Resume

The habitat of the Arpadian Age of the Nir plain and the Ier Valley

- Phd thesis -

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More than four decades have passed since Janos Nemeti in `60 had began researching archaeological material of the Arpadian age on the Carei Plain and the Ier Valley. In my PhD thesis, based on these researches, I would like to model the habitat of the Arpadian Age in the Ier Valley and the southeast of the Nir plain. Janos Nemeti's research has been extended to the Valea lui Mihai area and to the south-east microregion of Nir's plain, which is currently in Hungary.

My work does not intend to be a full description of the historical geography of the entire territory under investigation because it would go beyond the limits of the description of the archaeological materials. The archaeological material emerged from field research and only a small part was found in archaeological excavations. Because the archaeological material becomes from the field, so we can not make a complete description of the materials only a description of the artifacts found. My intention by presenting these artifacts is to locate the Arpadian settlements. Thus, after describing the most important materials, it is the creation of a catalog of settlements in the studied territory. Modeling their system in the habitat according to the rules of historical geography and after the field usage in the Middle Ages. So I want you to create a full picture of the Arpadian habitat. I have tried to follow that basic principle, that the landscape is a unit and all elements in it are structurally related to this unit. Therefore, it is not possible to analyze individual elements in the landscape without discussing the other elements of the system. So I tried to describe the area as detailed as possible. In the first part we presented the geographic delimitation of the area, which itself is a separate problematic system, then its geological formation, which I think is very important because it is the basis of the geographic formation. In the process of this training an area generates special resources and resources. The topography of the area influences the hydrology of the area, which affects the formation of vegetation and fauna and the fertility of the soil. In the function of these phenomena, a human community is established in the area and develops their settlement system according to what kind of economy it has and anthropomorphizes the environment.

Based on the great historical work on the studied area, I took into account three important factors in the analysis of the historical documentations. The first factor is the description of the medieval landscape and any type of landscape data. The settlements mentioned in the Middle Ages and the existing borders are important facts that reveal the relationship between different forms of social order in the era. The second factor is the first occurrence of settlements in the written sources. The third is the etymology of the names of the settlements, which may indicate important evidence about their origin or evolution, not mentioned in the diplomas. I think this data is important, which we presented in a table and

then we added the dating of the discoveries. Thus, for a given settlement, we obtain a relatively complex set of data to deepen the information about them. One of the most important parts of my dissertation is the catalog I made after the model of "The Archeological Topography of Hungary". It includes all archaeological sites found in the studied area: 82 sites in 43 settlements, mainly traces and settlement phenomena. The vast majority of my archeological discoveries are ceramics. Dating of this type of artifact is less sensitive, so its analysis is valid only for a longer period of time. The Arpadian age is basically divided into three parts: The early Arpadian period 895-1095 (secolul 9^{th}-11^{th} century) the middle Arpadian Age 1095-1242 (11^{th}-12^{th} Century) and the late Arpadian age 1242-1301 (12^{th}-13^{th} centuries). Ceramic dating can not be done in such narrow frames, there are overlaps that complicate the dating of pottery in the Arpadian age. Therefore, in my dissertation in the majority case, I am dealing with the findings of the settlements in the evolved phases of the Arpadian age. Analysis of the early-stage discoveries, I made where I have in the context of the findings, closed pits. In the case of early-stage ceramics dating from field research, dating is uncertain, it can only be manipulated with dating in a long term. When analyzing the settlement system in a separate chapter, I discuss the current micro areas of the researched area, highlighting the local links between them and the archaeological discoveries. Separately present the archaeological sites where they made archaeological excavations. We created in the Global Maps 15 and Qgis 3.0 and ArcGis 10 programs the maps, when creating the papers.

A great difficulty was the determination of the research area, because in some areas of the boundaries of the micro-zones are not clear. So we choose to analyze the micro regions of the southeastern Plain of Nir, the Carei Plain (today Carei Plain-Mihai Valley) and the valley of Ier. In the middle of Pleistocene in the northern area of the Alfold Plain, a series of important events occurred. Areas of 150-200 meters have begun to sink, so river courses have become faster, and at the foot of the mountains have begun to build a great alluvium. This construction continued until Pleistocene late when a layer of 150-160 m was deposited on the panonic start. At that time, the rivers Latorca, Borsava, Tisa, Somes were in the Valley of the Ier. At the end of the Pleistocene period near the course of the rivers, the wind had a very important role, which began to expand this alluvium in the north-eastern part of the Alfold plain. This alluvium had a north-south slope. Because all the surface was heightened, he did not receive a living water course. In this stage the most important element of surface modeling was the wind. The most important element was the flying sand that had a thickness of a few centimeters up to 25-32 meters. This flying sand mixed with loess forming a fertile layer. The wind formed sand

dunes and between these places of the inter dune formed lakes called by the locals "nyírvízlapos". The banks of these lakes were ideal for human settlements.

The valley of the Ier, which has 1437 km^2, has 65,000 hectares. The geological structure of the valley is based on a crystalline layer of the Paleozoic era over which are sediments from the Cretaceous, Baden, Sarmatic and Pannonic era. This crystalline layer sank to form a tectonic ditch, which connects the Upper Tisza Depression and the Basin of the Cris. The proper valley formed between the Nir's Plain and Marghita-Tasnad Plateau. Geological analyzes have shown that the most important river drainage site in the Northeast Pannonian Basin was this valley. When the area rose and Someş's Depression sank the Tisa rivers, Somes and Crasna left the valley and took a west-flow, thus, starting from the Holocene era, the valley is occupied by the Ier River. The normal Pleistocene runoff was blocked, so the valley filling process began, forming a vast marshy area through which Ierul slowly flowed. The Ier valley is the corridor between the Marghita Plain and Carei Plain. The highest point is in Otomani (159 meters). The Ier Valley is a unique geological formation. Before the 1965 sanitation, the locals defined it as "there is neither a river nor a canal, nor a marsh, but from each has something." The most rivers that flow in the Ier valley: on the right side are Checheț, Cehal, Valea Sânăului, on the left side Vetij gat, Ierul rece, Ganaş, and Moka. The most important type of soil is red clay and is located on the terraces of the valley.

During the Arpadian period (10^{th}-13^{th} centuries) in the climate of Europe, there was an important change, the so-called medieval optimal climate. After the climatic reconstructions between the 8^{th} and 13^{th} centuries the climate was more advantageous, warmer, but and more damp on the mainland but less arid. In the Carpathian Basin during this period the vine was spread to the north, the limit of the forests are restricted with 100-200 meters in the mountains. During this time, the coldest period was between 1090-1179. Between 1180-1209 the winter was warmer, which was one in the last millennium the lowest average winter temperature. In the Carpathian Basin, after the analysis of the glaciers, the medieval optimal climate was between 800-1250 years. Written documents on the climate in the Carpathian Basin during this period are very rare, for example in the Battle of Ménfő in 1044 Samuel Aba King of Hungary, was defeated by the Henrik, Imperator of the Holy Roman Empire, due to a storm dust, indicating that during this period the climate is arid. In February 1074, King Salamon passes with his army the frozen Tisza. In our area the swamp of Bátorliget is narrowed and turned into an artificial lake. This climate ended in the end of the 13^{th} century.

In the researched area the main vegetation on the big terraces were oak forests, and in the low-lying areas of water reeds and sedge appear on the shores of these lakes, the marshes

are ideal for animal grazing. Among the big animals is the deer, the boar. But most important are different species of fish such as sleep, pike, carp, and carafe.

The history of the research of the Arpadian era began in the 19th century, when modern cartography of the Carpathian Basin has began. But the research of the Arpadian settlements does not have a long history. After the 19th century and the early 20th century attempts modern methodology was made by István Méri in the 1950`s, his work was continued by his students, especially by Júlia Kovalovszki, in the 1970`s -80. After 1990, a new era in archeology began in Hungary when major construction investments were started, which were necessarily researched by excavations on large surfaces. According to Miklós Takács's calculations from 1990, 414-449 settlements or parts of the Arpadian settlements were found. In our area, the first mention of the Arpadian settlements archeology dates back to 1907 when Vende Aladar dug in the Ecsed-Sárvár monastery. In 1943, Ernő Andrássy, an amateur archaeologist, on the territory of Valea lui Mihai-Jánostelke dug sections to control the area where the surface ceramic fragments dating from the Arpad period were collected. Dr. Andrássy was also the founder of a museum in the Valea lui Mihai. In the catalog he made in 1954 mentions 14 sites from the 10th-13th centuries. Also in 1954 in the connection with archaeological excavations in the city of Bihor, Mircea Rusu mentions the settlements from the 9th-11th centuries on the Valley of Ier. A very good friend of Andrássy was Ciumeşti's parson Gyula Kovács, who, according to Andrássy's parable, began collecting archaeological materials from the deep struts introduced in the 50's to Ciumeşti. This collection was bought in three parts by the Museum in Baia Mare in 1961, by the Satu-Mare Museum in 1967 and by the Carei Museum in 1977. In the 1970`s a long campaign was made to find the monastery of Ecsed-Sárvár , so a series of archaeological excavations were made on the site of the monastery led by Kalman Magyar. In 1983, Sever Dumitraşcu mentions in an article the early medieval settlements on the valley of Jerusalem. In 1999 appears the archaeological repertoire of Carei, where Janos Nemeti also collected the points where the settlements from the Arpadian period are mentioned. Ioan Crisan in his book dealt with the medieval rural settlements in Crişana describe the settlements. Near the archaeological publications are very important the historical works the main works is Zsigmond Jakó's book dealing with the county of Bihor and Ferenc Maksai dealing with the county of Satmar. Both have come to the conclusion that the settlement system on the terraces of the Ecedea marsh is part of the Hungarian border early mark. György Györffy, who in his monumental work extends the analysis of settlements with economic analysis, arrived at this opinion too. The one who continues his work on the Satmar county is the former director of the Nyíregyháza Museum, Péter Németh, in his 2008 book describing

the medieval history of Satu Mare County. Besides the appearance of settlements in written documents the origin of their name is very important. In our area, the etymology of the most important villages names is indicating a Slavic population along the Ecedea marsh.

As the valley of of the Ier and the south-eastern Plain of the Nir plains showed during the Arpadian period, it is evident from historical documents. The first mention of the Plain of Nir is dated from 1109 in Gesta Ladislai regis, and during the Middle Ages it was mentioned as district, province. From historical documents, even if in a part, but we can rebuild the territory. In the higher areas we have huge forests, the largest stretches between Carei and Piscolt to the west stretching to Tisa. The course of the Ier River in the Middle Ages, especially in the Middle Ages, can`t be rebuilt. As can be seen from historical documents, the river flows into the tectonic ditch without a major bed. The first is mentioned in Anonymus as Omsóér. In historical documents only appears in 1320, and the name Érmellék appears only in 1445. Through the mirror of historical documents we can say that the our territory is a very fertile area ideal for the settling of the people, to the north is the swamp Ecedea, the largest eutrophic marsh in Europe with a territory of 400 km^2, and to the east is the valley of Ier with the marsh area in a large ditch of 4-14 km and 90 kilometers long. These two structures forming a micro zone, which can ideally defend. The fortifications, have been put into places where the lower areas can be crossed, blocking the access ways. These are key strategic points on our micro-zone. If we analyze the micro zone from the point of view of landscape archeology, according to the "in site and off site" rule, we can say that all settlements are located on the areas where at least two types of soils meet, on the Nir's Plain in the Carei Plain , and in the Ier Valley on large terraces and promontories. These areas are very ideal for growing different plants, low areas are rich and ideal for fishing and hunting. The shores of the marshes and the terraces are ideal for animal breeding that has the most important part in the differentiated economy in floodplains.

The Arpadian settlement system under these conditions was established in the micro zone. When the Hungarian tribes occupied the lowlands of the Carpathian Basin, which was the most ideal for their economy our territory was included also. But as can be seen from historical documents, the institutional installation of the Hungarian Kingdom began in the second half of the 11^{th} century, when the kins, who defended the western borders of the Hungarian Kingdom, had given properties on the shores of the Ecedea marshland where their centers were established, such as the Kaplony kin with the center at Căpleni and the Gut-Keled kin center in Sárvár. Where, according to the legislation of Ladislau I (1077-1095), a monastery was built for the dissemination of Christianity. The upper part of the valley of the Ier was

colonized by the hospes, and the most important area, Salacea and its neighboring area was fortified and administered directly by the King of Hungary, south of this territory were placed Szeklers to defend the routes. The military establishments were part of the north eastern part of the border protection system we don't know exactly because never was mentioned in any historical records. From an archaeological point of view, after the placement of the fortifications and the centers, we could say that this is a part of that system.

The archaeological material of the settlement system is largely ceramic. In general, the typology of the Arpadian era is very simple. In the first phase we have a very rich variation of typology. We have different shapes of jars, which originated in the pottery of the late avars, generally made at the slow potter's wheel, have a crisp paste, ornamented especially on the upper part of the vessels, with a combination of wave and parallel lines. Handmade clay trays. And with the Hungarian Conquest, other types of eastern origin appear, such as a bowl with grooved throat, a clay bowl and various types of bottles. This rich variation is simplified, especially at the middle of the century and at the beginning of the 14th century, new types of vessels are entering again, especially from the West.

The most important and characteristic of the Arpadian pottery are clay cauldrons. This type of ceramics, according to Miklós Takács's typology, has four types:

- clay bowl shaped cauldron.
- bucket-shaped clay cauldron.
- pot-shaped clay cauldron.
- Round-bottom clay pots that mimic metal clay cauldron.

The ornamentation of the Arpadian ceramics is very simple, and it is generally possible to date the ceramics. Ornament lines in wave and parallel generally disappears at the beginning of the 12th century. The single-line ornament extends from the middle of the 11th century, but the most common one will be in the 12th-13th centuries. The ornament made with a single line in the wave appears at the beginning of the 11th century and is in use in the 13th century.

The most important ornament of the Arpadian era is the ornamentation made with cog wheels. Initially, this ornament was dated in the middle of the 11th century, but after modern research and C14 analyzes we can date earlier in the 10th century. The presentation of the archaeological material in the researched area is continuing by presenting the small excavations in the area, where we had access to the archaeological material and the documentation. We have opted for this option because it is just so that the archaeological material can be analized. Thus, the Vállaj-Határátkelő site was analyzed, where, in 2003, surveys were carried out before

the work begins in the on gas pipes that fed the dutys. As a result, they found the traces of a dwelling dated to the 12th-14th centuries. We could not find any more because the digging ditch was narrow and only the parts of archaeological complexes were caught. One complex is very interesting (CX 29) that can be related to the reduction of limonite (swampy ore). This is the only complex in the entire research area that can be linked to this profession. It has a very narrow oval shape ditch with a recess at the bottom of the pit. It was heavily burned and in the complex there were many pieces of limonite the Arpadian ceramic fragments found in the pit dated to the 11th-12th centuries. Another interesting site is Nyírcsaholy-Szent Miklós where the former director of the Nyíregyháza Museum dug 1984 to search for the monastery. But he found a dwelling dated between the 10th-11th centuries. The archaeological material in the deepened dwelling was very rich, being found in ceramic materials hand-crafted by a tradition from the late avian period, but also white-burnt ceramics. The best dating item was a knife. The type of this knife is found in the early 10th-11th century aristocratic cemeteries throughout the Alföld plain, such as Tiszaeszlár-Bashalom, Tiszavasvár-Aranykerti temető, Ikervár-Virág utca. We can say that the deepened dwelling is evidence of land use during the Hungarian Conquest. The most important research area was the Valea lui Mihai area. Here, through the observation of the works of the earth and through the repeated field survey, many traces of settlements from the Arpadian age were found. The most important is the Valea lui Mihai-Jánostelke. As a result of a series of the field survey, the settlement Tárnoktelke was identified on the Jánostelke border. The archaeological excavations made by Dr. Andrássy Ernő were organized on the territory of this settlement. As a result of the flying sand movements this site was covered, only in the 2000s it was discovered that due to forest deforestation the flying sand began to move again. Thus were discovered the traces of dwellings, the traces of firewalls and other archaeological complexes.

This settlement is located on the left bank of the Füzék brook, along a line of sand dunes surrounded by small marshes. The surroundings of the settlement were very important because the Salacs salt road crossed the area. This village is maintained for the first time in 1335, but archaeological materials can be dated earlier in the 11th-13th centuries. All the ceramic fragments that have been found are made at the pottery wheel of the low-speed, have a neutral burnt, most of which are burnt secondary. Ceramic types include clay pots and pots. The clay pots are, according to the typology of Miklos Takacs, type II / D, the most common type in the Arpadian period. The pots are the most common forms of the Arpadian period, they were formed with the wheel of the average speed pot after their surface was handled. Ornaments are two types of parallel lines and a wave line. In general, the settlement was very rich.

On the territory of Valea lui Mihai village on Ady Endre street were found traces of dwellings probably belonging to the 11th-13th centuries Arpadian period. These traces are safely linked to the Arpadian phase of the village.

In the catalog of the settlement there are the archaeological materials found on 82 sites in the range of 43 villages. The catalog includes the materials found on all surfaces of the area surveyed.