

Katharina Zanier<sup>1</sup>

# The Past Made Present: Issues of Management, Presentation and Interpretation on the Example of the Late Roman Defence System *Claustra Alpium Iuliarum*

---

**ABSTRACT:** The paper presents issues concerning the management, presentation and interpretation of a complex cross-border monument, such as the Late Roman defence system the *Claustra Alpium Iuliarum*, which can be understood as a serial archaeological site.

The defence system protected the passages to the heart of the Roman Empire. The archaeological remains of the system span in segments from Rijeka in Croatia to the Posočje region in Slovenia. The *Claustra Alpium Iuliarum* represents an outstanding example of integration of architecture into the natural environment: the archaeological remains are located mainly in wooded areas, which often overlap with protected natural areas, therefore their experience is closely linked to the enjoyment of nature.

The remains of the system are spread over at least 19 small municipalities. In Croatia, they all pertain to the Primorje-Gorski Kotar county. In Slovenia, there are no regional entities which could coordinate and channel finances and activities for the valorisation of mentioned sites. In the absence of major and financially powerful entities, research, presentation and interpretation activities have mainly been implemented within the framework of several European projects, such as the PARSJAd, *Claustra* and *Claustra+* project.

The aim of these projects was to improve the attractiveness and highlight development opportunities of the defence system, also by connecting its stakeholders. Several research activities were implemented in order to improve the information basis for all dissemination activities. Parts of the archaeological remains were exhibited to the public. The projects were also intended to enhance the physical and informational accessibility of the remains. The sets of activities were focused on the development of a joint tourism product, and a participatory form of management was initiated through the establishment of a consortium of 42 stakeholders. The paper aims to provide a critical overview of

---

1 Assistant Professor Dr Katharina Zanier, University of Ljubljana, Faculty of Arts, Department of Archaeology (Aškerčeva 2, 1000 Ljubljana). Email: Katharina.Zanier@ff.uni-lj.si; ORCID: 0000-0003-1605-2502.

the key archaeological, conservation, and management activities that have been undertaken over the past two decades on the *Claustra Alpium Iuliarum* system. It seeks to highlight the main accomplishments of European cross-border projects, assess their contributions to research, heritage preservation, and sustainable tourism, and reflect on the challenges of coordinating and managing a transnational, serial cultural heritage site.

**Keywords:** *Claustra Alpium Iuliarum*; Roman Defence System; Archaeological Heritage; Cultural Heritage Management; European Projects

## 1 Introduction

This paper takes its cue from a number of European projects that have taken place in recent years on the subject, and the sites of the *Claustra Alpium Iuliarum*, which is an internal Late Roman defence system and can be understood as a serial archaeological site. It consists of barriers (i.e. *claustra*) that controlled the passages to ancient Italy. The barriers are located in discontinuous, and sometimes multiple, stretches between Rijeka in Croatia and the upper Soča Valley in Slovenia<sup>2</sup>. The *Claustra Alpium Iuliarum* represents an outstanding example of the integration of architecture within the natural environment: the archaeological remains are mainly located in wooded areas that often overlap with protected natural areas, and their experience is therefore closely linked to the enjoyment of nature.

Among other Roman defence systems, the *Claustra Alpium Iuliarum* can best be compared to early Byzantine Eastern-Balkan internal linear barriers (Dintchev 2012). Only few other internal barriers have reached the extent and importance that the *Claustra Alpium Iuliarum* system had. Due to its importance, the *Claustra Alpium Iuliarum* system was proposed for inclusion on the national UNESCO tentative list in a 2007 Slovenian government document, viz. in the ‘Strategy for the Protection of Cultural Heritage and Natural Values in the Republic of Slovenia in accordance with International Legal Instruments and Activities’ (Vlada Republike Slovenije

---

<sup>2</sup> For a basic contextualization of the defence system, I mention only a few titles from the rich and valuable bibliography on the subject. Despite its remarkable age, the beautiful monograph by Jaroslav Šašel and Peter Petru (1971) still remains essential. After several interesting articles about individual sites belonging to the defence system, two comprehensive monographs were published: one by Jure Kusetič (2014) and the other by Peter Kos, with a greater focus on the Hrušica site (Kos 2014a). The results of the investigations carried out over the past few years were then collected in the monograph published at the end of the *Claustra+* project (Višnjič and Zanier 2019), where further details and literature on the places mentioned in the text can be found.

2007). This proposal was never implemented, probably mainly due to an evident lack of solutions for a sustainable management of all the sites pertaining to the system.

The remains of the system are spread over at least 19 mostly small municipalities. In Croatia they all belong to the Primorje-Gorski Kotar county. In Slovenia, there are no regional entities that could coordinate and channel finances and activities for the valorisation of the aforementioned sites. In the absence of major and financially powerful entities, research, presentation and interpretation activities have therefore mainly been implemented in the frame of several European projects. In the last fifteen years, we can highlight three major projects. The PARSJAd project ('Archaeological Park of the Upper Adriatic') was a strategic Interreg Italy-Slovenia cross-border project implemented from 2010 to 2014, in which the Hrušica site, i.e. *Ad Pirum*, was included as the central pivot of the *Claustra Alpium Iuliarum* system among many other archaeological sites. This was followed by two projects, *Claustra* and then *Claustra+*, which specifically focused on the defence system; both took place within the framework of the Interreg Slovenia-Croatia programme<sup>3</sup>. Two key documents were prepared in the *Claustra* project: a conservation and a management plan for the remains of the defence system (Oven et al. 2015; Zanier et al. 2015). These documents enabled stakeholders to independently implement activities, including within the framework of different projects, but in accordance with a coherent intervention logic. The project *Claustra+* ended in January 2020 and was coordinated by myself as the project manager at the Institute of the Protection of Cultural Heritage of Slovenia, which was the lead partner of the project. Some important documents were also prepared in this project, intended to guide future activities at the sites of the defence system: the development guidelines for the destination *Claustra Alpium Iuliarum*, an interpretation plan for the cultural touristic route, and a pro-

---

3 I refer to the project website *Claustra* (2019) for main project information. Two prizes, awarded by the Association of Conservators of Cultural Heritage of Slovenia (*Slovensko konservatorsko društvo*) and by the Slovenian Archaeological Society (*Slovensko arheološko društvo*), to whom I take the opportunity to express my gratitude, acknowledged my efforts directed to the coordination of the project. In the context of more recent research activities on this topic, I also acknowledge the valuable financial support of the Slovenian Research and Innovation Agency (research programme Archaeology – P6-0247).

motion plan for the cultural touristic product (Nikolić Đerić 2018a, 2018b; Kulturbüro 2019).

Although the aforementioned projects were primarily aimed at the tourist enhancement of the sites involved, there were also plenty of opportunities to include research activities, which clearly constitute the basis for dissemination. In recent years, archaeological research on the defence system has evolved in three main directions: the identification of new barriers, further topographic recognition of those already known, and preventive archaeological excavation connected to the presentation of the remains. Targeted excavations were implemented both in urbanised areas, subject to building interventions, as well as in rural areas, destined to be developed touristically through the establishment of archaeological trails and the presentation of archaeological remains. These sets of activities also focused on the development of a joint tourism product and a participatory form of management was initiated with the establishment of a consortium of 42 stakeholders, despite diverse ownership situations and various responsibility prerogatives.

The aim of this paper is to provide a reasoned overview of the key archaeological, conservation and management activities undertaken in the past two decades on the *Claustra Alpium Iuliarum* system. I will mention the activities implemented in aforementioned projects, as well as some important interventions that were implemented during the same years, but within the framework of other initiatives. For the sake of space, I will not be able to offer an exhaustive and comprehensive overview of all undertakings, but will focus only on the main ones. My accounts will be based on published data, project and expert reports, as well as on direct witnessing of implemented activities<sup>4</sup>.

More broadly, the paper aims to assess how different European projects contributed to research, heritage preservation and sustainable tourism, and how the workflow has been organized in order to reach sound results, although the activities have been implemented within several projects and at different time periods.

The paper also offers a reflection on the challenges of coordinating and managing a transnational, serial cultural heritage site. Serial sites share common meanings and values. They were first mentioned in the 1980' version of the *Operational Guidelines for the Implementation of World Heritage Convention* (UNESCO 1980). Since then, several serial sites have been included on the World Heritage List. Nevertheless, few specific studies have focused on this heritage category and its specific challenges of valorisation and management (e.g. Poshyanandana 2019). The *Claustra Alpium Iuliarum* case study is therefore relevant for offering new insights and experiences related to this specific category of heritage.

## 2 Results and Discussion

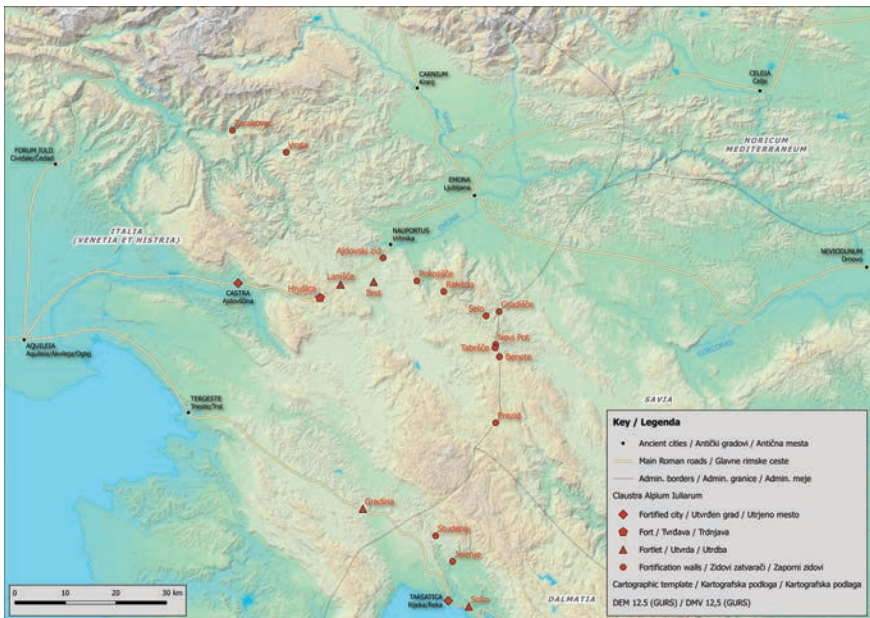
### 2.1. Archaeological and Historical Context

It was precisely in the context of the aforementioned projects that we came across the fundamental problem of clearly identifying individual structures and sites relevant to the defence system. While in ancient literary sources the main function of the *Claustra Alpium Iuliarum* as land barriers is distinctly emphasized (Šašel 1971; Kos 2014a, 114–122), it is also evident that it is possible to bar the land in different manners and as part of a more or less organically organized and unitary system. Thus, two main schools of thought have developed. One is more restrictive and considers as parts of the system only those Late Roman sites of a purely military character distinguished by linear barriers (large walls, ranging from a few tens of meters long to more than seven kilometres, mostly equipped with towers or even fortlets and forts), located in the area of the south-eastern Alps, i.e. in the ancient *Alpes Iuliae*, mainly near official road routes to channel the traffic over them (Kos 2013, 2014a, 2014b; Kusetič 2014). The other school of thought is more inclusive, comprising a broader zone and in addition to the usual Late Roman barrier walls, also includes Late Antique fortified hilltop settlements located in the wider area between north-eastern Italy and the south-eastern Alps, with a more or less pronounced military presence, but not characterised by linear barriers (Ciglencečki and Milavec 2009; Ciglencečki 2011, 2015, 2016; see also Milavec 2017, 157–158).

Dissemination is known to require simplification of the various possible hypotheses and clear identification, which is a sore issue in the archaeo-

logical field. For the purposes of the aforementioned projects, twenty sites were thus selected, located in present-day Slovenia and Croatia (Figure 1). They correspond to ascertained linear barriers, also including a number of forts in the same areas, which are partly structurally connected to the same linear barriers, with unitary constructive and chronological characteristics. The aforementioned sites are located in conjunction with identified or hypothetical road connections belonging to the main *viae publicae* and numerous minor roads in the area. This way, these sites were undoubtedly identified as part of the defence system, not excluding, however, that it relied for its operation also on a broader context and on additional sites of a more heterogeneous and complex character.

**Figure 1:** Map of the *Claustra Alpium Iuliarum* defence system (linear barriers, forts and fortlets), with indication of main ancient settlements and roads, as well as provincial boundaries. Map: Jure Kusetič, National Museum of Slovenia.



However, the operation, i.e. the function of the *Claustra Alpium Iuliarum* has also given rise to considerable debate, partly related to their chronology, an issue that is also important to the aforementioned topic of site identification. The presence of the *Claustra Alpium Iuliarum* seems to be

documented as early as the year 269/270 AD in the *Vita Aureliani* (Historia Augusta 1998, 268–269<sup>5</sup>; cf. Kos 2014c, 118). Various literary sources, however, focus mainly on their importance during the civil wars between 350 and 352 (when, however, Hrušica is already referred to as an old fortress: Iul. 3.17), as well as in 388 and 394, while they are no longer mentioned during the crucial invasions in 408 and 452 (Kos 2014c, 121). As observed by Aldo Marcone, the *Claustra Alpium Iuliarum* ‘serve more as a battleground between emperors among themselves and between emperors and usurpers than as a barrier against the barbarian hordes’ (Marcone 2004, 354). Nevertheless, it is hard to imagine that such an extensive system was conceived as a whole and, above all, maintained over time for this purpose alone. Marcone himself also pointed out that the connections between the *Illyricum* and the Po Valley are right in this area facilitated by a series of passes that are at an easy altitude when compared to other areas of the Alpine arc (ibid., 344). By comparison, even today these are extremely heavily travelled areas within recent migration waves. The potential threat of invasions through this corridor, also mentioned in some sources<sup>6</sup>, should have at least constituted an incentive for the construction of the system. However, it may also have had other purposes, such as traffic control, including trade (Kos 2014a, 36), with a particular emphasis on protecting people and goods along the route, which were often in danger due to the intense brigand activity, as attested by numerous sources (Bigliardi 2004, 326)<sup>7</sup>. The control of internal migration flows<sup>8</sup>, including those of refugees and of a basically peaceful nature, may also be another possible purpose of the system, as well as protecting agricultural production in the high plains and suppressing raids by gangs of various provenance (Poulter 2013, 22, 24, 27). A combination of several of the aforementioned reasons is also probable. However, it should be noted that the general scarcity of artefacts found in the area of the actual linear barriers, i.e. the walls, would more

5 SHA, *Vita Aureliani* 37.5–6.

6 Cf. especially St. Ambrose for the years 374 (*De excessu fratris Satyri* 1.31) and 392 (*De obitu Valent.* 4).

7 See also the funerary monument from Ajdovščina (*Castra*) dedicated to *Antonius Valentinus*, who was killed by robbers at *Scelerata* while crossing the *Alpes Iuliae* (Pais 1922, 401–404; Buonopane 2016, 45; with many other examples). On the problem of Roman brigandage in the *regio X* cf. especially Cerva (1998).

8 On internal migration, nomenclature and categories in Roman law see Moatti (2016).

likely correspond to a temporary and short-term function and occupation in the event of sudden attacks (either internal or external invaders), rather than a permanent and prolonged control of the territory and traffic, which would have required continuous deployment of garrisons on site.

## 2.2 Non-invasive Research Approaches

As is well known, LiDAR imaging is available *online* for the entire Slovenian national territory (Triglav Čekada and Bric 2015). Thus, there are several reports of newly spotted walls and barriers, even made by non-professionals who have become interested in examining LiDAR images. When verifying LiDAR data in the field, it proved crucial to consider distinctive characteristics, such as the thickness of the walls (which in the case of the known remains of the *Claustra Alpium Iuliarum* is never less than 90 cm, i.e. three Roman feet), the construction technique (consisting of medium-large roughly hewn elements, generally, but not always, bound by mortar<sup>9</sup>), the presence of towers (mostly measuring between 4 x 4 m and 6 x 6 m) or small wall protrusions, which were probably intended to support wooden walkways along the walls (see below, Figure 4) (Kos 2014a, 22–23, 32–33; Kusetič 2014, 104–106). The analysis of the LiDAR data made it possible to recognise additional sections for some already known walls, both in Slovenia (Kusetič 2019, 6–7) and in Croatia, where the area was surveyed with LiDAR technology within the framework of the aforementioned *Claustra* project (Višnjić 2016). It also enabled researchers of the National Museum of Slovenia to re-identify the course of the barrier at Vrata, not far from Cerčno in Slovenia, previously partially known through notes of Pavle Blaznik and Nada Osmuk (Kusetič 2019, 11–12).

A recent master's thesis (Biščak 2022)<sup>10</sup> also analysed the visibility of one of the barriers of the defence system, namely the Ajdovski zid near Vrhni-

---

9 Some of the barriers in Croatia show dry construction sections: a short adjunct wall at Kičej in the Studena barrier sector (Višnjić et al. 2019a, 159, figs. 1 and 4), some sections of the Jelenje barrier at Borovica and Tomažina (Višnjić et al. 2019c, 119), both side walls of the U-shaped barrier in the area of Prezid, i.e. Babno polje, right on the Slovenian-Croatian national border (Lipovac Vrkljan and Šiljeg 2006, 81; Višnjić et al. 2019b, 191).

10 The master's thesis was prepared at the Department of Archaeology at the University of Ljubljana, under the mentorship of myself and Dimitrij Mlekuž Vrhovnik.

ka. The thesis used the QGIS program to investigate the visibility from the Ajdovski zid to the surrounding area and the visibility of the barrier from selected points in the area, as well as the mutual visibility of individual sections of the barrier itself. The analysis showed that the Ajdovski zid barrier enabled the monitoring of nearby roads and that the Ajdovski zid and Lanišče barriers could communicate with each other, as the visibility between them is excellent. The integration of the barrier into the terrain itself shows to be optimal based on the visibility analysis. Any other integration into the terrain would disturb the main fields of view that the actual layout offers.

### 2.3. Recent on-site Interventions

Archaeological research and interventions aimed at the presentation and interpretation of the *Claustra Alpium Iuliarum* sites have been carried out in the last twenty years in Rijeka, Solin near Kostrena, Jelenje, Studena, Pasjak and Prezid / Babno polje on the Croatian side. In Slovenia, similar activities have been carried out at the barriers of Benete, Novi pot, Gradišče pri Robu and Ajdovski zid, as well as in Vrhnika, Hrušica and Ajdovščina. In the following, I will focus on these locations, but small on-site interventions were over time implemented at almost all locations of the defence system, as they have been equipped with information boards and signposts. The interventions were implemented in accordance with common conservation guidelines and with the authorisation of all responsible institutions and owners.

Rijeka

Since 2007, large sections of *opus mixtum* structures pertaining to the south-western part of the *principia*, i.e. the military headquarters, of *Tarsatica*<sup>11</sup> have been brought to light and displayed *in situ* as an initiative of the municipality of Rijeka, but with the collaboration of the Croatian Conservation Institute (*Hrvatski restauratorski zavod*). Parts of the building are

---

11 The first to mention *Tarsatica* is Pliny (Plin., *HN* 3.140), precisely as *oppidum*; it became *municipium* probably in Flavian times, see Šašel and Petru (1971, 53) – especially in relation to literary sources – and Višnjić (2019, 71).

still incorporated into the surrounding architecture of the historic centre of Rijeka, but the layout of the complex, which has a large porticoed courtyard as its central space, is clearly recognisable. On the western side, which has been fully excavated, lies a row of rooms, while on the northern side, the remains of the main wing with the *aedes principiorum*, i.e. the shrine of the standards, and adjoining rooms have been discovered. On the southern side of the building was a monumental entrance, to which belongs the famous Roman arch. The latter is built with large limestone blocks and presents simple mouldings (Radić Štivić and Bekić 2009; Kusetić 2013, 35–37; Višnjić 2019). Luka Bekić dated the construction of the *principia* between 260 and 270 AD (Bekić 2009, 220), Peter Kos slightly later, towards the end of the 270s or in the early 280s, and its abandonment at the beginning of the 5th century (Kos 2012, 299; 2014a, 32–35; 2014c, 127). The coastal town of *Tarsatica* was surrounded by walls at this time. Some linear barriers also fortified the town's hinterland: five sections of barriers extend to the north, in the upper parts of the modern city, between the Calvary Hill (Kalvarijska) and the Saint Catherine's Hill (Sveta Katarina) (Kusetić 2013, 34–38; Višnjić 2019).

The display of Roman remains has a long tradition in Rijeka. Several sections of linear barriers have long been displayed, but conservation and valorisation efforts have concentrated in recent years on the area of the *principia*, the remains of which have been consolidated and displayed to the public. A 3D reconstruction has been designed for the whole complex. An on-site an archaeo-stereoscope enables the visitors to see the reconstruction in real proportions. Since the site is located in the very centre of the city, regular maintenance of the remains is implemented by the municipality of Rijeka and the Croatian Conservation Institute.

### Solin

The fortlet of Solin (Figure 2), located in the municipality of Kostrena, southeast of Rijeka, has been undergoing excavations for the Maritime and Historical Museum of the Croatian Littoral in Rijeka since 2007 (*Pomorski i povijesni muzej Hrvatskog primorja Rijeka*): only the southern side (the only accessible one) of the fortlet was protected by 2 m wide walls. Archaeological research shows that a hill-fort was previously located on the same location (Starac 2019b).

All discovered walls of the fortlet were eventually consolidated and displayed to the public and are subject to regular maintenance, as the site is jointly managed by the municipality of Kostrena and the Maritime and History Museum of the Croatian Littoral in Rijeka.

**Figure 2:** Solin near Kostrena (Croatia), archaeological remains of the late Roman fort facing west, with Rijeka in the background. Photo credit: Petar Fabijan.



### Pasjak

A similar situation exists at the Pasjak fortlet, situated in the municipality of Matulji, on the route of the *Tarsatica–Tergeste* road. The fortlet re-examined by the Maritime and History Museum of the Croatian Littoral in Rijeka between 1987 and 2006. Ranko Starac dates the construction of the fortlet with 3 m thick walls, also located above an earlier prehistoric hill-fort, between 250 and 270 AD, and assumes its early abandonment shortly afterwards (Starac 2019a).

Here too, remains have been discovered, consolidated and displayed to the public. Maintenance activities are performed only occasionally.

### Jelenje

Recent archaeological research performed at the barrier, located in the municipalities of Jelenje and Čavle, was coordinated by Josip Višnjić from

the Croatian Conservation Institute. In 2015 and 2017, two towers of the Jelenje barrier were excavated in Obrovac. From the first a charcoal sample, relevant to the phase of use of the site, was dated by the C14 method to 340–425 (95 % probability) or 385–420 AD (68 % probability). During the excavation, fragments of smooth plaster were collected, which, as also observed in some other barriers, must have covered the walls of the tower. As with the other *claustra* towers, no tiles were found, suggesting the presence of a wooden roof. Remains of ceramic and glass artefacts collected during the excavation indicate that the tower, like some others, was at least partly used as temporary accommodation for soldiers (Višnjić et al. 2019c, 128–130).

Parts of the Jelenje barrier have been consolidated and displayed to the public. The 3D reconstruction of the barrier is also visible through an archaeo-stereoscope, placed at the Frankopan Castle of Grobnik situated in front of the barrier. Also in this case, maintenance activities are performed only occasionally.

#### Studena

Excavations were carried out at the Studena barrier (in the area of the municipalities of Klana and Jelenje), in 2005–2006 (Starac 2009, 279–285) and in 2015, specifically in the locality of Mlake, where a tower was discovered. The tower was crossed by a footpath, and a road probably ran alongside the tower, lined on the other side by another tower. A charcoal sample was analysed using the C14 method and provided a date of the tower's phase of use between 250–400 (95 % probability) or 260–280 or 325–385 AD (68 % probability) (Višnjić et al. 2019a, 154–165).

These remains were also over time consolidated and presented to the public. Maintenance activities are performed occasionally.

#### Prezid / Babno polje

The Prezid / Babno polje barrier lies on the national border between Croatia and Slovenia (respectively on the territory of the municipalities of Prezid and Loška dolina). The barrier was excavated in 2018 in Deuce. In addition to the characteristics also found at other *Claustra Alpium Iuliarum* sites (1.2 m thick wall with wall protrusions intended to support a wooden walkway), the coexistence of one part of the wall built with mortar and the other with dry construction has been documented here (Višnjić et al. 2019b, 198).

The discovered section was consolidated, but as a border area controlled by border policy, several parts of the barrier are *de facto* not accessible to the public.

#### Benete

Archaeological research was recently carried out at the Benete barrier, in the area of the municipalities of Bloke and Sodražica, on Slovenian territory. Archaeologists from the National Museum of Slovenia (*Narodni muzej Slovenije*), guided by Jure Kusetič and supported by other collaborators, conducted geophysical research and LiDAR analysis (Kusetič and Mušič 2019; Kusetič 2019, 5). The Institute for the Protection of Cultural Heritage of Slovenia (*Zavod za varstvo kulturne dediščine Slovenije*) conducted archaeological excavations at the site of a tower, which had previously already been partially excavated, coordinated by Maja Lavrič. Fragments of rough plaster were present on the inner and outer sides of the tower walls, and plaster fragments with special marks were also found: two had imprints of a circular object, one had engravings possibly referable to an extemporary rosette engraved in the fresh plaster, and one fragment was decorated with a red fillet on a white background. Inside the tower was a *cocciopesto* floor, and pavement remains were also found outside the tower. The tower was damaged on the outer side and later repaired. Charcoal samples analysed using the C14 method date the construction of the tower to a period slightly later than 300 AD, and its renovation to 350/360 AD. Again, only a few fragments of kitchen ceramics and glass, a nail and a fragment of bronze sheet metal were found (Lavrič, Mori and Vršnik 2019).

The tower was then consolidated and presented to the public. Maintenance activities are performed only occasionally.

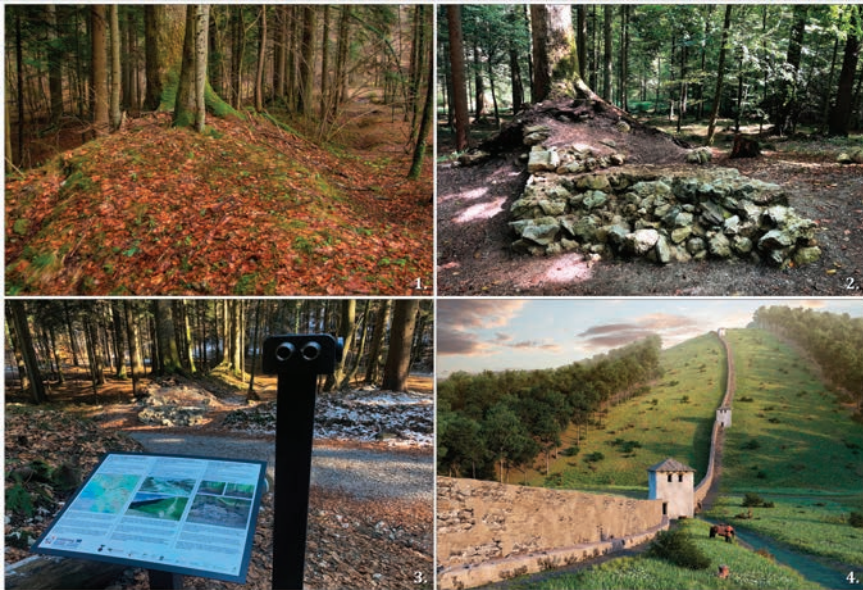
#### Novi pot

Not far away lies the Novi pot barrier (municipality of Sodražica), which itself is a recent accidental discovery, made during road works in 2011. It is a 300 m long and 2 m thick wall with two towers. Geophysical investigations have shown that one of them was crossed by a road, the route of which has yet to be reconstructed (Kusetič 2019, 5–6).

## Gradišče pri Robu

At the Gradišče pri Robu barrier (municipality of Velike Lašče), a small section of the wall was also cleaned (Lavrić and Mori 2019), consolidated and displayed by the Institute for the Protection of Cultural Heritage of Slovenia. The site was also equipped with an archaeo-stereoscope showing the 3D reconstruction of the barrier (Figure 3). Archaeo-stereoscopes are a convenient solution that offers visitors a vivid picture of attempted reconstructions of archaeological remains, especially in areas without electricity, as it is the case at most locations of the *Claustra Alpium Iuliarum* system. However, we have to point out that our archaeo-stereoscopes demonstrated to be sensitive to humidity and changing temperatures, which is truly demanding for regular maintenance.

**Figure 3:** Gradišče pri Robu: 1. the barrier wall before excavation (photo credit: Andrej Blatnik); 2. the wall after excavation (photo credit: Tajda Senica); 3. information board and archaeo-stereoscope in front of the excavated remains (photo credit: Tajda Senica); 4. reconstruction of the original appearance of the barrier with a masonry walkway and wooden-roofed towers, visible through the archaeo-stereoscope (image: Link 3D).



Maintenance activities at this site are performed occasionally. The barrier is located on a geological-archaeological trail managed by the local Zavod Parnas team, which cares for it and organizes activities on a regular basis (see here below chapter 2.4).

#### Ajdovski zid

The Institute for the Protection of Cultural Heritage of Slovenia excavated two towers at two different locations of the Ajdovski zid (i.e. the Pagans' Wall), namely at Cesarski vrh and Zaplana, which had been partially explored before. This is the longest barrier of the defence system. It is located in the area of the municipalities of Vrhnika and a smaller part of Logatec. At the tower excavated at Zaplana, a charcoal sample pertinent to its phase of use, was dated using the C14 method between 174 and 341 AD (Lavrič 2019, 325).

**Figure 4:** 3D reconstruction of the barrier of Ajdovski zid near Vrhnika, with a wooden walkway and wooden-roofed towers, as it can be seen through the archaeo-stereoscope placed in front of the wall at Zaplana. Image: Link3D.



Both towers were consolidated and presented to the public. At the location of Zaplana, an archaeo-stereoscope showing the 3D reconstruction was placed in front of the remains (Figure 4).

At the same time, a new trail was created that allows visitors to learn about the remains and their special natural ambient in a playful way. The trail was designed by the Zavod Škrateljč on the initiative of the Ivan Cankar Institute of Culture, Sports and Tourism Vrhnika (*Zavod Ivana Cankarja za kulturo, šport in turizem Vrhnika*) with the help of the Institute of the Republic of Slovenia for Nature Conservation (*Zavod Republike Slovenije za varstvo narave*).

#### Vrhnika (Hrib)

In 2018, construction works and consequent archaeological research, not related to any of the aforementioned projects, were carried out in the southern part of Vrhnika, considerably further south than the older Roman settlement core of *Nauportus*, which appears to be multinucleated and fluctuant during its chronological evolution (Horvat 2020). The work involved the locality of Hrib (or Gradišče), where buildings from the 1st and 2nd centuries AD, pertinent to a separate settlement core<sup>12</sup>, were also found, as well as the remains of a pentagonal fortress of later date, which was already excavated by Samuel Jenny in 1900. The archaeological research was coordinated by Tina Žerjal from the company Arhej d.o.o.. Part of the 2.03 m thick northern wall of the fortress was investigated. The area was considerably disrupted and no conclusive results could be obtained for dating of construction of the fortress wall, but the discovery of a coin of Constantius II, dated to 351–355 AD, would seem to indicate that the fortress was still in use during this period (Žerjal 2019, 352). The dating and context of this fortress have long been debated. The fortress is crossed by the *Emona–Aquileia* road, but the position of the fortress in front, i.e. to the east of the Ajdovski zid barrier, makes a direct connection with the linear barrier system of the *Claustra Alpium Iuliarum* difficult, for obvious strategic reasons (Saria 1939, 145; Kos 2014a, 36). However, it should be noted that the functioning of an internal defence system, i.e. a system for controlling the territory as a whole, could differ from the functioning log-

---

<sup>12</sup> Cf. Horvat 2020, 104. It should be noted that this settlement is detached from those located further north at Breg, Dolge Njive and Stara Pošta, as it is separated from them by a large cemetery in the Stara Cesta area, see Horvat (2020, 96, fig. 1).

ic of similar structures on the borders of the Roman Empire, since the dichotomy between internal and enemy territory is absent in this case. Therefore, a connection of this fortress with the *Claustra Alpium Iuliarum* cannot be dismissed out of hand.

This research was not conducted as part of the aforementioned European projects. However, in the frame of the *Claustra+* project, one of the already displayed circular towers of the fortress (located in the entrance area of the cemetery of Vrhnika) was equipped with an information board, and maintenance activities were also performed several times in order to clean the tower of vegetation.

#### Hrušica

The fortress and the barrier walls of Hrušica, i.e. *Ad Pirum*, in the area of the municipalities of Ajdovščina and Postojna, have been the subject of several excavations in the past. Archaeological research in recent years has focused on the improvement of the topographic documentation and on the evaluation of the results and finds of older excavations (Kusetič 2019, 11).

The visitor infrastructure of the site has been enriched by several interactive tools and by a small exposition and info point, managed on-site by the National Museum of Slovenia.

#### Ajdovščina

Recently and again without any connection to aforementioned European projects, extensive excavations (2017–2019) and presentation activities (2020) have also been carried out in the fortress of *Castra* in Ajdovščina. The fortress is similar in size to the aforementioned fortress of Vrhnika (Hrib), i.e. 2.6 ha. It is located west of various barriers that controlled the *Emona*–*Aquileia* road. It should be noted that the site includes the *mansio Fluvio Frigido*, dating back to the late 1st century BC. This road station is mentioned in the *Itinerarium Antonini* and the *Tabula Peutingeriana* and may have developed as a *vicus* or, in any case, a larger settlement, which was later fortified and designated as *mutatio Castra* in the *Itinerarium Burdigalense*. Therefore, the area contains archaeological remains pertaining to both of these two main development periods (Žerjal and Tratnik 2020).

The fortress is sub-oval in shape and has 14 circular towers, which were built in the 70s or 80s of the 3rd century AD (Kos 2012, 285; 2014a, 35). The most recent archaeological work was coordinated by Luka Rozman for the companies Magelan d.o.o. and Avgusta d.o.o. Numerous rooms of building II were identified. This building, containing baths, is located on the southern edge of the fortress, close to the walls and was already excavated in the 1980s (Osmuk 1986, 258–260). The recently investigated rooms of the complex include a large room with a row of columns in the northern part of the building and an apsidal room in its eastern part. Adjoining building IV consists of at least five rooms with hearths. In the central part of the fortress, a continuation of the so-called atrium house, previously excavated by Drago Svoljšak (Svoljšak 1970, 155–157; Svoljšak et al. 2013, 47–49, 68), was found. The building had a portico on the south side, along the street, as well as an inner porticoed courtyard, and used to reach as far as the eastern wall, which constituted one of the main complexes of the fortress. All buildings were developed during several construction phases. Archaeological finds can be dated between the mid-1st to the 5th century AD, but noticeable concentration dates from the last third of the 3rd to the end of the 4th century (Urek et al. 2019; Urek and Kovačič 2020).

New data are also available for the settlement situation *extra muros*, especially for the area located south-west of the walls, where archaeological remains again belong to the 1st and first half of the 2nd century AD, the second half of the 2nd and 3rd centuries, and especially to the 4th and first half of the 5th centuries (Žerjal and Tratnik 2017).

Much has been written about the function of the *Castra*, with its direct connection to the *Claustra Alpium Iuliarum* system sometimes being questioned, as well as its military purpose (Kos 2014b, 419; 2017, 301), and it has been compared to numerous urban centres in northern Italy that were equipped with walls during the same period. However, it should be noted that its very name, *Castra*, leaves little doubt as to its military significance. Moreover, the urban centres named as comparison for civil settlements encircled by walls in the Late Roman times (Rimini, Piacenza, Parma, Bologna, Verona; Pavia, Oderzo, Como, Aquileia, Milan, Cividale; Rijeka, Trento, Mantua, Vicenza, Trieste – cf. Žerjal and Tratnik 2017, 258) appear hardly equivalent to the site in question, for which not even the function

as *vicus* is ascertained. The position of the site, at the rear of several barriers, seems at least very suitable for an efficient supply of a defence system. A thorough evaluation of the material discovered during the recent extensive excavations will hopefully shed some light and clarify the question of the function and character of the site.

Ajdovščina has an established tradition of displaying remains of the fortress, and these recent works were also connected to the display of some of the discovered remains<sup>13</sup>.

## 2.4 Establishment of Participative Management Procedures

As shown in the previous chapter, several parts of the defence system were displayed to the public. Physical and information accessibility of the remains was enhanced. As already mentioned, almost all locations of the defence system were equipped with information boards and signposts. Various forms of informative material were printed, and info points about the system are available in Rijeka, Vrhnika and Hrušica. 3D reconstructions were designed for several sites and a mobile app about the system was created.

The Claustra and Claustra+ projects also tackled the crucial challenge of creating the basis for joint management, improving the attractiveness and highlighting development opportunities of the defence system, also by connecting its stakeholders. With the establishment of a consortium of 42 stakeholders called the 'Partnership for the conservation and revitalisation of the heritage of the Claustra defence system', several activities were launched, focused on the development of a joint tourism product and participatory forms of management. The consortium was established in 2019 after several preparatory workshops and was led by myself until 2023, when the presidency was taken over by the mayor of the municipality of Čabar, Antonio Dražović.

Despite diverse ownership situations and responsibilities, the consortium enables a soft form of joint management of the remains of the system, the exchange of best practices and common tools, in accordance with

---

13 For this presentation the responsible conservator Patricija Bratina from the Institute for the Protection of Cultural Heritage of Slovenia was awarded by the Slovenian Archaeological Society.

the competences and possibilities of the members. Several activities for visitors were tested during the Claustra+ project, including, for example, accommodation facilities in a temporary Roman camp, horseback riding visits and guided tours escorted by Roman soldiers (Figure 5). These pilot actions now serve as inspiration for new activities that the consortium members offer to visitors. As an example, we can mention the programme ‘Meeting with a Roman horseman’, offered by the local institute Zavod Parnas and the Mouse Valley Ranch, where visitors can meet a Roman horseman in full 4th-century gear while walking along the geological-archaeological trail at Gradišče pri Robu (Zavod Parnas 2025).

**Figure 5:** Guided tour from the Hrušica fortress to the Lanišče fortlet, escorted by Roman soldiers. Photo credit: Fulvio Grisoni.



### 3 Conclusion

In various segments, either management, presentation, interpretation or research, this overview shows that ‘the road to success is always under construction’, quoting the wise words of Lily Tomlin.

Research activities still need to be performed and widened in order to improve the interpretation of the defence system. The connection with the

*Claustra Alpium Iuliarum* system of several archaeological sites from the old and recent periods remains to be verified and despite the considerable progress made on several fronts, many questions remain and probably will always remain open in the interpretation of this very complex and intriguing defence system.

The presentation of archaeological remains, information boards and other eventual visitor infrastructure is unfortunately always associated with laborious maintenance work and this is where we are limping. Automation of monitoring and maintenance protocols still needs to be established. This deficiency is undoubtedly more evident in the case of archaeological remains compared to architectural monuments, which are subject to regular maintenance work, at least during use. Since the lack of regular maintenance is evident in almost every archaeological presentation (and there is little hope of a changing attitudes), it is important to always consider the principle of minimal intervention: the smaller the intervention, the smaller the maintenance effort.

The various activities that have made a significant contribution to research, heritage preservation, and sustainable tourism have been performed in different time frames and in different areas within different projects. Nevertheless, sound results were achieved. This was mainly made possible based on the subsequent preparation of solid planning documents, which were conceived as unitary, cross-border plans of intervention, represented first by the conservation plan, followed by the management plan and later on by the development guidelines for the destination *Claustra Alpium Iuliarum*, the interpretation plan of the cultural touristic route, as well as the promotion plan of the cultural touristic product.

These documents also helped to overcome challenges related to the coordination and management of a transnational, serial cultural heritage site with shared features, which have to be presented to the public in a uniform way, regardless of the uniqueness of every singular site. Within heritage studies, the category of serial sites is still underrepresented and our case study offers valuable insights and experiences that contribute to the assessment of this heritage category.

The last major project, *Claustra+*, was concluded in 2020. Some years later, we can still acknowledge it as a successful initiative, like all the pre-

vious projects. Of course, the activities are not so intense now as they were during the time of the realization of the projects. However, the consortium 'Partnership for the conservation and revitalisation of the heritage of the Claustra defence system' still exists and some activities are still being carried out. Overall, we can highlight the importance of minimal intervention, the need for sustainable maintenance protocols, and the value of the participatory consortium. At the same time, we must conclude that these extensive defence systems were difficult to maintain for the Romans, just as they are difficult to maintain for us.

## Bibliography

- Bekić, Luka. 2009. Antički numizmatički nalazi: Reperti numismatici di età antica. In *Tarsatički principij: Kasnoantičko vojno zapovjedništvo: Principia di Tarsatica: Quartiere generale d'epoca tardoantica*, eds. Nikolina Radić Štivić, and Luka Bekić, 185–225. Rijeka: Grad Rijeka, Hrvatski restauratorski zavod.
- Bigliardi, Giulio. 2004. Alpes, id est Claustra Italiae: La trasformazione dei complessi fortificati romani dell'arco Alpino centro-orientale tra l'età tardo-repubblicana e l'età tardo-antica. *Aquileia Nostra* 75: 318–371.
- Biščak, Nina. 2022. *Analiza vidnosti poznorimskega obrambnega sistema Claustra Alpium Iuliarum: Primer Ajdovskega zidu*. Master's Thesis. University of Ljubljana, Faculty of Arts, Department of Archaeology.
- Buonopane, Alfredo. 2016. Inter vias latrones sum passus (CIL VIII 2728, 18122): morire lungo le strade romane. In *Statio amoena: Sostare e vivere lungo le strade romane*, eds. Patrizia Basso, and Enrico Zanini, 39–48. Oxford: Archaeopress.
- Cerva, Massimiliano. 1998. Sul brigantaggio nella X Regio. *Atti e Memorie della Società Istriana di Archeologia e Storia Patria* 46: 7–28.
- Ciglenečki, Slavko, and Tina Milavec. 2009. The Defence of North-Eastern Italy in the First Decennia of the 5th Century. *Forum Iulii* 33: 175–187.
- Ciglenečki, Slavko. 2011. Utrdba Tonovcov grad – pomemben člen poznorimske obrambe Italije: The Fort at Tonovcov grad – An important part of the Late Roman defence system of Italy. In *Poznoantična utrjena naselbina Tonovcov grad pri Kobaridu: Naselbinski ostanki in interpretacija: Late Antique fortified settlement Tonovcov grad near Kobarid: Settlement remains and interpretation*, eds. Slavko Ciglenečki, Zvezdana Modrijan, and Tina Milavec, 259–271. Ljubljana: Znanstvenoraziskovalni center Slovenske akademije znanosti in umetnosti.
- Ciglenečki, Slavko. 2015. Late Roman army, Claustra Alpium Iuliarum and the fortifications in the South Eastern Alps: Poznorimska vojska, Claustra Alpium Iuliarum in utrjena krajina v Jugovzhodnih Alpah. In *Evidence of the Roman army in Slovenia: Sledovi rimske vojske na Slovenskem*, eds. Janka Istenič, Boštjan Laharnar, and Jana Horvat, 385–430. Ljubljana: Narodni muzej Slovenije.
- Ciglenečki, Slavko. 2016. Claustra Alpium Iuliarum, tractus Italiae circa Alpes and the defence of Italy in the final part of the Late Roman period. *Arheološki vestnik* 67: 409–424.

- Claustra*. 2019. Access: <https://claustra.org/project-claustra/> (1 January 2025).
- Dintchev, Ventzislav. 2012. The East-Balkan Barrier Wall and the 'Gates of Haemus' Complex. In *The Lower Danube Roman Limes (1st – 6th C. AD)*, eds. Lyudmil Vagalinski, Nicolay Shrankov, and Sergey Torbatov, 495–526. Sofia: National Archaeological Institute with Museum at the Bulgarian Academy of Sciences.
- Historia Augusta. 1998. Divus Aurelianus: The Deified Aurelian. In *The Scriptores Historiae Augustae: Volume III*, ed. David Magie, 192–293. Cambridge, London: Harvard University Press.
- Horvat, Jana. 2020. Nauportus – Vrhnika. In *Manjša rimska naselja na slovenskem prostoru: Minor Roman settlements in Slovenia*, eds. Jana Horvat, Irena Lazar, and Andrej Gaspari, 93–112. Ljubljana: Znanstvenoraziskovalni center Slovenske akademije znanosti in umetnosti.
- Kos, Peter. 2012. The construction and abandonment of the Claustra Alpium Iuliarum defence system in light of the numismatic material: Gradnja in opustitev obrambnega sistema Claustra Alpium Iuliarum v luči numizmatičnega gradiva. *Arheološki vestnik* 63: 265–300.
- Kos, Peter. 2013. Claustra Alpium Iuliarum – Protecting late Roman Italy. *Studia Europaea Gnesnensia* 7: 233–261.
- Kos, Peter. 2014a. *Ad Pirum (Hrušica) in Claustra Alpium Iuliarum*. Ljubljana: Zavod za varstvo kulturne dediščine Slovenije.<sup>14</sup>
- Kos, Peter. 2014b. Barriers in the Julian Alps and Notitia Dignitatum: Zapore v Julijskih Alpah in Notitia Dignitatum. *Arheološki vestnik* 65: 409–422.
- Kos, Peter. 2014c. Izgradnja zapornega sistema claustra Alpium Iuliarum: Construction of the claustra Alpium Iuliarum fortifications. In *Claustra Alpium Iuliarum: Med raziskovanjem in upravljanjem: Claustra Alpium Iuliarum: Between research and management*, ed. Jure Kusetič, 112–132. Ljubljana: Inštitut Ivan Michler.
- Kos, Peter. 2017. Ajdovščina (Castra) – novčne najdbe iz naselbinskih plasti zunaj obzidja: Pomen novcev za interpretacijo najdišča: Ajdovščina (Castra) – coin finds from the extra muros settlement: The significance of the coins for the interpretation of the site. *Arheološki vestnik* 68: 295–323.
- Kulturbüro. 2019. *Načrt promocije kulturno-turističnega proizvoda Claustra*. Rovinj: Kulturbüro.
- Kusetič, Jure, and Branko Mušič. 2019. Zapora na Benetah (pregled raziskav, arheološka topografija in geofizika): The defensive wall at Benete (Research overview Archaeological Topography and Geography): Obrambeni zid na Benetama (pregled istraživanja, arheološka topografija i geofizika). In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnega sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 206–243. Zagreb: Hrvatski restauratorski zavod.
- Kusetič, Jure. 2014. *Claustra Alpium Iuliarum: Med raziskovanjem in upravljanjem: Claustra Alpium Iuliarum: Between research and management*. Ljubljana: Inštitut Ivan Michler
- Kusetič, Jure. 2019. *Pregled raziskovalnega in projektne delo na zapornem sistemu Claustra Alpium Iuliarum po drugi svetovni vojni*. Access: [https://www.claustra.org/wp-content/uploads/2019/04/Pregled\\_Kuseti%C4%8D\\_2019.pdf](https://www.claustra.org/wp-content/uploads/2019/04/Pregled_Kuseti%C4%8D_2019.pdf) (1 January 2025).

<sup>14</sup> Also available in Italian.

- Lavrič, Maja, and Matjaž Mori. 2019. Arheološke raziskave na najdišču Gradišče pri Robu v letu 2018: Archaeological Investigation at the Gradišče pri Robu in 2018: Arheološka istraživanja na nalazištu Gradišče pri Robu tijekom 2018. godine. In *Clastra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 280–307. Zagreb: Hrvatski restauratorski zavod.
- Lavrič, Maja, Matjaž Mori, and Nika Vršnik. 2019. Arheološke raziskave na najdišču Benete v letu 2018: Archaeological Investigation at the Benete Site in 2018: Arheološka istraživanja na nalazištu Benete tijekom 2018. godine. In *Clastra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 244–279. Zagreb: Hrvatski restauratorski zavod.
- Lavrič, Maja. 2019. Arheološke raziskave Ajdovskega zidu na najdišču Jerinov grič: stolp 44 in stolp 52: Archaeological Investigation of the Ajdovski Zid Barrier Wall at Jerinov Grič: Towers 44 and 52: Arheološka istraživanja Ajdovskog zida na nalazištu Jerinov Grič: kula 44 i kula 52. In *Clastra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 308–325. Zagreb: Hrvatski restauratorski zavod.
- Lipovac Vrkljan, Goranka, and Bartul Šiljeg. 2006. Istraživanja Liburnskoga obrambenog sustava u Prezidu 2006: Research of the Liburnian defence system in Prezid 2006. *Annales Instituti Archaeologici* 3: 79–82.
- Marcone, Aldo. 2004. L'Ilirico e la frontiera nordorientale dell'Italia nel IV secolo d.C. In *Dall'Adriatico al Danubio. L'Ilirico nell'età greca e romana*, ed. Gianpaolo Urso, 343–359. Pisa: Edizioni ETS.
- Milavec, Tina. 2017. Defending Italy from the North-East: *Clastra Alpium Iuliarum* and Its Interpretations. In *Extra Limites*, eds. Marcin Bohr, and Milena Teska, 149–162. Poznań, Wrocław: Instytut Archeologii Uniwersytetu im. Adama Mickiewicza w Poznaniu, Instytut Archeologii Uniwersytetu Wrocławskiego.
- Moatti, Claudia. 2016. Migration et droit dans l'Empire Romain Catégories, contrôles et integration. In *The Impact of Mobility and Migration in the Roman Empire: Proceedings of the Twelfth Workshop of the International Network Impact of Empire (Rome, June 17–19, 2015)*, eds. Elio Lo Cascio, and Laurens E. Tacoma, 222–245. Leiden, Boston: Brill.
- Nikolić Đerić, Tamara. 2018a. *Krovni interpretacijski načrt kulturno-turistične rute Clastra*. Reka: Logoteam d.o.o.<sup>15</sup>
- Nikolić Đerić, Tamara. 2018b. *Smernice razvoja destinacije Clastra*. Reka: Logoteam d.o.o.<sup>16</sup>
- Osmuk, Nada. 1986. Ajdovščina. *Varstvo spomenikov* 28: 258–260.

---

15 Also available in Croatian.

16 Also available in Croatian.

- Oven, Maja, Katharina Zanier, and Josip Višnjić. 2015. *Konservatorski načrt: Claustra Alpium Iuliarum (južni del)*. Ljubljana, Zagreb: Institute for the Protection of Cultural Heritage of Slovenia, Croatian Conservation Institute.<sup>17</sup>
- Pais, Ettore. 1922. *Italia antica: Ricerche di storia e di geografia storica*. Bologna: Zanichelli.
- Poshyanandana, Saowalux. 2019. Serial Cultural Heritage: Concept, Applications, Categorization and Its Roles in Present Day Contexts. *Nakhara: Journal of Environmental Design and Planning* 16: 69–84.
- Poulter, Andrew. 2013. An Indefensible Frontier: The *Claustra Alpium Iuliarum*. *Österreichische Jahrbücher* 81: 97–126.
- Radić Štivić, Nikolina, Luka Bekić, ed. 2009. *Tarsatički principij: Kasnoantičko vojno zapovjedništvo: Principia di Tarsatica: Quartier generale d'epoca tardoantica*. Rijeka: Grad Rijeka, Hrvatski restauratorski zavod.
- Saria, Balduin. 1939. Doneski k vojaški zgodovini naših krajev v rimski dobi. *Glasnik muzejskega društva za Slovenijo* 20(1–4): 115–151.
- Starac, Ranko. 2009. Liburnijski limes: Arheološko-konzervatorski radovi na lokalitetima Vranjeno i Za Presiku: Limes Liburnico: Ricerche archeologiche e lavori di recupero nelle localita di Vranjeno e Za Presiku. In *Tarsatički principij: Kasnoantičko vojno zapovjedništvo: Principia di Tarsatica: Quartier generale d'epoca tardoantica*, eds. Nikolina Radić Štivić, and Luka Bekić, 273–288. Rijeka: Grad Rijeka, Hrvatski restauratorski zavod.
- Starac, Ranko. 2019a. Gradina iznad sela Pasjak: The Hillfort Above the Village of Pasjak: Gradina (Gradišće) nad vasjo Pasjak. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambenog sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 168–183. Zagreb: Hrvatski restauratorski zavod.
- Starac, Ranko. 2019b. Gradina Solin u Kostreni: The Solin Hillfort at Kostrena: Gradišće v Kostreni. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambenog sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 102–115. Zagreb: Hrvatski restauratorski zavod.
- Svoljšak, Drago, Beatrice Žbona Trkman, Nada Osmuk, and Barbara Brezigar. 2013. *Fluvio Frigido, Castra, Flovius, Ajdovščina*. Nova Gorica: Goriški muzej.
- Svoljšak, Drago. 1970. Ajdovščina. *Varstvo spomenikov* 13–14: 155–157.
- Šašel, Jaroslav. 1971. Antični viri: Ancient sources. In *Claustra Alpium Iuliarum I*, eds. Jaroslav Šašel, and Peter Petru, 17–45. Ljubljana: Narodni muzej Slovenije.
- Šašel, Jaroslav, and Peter Petru, eds. 1971. *Claustra Alpium Iuliarum I*. Ljubljana: Narodni muzej Slovenije.
- Triglav Čekada, Mihaela, and Vasja Bric. 2015. Končan je projekt laserskega skeniranja Slovenije: The project of laser scanning of Slovenia is completed. *Geodetski vestnik* 59(3): 586–592.

17 Also available in Croatian.

- UNESCO. 1980. *Operational guidelines for the implementation of World heritage convention*. Paris: UNESCO World Heritage Centre.
- Urek, Maruša, Ana Kovačić, and Luka Rozman. 2019. Ajdovščina (Castra) – predhodni rezultati raziskav v letih 2017–2019: Ajdovščina (Castra) – Preliminary Results of the Investigation from 2017 to 2019: Ajdovščina (Castra) – Preliminarni rezultati istraživanja provedenih između 2017. i 2019. godine. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 360–378. Zagreb: Hrvatski restauratorski zavod.
- Urek, Maruša, and Ana Kovačić. 2020. Fluvio Frigido, Castra – Ajdovščina: Raziskave: Investigations 2017–2019. In *Manjša rimska naselja na slovenskem prostoru: Minor Roman settlements in Slovenia*, eds. Jana Horvat, Irena Lazar, and Andrej Gaspari, 47–60. Ljubljana: Znanstvenoraziskovalni center Slovenske akademije znanosti in umetnosti.
- Višnjić, Josip, and Katharina Zanier, eds. 2019. *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*. Zagreb: Hrvatski restauratorski zavod.
- Višnjić, Josip, Tihomir Percan, Siniša Pamić and Nenad Kuzmanović. 2019c. Recentna arheološka istraživanja sektora zidova iznad Grobničkog polja: Recent Archeological Investigation of the Wall Sector Above Grobničko Polje: Recentne arheološke raziskave sektorija zidov nad Grobniškim poljem. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 116–141. Zagreb: Hrvatski restauratorski zavod.
- Višnjić, Josip, Tihomir Percan, Siniša Pamić, and Nenad Kuzmanović. 2019a. Arheološka istraživanja provedena na segmentu obrambenih zidova između izvora Rječine i Voljaka (segment Studena) tijekom 2015. godine: Archaeological Investigation of the Segment of Defensive Walls Between the Source of the Rječina River and Voljak (the Studena Segment) in 2015: Arheološke raziskave opravljene na segmentu obrambenih zidov med izvrom Rečine in Voljakom (segment Studena) v letu 2015. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 142–167. Zagreb: Hrvatski restauratorski zavod.
- Višnjić, Josip, Tihomir Percan, Siniša Pamić, and Nenad Kuzmanović. 2019b. Arheološka istraživanja na potezu obrambenih zidova iznad Prezida: Archaeological Investigation of the Prezid Barriers Wall Section: Arheološke raziskave na črti obrambenih zidov nad Prezidom. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambnoga sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 194–205. Zagreb: Hrvatski restauratorski zavod.
- Višnjić, Josip. 2016. Nove spoznaje o obrambenom sustavu *Claustra Alpium Iuliarum*: Rezultati istraživanja provedenih u sklopu projekta 'Claustra – kameni branici Rimskog Carstva'. *Portal: Godišnjak Hrvatskog restauratorskog zavoda* 7: 13–34.

- Višnjić, Josip. 2019. Antička Tarsatica kao dio sustava Claustra Alpium Iuliarum: Rezultati recentnih arheoloških istraživanja: Roman Tarsatica as Part of the Claustra Alpium Iuliarum System: The Results of Recent Archeological Investigation: Antična Tarsatica kot del sistema Claustra Alpium Iularum: Rezultati recentnih arheoloških raziskav. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambenog sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 68–101. Zagreb: Hrvatski restauratorski zavod.
- Vlada Republike Slovenije. 2007. *Strategija za varstvo kulturne dediščine in naravnih vrednot v Republiki Sloveniji v skladu z mednarodnimi pravnimi instrumenti in aktivnostmi*. No. 62000-3/2007/3, accepted on 27 December 2007.
- Zanier, Katharina, Josip Višnjić, and Jelka Pirkovič. 2015. *Claustra Alpium Iuliarum: Načrt upravljanja (2015–2020)*. Ljubljana, Zagreb: Institute for the Protection of Cultural Heritage of Slovenia, Croatian Conservation Institute.<sup>18</sup>
- Zavod Parnas. 2025. *Srečanje z rimskim konjenikom*. Access: <https://zavod-parnas.org/w/srecanje-z-rimskim-konjenikom/> (1 January 2025).
- Žerjal, Tina, and Vesna Tratnik. 2017. Ajdovščina (Castra) – poselitev zunaj obzidja Ajdovščina (Castra): Ajdovščina (Castra) – the extra muros settlement. *Arheološki vestnik* 68: 245–294.
- Žerjal, Tina, and Vesna Tratnik. 2020. Fluvio Frigido, Castra – Ajdovščina. In *Manjša rimska naselja na slovenskem prostoru: Minor Roman settlements in Slovenia*, eds. Jana Horvat, Irena Lazar, and Andrej Gaspari, 9–46. Ljubljana: Znanstvenoraziskovalni center Slovenske akademije znanosti in umetnosti.
- Žerjal, Tina. 2019. Vrhnik/Nauportus – Gradišče, raziskave leta 2018: Vrhnik/Nauportus – Gradišče, 2018 Research: Vrhnik/Nauportus – Gradišče, Istraživanja u 2018. godini. In *Claustra patefacta sunt Alpium Iuliarum: Recentna arheološka istraživanja na području kasnoantičkog obrambenog sustava: Nedavne arheološke raziskave na području poznorimskog obrambenog sistema: Recent archeological investigation of the Late Roman barrier system*, eds. Josip Višnjić, and Katharina Zanier, 326–359. Zagreb: Hrvatski restauratorski zavod.

---

18 Also available in Croatian.