

## ARTICLE

# The Role of the Exaltation of the Holy Cross Orthodox Monastery in Manyava in the Formation of Ecological Values

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## ABSTRACT

The article uses the example of the ascetic Orthodox monastery ensemble of the Exaltation of the Holy Cross in the village of Manyava, Bogorodchansky district, Ivano-Frankivsk region, to demonstrate its unique connection with the natural landscape and determine the role of monastic life in promoting environmental protection and its biodiversity. The aim of the article is to reveal the architectural and spatial characteristics of the monastery and highlight the specific features of monastic ecology. The methodology is based on the analysis of the main architectural and natural elements that allow us to understand the organization of the monastery environment and its inextricable connection with the surrounding landscape, which affects the formation of ecological values in Ukraine. The article outlines the stages of the monastery's development, from its foundation in the 13th century, its formation, a period of great prosperity, decline and destruction, to the revival of its activities since 1998. The study analyzes the architectural, spatial, and planning structure of the Monastery of the Exaltation of the Holy Cross in Manyava and shows its inextricable connection with the natural landscape. The work considers the Monastery of the Exaltation of the Holy Cross not only as a spiritual center, but also as a complex anthropogenic-natural system with clear ecological indicators.

**Keywords:** Exaltation of the Holy Cross Monastery; Structure; Architectural and Spatial Design; Monastic Landscape; Ecological Orientation

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## 1. Introduction

As a result of natural disasters, industrial disasters, and the careless exploitation of natural resources by society, environmental pollution has been occurring, deepening the ecological crisis. Pollution of water bodies, mineral resources, and the atmosphere has become a pressing issue of our time. Therefore, the urgent question arises of preserving the natural environment, which involves managing human activities in such a way as to minimise harm to the environment and prevent ecological disaster. An example of environmental preservation and rational use of natural resources has been, and continues to be, Orthodox monasteries.

In the social life of the Ukrainian people, Orthodox monasteries have played a special role, encompassing a wide range of landscapes and ecosystems of high ecological quality. Monasteries have not only been centres of religious and spiritual life and hubs of education, science, printing, and icon painting, but also architectural and artistic masterpieces with distinctive architectural and spatial organisation, sacred landscapes, and ecological values<sup>[1,2]</sup>. The functional purpose of a monastery dictated the choice of its building site. The natural environment was the primary external influence on the character, form, and even silhouette of the monastic complex. This was true of the Exaltation of the Holy Cross Monastery in Manyava, Ivano-Frankivsk region, which during its existence (1605–1785) was known in Ukraine, Moldova, Bulgaria, Russia, and Austria as the Great Manyava Skete<sup>[1,3]</sup>. From its foundation in the 13th century, the monastery underwent a complex historical development: from its establishment, formation, great flourishing, decline, and destruction, to the revival of monastic life since 1998, which continues to this day<sup>[4–6]</sup>.

Upon entering this compositionally structured architectural space with its ideal layout, one is struck by the architectural vision and artistic expression, shaped by the richness of volumetric and spatial structures from various historical periods. The integrity and artistic expressiveness of the monastery's architecture in Manyava are achieved through a harmonious connection with the natural landscape surroundings, and play a significant role in the formation of the sacred cultural landscape of the village. Today, monastic life actively thrives at the monastery, and monastic shrines destroyed by historical events are being restored on the basis of interaction with nature.

## 2. Review of Recent Sources and Publications

The study of the Great Manyavsky Skete was fruitful at different periods thanks to the works of many scholars, in particular Y. Tselevich<sup>[1]</sup>, A. Petrushevych<sup>[3]</sup>, T. Moklowski<sup>[7]</sup>, and A. Kopystyansky<sup>[8]</sup> in the mid-19th century, who worked focusing on history, archaeology, and art. In 1860–1914, I. Krypyakevich<sup>[9]</sup>, I. Ogienko<sup>[2]</sup>, M. Dragan<sup>[10]</sup>, and others studied the spiritual features of the monastery. In the 1920s and 1930s, the emphasis in the works of B. Voznytsky<sup>[11]</sup>, P. Zholtovsky<sup>[12]</sup>, M. Golubets<sup>[13]</sup>, and others shifted to art history and archaeological aspects. At the beginning of the 21st century, the Institute of History, Ethnology and Archaeology of the Vasyl Stefanyk Precarpathian National University, headed by M. Kugutyak, conducted comprehensive historical, archaeological, and art history research. V. Dolotko, in his monograph, highlighted the Statute of the Manyavsky Hermitage and its influence on the spiritual practices of Ukrainian and Moldavian monasteries<sup>[14]</sup>. In her article, L. Chen traced the history of the Manyava Skete, describing the stages of its development: from its foundation, flourishing, and decline to its destruction and modern revival. She also analyzed the architectural, spatial, and planning structure of the ensemble of the Exaltation of the Holy Cross Monastery<sup>[4]</sup>.

The issue of the study of monastic ecology is a highly relevant contemporary topic and is addressed in numerous publications. The analysis of scholarly works highlights the significance of this problem. In her research, Isabelle Jonveaux explored the relationship between Benedictine monasteries and nature, as well as the environmental protection practices implemented by the monks. She pointed out that monastic ecology is rational, charismatic, and rooted in a specific identity that encourages society to reconsider its relationship with the natural environment<sup>[15]</sup>. Josep-Maria, M., Josep, C., and Thymio, P., in their study of the connection between monastic communities and the natural environment, noted that the experience of these communities in adapting to and overcoming ecological and economic crises is particularly relevant to environmental managers and policymakers<sup>[16]</sup>. The same authors also examined governance principles, tendencies, and systems of natural landscape protection observed within monastic communities, which serve

as an inspiration for environmentalists and policymakers<sup>[17]</sup>. The issue of Christian monasticism and the future of monastic landscapes in North America has been addressed by J.M. Brown<sup>[18]</sup>.

The article by L. Chen traces the history of the Manyava Skete, describes the stages of its development: from its foundation, flourishing, and decline to destruction and modern revival. The architectural and spatial-planning ensemble of the Monastery of the Exaltation of the Holy Cross is analyzed<sup>[4]</sup>. The review of literature on the various aspects of monastic communities' interaction with the natural landscape, based on a foundation of deep spirituality, underlines the complexity of problems related to ecological restoration. This includes a focus on restoring endangered species and ecosystems, greening and conserving monastic landscapes as elements of natural heritage, and shaping ecological values grounded in spiritual principles and traditional ecological knowledge.

**The purpose of the article:** To trace the evolution of the development of the Manyavsky Cross-Exaltation Monastery during the 17th–21st centuries and to analyze its architectural and spatial structure as a model of adaptive development in mountain conditions. Through the synthesis of historical data and engineering and environmental analysis, to substantiate the significance of the Skete in the strategy of environmental protection and sustainable development of the Carpathian region of Ukraine.

### 3. Materials and Methods

The research methodology is based on an integrated approach that combines historical and architectural analysis with methods of engineering ecology and building physics.

The study of the Khrestovozdvizhensky Monastery (Maniavsky Skete) uses a combination of empirical, theoretical, and special scientific methods to trace its evolution and ecological impact:

Empirical research includes searching for literary and archival sources, conducting natural/field research, and detailed observation of the monastery environment. Historical analysis traces the development of the monastery from the 17th to the 21st centuries, including periods of prosperity, decline, and revival, using historical records and architectural documentation.

Theoretical analysis uses comparative and compositional analysis to understand the harmony between architecture and the natural landscape. The site has a compact layout, which includes central religious buildings and monks' dwellings, integrated into the landscape. The study of spatial planning, building materials (wood, stone), and fortified walls focuses on their harmonious integration with the mountainous terrain. Classification and generalization are used to categorize architectural elements and organize the stages of the monastery's development from the 17th to the 21st centuries.

Specialized architectural-spatial methods: Architectural-spatial analysis is used to analyze the specific organization of the monastery territory to reveal its inextricable connection with the surrounding environment. The monastery is strategically located in a picturesque mountainous landscape, and its spatial planning is designed to synchronize with the rugged terrain. The full-scale survey includes photography and measurement drawings to document the authentic features of the sacred complex.

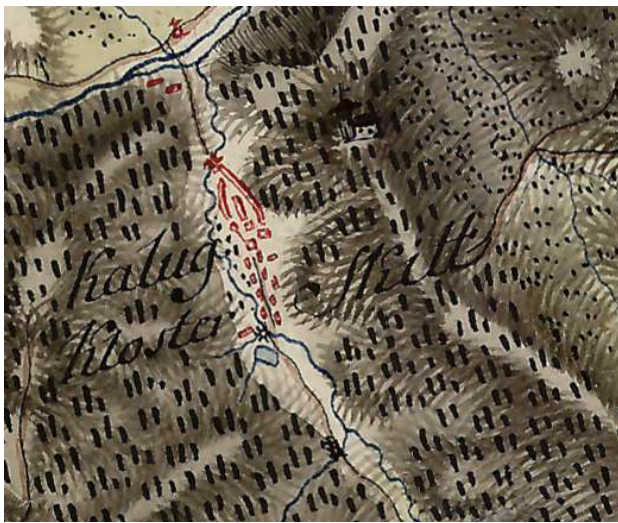
The ecological and biodiversity analysis of the study links the history of architecture with bioecology to determine how monastic life contributes to environmental protection and biodiversity in the Ukrainian Carpathian region.

Analysis of the Manyava Skete through the prism of civil engineering and physics allows us to assess it as a complex fortification and architectural system adapted to the extreme conditions of the Carpathians.

### 4. Presentation of the Main Material

In the western region of Ukraine, on the outskirts of the village of Manyava in the Bohorodchany district of the Ivano-Frankivsk region, in an exceptionally picturesque mountainous area, stands an ancient Orthodox monastery dedicated to the Exaltation of the Precious and Life-Giving Cross of the Lord—a significant spiritual Orthodox centre of Prykarpattia (**Figure 1**). According to legend, the foundation of the Manyava monastic community dates back to the 13th century and is associated with the monks Ioanikii and Pakhomii<sup>[6,13]</sup>. After the Mongol-Tatar destruction of the Kyiv-Pechersk Monastery in 1240, they came to the Carpathian Mountains and established the Exaltation of the Cross Monastery<sup>[19]</sup>. The first monks settled in a forest cave known as the “Blessed

Stone”, where they built a chapel and began holding the first liturgical services<sup>[19]</sup>. The stone with a grotto resembles a giant cave with an opening (**Figure 2**).



**Figure 1.** The Exaltation of the Holy Cross Monastery in Manyava on the Fon Mieg Map (1763–1787).



**Figure 2.** The Blessed Stone, where the first monks settled.

Between 1241 and 1242, they built and consecrated the first monastic church in honour of the Exaltation of the Holy Cross and formally founded the monastery<sup>[19]</sup>.

The ascetic way of life of the Manyava monks within the forested natural landscape and their perception of the natural environment as an image of Divine Creation were priorities in their daily monastic existence. The monks sought to minimise material needs, focusing instead on spiritual values. In their pursuit of harmony with nature and spiritual perfection, the monks attracted numerous faithful and pilgrims through their elevated spiritual lifestyle, diligent labour, and ceaseless prayer<sup>[1,2]</sup>.

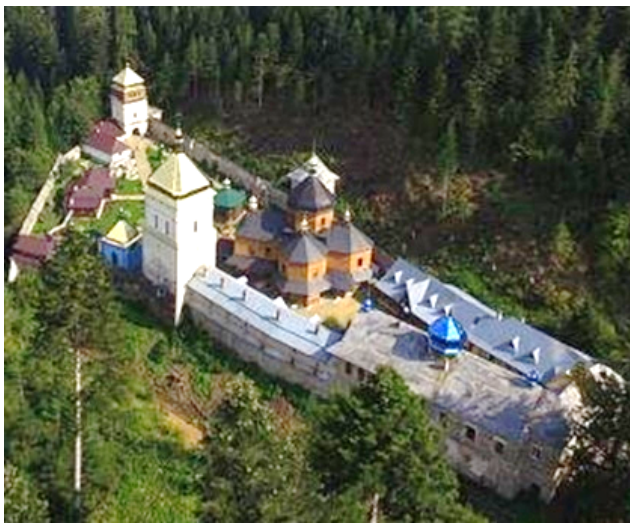
Subsequently, the Mongols attacked and completely destroyed the monastery. The next stage in the development and establishment of the monastic community dates back to the 17th century. Historiography provides documentary evidence concerning the foundation of the Manyava Skete in 1608 by the schema-monk Iov Knyahynytskyi<sup>[19]</sup>. In 1611, the local saltworks administrator, P. Liakhovych, built the first new monastic cell<sup>[1]</sup>. A year later, in 1612, thanks to funding from Maria Mohylanka, daughter of the Moldavian ruler E. Mohyla, a wooden monastic church was constructed and consecrated on 13 September—the Feast of the Exaltation of the Precious Cross—and two monastic cells were relocated from the old site to the new one<sup>[20]</sup>. Thus, the Orthodox monastic community known as the Great Manyava Skete was established in Manyava (**Figure 2**). The monastery’s founders were monks Iov Knyahynytskyi and Theodosii Manyavskyi<sup>[1,8]</sup>. Iov Knyahynytskyi, a native of Tysmenytsia and scion of a noble family, spent twelve years at the Ostroh Academy before residing on Mount Athos, where he took monastic vows at the Vatopedi Monastery<sup>[20]</sup>. Upon returning to his homeland, he founded the Manyava Skete in the Carpathians, bringing with him the experience and traditions of Hesychasm—an ascetic practice based on the continuous recitation of the Jesus Prayer (“Lord Jesus Christ, Son of God, have mercy on me, a sinner”). Together with Ioan Vyshenskyi and Zachariah Kopystynskyi, Iov established a monastic community and introduced the strictest rule of Basil the Great in the new community<sup>[20]</sup>. Due to the strictness of its rule and asceticism, the Manyava Skete was called the “second Athos”. Theodosii, a native of Halych from a devout and educated family, initially served as a deacon and later became a priest. He was appointed hegumen of the Manyava Skete by Iov Knyahynytskyi. In 1620, the Manyava Skete was granted stauropegic status by the patriarchs Timothy of Constantinople and Cyril of Alexandria<sup>[1]</sup>. In 1628, at the Kyiv Council chaired by Metropolitan Iov Boretskyi, the Exaltation of the Holy Cross Monastery was granted the title of “prota” (head monastery), overseeing 556 monasteries across the Belz, Halych, and Podil Voivode-ships, as evidenced by the signature of the Skete’s hegumen, Theodosii<sup>[20]</sup>.

The peak of the Manyava Exaltation of the Holy Cross Monastery fell in the mid-17th century, when the monastery housed 200 monks. The monastery was renowned for its



great holiness and profound spirituality<sup>[1]</sup>. Metropolitan Petro Mohyla wrote: “Go to Pokuttia, where two hundred angels dwell in the flesh, living the life of God.” At that time, the Exaltation of the Holy Cross Monastery was also a major artistic centre, hosting theological and painting schools as well as a school of choral part singing. The monastery possessed a large library containing numerous early printed books, now partly preserved in Vienna and Lviv.

The Manyava Skete was supported by endowments from Metropolitan Petro Mohyla of Kyiv, Ukrainian hetmans, Moldavian rulers, the Lviv Stauropegial Brotherhood, and Russian tsars. In 1613, Iov handed over the hegumenate to Theodosii, who, between 1613 and 1619, built several new monastic cells and expanded the refectory<sup>[1,20]</sup>. At the same time, a pond was dug, a mill constructed, and a small cell for Iov was built in the forest clearing called Skytik, later followed by the Church of the Holy Mother of God (Kugutyak, 2017)<sup>[21]</sup>. By the 1670s, the spatial boundaries of the monastery were established: the main sacred and cell buildings, the bell tower, the “Treasury” tower, a defensive tower, and various utility structures were built, and the monastery grounds, covering an area of 4 hectares, were fortified with high stone walls (Kugutyak, 2015)<sup>[22]</sup> (**Figure 3**).



**Figure 3.** The Exaltation of the Holy Cross Monastery in Manyava (photo 2018).

During the Polish-Turkish War of 1673–1676, the monastery was destroyed by the Turks and Tatars (PGA, vol. 2), and the cathedral Exaltation of the Holy Cross church, which had stood for 56 years, was burned down<sup>[21]</sup>. According to researcher Yu. Tselevych, the church was built

following the model of the Transfiguration wooden church of the Mezhyhirya Monastery near Kyiv. To rebuild the monastery, the Manyava monks appealed for assistance to the Moscow Tsar Feodor Alekseyevich, who provided financial support, vestments, and books. In a letter dated 19 July 1680, he allocated 300 rubles from the state treasury every five years<sup>[22]</sup>. At the same time, the monks of the Exaltation of the Holy Cross Monastery requested craftsmen and bricklayers from the Lviv Stauropegial Brotherhood to aid in the reconstruction. In 1681, Monk Sylvester, following the preserved measurements by architect T. Moklovsky of the original foundations, plan, and general drawing of the church, constructed the third cathedral wooden Exaltation church from yew and cedar. To decorate the newly built wooden church, in 1681, the monks invited the distinguished Ukrainian painter, Monk Iov Kondzelevych of the Bilostotskyi Monastery, who created a unique and highly artistic iconostasis for the church<sup>[21]</sup>.

It is unknown who built the second monastic Church of the Dormition of the Most Holy Mother of God. The only known fact is that it was sold for 40 gold coins to the community of the village of Hizd, Nadvirna County. The third Ascension Church was erected by the skete monk Isakiy Liubetskyi on Ascension hill (Voznesinka)<sup>[21]</sup>.

The Manyava Exaltation of the Holy Cross Monastery maintained a large estate. The monks planted orchards and vegetable gardens, dug an artificial lake, and built a mill. From the forest estate and medicinal garden, they prepared wine, herbal remedies, and incense. They also processed brine from local mines into barrel salt. Monastic craftsmen made pectoral crosses, wooden trenchers, wicker baskets, and salt barrels<sup>[1]</sup>. Organic farming, thrift, labour, and prayer were the unifying factors that motivated the monastic community to seek harmony with nature as an integral part of God’s creation and spiritual perfection<sup>[17]</sup>. Thus, the monks shaped a distinctive monastic landscape environment, which was characterised by a higher level of ecological sustainability compared to other landscapes.

After the Union was adopted by the Lviv Archdiocese in 1700, all the monasteries subordinate to the Manyava Skete joined the Union, with the exception of the Manyava Skete itself, which remained the sole Orthodox monastery in Galicia that rejected the Union and continued its activities. Following the First Partition of Poland in 1772, after which

Galicia came under Austrian-Hungarian rule, the Austrian Emperor Joseph II, as part of his reforms, ordered the closure of the Manyava Skete on 1 July 1785, along with many other monasteries<sup>[1]</sup>. The monks left the monastery and dispersed among Orthodox monasteries in Bukovina. From the late 18th century onwards, the monastery stood abandoned amidst the picturesque landscape and began to fall into ruin (**Figure 4**). After the monastery's closure, the Church of the Exaltation of the Holy Cross was sold in 1793 for 200 gold coins to the town of Nadvirna<sup>[1]</sup>, where it was destroyed by fire during the First World War in 1914<sup>[23]</sup>. The iconostasis was saved and sold for 60 gold coins to the parish of the church in Bohorodchany; the ambo and the tombstone of Job and Theodosius were transferred to the church in the village of Markiv. In 1916, the highly artistic iconostasis was dismantled by Austrian troops and taken to Krakow; in October of the same year, it was moved to the Austrian Museum of Art and Religion in Vienna. After the war, in the 1920s, the iconostasis was transferred to a museum in Warsaw and has been kept since 1923 at the Ukrainian National Museum in Lviv<sup>[1]</sup>.



**Figure 4.** The ruins of the Exaltation of the Cross Monastery.

Source: Lithograph by K. Auer, mid-19th century.

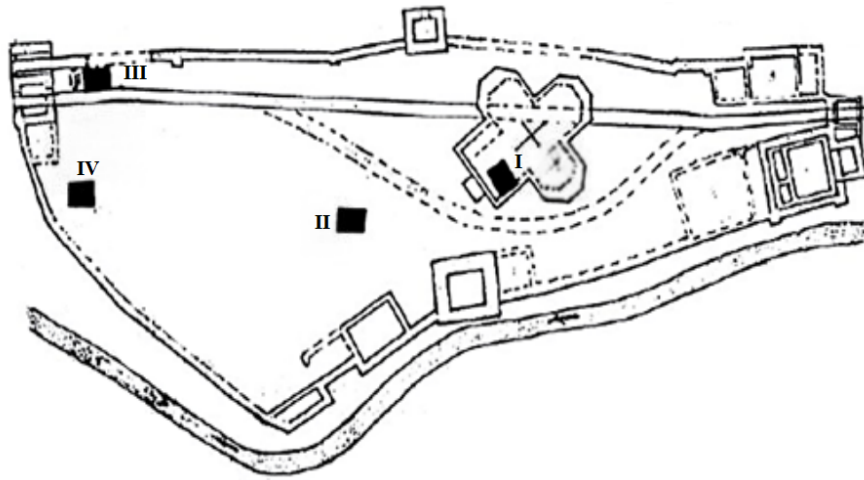
In the mid-1930s, the archaeological investigation of the Exaltation of the Cross Monastery (the Maniava Skete) was undertaken by the renowned Ukrainian scholar and archaeologist Yaroslav Pasternak. During the excavations, he was able to establish that the monastery church had stone foundations<sup>[24]</sup>, which enabled its floor plan to be reconstructed with a high degree of accuracy (**Figure 5**). Two masonry crypts, connected by a narrow passage, were uncov-

ered within the church. In one of them, researchers discovered two large fragments of gravestones carved from stone, adorned with Renaissance-style ornamentation<sup>[24]</sup>. The excavation plan developed by Pasternak later served as a basis for the reconstruction of the structural layout of the Exaltation of the Cross monastic ensemble in Maniava.

In 1980, a historical and architectural museum was established by the state authorities within the preserved monastery buildings. On 28 May 1998, the monastery was returned to the Orthodox clergy, and the Exaltation of the Cross Monastery for men in Maniava was officially reopened. The monastic ensemble of the Exaltation of the Cross is located on a natural, elongated terrace between the slope of Mount Voznesinka, covered with evergreen spruces, and the steep bank of the Baters stream, as well as Mount Koniukuvata (**Figure 6**). A picturesque road leads to the monastery: it crosses a bridge over the Maniavka River, winds through forested hills, descends into a deep ravine, and crosses the Baters stream, which flows past the monastery, before rising up to the main Holy Gate of the monastery, integrated into the bell tower.

The monastery grounds have an elongated shape, stretching from the southeast to the northwest. The monastery was designed following the Athonite layout: at the centre stands the main Church of the Exaltation of the Precious Cross, while along the perimeter walls are located the monastic cells, refectory, churches, and utility buildings (**Figure 6**). The monastery was built as a bastion fortress. The three main towers (the entrance with the bell tower, the Treasury, and the Annunciation) form a closed defensive circuit capable of withstanding mechanical loads during sieges. Due to the natural mountainous and climatic conditions of the area (particularly the cold, windy winters), all monastic structures in the Skyt were concentrated in the more sheltered south-eastern section of the territory, nestled between Mount Voznesinka and Mount Kaniukovata. The monastery buildings are built on complex slopes, where the foundation is made of rock and dense loam. This ensures the stability of the structures over the centuries, despite the significant slope of the terrain. According to researcher T. Moklovskyi, a road once ran through the monastery grounds, connecting the entrance and the exit<sup>[7]</sup>.





**Figure 5.** Plan of the Maniava Skete with marked excavation sites by Yaroslav Pasternak.

Note: I—excavation of J. Pasternak in the narthex of the Vozdvizhenska Church; II—excavation in 1936 in the monastery courtyard; III—excavation near the bell tower; IV—excavation at the site of the “Mass Grave”.

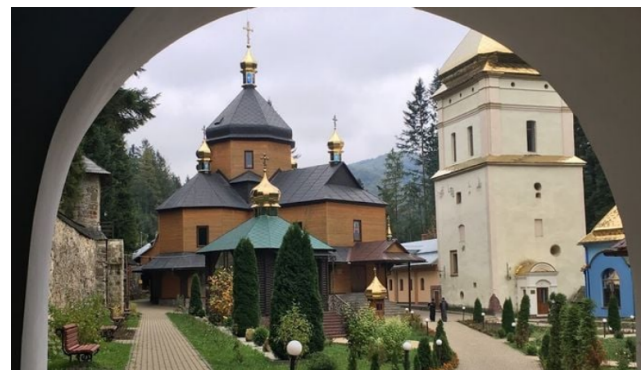


**Figure 6.** General view of the Exaltation of the Cross Monastic Ensemble in Maniava.

Source: [https://uk.wikipedia.org/wiki/%D0%9C%D0%B0%D0%BD%D1%8F%D0%B2%D1%81%D1%8C%D0%BA%D0%B8%D0%B9\\_%D1%81%D0%BA%D0%B8%D1%82](https://uk.wikipedia.org/wiki/%D0%9C%D0%B0%D0%BD%D1%8F%D0%B2%D1%81%D1%8C%D0%BA%D0%B8%D0%B9_%D1%81%D0%BA%D0%B8%D1%82).

Beyond the deep Baters Ravine, opposite the monastic cells and beneath Mount Koniukovata, lay the monastery cemetery, occupying a wide clearing<sup>[1]</sup>. The uniqueness of the monastic ensemble lies in its harmonious combination of wooden, masonry, and fortification structures, all organically integrated into the mountainous landscape<sup>[25]</sup>. At the far end of the large monastic courtyard, set at an angle to the axis of the main Holy Gate, stands the reconstructed wooden

Cathedral Church of the Exaltation of the Precious Cross, with its altar oriented to the east (**Figure 7**). The church has a cruciform plan, a five-part structure, and a single dome, built on a stone foundation. It belongs to the type of traditional wooden Hutsul churches of Ukraine. Attached to the central square log structure are three slightly lower five-walled arms, and to the west—a rectangular arm, all covered with roofs topped by small, blind domes. The central square is crowned with an illuminated octagon and a faceted dome. A wide perimeter gallery, supported by extended beams, surrounds the church<sup>[26]</sup>.



**Figure 7.** The Monastic Church of the Exaltation of the Cross in Maniava (photo from 2021).

The interior of the church was adorned with a unique iconostasis that separated the altar from the main prayer space for monks and laypeople. It was created and painted between 1698 and 1705 by a team of artists under the direction of the talented monk-iconographer from Bialystok in Volhynia, Yov Kondzelevych (**Figure 8**), who is regarded as part of the

golden heritage of Ukrainian sacred art<sup>[10,11]</sup>. The masterfully crafted five-tiered iconostasis represents a synthesis of arts, combining painting, decorative woodcarving, and gilding. It exhibits features of the transitional style from Renaissance to Baroque. Of the 55 icons from the sovereign, festal, apostolic, and prophetic tiers, Yov Kondzelevych personally painted a significant portion, including The Dormition of the Mother of God, The Ascension of Christ, Saints Anthony and Theodosius of the Caves, The Virgin Hodegetria, Christ the Teacher, and The Exaltation of the Precious Cross, along with the carved royal doors and deacon's doors featuring images of Archangel Michael and Archangel Gabriel<sup>[21]</sup>. Today, the iconostasis is preserved in the National Museum in Lviv. It remains a gem of Ukrainian sacred art and a testament to its spiritual grandeur.



**Figure 8.** Iconostasis of the Church of the Exaltation of the Cross, crafted by J. Kondzelevych.

Source: <http://kyiv-pravosl.info/2021/10/23/istoriya-mandriv-bohorodchanskoho-ikonostasa> (in Ukrainian).

In 2004, a new iconostasis was installed in the Maniava Monastery's Church of the Exaltation of the Holy Cross—an exact replica of the original monastery iconostasis. The iconostasis was created with funding from M. Vyshyvanyuk and V. Brus. The icons were painted by the artist M. Tymkiv from Ivano-Frankivsk. To the west of the main monastery church of the Exaltation of the Holy Cross stands the rebuilt stone Church of the Annunciation of the Blessed Virgin Mary, constructed between 2008 and 2011. It is a three-part, two-domed structure, with a square, considerably taller altar section, and somewhat lower nave and narthex. The church is adorned with a carved, gilded, two-tiered iconostasis. In

the centre of the north-eastern wall stands a tall, two-tiered square tower topped with a four-sided tented roof crowned by a lantern, also known as the Treasury.

A rectangular building of monastic cells with a kitchen adjoins the tall tower. Adjacent to the cells is a rectangular refectory—now the Church of Saints Boris and Hlib—which contains an entrance to the underground Church of the Lord's Tomb. Opposite the refectory, to the south-east, there is another rectangular building of cells with a kitchen and bakery. To the south-east stands the rebuilt second gatehouse—a square-shaped structure with a tented roof tower. The northern defensive tower, located in the wall near Mount Voznesinka, is stone-built, square in plan, and topped with a tented roof. The main vertical dominant of the monastery ensemble is the bell tower, constructed in Renaissance style between 1681 and 1684 with funds from Stanislav Morozenko, a colonel from Korsun<sup>[1]</sup>. The tower's architecture reveals monumental grandeur and refined Renaissance character, indicating the high craftsmanship of its builders. The stone, square-plan, plastered gate bell tower closes off the monastery's north-western wall. The tower comprises three levels. The first level is adorned with symmetrically arranged elongated niches, Renaissance sandriks, and frescoes of Saints Anthony and Theodosius<sup>[7]</sup>, as well as pilasters at the corners and a narrow-profile cornice.

On the inner side of the niches were depicted the first abbots: the monastery founder Job and his successor Theodosius; above them was an image of the Saviour; slightly lower to the left was an image of St. John the Theologian, and to the right—St. Apostle James<sup>[1]</sup>. The first level features an arched passage. The tower is covered with ribbed vaults. The second level of the bell tower is decorated with semi-circular niches adorned with frescoes, ornate Renaissance mouldings, and a large rectangular window, emphasized by pilasters at the corners and a pronounced cornice. The third level of the gate tower is the belfry, clad with wooden boards, with facades featuring decorative openings, topped by a four-sided tented roof with a break, crowned by a cross on the spire.

An additional spatial dominant is the monumentally designed, square in plan, originally three-tiered but now two-tiered, High Treasury Tower, located at the centre of the north-eastern wall above the Baters stream. The first tier has a beam ceiling, and the second is vaulted with ribbed vaults. Originally covered with shingles, the tower is now topped



with a faceted, tented roof with a break, crowned by a lantern with a cross. The tower's walls were decorated with frescoes: facing the Baters stream and Mount Konyukovata—an image of the Crucifixion of Christ; and facing the monastery courtyard—an image of the Dormition of the Blessed Virgin Mary with inscriptions above and below; at the bottom are two depictions of the Skete's founders, Job and Theodosius, and the date of the tower's restoration in 1781<sup>[1]</sup>. The entrance to the tower is decorated with a Renaissance portal. The entire monastic complex is enclosed by a high stone wall topped with a double-pitched shingle roof. The monastery stands as a unique example of merging defensive functions with the traditional wooden architecture of the Carpathian region, preserving the authentic features of 17th-century Ukrainian sacral buildings<sup>[27,28]</sup>. At the same time, the substantial thickness and specific structure of the masonry in its fortifications are key factors in the thermal inertia of such historical buildings, which is critically important for their long-term conservation and modern functional use.

The monastery buildings of the Manava Skete, diverse in architectural, spatial, and artistic design as well as building materials, are harmoniously interconnected and organically integrated into the complex mountainous landscape, creating a cohesive ensemble that produces a strong emotional impression. The fruit orchard, small vegetable garden, and apiary planted outside the monastery walls serve not only as the monks' primary food sources but also complement the monastery's structure within the mountain's natural environment. Today, the monastery is a major spiritual centre of the Orthodox Church of Ukraine.

## **5. The Monastic Community and Architectural Integrity in Organic Unity with the Natural Environment**

The ascetic monastic activity of the Exaltation of the Holy Cross Monastery is not aimed at generating material profit but rather at the pursuit of spiritual benefit, perfection, and harmonious interaction with nature. It represents the ideal of a self-sufficient monastic settlement characterised by high spirituality and a rich cultural tradition, oriented towards the careful preservation of the ecological integrity

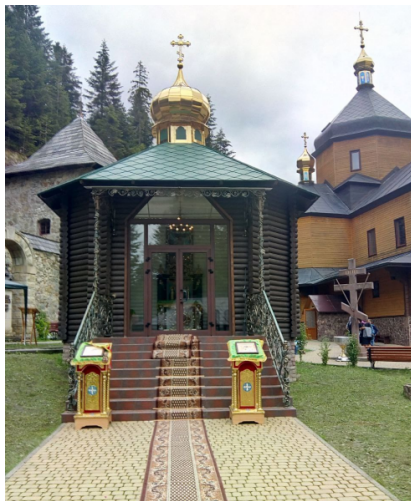
of the natural landscape, understood as a manifestation of God's creation<sup>[16]</sup>. The ascetic male monastery in Maniava is integrated into a pristine natural landscape, notable for its rich biodiversity: various species of trees, rare medicinal plants listed in the Red Book of Ukraine, a healing spring emerging from the Blessed Stone, the pure Baters River that flows past the monastery, as well as a diversity of bird and mammal species.

The monastery is virtually hidden within the forest, nestled among picturesque wooded mountains. It is noteworthy that the development of the monastic complex is based on the rational use of natural resources and ecological materials (wood, stone, sand), as well as a close interaction with the natural environment, maintaining a balance between nature and human activity. By employing wood as the primary building material for the construction of monastic shrines, the monks demonstrate a deep connection with nature. In essence, nature is integrated into the very architecture of the monastery. The monastic buildings, constructed from environmentally friendly materials, possess a high aesthetic value and have a positive impact on human well-being. The process of constructing timber monastic structures does not contribute to environmental pollution; on the contrary, it supports ecological sustainability and the protection of the natural environment. The monastery's close relationship with its natural surroundings constitutes an essential aspect of the identity of Orthodox monasticism<sup>[15]</sup>.

The Orthodox ascetic monastery cannot exist without its monastic garden, which symbolises the Garden of Eden; together, the monastery and the garden represent Paradise on earth. Outside the monastery walls of the Exaltation of the Holy Cross, a fruit orchard has been planted, containing apple, pear, plum, apricot, and walnut trees, together with bushes of currant, raspberry, gooseberry, guelder-rose, and grapevines—fruits and vegetables form the basis of the monastic diet. The orchard is enclosed by a low wattle fence and seems to merge with the surrounding natural landscape: forest stands of evergreen firs and spruces, bilberry and wild strawberry bushes, mosses and meadows rich in herbs such as arnica, periwinkle, St John's wort, rosemary, chamomile, violets, thyme, red clover, valerian, sage, centaury, and marjoram.

As a symbol of divine grace, the monastic garden provides a place of quiet repose and spiritual reflection for the

monks. The monastic courtyard is likewise organised as an inner, symbolic garden that visualises theological belief as an integral element of monastic culture. It follows a canonical form of landscape art: at the centre stands a chapel where the Divine Liturgy is celebrated on major pilgrimage feast days (symbolising Christ), alongside the stone cross marking the site of the Virgin's apparition (**Figure 9**), and a well; decorative trees, rose and lily bushes, pathways, lamps and benches compositionally complete the garden's structure (**Figure 10**). Roses and lilies are traditionally interpreted as symbols of the Virgin's purity and chastity. This garden—a symbol of beauty and divine grace—fills the monastic environment with aesthetic natural splendour and spiritual significance. The high pictorial quality of the monastery's setting, together with its profoundly sacred atmosphere, tranquillity, and beauty, continues to attract numerous pilgrims (**Figure 11**).



**Figure 9.** Monastic chapel.

Source: Author, 2020.



**Figure 10.** Landscape of the monastic courtyard.

Source: <https://go-to.rest/location/transcarpathia/manyavskiy-skyt/>.



**Figure 11.** Pilgrims visiting the Exaltation of the Holy Cross Monastery in Manyava during the Divine Liturgy celebrated by Metropolitan Epiphanius.

Source: Author, 2024.

The main monastic church of the Exaltation of the Precious Cross houses a miraculous icon of the Most Holy Mother of God known as the “Deliverer”, to which numerous pilgrims come, seeking spiritual aid. Another sacred object is a stone cross erected in front of the main church at the place of an apparition of the Virgin Mary. In the second half of the 13th century, the monks descended from the Blessed Stone in the mountains to the river below, where one of the monks experienced a vision of the Mother of God, who showed him the location where the church was to be built. Today, a stone cross stands at this site, and many monastery visitors remain there in prayer, stretching out their hands, feeling the vibrations of this blessed place. A pleasant warmth emanates from the cross, lightly tingling the fingers and filling the entire body with healing Divine energy.

The high spiritual culture and ecologically oriented way of monastic life at the Exaltation of the Holy Cross Monastery contribute to the formation of ecological values within Ukrainian society and serve as an inspiring example for emulation.

## 6. Discussion

The aim of this study of the ascetic Orthodox Exaltation of the Holy Cross Monastery in Manyava was to analyse its architectural and spatial structure and to demonstrate its relationship with the natural environment in the process of restoring the monastic complex. This approach seeks to understand the extent to which the monastery's deeply spiritual and ecologically oriented monastic life contributes to

shaping ecological values in Ukraine. The discussion of the research results is based on the thesis that the ascetic structure of the Holy Cross Exaltation Monastery in Manyava is not only a spiritual doctrine, but also a fundamental factor in the formation of its architectural and ecological stability. Situated within a mountainous forest landscape rich in biodiversity, the monastery maintains an organic connection with its natural surroundings. Its activities are grounded in spirituality, prayer, culture, humility, and labour, as well as a respectful attitude towards the natural landscape as a Divine creation<sup>[1,2]</sup>. The monastery does not engage in large-scale agriculture; instead, it maintains a modest organic orchard beyond its walls, a vegetable garden, beekeeping, and the careful use of natural resources in everyday life, all rooted in a reverent relationship with nature. The inclusion of territories beyond the monastery walls into monastic ownership creates a well-balanced landscape model, managed in harmony with the surrounding mountain forests located in some of the most well-preserved natural areas<sup>[16]</sup>.

The creation by the monks of a contemporary internal symbolic garden, based on theological and symbolic principles, attests to their spiritual culture and familiarity with landscape art. Above all, the monastery is a place of spirituality, tranquillity, ceaseless Jesus prayer, and culture, with the provision of ecological sustainability being a subsequent concern. The phenomenon of the Orthodox Holy Exaltation of the Cross Monastery in Manyava lies in the profound religiosity of the monks, who uphold spiritual and cultural values in harmonious connection with nature as God's creation.

The monastery's connection with the ecology of both the natural and monastic environments is expressed through a systemic ecological approach to the landscape formation of the monastic setting. The construction of monastery buildings using wood and stone, as well as the utilisation of wood waste for heating during the winter months and daily cooking, demonstrates practices that do not harm the natural environment but rather underscore the monastery's role in fostering ecological values.

The architectural evolution of the Manyavskiy Khrestovozdvizhenskyi Monastery demonstrates a unique example of combining medieval fortification traditions with the rational use of the natural and climatic potential of the Carpathian region of Ukraine. It is worth noting that the main structures (the "Treasury" tower, walls) are built of local sandstone and

river stone on lime mortar. The large thickness of the walls provides high thermal inertia: buildings warm up slowly in summer and retain heat for a long time in winter, which is critical for the mountain climate. The use of natural stone and wood contributes to the natural "breathing" of structures. However, modern studies indicate the problem of capillary moisture in the lower tiers of the towers due to the lack of modern waterproofing of the foundations. Due to the sandstone walls with a thickness of 1.2–1.5 m, the thermal inertia calculated by the formula:

$$D = \sum R_i S_i = \sum \frac{\delta_i}{\lambda_i} S_i$$

$D$ —is the dimensionless value of the thermal inertia of the protective structure;

$R = \delta/\lambda$ —is the thermal resistance of the material layer;

$\delta$ —is the thickness of the material layer (m);

$\lambda$ —is the thermal conductivity coefficient of the material;

$S$ —is the calculated heat absorption coefficient of the material.

The height of the stone towers is over 6.0. This ensures exceptional microclimate stability when the outside air temperature fluctuates by 20 °C; the internal temperature changes only by 1.5–2 °C during the day without the involvement of active heating systems. This ensures a stable microclimate due to the high thermal inertia of the walls.

Engineering features of the monastery buildings include the structural massiveness of the walls made of local sandstone for thermal inertia, adaptive foundation on complex terrain using a rock base, a well-thought-out hydraulic system with autonomous water supply, tent rafter systems for snow removal and natural ventilation, as well as the synergy of materials (stone, lime mortar, wood) for humidity regulation.

The foundations of the structures are integrated directly into the bedrock and dense loam, which ensures the stability of the facilities on complex slopes with a steepness of 15–35° and prevents landslide processes. The hydrotechnical system of the complex is based on the use of a natural aquifer with a flow rate of sources of  $\approx 1$  L/min, which guarantees autonomous water supply and meets the standards of sustainable water use, highlighted by the State Agency of Water Resources of Ukraine and maintains a stable level of air humidity (75–85%), necessary for the conservation



of authentic wooden elements. The roofing system is represented by complex layered and hipped rafter structures with a large angle of inclination, which not only effectively drains intense precipitation, but also creates a “cold attic” space for natural ventilation of wood, preventing its biological destruction. Thus, the synergy of traditional materials and defense engineering solutions forms an energy-efficient and environmentally balanced structure capable of self-regulation over long historical periods.

Special attention deserves the engineering solution of the wooden objects of the monastery complex, which demonstrates the continuity of the traditions of sacred construction of the Carpathian region of Ukraine. The wooden architecture of the Skete, represented by the rebuilt Cathedral of the Exaltation of the Holy Cross and cell buildings, is based on the use of local coniferous wood (spruce, fir), which is characterized by a high level of environmental safety and low inherent thermal conductivity ( $\lambda \approx 0.09\text{--}0.15 \text{ W/(m K)}$ )<sup>[29]</sup> (p. 65). The roofing system is represented by complex layered and hipped rafter structures with a large angle of inclination, which not only effectively remove intense precipitation, but also create a “cold attic” space for natural ventilation of the wood, preventing its biological destruction.

The hydrotechnical regime of the territory, where the air humidity is stably kept within 75–85%, ensures the natural plasticity of wooden elements, minimizing the risk of deep cracks in the log mass. The use of traditional connection nodes (“lock”) without rigid metal fasteners allows structures to adapt to seismic vibrations and seasonal soil deformations on slopes with a steepness of 15–35°. Such synergy of materials and constructive solutions forms an energy-efficient and environmentally balanced structure capable of self-regulation over long historical periods. The use of natural wood in combination with stone contributes to the “breathing” of structures, which minimizes the accumulation of  $CO_2$  inside the premises and creates a microclimate favorable for health.

The modern stage of the monastery’s evolution (XX–XXI centuries) is marked by the introduction of methods of bioprotection of wooden structures using deep-penetration antiseptics, which, in conditions of humidity of 75–85%, is critical for preventing biological destruction<sup>[25]</sup> (p. 84).

The use of tent rafter systems and a roof made of shingles treated with natural resins provides effective ventilation

and waterproofing, which corresponds to the strategy of sustainable development of the Carpathian region<sup>[17]</sup> (p. 214). Thus, the architectural and spatial structure of the Skete is transformed from a purely defensive object into a quantitatively measured ecological system, where each structural element works to preserve the protected ecosystem of the Carpathians.

The living relationship between the monastery and nature is reflected in the organic unity of the monastery’s wooden structures with the surrounding landscape, both external and internal. The aesthetic quality of the monastery’s architecture, harmoniously integrated with the inner landscaped environment created by the monks, enriches the monastery’s spiritual atmosphere with aesthetic virtues<sup>[4]</sup>. Together, they form a coherent sacred environment imbued with profound religious meaning and landscape artistry, representing an ideal of Christian values and serving as a spiritual guide not only for the monks but also for numerous pilgrims and visitors.

Comparing the Maniava Skete with the large monastic centers of Greece (Athos and Meteora) allows us to see a single model of Orthodox eco-management, adapted to different landscapes. A striking example of harmony with nature is the Holy Mount Athos (Greece), an autonomous monastic republic that has preserved vast forests and unique biodiversity for centuries. Life here is based on self-sufficiency, organic farming, and the use of renewable energy sources, which makes Athos a model of sustainable development. Another example is the monasteries of Meteora in Greece, which are built on the tops of giant rocks. These monasteries demonstrate architectural integration into the natural landscape without destroying it. Unlike Mount Athos, where each monastery independently manages its forest area, the Manyava Monastery operates within the framework of a state nature reserve fund, which requires close cooperation with ecologists. Greek monasteries and the Ukrainian Exaltation of the Holy Cross Monastery (Maniavsky Monastery) demonstrate an ecological ethic based on asceticism—the principle of “sufficient minimum”, which is key to modern models of sustainable living.

Thus, the monastery’s overall ecological strategy reflects ecological practices and the aesthetic foundations of the monastic layout and environment, grounded in high spirituality and ecological values.

## 7. Conclusions

The Exaltation of the Holy Cross Monastery in Manyava, as a major spiritual and cultural centre of Orthodoxy, has undergone a complex trajectory throughout its existence: from its foundation and period of flourishing, through decline and destruction, to its modern-day revival. Despite difficult historical circumstances, the monastery has been restored as a spiritual hub of Orthodoxy in the western region of Ukraine, retaining its unique splendour. The monastery's distinctiveness lies in the ecological nature of the materials used in its construction (wood, stone, sand) and its inseparable relationship with nature, which contributes to environmental protection as well as the aesthetics of its architecture and monastic landscape. The harmonious combination of wooden and stone buildings from different periods, surrounded by fortified thick walls with three towers and characterised by notable architectural and artistic solutions, makes the monastery both attractive and unique. Situated within a unique mountainous forest environment rich in biodiversity, the Exaltation of the Holy Cross Monastery forms part of Ukraine's cultural and natural heritage. The distinctiveness of the monastic ensemble lies not only in the harmonious functional integration of wooden, masonry, and fortification structures but also in the close interconnection between spirituality, aesthetics, and the monks' ecologically responsible way of life. The ascetic male monastery was rebuilt on the principles of deep spirituality, rational use of natural materials, and a systemic approach to the ecology of the natural environment, serving as an example for other social organisations to emulate. High spirituality, prayer, labour, humility, and ecologically oriented activities are the guiding principles of the monks of the Exaltation of the Holy Cross Monastery. The natural conditions, the profoundly spiritual atmosphere, and the ecological environment of the monastery attract young monks to dedicate themselves to service to God within its walls.

The interest of younger generations in the monastic way of life, spirituality, and culture has always been a significant factor in drawing numerous pilgrims, scholars, and tourists to visit the Manyava monastery.

It has been proven that the ecological role of the Manyava Skete lies in the synergy of spiritual asceticism and engineering feasibility, where the sustainable microclimate of the buildings ( $D > 6.0$ ), rational water use ( $\approx 1$  L/min) and

the preservation of a carbon-negative landscape (85% forest cover) form a quantitatively measured model of sustainable development and an effective social and educational center for the establishment of environmental values in Ukraine.

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Data is available upon request.

## Conflicts of Interest

The author declares no conflict of interest.

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