieze in Yunkerova 47 (ЗаПущений Спокій, n.d.)

Figure 20 Edge column Yunkerova 47 (Кайдан, 2019) Figure 21 Edge column Maksymenka 9 (Кайдан, 2019) Figure 22 Edge column Yunkerova 37 (Кайдан, 2019)



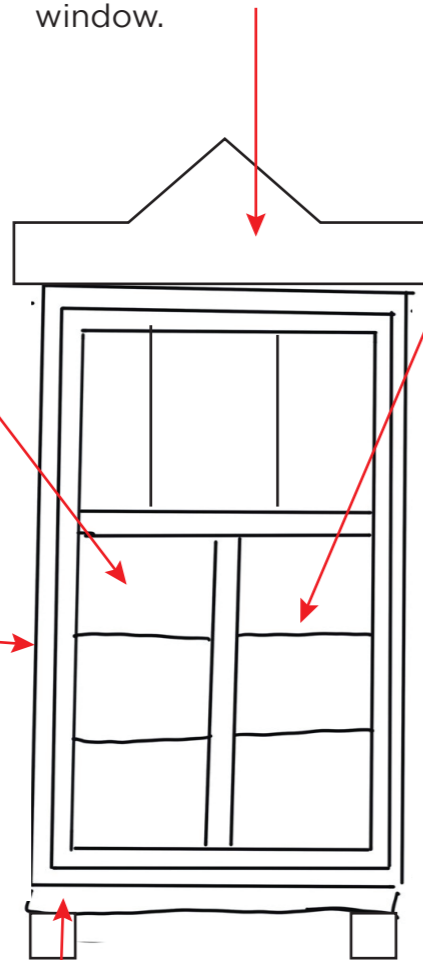
Figure 23 Collage that gathers all the photographed examples of windows in Pushcha-Vodytsia
 Pictures partially sourced ЗаПущений Спокій (n.d.) and Главн (n.d.).

Window elements of wooden villas in Pushcha-Vodytsia

Cornice above is always applied. It is richly decorated with few rows of openwork, geometrical or flower patterns. Cornices often follow a shape of a triangle that creates the 'roof' above the window.

Often one of the lites was also openable for ventilation

Decorative batten frame around the window was always present. It often includes the pattern of press-in, geometrical motives or sometimes even openwork around



Muntins --> can be cross or vertical and are applied to divide the window glass panel. In Pushcha, application of vertical muntins above the transom and dividing glass plate into 3 seems to happen often.

Decorative band under the window is present often. It has a simple form. The addition of small block is a common decorative approach.



Figure 25 Veranda at Yunkerova 47 (ЗаПущений Спокій, n.d.)



Figure 26 Veranda at Maksymenka 9 (ЗаПущений Спокій, n.d.)



Figure 27 Veranda at Kvitky Cisyk 47 (ЗаПущений Спокій, n.d.)

Figure 24 Summary of typical decoration elements of the windows of wooden villas in Pusha-Vodytsia.

Ornaments

Lastly, the discussion concerning the ornaments of Pushcha-Vodytsia and their possible origins needs to be discussed. As discussed in the chapters above the ornaments of Otwock and Pushcha-Vodytsia were most likely designed by the owners of the villas or the workers who were constructing those houses. Due to that, there seem to be no concrete statements about the origins of those detailing elements.

Scholars researching the wooden housing of Otwock point out similarities with the works of Liebold, (1893). Also overall the ornaments of Otwock are stated to follow natural, geometrical, and more rarely zoological motives (Radomska, 2001). However, based on the summary of their appearance that is presented in previous chapters, the geometry-based patterns seem to dominate. Specifically, the motifs of teeth, dovetails, and ornaments that mimic ancient patterns are mentioned and noticed quite often in different parts of the elevation of Otwock's wooden housing (Dwornik et al., 2019).

At the same time, literature discussing the ornaments of Pushcha-Vodytsia wooden housing seems to not exist yet. There are only assumptions made that those houses were realized based on the architectural manuals of Russian wooden summer housing (Smolij, 2003). This chapter aims to start the discussion about the ornaments of Puscha-Vodytsia wooden villas. To do so three collages were created. (Figure 28,29,30) They present the ornaments of Pushcha-Vodytsia and juxtaposition them with visually similar and most importantly matching in terms of the location of the facade and role designs taken from Liebold, (1893) pattern book and Russian manuals by Leve, & Shults, (n.d.) and Kozlov, (1902). The last column of the collage contains the folklore symbols of Ukraine that are alike visually with the chosen ornament. Those ornaments were taken from art manuals by Юрченко et al (1962), Шонк-Русич (1982). Based on those collages a few conclusions can be made. Firstly, the ornaments of Pushcha-Vodytsia seem to mainly follow floral motives and geometrical ones are also sometimes noticeable. This tendency matches with the approach of Otwock wooden housing. The possible difference is the fact the Ukrainian example incorporates flower patterns with higher intensity and the ornament seems to be overall richer due to the overlay of different elements. Secondly, in terms of the sources of designs for ornaments of Pushcha-Vodytsia. They seem to match the design of Liebold and Russian designs. It is important to underline that rarely they are completely similar, therefore those correlations might be fully accidental. Lastly, the motives from Ukrainian folklore also can be noticed in some ornaments of Pushca-Vodytsia. Those elements are subtle and therefore need to be more directly collected and proven in subsequent research.

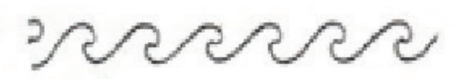
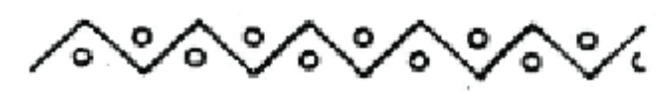
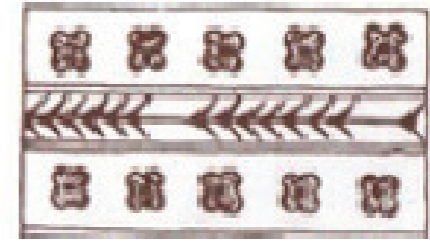
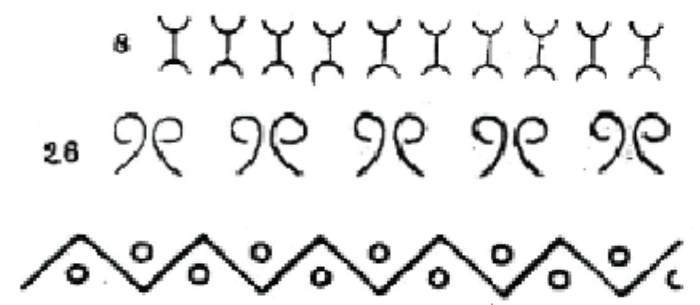
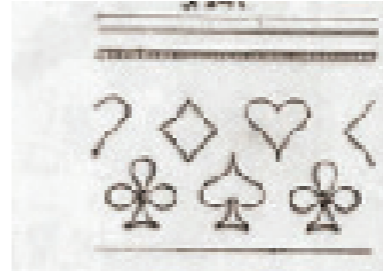
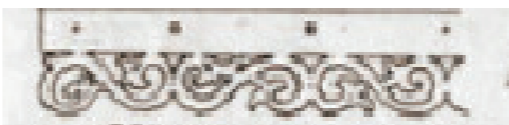
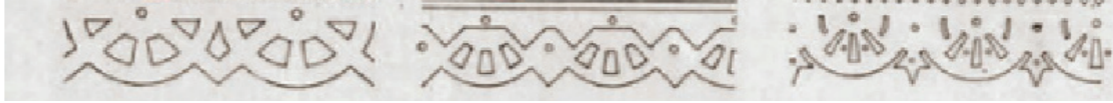
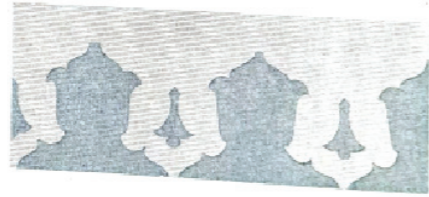
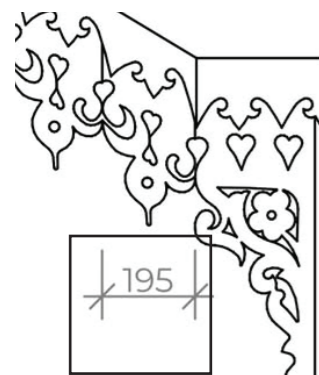
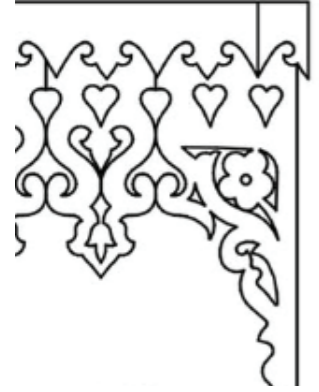
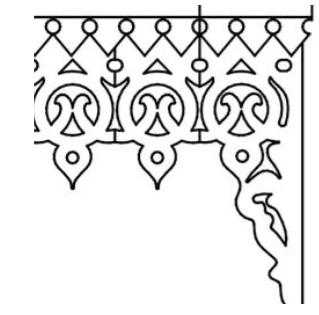


Figure 28 Collage concerning the details of Yunkerova 37

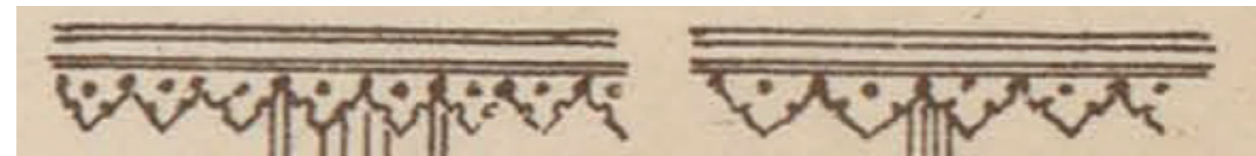
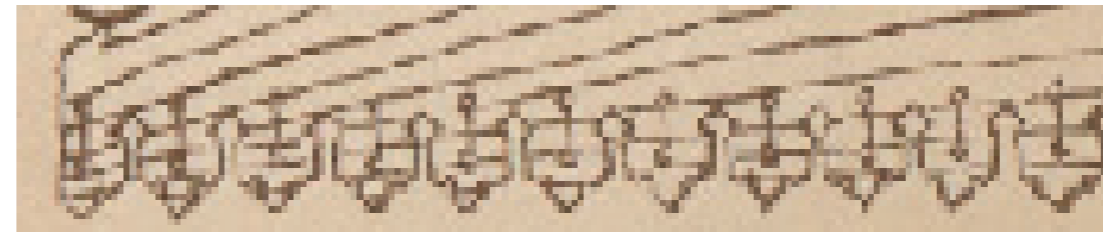
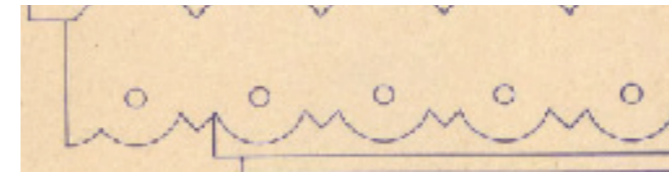
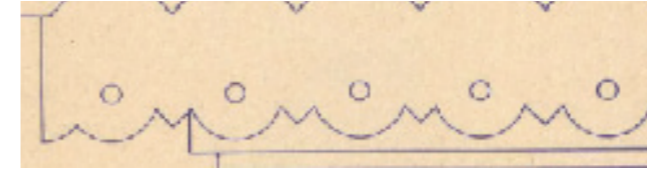
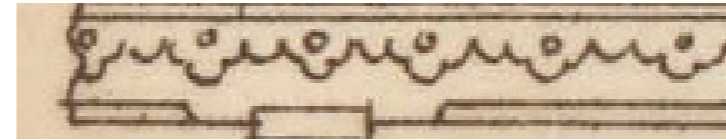


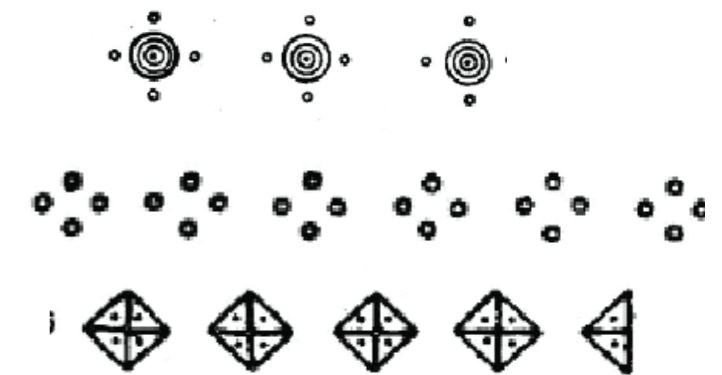
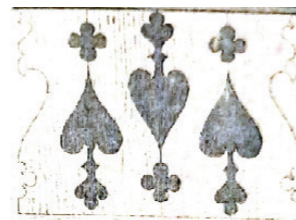
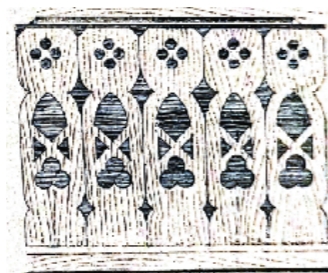
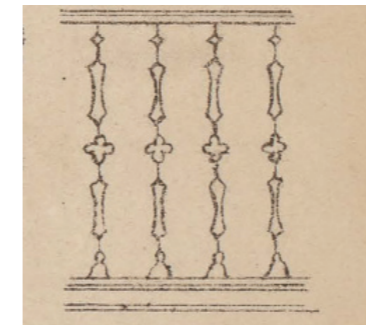
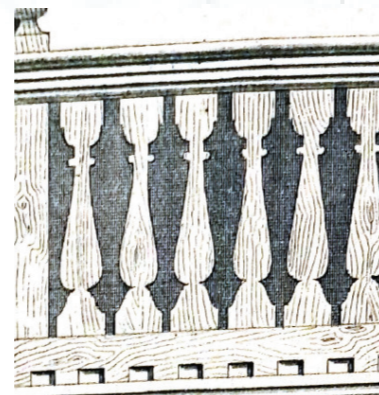
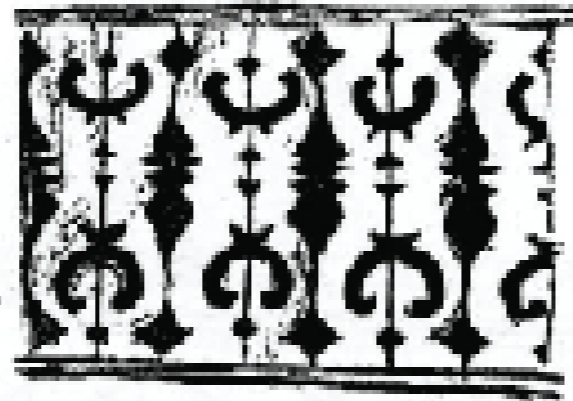
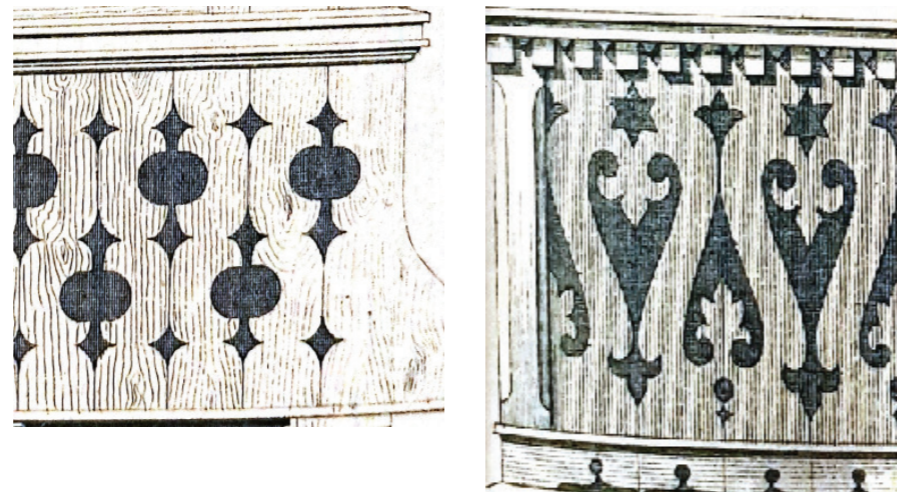
Figure 29 Collage concerning the details of Maksymenka 9

Pushcha-Vodytsia

Liebold

Russian manuals

Ukrainian Folklore



17 Figure 30 Collage concerning the details of balustradas of all houses

Conclusion

The paper aimed to analyze and define the wooden heritage architecture in Pushcha-Vodytsia. It was done by actively comparing it to the wooden villas that are located in Otwock, Poland. Those two settlements were initially differentiated concerning their historical development and the reasons that led to it. That chapter proved them to be alike in terms of their chronicles.

After this conclusion, research dived into more specific considerations. Later the aspects of buildings themselves were taken into account. After analyzing the building masses and detailing approaches of houses in Pushcha-Vosytsia and comparing them to summarized analysis of Otwock architecture a few statements can be formed. Firstly, Pushcha-Vodytsia housing has a lot of similar elements to Otwock architecture. Examples of that are the elements of building masses such as avant-corps, verandas, and decorative towers that appear in both examples. Also, the main concepts concerning the detailing of two discussed housing types are similar. Both examples similarly treat facades. Namely, they tend to locate ornaments similarly on the elevations. The types and general way of detailing windows are also similar.

However, differences are also noticeable. They are namely present in the manner the above-mentioned aspects, which proven to be similar, are realized and applied to discussed architecture examples. Namely, Pushcha-Vodytsia tends to be more rich in architectural expression. In terms of building masses, it can be noticed through the fact that the Ukrainian example has more different elements combined per building. One villa might have verandas on each side, crowned with gable walls and decorative pinnacles or towers. Also, the application of ornaments is more fierce. A perfect example of that is windows, which in their core characteristics are similar to examples of Otwock. Nevertheless, the windows of Pushcha-Vodytsia differ visually because they combine all the possible ornament types per element. As was stated in the above chapters coexistence of multiple ornaments per window is a rare practice.

Also, a brief analysis of the ornaments of Pushcha-Vodytsia housing was performed. It shows rather ambiguous results. Namely, the details of Pushcha-Vodytsia seem to be similar to Liebold's and Russian design manual. Another aspect that was concluded is the subtle presence of Ukrainian folklore motives in the discussed pattern. This occurrence should be further examined in other research concerning this subject. Research overall achieved its goals stated in the introduction, despite the limitations in available sources concerning the architecture of Pushcha-Vodytsia. It forms an invitation to this new subject of wooden architecture of Pushcha-Vodytsia in Ukraine.

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