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184-195 **GABRIJELA RAJIĆ
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TRADITIONAL HERZEGOVINIAN RESIDENTIAL ARCHITECTURE OF GORNJI CRNAC

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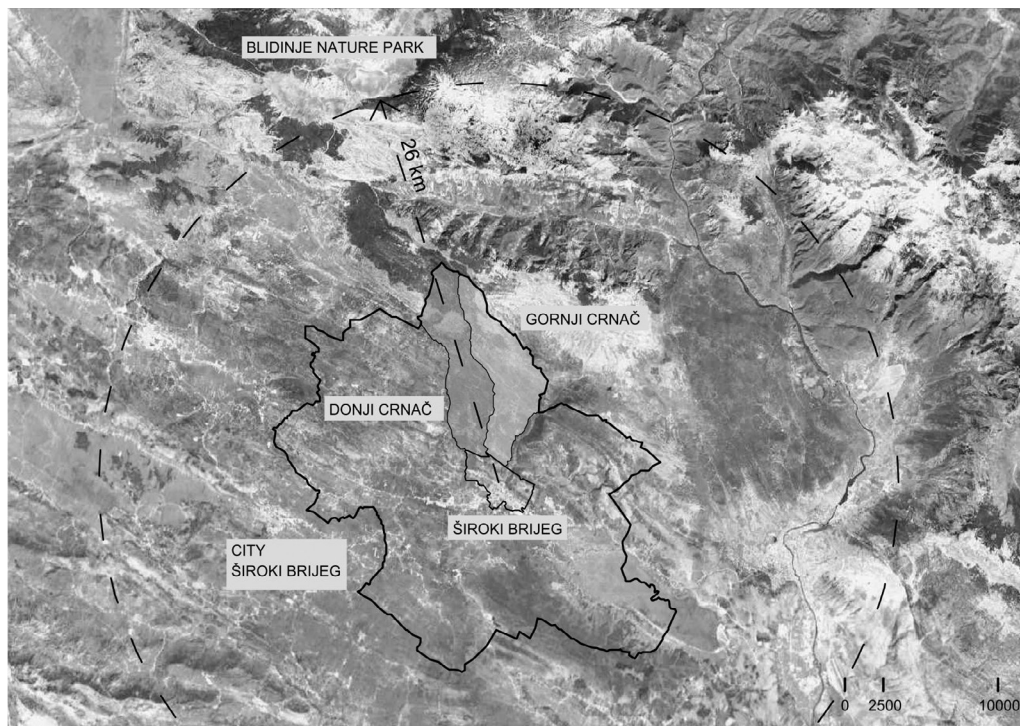


FIG. 1 LOCATION OF THE STUDIED AREA



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TRADITIONAL HERZEGOVINIAN RESIDENTIAL ARCHITECTURE OF GORNJI CRNAČ

CRNAČ – ŠIROKI BRIJEG, BOSNIA AND HERZEGOVINA
STONE CONSTRUCTION
TRADITIONAL ARCHITECTURE
WOOD CONSTRUCTION

The village of Gornji Crnač, part of Široki Brijeg, in Bosnia and Herzegovina, offers insight into the authentic traditional construction of the Croatian population of Herzegovina. The heritage, however, is at risk due to the village's depopulation. To build upon previous research and to assess the current preservation state, a field survey in the preserved hamlets was conducted, along with the interviews of the few remaining inhabitants. Some hamlets were permanently inhabited,

while others were occupied only seasonally. Built with stone, structures have remained physically preserved and authentic, intact by decades of abandonment that shielded them from alterations, and modifications. It was found that previous research, focusing on the traditional housing construction techniques of the broader Široki Brijeg area, overlooked the distinct features uniquely crafted by local builders in the village.

INTRODUCTION

The village of Crnač, the largest in north-western Herzegovina by area, belongs to the city of Široki Brijeg. It is located north of the city, geographically divided into Gornji i Donji Crnač (Lower and Upper Crnač). The village was first mentioned in 1468 in the Turkish taxpayer list and was named after the black color of the ash leaf (MZ Crnač, 2022). According to climatic characteristics, the village of Crnač has dry and hot summers, and the mountainous areas with lower temperatures provided better conditions for grazing livestock. The population used the so-called summer and winter housing (Rajić, T., 2023). The cattle migration lasted from 1 June to 29 July, and had three phases: 1. migration to the “lower grasses” – if the year was warmer at the end of January, 2. migration to the “middle grasses” – after the Feast of the Annunciation (*Blagovijest*) on 25 March, and 3. migration to the “upper grasses” – after the Feast of Saint George (*Durdevo*) on 23 April (Šaravanja and Oreć, 2022: 181). During the warmer months, most migrations gravitated towards the area of the present-day Blidinje Nature Park, to hamlets in the area of Čabulja mountain (Popović, 2008: 63-67), and to a lesser extent within the borders of the villages (Fig. 1).

The initial settlement of these places was driven by access to fertile land and pastures for grazing. The hamlets themselves emerged

as families expanded and new households separated from the initial family household. The most significant resource shaping construction in this area is stone, which has played a crucial role in its architectural history. As a result, physical remains of traditional residential construction in the area still endure. The architectural concept and construction are a direct reflection of the surroundings, with buildings emerging organically from the landscape. The techniques and knowledge associated with the traditional architectural heritage of western Herzegovina have been preserved mainly through oral tradition, while written sources on them remain scarce. Franciscans, the main disseminators of knowledge, literacy and culture in Herzegovina, documented the population and the region through their records. However, such documents were preserved in fragments since the archives were burned in 1945. In the review of genealogy and indigenous peoples in this region, Mandić (2002) states that the population is predominantly Croatian and those migrations occurred between Herzegovina and Dalmatia due to Turkish influence in western Herzegovina. A review of the basic characteristics of folk architecture in Dalmatian regions (Freudenreich, 1962) reveals their similarities with the traditional architecture of western Herzegovina. A literature review records information on the traditional architecture of western Herzegovina – to which the village of Crnač belongs – primarily through analyses of individual elements such as walls, lintels, roof structures, and fireplaces, rather than through studies of houses as integrated systems in their cultural context. Bugarski has so far provided the most detailed description of the rural architecture of this area (Bugarski, 1970: 135-173). Research conducted by her team in 1970 led to the conclusion that, in the area of Široki Brijeg, a transitional form between the true stone house and the wooden house was widespread. The primary types of residential buildings had both significant residential and economic functions; functions that were gradually abandoned – though not entirely – at the time of the study. However, a comprehensive overview remains incomplete due to insufficient documentation: “According to folk tradition, it is known what the rural house in the surroundings of Lištica looked like in the first half of the 19th century, that is, at the end of Ottoman rule in Bosnia and Herzegovina. Due to the lack of historical documents and insufficient archaeological research of this area, it is difficult to determine what it was like in earlier periods.” (Bugarski, 1970: 171-172). *Ecoplan's Handbook* (***) (2016) is a resource offering insight into the

historical aspects of construction, guidelines for renovation, and contemporary reference examples of construction in Herzegovina, where historical motifs remain deeply embedded. More recently, Šaravanja and Oreč have explored dry-stone construction, which has endured over time to present day, that also offers insights and knowledge about residential complexes that differed under the influence of the period, location, quality and processing of the stone of the village houses (Šaravanje and Oreč, 2023). They were architecturally simple small stone houses with a single-room rectangular floor plan, measuring 6-7 by 4 metres. They were built on a sunny side, sheltered from the wind, most often semi-buried and built on the rock. They had an open hearth, wooden roof structure, compacted earth floors, and the only opening was a small door on the longer façade. Palavestra argues that the population of the Široki Brijeg area – and its surroundings, including Crnač – embodies the full range of elements characteristic of the entire population of western Herzegovina (Palavestra, 1970: 5). However, as stated: “The contributions published here, of course, cannot represent all areas of folk life that require ethnological analysis and highlight the need for ethnological study. There was a lack of strength, time, and resources for that. I believe that the data contained in the individual works published here also need to be further deepened through fieldwork, since it is undoubtedly true that we have not exhausted the full richness of the folk culture of the inhabitants of that area.” (Palavestra, 1970: 5). Today, however, these locations are marked by inaccessible and abandoned architectural complexes and buildings. Moreover, the older residents who once lived in these traditional settings still recall the time of construction, and possess detailed knowledge of the building techniques employed and architectural features used in traditional housing. Therefore, it is necessary to further document and better understand traditional architecture, which is irreversibly disappearing due to urbanisation and the abandonment of this area.

METHOD

To obtain deeper insight into the knowledge about traditional housing and construction techniques of western Herzegovina, a field survey of the physical remains in the selected area of Gornji Crnač was conducted. Characteristic elements of stone and wooden structures were identified, photographed, sketched, and captured through diagrams and notes. Accounts from local residents

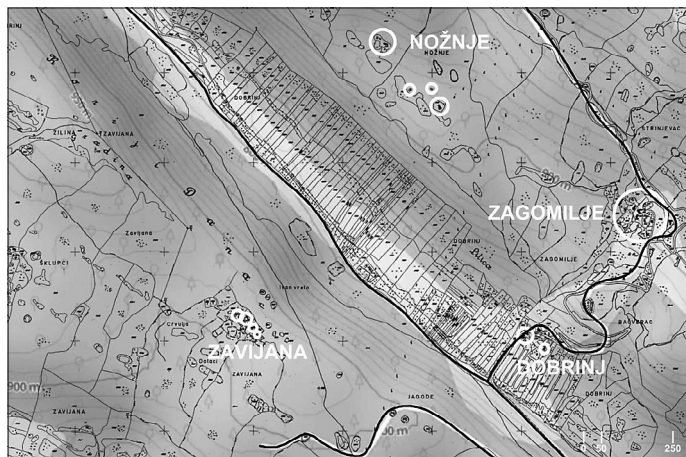


FIG. 2 LOCATION OF THE HAMLETS AREA

were collected to provide additional insights and to complement existing knowledge of traditional housing construction of the period. Of the thirteen residents who provided their accounts, all were born in Gornji Crnač. Eight still live in the village – six in Gornji and two in Donji Crnač – while four live in the city of Široki Brijeg, and one lives in Mostar. The informants' age ranges from 50 to 83, with five individuals under 65.

HAMLETS

The village follows the dispersed Dinaric settlement pattern, with compact hamlets forming smaller clusters in which groups of the same kin and surname lived (Bugarski, 1970: 136). According to the accounts of six informants, there were subgroups within the groups, with nicknames derived from the mother's maiden surname.

The area of Gornji Crnač was surveyed, including the following preserved hamlets: Zavijana, Nožnje, Dobrinj, Pod Greda, Jabuka, Podi, Pod, Zagomilje, and Žukovica. Some of these hamlets were intended for seasonal and some for permanent residence of the local population (Bugarski, 1970: 136). Permanent settlements include the hamlet of Podi, home to the Naletilić family, Pod Greda and Jabuka, where the Karacić family resided, and Dobrinj, belonging to the Ljubić family as provided by the living members of the family. Zavijana was a hamlet designated for temporary summer residence of the Šaravanja family, from March to early June and from October to Christmas, while from June to October the family resided at Bare in today's Blidinje Nature Park (Rajić, S., 2023). Nožnje, the area with the most fertile land in the village, was seasonally inhabited by the Karacić family from March to November. Individual Karacić families with nicknames: Soljići, Jurići, Sudurovi, Vraninići, and Palcušići lived in

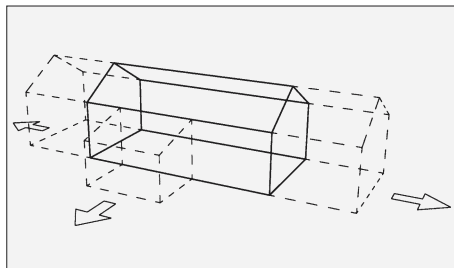


FIG. 3 SKETCH OF TYPICAL IN ROW AND PERPENDICULAR EXTENSIONS TO MAIN HOUSE VOLUME

FIG. 4 DIAGRAMMATIC SKETCHES OF THE HOUSE ELEMENTS (A), AND THE RESIDENTIAL COMPLEX (B)

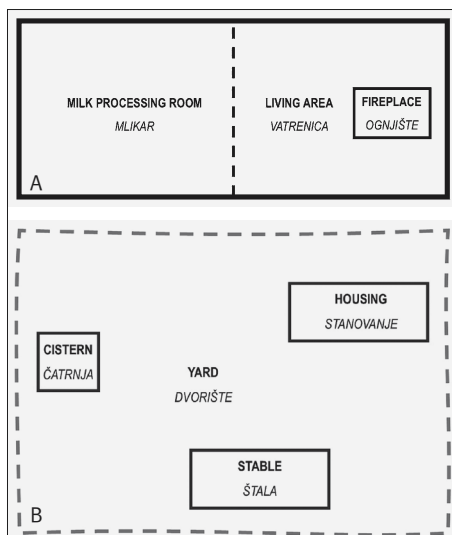


FIG. 5 A) RETAINING WALL EMBEDDED IN THE GROUND – NOŽNJE; B) SPECIFIC WALL SOLUTION WHERE THE COMPACTED SOIL LAYER IS MISSING – POD GREDA



Nožnje at the northernmost point (Rajić, M., 2023; Fig. 2). The last to leave Nožnje was Mirko Karačić – Palčusić, on 14 August 1983 (Rajić, S., 2023).

BUILDINGS

Hamlets contain residential buildings, out-buildings, auxiliary structures, and equipment, primarily constructed from stone, with wood and other materials used to lesser extent. The buildings were arranged either parallel or perpendicular to the terrain contours (Živković, 2013: 23). Herzegovinian residential architecture was marked by a one-room layout (***) 2016: 16), where people lived, cooked and slept. At the center of the house was an open hearth around which the family gathered. However, examples of such houses have been preserved only in traces, found on-site as one of the rooms of an extended house. The layout was typically an elongated single-storey structure, with two main typologies: one on flat terrain and other on sloped land, where part of the house was embedded into the terrain (***) 2016: 17). As families grew, additional floor or horizontal extensions were added – volumes were attached to the main volume in a row (Fig. 3) or perpendicular to the main structure (Bugarski, 1970: 147).

These added volumes were built using the same material and construction techniques. The cross-section of the house usually followed an archetypal design, with the gable roof placed on the rectangular prism. The houses were designed to withstand local weather, including wind, snow, and ice. Over time, the design developed into a two-part

residential structure, with a living area (*vatrenica*) and a milk processing area (*mlikar*) (Bugarski, 1970: 146; Fig. 4). The courtyard of the traditional Herzegovinian house in this region typically included a cistern, pergolas (often a vine-covered canopy), and greenery (Bugarski, 1970: 138). Pergolas, a common feature of the traditional Herzegovinian courtyard, were, however, absent in the surveyed area of Gornji Crnač. Review of the literature indicates that in Herzegovina there existed both open and enclosed courtyards. Open-type courtyards were without walls or fences, which enabled the interweaving of private and public spaces through the arrangement of agricultural buildings alongside residential structures (***) 2016: 13). Accounts from local informants, along with field surveys, confirmed that only open-type courtyards were present within Gornji Crnač (Fig. 4b).

RESIDENTIAL BUILDINGS

Residential houses were built with stone and lime mortar. The mortar was prepared either from slaked lime and sand or from slaked lime and red soil (*crvenica*). The stone used for residential buildings was more finely worked (dressed stone), whereas for agricultural or utility structures, the workmanship was simpler and rougher (rubble stone). The walls were constructed with two outer faces made of stone blocks, while the core was filled with smaller stones, known as *sakavac* or *skalja*. The total thickness of the walls typically ranged from 50 to 80 cm (Bugarski, 1970: 151-152; Rajić, S., 2023; Karačić, P., 2023). Initially, construction employed the dry-stone technique, without any binding material. Later, hewn stone blocks were laid in lime mortar, *gnjili* (clay) or *rudaca*. *Rudaca* was produced by mixing red soil (*crvenica*) with slaked lime (Karačić, P., 2023). The first row of stones, 40 cm high and projecting at least 3 cm beyond the wall plane, was the most precisely shaped (Bugarski, 1970: 152; Karačić, M.P., 2023). The houses were typically embedded into the surrounding terrain on one or three sides (Fig. 5), and where this was not possible, an artificial embankment of earth and stone was created, known as *sopa* (Bugarski, 1970: 140). A field survey revealed a unique feature in the construction of a double wall in a residential building in the hamlet of Pod Greda, where the space between the house wall and the retaining wall was neither filled with soil nor had it ever been (Karačić, M.V., 2024; Fig. 5). The published literature does not mention this specific feature because it is difficult to detect without a detailed survey, which was not feasible due to time constraints and the large area covered.



Also, during field visits, it was observed that niches were often made in the walls of residential and outbuildings, which, according to the testimonies, served as storage for a small number of dishes and tools. In addition to the walls of houses, walls of the pens used to house livestock were also constructed. Boundary walls between individual fields were built as well, and with the rise of ownership relations, these walls known as *meda* began to define the limits of individual plots. All these walls were built using the dry-stone method (** 2016: 22). Additionally, as accounted by the six informants, the steep terrain in the hamlet of Noznje led to the unique design for the terraces and retaining walls with stairs providing access to individual levels.

SEASONAL BUILDINGS

In seasonal buildings, the primary function was economic, with the residential function being secondary (Marković, 1971: 45). In the literature, we find that the earliest known forms of seasonal housing were single-room prefabricated wooden huts. These huts were the foundation for the development of housing which contained all the familiar architectural elements of a permanent residence, but of a more modest character (Vego, 2000: 259-272), also confirmed by two informants. The huts were dismantled during the winter months and, upon the return of the warmer season, were erected in the same or more favourable locations. The interior was typically divided into two parts (same division as in permanent buildings): *vatrenica* and *mlikar* (Karačić, P., 2023; Fig. 7). Over time, the buildings became more permanent as stays in the mountainous areas lengthened, or became permanent for some families. Informants account (Rajić, S., 2023) that, as a result, the predominantly wooden structure of the house was gradually replaced by stone, with the walls being constructed using a dry-stone method (Bugarski, 2001: 45).

BUILDING ELEMENTS

The published sources state that the floors of residential houses were most commonly made of rammed earth or clay (Bugarski, 1970: 147), which was corroborated by locals. Over time, the floors were covered with wood boards, or with stone slabs. Wood was typically used for living quarters, whereas stone, a naturally colder material, was reserved for the house's utility rooms (Karačić, P., 2023). *Gnjila* was placed in two layers beneath the hearth. The first layer consisted of clay mixed with pig hair, while the second was made of clay alone (Bugarski, 1970: 157; Rajić, S.,

2023). The clay was compacted using wooden tools, and it could last several years when made with this method (Rajić, A., 2023). In the hamlet of Pod, two households of the Ljubić family contained a *kut* (Fig. 6) – a setup of two vertical stone slabs with a horizontal one placed across them – used to collect ash from the hearth (Bugarski, 1970: 157). The survey didn't find instances of this setup anywhere else, and locals also affirmed that this element was rarely employed in the village. Also, in Noznje, within the house of Mirko Karačić, the hearth was built into the wall – or enclosed in a manner resembling contemporary fireplaces (Rajić, T., 2023) – making this design distinctive – not previously recorded by literature, since no research was prior conducted in this hamlet.

With the advancements of the twentieth century, ground floors began to feature a thin layer of concrete (Brekalo, 2023). During this period, open hearths were often replaced by stoves called *fjaker* which were primarily used for heating, but also served for cooking and baking (Brekalo, 2023). Shortly after their introduction, they became a standard feature in the entire village. Chimneys were absent; instead, a circular opening was left in the outer gable wall. According to the informants, seasonal mountain houses, much like those in the lowlands, featured a rectangular floor plan, with a single space and a gable roof made of a wooden structure covered with rye straw. One end of the house housed a hearth, while at the other end was unheated and used for milk processing. Where present, interfloor structures were made of wood, most commonly oak and *cerovina* – a local



FIG. 6 "KUT" IN THE LJUBIĆ – POD FAMILY

FIG. 7 A) PHOTO OF THE MARKO ŠARAVANJA PREFABRICATED WOODEN HUT IN DONJE BARE; B) SKETCH OF THE TYPICAL WOODEN HUT

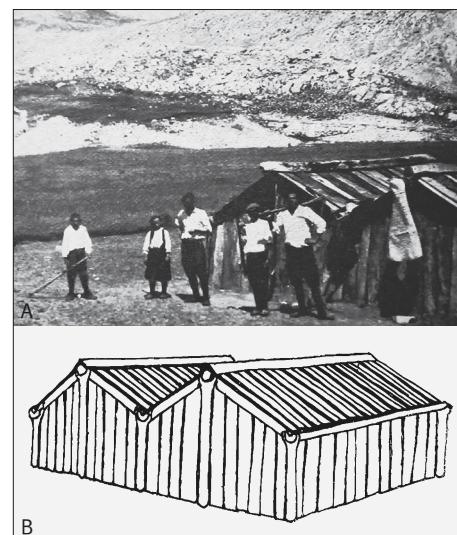


FIG. 8 ILLUSTRATION OF TWO TYPES OF CEILING:
A) BEAMS AND WOVEN BRANCHES – LISA;
B) BEAMS AND PLANKS ARRANGEMENT – TRENICA



TABLE I LINTELS
OVER WINDOWS
AND OVER DOORWAYS

Lintels over windows



External and internal view – Pod

External and bottom view – Pod



External view – Noznje



External view – Zavijana

Lintels over doorways



External and internal view – Dobrinj



term for a type of oak (*Quercus cerris*; Karačić, P., 2023).

There were two types of wooden inter-storey structures: *trenica* and *lisa*. The term *trenica* (Fig. 8b) referred to a wooden framework composed of beams and planks. The planks were hewn with tapered cross-sections to allow them to overlap one another (Karačić, M.P., 2023). The *lisa* (Fig. 8a) was more complex to construct and produced a more porous structure, since the material was more readily available. It consisted of beams supporting wooden slats, between which *pruce* – thin branches were woven. Smoke from the ground-floor hearth would rise through the ceiling into the attic where meat was dried (Bugarski, 1970: 146; Karačić, P., 2023). This type of intermediate floor construction was

found preserved in the hamlets of Zavijana and Zagomilje.

Functionally, the houses were semi-residential and semi-economic structures (Bugarski, 2001: 18). The living space consisted of a single room with a hearth, which functioned as the main area for daily activities, including living, eating, and sleeping for the oldest members of the household – on low beds positioned on either side of the hearth. The ceiling above the unheated ground-floor *mlikar* area was constructed using wooden beams and planks (*trenica*), as were the ceilings of other unheated sections of the building. The attic also served as storage for agricultural products and, in the absence of designated bedrooms, it was used for sleeping as well (Karačić, M.P., 2023). Since wood was less



External and internal view – Zavijana



External and bottom view – Noznje



External and internal view – Noznje

available, and the length of timber was often limited, it determined the width of the house. Consequently, rooms were about 4 m wide – a dimension that persisted in later construction (Karacic, M.B., 2024).

Initially, the windows, so-called *pender*, were rather small (Rajic, A., 2023), designed to minimize heat loss during the winter and shield the interior of the house from excessive summer heat. Lintels were most commonly constructed using stone beams and vaults, with each craftsman applying his own solution; by the end of the 20th century, concrete had assumed the primary role (Naletilic, 2024). Stone window frames were crafted from local stone; however, due to their weight, they required the gathering of a large number of villagers to carry the stone from

the quarry to the construction site (Rajic, S., 2023).

The lintels were carved with greater precision than the rest of the house (Bugarski, 1970: 152). A combination of wooden and stone lintels was used less often, and one instance of this combination is still preserved in the hamlet of Pod. In the period when glass became available, window sashes had a thin wooden frame, divided into two or three panes, because glass of larger formats was too expensive. The position of the windows was determined by the internal organisation of the house and the functional requirements of each space, which is why the façades had different irregularly arranged openings (Kalajžic, 2023). Whoever had the means, installed iron bars (*demeri*) on the windows (Table I),

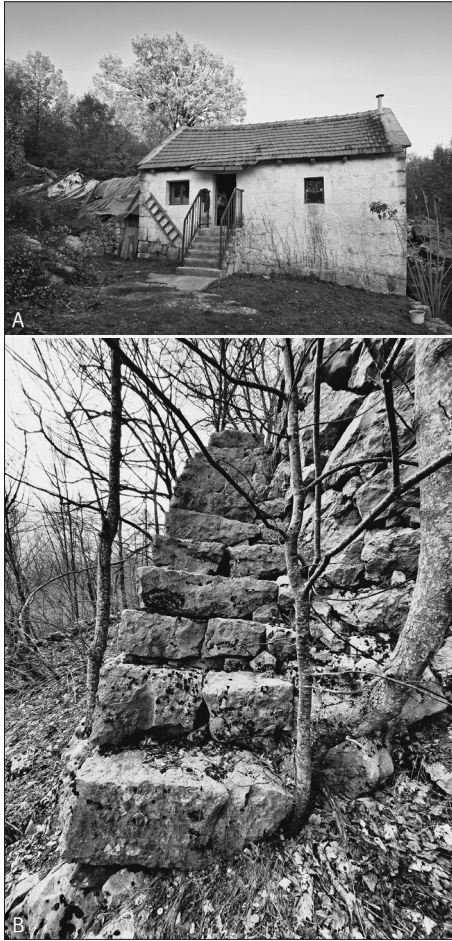


FIG. 9 A) THE FIRST HOUSE IN THE VILLAGE COVERED WITH TILES – ŽUKOVICA; B) THE LONGEST FLIGHT OF STAIRS IN THE VILLAGE – NOŽNJE

since they were the most expensive part of the house, and their manufacture required the work of a blacksmith (Karacić, M.P., 2023). The doors were made of wood, and featured two types of lintels in their design: rectangular and semicircular (***) 2016: 27; Table I). Finely-hewn blocks were used in the construction. One instance of a semicircular lintel has been preserved on the Ljubic family barn in Dobrinj; it was designed by a craftsman from the same lineage and remained in use until the 1990s (Ljubic, 2024). Apart from the rectangular and semicircular lintels, the terrain survey revealed also triangular lintels, an arched doorway, and a relieving arch as well as relieving arch above a stone lintel, and combinations of wooden and stone elements (Table I). These details varied from one master builder to another and often differed between the interior and exterior faces of the walls, reflecting the craftsmanship of different masons and suggesting the coexistence of several building traditions within the village.

The entrance door to the house was wooden, divided horizontally into two sections – an upper and a lower door. During hot days, only the upper door was opened, while the lower door remained closed to prevent animals from entering the house (Karacić, M.P., 2023).

The roof structure was built with timber, while the covering on older houses was made of stone slabs measuring 3 to 4 cm thick (Bugarski, 1970: 152; Karacić, P., 2023). They were laid diagonally with an appropriate overlap to ensure watertightness as presented in *Stara seoska stambena arhitektura u Hercegovini* (***) 1960). As stated by the four informants, it is known that the ancestral house of the Ćorić family in the hamlet of Žukovica was covered with stone slabs until 1912, when they were replaced with roof tiles (Fig. 9a), making it the first such roof in the village (Ćoric, 2024). The research found that the most common roof covering used rye straw, which remained in use by all buildings in the hamlet of Nožnje until they were abandoned (Rajić, J., 2023).

As a result, not a single roof has been preserved today. Later, in the twentieth century, roofs were covered with tiles, which lightened the roof structure and extended the life of the roof itself. Grooved tiles were more commonly used, while channel tiles were less frequent due to their more complex installation (***) 2016: 32). The published sources state that the tiles were connected with wire, but due to strong winds, they were subsequently covered with mortar along the gable and dovetail (Bugarski, 1970: 153), which

was confirmed by the informants and the preserved material evidence on-site.

Staircases, when present, were typically external, while the internal ones were generally absent (Bugarski, 1970: 156). Due to its terraced design, the hamlet of Nožnje features numerous stone steps built directly into the terrain. The residential terrace of Mirko Karacić's estate is connected to the lower terrace by a series of steep, dry-stone steps that ascend through twelve heights (Karacić, M.P., 2023; Fig. 9b). They were also the only ones to reach such height. On the shorter façades of the family house on the same estate, dry-stone steps provided access to the attic. A wooden staircase with an access terrace once stood at the Šaravanja family's two-storey house in the hamlet of Zavijana (Rajić, S., 2023). However, to this day it has only been preserved in memory of people who lived there.

WATER PROVISION STRUCTURES

Herzegovina is scarce in permanent watercourses, and therefore water provision is an integral part of every homestead. Within the hamlet there are: cisterns, rock hollows (*kamenice*), and troughs that were used to collect rainwater (Table II). First forms of cisterns were open stone cisterns, commonly referred to as "wells" in the region (*bunar*). Common to the entire area, they were recorded in the hamlets of Pod Jabuka and Žukovica (Karacić, M.B., 2024). Cisterns, vaulted structures known as *catrnje*, built adjacent to the house featured a square or rectangular design. The floor and walls were made of stone, and the cistern space was vaulted with a stone vault built on wooden formwork.

The cisterns interior surfaces were either plastered with mortar mixture of slaked lime and red soil (*crvenica*) or lined with clay to ensure water tightness (Bugarski, 1970: 169). The opening in the vault often measured 50×50 centimetres and was surrounded by four thicker interlocked stone slabs (Karacić, P., 2023). The cistern was entered through this opening for cleaning and repairs. The water used to fill the cistern was collected from the surrounding terrain and filtered. Examples of such cisterns are still preserved in the hamlets of Zavijana, Nožnje, Pod and Zagomilje. Since the inhabitants were not wealthy, they used natural resources in every segment. Thus, cisterns in the Nožnje area, if possible, were built between rocks where only two sides had to be walled off (Karacić, M.P., 2023).

The informants confirmed as claimed by the literature that *kamenice* were natural depres-

sions in the rocks used for collecting rainwater and that they were used both by shepherds and cattle during grazing (Bugarski, 1970: 169). On the other hand, the troughs were carved stone basins set beside the cistern. They were typically located in front of cisterns and houses, and they are more concentrated in the Noznje area where a virtuous and well-known stone shaping master used to live. Later, when tin gutters were introduced, water collection from the roofs of houses began.

Cisterns started to be made of new materials, such as concrete found in the hamlets of Podi and Pod Greda. The cistern also served as a food storage space where meat could be preserved for a few days. It was lowered in a bucket on a rope into the cistern, to the zone just above the water where the temperature was lowest (Karacić, P., 2023).







OUTBUILDINGS

Outbuildings were: barns or stables, pigsties, threshing floor, chicken coops, etc. The farm complex was small and modest, only as much as was needed to meet the needs of a single family. The small buildings still fulfilled their function, because the climate was favourable and it was possible to stay outside and do the work almost all year round (Freudenreich, 1962: 205). Farm buildings were often partially buried in the ground of the sloping terrain on which they were built. The processing of stone for walls was much simpler and rougher (broken stone). The attic was most often used to store hay for livestock, but it also served as a place to sleep for the lack of proper bedrooms. If the barn was partially buried, the attic could easily be filled with hay from the upper level, and the hay was later let through the openings in the ceiling (*promet*) into the lower level where the cattle were housed (Rajić, A., 2023).

The same principles apply to seasonal housing barns. They were located near the houses, or at the foot of the hill, most often on the southern slopes (Vego, 2000: 259-272; Rajić, S., 2023). In addition, a service building *ajat* was often added to the residential structure in a horizontal extension, which, according to the literature, initially served as a shelter for livestock (Bugarski, 1970: 165-166).

However, local informants state that in their case the name and function of the same structure referred instead to the storage of goods. Within the hamlet of Noznje and Podi, recesses were observed in the wall of the *ajat* adjoining the terrain. Inside these recesses, a hen would be placed to hatch chicks (Karacić,

TABLE II FORMS OF WATER PROVISION STRUCTURES IN GORNJI CRNAČ

Cistern in Zavijana	
	
Corner cistern (<i>cemerena catrnja</i>)	Detail of joining stone slabs of the cistern opening
Kamenicas in Zavijana	
	
Water Provision Structures in Noznje	
	
Cistern between rocks with two sides walled	Stone trough

M.P., 2023). Chicken coops were rarely added to the residential building in the horizontal direction, on a shorter façade (Ljubic, 2024). More often, they were separated from the house and built using the dry-stone method and covered with straw. An example of a barn is still preserved on a family estate

in the hamlet of Jabuka next to the *jancijak* – a barn for lambs (Karacić, M.B., 2024). Within the complex of outbuildings there was also a circular area enclosed by a low dry-stone wall, used for threshing grain (*guvno*).

DISCUSSION

The results of this research confirm that the traditional residential architecture of Gornji Crnač is characteristic of the western Herzegovinian built heritage since it synthesizes material pragmatism and adaptability in accordance with the traditional way of life. The use of traditional building materials (stone and wood) as a design necessity that came directly from the surroundings, resulted in a recognisable architectural identity. Although simple in their construction, the buildings demonstrate a highly developed understanding of structural logic and spatial economy.

Field surveys revealed that the village's abandonment contributed to the physical conservation of its architectural authenticity. The absence of modern interventions has kept spatial and material integrity intact, protecting it from possible alterations, emphasising the importance of neglect as an unintentional mechanism of conservation. Oral accounts collected from the few remaining residents revealed unknown and valuable information raising the question of how to conserve the memory for reinterpretation of such ensembles in contemporary practice.

Moreover, several recorded construction details (such as the double wall in Pod Greda, integrated hearth in Noznje, *kut* in Pod, hatching recess in the wall in Podi and Noznje, various types of lintels, outdoor stairs, and other mentioned distinctive elements) expand the existing knowledge on Herzegovinian rural ar-

chitecture, and emphasise the creativity of local construction. They also indicate the diversity of local solutions within a seemingly uniform architectural typology, illustrating the nuances of vernacular architecture. The fact that these elements were not previously covered by the existing literature, emphasizes the importance of fieldwork as an essential complement to archival research.

More broadly speaking, this study reveals the intertwined relationships between habitation, topography, environmental cycles, material and social life as knowledge essential for preservation of both architectural and immaterial heritage of western Herzegovina.

CONCLUSION

The physical remains of the traditional architecture of Gornji Crnač reflect building technique and community that mastered construction with few immediately available materials. Modest yet sophisticated structural efficiency and spatial economy was built on the decisions that considered function, material processing, orientation, climate, and seasonal activities, achieving functionality in alignment with natural constraints.

The available literature is enriched by architectural features documented in this study, stressing the importance of field work and oral tradition. The importance of recording the design and construction techniques of the past is further stressed by the almost complete abandonment and degradation of the settlements in western Herzegovina.

Recording the memory and knowledge about vernacular heritage can ensure the continuity of western Herzegovina's architectural identity based on simplicity, functionality, material logic, and adaptability.

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SOURCES OF FIGURES AND TABLES

- FIG. 1 Google Earth imagery, adapted by the authors, 2025
- FIG. 2 Topographic map, adapted by the au-thors, 2025
- FIGS. 3, 4 Sketch of the authors, 2025
- FIGS. 5, 9 Photo archives of the authors, 2023-2024, Gornji Crnač, Široki Brijeg, BiH
- FIG. 6 Photo archives of the authors, 2024, Gornji Crnač, Široki Brijeg, BiH
- FIG. 7 a) POPOVIĆ, 2008; b) BUGARSKI, 2001
- FIG. 8 Photo archives of the authors, 2023, Gornji Crnač, Široki Brijeg, BiH
- TABLES I, II Photo archives of the authors, 2023-2024, Gornji Crnač, Široki Brijeg, BiH

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