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THE LEGENDS OF ROCK: STORIES, LANDSCAPE, AND BOUNDARIES IN THE CENTRAL VELEBIT MOUNTAIN

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INTRODUCTION

Following the establishment of Roman governance in Illyricum in the early Principate, the former independent communities of the region were organized into new territorial administrative units - *civitates* - with precisely defined territorial boundaries (Mesihović 2011, 75-76). Reconstructing their territories and identifying traces of boundaries in the landscape have been a challenge for archaeologists for a long time (Glavičić 1997; Čače 2006; Dubolnić 2007). Reconstruction of community territories is a difficult and complex issue due to the absence of literary sources, material evidence of demarcation, and archaeological field surveys. Therefore, the majority of reconstructed Roman *civitates* territories in the area of former Illyricum is a result of spatial analysis of site distribution and sparse material evidence (Glavičić 1997; Čače 2006; Dubolnić 2007).

In the area of the Central Velebit Mountain, *civitates* territories have not been systematically examined thus far. Previous researchers placed communities in the landscape of Velebit in the same way as in the other areas of the former Illyricum province. These territory boundaries are questionable as they were reconstructed mostly on the basis of poor literary sources and limited material traces (Zaninović 1984; Glavičić 1997).

New approaches to territoriality and cultural landscape research were initiated by the development of geographic information systems (GIS) and its application in archaeology (Novaković 1998; Ducke, Kroefges 2007; Glavaš 2015). Oral tradition became increasingly used as a valuable source of information in archaeological landscape research (David et al. 2004; Sheppard, Walter, Aswani 2004; Hrobat 2007; Boeyens 2012; Katić 2014).

Oral traditions are preserved in the collective memory of local people

and therefore can be used for interpretation and understanding of the local landscape. Accordingly, oral traditions and a contextual understanding of them is an important source of information in archaeology comparable to other available sources (David et al. 2004; Sheppard, Walter, Aswani 2004; Hrobat 2007; Boeyens 2012; Katić 2014).

Velebit Mountain was mostly populated with pastoralists due to its specific geomorphologic and climatologic features, and seasonal pastoralism was a dominant economic pattern on Velebit Mountain from prehistory to the middle of the 20th century. The area remained mostly isolated from outer influences because of its inert karst landscape that restricted greater transformations, as well as due to a closed economic pattern of exploiting modest karst resources.

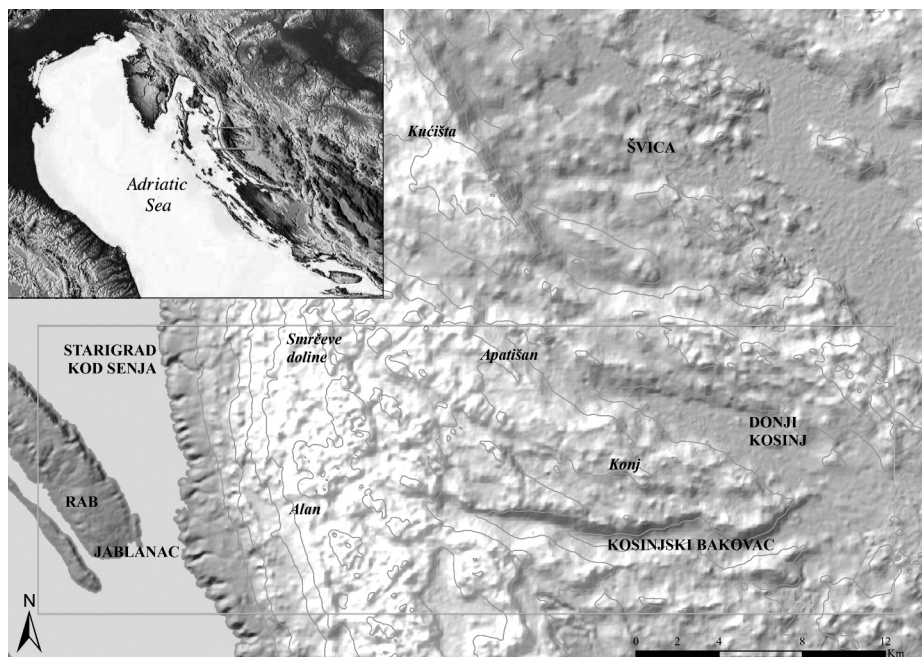
Many stories and narratives about places such as Velebit have been preserved (Dronjić 2008, 241-256; 2009, 245-274; 2012, 133-154). Use of oral traditions as a relevant source of information in cultural landscape research confirms its value, as many of these stories are related to old dry stone walls and prehistoric hill forts (Dronjić 2008, 241-256). One such story is related to a Roman boundary wall built in the 1st century AD in the Central Velebit area. Another story recorded in this area mentions an inscription called *Mali pisani kamen* (eng. Small written stone) that was lost a long time ago. However, both stories are related to a well-known Roman inscription referred to by local people as *Pisani kamen* (eng. Written stone), which provides a clue about territorial demarcation between indigenous *civitates* in the Central Velebit area.

The main aim of this paper is to reinterpret the *Pisani kamen* boundary inscription and reconstruct Roman *civitates* territories in the area of the Central Velebit. We employ an interdisciplinary approach that includes epigraphic analysis of inscription, field survey, aerial photography, use of geographic information systems (GIS) and oral traditions. The study area encompasses a segment of Central Velebit from the wider maritime Jablanac to Begovača area in the hinterland (Figure 1).

REGIONAL CONTEXT OF THE LANDSCAPE

The research area is located on the border between Northern and Central Velebit Mountain (Figure 1). The low relief along the Alan Pass (1340 m.a.s.l.) is a natural divide between both sections of the mountain. Typical karst landscape characterizes the whole mountain range, which is reflected in a lack of surface streams and a lack of soil cover. A range of karst geomorphic features is well represented, from small rillenkarrens and grikes to larger features such as dolines and other joint induced karst depressions. In the upper sections of the Velebit Mountain, between karst depressions, there is a number of conical hills and steep peaks that are formed from massive limestone breccia (Bognar 1994, 3-4).

Figure 1: Study area



The Velebit area is characterized by great variation at small distances, including sub-Mediterranean climate in the Velebit channel, Alpine climate above the tree line, and humid continental climate on the inner mountain slope. Higher areas on Velebit are not as dry as the littoral slope during summer due to the effect of katabatic winds. The highest areas of the mountain are characterized by Mediterranean-Alpine humid climates with great amplitudes of daily temperature (Rogić 1957, 92). The inner slope and higher Velebit areas are also characterized by greater precipitation, which is more typical for colder periods of the year. Lower slopes display far less precipitation, which is a result of the lack of orographic effect in lower littoral areas (Perica-Orešić 1999, 15-30).

Natural factors such as sea proximity, Mediterranean climate, carbonate bedrock, karst and altitude have the greatest effect on formations and spread of Velebit vegetation. The vegetation is thus adapted to a dry environment. The vegetation spread is greatly affected by temperature variation, which can be quite substantial within small distances. Barren and rocky landscape prevails on Velebit littoral slopes. Bushy vegetation typical for karst landscapes dominates plant life (Rogić 1957, 97-8; Forenbacher 1990, 324, 439, 493, 665). The higher zones include numerous meadows and pastures composed of different types of grass. These grasses contain higher calorie values and are better suited for livestock grazing than the vegetation on the Velebit littoral side (Forenbacher 1990, 43-5, 59-63).

Morphology, climate and vegetation are factors that framed human adaptation to topo-climatic characteristics of Velebit. The primary economic activity has always been animal husbandry. Arable land on Velebit is scarce on its littoral slopes, and opportunities for practicing agriculture are few. However, seasonal pastoralism was dominant on Velebit as well as on other Dinaric mountains in Bosnia and Herzegovina and Montenegro (Marković 2003, 33-75). Mountain pastures and the quality of grass produced specific land use patterns. Littoral communities were situated into permanent settlements along the coast but owned a portion of territories in the higher zones of the mountain where they spent spring, summer, and early autumn months. Such a subsistence pattern and seasonal pastoralism was preserved on Velebit until the middle of the 20th century (Marković 1980, 7).

The boundary wall built in the time of Dolabella (14.-20. AD) is situated in the vicinity of Jablanac. It was built on extremely karstified terrain of the littoral slope of Velebit where permanent *civitates* settlements were positioned. The littoral part of the mountain has always lacked a quality grass that would be adequate to sustain livestock breeding. In such circumstances, people moved their herds to the higher altitudes as early as spring months. Dundović pod (600-800 m.a.s.l.), positioned to the east of Dundović kosa, is a spacious depression where the inhabitants from the littoral Velebit had their shepherd's compounds and permanent settlements. The largest part of Dundović pod is nowadays covered by deciduous forest and maquis vegetation. However, at the time when this area was at the peak of exploitation for the purposes of animal husbandry, the forests and maquis were mostly absent (Rukavina 1990, 281-290).

Mountain pastures such as Mirovo, Tudorevo, Bilenski and Šegotski padež, along with numerous others, are positioned at altitudes higher than 1200 m.a.s.l. east of Dundović pod. Remains of shepherd's compounds are still visible in some of these places. The pastures were exploited in summer periods when the grass at the lower altitudes was dry and of poor quality. The terrain descends to the east of these pastures towards Begovača, and the vegetation changes as well. Forests start to appear, but pastures are still present in the landscape. Begovača was one such pasture, which is currently overgrown in thick forest due to lack of exploitation. Begovača is an elongated lowland region positioned at an elevation of 820 m.a.s.l. It is separated from Kosijski Bakovac to the south-east by Gavranuša ridge and its extension. Poljes in Donji Kosiinj and Lipovo Polje are positioned to the north-east of Begovača. Kosijski Bakovac, Donji Kosiinj and Lipovo Polje abound with water. The Lika River flows through Donji Kosiinj and Lipovo Polje, while several springs as well as the Bakovac stream can be found in the Kosijski Bakovac area. The Begovača area was extremely significant for summer grazing because it had a perennial water source - a rare occasion on Velebit.

CENTRAL VELEBIT: HISTORY, ARCHAEOLOGY AND ORAL TRADITIONS

HISTORICAL AND ARCHAEOLOGICAL CONTEXT

Following the formation of the Illiyricum province in the early Principate, Roman authorities continued the process of administering the province initiated by Caesar. The hitherto autonomous indigenous communities become peregrine or dependent. Peregrine communities (*civitates peregrinae*) are formed as Roman administrative units, which was also the first step toward their integration into the Roman state (Mesihović 2011, 75-76). Accordingly, it was necessary to determine precise territories of indigenous communities in Liburnia, and the Velebit region was no exception.

The constitution of the Roman province commenced following the cessation of hostilities during Bato's war in 9 AD. Administering the province was a significant endeavor for Rome. Demarcation issues were entrusted with the *legatus Augusti pro praetore provinciae Dalmatiae*, which testifies to the importance of such affairs for Rome. The mandate of legate included implementation of imperial policies, and they answered directly to the Emperor (Glavičić 2014, 42). Apparently, this is the reason they were entrusted with the task of territorial demarcation. The first legate to begin the demarcation of Liburnian territorial communities was *Publius Cornelius Dolabella* (14-20 AD), as documented by contemporary inscriptions (Wilkes 1974, 258-68). The demarcation of territorial communities was featured in a great number of boundary inscriptions (Wilkes 1974, 258-68; Zaninović 1984, 38; Babić 1996, 57-69; Čače 2003, 7-43; Catani 2008, 75-86), testifying to the efforts to regulate relations within the Illiyricum province (Mesihović 2010, 57-90). The stability of the province, and consequently its development, efficient management, and exploitation was facilitated by the demarcation process. Exploitation was manifested in the use of natural resources, conscription of the local population, and numerous other obligations. But the biggest change imposed by the authorities on local people was taxation.

All boundaries were mapped onto the Dolabella map (*forma Dolabelliana*), whose existence is confirmed by an inscription from the Archaeological Museum in Split (ILJUG 874). *Forma Dolabelliana* contained records of demarcation. The Roman authorities referred to it when the boundaries were renewed, and *forma* constituted the first provincial cadaster. This official document was archived in *porticus Vipsania* in Rome built by Agrippa (Suić 2003, 161-62).

The demarcation of the territory is attested in two instances in Central Velebit area. The first is the boundary wall from Jablanac in conjunction with the boundary inscription (ILJUG 02, 00919), and the second is the boundary inscription in Begovača (CIL III, 15053). The first territorial demarcation was discovered by archaeologists in the year 1900 in the vicinity of Jablanac (Figure 2). The wall stretches from the coast and Panos area in the west to the Dundović

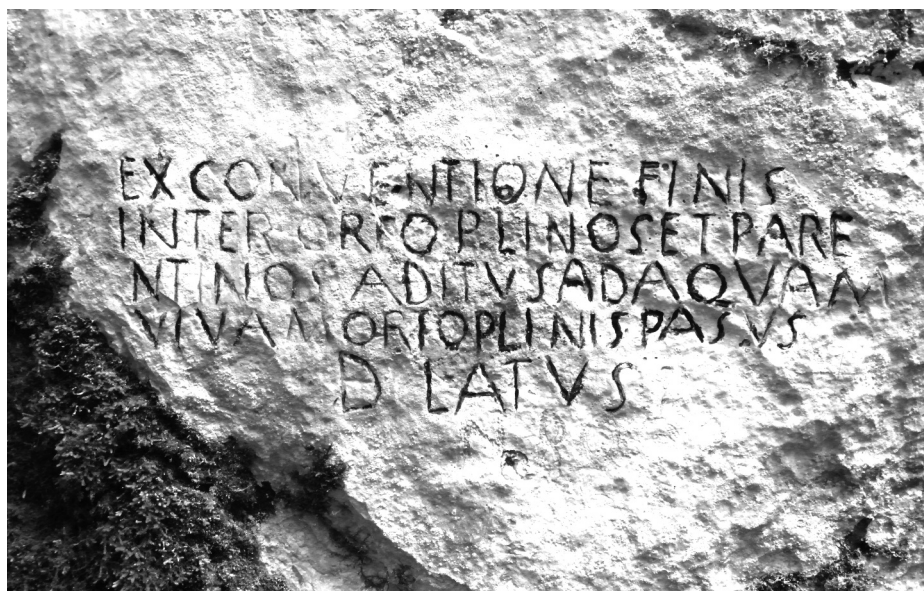
kosa in the east (Brunšmid 1900, 231). The wall width ranges from 1,20 to 1,50 m, and its greatest preserved height is 0,5 m. The wall stretches in a straight line (*rigor*) from the coastline to an elevation of 350 m. It crosses the Mujić glava hill, thereby maintaining the *rigor* and finally ends below the peaks of Dundović kosa. This dry stone wall boundary is categorized as *limites montani* or “limits facing mountains” (Campbell, 245-6, *Nomina Limitvm* L 248.6, 13). Thus far, this is the only proof of such territory demarcation between peregrine communities in the study area. The boundary inscription was found *in situ* in the Panos area. It was part of the dry stone wall boundary itself. This find confirms that the wall is indeed a boundary wall (Rendić-Miočević 1968, 63-74). The reading of the inscription is as follows: *Ex dec[r(eto)] / P(ubli) Corneli[i] / Do<label>ae / leg(ati) pr(o) pra[et(ore)] ♂ [[//////////]] int(er) Beg(i?)os et Ortopli[n(os)]* (eng. According to Publius Corenlius Dolabella propretorian legate’s decree [[//////////]] between Beci and Ortoplini). The fifth line, which apparently clarifies the act of demarcation, is missing. According to Rendić-Miočević, the line contained a short formula. The purpose of this formula was to describe the occasion in which the inscription was erected without actually naming the *iudex* or the person responsible (Rendić - Miočević 1968, 68). What may have happened was that one of the sides in the boundary dispute was disappointed with the outcome and removed the formula (*termini positi?*) that defines the boundary between two communities. This probably took place somewhat later, during the time of Dolabella’s successors, in an effort to alter the past state of affairs in a more favorable manner for the aggrieved party.

Figure 2: Dolabella’s boundary wall



Other evidence of territorial demarcation is found higher up the mountain in the Begovača area (Figure 3). Another boundary inscription, known by local people as *Pisani kamen*, is carved into an enormous carbonate rock (*montibus lapides naturales*) and often elaborated upon in literature. The inscription is almost completely preserved with only minor damage. The inscription reads: 1. *Ex conventione finis inter Ortoplinos et Parentinos.* “As negotiated, the boundary between *Ortoplini* and *Parentini*.” 2. *Aditus ad aqvam vivam Ortoplinis passus D latus I.* “Spring access - 500 paces (long) and 1 pace wide.” (Ilakovac 1978, 375). The first part of the text is quite clear and is undisputed by scholars. However, the second part of the text was interpreted differently by different scholars. The portion of the inscription over which scholars disagree is the interpretation of rights to spring access. Some of the authors accept the interpretation of the pace wide access allowed by *Parentini* to *Ortoplini* (Patch 1990, 29-31; Rendić-Miočević 1968, 63-73; Ilakovac 1978, 375; Glavičić 2003, 86). Brunšmid formed the second interpretation of the text by omitting the number *I* at the end of the inscription, suggesting it is a later intervention (Brunšmid 1901, 100-1). If that were the case, the inscription would say that the *Ortoplini* are allowed spring access 500 paces wide (740m).

Figure 3: The “Pisani kamen” boundary inscription



Although the inscription text is legible and the formulas rather clear, it seems that the interpretation of the text is not completely adequate. What is possible to interpret from this text is that the boundary was placed on this location between *Ortoplini* and *Parentini*. It can also be understood that *Ortoplini* were allowed spring access in the length of 500 paces and 1 pace width. Previous

authors writing about this inscription believed it was about the spring in Begovača. The spring is located on a meadow in Begovača and never dries in the summer months. And while authors concentrated mostly on the problem of the *Ortoplini* spring access width, they ignored the actual distance between the Begovača spring and the *Pisani kamen* inscription. The spring distance from the boundary stone doesn't fit the measures mentioned on the stone. The spring is 1200 meters away from the inscription that mentions the passage in the length of 500 paces (which is 740m) to the spring. This is precisely why it would appear that the *Pisani kamen* inscription does not refer to Begovača spring, which will be demonstrated in this paper.

Apart from evidencing demarcation, these inscriptions are significant in a sense that they name Roman *civitates Ortoplini, Beci, and Parentini*, which inhabited the Velebit region. Some communities are mentioned by Roman literary sources (Matijević-Sokol 1994.), but the *Parentini* community is known only through the Begovača boundary inscription. *Ortoplini* inhabited the areas of Stinica (Zaninović 1984, 38) and Starigrad kod Senja. Their territory stretched deeper inland, as suggested on the *Pisani kamen* inscription. The *Beci* lived south of the *Ortoplini* and their center is commonly placed at contemporary Karlobag - Roman *Vegium* (Rendić-Miočević 1968, 70). Unlike *Ortoplini* and *Beci*, the *Parentini* community is known only through the *Pisani kamen* boundary inscription. The discovery of the boundary inscription facilitated the reconstruction of their hypothetical territory. Scholars have commonly placed them in the area of Gornji Kosinj and Perušić (Patch 1990, 31; Brunšmid 1898, 174-76; Brunšmid 1901, 101). However, the reconstruction of Velebit *civitates* might suggest a different solution to the problem of the *Parentini* core territory. The different interpretation is based on the reinterpretation of the *Pisani kamen* inscription and the use of the oral traditions collected during the course of research.

ORAL TRADITIONS

Rich oral traditions within the Velebit area are quoted many times in the literature (Dronjić 2008, 2009, 2012). Locals from the Velebit Mountain are curious about prehistoric hill forts, old settlements, shepherds houses, old cemeteries and pounds, which are reflected in oral traditions.

During our field studies on Velebit Mountain, local people often narrated the local history and stories they have heard from their ancestors. These stories have been repeated for generations. Even though our work in the area is not focused explicitly on the local oral tradition, we did encounter two stories of potential importance for boundary interpretations. Consequently, we investigated the two narratives that we heard in the local villages of Jablanac, Donji Kosinj and Kosinjski Bakovac.

The first of these oral traditions refers to the Jablanac boundary wall.

According to the informants' stories, the wall stretches to the area beyond Dundović kosa in the direction of Begovača where *Pisani kamen* was found. Moreover, according to the sayings, the inhabitants of the sub-Velebit littoral followed the wall to Begovača themselves, or some of their ancestors did. There is also another version of this story, which states that a wall stretches up to Apatišan. Both stories were also stated in older literature (Brunšmid 1900, 231). However, the second version of the story was never mentioned by our informants. They persistently repeated the information about a wall built in direction of Begovača.

Apart from the story of the wall stretching to Begovača, there is another story connected to this area. On the Gavranuša ridge west of Begovača, people from Kosinjski Bakovac and Donji Kosinj area tell a story of the existence of an inscription called *Mali pisani kamen* (eng. Small written stone). The story states that one peasant was collecting mistletoe in the area of Gavranuša. When he became tired, he laid down on a stone, which appeared flat as a board. When he took a closer look, he saw an inscription on it that he could not read because it was written in a language unknown to him. When this person wished to return to his place of discovery, he could not find it anymore.

In the late 19th and early 20th century, more stories about the existence of older inscriptions were recorded in the area of Velebit (Brunšmid 1901, 101). Reports about the existence of these types of monuments are related to the area of Švica and Smrčeve doline. However, the inscription from Smrčeve doline is from the modern era and doesn't belong to the group of boundary inscriptions. The inscription that was mentioned by Cvjetko Vurster to be placed above the Švica water spring (Ljubić 1880, 231) has not been found. Brunšmid also mentioned information about the inscription in the area of Kućišta (Brunšmid, 1901, 101). However, he says he didn't have time to find it. In this context, one interesting element could be the oral tradition about a buried treasure connected to Kućišta (Dronjić 2008, 243). However, we did not receive any information about inscriptions in the area of Švica and Kućišta. Nevertheless, S. Glumac from Lipovo Polje told us a story about the search for a lost inscription in the area of Konj. About 50 years ago, a number of forestry workers were hired by "some museum people" to find the inscription but they were unsuccessful.

Based on the information presented above, it is clear that stories about old inscriptions can be of great interest to those archaeologists searching for them. Due to fairly impassable terrain on Velebit, information from local people about inscriptions was sometimes the only way to find them. Furthermore, the *Pisani kamen* inscription was found in this manner. Even though there is little possibility of discovering new inscriptions, such oral traditions must be incorporated into local cultural landscape research. They assign meaning to locations, which must then be evaluated in the context of the wider cultural landscape.

RESEARCH METHODS

This project utilizes archaeological, inscriptive, historical and oral, and landscape data to reconstruct the territories of indigenous *civitates*. We utilize topographic maps (TK1:25,000 and TK 1:5,000), historical maps of the Habsburg Empire from the 19th century, aerial oblique photographs, orthophotographs, a digital elevation model (DEM) and GIS. Contemporary topographic maps and orthophotographs were used from the online service Geoportal.dgu.hr. Historical maps of the Habsburg Empire were examined through service mapire.eu. A digital elevation model (DEM) was created using the Ordinary Kriging interpolation method in ESRI ArcGIS 10.1 from elevation point data and used for data visualization.

The starting point of the research was the epigraphic analysis of the *Pisani kamen* inscription, since this boundary inscription is the physical basis for reconstructing territories. The inscription was geolocated in detail, and the text was re-examined and clarified.

Contemporary topographic maps (TK1:25,000 and TK 1:5,000) and Austrian military maps from 19th century (the first and second military survey 1:28,800 scale and third military survey 1:75,000 scale) were studied based on conclusions derived from the analysis of the inscriptions. Maps were used for locating and mapping of old shepherd paths that are overgrown with vegetation and barely visible. They were also used for organizing field reconnaissance.

Archaeological aerial reconnaissance in Europe is usually carried out using high-wing light aircraft from which an archaeologist examines photographs for ground features that are of interest (Renfrew, Bahn 2016, 80-93). The resulting oblique images are geolocated using data from continuous GPS placed in the aircraft. Selected images can then be transformed to provide accurate plan views. Such aerial reconnaissance as a method of research enables prospection of the terrain and provides important information about the landscape as a whole. This is the main reason why this particular method was applied. Through a series of flights, our survey attempted to establish whether the boundary wall continues as stated in the oral tradition as well as in the literature.

Field reconnaissance was carried out in those areas that are related to the oral tradition where material demarcation traces were expected. For the purpose of directing field reconnaissance, we used ESRI ArcGIS 10.1. Preserved remains of the wall were mapped from aerial photographs by using GIS. Presumed continuation of the wall as suggested by the oral tradition was extrapolated in the direction of Begovača. Additionally, positions of the *Pisani kamen*, the Begovača spring and positions of other water springs were geolocated as well as old pedestrian and livestock tracks in the study area. After that, a 500-Roman paces buffer zone from the *Pisani kamen* boundary inscription was calculated in GIS. All these data were imported into GPS for the purpose of field inspection.

The area from Dundović kosa towards Begovača, presumably a boundary

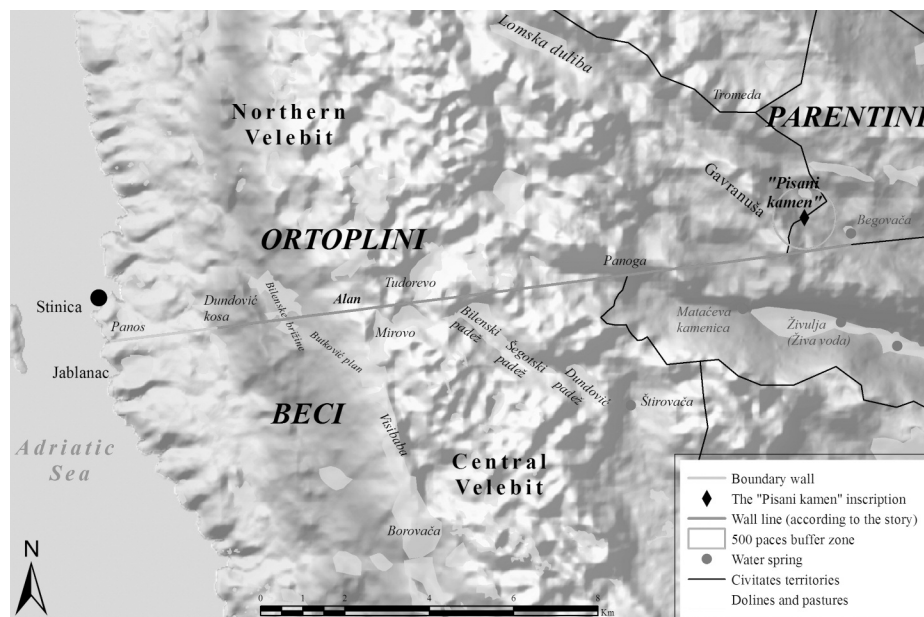
wall line, was particularly scrutinized to determine if the remains of the wall are still visible, as suggested by oral tradition. Field inspection was aimed towards the areas of the possible wall extension and delineated by GPS in the direction of its presumed continuation. The field inspection was conducted in the area of Begovača in order to find traces of former streams, which could be related to the *Pisani kamen* context. The research was conducted within a buffer zone of 500 Roman paces of the *Pisani kamen* inscription. The area of Gavranuša, which is connected to the story of *Mali pisani kamen*, was also inspected in order to try to find the location to which the story is connected.

RESULTS AND DISCUSSION

Since the oral tradition suggests that the boundary wall from Jablanac stretches to the other side of Dundović kosa in the direction of Begovača towards Kosinj, the decision was made to test this claim in the field. Field survey and aerial reconnaissance of that area did not identify any remains of a wall that would extend in that direction. Nevertheless, information from the oral narratives was critically evaluated and taken into consideration for further reconstruction of the *Ortoplini* territory. If the geomorphology of the area where the wall is preserved is considered, one can determine that this is the typical karst terrain where geomorphological slope processes that could destroy the wall are not in operation. In addition, vegetation is poor and all structures that were not mechanically removed from the littoral side of Velebit are preserved *in situ* as small or large collapsed walls. Similarly, the Dolabella's boundary wall was preserved. It is lower today than in the past due to the secondary use of its stones for building new dry stone walls. On the other side of the Dundović kosa and further in Velebit, the geomorphology of the terrain changes. Slopes are much steeper, and as elevation increases, the vegetation and precipitation change. On the steep slope below Alan, such as Balenske brižine and Butković plan, the wall could have been built, but its structure would not likely be preserved because of slope processes. We should expect a preserved boundary wall structure on the flat pastures of Mirovo and Tudorevo, but surprisingly, no remains were found there either. Most of the other areas, where traces of the boundary wall should be present, are covered by lush forests that make field survey difficult. Furthermore, there are some areas like Panoga and southern parts of Gavranuša that are totally inaccessible due to very steep terrain and huge grikes, rendering it extremely difficult or impossible for the wall to have been built. Nevertheless, the information about the wall originated from the early 20th century. Since that period, vegetation has changed due to a reduction in livestock breeding, which should be taken into consideration. Many former pastures are today overgrown with dense forest, such as the Begovača area. Therefore, the information about the wall stretching further into Velebit should not be ignored. If it did not exist phys-

ically, the assumption that the story about the wall refers to an old boundary between Jablanac and Stinica area and their pastures seems plausible. For that reason, the existence of the boundary preserved in local stories was taken into consideration, which is the reason why we extended the line of the wall due to its bearing in the direction of the *Pisani kamen* inscription (Figure 4).

Figure 4: Boundary wall and wall line in relation to the 500 paces buffer zone



The examination of the *Pisani kamen* boundary inscription established that the depth and curving pattern are identical on the entire inscription. Therefore, the Roman numeral *I* at the end of the text that caused much dispute among the scholars is, in fact, part of the original content. The numeral is slanted in relation to other characters. However, the entire final line of the inscription is not curved in a straight line. Rather this line appears uneven in comparison to the rest of the text. Therefore, the reading of Ilakovac (Ilakovac 1978, 375) seems to be correct. The point of disagreement with other scholars is that the inscription refers to the Begovača spring. The problem is that the actual distance between the *Pisani kamen* inscription and the Begovača spring is 1200m when in fact the inscription merely states that the water access is 500 Roman paces (740m) long and one pace wide. Although the inscription was erected according to the agreement between two communities, the appearance of the text clearly shows that its template was written by an official. It is also evident that the measurements engraved in the stone were defined by the Roman division of the territory. So it is hard to doubt that a mistake was made by an amateur land survey. Moreover, if *Ortoplini* did indeed have an access of 500 paces wide, it would mean

that they were allowed passage through the *Parentini* territory – that is, through the entire valley. In that sense, they would have been allowed to exploit *Parentini* pastures and water, which was likely not an option. If we take into consideration the fact of how precisely the contemporary wall is aligned, the possibility that such a great error in precise measurement could have been made seems implausible.

On the basis of these facts, the first assumption we explored was the existence of an older spring at a distance of 500 Roman paces from the inscription – possibly one that has since dried. There are numerous reasons for springs drying out in karst landscapes, and they can be related to human or natural factors. However, during our field inspection, we didn't come across any appropriate deposits or bedrock types that might allow a presence of any kind of springs in the past. Another possibility is that passage was allowed through the *Parentini* territory on a path 500 paces long to the spring in Kosinjski Bakovac. There is a track and a natural passage above the *Pisani kamen*, connecting Begovača and contemporary Kosinjski Bakovac. This track is the only possible way to pass Gavranuša, and it ends near a spring called Živulja in the Bakovac area (Figure 5). On older Habsburg Empire maps, Živulja is mapped as Živa voda which, if translated directly, matches the text *Aqua viva* from the boundary inscription in Begovača.

A boundary wall line from Jablanac seems to confirm this interpretation, which, if we extend it to Gavranuša, passes 765m from the *Pisani kamen* stone, or about 25m beyond the 500-paces buffer zone (740m). In this case, *Ortoplini* would have been allowed water access through the territory of *Parentini* only through the 500 paces long and 1 pace wide track. The water was situated on the community territory in Kosinjski Bakovac. This interpretation appears far more plausible because the distance of 500 paces stated in the text almost completely corresponds to the direction of the Dolabella wall (+1,03%) (Figure 4). This interpretation makes much more sense than the previous interpretation referring to Begovača spring, which is located 1200m from the inscription.

The oral tradition on *Mali pisani kamen* is connected to Gavranuša ridge, the area where the wall line adjoins the buffer zone defined at 500 paces around the *Pisani kamen* inscription. Neither the *Mali pisani kamen* nor the continuation of the wall was found in the field. It is reasonable to assume, though, that the tradition of its existence could refer to an old boundary place. In the future, it is necessary to further inspect the entire area to Begovača, beyond the termination of the Dolabella wall because it is quite possible that the boundaries were marked differently in the high area of Velebit. Therefore, the manners of boundary demarcation likely varied and were not strictly limited to walls.

The weakness of this idea could be the distance of the Živulja spring in Kosinjski Bakovac and whether or not *Ortoplini* actually walked 2,5 km from the inscription to the spring. However, if we keep in mind that they moved together with their livestock over Legenac and Begovača during summer months when they used ponds for watering their livestock, it seems reasonable to conclude that they descended from the mountain after summer grazing through

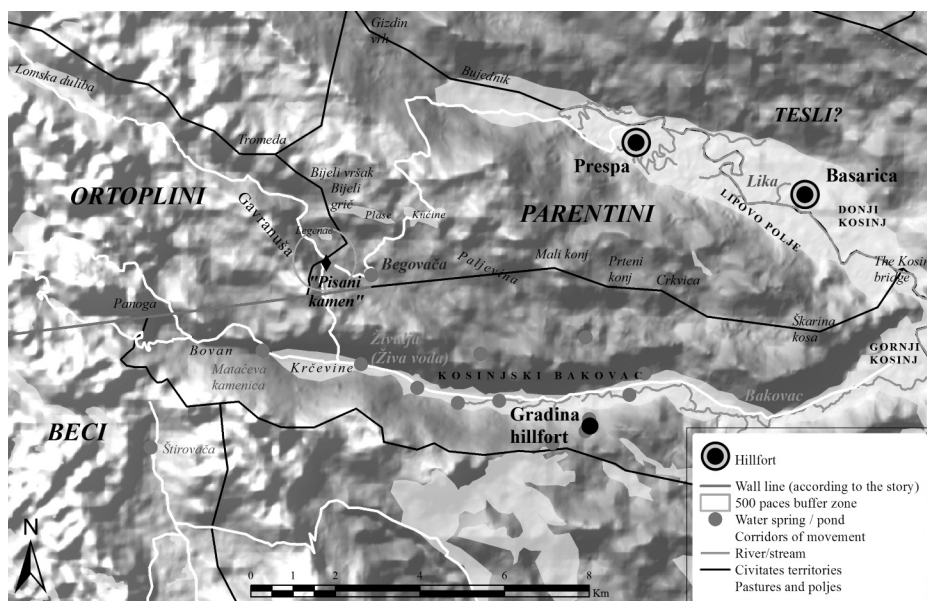
Kosinjski Bakovac. This is where they would have had access to spring water, after which they could have continued through Krčevine and Bovan back to their territory. On the one hand, *Parentini* surely would not have allowed the exploitation of the only spring they owned on Begovača to be polluted by livestock. The spring at Begovača as we know it today was reconstructed during the 1990s. Brunšmid describes it as a powerful spring that is often muddy and easily polluted (Brunšmid 1901, 101). Perhaps that is the reason why *Parentini* would not allow water access to *Ortoplini*. On the other hand, there are several springs in Kosinjski Bakovac, which could be the reason why the community that lived there didn't have a problem allowing watering livestock to *Ortoplini*.

Following this logic, the *Ortoplini* boundary would have included the area from *Pisani kamen* through Begovača towards the northeast to the highest peak above Legenac (881 m.a.s.l.). The boundary can further be assumed to have extended to Ledena draga ridge, Bijeli grič peaks (1051 m.a.s.l.) through Bijeli vršak to Tromeda. *Ortoplini* thus had in their possession the pastures at Lomska duliba through which they could reach Begovača. This is probably where they would stop before moving to the littoral area in late summer months.

Scholars have commonly claimed that *Parentini* inhabited the area of Gornji Kosinj and Perušić (Patch 1990, 31; Brunšmid 1898, 174-176; Brunšmid 1901, 101). However, this work has reached a different conclusion on the *Parentini* core territory. There are arguments that suggest that *municipium Tesleum* in the 2nd and 3rd century should be located in Donji Kosinj area. Horvat was the first that mentioned this *municipium* in literature when publishing his discovery of a Latin inscription where the text *municipium Tesleum* was engraved (Horvat 1993, 58). Today the inscription is lost. However, confirmation of the existence of a *municipium* in the Donji Kosinj area comes from urns with inscriptions that mention decurions (Glavičić 2008). Accordingly, *Tesli?* is assumed to be the name of the community that inhabited the area of Donji Kosinj (Glavičić 2008, 154-155). Therefore, this area should be excluded as the possible *Parentini* territory (Glavičić 2008, 154-155). The karst polje in Donji Kosinj area is divided by the Lika River into the northeastern part of Donji Kosinj and the southwestern part of Lipovo Polje. The entire polje covers an area of 14 km², and it is separated by a ridge from the Gornji Kosinj polje. The area where the Lika river cuts into it is 1,4 km long. Despite the fact that poljes in Gornji Kosinj and Kosinjski Bakovac are two different features, geomorphologically they are connected by Bakovac stream, which empties into the Lika River in Gornji Kosinj. Fresh water and fertile lands are abundant in the whole area and provide normal functioning for several communities. Since we took into consideration the possibility of the boundary between *Ortoplini* and *Beci* stretching further into the mountain according to the direction of boundary wall, the *Parentini* territory was reconstructed considering the direction of that particular wall. Despite the fact that the territory was reconstructed according to the direction of the wall, it is difficult to assume that the wall was indeed built along the whole stretch. Geomorphological characteristics of the terrain simply wouldn't allow it. The intersection of boundaries between *Ortoplini*, *Parentini*, and an unknown community is

located at Gavranuša. From that position, the boundary extends over the higher peaks (872 m.a.s.l. and 864 m.a.s.l.) in the direction of Begovača. The boundary stretches further from Paljevina to Mali konj where it turns east towards Prteni konj (826 m.a.s.l.) and Crkvica (831 m.a.s.l.) extending to Škarina kosa (826 m.a.s.l.) all the way to contemporary Kosinj bridge. The bridge is a natural divide between Donji Kosinj and the Lipovo Polje area and Gornji Kosinj. These peaks are geographically associated with the Lipovo Polje area, and they naturally divide Lipovo Polje from Kosinjski Bakovac. The Lika River is assumed to be a boundary between the *Parentini* and *Tesli?* communities. Since the Roman land surveyors stated that a river was often utilized as a natural boundary, it could have been the case in this area as well. Although geomorphologically this polje is a single feature, traditionally the area is separated into two. Different names for the northeastern and southwestern part of the polje testify to this. Furthermore, both poljes feature a strong hill fort, which could have functioned as the central settlement. The *Parentini* central settlement could have been located at Prespa hillfort in Lipovo Polje, a prominent hill rising above the Lika River. The Lipovo Polje area is naturally connected to Begovača. Numerous paths, only a few hours walk from the mountain pastures and Begovača spring, confirm the homogeneity of this area. In this particular case, it is necessary to point out another component of the division between Donji Kosinj and Lipovo Polje. Even today, these two cadaster municipalities are divided by the Lika River, which could reflect a traditional boundary along its course. From the Lika River ponor, the *Parentini* and *Tesli?* boundary was assumed to pass over Bujednik through Goljak and Gizdin vrh (879 m.a.s.l.) to Risovac (932 m.a.s.l.) (Figure 5).

Figure 5: Reconstructed civitates territories in the Central Velebit area



CONCLUSION

This paper investigates the territorial organization of indigenous *civitates* in the area of Central Velebit in the period of the constitution of Roman authority in Liburnia. The analysis of data acquired by field survey, aerial reconnaissance, epigraphic analysis, the application of GIS, and use of oral tradition were used to reconstruct the territories of Roman communities. The main goal of this paper was to reinterpret the meaning of the boundary inscription of *Pisani kamen* and demonstrate the usefulness of stories and oral tradition in cultural landscape research and the territorial reconstruction of indigenous communities.

Although the content of the collected oral tradition probably eroded over time while transferring through generations, they still represent valuable source of information for cultural landscapes research. Our research indicates that oral tradition could contain historically relevant information. We believe that the legends about the boundary wall and *Mali pisani kamen* that were utilized in this paper to reconstruct territories reflect a tradition of the existence of older boundary traces that were preserved in the memory of a place and people who passed it on from one generation to another. Since the majority of the Velebit area remained isolated from significant outside influence, numerous legends of places were preserved and available for research. Talks with local residents that we conducted during our research of this mountain show that there is a story about each place on Velebit. Archaeologists must take these stories into consideration in the same manner that we use material remains to reconstruct past lives. This is the main reason why we used different methods of boundaries research. But final reconstruction of territories would not be possible by using only one of these research methods. Consequently, it is necessary to point out the meaning of the interdisciplinary research of the cultural landscape by utilizing various archaeological methods as well as local stories. Through stories, some landscape features become recognizable and important to archaeologists. They also gave the landscape its spatial and physical identity, which helps preserve traditions (in this case boundary traditions) for the present and the future.

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