

# Traditions of Wooden Architecture in the Lands of the South Slavs: A Study of Farm Settlements in Former Yugoslavia

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## INTRODUCTION

This study of wooden structures of the lands of the South Slavs (former Yugoslavia) is an exploration of architectural forms and details, examining how people of a notably complex culture formed their own environments. The South Slavs maintained a simple subsistence way of life well into this century and from elemental materials built expressions of their needs, beliefs and aspirations. Their buildings and settlements offer a rich repository for the study of regional and local architectural traditions. In our research we have attempted to observe without preconceptions, to classify and compare, and finally to seek acultural commonalities which transcend cultural limits and reveal universal qualities of architectural form, space, structure and detail. Our focus is upon wood as a primary building material of significant expressive character, easily worked by most building craftsmen. While our studies cover urban and rural dwellings, markets, economic buildings, religious buildings and monastic settlements, in this paper we will focus upon one topic, a study of farm settlements.

## HISTORICAL AND GEOGRAPHICAL CONTEXT

Tracing the traditions of architecture of former Yugoslavia is not a simple task, for the history of the Balkans involves successive invasions and divisions which began millennia ago, resulting in a culture of overlapping traditions and complex allegiances. Conquered in ancient times by the Romans, the earliest Balkan peoples were subsequently divided between Byzantine east and Roman west, then invaded by waves eastern tribes who introduced Slavic culture and eventually formed early Serbian, Bosnian, Croatian and Montenegrin dynasties. Dominated from the fifteenth through nineteenth centuries by rule and warfare of the Hapsburg and Ottoman Empires, these lands were finally united as Yugoslavia at the end of World War I. Within this country, six republics and two provinces were formed in an attempt to accommodate the distinct historic regions of Slovenia, Croatia, Bosnia and Hercegovina, Montenegro, Serbia, Macedonia, Vojvodina and Kosovo. The diversity of

this composite culture is further expressed in its two alphabets, Cyrillic and Latin, and three major religious groups, Orthodox, Moslem and Catholic. Today this complex heritage is **reaffirmed** in these lands which have separated to form five independent countries. The architectural heritage of former Yugoslavia is deeply influenced by this history of cultural diversity, and **further** enriched by a mountainous geographic setting that encourages regional variation.

The geography of the Balkan peninsula is characterized principally by extensive mountain ranges and by smaller areas of valuable open plains'. Throughout the long history of conflicts and migrations of people to the Balkan peninsula, mountain forests provided safe haven and shelter, while the Danube River and its tributaries formed its highways. The lands of former Yugoslavia incorporate these two characteristic zones, which set the context for this survey of wood traditions: mountain regions, and river valleys and plains. The central mountains still contain the areas of greatest forestation, where wood has traditionally been the principal building material. Wood is also a significant building material of the valleys and plains, even where agriculture has long since eliminated the forests.

## MOUNTAIN REGIONS

### Settlements of the Dinaric Alps

In the heart of the most richly forested region are the inland ranges of the Dinaric Alps which span Bosnia, Serbia, and northern Montenegro. In these remote mountain highlands subsistence farms dot the landscape in small, dispersed settlements. Each farm is an extended family unit, *azadruga*, or clan of people who combine their labors to tend animals and 'grow grains sufficient for their collective needs. The mark of these farms on the land is small but distinct. Compact horizontal-plank structures with steep wood-shingled, thatched, or slate-tiled roofs house farm activities, each building formed to serve a particular function. Surrounded by a wooden slat fence woven with thresh, the farm compound is called the *kuca*<sup>2</sup>, as is the principal dwelling within the compound, and further, the cooking hearth within



Fig. 1. Map of the lands of former Yugoslavia

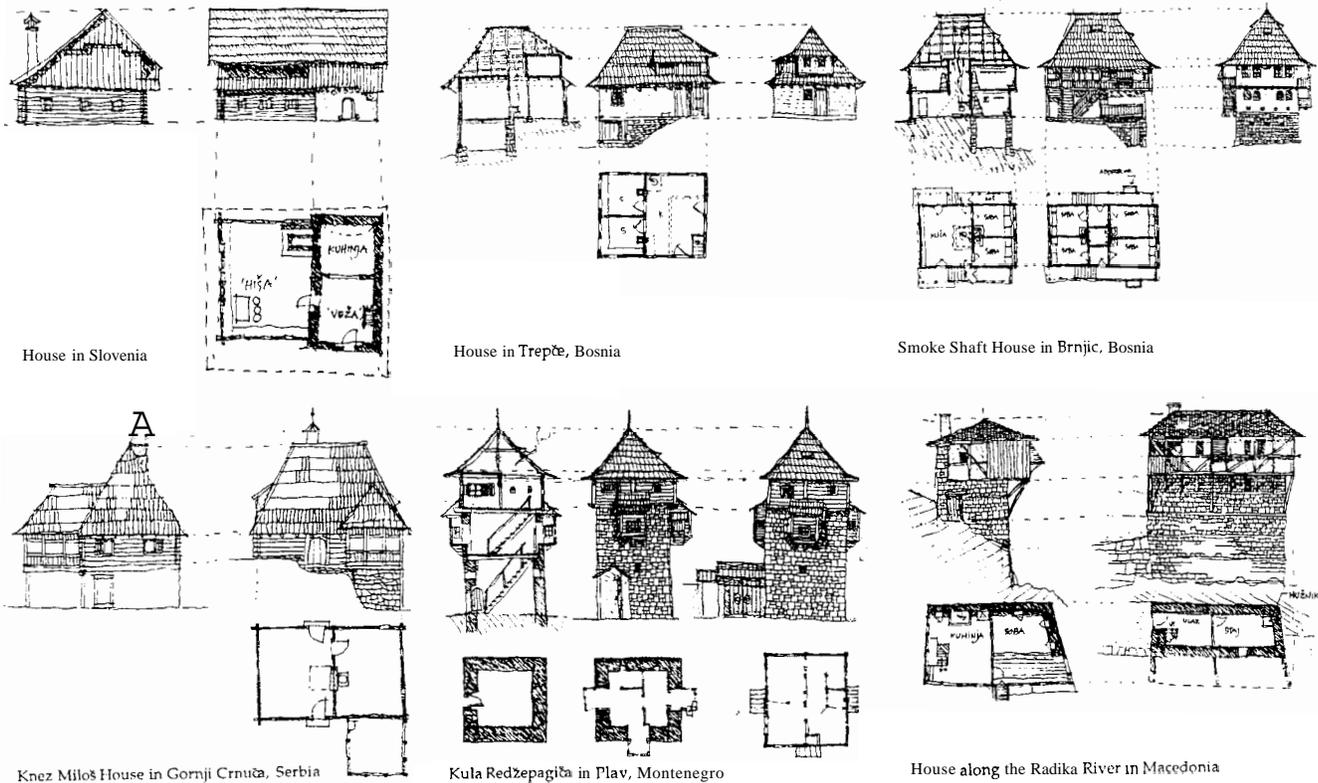


Fig. 2. Examples of houses of the mountain regions

the house. This concentric naming affirms the hearth as the hierarchical core of the farm; the siting and roof expression of the main house affirm the importance of the fire. In this harsh mountain climate life is transacted primarily outdoors, so the source of cooked food and warmth is essential and celebrated. At a place named Sirogojno, in the Zlatibor (Golden Pine) Mountains of western Serbia, an ethnopark has been formed of farm buildings collected from this region<sup>3</sup>. Here, construction is primarily of wood, heavy sawn plank laid horizontally and joined by concealed pegs, with interlocking notching at the comers in a log-cabin technique. Stone is used only to form up the foundation, set against the site's characteristic slope. This type of wood construction is named *brvnara* and reputed to derive from knowledge brought into the Balkans by the immigrant Slavic peoples<sup>4</sup>. The Dinaric *brvnara* house is described by Branislav Kojic and others as the only indigenous building type of Yugoslavia<sup>5</sup>. In the Dinaric mountains, exceptionally steep roofs are formed of heavy timber frames, with brackets which extend the roof outward to protect the walls from rain and snow. The older roofs are sheathed with radially-cut wooden shingles called *sindra*, or with straw.

The hearth space of the patriarch's *kuca* integrates opposing axes which order this two-room house in relation to the sun's path. One axis aligns the two exterior doors, the main east door for arrival of good things and the west for removal of bad. The opposite axis aligns the two rooms of this structure, ideally on a south-facing slope overlooking the fields. The dark, earth-floored space of the open hearth extends vertically into the roof volume; the smoke of the hearth preserves the roof from insects and decay, and escapes through vent and cupola-like openings. Within the *kuca* space only low stools accommodate sitting. An overhead rack which hangs from the roof framing is used for smoking and storing meats. Additional storage cupboards are integrated into the plank construction of the building's north wall.

The patriarch's *soba* (a room for sleeping and indoor work) has both wooden floor and ceiling which help to insulate this space. A ceramic heating stove, fired through the wall of the *kuca*, and a few beds and benches, make this the most comfortable space of the farm. The building's only

windows look out from the *soba* over the fields below. The foundations form a cellar below the *soba*, used for storage, most often for the farmer's highly prized *rakija* (plum brandy).

Younger married couples and children of the *zadruga* sleep in small *bwnara* outbuildings called *vajat*, constructed more simply than the *kuca*. These dwellings may have small porches for outdoor work but have no hearths. Stables of *bwnara* construction provide shelter for farm animals, while other uniquely formed structures contain the precious crops of grains (an *ambar*) and corn (a *kos*), to protect food for the winter months. A separate *mlekar* (milk house) is for the storage of milk and the making of yoghurt and *kajmak* (cream cheese). These elegant woven thresh and wood constructions are often embellished by carvings to celebrate the farm's productivity.

### Settlements of the Julian Alps

The high mountains of Slovenia, in the northwest of former Yugoslavia, are part of the Julian Alps, shared with Austria. The settlements of this region are distinctly different from those in the Dinaric Alps, in the form of both the settlements and their houses. In the village of Studor, near Lake Bohinj, the individual farm compounds are very densely clustered, pushed up close against the mountains, keeping the best land in the small valley outside the village for planting and grazing<sup>6</sup>. A single farm compound has one main structure, *hisa* in Slovenian, in which house, barn and granary are combined. In one typical *hisa* in Studor (the oldest part dating from 1786), house and barn are overlapping and aligned in a composite structure, their entrances along one edge connecting to the farmyard. Living spaces occur on the ground floor, animals and equipment in the barn, and grain storage in the large attic.

These farmhouses are constructed of masonry and wood. Heavy stone walls form the dwelling core and barn ground level, and rise to form the chimney of the black kitchen. The dwelling spaces of older *hise* are formed of horizontal plank construction with log-cabin joinery. The upper barn and house attic are cantilevered beyond the base and built of heavy timber frame construction, clad with vertical wood siding or wood shingles. Artfully shaped gable openings

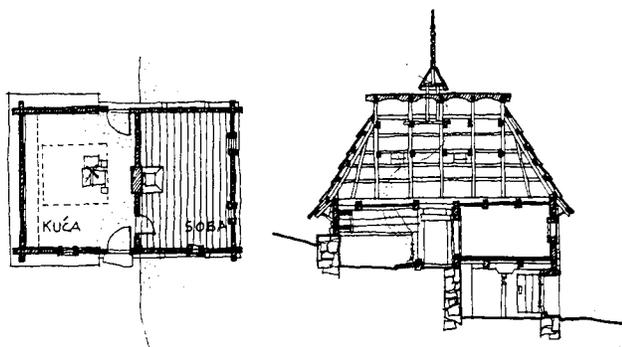


Fig. 3. Drawings of the principal *kuca* at Sirogojno

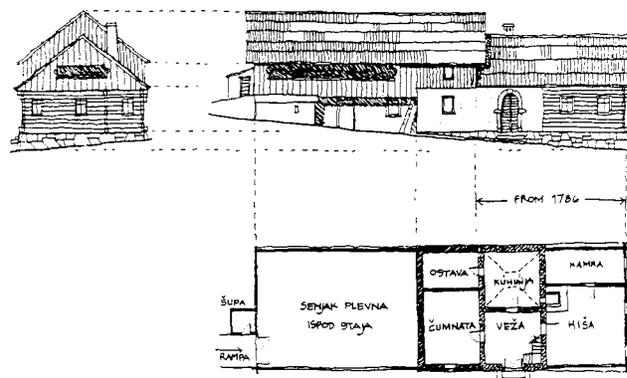


Fig. 4. Drawings of the *hisa* in Studor

provide ventilation and covered drying galleries for the stored grains.

The kitchen (*kuhinja*) is a masonry formed volume in the center of the structure, directly beyond the entrance hall. It is not the principal gathering room as in the Dinaric house. This kitchen has a walk-in, open hearth in which the walls have become blackened over time, hence called "black kitchens". A main dwelling room looks out on the public street and carries the name *hisa*. It is used for family life; a large masonry stove occupies one corner, in another is a table with benches. These features are typical of Slovenian *hise* as well as of main rooms in most Austrian, Hungarian, and northern Croatian farmhouses. Other dwelling rooms are for sleeping and storage.

Hayracks, called *kozolci*, are the most interesting and unique farm structures in Slovenia. They typically are located adjacent to the fields, and take on a variety of forms, from single hayracks to asymmetrical shed forms and grand barnlike structures. Hay is initially dried on the exposed lateral racks, then stored in the trussed crib structure in the center of the *kozolec*.

### Settlements of the Pindus Alps

The northern reaches of the Pindus Alps, which extend through Albania and Greece, are the mountains of western Macedonia (the former Yugoslav republic). Slavo-Macedonian civilization has encountered extreme hardships throughout history from wars waged for territorial claim by Turks, Bulgarians, Serbs and Greeks. The farm architecture of this region expresses fortresslike qualities, protection from an unforgiving political and physical environment<sup>7</sup>. Winters are very harsh, but the summer sun is equally strong and the architecture must satisfy both extremes. Farming is minimal in this barren landscape, yet large flocks of sheep graze the highlands. Village sites are chosen for wind-sheltered solar exposure, so that the grouped buildings form an architectural amphitheater, with each structure claiming

its own aspect toward the sun and views. One farmhouse, from the village of Gari above the Raaika River, exemplifies this region. A single building, called *kuka* in Macedonian, houses most of the farm functions, as in the Julian Alps, but here the organization is vertical rather than linear. Animals live in the ground floor spaces, and people above. The number of rooms in each house varies according to the needs and wealth of the owners; all are clustered within the simple rectangular form. The roof is hipped, with gentle pitches extending toward the eaves, and tiled with slabs of slate.

The form of the house is a generous, rectangular solid, firmly embedded in the slope. Rough stone construction with stabilizing courses of heavy timber forms the ground floor of the structure and extends through the upper floor on the colder, uphill sides of the building, while the upper south-facing portion of the building is built of a lighter fabric of timber frame and infill. These lighter portions project outward upon cantilevered beams, and so appear to keep watch over the valley below.

The upper dwelling spaces include the *kuka* (kitchen) which is reached by an interior stair from an entrance space below. It is a generous room set against the slope, with a stone hearth and chimney set into the masonry wall. An adjacent room (*odaja*) for living and sleeping is more modest in size, formed within the heavy masonry walls, intended for winter use. A second *odaja* is part of the lighter, projecting wood-frame construction, a space appropriate for summer use. However, the principal projecting room is the *cardak*, a "space between heaven and earth", which has a raised sitting platform and many windows overlooking the landscape. This is a space especially for summer living and entertaining, open, airy, and architecturally distinct.

### RIVER AND PLAINS REGIONS

#### Settlements of the Kupa River Basin

The lowland landscapes of the great rivers of Yugoslavia were once also densely forested, but have been cleared as fanning areas. The surviving traditional architecture displays a mixture of local building methods and influences. Where oak was once abundant, horizontal timber and plank construction techniques prevail. In other regions, wood remains an important building material, but is combined with other materials, mud, clay and less frequently, stone. The Kupa River, southeast of Zagreb in Croatia, forms lazy oxbows as it converges on the wayward Sava, forming a large, flat river basin. Farmers have tilled this rich soil for many centuries. But the inevitable shifting and flooding of the rivers has taught that safe dwellings must be built elevated above the ground or behind dikes along the riverbanks. Farm settlements are not dense, with compounds loosely clustered into villages along the river, the farmsteads taking on a linear pattern and facing a common road, which is often atop the dike on the river edge. Traditionally these farms were comfortably self-sufficient, with cows, chickens and pigs, and fields outside the village.

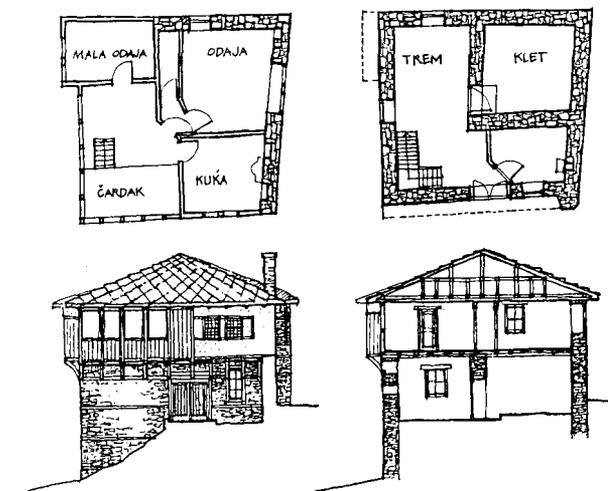
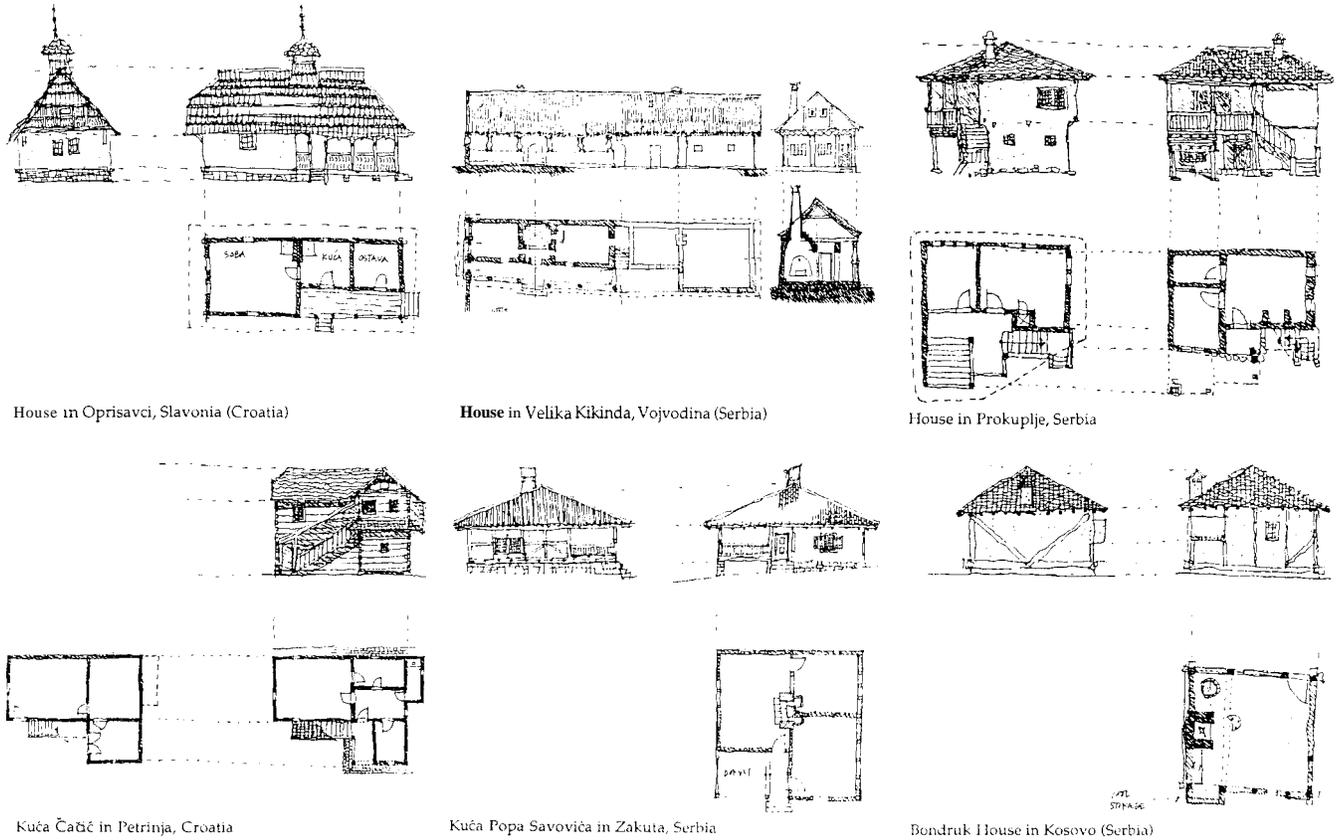


Fig. 5. Drawings of the Serafinovski Kuka in Gari



House in Oprisavci, Slavonia (Croatia)

House in Velika Kikinda, Vojvodina (Serbia)

House in Prokuplje, Serbia

Kuća Čađić in Petrinja, Croatia

Kuća Popa Savovića in Zakuta, Serbia

Bondruk I House in Kosovo (Serbia)

Fig. 6. Examples of houses of the river & plains regions

The Jurinac Kuca in Brest predates the era of the dikes<sup>8</sup>. It is part of an old clustered zadruga (clan) settlement, on high land, adjacent to the Kupa, and does not align with the nearby road. The dwelling is a katnica, the local name for these two-story houses. The building spaces are organized in a linear manner, with an exterior stair giving access to the raised living floor on the sunny, farmyard flank of the house. The upper level is cantilevered on all four sides by a system of crossing heavy oak beams. The dated (1673) central support beam extends the 16-meter length of the upper floor. A double pitched roof with small half hipped portions at each end is covered with wood shingles.

Farm animals, equipment and produce occupy the spaces of the ground level. An open kolnica, a garage space for farm vehicles, lies below the projecting entrance hall or gallery (ganjak) and kitchen (kuhinja) spaces, making the entrance landing appear suspended above the farmyard. The central kitchen is not large. It's stove shares a chimney with another in the adjacent druzinska soba, a spacious room for eating and entertaining, as well as sleeping for some family members. This room contains features present in the Slovenian farmhouse, heating stove in one corner, and square table with benches in another. The patriarch's komora, a sleeping chamber reserved for parents and young children, lies on the other side of the kitchen. The comforts of this house include an indoor toilet.

In the architectural expression of this house the hearth space is not significant. Rather, it is the rich, dark textures of wood, the cantilevered beams, articulated corners, and especially the embellishments to the exterior covered stairs

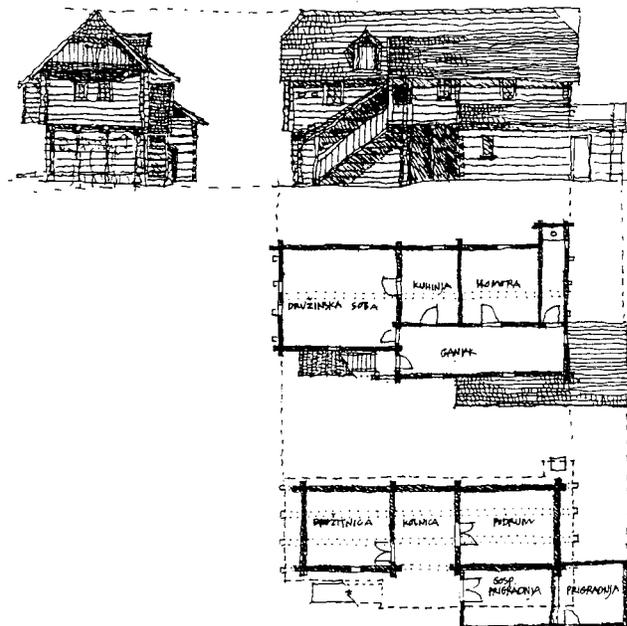


Fig. 7. Drawings of the Jurinac Kuca

and landing which distinguish the architecture. The farmyard includes a few tiny outbuildings, a covered well, an adjacent bread oven, a chicken coop, and a pigsty and shed appended to the main house. A grove of grapevines for making wine, beehives and a fine walnut tree complete the setting.

### Settlements Between the Sava and Drava Rivers

A hilly and wooded region bounded by the Drava River on the north and the Sava River on the south is home to a tradition of architecture connected to the wood-building techniques of central Yugoslavia, but also significantly to those of the Pannonian Plain of Yugoslav Vojvodina and Hungary. Northeastern Slovenia and northern Croatia including Slavonia form this region.

The farm village of Kurnovec, in the Croatian Zagorije hills northwest of Zagreb, has been preserved as a historic and ethnographic museum<sup>9</sup>. Houses in this town, as throughout the Pannonian Plain, lie low to the ground, long rectangular forms divided into linear arrangements of rooms. The disposition of these rooms is familiar: a central kitchen, here named *kuhja*, directly opposite the house entrance, flanked by two living spaces, here both called *hise*. The open hearth of the kitchen has wall openings for firing stoves within the adjacent rooms. The larger *hisa* is used for eating and entertaining with the familiar square, comer dining table as focus of the room.

Of particular interest in this region is the method of finishing the horizontal plank walls which are completely plastered with a lime paste, making them airtight and preserving the wood. The roofs, formed of heavy timber with a double pitch, and half hipped gable ends, are covered with thatch.

### Settlements of the Pannonian Plain

The Pannonian Plain surrounds the Danube River as it flows through Vojvodina (the northern province of Serbia) and across Hungary<sup>10</sup>. This flat, thinly forested and often marshy landscape has induced ways of building dependent upon the earth itself, through the use of compressed earth, *naboj*, to form thick building walls. Later, mud brick or *bondruk* replaced compressed earth for walls. Limited available wood was used for the essentials of structure, for decoration, and for important outbuildings.

The Austro-Hungarians took control of these lands in the eighteenth century, drained marshes and developed farm settlements according to regulated plans, so the farm villages acquired a repetitive pattern which remains today. Low, linear houses are similar to those throughout the Pannonian Plain. Farm compounds are grouped closely in narrow plots perpendicular to the street, with fields outside of town. The Savic Kuca in the village of Nestin is protected today although under control of the Savic family, who now reside in a newer adjacent house. The old house dates from the eighteenth century, and is built of a handsome combination of mud brick, wood and thatch. Nestin is elevated on a slight

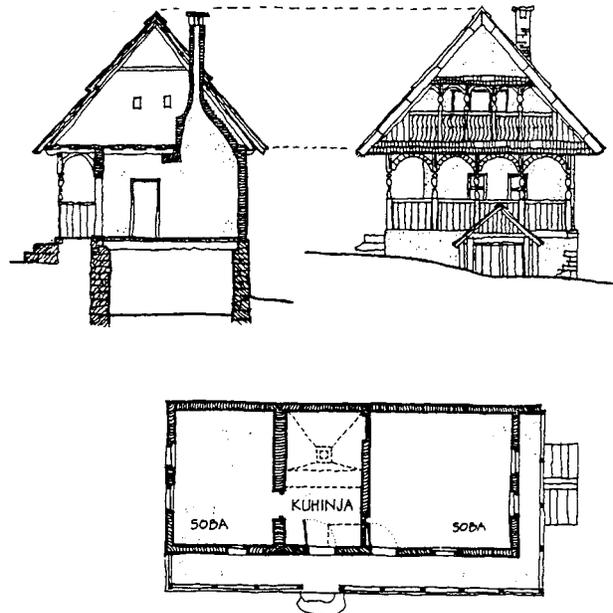


Fig. 8. Drawings of the Savic Kuca

bluff above the south bank of the Danube River; the slope permits a rare basement storage room, *podrum*, built within the stone foundation. The unusual site of Nestin has produced an irregular town plan, and the Savic *Kuca* compound departs from more formalized types. The house is set within its compound rather than directly on the street, like the organization of Slavonian farms further west.

The body of the house is constructed with wood framed walls infilled with mud brick, obscured under a thick stucco-like finish. The double-pitched roof is framed of timber and covered with two overlapping panels of thatch which meet at the ridge below a wooden cap. Along both farmyard and street elevations is an arcaded gallery (*trem*) constructed of decoratively carved wooden posts and arches.

The interior of the *kuca* is quite familiar; its *kuhinja* and two *sobe* (rooms) are ordered and used just as in the houses of Slavonia and northern Croatia. The open hearth of the kitchen is formed of mud brick into a vaulted space with an integral chimney, establishing a separate fireproof structure within the volume of the house.

The rich play of solid and openness of this modest form is particularly pleasing, but the handsome gallery is functional, opening the house to the farmyard, and protecting this edge from sun and rain. It is the public gable end of the building which is purely decorative, proclaiming pride and wealth through the builder's craft.

Within the typical compound, the most important outbuilding is the granary for storage of corn and grains. In Slavonia and Vojvodina, these are freestanding raised wooden buildings within the farm compound, carved with decorations to celebrate the farmer's customs and success. In the rigorously planned towns of Vojvodina, the wooden granaries are positioned, like the house, directly into the masonry wall of the street edge, while inner courtyard construction transfers to exuberant open wooden forms.

### Settlements of the Morava and Vardar River Valleys

The Morava River which runs north through Serbia into the Danube, and the Vardar River which flows south through Macedonia to the Aegean, define an expansive agricultural region along the southeastern edge of former Yugoslavia. This region has few forests, is fairly arid and has a rolling landscape bounded by mountains to the east and west. Here the principal building method, called *bondruk*, combines wood frame with wattle and daub or mud brick as infill<sup>11</sup>. Extensive studies support the claim that this type of construction is well adapted to the earthquakes which threaten this region<sup>12</sup>.

In eastern Serbia, the farm compounds which dot the landscape are composed of small buildings, each activity separately accommodated. The *kuca*, or farmhouse, has a clear cubic, whitewashed form, with two or three rooms and often a porch claiming the quadrants of an almost square plan. The roofs have a shallow, four-way pitch, and are covered with clay tiles. The distinct character of the architecture of this region is similar in form and construction to that of settlements in Bulgaria and Romania. The Matic Kuca, in the village of Vranic south of Belgrade, exemplifies construction techniques in the Morava River Region. The house is built of a wood frame raised upon perimeter wooden grade beams. Its walls and roof are also structured by an intricate framework of timbers. Wall frames are infilled with woven thresh, then plastered with a mixture of earthen clay. Additional layers of clay are plastered over the surface of the wall, then whitewashed, hiding the structure beneath. Curved brackets reach out from the wall supports to carry the ends of elongated rafters, and the resulting deep overhangs protect the wall surfaces. The roof, covered with clay tiles, has relatively shallow pitches to prevent tiles from sliding off.

The principal room is the *kuca* which has an open hearth set into the earth and stone floor (once again the compound, house, room and hearth share the same name). The hearth is vented through a large overhead funnel-shaped flue formed of wood and plaster, which directs the smoke through a rooftop chimney. As with the Dinaric house, the *kuca* is the main social room where people gather around the hearth,

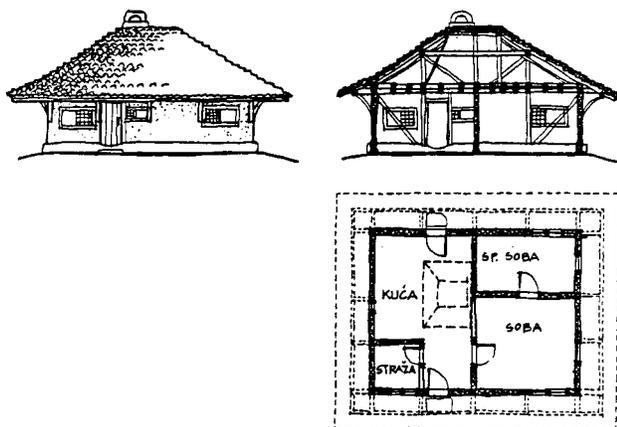


Fig. 9. Drawings of the Matic Kuca

sitting on low three-legged stools, for meals and storytelling. There are two exterior doorways to this *kuca*, perhaps an influence from the nearby Dinaric region, for this is not a trait typical of the Morava house. A small storage cupboard for keeping milk and cheese, with a special vent opening, is embedded in the corner of the north exterior wall of the *kuca*. The adjacent *sobe* are rooms for sleeping and indoor work.

### CONCLUSIONS

The diversity of forms and construction language, of order and uses of spaces in these selected farm settlements, convey some of the qualities which have inspired us to pursue this research. Much of our current work includes comparative studies of site, building types and forms, spatial composition, and architectural elements and details. In this study of farm settlements, the basic formal, spatial and social orders of the farm compound courtyards are especially revealing of cultural, climatic and economic variation. Exceptional building forms, particularly the *cardak* (a porch-like space or object) and the *ambar* (granary), in their regional variations, have struck us as architectural elements of unique sophistication in form, position and symbolic expression, and warrant special study. But the most enlightening aspect of our investigations lies in observing how others, free from the direction of architects, have formed the elements and textures of their environments, the rich interplay of planar and surface elements, to create and frame their views of nature and of one another.

### NOTES

- <sup>1</sup> The Turkish name for a chain of mountains is *balkan*, as recorded in *History of the Balkans*, Volume 1, by Barbara Jelavich, page xiii and page 1.
- <sup>2</sup> Diacritical markings essential in the Serbo-Croatian, Slovenian and Macedonian languages have been deleted in this publication.
- <sup>3</sup> The project was initiated and directed by Ranko Findrik, former architectural director of the Serbian Institute for the Protection of Cultural Monuments. He has also published several articles about Sirogojno.
- <sup>4</sup> *Traditional Architecture and Construction in Yugoslavia*, Regionalni Zavod za zastitu spomenika culture u Zagrebu, 1988, page 26, (Aleksandra Muraj).
- <sup>5</sup> *Seoska Arhitektura i Rurizam, Teorija i Elementi*, by Branislav Kojic, Beograd 1973
- <sup>6</sup> Tone Cevc, an ethnographer from the Slovenian Institute of Arts and Sciences, accompanied us to Studor and described the local traditions. He has written several books on Slovenian traditional architecture and culture.
- <sup>7</sup> Our knowledge of the farm settlements and buildings of these regions has come from many sources, our principal guides being Lazar Sumanov, a director of Macedonia's Institute for the Protection of Cultural Monuments, and in Kosovo the architect Lula Pula and her colleagues at the Architecture Faculty in Pristina.
- <sup>8</sup> Davor Salopek, a Croatian architect of this region, has spent his career studying and trying to preserve the architectural heritage of his ancestors. His books and personal guidance gave us an excellent opportunity to learn about this architecture.

- <sup>9</sup> Kumrovec was the birthplace of **Josip Broz Tito**, Yugoslavia's great postwar leader. The true form of the farm settlement cannot be verified, as many buildings have been relocated to this site.
- <sup>10</sup> In some regions the frame is **left** exposed, the appearance reminiscent of northern European half-timber construction.
- <sup>11</sup> The Pannonian Plain was once the basin of the ancient Pannonian Sea.
- <sup>12</sup> See the work of Lazar Sumanov of Skopje in particular.

***Bibliographic Note:*** A complete research bibliography on the traditional architecture of former Yugoslavia has been compiled by the authors. Most sources are written in Serbo-Croatian, Slovenian or Macedonian, with brief resumes in German, French or English. Few publications are available outside their republics of origin.

***Illustration Information:*** All drawings are by the authors, based upon information gathered on site visits, provided by preservation institutes or published by Yugoslav scholars.