The Earth Beneath Your Feet *Archaeology on the Motorways in Slovenia* Giude to Sites

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Terra gentis humanae memoria

Archaeological Heritage Protection and the Motorway Construction Project

And they, who relate things past, could not relate them, if in mind they did not discern them, and if they were not, they could no way be discerned.

ST AUGUSTINE, *Confessions* 11, 17

Athens and Rome, Alexandria, Byzantium, Abu Simbel, Stonehenge, Borobodur, Machu Picchu, Chichen Itzá, Xi'an, Novgorod, Zimbabwe and other names that inhabit the imagination of contemporary Western man and appear in catalogues of successful travel agencies had begun their epic journey gradually and slowly several decades or actually centuries ago. They elbowed their way into everyday life primarily through literature, first into the life of the elite, among the young European aristocrats and upstarts who had matured through their Grand tour to Rome, Naples and maybe even Turkish Athens and Istanbul, and subsequently into the life of the new middle class with the help of several expeditions, military ones of Napoleon to Egypt, and research expeditions as far as the Middle East. All this was successfully intertwined with spies and their activities connected with the colonial ambitions of the European Great Powers. All this has also been captured by Agatha Christie. This was the area and effect of a certain interest in the past that had gradually surpassed the amateurish and jealous passion for collecting, overflowing with fantastic and simultaneously erudite explanations, and developed into a special discipline – archaeology (Schnapp, 1993).

The present activity of the archaeological profession cannot be separated from its past and the context of its origins. There is still too much debris of the former periods composed and still being composed into the contemporary stereotypes used daily that continually acquire new forms and dimensions through modern barbarisms. New patterns of behaviour and new values are thus created; new private and social ideologies in the function of concrete interests of recent and less recent masters. The denial of the historical nature of the present processes that accompanies this Postmodern agitation, the transformation of the past into stories and myths with their fictitious heroes, the subsiding of actual, documented events in the mythical past of new states for ancient peoples created for everyday use – these are omnipresent, tangible dangers of the loss of the fragile structure of historical memory integrated in the foundations of modern Western culture.

In the opinion of the historiographers and archaeologists, the oblivion through myths can only be avoided through sources; through those direct products of the processes of life that have been preserved in an endless variety of forms in all parts and depths of the Earth.

These documents are the only unambiguous testimonies, some with greater and others with lesser accuracy, of actual events and developments associated with people – those unusual creatures that are the only ones on this planet that do not adapt to their surroundings, but rather adapt the surroundings to themselves. Therefore they leave behind not only their skeletons in layers of earth, which would make them equal to numerous other animal species, but also traces of their habitation and activities: tools and ornaments, places of abode and fossil fields, irrigation canals and roads, astronomical observatories and temples, tombstones and means of transportation. Numerous symbols are likewise left behind, signs of communication or mere attempts at communication, impressed in clay, cut in stone, scratched in wax, painted on papyrus, leather or wood or printed on sheets of paper in the form of slabs, plates, scrolls and books. All this endless mass of artefacts that gradually disappears in the natural way of decay, dilapidation or material transformation of every kind, this never-ending collection of artefacts and traces of activity, this great archive of everything that has happened and still happens on this planet, rests beneath thick and sometime thinner layers of the changeable surface of the Earth. As in modern warehouses – shrines of knowledge and learning, so typical of Western civilisation – museums, libraries and archives.

Artefacts

There have always been people who have collected, classified and often also described artefacts. They have done so on account of the special value, beauty, exceptional or uncommon nature or importance attributed to them. The artefacts could have been human products or natural phenomena, and the dividing line between them was always defined according to current knowledge, even in such a way that artefacts were regarded as natural phenomena and vice versa. European history is full of collections that have developed in courts or temples, in aristocratic or middle-class families, that have changed hands, been described, supplemented, exchanged, robbed and destroyed. These collections comprise substantial parts of existing museum collections and the process of their emergence, renovation and extension continues relentlessly. Collections described as archaeological occupy a special place among them. They have developed in various ways, yet mostly so that their parts were excavated from earth or were discovered beneath its surface. However, their archaeological nature is not based on the fact that they were discovered beneath earth, but exclusively from their being part of a distant and forgotten past that had been recognised, described and founded in various ways by people, described by diverse titles in the course of time (*doctus, eruditus, magister*, etc.), yet finally denoted with just one: antiquarian.

There is a long and famous tradition of antiquarians as well as the tradition of their activities and merits, with an equally long tradition of deriding and parodying them. Dealing with artefacts, their precise observation, description and comparison, the persistent and passionate collection of data about them, and their history and material composition has often excited admiration in numerous observers as well as ridicule as a consequence of incomprehension even among histori-

ans who have, in the noble tradition of Thucydides, preferred to deal in causes, consequences and explanations of human behaviour and far less in their artefacts.

There are branches of archaeology and archaeologists who still deal primarily or even exclusively with collections of human artefacts, objects of numerous famous and established cultures, for which they seek functions and forms, techniques and ages, meanings and values so that they could classify, list, explain and evaluate them. Their activities often do not differ in any way from the activity of antiquarians, the successors of whom they are, and they can be described without hesitation as modern antiquarians who often arouse astonishment.

But is there a difference at all between antiquarians and archaeologists, as the archaeologists keep claiming? Yes, there is indeed a difference; a minor, yet essential one. Artefacts only make sense to an archaeologist when they are connected with a particular place and area, with particular usages described as special that facilitate their definition and explanation. Consequently, archaeologists attempt to comprehend the people who had produced and used them in order to answer simple questions: Why are we what we are, and how have we become that? In the process of doing so, they give credence to material, tangible artefacts and traces rather than numerous different words, the otherwise generally accepted residence of human memory.

In Western culture, artefacts have for at least three centuries been considered to be more authentic and convincing sources than various words (texts). However, only on condition that they be explained correctly and defined accordingly (Klejn, 1987). That means that precise and strict rules are applied in the process of their explanation, not subject to current requirements of some kind of "Venetian" past of the Slovenes, to an *apologia* for new empires or to prove cultural superiority. A special methodology must therefore be developed in the course of time based on typology (Klejn, 1988), comparative analysis (Klejn, 1987) and stratigraphy (Harris, 1979), three cardinal methods of archaeological science.

In science designed thus, artefacts are considered to be traces of distant human past, and it is their informative value among their numerous features that is of the greatest significance for the knowledge of that past. However, traces are not only artefacts that can be collected, ordered and admired in various modern versions of treasuries (*Schatzkammer*) – collections of marvels. Traces likewise consist of numerous, hardly discernible or entirely invisible changes in the environment caused by human labour, often the only proof of human presence and activity. These very traces that cannot be classified into collections, that are devoid of any other value except that of providing information, gain importance in the comprehension of the human past and are sometimes even of decisive importance.

The modern approach to artefacts that is common to antiquarians and archaeologists alike can be justified as argumented and necessary by various interests of antiquarians attracted to artefacts themselves and those of archaeologists attracted to the people and processes behind the artefacts (and traces) even in cases when they do not concern only academic debate, but a veritable conflict in interests – in encroachments into the environment.

Environment

There are certain areas in the space in which we live, where the memory is condensed to the utmost. These are the *loci memoriae*, products of numerous generations, material parts of a network of memory that is constantly renovated or destroyed, expanded or fragmented, together with us. Our landscape is therefore conceived as a palimpsest of all numerous cultures that have rendered their meanings in it and left their traces. Such a historical landscape is the sphere of the recognised and accepted, more or less discernible monuments and sacred places, yet at the same time the sphere of an invisible, subterranean network of forgotten memory from which these monuments and sacred places are created and grown as from an all-embracing mycelium.

In this entirely material, physical landscape expanding around us, the past is merged again with the present at every moment, and new effects are thus created. They also take place in the special field of archaeology discernible as the sphere of creating new meanings, new knowledge and new monuments explaining the past and renovating the present.

The notion of a historical landscape that likewise includes the archaeological landscape, mostly hardly visible in a direct way (Hoskins, 1981; Novaković, 2001), certainly denotes only one dimension of our environment in which we meet and in which all the material, often symbolically expressed interests of individuals, groups and societies are rendered. The common everyday competitive battle for existence and domination that characterises the entire past and present of human societies similarly takes place in it.

Numerous processes and accompanying encroachments into the environment have been destroying and have sometimes entirely destroyed the evidence of various cultures in the past. These processes, which used to be connected with various natural disasters (and only exeptionally with rare human interventions, in which an enormous amount of labour was involved) have become more common with technological development. It has been possible to encroach in the environment with huge development projects and to transform it for a century or more (*Archaeology and major public works*, 1989). Technical development and a cheap labour force have facilitated not only the rapid development of certain societies, but also equally rapid destruction of larger parts of irreplaceable archaeological resources. Surface mining, enormous power plant lakes, motorway systems, oil and gas pipelines, extensive urbanization, tourist and other industrial complexes, reclamation of extensive farmland areas and rivers – all these powerful new traces and gradually developing monuments not only destroy the natural environment and plant and animal species, but also pose a serious threat to human kind, its present and its past.

Preservation

Preservation of the evidence of human past is based on the right and requirement of the public to know the past (Merriman, 2002), and it is the archaeological heritage that bears witness to the main part of the past of mankind. Disclosures of that past, including its reconstruction, depend essentially on special scientific research studies that deal with the evidence of the past – artefacts and traces – in an appropriate

manner. These research studies are archaeological in their nature, and archaeological heritage as the subject of expanding legal protection is considered primarily as a historical source, as a source of data on mankind's past (*European Convention on Archaeological Heritage Protection*). It has to be emphasised again that apart from the artefacts, their exact positions in the environment and all traces of various deposit and post-deposit processes preserved in layers of earth comprise entirely equal parts of archaeological heritage (Barker, 1993; Moberg, 1990).

It is therefore logical that layers of earth as well as river and sea beds that contain archaeological information on the human past are to be the objects of protection. This fact results in the sensible, yet often misunderstood and legally clearly defined requirement that archaeological excavation is to be performed as an extreme means of preserving the material evidence that is subject to threat. In other words, excavation is a method of testing the material connections and relationships of artefacts and traces in layers of earth in a written and graphical archive of the surveyed part of the site that has been destroyed in the process of excavation.

Preservation of layers of earth with evidence of the human past, as archaeological sites could be described in general, is a fairly new and therefore poorly understood concept in a special field of the monument protection service that is pertinent for the protection of cultural heritage. Originating from the concept of a monument that is always an ideological construct and part of ideological economy (Pirkovič, 1993), the monument protection service is descending with difficulty from the level of monument creation to that of the protection of a historical source. Consequently, it has difficulties in recognizing the reason for its preservation. Despite the most modern legal foundation ratified by the *European Convention on Archaeological Heritage Protection – Malta Convention* (Petrič, 2000), which introduces the shift from monuments to heritage in the field of archaeological heritage and from monument features to scientific significance, the monument creation practice in Slovenia is still dominated by the art-history prevalence of the concept of a monument and, consequently, the suppression of the significance of archaeological heritage to the subconsciousness of the profession. How else is it possible to account for the absence of appropriate concepts, a strategy and mechanisms required for a legally declared level of protection for archaeological heritage in Slovenia? (*Management of archaeological projects*, 1991)

A similar lack of comprehension originating from equal or similar reasons can be likewise noted in those fields that directly affect the preservation of archaeological data in the environment, in such professions as urban planning, architecture, construction, agriculture, etc. The consequence of tradition, of the concept apparatus of monument protection defined by art history that is reflected in the enumerated professions at various levels, and the consequence of a non-reflected, unprofessional, stereotypical perception of dealing with archaeological heritage essentially defined with the notion of a monument, is the emergence of a series of professional cultures that promote a disregard and sometimes even hateful attitude towards the protection of cultural heritage and those concerned, on account of different interests and various levels of social power.

The demand to open archaeology to the public based on the right to know one's own past has gained prominence. It is no longer possible to be satisfied with the production of narrowly oriented archaeological knowledge, neutral in its interests, on which the increasingly attentive and inquisitive public eye is focused, in view of increased public interest and increased investment in the entire field. Leaving aside the big question of ideological neutrality of the production of archaeological learning that was highly topical in Europe in the 1980s and 1990s (Shanks, Tilley, 1987), the issue to be faced with all severity is that of the absence of a policy of promotion and the increase of accessibility of the public to archaeological heritage, primarily real estate. Archaeological heritage in a public environment is not, and never will be, unambiguous (Hodder, 1999); various interests and definitions of different social groups pertaining to them will always be recognised in them, therefore the distinct and privileged field of the protection of archaeological heritage must be opened entirely to such requirements and comprehension of the public.

Development Projects and the Protection of Archaeological Heritage

Within the specific field of protective archaeology in Slovenia, the question of the protection of archaeological heritage has always been, and mostly still is, equated with rescue or salvage excavation. Such excavation is, in turn, without exception determined by the actual possibilities available to protection in the field of development planning or rather by the relationship between the power of the investor and the ability and possibilities of the public service to impose its public interest (Demoule, 2001). Due to reasons that, in cases of interventions in archaeological heritage, never originate in the requirements of archaeology, excavation in this context should be the last possible method of protection, yet its use is actually determined by the nature of development works, therefore it is a necessity that cannot be avoided by the monument protection service in large development projects.

The relationship between development projects and the protection of archaeological heritage in Slovenia underwent important changes in the last decade. The transformations were determined primarily by the largest development project in recent years, i.e. that of the construction of the motorway network in Slovenia. The solutions implemented in the protection of archaeological heritage as part of this project of national infrastructure (Grosman, Novaković, 1994) have cast a shadow on all smaller development projects and have simultaneously affected the changes in defining the methods and possibilities of protection.

The archaeological heritage protection project accompanying the construction of motorways was drafted in 1994, primarily as a consequence of the need for authentic professional groundwork for the planning of motorway sections, in which all the registered areas of archaeological heritage were to be entirely avoided and the unrecorded sites damaged to the least possible extent, in accordance with the *Law on Protection of the Natural and Cultural Heritage of Slovenia* (RS Official Gazette No. 1–3/81) and in the spirit of the *La Valetta Convention*, not then ratified. The draft of the project was based on the assumption that the existing environmental data on the archaeological heritage were not entirely authentic or rather not precise enough for

the requirements of planning the motorway sections, and on the further assumption that it was possible to survey the entire area of comparative variants of the motorway sections with known methods and techniques within the required short period of time and to define the existing unknown archaeological sites so as to avoid them to the utmost during the first phase of planning.

The first assumption was undoubtedly correct, since the otherwise rich and systematically structured database on archaeological sites in Slovenia has been created within the academically defined interests and institutions at least since the 1930s (*Archaeological Sites of Slovenia*, 1975; Tecco Hvala, 1993; Modrijan, 1994; Kovačec Naglič, 2001), and the site was therefore defined rather inaccurately for protection requirements. Furthermore, the extent of the site was often overestimated, due to conditions governing the brief-watch control.

The second assumption was based on the conviction that there are methods and techniques that facilitate a rapid analysis of the area and that they are familiar to and mastered by experts in Slovenia.

The assumption of the existence of appropriate methods and techniques was correct in principle, since a part of academic archaeology in Slovenia has experimented with systematic field survey techniques (Arheo 9, 1989; Novaković, 1996, 2002) since the early 1980s and has, as a logical consequence, begun to systematically introduce and develop: geophysical methods (Mušič, 1996, 1999, 2000), specialised aerial photography (Grosman, 1996; Kerman, 2002) and predictive modelling combined with GIS technology (Stančič, Gaffney, 1991; Dular, Slapšak, Stančič, Tecco Hvala 1992; Stančič, Veljanovski, Oštir, Podobnikar, 2001), which was the consequence of a conceptual shift away from the otherwise traditional and prevailing cultural, historical and typologically chronological paradigm of archaeology in Slovenia in the direction of spatial archaeology and landscape archaeology. However, such practice was experimental and therefore marginal within archaeology as a whole and almost entirely absent in the narrower sphere of monument protection until the implementation of the motorway project. The consequence of this is that the assumption concerning mastering methods and techniques which would have facilitated the creation of authentic expert groundwork in the phase of planning motorway sections was incorrect in the sense of organisation and implementation. Due to the experimental nature of the introduction and development of appropriate techniques, there was an insufficient number of skilled professionals, and even those available were assigned in the academic field rather than in the monument protection service. The assumption that there would be sufficient time for a survey of extensive large surfaces several hundred square kilometres in size was likewise incorrect.

Two principles were adopted pertaining to the protection of archaeological heritage: (1) all recorded heritage is protected entirely and without exception in such a way that it is avoided by the planners, and (2) all newly discovered archaeological sites that cannot be avoided are protected by archaeological excavation resulting in the preparation of an archive of the site which is as detailed as possible, kept in the corresponding museum, and only exceptionally in material form *in situ* as well, when the quality of the remnants requires it.

The second principle was adopted with greater ease, since the common belief shared by archaeologists was that the area of Slovenia was sufficiently familiar and surveyed so that new discoveries were unlikely and their number not large according to expectations.

In contrast to the decentralised structure of the monument protection service (Hoyer, 1998), the project of protecting the cultural heritage in the construction of motorways was planned centrally. Since the project concerned the development of an infrastructure in the entire territory of the country, all the procedures concerning cooperation of the monument protection service were supervised from a single place. That facilitated, but did not condition, a similar organisation in the special field of archaeological heritage protection. The former Institute for the Protection of the Natural and Cultural Heritage of the Republic (present day Cultural Heritage Directorate) established a special committee, the Slovene Motorway Archaeology Group (SAAS committee), for coordination and to have a standard approach to the protection of archaeological heritage consisting of one representative from each of the seven monument protection units (present day branches of the Institute for the Protection of Cultural Heritage), a representative of the central institute and another of an academic institution as a link between the two sectors of archaeology.[1] The committee adopted and implemented a model of protection drafted within the academic field that had practiced the new methods and techniques gradually introduced in archaeology.[2] All the works were and still are centrally surveyed: the pre-excavation procedures of defining newly discovered sites, evaluation of the extent of damage incurred, control over the quality of excavation and creation of the site archives, coordination of post-excavation procedures and preparations for publication and the announcement of results. The method of funding (prices, standard contracts, phase contracts) was likewise negotiated with the investor, the Republic of Slovenia Motorway Company (DARS), that covers all the expenses. The most delicate and consequently most responsible phase of establishing and evaluating the newly discovered sites is supervised in the financial and executive aspects by SAAS exclusively. Archaeological excavations are supervised from the financial aspect by the corresponding branches of the Institute for the Protection of Cultural Heritage of Slovenia, while other institutions and newly established private companies participate in the implementation. The selection of appropriate excavation supervisors and excavation groups is performed in accordance with the expert opinion issued by SAAS.

Model

The adopted model of archaeological heritage protection is limited exclusively to protection within the defined area under development. Thus the project was deliberately directed to archaeological works

1 Members of SAAS at the appointment of the group: Bojan Djurić (Chairman), Boris Vičič (Vice-chairman), Danilo Breščak, Jovo Grobovšek (Barbara Mlakar since 1999; Helena Štih since 2003), Nada Osmuk, Milan Sagadin, Marko Stokin (Alfred Trenz since 2000), Alenka Vogrin (Danijela Brišnik since her death in 1998) and Ivan Tušek.

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designed to prevent and preserve, since it was only possible in such limited surveys to (1) establish with speed and authenticity potential archaeological sites in the area that were expected to be destroyed or transformed in the process of construction, and (2) predict new sites with the probability required for their preservation even before the commencement of construction works. Two preconditions were required for the goals defined in this way: (1) the planning of the entire construction procedure as a potential archaeological site that was to be subjected to all required analyses, and (2) the beginning of all analyses in the phase of drafting the location plan, which facilitated the execution of all phases of protection before the construction works began (which was one of the main objectives of the investor).

The basic scheme of the adopted model is as follows:

Model of the Protection of Archaeological Heritage in the Project of Motorway Construction in Slovenia

First phase		
MOPE	· Definition of motorway route · Assessement of the impact of motorway construction on the environment	1st Principle No recorded archaeological site is to be damaged or destroyed.
MK URSKD	· Elements for assessement of the impact of the motorway construction on the environment	Data bases · INDOK–RKD · ARKAS
A route of a motorway is defined/Draft of a detailed plan		
Second phase		
MK URSKD	SAAS	2nd Principle Whole area under construction is a potential archaeological site.
Contract 1 DARS – developer	Extensive survey 10 % sampling · Aerial photography · Time	
Definition of potential archaeological sites and features		
MK URSKD Contract 2 DARS – developer		
Elements for intensive survey and for new contracts defined		

Phase 3

Consultative board of specialists established by SAAS	Intensive survey · Total surface collection · Geophysics · Aerial photography · Test pits/trenches	3rd Principle All identified sites and structures are to be excavated.
Archaeological sites and structures defined		
MK Branches of ZVKDS Contract 3 DARS – developer		
Range of archaeological works / excavations and elements of the new contract defined		

Phase 4

MK Branches of ZVKD and other institutions or private companies	Excavations	· Consultative board of specialists for archaeological sites · Chief conservator
Permit to commence construction works		
MK Branches of ZVKD	Watching brief	
Formation of site archive		
MK Branches of ZVKD Contract 4 DARS – developer		
The potential of site archives is ascertained by the specialist board, and elements for their processing are defined		

Phase 5

Processing of the site archive and preparation of the publication

Phase 6

Funded by MK	Publication · editorial board for each excavated site is established	Site archives handed over to corresponding museums

ARKAS	Archaeological Cadastral Register of Slovenia
DARS	Motorway Company in the Republic of Slovenia
INDOK	Information and Documentation Centre of the Directorate for Cultural Heritage
MOPE	Ministry of the Environment, Spatial Planning and Energy
MK	Ministry of Culture
SAAS	Slovene Motorway Archaeology Group
URSKD	Cultural Heritage Office of the Republic of Slovenia (now Directorate for Cultural Heritage)
RKD	Cultural Heritage Register (CRH)
ZVKDS	Institute for the Protection of Cultural Heritage of Slovenia

The basic division into the pre-excavation, excavation and post-excavation phases is standard and the more logical since it is conditioned by the basic and only possible method of protection – that of preventive archaeological excavation. The most important or most delicate parts of the accepted model are Phases 2 and 3 when the archaeological sites are identified and defined, their basic evaluation ascertained and the range of destruction through the construction process is estimated.

Phase 2 comprises an analysis of the entire area of development under the systematic field survey technique with the inclusion of 10

Field survey, Nova Tabla 1998

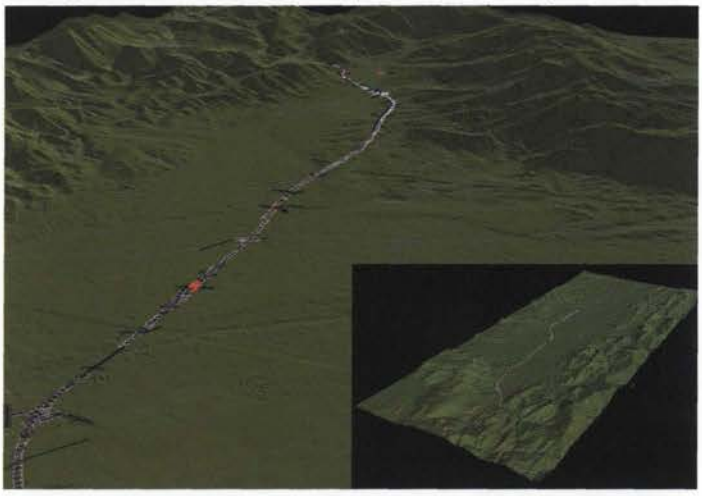
per cent of the sample of all the artefacts and definition of the archaeological potential of the area. The potential is indicated by a greater or smaller concentration of artefacts (primarily ceramics) resulting from various deposit and post-deposit processes and activities. Apart from the level of visibility that affects the number of recorded artefacts – only four months of the calendar year are appropriate for field surveys in that sense in Slovenia – their definition is essentially conditioned by the level of preliminary knowledge of diagnostic records.[3] The basic starting-point for further analyses at this initial stage of defining potential archaeological sites, i.e. the stage of extensive detection of artefact distribution, is a positive answer to the question of 'present-absent', regardless of the absolute amount of significant artefacts. The share of archaeologically significant artefacts among all the registered ones in the process of performing a field survey amounts from 0.5 to 2.5 per cent, yet the differences in their number are mostly regionally determined.

The result of the first stage of analysis, apart from the defined points of potential archaeological sites, are the data on the presence of traces of numerous different activities in the landscape to the present. These data are categorically homogeneous from the aspect of sampling, and present an excellent base for numerous further

3 Archaeology in Slovenia has still not succeeded in formulating generally accepted basic tools in the form of textbooks that would facilitate rapid processing or definition of the most significant diagnostic material.

analyses as a cross-section through all parts of the diverse regions of Slovenia. Although the data have not yet been exploited in that sense, they indicate at least two features of the Slovene landscape: its stable appearance in the sense of exploitation (woods, meadows and fields) over the centuries to the modern time and the varying extent of pollution with waste connected with its modern use.

Due to the lesser quality of archaeological potential, the anticipated supplementary interpretation of aerial photographs acquired for systematic mapping (CAS – Ordonance Survey) for the requirements of the geodesic service was gradually substituted with specialised aeri-



Survey area on the Arja Vas–Vransko motorway section

al photography for the requirements of archaeology wherever possible (e.g. in the region of Prekmurje). The basic difficulties with this method in our project are associated with the short period of time available from the beginning until the end of the pre-excavation phase, with the fact that at least two thirds of the territory of Slovenia is unsuitable for such analyses and that the arable landscape is very fragmented as to the cadastral register and highly varied as to agricultural crops.

At the request of the investor, geophysical field survey techniques, primarily geoelectric profiling, were included in the project at this stage. In view of a lack of geological data at the micro-level, on account of which it is almost impossible to recognise signal deformations as indicators for the presence of archaeological remnants, the technique soon turned out to be methodologically inappropriate and was abandoned.

One method of data collection that was not included in the model due to (1) its high costs of performance and (2) difficulties of access to the survey area, the ownership of which was still unchanged at the time of the surveys (the ownership of plots changed directly before the beginning of construction or in some cases even during it), is the technique of core drilling, especially in those areas where the geomorphological structure had been greatly transformed. All the archaeological sites overlooked in the first phase of the project and discovered only during the construction works were those that had emerged on the geological basis of clays and sands and had been covered with thicker colluvial layers resulting from low- and high-energy events.

Although the number of overlooked or subsequently defined sites was very small, amounting to only less than 8 per cent of all discovered sites (the prediction level ensured by the contract is 80 per cent), it is true that the possibility of overlooked archaeological signs and remnants is greater on such geological foundations, particularly of the most modest remains.

The technique would be very advantageous on such geological foundations and in similar geomorphological circumstances as a supplementary method in the third phase too, i.e. at the level of intense surveys of potential archaeological sites. The assumptions on

Rogoza, results of extensive (1) and intensive (2) field surveys as well as excavations (3)

the existence of an archaeological site at a certain location, its size within the encroachment in the area as well as the nature and range of stratification of the site were either confirmed or rejected at that stage. The basic technique for collecting data is a total surface survey in a grid of squares 10 x 10 m in size, while the test pits 1 x 1 m in size are a means of defining the stratification. Yet, the already tested technique of surveying within a grid of 5 x 5 m squares or with a more precise resolution did not actually turn out to be better in relation to the input of time and money for our purposes. The combined geophysical techniques of charting (geoelectrics, magnetometry and georadar) used at this stage were very beneficial for all the built structures (Roman sites) and much less so for the otherwise prevailing prehistoric and early mediaeval settlement sites with numerous pits of various functions filled with earth.

The purpose of the analysis of a site at this stage is not its typological, chronological, cultural or functional definition – that is the goal of the next excavation phase that is to follow always and without exception. Its purpose is rather to delineate the location of the site and define its stratification; these are at the same time elements that facilitate the definition of the extent of work in the excavation phase. The goal thus narrowly limited decreases the level of feasibility of the site analysis, reduces the range of the techniques employed in the process and shortens the time required for the definition.

Results

The results of the pre-excavation phase of our project were highly astonishing for everybody by the very number of new sites detected and confirmed. They refuted the common belief that the territory of Slovenia was well investigated in the archaeological sense, and

simultaneously revealed the bias of the traditional archaeological image of the area, resulting from the lengthy, gradual and irregular development of archaeology in Slovenia.[4]

Altogether, 94 new sites of a predominantly settlement nature have so far been discovered on 250 km (out of the final 346 km) of motorway sections. Excavations performed on 48 sites have shown that we are not dealing only with an increased number of archaeological sites, but rather that these have so far been poorly known or even unknown in the typological sense and that the sites often originate from periods or cultures that have so far not been recorded in the territory of Slovenia. To put it briefly, several cases concern the opening up of entirely new research areas with considerable consequences for the understanding of the past in this part of Europe.

Prekmurje, archaeological landscape

In the functional sense, settlements in the lowlands and plains prevail, closely connected with various water sources, i.e. smaller or larger brooks and marshes. Only a few settlements of that variety have been known in Slovenia so far and even fewer have been surveyed. The exceptionally extensive surveyed areas of newly discovered sites (as much as 30,000 m²) have facilitated an insight into their forms, spatial context, internal organisation and types of architecture as well as the pertaining settlement structures for the first time. This holds true primarily of larger settlements from the Late Bronze Age and the dispersed settlement of smaller hamlets and farms from the Middle Neolithic until the earliest Slavic settlement at the turn of the 6th and beginning of the 7th century. Apart from these rural settlements, there are some exceptional cases: the Late Palaeolithic base camp of Zemono (10,000 BC), the large Early Bronze Age settlement in Loka on the bank of the river Krka near Bela Cerkev, the Bronze Age mining settlement in Podsmreka near Višnja Gora, an Iron Age road at the site of Požarnica near Dolenje Kronovo, the Augustan military camp in Obrežje, the brickwork complex of the Roman army in Ilovica near Vransko (2nd century AD) and some cemeteries, including the only so far known Late Eneolithic cemetery (3800–3500 BC)

4 Cf. *Arheološka najdišča Slovenije*, Ljubljana 1975.

in the territory of Slovenia – that of Pod Kotom near Murska Sobota, which is of exceptional significance.

It is possible to discern the great potential of the new discoveries for the reconstruction of past developments in the transition zone between Pannonia and the Mediterranean even from this sparing overview.[5] New discoveries undoubtedly present a great step in the development of the archaeological profession. However, the discoveries are of equal significance on account of the new quality of field-work that took place with the uncovering of extensive areas, up to 100,000 m² in extreme cases (e.g. Nova Tabla near Murska Sobota).

Field archaeology in Slovenia, limited to smaller excavations in the form of trenches almost without exception during its entire development, was suddenly faced with an utterly new order of size. The consequences were necessarily discernible first at the level of planning and organising the excavation and its funding, in the selected technology of excavation and the method of data sampling (the use of machinery, digital data sampling of the area, GPS and digital data processing) as well as in a new understanding of the site locations, which is evident, for example, from the methodical sampling of the environmental data for the comprehension and reconstruction of the paleo-environment and anthropogenic processes in it.

The motorway construction project has brought about very rapid technological progress in field archaeology in Slovenia that has raised the basic excavation and documentation standards of all the participating groups. Due to the extensive range of work, the transformation has included almost all the archaeological institutions in Slovenia and thus the main share of the archaeological population, within which some private archaeological companies have emerged and become established.

The participation of the monument service in the phase of preparing the documentation for the construction of motorway sections has at the same time shown quite clearly that the significance of archaeological heritage in land development is minimised and marginalised by the professional culture of urban planners, planners and construction experts and often either entirely disregarded in actual planning, or else its protection is perceived merely as archaeologically supervised destruction. Such a state of affairs is undoubtedly also the consequence of the archaeological protection doctrine of long standing and the resulting practice that regarded the method of excavations as a privileged form of protection and has therefore neither developed nor introduced alternative methods of protection.

The unexpectedly large range of archaeological excavations within the motorway construction project was not anticipated by the investor and was in fact several times larger in comparison with the past standard of protection, therefore it caused an unexpectedly large investment of funds. Analyses performed by DARS (*Analysis of the Implementation of the National Motorway Construction Programme in the Republic of Slovenia*, 1999, 2001) have shown that the share of expenses for archaeological excavations amounts on average to 1.7 per cent of total motorway investment. Since individual motorway sections are

5 For a complete overview of archaeological sites discovered so far see: *Catalogue*.

financially fixed units in the sense of accounting, the actual range of costs for archaeological heritage protection is very irregular as to individual sections and amounts from a negligible 0.01 per cent to an almost intolerable 10 per cent, despite a reduction of the price of archaeological works per unit of work attained mostly by employing machinery. Such high shares required for consistent protection (primarily for the excavation of those parts of the sites that were destroyed in the construction) have generated intense opposition from the investor and led to attempts to abolish the project or reduce the standard of protection by means of lobbying in professional[6] and administrative circles reaching as far as the Government. The reasoned persistence with the agreed level and methodology of protection based on the Law on Cultural Heritage Protection (RS Official Gazette No. 7/99) and norms of the Malta Convention has preserved the project in its unaltered form and has simultaneously categorically raised the social prestige of the profession, in relation to the actual evaluation of the performed archaeological work. However, the planners and investors of other projects in the national infrastructure have consequentially begun to oppose the extended standard of archaeological heritage protection.

All the above-mentioned facts have contributed to some conceptional shifts in the field of protection that can be understood as a starting-point for the transformation of this area. Our project has undoubtedly confirmed that (1) far more and better preserved material evidence of past developments exists in the landscape than has been presumed, let alone recorded, (2) these remnants can be discovered and defined with sufficient accuracy by means of non-destructive methods and techniques, and (3) the existing archaeological heritage database is categorically incomplete, biased and insufficiently accurate for land development planners.

The traditional model of archaeological heritage protection in Slovenia became rather questionable even in the 1980s on account of (1) its discouragement through district authority land development plans, (2) the method of control over construction works, or (3) protective excavation. The discouragement of interventions (1) in the phase of planning was far from successful due to the domination of various, mostly economic interests, legally dubious administrative procedures for issuing building permits, a poor supervisory service and simultaneous poor appraisal of archaeological field-work; (2) the control over construction works was highly deficient, judging by the

6 The Institute of Anthropological and Spatial Studies of ZRC SAZU adopted the initiative of the Ministry of Transport of RS and DARS for an analysis of the archeological protection model as part of the motorway construction project in Slovenia that was signed by the Ministry of Culture of RS. The analysis that had basically adopted an *a priori* evaluation of the investor on exceedingly high costs of archaeological heritage protection of the motorway section Vučja Vas–Beltinci was based on archaeological predictive modelling for that part of the region of Prekmurje. See: Stančič, Zoran; Veljanovski, Tatjana; Podobnikar, Tomaž; Oštir, Krištof; Šprajc, Ivan, "Izdelava arheološkega napovedovalnega modela za potrebe analize vplivov na kulturno dediščino na AC A5: Vučja vas–Beltinci z rekonstrukcijo R 353", Ljubljana 2000. *Metodologija arheoloških napovedovalnih modelov pri načrtovanju gradnje cest, Končno poročilo*, Ljubljana 2001.

astonishing density of sites in the area, never detected so far, and (3) the protective excavations have generated work intensive situations, many of them often uncontrollable and characterised by conflicting states that have resulted in the appearance of never processed site archives inaccessible to the public.[7]

The number, range and level of preservation of archaeological heritage in Slovenia, which can be generalised on the basis of the motorway project results with certain authenticity for the entire territory (a point in which Slovenia does not differ from other countries in any way), exceed the abilities of the practised model of archaeological heritage protection and demand different approaches and solutions.

The basic concept of protection can only be the reduction of destruction of archaeological heritage, which has acquired great dimensions in Slovenia through the extensive use of land for the requirements of haphazard urbanization (Ravbar, Drozg, Perko, Plut, Skobir, Hočevar, Sajko, 1995). Undoubtedly, such a reduction can only be attained by consistent cooperation in land development planning (*Archaeology and Planning*, 1987), possible only on the basis of the most comprehensive and credible database that must also include various evaluations of archaeological heritage. The motorway project has proved and confirmed that archaeological remnants can be successfully detected and defined by means of non-destructive methods and combined techniques in the area, while the existing database can be supplemented and developed with systematic application, and thus a higher level of its credibility and utility for development purposes can be attained. Protection, in combination with predictive modelling of settlements in the phase of land development planning can therefore be more successful.

The resulting decrease of interventions in archaeological heritage implies a reduction in the number and range of protective excavations and an increase in chances for protection in the form of reservations, parks, etc., i.e. a more active diversion of protective works to other areas, on the one hand, and an actual decrease of the funds needed for protection through excavation on the part of the investors on the other. There should be as few of those as possible.

However, it has to be clarified that the key discouragement factor of development (mostly destructive) interventions in archaeological heritage is of an economic nature. The actual evaluation of expenses of the interventions and possible conservation *in situ* is therefore considered to be one of the most efficient protection fund policies, which must simultaneously be in control of a clear conceptual apparatus and practise a consistent control policy.

From the aspect of academic interest, the shifting of emphasis to preventive protection, and thus to a more precise knowledge of the archaeological sites in the landscape, entails a powerful drive in the direction of all those archaeologies that deal with issues of settlement, urban centres, the area of settlement and its use, demographic issues, etc.

7 The number of such archives that are unprocessed and/or inaccessible to the public amounts to at least 700 according to current data. However, it is estimated that their number must exceed 1,000. This phenomenon is common throughout Europe.

However, large projects of the national infrastructure (motorways, land lines, oil pipelines, power plants, etc.) are interventions where extensive excavations can never be avoided. The nature of their positioning in the landscape does not permit essential modifications, while the density of archaeological evidence in the area is so high that selective physical protection of the most significant sites, and the most thorough excavation as possible of everything else, is all that can be done. The possibilities of preventive protection of archaeological heritage are much greater in development projects at the level of district authorities and anticipated in their development plans. In order to ensure that protection in the sense of physical preservation with equal participation of representatives of all interests in the area and with warranted action of the legal state at the level of district authority administrative units is feasible and successful, it has to originate from a proficient knowledge of the area already at the stage of intervention planning, on the one hand, and from clearly defined priorities of archaeological site protection, on the other. However, that repeatedly entails the issue of the current wealth of a certain society.

It must be established that large development projects with their destructive interventions in the environment are one of the greatest generators of progress in the field of archaeology, simply on account of the size of the challenge that they pose for it and to which it must respond, not only in the sense of work and logistic but also on the conceptual level. Within the context of such land development interventions, the profession must ensure primarily the highest possible professional level of field archaeology as the only discipline that can warrant appropriate recording, rendering and reading of archaeological sources. Their interpretation and varied public use are in fact fundamentally dependent on the first contact with the material evidence of our past.

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Guide to the Selected Sites

Middle Ages .....
Roman period .....
Prehistory .....

Late Palaeolithic Hunter/Forager Settlement

IRN 14086	Zemono near Vipava 2
Location	Vipava
Site type	Settlement
Excavated area	8,000 m²
Date	ca. 10,000–8,000 BC
Period	Palaeolithic period, Bronze Age
Excavation director	Gojko Tica
Date of excavation	2000–2001

The archaeological site of Zemono 2 is located on the alluvial deposits in the valley of Vipavska Dolina beneath the isolated hill of Zemono. The high plateau of Trnovski Gozd is raised above it to the north-west and the flysch hills of Vipavska Brda to the south-west. The geological foundation of the site was formed in harsh climactic conditions of the late Pleistocene as a consequence of a landslide (debris) that moved to the present location from the foothills of Trnovski Gozd, forming a mound.

Fragments of Bronze Age pottery were discovered during excavations in the ploughsoil and the layers directly beneath it. An earlier occupation layer containing hearths, numerous stone tools and animal bones was discovered burried beneath the layers of alluvial deposits. That layer probably served as an occupation surface, which means that the archaeological remains within it probably belong to different occupation phases.

Apart from a large number of flakes, the stone finds comprised several typologically undefined tools. Tools with semi-circular retouched edges prevail, probably

▲ View of the site with Zemono Castle (Photograph by M. Prešeren)

◄ View of the site in September 2003 and its ideal reconstruction

disc scrapers for working leather, wood, bones as well as minerals, e.g. the natural ochre that was used to impregnate and colour the leather. Small cutting tools – backed blades, which were helved together to form composite tools, were also common. Such composite tools served as knives or arrowheads. The next most common tool types were scrapers, retouched blades and retouched flakes.

The stone tools were mostly made of local quartz, an

View of the excavation (Photograph by M. Prešeren)

aggregate rich in silicon with regular breaks, while materials of better quality were procured from more distant sources.

Numerous animal bones were also preserved at the site and many of them were burnt. The bones identified so far belong to red deer and wild boar that hunters caught and brought to the site.

Two especially interesting finds were a piece of slate and an ironstone cobble, both decorated with incised geometrical patterns. The slate is decorated with eight single parallel waves on one side and incisions forming a herring-bone pattern on the other. The cobble was decorated with parallel and rectangular incisions. Since it contains a great amount of iron, the fresh incisions were red, which probably attracted the attention of people at that time.

The site can be classified on the basis of numerous tools with a steep retouched side as belonging to the late Palaeolithic Gravettien cultural complex. It is assumed on the basis of typical stone tools that Zemono 2 was a late Palaeolithic site occupied towards the end of the Ice Age. However, the date is still in doubt, and the doubts

Scraper – a stone tool with a semi-circular retouched edge

will only be resolved on the completion of post-excavation analyses.

Although the valley was surrounded by hills, the area was exposed toward the west to the warm influences of the Mediterranean during the Ice Age. The valley was broad and the area between the level bottom with the river and the foothills was cut by numerous small streams.

Longer summers and milder winters at the end of the Ice Age caused the disappearance of large herds of herbivores that were adapted to the cold climate. How-

Hearth – patches of red burnt soil (Photograph by Ana Plestenjak)

ever, their ecological niche was soon occupied by smaller herds of red deer and roe deer. The need to migrate constantly with human communities following the prey decreased, since the game remained in verdant forests containing increased numbers of deciduous trees. Apart from pines at exposed or elevated locations and spruce trees in sheltered areas, deciduous trees gradually returned to the forests. The first species that was established again was birch, to be followed by oak and other deciduous trees.

Backed blade – cutting tool with steep retouched edge (Photograph by M. Prešeren)

The human presence influenced the plants so that they regenerated in a different way in areas exploited by people from that in virgin forests. People transformed the appearance of the forest not only by picking fruit and digging roots, but also by gathering firewood, peeling off the bark and breaking small twigs and branches. Bark was used for covering the roofs of huts and for making mats, while flexible rods were used for nets and wicker baskets. Modern species of animals prevailed after the extinction of Ice Age species; in addition to roe deer, red deer, bison and wild boar, the species hunted also included predators (brown bears, wolves and various martens), smaller mammals (hares, voles) and birds (capercaillie, quail and pheasant). Men hunted for roe deer

and red deer in groups near the foothills and set traps for predators and wild boars. Chamois and ibex were tracked higher in the mountains. The remaining members of the community – women, old men and children – picked edible plants, set traps and organised communal drives of animals into nets set in the forests; most of the game consisted of birds, hares and rodents. Wicker traps were used for catching fish and frogs in the streams.

In order to avoid the winds, settlements were placed in sheltered areas beneath the hill, where Zemono Cas-

Slate decorated with geometric pattern on both sides (Drawing by Ida Murgelj)

tle is now located. They were built on a gentle slope to the south, not far from the stream. The dwelling structures consisted of joined birch poles covered with branches and bark. Branch covered paths wound between them. Summer hearths outside the houses were surrounded by mats and skins. People spent an increasing amount of their time in the settlement and its immediate vicinity, where they made wicker baskets as well as vessels, platters, spoons and ladles of wood and

bark. Hunters manufactured wooden handles for stone tools and replaced the jagged blades of knives. Women made wood- and leather-working tools of inferior local materials and they prepared food out of plants. Food was boiled in leather bags heated by droping red-hot stones into the water. Food wrapped in leaves was baked in hot coals in large fireplaces and meat was roasted over the fire. Meat was also dried and smoked as provisions for times when the hunting was lean. Game was butchered by men with stone tools on the bank of the stream and handed over to the women for drying and tanning. The clamour of children echoed throughout the settlement and its vicinity.

That was roughly the way of life beneath Zemono at the end of the Ice Age. Some evidence of such activities has been preserved in the archaeological record on the site, whereas other characteristics can be inferred on the basis of analogy with finds from contemporary Later Palaeolithic sites.

BORIS KAVUR *and* SIMONA PETRU

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Settlement of Eneolithic Farmers

IRN 6049	Hardek – Na Bregu archaeological site
Location	Hardek near Ormož
Site type	Settlement, barrow
Excavated area	7,100 m²
Date	3400 BC to the mid-7th century BC
Period	Eneolithic
Excavation director	Ivan Žižek
Date of excavation	1997

The hills of Slovenske Gorice and their foothills that gradually slope down to the terraces of the river Drava were quite densely settled during the Eneolithic period. The settlements in Ormož, Dobrava, Hardek, Hajndl, Pavlovski Vrh, Šafarsko as well as Strjanci and Drakšl are among those that testify to the density of settlement in this large area. Large numbers of documented stone tools, stone axes and mattocks are evidence of this.

The Eneolithic settlement at Hardek is located to the north-east of the village of the same name. The settlement is badly damaged on the eastern and northern sides due to a modern clay pit exploited by the brickworks in Ormož. The settlement was bounded by a cart track that ran along a deep ravine on the western side, while the terrain sloped gently to the south into the first

▲ View of the site (Photograph by S. Olič)

◄ View of the site in September 2003 and its ideal reconstruction

foothills of Slovenske Gorice. The area was converted to arable agriculture in recent times, while the area where the Early Iron Age barrow was located was turned into an orchard and vineyard by the owners. Intensive cultivation badly damaged the settlement and its structures. The site was additionally affected by the deposition of a colluvial layer, which is up to 1.7 m in depth.

Traces of larger pits and postholes were cut into the yellow clay subsoil. The best preserved structures were those located beneath the site of the Early Iron Age barrow, while those in the vicinity were badly damaged during the collection of the material for the construction of the barrow mound.

Structural remains (Photograph by S. Olič)

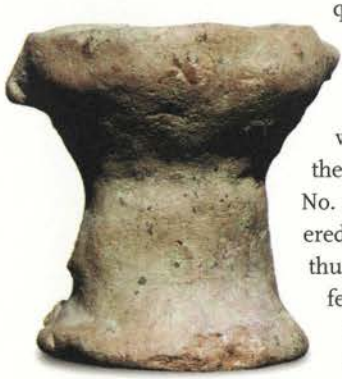
The settlement site was carefully selected on the gently south-sloping terrain, which solved the problem of draining the rainwater. The vicinity of running water undoubtedly contributed to the choice of location: namely, the water discovered on the eastern side in a channel leading from a spring in Slovenske Gorice to the Drava river. The stream is dried up at present, yet discernible in the forest in the hinterland of the settlement. Thus all the living conditions were supplied: a south-facing position with running water and protection against the northern winds. The flat hinterland was also well-suited for arrable farming.

Data on the flora of that time were preserved in charcoal samples. The most common plants were: oak (*Quercus*), pine (*Pinus*), hornbeam (*Carpinus*), poplar (*Populus*), willow (*Salix*), maple (*Acer*), beech (*Fagus*) and lime (*Tilia*). All the samples indicate that a mixed forest grew in the vicinity where the inhabitants gathered all the necessary building material and firewood. The forest also provided acorns and beechmast for domestic animals and game alike.

Pottery ladle
(Photograph by B. Farič)

It can be established with certainty that the site comprised at least seven buildings. Some of them were joined to form a farmstead. Four hearths were also excavated, two in the houses and two in the courtyards. The hearth between houses Nos. 1, 2 and 4 was sheltered against the wind and can perhaps be accounted for as a summer hearth.

Access to the settlement was provided on the north-western side where a fenceline was clearly discernible. It enclosed the larger courtyard to the west of the dwelling quarters. The south-western part of the fence butted against the north-western corner of house No. 7 and ended at the fortified entrance. It continued further to the east and butted against the south-western corner of house No. 7 and continued from the south-eastern corner of the same building to house No. 1. A fence connecting their corners was also discovered between houses Nos. 3 and 6. The courtyard was thus protected and completely enclosed. Parts of the fence were also traced to the east and north of house No. 7, which could be accounted for as an external courtyard. Most of the sherds from domestic pottery were discovered in the courtyard and by the fireplace in house No. 1.



Miniature footed pottery vessel
(Photograph by B. Farič)

Exceptional and numerous artefacts discovered among the lithic material comprise flint, flakes and tools. Scrapers and small blades could be identified among them. The flake distribution in the excavated area indicates that such tools were also manufactured outside the settlement. The noteworthy stone artefacts include stone axe fragments and river cobble chisels and river cobble hammer stones.

The site was dated to the period between 6900 and 5300 BC on the basis of radiocarbon dating of charcoal from the hearths, as well as from the larger pits and postholes. The site is attributed to the Lasinja culture, which occupied most of western Croatia, north-eastern Slovenia, western Hungary and eastern Austria.

Flint scraper
(Photograph by B. Farič)

The remaining 5,700 m² area of the site is now protected as a scheduled monumnet.

IVAN ŽIŽEK

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Eneolithic Cremation Cemetery

IRN 15510	Krog – Pod Kotom – jug archaeological site
Location	Krog
Site type	Cremation cemetery
Excavated area	8,700 m²
Date	3,500 BC
Period	Eneolithic
Excavation director	Irena Šavel
Date of excavation	2000–2002

The Pod Kotom – jug site is located on the alluvial plain of the river Mura, between the Mokoš and Dobel streams, ca. 3 km to the south of Murska Sobota between the villages of Bakovci and Krog. A prehistoric cremation cemetery was excavated on the 2,800 m² area beneath the arable fields on the route of the Vučja Vas–Beltinci motorway section. It lay at a depth of 30 cm beneath the modern ground surface in a layer of gravel and light brown sandy earth. An early medieval earth pit-dwelling was also discovered on the site. The remains of a settlement from the early Eneolithic period were located at a greater depth, between 1 and 1.7 m, as well as a Late Bronze Age hoard, which lay in a layer of grey clay at a depth of 60 cm beneath the modern ground surface.

The discovery of the earliest prehistoric cremation cemetery in Slovenia, from the late Eneolithic period, was the most significant find on the site. The appearance of this area during its formation was quite different from the present flat landscape, because it lay in undulating landscape. The height difference on the site was most apparent on its southern edge, where the original surface was 1.7 m lower than that on the northern edge. This phenomenon can be accounted for by gravel point bars created by the river Mura at the end of the final glacial

▲ View of the site (Photograph by B. Kerman)

◄ View of the site in September 2003 and its ideal reconstruction

period. The surface of the point bars, a sedimented pedological layer of gravel and sand, formed the undulating surface of the terrain at that time. Frequent floods had moved and deposited their sandy and silty load along the bottom of the banks, without reaching their tops. The prehistoric graves are cut into the top of the gravel and sand subsoil of the higher point bars, the lower point bars being buried beneath later alluvial sediments.

The cemetery was completely excavated and consisted of 176 inurned cremation burials. The tops of most

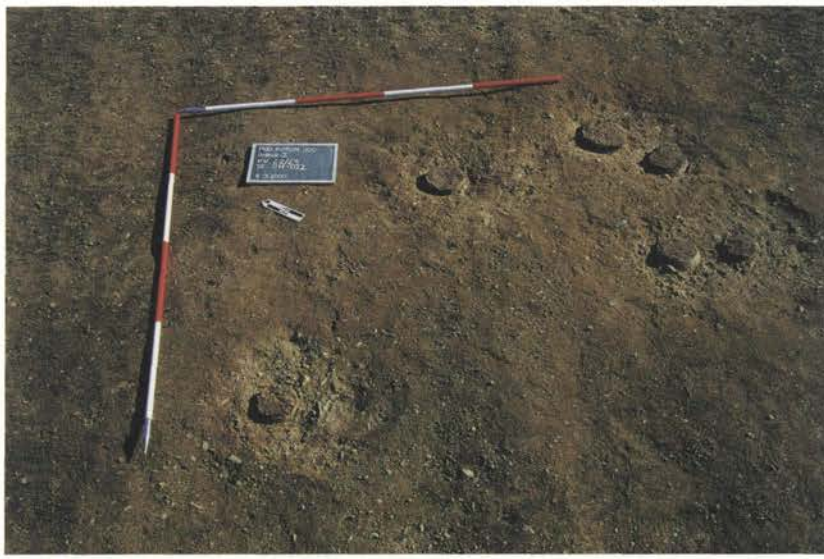
Ground plan: Child graves, Male graves, Female graves (Archive of MS RM)

of the pottery urns were damaged by ploughing. The urns are made of well-cleaned clay with a polished external surface and are fired grey-brown or grey-black. The most common form is that of a jar of various sizes with a biconical or globular form with a low neck, a slightly everted rim, with one, two or three ribbon handles located at the widest vessel diameter, at the rim, or high protruding. Several urns are decorated with applied fingertipped cordons, applique, button bosses or barbotine on the lower parts, or with a simple furrowed channel incised decoration with a prevailing geometric motif.

The deceased were all cremated on a pyre, the site of which was not discovered. The burnt remains of the deceased were placed in urns with pierced bottoms that were deposited in pits with the occasional addition of grave goods: burnt remains of various animals or small

artefacts. The grave pit was subsequently filled with earth and probably formed into a smaller barrow, similar to those known from the cemetery at Pilismarót-Basaharc (Torma, 1973).

Altogether, 57 out of 113 analysed cremated remains were children; the child mortality rate was greatest in the first two years of life. The remainder belonged to men and women in equal ratio, their average age being c. 30 years (Šlaus 2000). Various pathological transformations were discernible on the bones, traces of osteoporosis and osteoarthritis. It was also established that the population buried in the cemetery suffered from malnutrition.



Group of cremation graves (Photograph by A. Švenda)

Burial urn
(Photograph by A. Kovačič)

Burning the dead is one of the rituals connected with the Eneolithic religious beliefs and was connected with the Greek and western Anatolian area (Gallis, 1979). In addition, some urns also contained cremated animal bone: red deer, cattle, sheep or goats in male graves, cattle, sheep or goats in female graves, and sheep or goats and snail shells in child graves. The joint burial of animals and humans indicates their inter-relationship and a bond in the formation of the basic conditions of existence. The burial of cattle with the deceased, however, was part of a ritual common in the Baden culture (Tasić, Dimitrijević, Jovanović, 1979).

Some urns contained other grave goods: smaller stone artefacts were discovered in two cases, in single cases a small spindlewhorl, a ladle with a

solid handle and a thin copper plate. The deliberately pierced bottoms of urns and sherds discovered in the vicinity of the graves were likewise parts of the ritual: small beakers, spindlewhorls and ladles – a phenomenon also known in the cemeteries of Pilismarót-Basaharc (Torma, 1973) and Plateia Magoula Zarkou (Gallis, 1979).

The Pod Kotom – jug cemetery dates to the Middle Eneolithic period or to the Central European furchenstichkeramik horizon, the so-called Retz-Gajary culture (Dimitrijević, 1980) or Balaton-Lasinja II–III (Kalicz,

Detail of cremation grave (Photograph by A. Švenda)

1991). The classical form of crouched inhumation burial is known from the above period, cremation cemeteries being the exception rather than the rule. Cremation burial appeared on a large scale in the Central European area in the somewhat later, early Baden culture (the Bóleraz phase). The cremation cemetery at Pilismarót-Basaharc belongs to the same period (Torma, 1973) and there are several similarities to the cemetery under discussion. Similarities can likewise be established with the Neszmély and Szerencs cemeteries of the Balaton-Lasinja II–III horizon, where cremated bones were placed in pottery decorated in the furchenstich technique (Bánffy, 1991).

IRENA ŠAVEL

Burial urn
(Photograph by A. Kovačič)

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Early Bronze Age riverine Settlement

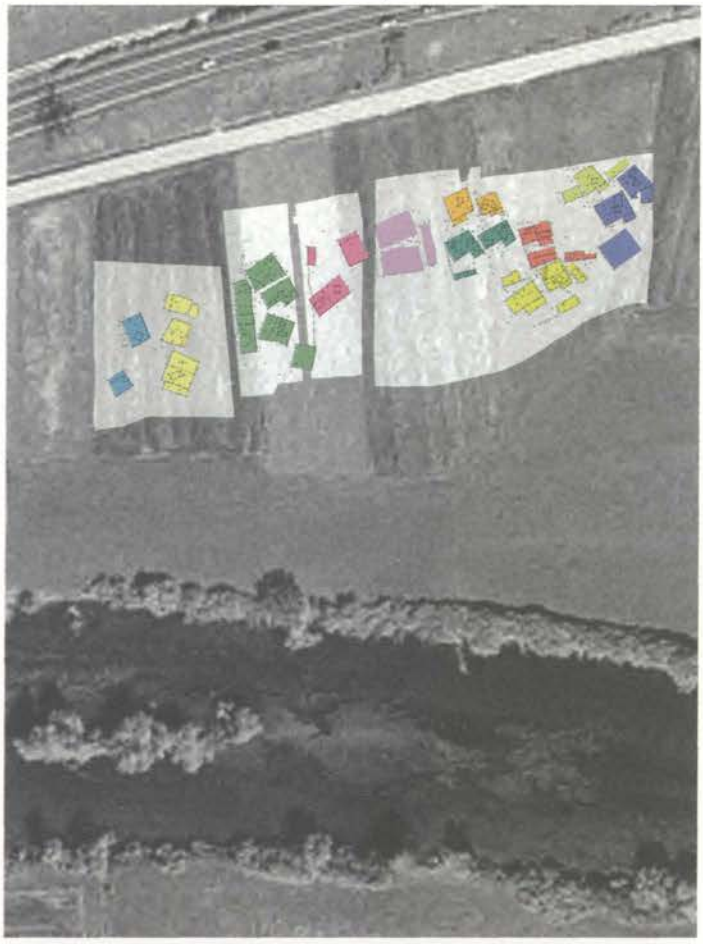
IRN 15511	Ruhna Vas – Loke archaeological site
Location	Bela Cerkev
Site type	Settlement
Excavated area	12,000 m²
Date	1700–1500 BC
Period	Early Bronze Age
Excavation director	Milena Horvat
Date of excavation	2002

The Early Bronze Age site at Loka between the villages of Bela Cerkev and Stranje is located on the extreme western part of the extensive Krško lowland – the southernmost part of Slovenian Pannonia, in the area where the river Krka comes closest to the Krško Hills.

▲ View of the site (Photograph by R. Urankar)

◄ View of the site in September 2003 and its ideal reconstruction

The inhabitants exploited the natural advantages of the area for their settlement: the small valley of the Cedilnik stream with its permanent watersource and the banks of the river Krka. The Cedilnik valley was carved in the colluvial slope of the low hills on the northern side of the Krka valley. Its shape indicates that it it was formed by the backward erosion that caused the developement of an alluvial-colluvial mound (153 m above sea-level), which extended as far as the Krka river bank. It was on this mound that the settlement developed. The western



Interpretation of the structures as farmsteads (Drawing by M. Horvat)

part of the mound was still safe from the frequent floods of the Krka, despite its direct proximity. The eastern part expanded c. 350 m further away from the settlement, but remained unoccupied. This part was less appropriate for settlement from a geological and morphological perspective, because it is frequently subject to flooding or heavy waterlogging from surface and ground water.

The remains of the settlement cover an area of c. 9,600 m^2. There are no traces indicating fortifications surrounding the settlement – a ditch or palisade. Therefore it was an open settlement located by the river and con-

sisted of a high density of planned buildings. They were arranged relatively regularly surrounding one of the larger village squares, to which village paths led, built along natural lenticular areas of gravel in the clay subsoil. Thus the paths remained relatively dry even in bad weather.

The distribution of the buildings renders the impression that they formed closed residential-economic units. The one- to three-room buildings were of various sizes and functions. Individual units consisted of one to two houses and one to two outbuildings. Each of the units had an internal courtyard of its own. Residential houses regularly had one or two rooms with a special entrance hallway and only rarely was this replaced by a projecting roof. The interior of the houses featured a hearth in one of the two rooms as well as a smoke structure – a kind of chimney conducting the smoke out of the room. A low bed built on posts sunk into the ground was located in the adjacent room. The associated outbuildings were smaller in size, as well as being narrower and more oblong in shape.

The houses had ridged roofs. The structure of the houses differed. In smaller houses the ridge beam was supported by a single line of posts, while larger ones had two lines of posts. The outbuildings were covered either with lean-to roofs or with protective roofs supported by four to six posts.

The orientation of the houses in a south-easterly/north-westerly direction is interesting. The reason for this was probably the wind, still blowing heavily from the east. All the entrances were therefore built on the southern side. The entrance to the building, however, was probably built in the western wall of the entrance hallway.

Potsherd with Litzen decoration (Photograph by P. Korošec)

The buildings were not renovated. Their distribution inside the framework of units indicates that they probably comprised individual farms with several outbuildings. It seems that the settlement did not expand through time but was built within a single generation.

Archaeologically detected economic activities comprised stock-breeding, arable cultivation and pottery production. Xylotomic analyses (i.e. analyses of charred wood) indicate that anthropogenic encroachments in the wooded surroundings were fairly strong. The forest was felled in order to obtain open spaces for pastures and fields, which indirectly indicates extensive stock-breeding and cultivation of land. Evidence for arable farming is provided by modest plant macro-remains (cereal grains), as well as a fragment of a bronze sickle and numerous fragments of quern fragments. The preliminary analyses of the animal bone from the site indicate that the inhabitants of the settlement also practised hunting and stock-raising. A com-

Potsherd with Litzen decoration (Photograph by P. Korošec)

plex of larger pits discovered inside one of the dwellings in the western part of the settlement (house No. 7) can be associated with pottery or even house building (walls daubed with clay). A 20 cm thick layer of heavy clay of exceptional quality that could easily be formed was preserved at the bottom of one of the pits. Other economic activities could not be documented in the settlement. Heavy degradation of the forest could perhaps indicate metal working. The fact that larger amounts of firewood were required for smelting ore and metal in the Bronze Age, which would have caused deforestation, cannot be disregarded. However, there is no direct evidence of the extraction of metals in the settlement.

The settlement is defined as originating from the Early Bronze Age (1,700 to 1,500 BC). The finds of Litzen pottery and a part of a sickle (handle) facilitate a more precise dating of the settlement to the turn of the Early Bronze Age (BZ A2 according to Reinecke) or Ig C or LBVII according to Parzinger (Gabrovec 1983; Parzinger 1984). Apart from the decoration made in the twisted cord technique, the typical feature of Litzen pottery is the vessel form. The selection of shapes at the Loke site is limited to bowls, dishes and jugs. They all have a funnel-shaped neck and more or less globular body with a ribon handle on the jugs. The motifs are also typical: transverse and wave-like bands, short vertical bands and an independent transverse line. The motifs are distributied on the entire surface of the neck, in a narrow band or in two lines beneath the rim, and also in vertical bands on the shoulder of the vessel. The discovery of the bronze sickle within a Litzen context is of exceptional significance. According to the valid chronology, sickles of this type should only have appeared during the Middle Bronze Age. The sickle from Loke is thus the earliest find of this tool type not only in Slovenia, but also in the area of the south-eastern Alpine region.

There are several known sites with Litzen pottery in Slovenia: Notranje Gorice, Ig, Krtina, Slivnica near Maribor, Brinjeva Gora, Grofovsko, Ajdovska jama near Nemška vas, etc. Litzen pottery is most common in Austria, Slovakia, Hungary and Croatia.

The newly discovered site of Loke facilitated an insight into the internal organisation and structure of an Early Bronze Age settlement in the lowlands of Dolenjska. Previous excavations have been concentrated on upland settlements in this region. However, the most recent excavations on the motorway route in Dolenjska have revealed the existence of Bronze Age settlements in lowlands as well (Sela near Dob – phase IV, Col near Čatež – later phase, Loke and Loka).

Bronze sickle handle
(Photograph by P. Korošec)

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Bronze Age Settlement in the Pohorje Foothills

IRN 15509	Rogoza near Maribor – archaeological site
Location	Rogoza
Site type	Settlement, barrow cemetery
Excavated area	32,176 m²
Date	ca. 2000–700 BC
Period	Eneolithic, Bronze and Iron Ages
Excavation director	Mira Strmčnik Gulič
Date of Excavation	1998, 1999

The specific geographic position of modern Slovenia decisively determined the range and type of settlement throughout Prehistory. Two major cultural zones were thus created in the south-eastern Alps during the Bronze Age. Archaeological remains testify to the fact that eastern Slovenia was culturally connected with western Transdanubia, an area between the rivers Drava and Sava and eastern Austria, while the influence of Italy, the western Balkans and the Adriatic can be found in the regions of Notranjska and Kras. The dividing line can be traced in the broader area of the Ljubljana basin where the influences overlapped (Teržan 1999). The nature of settlement in the Bronze Age in Slovenia has been substantially filled out and clarified to a large extent as a result of the latest discoveries during extensive archaeological excavations on the new motorway routes.

The Rogoza archaeological site is located on a slightly raised terrace at the base of the north-eastern Pohorje foothills, at the interface of the Dravsko Polje plain with the edge of the extensive Pannonian plain. The site was discovered and defined by extensive and intensive surveys, the protective regime demanding archaeological excavation prior to construction of an area of 600 x 50 m.

The appearance of the lowland settlement established so far gives the impression of a slightly raised gravel terrace that had been occupied in several different periods.

▲ View of the site area (Photograph by R. Urankar)

◄ View of the site in September 2003 and its ideal reconstruction

The stratigraphic data indicate that the interface between the terrace and the foothills was still pronounced in the period of the initial Eneolithic settlement (Phase I). The location of the settlement and the character of the broader area in this settlement phase are not known, as the occupation layer was exposed to intense post-depositional processes.

The opposite is true of the Phase II settlement, preliminarily dated from the earlier and middle phases of the Urnfield period to the Early Iron Age transition period. The dwelling structures were located on the gravel/sand terrace, which formed a less prominent feature of the landscap in this period. The terrace base was already partially buried by sandy and silty sediments that were cut by a meandering stream channel, which is no longer visible. The stream channel was most clearly recognisable in the area where the houses were concentrated. Further to the south of this area, it is clear that the stream frequently broke its banks, flooding the area in a delta-like manner and simultaneously depositing artefacts from the northern part of the settlement. The dark brown-grey clay layer in the channel contained numerous sherds of prehistoric pottery, as well as stone querns and charcoal fragments, etc. The large number of finds in this feature is due to the erosion and silting up of the lower-lying channel at the edge of the settlement. Two natural channels that ran in a east-west direction were located at the northern edge of the site, below which was a shallow depression, filled with

Plan of the excavated area (Archive of ZVKDS)

compact grey clay and silty sand with occasional finds in the flood deposits. A stone-surfaced plateau, discovered on the edge of one of the channels, probably served as a stone surface on the frequently used channel bank.

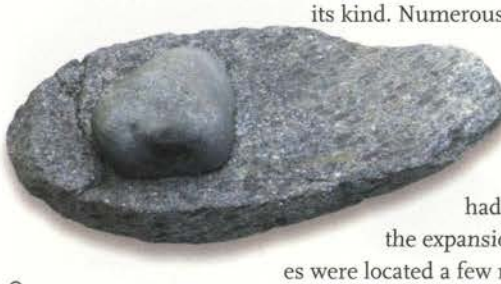
Four single cremation burials beneath barrows were also discovered in the same area. The barrows were positioned in a line in a north-west/south-east direction. Only the outline of the lower, hardly discernible layer of the barrows survived due to intense cultivation. The associated pottery suggests that the barrows can be as-

View of the excavated site to the south (Photograph by I. Bizjak)

signed to the Poštela II phase, which began in the late 8th or early 7th century BC. Similar pottery types were wide-spread in the eastern Alpine and western Pannonian area throughout the Ha C period, which is an indication of their popularity and long-term use.

A south-west/north-east aligned prehistoric path, paved with small river cobbles, was discovered somewhat further to the south, in the northern part of the settlement.

It is certainly the planned nature of the settlement that distinguishes the Rogoza Bronze Age settlement and places it among the most important discoveries of its kind. Numerous remains of wooden dwelling and outbuilding structures of a dispersed type settlement were discovered. The houses stood on the terrace of the stream, the meanders of which had created natural conditions for the expansion of the settlement. The houses were located a few metres apart, usually grouped around a small courtyard, and were mostly of small to medium dimensions. The building technique was typi-



Quern
(Photograph by I. Bizjak)

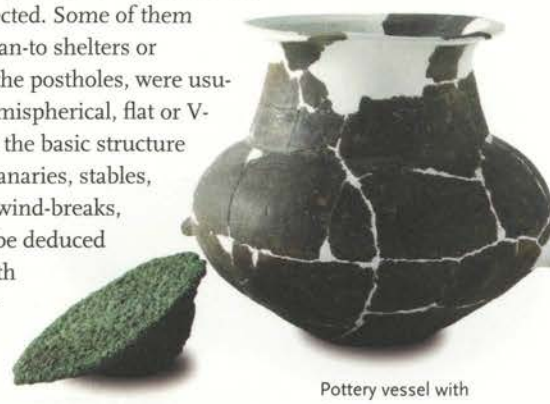
cal of the Bronze Age, i.e. the so-called post technique: the load-bearing posts were cut into the ground and formed the walls of the house. The walls were made of woven withy and rod wattle, which was coated with clay daub on both the interior and exterior. Withy impressions were preserved in the burnt clay daub. The excavated remains of the regularly spaced load-bearing posts make it possible to reconstruct the basic forms of the former buildings, which had been renovated and repaired on several occasions. The floor plans indicate the

Selection of Late Bronze Age pottery, 12th–11th century BC (Photograph by I. Bizjak)

existence of four distinct basic building types:

- Buildings consisting of two rows of single posts (four to a row).
- Buildings consisting of two rows of even numbers of double posts.
- L-shape buildings.
- Buildings consisting of four rows of single posts.

Some of the buildings were divided into rooms and were sometimes interconnected. Some of them were butted by additional lean-to shelters or sheds. The posts, or rather the postholes, were usually circular in plan with hemispherical, flat or V-shaped bases. Posts formed the basic structure of houses, out-buildings, granaries, stables, sheepfolds, various fences, wind-breaks, screens and the like. It can be deduced on the basis of analogies with other Bronze Age sites (Dular 1999) that houses had ridged roofs, whilst their construction differed according to size. The roofs of smaller houses were supported by a single row of ridge posts, while the larger



Pottery vessel with bronze ingot (Photograph by I. Bizjak)

ones required two or more rows. The roofs were probably thatched with straw and bark.

At least 19 houses have been excavated so far, whilst others will have to be evaluated together with the small finds during the post-excavation analysis. In spite of the large excavated area, the final number of buildings or the full extent of the settlement cannot be defined, because it extends further to the east and west along the former stream channel and beyond it.

An exceptional example on the site is a larger dwelling structure that was divided into several rooms, at least two of which were for domestic occupation and an antechamber. It had a ridged roof, which jutted out over the entrance on the south side. The eastern wall was also extended to provide protection against the wind. Traces of a hearth were discovered next to it.

Hearths were significant structures within the settlement and were mainly built outside the houses. They were circular or oval in plan and were built of river cobbles, coated with a layer of clay. The storage pits that were discovered directly beneath the former ground surface also provided important data. The excavated remains indicate their differing sizes and forms, whilst their contents often also provided a further means of distinction. They could be filled with complete vessels or potsherds, charcoal, daub, or simply filled with earth. They were used for storing pottery and crops. Storage pits with circular lean-to roofs, probably used as granaries, were special structures on the site, as was the still unexplained stone plateau.

The finds are dominated by pottery: bowls with inverted rims, jars, bowls, dishes, amphorae and pithoi, which will provide an accurate date for the site and the individual structures.

MIRA STRMČNIK GULIČ

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Early Iron Age Cemetery

IRN 15512	Murska Sobota – Nova Tabla archaeological site
Location	Murska Sobota
Site type	Cemetery
Excavated area	366,000 m²
Date	4000 BC–800 AD
Period	Neolithic to Early Middle Ages
Excavation director	Mitja Guštin
Date of excavation	1999–2003

The landscape to the south of Murska Sobota in the immediate vicinity of a large gravel pit, the modern Soboško Jezero lake, is a gently undulating lowland typical of Pannonia. It is covered with large fields, cut by former channels of the river Mura and smaller streams. The Nova Tabla archaeological site was until recently defined by the Dobel stream, which meandered through the countryside until the development of the modern agricultural landscape.

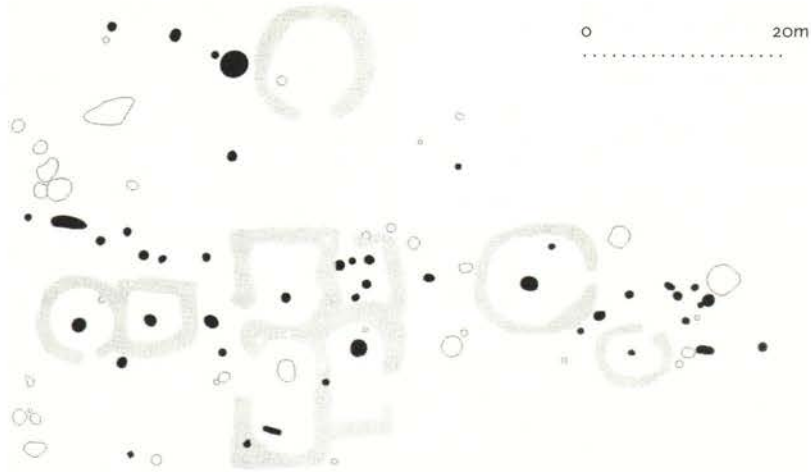
The Early Iron or Hallstatt period cemetery is among the most significant discoveries of the archaeological excavations at Nova Tabla. It is the first known cemetery from this period in the Prekmurje region. It thus has special significance as it is a type of mortuary architecture that has been unknown so far in Slovenia and its border area.

Traces of Early Iron Age settlement in the form of pits were also discovered on the nearby Kotare-baza archaeological site. They consisted of traces of individual farmsteads and dwellings in the form of pit dwellings and storage pits. The finds comprised large quantities of burnt clay and potsherds from urns, as well as other mortuary vessels from graves and the surrounding ditches of grave plots.

▲ Cropmarks (Photograph by B. Kerman)

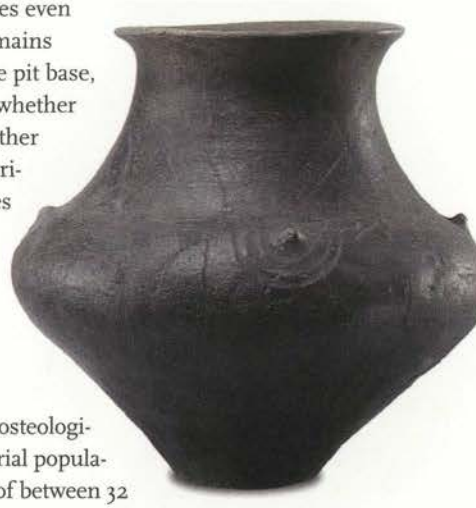
◄ View of the site in September 2003 and its ideal reconstruction

The cemetery extended with interruptions over the entire length and breadth of the excavated area of the projected motorway route. Approximately 100 cremation graves were discovered in several groups. Eleven of them were enclosed by circular ring ditches or rectangular ditches, 8 to 14 m in diameter. The graves within the ditches were cut into in the centre of the plots. The remains of three stone settings, up to 7 m in diameter, probably served a similar function to that of the ditches, although it seems that there were no grave pits in their centres.



Site plan (Drawing by G. Tiefengraber)

The distribution of the graves indicates that most of them had no plots and could not have had any, since they were located in such close proximity to each other. It is interesting that the graves within the ditches are not distinguished from most of the other graves by their size or their grave goods. The Nova Tabla graves have simple circular, oval and sometimes even rectangular pits. The cremated remains were sometimes laid simply on the pit base, but it was impossible to establish whether they were deposited in cloth or leather bags, or in vessels of organic materials. However, most of the examples were urn burials: the remains were placed in larger wide-bodied vessels or jars. In most cases, they were accompanied by other pottery, primarily bowls, which served as urn covers.



Graphite slipped Urn (Photograph by T. Lauko)

Anthropological analysis of the osteological remains established that the burial population comprised at least seven men of between 32 and 52 years of age and 20 women of between 14 and 60 years of age. Two graves contained multiple burials. Classification of the sex of the burials on the basis of

grave goods and ornaments alone is difficult, because the grave goods were modest.

Male burials can be defined also on the basis of typical grave goods, but only four contain pins typical of male costume and no weaponry was present. A socketed iron axe that can be classified either as a tool or as a weapon was found in one of the pits, which probably had a ritual function.

Female burials were easier to define, because they contained bronze jewelry in the form of various brooch-

The central part of the site (Photograph by M. Guštin)

es: bronze two-looped knot-bowed fibulae and boat fibulae, including the so-called Šmarjeta type, various bronze bracelets, especially wire rings, as well as tiny amber and blue glass beads and clay spindlewhorls, parts of characteristic distaffs.

Most of the graves contained at least one vessel, an urn, often with a bowl as a cover and an additional handled cup, all made of high quality clay. Some vessels were completely graphite coated, whilst others were only painted with graphite in geometric motifs.

Pottery forms and decoration, particularly vessels with low cylindrical necks, are rare in Štajerska (Slovenian Styria), yet they correspond to pottery from the Sulmtal group. The vessels with conical necks also have good analogies at Kaptol near Slavonska Požega. On the grounds of the grave goods, the Early Iron Age cemetery from Nova Tabla can be classified as part of the south-western Pannonian Iron Age group, that is to the Ha C and the beginning of the Ha D period, or Štajerska 1–3 according to B. Teržan, an absolute date to the 7th and the beginning of the 6th century BC. It is interesting that some damaged middle and even some late La Tène graves were discovered in the ploughsoil above the central area of the Early Iron Age cemetery. Some Roman

Pottery baby bottle (Photograph by T. Lauko)

and early medieval graves were also excavated in the immediate vicinity.

Nevertheless, the main characteristics of this cemetery are the rectangular or pennanular ring ditches, which are only partly extant due to ploughing. The ditches were up to 1.5 m wide, while their extant depth is between 0.2 and 0.8 m. They regularly had an entrance with semi-circular ditch terminals, which is not oriented on the cardinal points of the compass. In one case, the access to the plot area is further accentuated by two

The remains of a barrow mound (Photograph by M. Guštin)

posts on either side of the entrance. Potsherds contemporary with the central graves were often discovered in the ditches and especially in the entrance area. Four rectangular enclosure ditches formed a large complex of an unknown nature in the central, largest group of graves.

The entire original ground surface has been transformed and destroyed by changes in the ground level and intense ploughing on the site. It is therefore difficult to reconstruct the form of the mortuary structures on the basis of the excavated structures alone. The cemetery close to the Dobel stream in the shelter of an oak wood can be seen as consisting of small barrows, which were erected over the grave after the pit had been dug and the urn with the grave goods had been buried. However, it seems likely that a low barrow occupied the entire surface of the circular plots enclosed by the ring ditch. The form of the grave superstructure inside the rectangular plots is difficult to envisage.

This is the first case of this type of mortuary structure in Slovenia. The ring ditches of the Early Iron Age graves at Nova Tabla can be compared with similar plots known in Central Europe from the late Bronze Age

Bronze pin
(Photograph by T. Lauko)

Bronze boat fibula
(Photograph by T. Lauko)

Urnfield culture through to the Hallstatt period and early La Tène period, surviving into the early Roman period.

Branko Kerman has used aerial photography to document traces of similar ditches at numerous locations in Prekmurje. However, the excavations at Nova Tabla have established that some of these ring ditches must be attributed to Hallstatt, as well as Roman cemeteries.

MITJA GUŠTIN *and* GEORG TIEFENGRABER

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Celtic House

IRN 15514	Bakovci – Kotare archaeological site
Location	Murska Sobota
Site type	Settlement
Excavated area	30,500 m²
Date	1700 BC to 8th century AD
Period	Late Iron Age (La Tène period)
Excavation director	Branko Kerman
Date of Excavation	2000–2001

An area of 30,500 m² was excavated in 2001 on the Kotare – baza archaeological site to the west of the Murska Sobota–Bakovci road. The site is located in the area with the field name Kotare beside the Dobel stream, 2 km to the south of Murska Sobota. This area is the former flood plain of the rivers Mura and Ledava, consisting of an extensive alluvial plain, the gravel Prekmurje basin, which is generally only covered by a thin layer of topsoil. The varied, undulating and slightly raised character of the landscape in the area is formed by streams, as well as former shallow channels and canals.

The site is bounded by the Dobel stream channel on its western side, by a ditch on the northern side and is cut by the Ledava overflow channel.

The subsoil on the site is silicate gravel, a Pleistocene alluvial deposit of the river Mura. The effects of the stream are discernible ca. 50 m from the modern channel, or even further away. When the former Dobel stream flooded, it eroded and levelled the gravel surface, depositing a darker layer of sandy silt. This layer contains numerous re-deposited potsherds. The layer is thickest beside the stream, diminishing with the distance from it, until it disappears in the western and

▲ Kotare-baza, view of the site (Photograph by B. Kerman)

◄ View of the site in September 2003 and its ideal reconstruction

northern parts of the site. The area was somewhat protected from flooding, due to its location and distance from the Dobel stream.

The topsoil in the western and northern parts of the site is very thin and partially mixed with gravel. The archaeological remains are dispersed and almost destroyed, with only the bases of negative structures still extant.

Prior to the archaeological excavations, the site was covered with arable fields. Intense cultivation has badly damaged the shallow archaeological layers, primarily in

Remnants of the Celtic pit dwelling with inner step (Photograph by D. Šumak)

the western and southern parts of the site.

Archaeological excavations at the Kotare-baza site revealed pits to the north and west of the Dobel stream that were dated to the Early Bronze Age (Bd A2) on the basis of the Litzen pottery which was found in them. The area was densely settled again in the Early Iron Age.

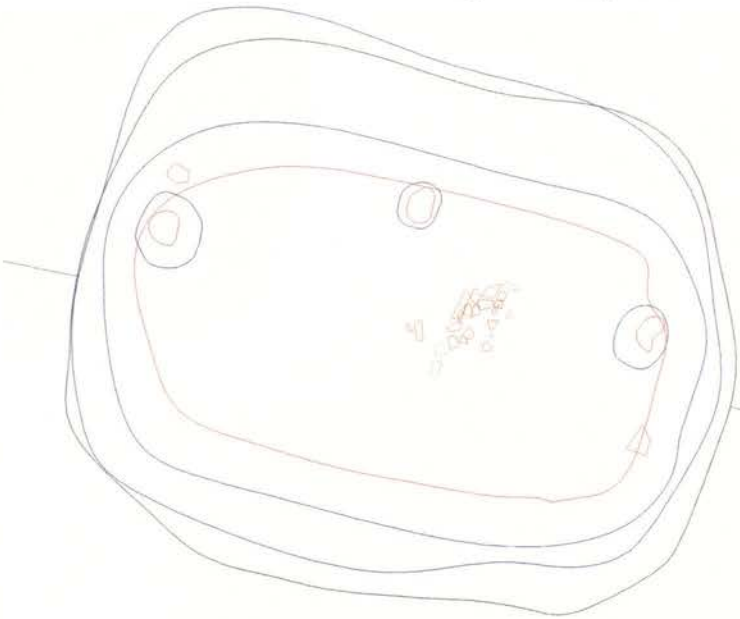
Early Slavic settlement structures were discovered throughout the site, with a greater concentration of buildings and pits in the western and northern parts.

La Tène period buildings were less common: a house, a pottery kiln and pits, all concentrated in the south-western part of the excavated area.

On discovery, the excavated La Tène house appeared as a dark rectangular stain, which was easily distinguished from the sandy gravel subsoil. The pit dwelling was well preserved. It was rectangular, 4.01 x 3.34 m in size, with rounded corners and a flat base. It was oriented in an east-west direction. The depth of the subterranean part was 0.59 m. The sides of the structure were cut vertically into the sandy gravelly silt. Part of the southern side was formed into a 50–70 cm wide hori-

zontal step. The step or ledge was located 30 cm above the base of the pit or the ground surface. Three postholes were discovered at the bottom: one on the eastern side, the second by the western side and the smaller third in the centre, next to the step. These postholes were the only traces of the load-bearing posts of the ridged roof structure.

The pit dwelling was filled with dark grey or black-brown soft loamy, sandy soil that contained numerous charcoal and burnt clay or daub fragments in the basal fill. Rim, body and base sherds of pottery vessels were also found in the same layer. The pottery included graphitonkeramik, reddish-brown and black fired dishes and jars, as well as three graphitonkeramik discs with central hole. A reddish-brown clay biconical dish was found beneath the step at the bottom of the fill, as well as a fragment of a graphite-rich clay jar, decorated with broad vertical lines. The fill also contained bone fragments, part of a metal artefact and two nails. The floor in the eastern side of the pit dwelling was partly covered with a compacted layer of brown clay around medium-sized river cobbles.



Ground plan of the pit dwelling (Drawing by S. Kolenko)

The Celtic house from Kotare belongs to the type of rectangular pit dwellings, whose dwelling area (13.7 m²) is cut 0.60 m in the ground. A wooden ridged roof was constructed above the sunken part. The entrance to the house was on its southern side, where excavation revealed a step with a posthole below it.

Glass bead from Kotare – krogi (Photograph by D. Šumak)

The basic characteristics of Celtic houses or huts mostly excavated on Eastern European lowland archaeological sites is that they were cut into the ground (pit

dwellings). They had rectangular ground plans and ridged roofs and some of them also had a small step (Horváth, 1987). The load-bearing posts were located in the centre of the shorter sides on the longitudinal axis, while the roof structure was often supplemented by smaller posts, usually along the longer sides or in the middle of the building (Kuzmová, 1980).

The Kotare Celtic house or pit dwelling is the first example of an excavated structure of this type in Slovenia. A pit dwelling from the nearby site at Nova Tabla is similar, but has a single posthole on its western side (Guštin, Tiefengraber, 2002). There are excellent parallels for the Kotare house amongst the Celtic dwellings from the adjacent Zala county in Hungary (Horváth, 1987), Celtic settlements in Slovakia (Kuzmová, 1980), the Czech Republic (Waldhauser, 1977) and Austria (Karl, 1996).

Graphitonkeramik jar decorated with broad vertical channels (Photograph by D. Šumak)

It is much more difficult to define the function of the pit dwelling from Kotare, because it is an isolated building on the site. Therefore, it cannot be treated as a settlement in the strict sense. It is also interesting that no hearth or oven, an essential for occupation, was discovered within it, although the lower part of the black-grey fill contained a lot of charcoal. However, fragments of pottery, metal and remnants of animal bones indicate that the house had been inhabited by people at least for some time. The pit dwelling from Kotare was most probably part of a small family farm in the extensive Prekmurje lowlands.

The discovery of the first Celtic lowland houses at the Kotare-baza, Kotare-krogi and Nova Tabla sites (all of them to the south of Murska Sobota) filled in the gap in settlement of this population in Prekmurje in a most representative way. With this important discovery the landscape along the river Mura joins the other regions of Slovenia, where the La Tène period has already been extensively excavated.

Biconical dish (Photograph by D. Šumak)

BRANKO KERMAN

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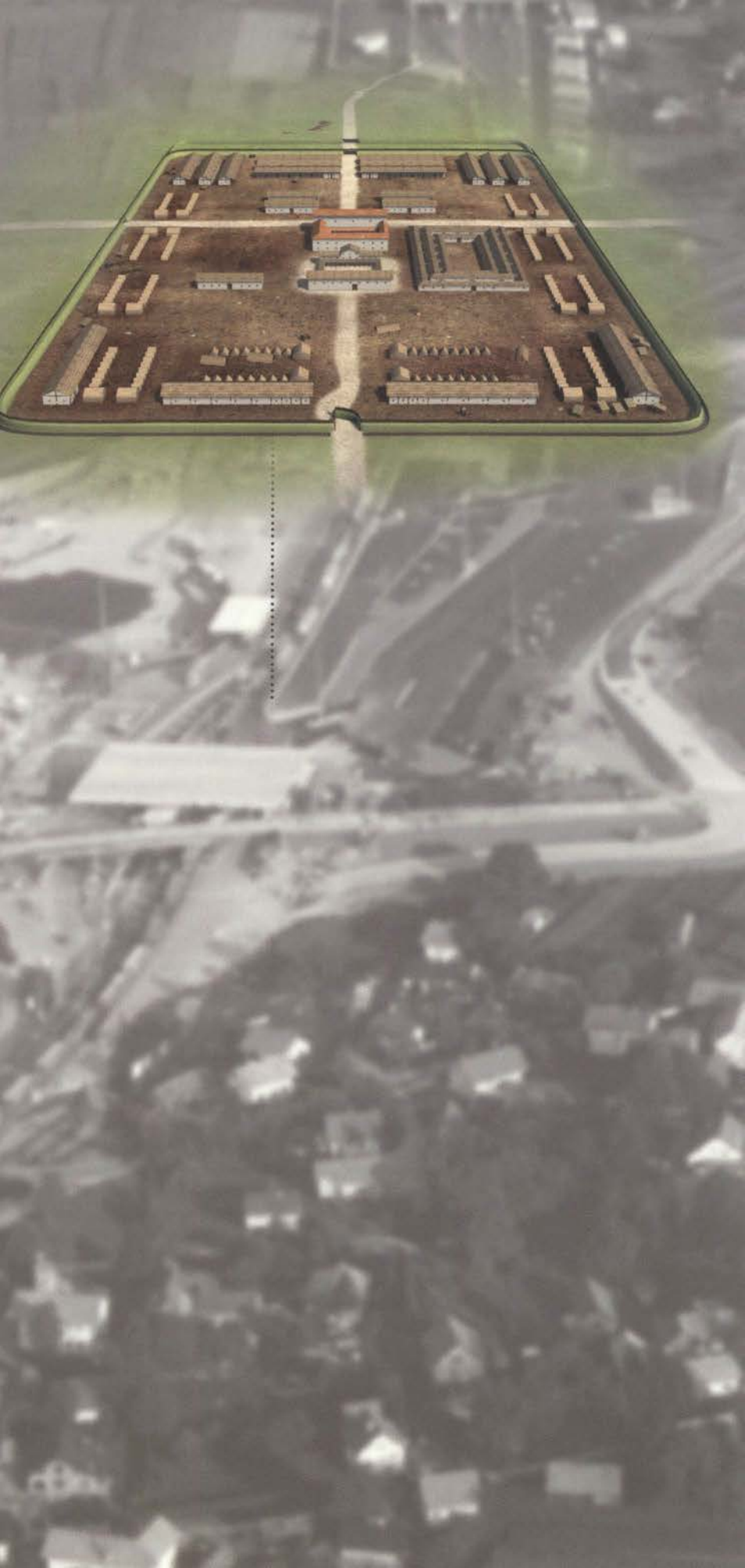


Roman Military Fort

IRN 12654	Obrežje – Obrežje archaeological site
Location	Obrežje
Site type	Cremation cemetery, fort, settlement, farmstead
Excavated area	68,903 m²
Date	10th–8th century BC, 1st century BC–1st century AD, 15th century AD
Period	Late Bronze Age, Roman period, Middle Ages
Excavation director	Philip Mason
Date of excavation	2001–2003

The Obrežje archaeological site was discovered during extensive and intensive systematic field survey of the Krška vas - Obrežje motorway section and area of the projected Obrežje international border crossing.

The site itself is located on the Bregana Pleistocene gravel terrace. It is bounded on the south west by the Gorjanci hills, on the north-west by the steep edge of the Sava terrace and the now dry valley of the Struga stream, on the south east by the flood plain of the river Bregana, and on the north east by the flood plain of the river Sava. The Bregana terrace was formerly more extensive, but research has indicated that the north-eastern part was eroded by the river Sava at least 800 years ago, creating the steep terrace edge, which forms a dominant feature in the landscape today (Verbič 2002).

A c. 6.9 hectare area was excavated on either side of the existing Obrežje border crossing and the Ljubljana – Zagreb highway. Excavations revealed that a large Late Bronze Age cemetery (358 cremation and 6 inhumation graves) and settlement occupied the southern slopes of

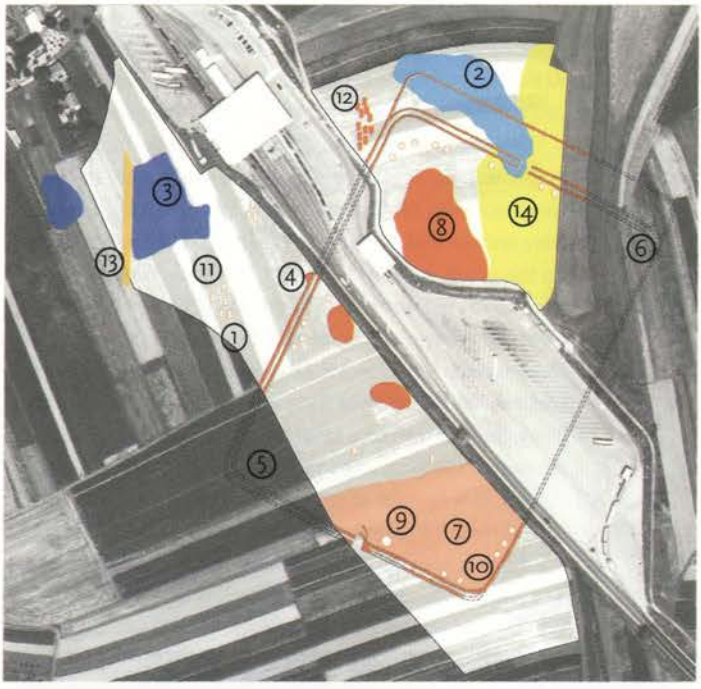
▲ View of the site (Photograph by D. Grosman)

◄ View of the site in September 2003 and its ideal reconstruction

the Struga stream, whilst a 15th century farmstead occupied the north-eastern part of the site.

The most important part of the site was an Early Roman fort that dates to the Roman conquest of Pannonia under the Emperor Augustus. It is a unique site in Slovenia and is the only known site of its type and date outside the former Roman provinces of Gallia and Germania.

The location represented an excellent defensive position on the edge of the Bregana terrace, which was protected by the natural defenses of the marshy flood plains



Site plan: 1) boundary of excavated area; 2) Late Bronze Age settlement; 3) Late Bronze Age cemetery; 4) fort ditches – excavated; 5) fort ditches – not excavated; 6) fort ditches – destroyed; 7) industrial/workshop zone; 8) barracks; 9) well; 10) water cisterns– latrines; 11) bread ovens; 12) iron smelting furnaces; 13) road; 14) medieval farmstead (I. Pintér, M. Erič)

of river Sava and the river Bregana to the north east and south east. The valley of the Struga stream formed a significant barrier to approach from the high edge of the Sava terrace to the north-west. The south western side of the fort was without natural defenses on the level Bregana terrace, but was ideally situated to protect or control communications along the line of what later became the main Roman road from Siscia (Sisak), via Emona (Ljubljana) to Aquileia, at the point where the road left the broad Sava valley and entered the narrows of the Brežice Gates.

Bronze pendant, part of horse harness (Photograph by M. Pungerčar)

The fort was built on a rectangular plan with rounded corners. It was defended on three sides by double, 2m wide, at least 1.20 m deep V-shaped ditches with

narrow flat bases. The fourth side was defended by a single ditch. The area directly behind the inner ditch would have been defended by an earthen rampart (*agger*), which had a maximum 6 m width at the base. Unfortunately, 2000 years of erosion and ploughing have removed all trace of this rampart, but the lack of postholes along the inner edge of the inner ditch suggest that it was a turf-faced rampart (*agger*) crowned by a timber rampart (*vallum*). The area enclosed by the ditches was 290 m by 210 m, with another ditch being added later to the north-eastern end of the fort to enclose a 210 x 25 m annex. It originally covered an area of c. 6 hectares, but the central part of the site was destroyed by a shift in the course of the river Sava, as well as by the construction of the Ljubljana-Zagreb road and by the present border crossing.

Iron smelting furnaces (Photograph by F. Aš)

Entrances were found in the centre of the north-eastern and south-western sides, but all trace of potential entrances on the north-western and south-eastern sides has been destroyed. The south-western entrance was defended by two phases of a curved ditch (*clavicula*) with a turf bank, which forced all those who entered to turn towards the right, presenting their unshielded side to the defenders. There was also a 6 m deep well close to this entrance.

Iron military tent peg (Photograph by M. Pungerčar)

Altogether, 696 pits and 434 postholes were discovered and excavated in the interior of the fort. There were groups of large, deep pits close to the inner ditch, which functioned as latrines and water cisterns for the sentries on the rampart. Part of the fort was occupied by a number of wooden post-built rectangular barracks. The evidence for these is given by the large number of postholes in the surviving central part of the fort. The barracks were surrounded by a large number of

rubbish and storage pits, as well as by latrines. All the pits contain animal bone, as well as wine and oil amphorae, *terra sigillata* (fine table ware), pottery drinking vessels and coarse pottery cooking pots. There are also pieces of metalwork – bronze fibulae, harness and belt fittings, weapon fragments and armour fragments. Three beehive domed clay bread-ovens were located to the south west of this zone. The relatively empty area between the barracks and the rampart, as well as the interior of the annex could have provided space for stall-

External ditch with palisade postholes (Photograph by F. Aš)

ing animals, parade grounds or camp grounds for additional personnel.

The mass of pits in the south-western part of the fort presents a different picture. Many of these pits were large deep bell-shaped storage pits that served as grain silos. There were also at least five large pit complexes that were in use for a longer period of time. The finds from these pits are characterised by iron tools such as saws, awls, knives, augurs and nails, as well as half-finished sawn antler discs. The nature and number of the pits and pit complexes, as well as the associated finds suggest that this was a grain storage area and an industrial zone, possible connected with tanning and leather working.

The exterior of the fort between the outer ditch and the valley of the Struga stream was occupied by four groups of ovens. The smaller two groups comprised respectively 7 and 3 bread ovens, but the 2 larger northern groups comprised 15 iron smelting furnaces and 10 bread ovens respectively.

Antler disc blanks (Photograph by M. Pungerčar)

The fort was probably built in the period around 14 - 13 BC during the conquest of Pannonia, and was probably in use until the end of the Great Pannonian Revolt of AD 6 – 9. The size of the fort and the finds suggest that it was occupied by a unit of 1000 men (*mil-*

laria), or a mixed force (*vextillationes*), made up in this case of legionaries and auxiliary cavalry. It may also have served as a supply and repair base at the beginning of the route into the more recently pacified and potentially hostile territory towards Siscia and the Danube. It was abandoned and the ramparts were slighted by the early part of the reign of Tiberius, when strategic priorities changed and the Roman army moved closer to the Danube frontier. The area then saw only minor activity in the mid 1st century AD - represented by a few pits and

Bread oven inside the fort (Photograph by F. Aš)

burials - when the Roman road ran in a southerly direction past the abandoned fort.

PHIL MASON

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Roman Settlement and cemetery

IRN 15513	Zagorica near Veliki Gaber – Zagorica – Bič archaeological site
Location	Zagorica – Bič
Site type	Settlement, cremation cemetery
Excavated area	25,500 m²
Date	2500 BC–9th century AD
Period	Prehistory, Roman, early Middle Ages
Excavation director	Boris Vičič
Date of Excavation	2002

Dobska Uvala is one of the basins in the Dolenjska system of valleys. It is located between Dob near Šentvid pri Stični in the west and Medvedjek in the east. It is surrounded by isolated hills, which rise to a height of up to 100 m in the south and east. The bedrock consists of Jurassic limestone and clay. The floor of the uvala has been formed by numerous hydrologically active karst caves with swallow-holes, vent-holes and ponds, which contain water all year round. The Zagorica site is located at the eastern part of the basin between the villages of Bič and Zagorica, at the base of Medvedjek. The terrain is relatively level.

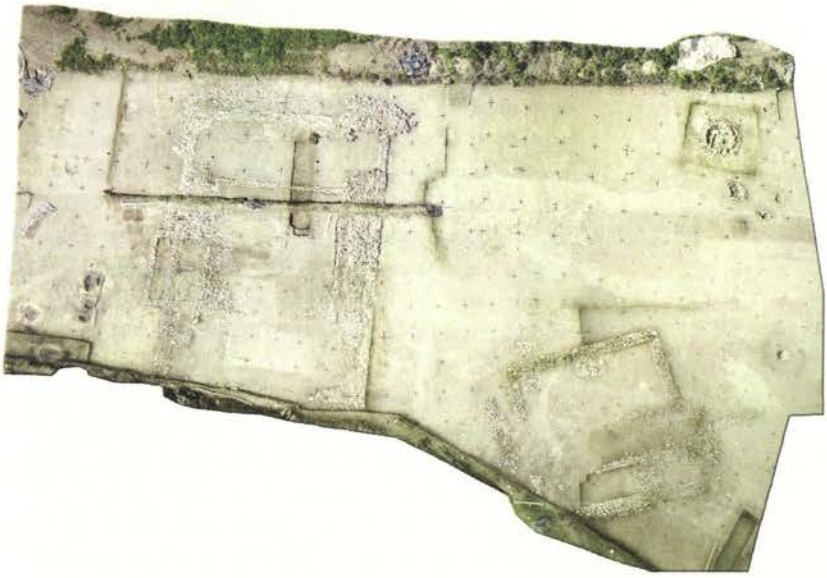
The earliest settlement traces were discovered on the elevated terrain at the foot of Reber and date to the La Tène period. The associated cemetery of 20 cremation graves with rich grave goods was excavated in the lowland area. It is dated to the 2nd century BC or the beginning of the 1st century BC. The Roman period settlement is located on the formerly flooded basin bottom and partly extends over the La Tène cemetery. The associated cemetery was excavated on the eastern edge of the settlement. The lowland location was abandoned in the 3rd century AD. The settlement focus was transferred to the former site on the elevated terrain at the foot of Reber in the Late Roman period and the Early Middle Ages.

The Roman settlement was adapted to the shape of the terrain and did not exhibit a geometric layout. The buildings were mostly timber-built with a vertical post structure, but four of the buildings had river cobbles foundations. It is suggested that this is probably related to functional differentiation within the settlement area. Both building types have adjacent shallow storage or refuse pits. A wooden fence may have enclosed a courtyard in one part of the settlement. The original ground

▲ View of the site (Photograph by D. Grosman)

◄ View of the site in September 2003 and its ideal reconstruction

or utilisation surfaces are not generally extant, neither are the remains of the building superstructures. This means that inferences about the appearance are very limited due to the lack of closed collapse and rubble contexts containing finds. The extant "negative" structures permit the following hypotheses. The Three large buildings with foundations (Nos. 1–3, characteristic size c. 20 x 15 m) can be interpreted either as the cores of basic family residential/economic units with associated smaller wooden outbuildings and manipulation space



Part of the excavated architectural remains (DFG Consulting, M. Erič)

or farmyards, or as functionally different buildings within a unitary country estate. It is posited that the external walls of the houses and the internal dividing walls were of horizontally mounted timber that could also have supported the roof structures.

The date and position of the two fibulae from the centre of building no. 1 confirm the two-phase development of the structure. The earlier phase is dated on the basis of a two-button Noric-Pannonian fibula to the end of the 1st and partly the 2nd century AD, while the second phase is dated by a coin of Antoninus Pius (minted after 141 AD) and an Almgren type 84 fibula to the middle or second half of the 2nd century AD, or perhaps to the beginning of the 3rd century AD.

Structure no. 4 stands out from the rest of the structures (1–3), due to its size and internal structure. It is located to the east of building no. 1, on the southern edge of the cemetery and the waterlogged area, which extends in the direction of the present pool. It has an almost square ground plan (11.70 x 11.35 m) with two internal dividing walls aligned in an east-west direction. The interior

Bronze brooch, 2nd–3rd century AD (Photograph by B. Vičič)

contained four fairly large pits (up to 2 m long) by the northern and southern walls. The pits were filled with mortar and stone (finds: pottery and an iron carpenter's axe). It is suggested that these were plinths for some form of craft production, if it was an out-building, or pedestal bases for free-standing stone monuments, if it was a building for cult practices.

All the graves in the small cemetery to the north of building no. 4 were cremations. The most elaborate grave was a circular, domed tomb. Such tombs are char-

Circular, domed tomb – later phase, 2nd–3rd century (Photograph by M. Brenk)

acteristic of the Dolenjska region, the example from this site being the most western example. There are no finds from the period of the tomb construction, but the grave goods from the later phase (a flask, two Almgren type 84 fibulae and a bronze *as* of Hadrian, struck between AD 117 and AD 138) are dated to the second half of the 2nd or beginning of the 3rd century AD. The rest of the graves are modest: two are square, stone-built with a ledge for grave goods, two are simple pits cut into the clay. The grave goods have not survived, but all the graves contained cremated remains.

Bronze brooch, 2nd–3rd century (Photograph by B. Vičič)

The excavated structures are part of an extended settlement or estate from the end of the 1st, 2nd and beginning of the 3rd century AD. The settlement was clearly bounded on the west and east inside the excavated area and undoubtedly extended outside the area to the north and south. The pottery finds indicate an entirely indigenous population structure, steeped in the Celtic tradition. The settlement was locat-

ed away from the *Emona–Siscia* state road and dominated an agricultural settlement zone in the area between places that are known by name in the written sources, i.e. *Acervo* (site in the area of present-day Stična, which is not yet not precisely located) and *Praetorium Latobicorum* (Trebnje). A local road probably branched off somewhere near Šentvid in the direction of Sele pri Dobu (a Roman building with an iron foundry and a smithy was excavated here prior to motorway construction), going towards Zagorica and then running on towards Medvedjek, the site of a known Roman cemetery. The area seems to have been fairly densely occupied, because Roman finds are by no means rare. The area belonged in an administrative sense to the territory (*ager*) of the town of *Municipium Flavium Latobicorum Neviodunum* (modern Drnovo near Krško), one of four Roman towns in the area of modern Slovenia. The ager extended from Višnja Gora in the west to the river Sava in the north and the region of Bela Krajina in the south. It formed part of the province of *Pannonia*. It was settled by the romanized Celtic Latobici tribe. The initial analysis of the finds suggests that the settlement was founded during the creation of a municipia out of the Latobici tribal territory, and the administrative reorganisation of their peregrine community into a civic community with its centre in Neviodunum in the second half of the 1st century AD. The conditions on the site suggest that the area was not deliberately destroyed, but was abandoned. The reasons for this could have been economic and political (e.g. an economic breakdown or social differentiation), demographic (possibly epidemic diseases, similar to those that devastated the area in the middle of the 2nd century and later), or even environmental. The latter may be supported by evidence from several sites in Slovenia that show a change in hydrological or local climatic conditions.

BORIS VIČIČ *and* BOŽIDAR SLAPŠAK

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Roman Military Brickyard

IRN 10406	Vransko – Na Ilovici Roman brickyard
Location	Vransko
Site type	Roman brickyard
Excavated area	2,400 m²
Date	1st–3rd century AD
Period	Roman
Excavation director	Irena Lazar
Date of excavation	1995

The remains of a Roman brickyard were discovered and excavated in 1995 on the route of the Arja Vas–Vransko motorway section. The site is located on the Ilovca field beside the Bolska stream in the immediate vicinity of the village of Vransko.

Two brick kilns were located in the central part of the complex, the one on the left being better preserved. The kilns comprised two access chambers and kiln ducts, as well as two of five vaults in the firing chamber, although the kiln grates and the oven superstructures were not extant. The oven remains lay at a shallow depth beneath the field surface, which led to the destruction of the grates and domes by ploughing. The kilns were identical to each other in ground plan and method of construction. The access chamber that served for the storage of fuel, stoking and clearing the ashes was circular in plan with a beaten clay floor. The fireplace or heating conduit where the fire was laid was located behind it. It was built of brick with a roof tile (tegula) paved floor. The conduit broadened into the central part of the kiln. This was the firing chamber, which was divided into two parts by a firing grate. Unfired bricks were laid on the grate, which was supported by brick vaults. The apertures in the grate facilitated the circulation of hot air between the lower

▲ View of the excavated part of the site (Photograph by D. Snoj)

◄ View of the site in September 2003 and its ideal reconstruction

and upper parts and even firing inside the kiln. The kilns were built within a rectangular building with 1 m thick mortared limestone quarry stone and river cobble walls. The corners were strengthened with unusual circular structures, the function of which is still unknown.

A ditch that served as a waste pit was located to the north of the kilns. It contained the remains of damaged and discarded brick of various types. A 30-metre long building was erected to the east of the kilns, probably a warehouse for the products. Workshops and residential

The brick-kiln (Photograph by T. Lauko)

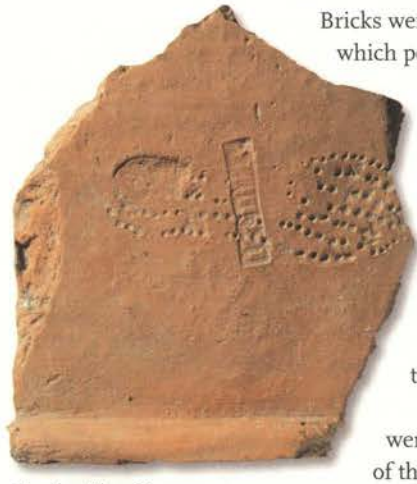
premises were located to the west of the kilns. These were almost entirely destroyed by the flooding of the Bolska stream.

The architectural remains and the archaeological finds indicate that a large Roman brickyard (Lat. *figlina, officina*) operated at Ilovica near Vransko. The brickyard location was carefully selected. Sufficient raw materials, clay, water and timber, were available in the immediate vicinity. The *Emona–Celeia* state road ran past the kiln, facilitating the speedy transportation and distribution of products.

The operation of the brickyard was accompanied by several processes that facilitated regular production. Clay had to be dug, transported to the brickyard and prepared for use. Most Roman pottery workshops and brickyards had clay pits in their immediate vicinity, as was the case at Ilovica. The clay was left to settle before manufacture, exposed to the weather. It was occasionally turned and mixed to make it more workable. This stage was followed by more careful treatment. The clay was cleaned of impurities by mixing it with water and letting it stand. Larger particles gradually settled on the base, while lighter particles floated to the surface where they were removed. When the clay was sufficiently cleaned, the water was left to evaporate. A longer separa-

tion process was required for finer pottery clay, a shorter process with less purified clay was required for coarse pottery and bricks.

The addition of various tempers followed, e.g. sand for harder products. The process probably took place on larger stone surfaces, where the clay was kneaded by foot. The clay prepared in this way was subsequently stored. The final phase of treatment took place directly before manufacture when the clay was kneaded again and softened to make it ready for use.



Tegula with military footwear sole print (Photograph by T. Lauko)

Bricks were made with the aid of wooden frames, which permitted the simultaneous production of more bricks. A kind of mould was used for the manufacture of tegula so as to create the characteristic lip of these typically Roman roof tiles. The varied brick fragments discovered at Ilovica indicate that bricks of various types for different purposes were manufactured there: roof tiles, floor tiles, bricks for central heating, building bricks and wall tiles, vault bricks, etc.

The bricks discovered in the brickyard were stamped with various forms of the seal of the II. Italica legion (LEG II ITA, LEG II ITAL-PATR. LEGII ITA/AVSPICATVS), as well as with the seals of REGANO and PARATI.

Roman legions and other military units had already operated their own brickyards from the Augustan period onwards. The first appearance of product stamping occurred in the middle of the 1st century AD, the period of Emperor Claudius (41–54 AD). Private manufacturers stamped the name of the workshop proprietor, while the army used that of the legion, unit, or occasionally the name of the soldier who manufactured the bricks.

Stamping was probably proof of a certain quality. It has even been suggested that stamped bricks from military workshops were exempted from customs duty or taxes. Some researchers today believe that stamping was simply a means of protection against stealing from open military warehouses. The production of military brickyards was intended primarily for the construction of military and imperial buildings and occasionally the buildings of provincial administrators.

Tegula with legion stamp (Photograph by T. Lauko)

The stamps used for marking the products have rarely survived. They were usually made of wood, but some were even manufactured of clay, iron, bronze or lead. They were often elongated rectangular in form,

while some had the form of a plaque with wings for attachment (*tabulae ansatae*).

In addition to stamped bricks, bricks with animal impressions are also interesting finds. The bricks were first dried in the open air or in covered sheds and only subsequently fired. During the drying process, various domestic or even wild animals accidentally walked over the bricks, probably at night.

A brooch in the shape of a sea monster
(Photograph by T. Lauko)

Imprints of cat paws, dog paws as well as an impression of a goat or a roe deer hoof were discovered on the fragments from Ilovica. Special attention must also be paid to a tegula stamped with the legion stamp LEG II ITA and an imprint of a sole studded with round hobnails, probably of military footwear.

The finds indicate that the brickyard (Lat. *figlina, officina*) operated for around one hundred years, from the end of the 1st to the end of the 2nd century. Half of the coins discovered on the site dated to the second half of the 2nd century. These were coins of the Emperor Antonius Pius (AD 138– AD 161) and Marcus Aurelius (AD 161– AD 180), as well as those of Faustina II., the wife of Marcus Aurelius, which confirms the supposition that the second half of the 2nd century was the heyday of the brickyard. The II Italica legion was stationed in Ločica near Polzela at this time (probably between AD 168 and AD 172) and it is likely that the operation of the brickyard in Ilovica can be linked with this historical event.

Reconstruction of a bronze purse

The safety of the Roman Empire was threatened in the middle of the 2nd century by incursions of Germanic tribes who lived across the river Danube. the Emperor Marcus Aurelius moved the II Italica legion from the Danube border to the newly established fort in Ločica after a major invasion in about AD168,. Their task was to defend the passage over Trojane (*Atrans*) to Italy. Simultaneously, a special military area was established, including the area of *Emona* (modern Ljubljana) and *Celeia* (modern Celje), to defend the so-called Illyrian-Italic gate on the route from the Balkans to Italy.

The existence and operation of the brickyard in Ilovica can be linked with the Roman military presence and the construction of the fort at Ločica. The brief period when the new fort was built and occupied by the II Italica legion was the period of most intense activity in the brickyard. With the transfer of the legion to the Danube, first to Albing and subsequently to *Lauriacum* (modern Enns, Austria), the economic position of the brickyard changed substantially. The Ločica fort was abandoned or demolished and the army, the main customer of the brickyard at Ilovica, moved away. It is possible that the brickyard ceased production immediately after the army withdrew, but it is more likely that production decreased

Silver coin of
Antoninus Pius
(Photograph by T. Lauko)

substantially until the workshop was finally abandoned in the first half of the 3rd century.

IRENA LAZAR

Bronze coin of
Marcus Aurelius
(Photograph by T. Lauko)

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Early Slavic Pit-dwelling Settlement

IRN 15512	Murska Sobota – Nova Tabla archaeological site
Location	Murska Sobota
Site type	Settlement
Excavated area	366,000 m²
Date	4000 BC–800 AD
Period	Neolithic to Early Middle Ages
Excavation director	Mitja Guštin
Date of excavation	1999–2003

The site at Nova Tabla is located to the south of Murska Sobota in an intensively cultivated area damaged by a flooded gravel pit. The fields around the artificial lake, ploughed to a depth of 30 cm, are located by a former river bank. The gravel of the river bank extends into the ploughsoil in some places, while in others it is hidden deep beneath the surface. The geological layers at the site occur in the following stratigraphic order: river gravel, yellow or reddish clay, dark grey clay layer, yellow or brown sandy loess in some places and dark brown ploughsoil on the top. The gently rolling plain that is now divided by the motorway is aptly named Ravninsko (Lowland), the term being applied to this part of Prekmurje.

The Dobel stream wound its way through the Nova Tabla area as late as the Holocene, whilst a now defunct tributary flowed to the north of it. Settlement was focused on the banks of both streams as early as the Neolithic period and continued through the Bronze and Iron Ages, during the Roman occupation and into the Early Middle Ages. The remains of an extensive Early Medieval settlement were the most important discovery during archaeological excavation at Nova Tabla. These remains bear witness to Slavic settlement between the end of the 6th and the 9th century. Structures that can be attributed to the first settlement wave of Slavic immigrants up to the middle of the 7th century are particularly common. They comprised the core of the settlement that subsequently expanded to the west. Only the structural remains that survived beneath the ploughsoil are available for its reconstruction. The original ground

▲ View of the site (Photograph by M. Guštin)

◄ View of the site in September 2003 and its ideal reconstruction

surface of the settlement has been destroyed by deep ploughing, but the lower part of the pit dwellings, postholes and storage pits survive, because they were cut deep into the subsoil.

A group of three pit dwellings and two pits was selected to illustrate life in an early Slavic settlement, located in the shelter of an oak wood close to the Dobel stream. They were cut into the area with soft and sandy yellow loess, which differs considerably from the clay or gravel subsoil in the immediate vicinity. Black outlines

Plan of the excavated settlement remains from the Early Middle Ages

of pits with charcoal-rich soil fills were clearly visible after the removal of the ploughsoil. Numerous grey and yellowish red burnt stones were discovered in them. The pit dwellings had characteristic oval pit ground plans, 5–6 m long and 2.5–3 m wide. Their surviving depths vary, ranging from 0.15 m to 0.50 m and sometimes even more than 1 m.

The structures had no extant special building and structural elements, with the exception of one pit dwelling. A semi-circular niche-like extension containing a hearth at its base was discovered by the north-eastern wall of this pit dwelling. It was made of a layer of fist-size cobbles, covered by a layer of burnt red clay. A charcoal-filled pit was found in front of the hearth inside the pit dwelling. It was probably intended for removing the ash from the hearth.

Jar
(Photograph by T. Lauko)

Pit dwellings were very common in the first millennium AD, particularly in barbarian Europe. They were used as dwellings and for storage, as well as workshops. They consisted of a sunken pit and postholes, which supported the roof structure.

The walls were made of wattle and daub. The ridged roofs that generally reached the ground were thatched with reed or straw. Various types of pit dwellings are known from Slavic settlements. They may have square, rectangle, oval, round or irregular plans.

The shape of the pits from Nova Tabla, as well as those from Spodnje Hoče near Maribor, indicate that they belong to the oval type of pit dwellings. They were common mainly in the north-western parts of the Slavic territory and appeared in the earliest period, in the sec-

A pit dwelling under excavation (Photograph by M. Guštin)

ond half of the 6th and during the 7th century. An open hearth was one of their characteristic features. These pit dwellings had no supporting roof structures sunk in earth, which is otherwise self-evident in pit dwellings and is indicated by numerous postholes. However, it is posited that these pit dwellings had a light tent-shaped roof made of reed set on a framework of light poles stuck into the ground around the sunken pit.

The earliest Slavic pottery at the Nova Tabla site consists of numerous wide-bodied jars and round raised-edged platters or baking trays. Other vessels were probably made of wood, leather or dried gourds and have not survived. The excavated finds include some iron artefacts: knives, scissors and an arrowhead, as well as some tiny glass beads. Some clay spindlewhorls that were used as weights for spinning were also found.

Platter
(Photograph by T. Lauko)

The rare remains of animal bones belonged mostly to domestic animals: pigs, cattle, aurochs and sheep or goat. Two cattle bone fragments indicate

that cattle size was on average the same as that of Roman cattle and larger than the Early Medieval cattle known from contemporary sites. Traces of chopping and cutting are discernible on the bones.

Several factors bear witness to the Slavic ethnicity of the Early Medieval inhabitants of the settlement at Nova Tabla near Murska Sobota: the location of the settlement in a lowland area beside a stream; a series of characteristic residential structures and outbuildings – pit dwellings without posts, with hearths located in niches;

The three phases of excavation of the pit dwelling with hearth– SZ 2 (Photograph by M. Guštin)

characteristic hand-made, porous, undecorated pottery, above all jars and baking trays; the early date of the finds to the end of the 6th or 7th century. This is based largely on analogies with pottery from Slovakia and the absolute dating of the settlement structures by radiocarbon (C^{14}) analysis.

MITJA GUŠTIN, TIMOTEJ KNIFIC

Reconstruction of part of the Slavic settlement at Nova Tabla near Murska Sobota, from the occupation period c. 600 AD (Photograph by K. Stare)

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Catalogue of Archaeological Sites

Discovered and excavated during motorway construction in Slovenia between 1994 and 2003

Ten years of intense co-operation of the heritage protection service and other archaeological institutions in the motorway construction project in Slovenia have yielded 94 new archaeological sites, discovered or recorded. Regrettably it was not possible to avoid damaging or partially destroying 6 previously recorded archaeological sites in the process of locating motorway sections in space. The interests of archaeological heritage protection have been successfully implemented by the Ministry of Culture's Cultural Heritage Office in the planning process, which has been and is still managed by the Ministry of the Environment, Space and Energy, Spatial Planning Office. The wide-reaching and persistent work of this specialist institution, the results of which are not unknown to the public, deserves extensive credit for preserving previously documented archaeological heritage and for establishing suitable conditions for rescuing the hithero unknown archaeological heritage. Special thanks are due to them for the work that they have accomplished.

The catalogue contains a brief description of all the (100) excavated or recorded archaeological sites. The information column that presents each site begins with its name. This is followed by the registration number of each site (IRN) and its full name, under which it is entered in the Collective Heritage Register kept by the Ministry of Culture of the Republic of Slovenia. Detailed spatial coordinates are given for each site or area: the latitude (x), longitude (y) and altitude above sea level (z) of the excavated or surveyed part of each site, the name of the 1:5000 scale primary topographic map, where the site is located (TTN5), as well as the cadastral commune (C.C.) and cadastral plot numbers of the surveyed area. These are followed by data on the site type and the archaeological periods of the remains, found on the site, the method of discovery, name(s) of the site discoverer(s), discovery date and excavation date, the size of the excavated area and the location where the site archive (finds, samples and documentation) is currently kept. The accompanying graphic material is consistently limited to spatial data: views of excavated areas in aerial photographs at a scale of 1:5,000 (and only exceptionally to a scale of 1:10,000 on account of the size of the excavated area) and a typical artefact for each of the archaeological periods represented on the site.

The structure and contents of the information column are taken from the v50353-00 project documentation by J. Dular and S. Tecco Hvala, *Standardizacija podatkov za nepremičninsko arheološko dediščino [Standardisation of Data for Immoveable Archaeological Heritage]*, Ljubljana, 2002. The type names and periods of sites are based on internal reference material of the INDOK Centre of the Cultural Heritage Office of the Republic of Slovenia. Special thanks are due to Brigita Petek and Ksenija Kovačec Naglič for their aid in creation of the catalogue.

BOJAN DJURIĆ

Ajdovščina

IRN 15551	Ajdovščina – Na Gmajni archaeological site
Motorway section	HC Vipava–Selo
Geographical coordinates	x 414292 y 82956 z 108
Primary topographical map sheet TTN5	Ajdovščina
Cadastral register	c.c. Vipavski Križ, cadastral plot no. 1070/152
Site type	Aquileia–Emona road
Period	Roman
Method of discovery	Watching brief
Fieldwork method and date	Excavation in 1997
Survey director	Nada Osmuk
Excavated area	8 m²
Site archive kept by	ZVKDS, Nova Gorica Regional Office

Section of the Roman road

A Roman road, via publica *Aquileia–Emona*, was cut during the construction of the Ajdovščina motorway junction to the west of Ajdovščina between the main road Ajdovščina–Nova Gorica and the motorway Razdrto–Nova Gorica. The characteristic slightly convex surface of the Roman road is bounded by a drainage ditch on each side. The road width is 4.2 m at this site. The highest point of the road is 0.4 m beneath the present ground surface. The road was also discovered beneath the route of the present dual carriage way (Ob Jevščku, Plot. Nos. 1024 & 1026 c.c. Vipavski Križ), which clearly established its route across the mountain pass to the east of Vipavski Križ.

NADA OSMUK

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Bela Cerkev – Pod Vovkom

IRN 15515 (1)	Bela Cerkev – Dolge Njive archaeological site
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 521904 y 80247 z 154
Primary topographical map sheet TTN5	Novo Mesto 20
Cadastral register	c.c. Bela Cerkev, cadastral plot nos. 2643/1, 2644 & 2647
Site type	Building
Period	Early Iron Age
Method and date of discovery, site discovered by	Archaeological survey 2000–2001, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Borut Križ
Excavated area	5,000 m²
Site archive kept by	Dolenjski muzej Novo Mesto

The archaeological site is located on the edge of the river Krka flood plain directly below the village of Bela Cerkev. Stone flakes and tools deposited by the river Krka from an unknown site located higher up the river were discovered all over the entire site.

The most important part of the archaeological remains is located 160–200 cm beneath the modern ground surface. A considerable amount of daub and prehistoric potsherds was discovered at this level, as well as a 16-m-long stone setting, which represented a house foundation wall. Numerous daub fragments with wattle imprints, animal bones and potsherds lay alongside the wall. The building was destroyed by fire. A further, circular building (3.80 m in

Early Iron Age
bronze brooch

La Tène glass bracelet fragment

Medieval glass bead

diameter) was located in the vicinity. The presence of daub fragments and intensive burning indicate that it was a timber house with wattle and daub walls.

In addition to some postholes for vertical posts, two stone-paved surfaces were also discovered. The context and date of these structures has not yet been determined.

A bronze pin, a band fibula and a Certosa fibula from the destroyed building foundations date them to the Early Iron Age and the final phase of the Bronze Age. Lowland settlement is rare in this period and had not yet been found so far, although its existence seemed possible. Early Iron Age lowland settlement is a novelty in the region of Dolenjska, where only hillforts were known, with the exception of the defended enclosure at Straža. Such settlement has been confirmed in Bela Cerkev for the first time.

BORUT KRIŽ

Eneolithic stone tools and flakes

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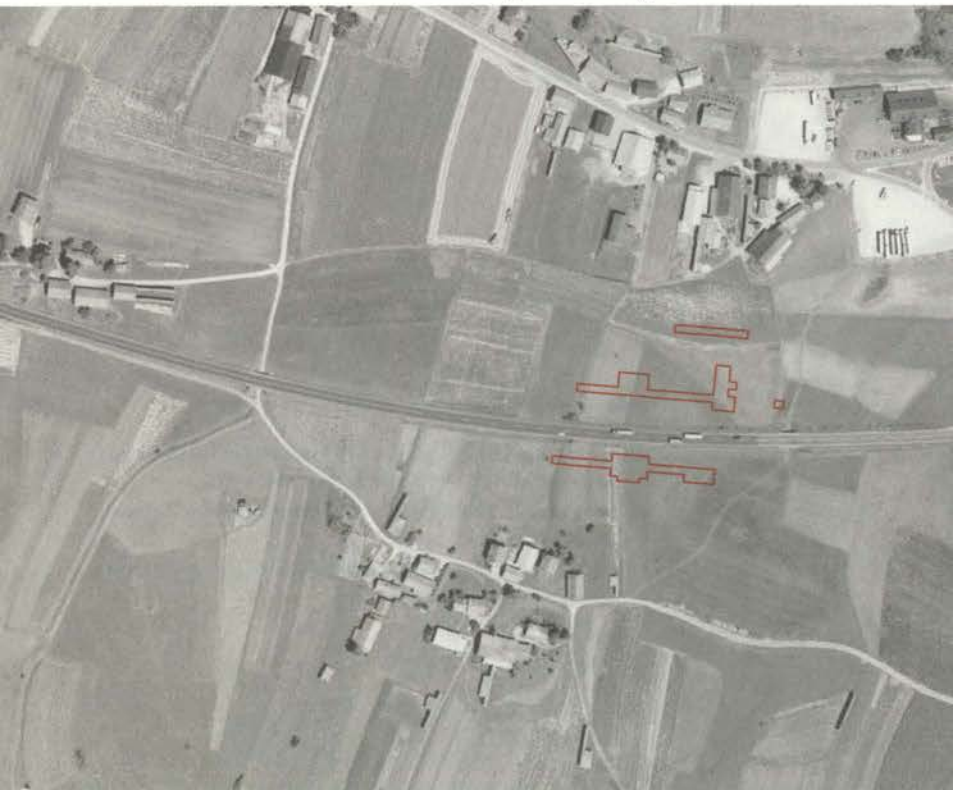
Bič

IRN 15543	Pristavica pri Velikem Gabru – Pule archaeological site
Motorway section	KO 14 Bič–Trebnje
Geographical coordinates	x 491364 y 86658 z 305
Primary topographical map sheet TTN5	Višnja Gora 47
Cadastral register	C.C. Zagorica (TR), cadastral plot nos. 562/1, 2, 4, 5, 6, 7, 569/2, 571/1, 2, 3, 632/1 & 633/1
Site type	Settlement, refuse pit
Period	Prehistory, Roman, Middle Ages
Method and date of discovery, site discovered by	Archaeological survey 2001, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Gojko Tica
Excavated area	2,000 m²
Site Archive kept by	Akord, d.o.o.

Prehistoric potsherds

Archaeological excavation was undertaken on both sides of the present Ljubljana–Zagreb highway between the hamlets of Dobravica and Pristavica near Veliki Gaber. The area was divided into Sector no. 1 to the south and Sector no. 2 to the north of the road. Several smaller, shallow pits without finds were excavated in Sector no. 1. The two small hearths and an old ground surface in both sectors were undoubtedly of prehistoric origin. The material is still being processed, which makes more accurate dating impossible at the present time. It can be approximately classified as originating from the Late Bronze Age or Early Iron Age.

Layers and structures from the Late Middle Ages and the beginning of the Modern period were excavated in Sector no. 2. Two structures were most distinct: a 5.5 m long and 0.8 m wide group of rounded limestone rubble deposited in several layers. It was not possible to define the purpose of this structure; it could be the foundation of a timber house or remains of a plot boundary, which was also marked at



the same spot in the Franciscan cadastral register from the turn of the 18th century. A large pit was discovered to the immediate west of the structure. It was approximately. 1 m x 1 m in size and 0.15 in depth. The upper part contained sherds of medieval coarse ware, whilst the lower part was filled with a dark brown deposit with charcoal and occasional pottery fragment inclusions. The pit base was floored with closely fitting square limestone slabs. It was most probably used as a rubbish pit, where damaged or broken potsherds were dumped. A layer with a small iron knife and pottery that can be compared with the pottery from the pit was excavated around both structures. There were no Modern finds in this layer, which can thus be interpreted as evidence of intensive medieval or early modern use of space.

Medieval potsherds

The presence of numerous Roman finds on the site has remained unaccounted for. Over 100 fragments of Roman pottery were discovered in the upper, mixed layers, but no undamaged Roman layer was found beneath them. The finds can be interpreted as a result of post-depositional processes, the movement of material from an area of intact deposits (colluviation) or as a result of destruction of a shallow Roman layer in this area. Roman remains appeared directly beneath the circa 20 cm deep topsoil at the site of Zagorica, which is only a few hundred metres away. It may, thus, be suggested with some conviction that the Roman settlement remains in the excavated part of the site are entirely destroyed, as were those in the immediate vicinity.

GOJKO TICA

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Bohova 2

IRN 15539	Bohova – Za Vasjo archaeological site
Motorway section	HC Slivnica–BDC
Geographical coordinates	x 550980 y 152038 z 272
Primary topographical map sheet TTN5	Maribor 23
Cadastral register	C.C. Bohova, cadastral plot nos. 23, 36 & 165
Site type	Settlement (?)
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 1995, Bojan Djurić,
Surveyed area	420 m²
Site Archive kept by	SAAS

A considerable amount of potsherds was discovered during an extensive survey of the lowland area to the south-east of the village of Bohova, where the bed of a newly regulated stream was projected (the plan was subsequently changed). They are undoubtedly remnants of a Roman settlement. The site has not been excavated.

BOJAN DJURIĆ

- Roman pottery

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Bohova 3 – Pri Kapelici

IRN 15538	Razvanje – Pri Kapelici archaeological site
Motorway section	HC Slivnica–BDC
Geographical coordinates	x 550430 y 152300 z 272
Primary topographical map sheet TTN5	Maribor 23
Cadastral register	c.c. Razvanje, cadastral plot nos. 816/1, 816/4, 819/1, 819/4, 820/1, 820/4, 835/16 1132/1.
Site type	Villa rustica
Period	Roman
Method of discovery	Watching brief
Fieldwork method and date	Excavation in 1997
Excavation director	Mira Strmčnik Gulič
Excavated area	6,372 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The site is located on the western periphery of the Dravsko Polje plain and belongs to the series of Roman archaeological sites to the south of the river Drava in Maribor. The area that was attractive for settlement is bounded by the Slovenske Gorice hills in the north, by the north-eastern foothills of Pohorje in the south-west. The Dravsko Polje plain or the peripheral area of the Pannonian plain opens up in the south-east. A favourable location in the interface of three geologically and economically diverse areas facilitated settlement in almost all periods. The transitional nature of the Maribor area is also indicated in the direction of the *Celeia–Flavia Solva* road on the one side and *Poetovio–Virunum*

road on the other. The area was, thus, connected permanently with the town of Poetovio in Pannonia to the east and the norican town of Virunum in the west.

The Roman site with individual elements of prehistoric and early medieval settlement indicates rather damaged remains of a economic/residential complex – *villa rustica*, one of the Roman villas (in Bohova, Betnava and Hoče) at the foot of Pohorje, which complements their spatial and chronological position.

Cup with incised inscription (beginning of 2nd century AD)

Two construction phases are discernible in the site and were confirmed by the stratigraphy. The first one is rather early and is approximately dated to the 1st century AD (a well, hearth and modest remains beneath the paving). After the destruction of the first phase settlement, the terrain was levelled or rather paved with smaller river cobbles. This phase is chracterised by traces of wooden and stone-built structures, as well as by an evenly distributed occupation layer. The second phase is defined as dating to the period between the 2nd and 4th century AD on the basis of small finds. However, it is not clear whether the settlement was of equal intensity throughout, or whether it was more intensive only in the 2nd and 3rd century.

MIRA STRMČNIK GULIČ

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Boško near Stepani

IRN 15529	Gabrovica pri Črnem Kalu – Boško archaeological site
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	x 411080 y 46197 z 200
Primary topographical map sheet TTN5	Kozina 21
Cadastral register	c.c. Rožar, cadastral plot nos. 1401 & 1406
Site type	Building
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 2000, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation in 2001
Excavation director	Gojko Tica
Excavated area	600 m²
Site Archive kept by	Akord, d.o.o.

The remains of a Roman building with three rooms were excavated at a location to the north-east of the hamlet of Stepani in the area with the toponym Boško (It.: Bosco). The building was located on a saddle between the hills of Na Vrhu and Škrljevica, commanding a fine view of the valley of Osapska Dolina. There is also a good visual connection with Tinjan on the one side and Rožar, as well as the Kraški rob (Karst edge) on the other. The finds indicate that it was probably built in the 1st century AD.

The foundations of the three-room building were built simultaneously in the dry-wall technique. Most probably it had timber walls and a compacted earth floor. It was covered by a roof consisting of tegula and

imbrex tile. Some tegulae were stamped TULIÆ A.F. CRISPINÆ with the abbreviation T.A.F.C. in the rectangle in the middle. The stamps date from the 1st century AD and are connected with the ager of Trieste.

The eastern part of the building had a projecting timber roof covered with tegulae on the external eastern side, as well as a hearth in the room. Two pits, cut into the bedrock, were discovered in the western room. It is assumed that the room served as a storage space during the first construction phase. Some changes took place in the building, presumably in the 1st century, without any substantial transformation to its plan.

Small amphora-shaped lead weight

The building at Boško was undoubtedly a residential structure, in which the eastern room was a sitting-room, the central one probably served as a bedroom and the western one as a pantry. The small finds largely comprised fine pottery table ware and drinking vessels, primarily jugs. Several bronze vessels were also discovered. There were numerous fragments of amphorae, glass vessels, metal artefacts, tools, weaponry, dress fittings, toilette and even medical instruments, bronze hooks, stone weights and an amphora-shaped lead weight. There was little coarse pottery.

The excavated building was probably not the only one in this area. There are namely several artificial terraces in its vicinity, on which architectural remnants can be expected. The building was probably also connected with the at least partly contemporary site of Na Vrhu, only a few metres away. However, the location of the building on the very windy northern slope of the hill is rather unusual since the wind blows from the hill of Na Vrhu as far as Tinjan. On account of its location, easy access from Osp on the northern side and southern access from the valley of Rižana past Stepani, the building(s) on the site of Boško can be understood as a control point.

GOJKO TICA

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Brgod near Petrinje

IRN 15530	Petrinje – Brgod prehistoric settlement
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	x 414997 y 49262 z 420
Primary topographical map sheet TTN5	Kozina 13
Cadastral register	c.c. Ocizla, cadastral plot nos. 2036 & 2398/9
Site type	Settlement
Period	Bronze Age
Method of discovery	Watching brief
Fieldwork method and date	Excavation in 2002
Excavation director	Alma Bavdek
Excavated area	104 m²
Site archive kept by	Notranjski muzej Postojna

Brgod is the toponym of a limestone hill located at the edge of the Petrinjski Kras 3 km away from the so-called Kraški rob (Karst edge), where the classic Karst region terminates in sheer limestone cliffs. The Kraški rob is a natural barrier, several kilometres in length, on the way to the sea. The passage over it to the sea coast was only possible along narrow corridors. Brgod has a tongue-shaped configuration and extends in a north-south direction. The village of Petrinje is located against the slope of the highest part of the hill (447 m above sea level). The lower part of the hill extends to the north in the direction of the village of Ocizla.

Limestone layers meet flysch layers at the eastern foot of Brgod in the valley of Smelavc, as well as on the western foot on the Kraje common. A stream runs along the valley of Smelavc flowing into the main Glinščica stream. The broader area of Brgod and Ocizla is also rich in water, always a precious resource in the Karst region, due to the interchange of flysch layers and limestone thrust scales.

The route of the Klanec–Ankaran motorway intersects the northern part of Brgod. Fragments of prehistoric pottery were discovered on a part of the route after the removal of the topsoil at the beginning of the construction works in 2001. A preventive archaeological intervention was performed as part of the watching brief on the area in question. A larger amount of broken potsherds was discovered as well as some bone and quartz flakes, fragments and cores. Apart from that, only the limestone bedrock without any other elements giving evidence of a permanent settlement was recorded.

Fragmentary Bronze Age bowl

Five trial trenches were dug in Brgod outside the route on undamaged terrain in 2002. The discovered artefacts – fragments of ceramic pottery, bone, teeth, quartz flakes and cores – were mostly located between the limestone layers or in the areas with preserved topsoil. Again no traces of built structures were discovered during the investigation.

The finds, primarily pottery, can be defined as originating from the Bronze Age and consequently Brgod is determined as a site with traces of settlement.

ALMA BAVDEK

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Brgodec

IRN 15550	Klanec near Kozina – Brgodec archaeological site
Motorway section	SK 19 Kozina–Klanec
Geographical coordinates	x 416862 y 49870 z 467 m
Primary topographical map sheet TTN5	Kozina 14
Cadastral register	c.c. Ocizla, cadastral plot no. 3592/1
Site type	Building
Period	Bronze Age
ethod and date of discovery, site discovered by	Archaeological survey 1998, Bojan Djurić and Ildikó Pintér,
Fieldwork method and date	Excavation 1999
Excavation directors	Bojan Djurić and Tina Žerjal
Excavated area	120 m²
Site archive kept by	SAAS

A large stone cairn, the last remnants of a Bronze Age structure, was excavated on a 467 m high ridge between the village of Klanec and the hamlet of Brgod, which lies directly above the Kozina–Koper main road. Its northern side was investigated. It was located on a narrow limestone crest with steep slopes running in a north-south direction. The toponym of the crest is Hrib above Frnaža or Brgodec, while it is registered in the Franciscan cadastral register under the name of Na Brgozi.

Two drystone walls that made up the north-eastern corner of the structure on the ridge were discovered in the northern part of the excavation area. Badly preserved lines of larger stones that followed the periphery of the stepped bedrock were revealed along the sides. The limestone bedrock was most probably used as the floor and its irregularities were filled with rubble. Thus the structure adapted to the form of the besrock rose in two levels toward the crest of the ridge. The area was perhaps covered or surmounted by a wooden structure indicated by a rock-cut posthole with two supporting stones on the inner side of the northern wall. Fragmentary pottery finds only permit a general date to the Bronze Age.

Due to the badly preserved state of the finds and their modesty, the function of the stucture is hard to define, yet it may be associated with its dominant position in the landscape. A flysch valley with one of the two springs of the Glinščica stream extends beneath the crest to the west, whilst the hills of Slavniško Pogorje begin above a small valley to the east. The area is an interface of limestone and flysch. The Glinščica flows further along the gorge beneath Mihele and across the border towards Botač and Boljunec into the Gulf of Trieste. The valley of Glinščica has always been a natural link between the plain and the sea, despite being very narrow and passable with difficulty.

In the Middle Ages, one of the main roads connecting the interior with Istria ran through Klanec, leading from Divača through Kačiče to Kozina where the dominion of the Diocese of Trieste began. This was followed by the slope to Klanec, where a Trieste toll-house was located and where direct access to various Venetian towns began. The main road to Koper led through the Podgorski Kras and Črni Kal to the valley of Rižana. Undoubtedly, the road to Prešnica, Podgorje and further to the region of Čičarija ran beneath Hrib to the south-east. The communication between Trieste (or Aquileia) and Tarsatika ran along the nearby Matarsko Podolje in the Roman period. It is not known how local roads in the area ran, but their course had undoubtedly not changed since prehistory due to the difficulty of the terrain (Kraški rob).

Handle and rim sherds of two Early Bronze Age vessels

Hrib above Frniža commands a fine view of both the fertile valleys beneath it. The western one is particularly significant since it contains a permanent spring of the stream and is the site of road communications.

At least one further anthropogenic stone structure (most probably a barrow) was established on the same ridge, confirming its significance in the area and thus the controlling and observation functions of the structure on the border between two geographically diverse regions.

TINA ŽERJAL

Cediljeki

IRN 15552	Spodnja Gorica – Cediljeki archaeological site
Motorway section	Pragersko by-pass
Geographical coordinates	x 552782 y 141052 z 249
Primary topographical map sheet TTN5	Ptuj 14
Cadastral register	c.c. Gorica, cadastral plot nos. 309/1, 2, 6, 313/1, 2, 316/1. 2, 317/1, 2, 322/1, 2, 324/1, 2, 261/1 & 262/3
Site type	Settlement
Period	Bronze Age, Roman period
ethod and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Marija Lubšina Tušek
Excavated area	4,150 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The archaeological site of Cediljeki is located on the Dravsko Polje plain to the north-west of the village of Stražgonjca between the Črnec stream (Framski Potok) and the low terrace of Gmajna behind the village of Spodnja Gorica.

The subsoil of the Bronze Age and Roman period site is the Pleistocene gravel and sand of the river Drava covered with the later alluvial sediments of numerous smaller streams and their tributaries with associated flood plains, which were often marshy.

Bronze Age lugged pottery vessel sherd

The material in the sediments was brought by streams from the north-western side, from beneath the Pohorje mountains, depositing sandy pebbles and gravel, while gravelly silt layers were deposited primarily in the flood plains and the associated

marshes. There used to be numerous natural streams in the area (with the joint name of Reka) that flooded larger areas. The present Črnec stream is more or less an artificial channel, very deep and functioning as a drainage channel. Reclamation was performed for the purpose of draining the area in the early 1980s, which entirely transformed the original natural geotope and biotope and badly damaged the archaeological site, located on a slightly elevated terrain between Črnec and the terrace edge.

The surface at the site consists of reclaimed fields. The stratigraphy of the site is fairly uniform. A 0.5 to 0.10 cm thick grey-brown occupation layer containing particles of burnt material and rare, mostly Roman pottery is still extant beneath the ploughsoil (up to 30 cm). There is a brown-yellow occupation layer containing fragments of prehistoric pottery beneath it, primarily in the central part of the site. Traces of post-holes of wooden structures of various sizes and pits are clearly visible in the subsoil. They contain rather low concentrations of Bronze Age and Roman potsherds.

Sherds of two Roman pottery vessels

MARIJA LUBŠINA TUŠEK

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Col

IRN 10599	Podgračeno – Settlement of Col
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 549805 y 81711 z 147
Primary topographical map sheet	TTN5 Samobor 13
Cadastral district	c.c. Velika Dolina, cadastral plot nos. 1128/2 & 1130/1
Site type	Settlement
Period	Neolithic and Late Bronze Age, Roman
Method and date of discovery, site discovered by	Archaeological survey 2000, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation, 2001–2002
Excavation director	Milena Horvat
Excavated area	2,400 m²
Site archive kept by	Faculty of Arts, Department of Archaeology, Ljubljana University

The site of Col is a multi-period site with intense occupation from the Middle Neolithic and Early Bronze Age. Artefacts from the Late Iron Age and the Roman period were also discovered in the plough soil. The site is located between the villages of Prilipe and Podgračeno in the extreme south of the extensive Krška Ravan plain on the edge of the great plain of Brežiško Polje. It is located on a morphologically prominent proluvial mound (circa 150 m wide) of the Veliki Drnovec stream, which extends above the Holocene flood plain of the river Sava. One of the paleochannels of the Sava, at present a stagnant oxbow, is located directly beneath the mound to the north of the settlement. With regard to natural conditions, the settlement location was very favourable and protected beneath the southern slope of Cirnik at the confluence of the stream with the river.

Traces of a Neolithic settlement on an area of 550 m² were discovered in the extreme eastern part of the 1,680 m² excavated area, but the full extent of the settlement was not established. However, excavation defined its eastern edge, whilst its southern border coincides with the edge of the Sava terrace.

Part of a Neolithic pottery vessel

The arrangement of building remains indicates that the settlement consisted of a group of structures with at least two buildings in each of them. The various sizes and shapes of buildings indicate their various functions. Two complete residential and economic units are confirmed, each of them having its own courtyard and organised entrance. The houses were located close together with narrow passages between them.

The excavated residential structure comprises two rooms (7.5 x 5.5 m) and has a separate entrance hallway or rather a projecting roof above the main entrance (3.30 x 2.10 m). The building was covered with a ridged roof. Since it is a larger building, the ridge beam rested on two lines of posts. The building is oriented in a south-west/north-west direction. The associated outbuilding was smaller in size (2.8 m) and located 5 m from the house. On the basis of numerous artefacts (flakes, cores and tools) discovered in it, the building can be associated with great certainty with stone tool manufacture.

Late Bronze Age cup rim

The buildings are post built. It has been established that the walls were built with posts filled with wattle and daub. It is estimated that the outbuilding was of an open type covered only with a protective roof supported by four posts. The assumption that this was not an isolated farmstead is confirmed by a pottery concentration discovered by the southern periphery of the excavation area, which indicates the existence of another dwelling and husbandry unit.

The excavated pottery can be classified on the basis of its form, decorative techniques (the incision technique: right incision, channelng; impressions: stabbing and fingertipping), typical motifs (oblique line groups) and their distribution over the entire surface of the necks and shoulders of vessels as dating to the Middle Neolithic period. The typologically definable stone tools belong to the Neolithic period, an estimate confirmed by the flaking technique. The lithic assemblage is dominated by cores as well as slightly utilised or unutilised flakes and tools. It is assumed on the basis of archaeological research and a geological survey of the immediate and nearby vicinity of the site that chert gathered in the area of the settlement or in its hinterland was utilised for stone tools.

Roman bronze clasp

The remains of two buildings from a Late Bronze Age settlement were discovered on the extreme northern edge of the excavation area. A hearth was found in one of them.

The artefacts discovered in the plough soil confirm the existence of a settlement in the La Tène and Roman periods. The discovery of Roman remains came as no surprise since a Roman house was destroyed in cadastral plot nos. 1129 and 1130 during the Ljubljana–Zagreb road construction in 1958.

MILENA HORVAT

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Čateški Grič

IRN 11434	Čatež ob Savi – Čateški Grič archaeological site
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 546560 y 83377 z 187
Primary topographical map sheet TTN5	Samobor 1
Cadastral register	C.C. Čatež, cadastral plot No. 71/6
Site type	Settlement
Period	Copper Age, Early Iron Age, Late Iron Age, Roman, Medieval
ieldwork method and date, excavation directors	Excavation 2000, Alenka Jovanović; excavation 2002, Mitja Guštin; excavation 2003, Uroš Bavec
Excavated area	84 m² + 158 m² + 250 m²
Site archive kept by	Posavski muzej Brežice, Faculty of Arts, Department of Archaeology, Ljubljana University

The site of Čateški Grič is located on a rocky outlier of the Gorjanci hills beneath the Šentviška gora hill above the confluence of the rivers Krka and Sava. Limestone ridges, oriented in a north-south direction, render the rolling shape of the hillside and determine the location of occupation layers.

Although Čateški Grič has been known as an archaeological site for quite some time, the first more extensive archaeological research was only undertaken during preliminary works for construction of the Krška Vas–Obrežje motorway section: extensive sub-surface survey in 1998, intensive sub-surface survey in 2000, microrelief and georadar survey, archaeological trial trenching (2 trial trenches: 3 x 13 m and 3 x 15 m), archaeological excavation of the lower part of the southern slope and additional archaeological excavation on the south-eastern slope.

Sub-surface surveys and trial trenching in 2000 revealed settlement and defensive remains on the hill from prehistoric periods (Eneolithic, Bronze Age, Early Iron Age, Late Iron Age), the Roman period and Middle Ages. Trench 1 established traces of levelling out of the terrain or a former compacted surface, as well as the remains of dry-stone structures and some rubble layers. The remains of a 5.5 m wide stone defensive wall were discovered in Trench 2, as well as those of an earthen rampart

La Tène inhumation grave

that had additionally strengthened the external front of the walls and a drystone structure, which divided the earthen rampart and a rectangular stone structure.

The 2002 excavations revealed building activity beneath the former prehistoric hillfort. Rubble layers dating to the late La Tène period in the 1st century BC were revealed in the eastern part of the excavated area between the natural ridges. The top of these layers was covered with stone rubble such as can be found for metalling slopes beneath hillfort ramparts at that time. A crouched inhumation burial without grave goods was discovered in the yellow natural layer and can be dated by radiocarbon analysis and on the basis of its position to the La Tène period. 10 m^2 of a levelled fill, the function and dating of which cannot be determined so far, were discovered in the western part of the excavated area.

A larger number of excavated stone artefacts are attributed to erosion from the top of the hillfort and probably date to the Neolithic period. The potsherds are very small and date to the Early and Late Iron Age, but some of them are Roman in date, most probably from the final decades of the 1st century BC.

Eneolithic pottery vessel fragment

A semi-circular stone structure interpreted as a component of the fortifications, located on the hill of Čateški Grič, was discovered on the upper edge of the western part of the area excavated in 2003. It was located on the

natural bedrock, which is distinctly raised at this point. A natural stone ridge with discernible traces of human activity (two slopes ending perpendicularly, probably as component parts of the hillfort) was discovered in the eastern part of the site. Additionally, a smaller hole with geological and anthropogenic fill layers was found in the upper part of the ridge.

MITJA GUŠTIN *and* SLOBODAN OLIĆ

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Čateški Grič – jug

IRN 11069	Drnovo – Neviodunum–Siscia Roman road
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 546530 y 83276 z 183
Primary topographical map sheet TTN5	Samobor 1
Cadastral register	c.c. Čatež, cadastral plot nos. 1882/2 & 1897
Site type	Via publica Siscia–Neviodunum, Čatež–Krška Vas road
Period	Roman, Modern
Method of discovery	Watching brief
Fieldwork method and date	Excavation 2003
Excavation directors	Uroš Bavec and Primož Predan
Excavated area	46 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

Road section

Two transverse trial trenches were excavated across the road during construction work in the area of the local Čatež–Krška Vas road that runs along the southern side of the main Ljubljana–Zagreb road. They revealed a series of road surfaces. The lowest road, defined as Roman, was built of fine sand with river cobbles over a base of large quarry stones. No drainage ditches were found on either side of the road, because the road edge was destroyed by subsequent interventions. The extant road width is 4.6 m. The subsequent road metalling (over 50 cm thick) was laid on the Roman surface.

PRIMOŽ PREDAN

Čatež – Sv. Jurij

IRN 15570	Čatež ob Savi – Sv. Jurij archaeological site
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 546926 y 83333 z 166
Primary topographical map sheet TTN5	Samobor 1
Cadastral register	C.C. Čatež, cadastral plot nos. 23/1, 70/4, 6 & 8
Site type	Settlement
Period	Prehistoric, Roman, Middle Ages
Method of discovery	Watching brief
Fieldwork method and date	Excavation 2003
Excavation director	Uroš Bavec
Excavated area	460 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

The archaeological site of Čatež is located to the south of Brežice, at the confluence of the rivers Sava and Krka, in a narrow zone between the Ljubljana–Zagreb regional road and the river Krka. Before the beginning of excavation, the site was damaged by a longitudinal machine trench, which cut the site into two rectangular areas. Archaeological structures from different periods were discovered in the fairly small excavation area.

Prehistoric pottery vessel fragment

Several medieval pits were cut into the subsoil at the northern edge of the excavation area. They contained medieval and Roman pottery, building material and animal bones. These were probably rubbish pits, perhaps connected with a structure, the foundation of which was investigated in the eastern part of the test trench. It was aligned in a north-south direction for a total length of 10 m. The foundation was built of large, roughly worked, unmortared ashlars. The wall was cut and destroyed along one third

of its length. The remains of a badly damaged paved or rubble surface were discovered beside the south-eastern part of the wall. The layer, cut by the foundation, contained largely Roman pottery, the origin of which is unfortunately unkown due to recent demolition work.

A significant and interesting result of the excavation is the discovery of the remains of a prehistoric structure in the central part of the excavation area. The structure was oriented in a north-west/south-east direction and survived in the form of postholes cut in an alluvial layer, the upper part of which contained a larger amount of burnt clay and prehistoric coarseware sherds. The postholes formed the plan of a rectangular wooden structure. The remains were badly damaged by the machine trench, which makes it impossible to define the complete plan.

Roman potsherd

The occupation layer contained burnt clay, several sherds of very coarse, porous, hand-made pottery, as well as some pottery vessel bases of indeterminate form.

SAŠA BUGAR

Čatež – Na Vrtih

IRN 15569	Čatež ob Savi – Na Vrtih archaeological site
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 547307 y 83230 z 147
Primary topographical map sheet TTN5	Samobor 2
Cadastral register	c.c. Čatež, cadastral plot nos. 52/7 & 1883/7
Site type	Road
Period	Modern
Method of discovery	Watching brief
Fieldwork method and date	Excavation 2002
Excavation director	Uroš Bavec
Excavated area	460 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

Excavated section of the metalled road leading to a ferry

Part of a highly compacted road of large river cobbles (mačje glave - cat's heads) was discovered to the north of the Ljubljana–Zagreb road embankment. The western edge of the road is covered by the present road, while the road turns sharply in the direction of the river Sava (ca. 85) to the east. A stone-built gutter is preserved beneath the roadway running in a north-south direction. It was made of larger limestone quarry stones. According to information from local people, the road ran to the ferry on the river Sava near Čatež.

UROŠ BAVEC

Dolenje Karteljevo

im 15558	Dolenje Karteljevo – Prehistoric settlement
Motorway section	KO 16 Hrastje–Kronovo
Geographical coordinates	x 510886 y 79982 z 235
Primary topographical map sheet TTN5	Novo Mesto 15
Cadastral register	C.C. Zagorica (NM) Plot nos. 924, 925, 926/2, 928/2, 935/1 & 936/1
Site type	Archaeological site
Period	Prehistoric
Method and date of discovery, site discovered by	Archaeological survey 2001, Ildikó Pintér and Bojan Djurić
Surveyed area	11,200 m²
Site archive kept by	SAAS

The site is located in the northern part of a karst valley with a dolina, directly beneath the Ljubljana–Zagreb road. It is defined by surface finds of prehistoric pottery.

BOJAN DJURIĆ

- Prehistoric pottery
- Roman pottery
- Burnt clay

Literature

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Dolenje Kronovo

IRN 15537	Dolenje Kronovo – archaeological site
Motorway section	KO 16 Hrastje–Kronovo
Geographical coordinates	X 519753 Y 79221 Z 165
Primary topographical map sheet TTN5	Novo Mesto 19
Cadastral register	C.C. Družinska Vas cadastral plot nos. 300/2, 301, 311 & 313/1
Site type	Archaeological site
Period	Prehistoric
thod and date of discovery, site discovered by	Archaeological survey 2001, Ildikó Pintér and Bojan Djurić
Surveyed area	2,800 m²
Site archive kept by	SAAS

The site is located at the foot of the northern slope of the small valley lying to the west of the Toplica stream. Fragments of prehistoric pottery indicate that these are remains of a settlement.

BOJAN DJURIĆ

■ Prehistoric pottery

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Dolge njive near Bela Cerkev

IRN 15515 (2)	Bela Cerkev – Dolge njive archaeological site
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 522130 y 80422 z 156
Primary topographical map sheet TTN5	Novo Mesto 20
Cadastral register	c.c. Bela Cerkev, cadastral plot nos. 2604, 2605/1, 2622, 2623, 2630/1, 2631 & 2973
Site type	Ritual platform, barrow cemetery, settlement, road
Period	*Bronze Age, Early Iron Age, Roman, Middle Ages*
Method and date of discovery, site discovered by	Archaeological survey 2000–2001, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Phil Mason
Excavated area	4,450 m²
Site archive kept by	ZVKDS, Novo mesto Regional Office

The site is located to the north of the present Ljubljana–Zagreb road. It is bounded by the high rocky cliffs below the village of Bela Cerkev in the west and the hill between Draga and Dolge Njive in the east.

The earliest phase of the site is represented by a paleochannel in the eastern part of the excavation area that runs from a presumed dried-up spring hollow, which is visible in the hill slope. Two separate palaeochannel phases are visible in the section of this feature. The earlier channel ran across the eastern part of the site, whilst the later channel shifted towards the centre of the site. Both palaeochannels were silted up and filled with colluvium by the Bronze Age.

A marshy depression, bounded by the slightly raised western and eastern banks of the former channel and divided by a low central ridge, remained in the centre of the site after the infilling of the palaeochannels. These natural structures were used for the construction of two stone platforms in the Late Bronze Age. The western platform was made up of large boulders and rocks, whilst the eastern platform was surfaced with stone chips and rubble, containing a large quantity of potsherds and burnt human bone fragments. A compacted path led from the western platform to the eastern one, whilst a second path branched off from the main one and led to the south. The Late Bronze Age structures were probably associated with a still undiscovered Late Bronze Age cemetery in the immediate vicinity.

Late Bronze Age flint tool

In the Early Iron Age 3 barrows were erected on the locations of the Late Bronze Age structures, which stood on slightly raised natural structures. The eastern barrow is bounded by large stones, which form a kerb. A disturbed inhumation grave, containing an iron spear and a pottery vessel, was excavated at this location. The central barrow was visible as a slightly raised earth structure with a partially damaged grave containing a disturbed inhumation, accompanied by pottery and two iron spears.

The western barrow was located to the south-east of the Late Bronze Age stone platform, where 6 graves with extant inhumations were excavated. The skeleton in Grave 1 was accompanied by three spindlewhorls, three pottery vessels, an amber bead necklace, a bronze boat fibula, an iron fibula and two metal bracelets. The skeleton in Grave 2 was accompanied by two bronze boat fibulae, an amber bead necklace, two bronze bracelets and a ringlet. Grave 3 was a double inhumation grave. The grave goods comprised five pottery vessels, a belt set of bronze ringlets and two iron knives. Grave 4 contained an inhumation with two iron spears. The inhumations in the latter two graves were only equipped with pottery vessels.

The next phase at the site is represented by the extreme western part of a Roman roadside settlement, which is centred on the Draga archaeological site. The remains of timber-built structures (postholes and beam slots) were discovered in the eastern part of the site. The structures were built on the slope erosion deposit at the foot of the eastern hill. A number of postholes, ditches and rubbish pits, containing a large amount of Roman pottery, roof tiles and other small finds, were investigated inside the structures. An oven, connected with the eastern structure, was also discovered. Another oven or hearth

Early Iron Age boat fibulae

of baked clay was connected with the postholes at the northern edge of the site. It was located in the central part of the excavated area.

Layers that may be associated with the same Roman settlement were excavated in the south-western part of the site. The layers came into existence at the foot of a slight rise, which was separated from the above-mentioned structures by a medieval field path. Part of the Roman layers was damaged by the cutting of the drainage ditch of the present main road. The three dark earth layers in these sectors contain burnt stone, animal bone, coarse ware sherds, fine table ware sherds (*terra sigillata*), amphorae and part of a bone comb. The dark earth layers could be derived from large quantities of organic midden material, or from the remains of turf and cob-built structures. Postholes, visible in the underlying layer, may be derived from such buildings. Initial estimates date the finds from the Roman phase to the 4th century AD.

Roman bronze key

The final phase is represented by the medieval use of the area. A field path was excavated in a shallow gully in the central part of the site. It was bounded by two parallel ditches. This was the main axis that divided the western and eastern parts the site. The main mediaeval and modern communications followed the road on the western edge of the excavated area. Its course is plotted in the Franciscan cadastral register. The stone and river cobble-surfaced road led from the village of Bela Cerkev along the eastern bank of the present stream to the river Krka. The construction of the modern main road interrupted this road, leading to its abandonment.

PHIL MASON

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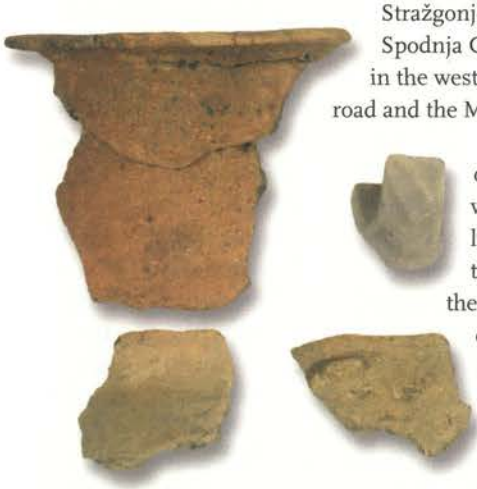
Dolge Njive near Šikole

IRN 15556	Stražgonjca – Dolge Njive archaeological site
Motorway section	Pragersko by-pass
Geographical coordinates	x 554133 y 140794 z 246
Primary topographical map sheet TTN5	Ptuj 15
Cadastral register	c.c. Stražgonjca, cadastral plot nos. 144/1, 5, 6, 148/2, 4, 150/8, 7, 14, 17, 157/3, 4, 158/3, 4, 164/1, 2, 165/1, 2, 167/1, 3, 177/1, 180/1, 2, 185/1, 2, 186/1, 2, 187/1, 2, 189/1, 2, 3, 168/2, 196/1, 2 & 197/1
Site type	Settlement
Period	Bronze Age, Early Iron Age, Roman
ethod and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Marija Lubšina Tušek
Excavated area	15,750 m²
Site archive kept by	ZVKDS, Maribor Regional Office



Prehistoric pottery fragments

The site is located to the east of the village of Stražgonjca. It is bounded by a local path from Spodnja Gorica to Šikole and the Lavše site in the west, as well as by the local Rače–Šikole road and the Med Cestami site in the east.

The subsoil on the site consists of Pleistocene Drava river gravel with lenses and layers of sand, partly mixed with clay. In some areas, these sediments lie directly beneath the ploughsoil, while in others they are covered with later stream deposits, mostly consisting of sand. This is the case in the extreme eastern part of the site, where the gravel point bar dips down to a depth of over 1.5 m beneath the modern ground surface. The edge of the point bar was formed anthropogenically, or rather it represents the edge of a prehistoric, Bronze

Age sunken feature. It was filled and covered by later alluvial layers, which lie directly beneath the ploughsoil. This took place through the processes of out-washing and re-sedimentation (moving the material from the immediate vicinity, also as a result of alluvial processes).

The stratigraphy is fairly uniform over the remaining surface area. The occupation layer survives to a depth of 15 to 20 cm, reaching 0.40 m, or in some places even dipping down to a depth of 0.5 m above the archaeologically sterile subsoil. The upper part is truncated and damaged by ploughing.

Traces of wooden architecture were clearly visible in the subsoil. These comprise the postholes of wooden houses and other smaller structures, as well as traces of hearths, which are dated on the basis of pottery concentrations to the Early Iron Age or Roman period.

Roman vessel fragment

Circular pits, 0.35 m in diameter and cut up to 3.20 m in depth into the gravel subsoil, have so far defied explanation. They were filled with dark brown loamy soil, containing fragments of burnt material and some pottery fragments. There were no discernible traces of wooden superstructures. The function of these structures that extend into the water table has so far remained unexplained.

MARIJA LUBŠINA TUŠEK

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Draga near Bela Cerkev

IRN 15516	Draga near Bela Cerkev – Draga archaeological site
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	X 522464 Y 80620 Z 157
Primary topographical map sheet TTN5	Novo Mesto 20
Cadastral register	C.C. Bela Cerkev, cadastral plot nos. 2369/1, 2535, 2536/1, 2, 2540/1, 2570, 2573 & 2973
Site type	Settlement with a mortuary site
Period	Neolithic, Roman, Middle Ages and Modern Age
Method and date of discovery, site discovered by	Archaeological survey 2000–2001, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2002–2003
Excavation director	Borut Križ, Primož Predan and Phil Mason
Excavated area	10,000 m²
Site archive kept by	Dolenjski muzej Novo mesto

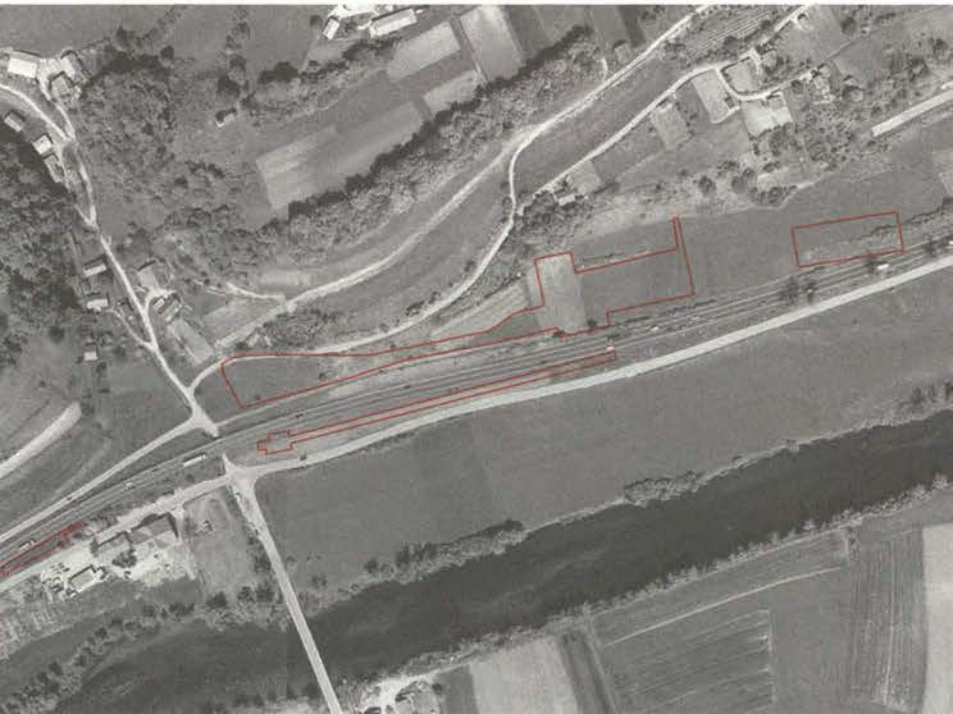
The site was partially discovered during the construction of the Ljubljana–Zagreb road in 1959. Some of the graves discovered at that time indicated occupation during the Roman period.

However, new excavations have revealed that the site was of a complex type, because the area had been relatively densely settled in the Neolithic period, the Bronze Age, the Iron Age, the Roman period and from the Middle Ages up to the present.

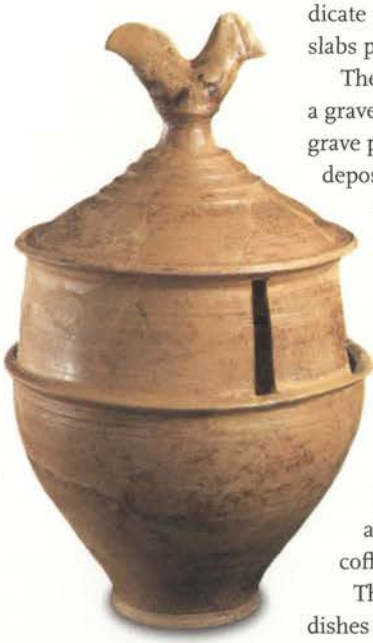
The sunny location of the slight rise above the flood plain of the river Krka and a small stream running into the Krka near Draga offered a favourable location for a settlement in the 5th millennium BC. Buildings remains, stone tools, stone flakes and pottery were discovered here.

Roman Bronze head of Mercury

A Roman settlement developed at the same location, centred on a solid two-phase building of mortared stone, which was roofed with tegulae and imbrex. It was located beside the important Roman *Emona–Siscia* road, while other buildings were located ca. 300 m to the east and west of this centre. Some were built of mortared stone, but construction was not as elaborate as it was in the central building. Most of the buildings were made of timber with upright beams supporting the roof. The



Broken Eneolithic stone axe



Roman house urn with cockerel on apex

small finds date the settlement to the period between the 1st and 4th century AD.

A small cemetery of 28 graves was located in the eastern part of the site. The graves were positioned around a central rectangular plot (8 x 6 m), bounded by larger limestone ashlar blocks (150 x 60 x 30 cm). They were laid on on a foundation wall. The ashlar blocks came from a small quarry at Nemška Vas near Trebnje. They were finished on site, where they were set up and bound with iron braces fixed into the stone with molten lead. The ashlared grooves on the top surface of the surviving grave plot indicate the existence of small upright columns with stone slabs positioned between them, which are not extant.

The 23 cremation graves included seven without a grave construction. Pottery urns were placed in the grave pits, or the burnt bone and charcoal were simply deposited at the bottom of the pit. There were nine rectangular graves, lined with stone slabs, Roman brick or wooden boards. Seven of the graves were circular domed tombs, built of mortared stone. The entrances had lintels and door-posts and were sealed by large stone slabs. Stone ledges for pottery urns, containing the cremated remains of the deceased, were built in their sides. These tombs contained multiple burials. The remains of the deceased were placed in large pottery dishes or house urns. There were also five inhumation graves with traces of wooden coffins, which date to the 3rd and 4th century AD.

The grave goods mostly consisted of pottery, the dishes and jars often being decorated. The pottery house urn was a characteristic grave good in the graves in this cemetery. 13 such urns were discovered, including three surmounted by a relief model of a cockerel. Burial took place in this cemetery between the 1st and 4th century AD.

BORUT KRIŽ

Medieval iron square-cross-section arrowhead

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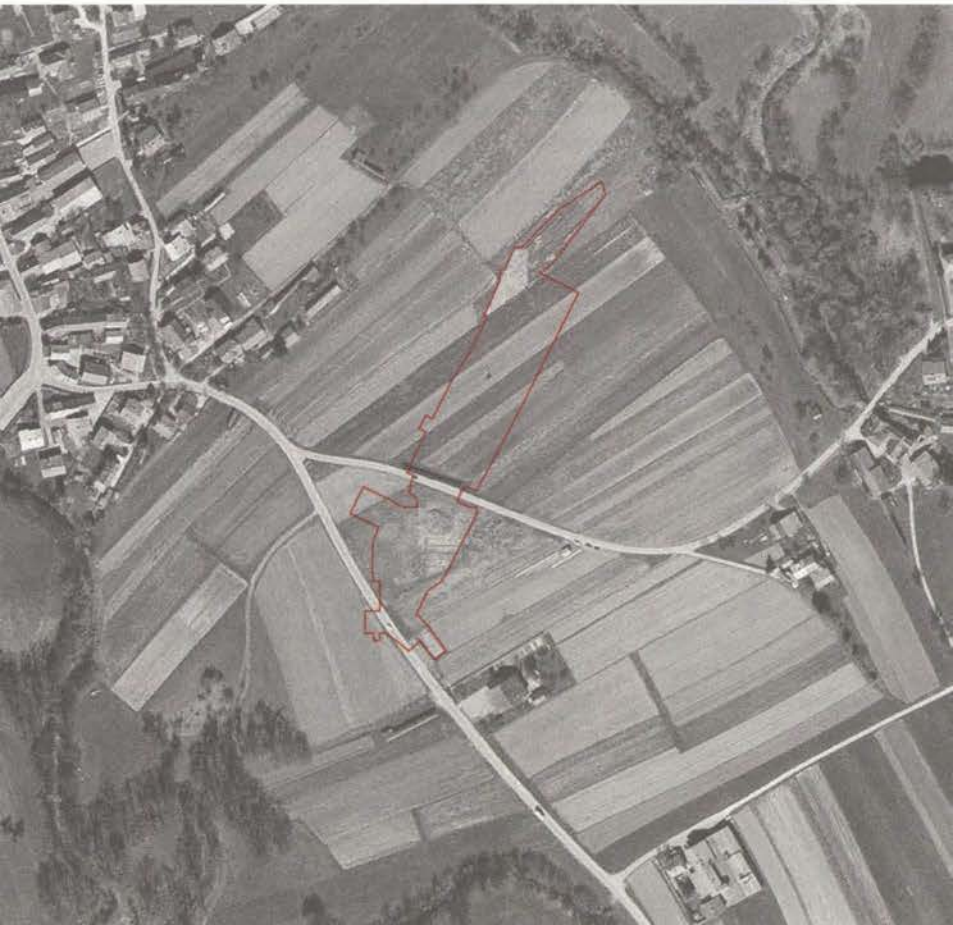
Dragomelj

IRN 13727	Dragomelj – Pri Kozolcu archaeological site
Motorway section	SK 08 Blagovica–Šentjakob
Geographical coordinates	x 469313 y 106855 z 285
Primary topographical map sheet TTN5	Ljubljana–S 27
Cadastral register	c.c. Dragomelj, cadastral plot nos. 91, 92, 93, 99, 101/2, 103/1, 2, 104/1, 2, 105, 106, 107, 108/1, 2, 109, 134/1, 2, 137, 138/1, 160, 161/1 & 2
Site type	Settlement
Period	Neolithic, Late Bronze Age, Roman, Early Middle Ages
ethod and date of discovery, site discovered by	Archaeological survey 1995, Mija Mertelj and Ildikó Pintér
Fieldwork method and date	Excavation 1997, 2001–2002
Excavation director	Peter Turk
Excavated area	12,500 m²
Site archive kept by	Narodni muzej Slovenije

Dragomelj is a lowland site with multiperiod settlement remains. The earliest traces date to the Neolithic period. A characteristic dark layer (over 1,200 m²) with numerous large irregular pits was found on the southern edge of the excavation area. The pits contained the remains of pottery (jars, dishes and ladles), as well as stone tools, flint scrapers, blades, arrowheads and polished stone axes. The pottery forms and decoration link the site with the earliest pile-dwellings on the Ljubljansko Barje marshes, the settlement of Drulovka near Kranj and the newly discovered site of Sredno Polje near

Neolithic stone axes
(5th millennium BC)



Čatež. These sites were dated by means of radiocarbon dating to the first half of the 5th millennium BC. The earliest permanent settlement of the lowlands in the Gorenjska region, on which the inhabitants already exploited new forms of technology and food-production innovations such as pottery, arable farming and stock-breeding, are dated to the same period.

The chance discovery of two hoards with bronze semi-products, ingots and broken end products was made in 1995. The total artefact weight exceeds 90 kg, which undoubtedly represented great wealth in the Late Bronze Age. The range and connections indicated by the artefacts from the Dragomelj hoards are a reflection of wide ranging exchange connections with distant regions, primarily the area of northern and central Italy. The rescue excavations between 1997 and 2002 indicated that the hoards were buried inside an extensive Bronze Age settlement. The excavations indicate that it was much larger than the Neolithic settlement, because the Late Bronze Age pottery finds and excavated settlement structures spread over an area of at least 4 hectares, although only an area of 1 hectare was actually excavated. As was the case in the Neolithic settlement, it was impossible to establish the existence of ditches or banks, which suggests that it was a so-called open village settlement. There were numerous postholes that formed the wooden frames of wattle and daub walled houses and outbuildings, as well as numerous refuse and storage pits. Artefacts reflecting everyday activities were buried in them: pottery, which varied in size and quality of manufacture (wide-bellied and biconical jars, large storage vessels, jugs, dishes and bowls with inverted rims), clay rings (vase supports, loomweights and spindle weights) loomweights, spindlewhorls, clay daub fragments, stone querns, hand mills, etc. Comparisons of the artefacts with those from contemporary settlements date the settlement to between the 12th and 10th century BC. Sporadic traces of settlement from the Early Iron Age were established on a limited area of 200–300 m². Extensive paving and some pits were also discovered, one of which contained a fragment of a bow of a serpentiform fibula from the 6th century BC.

Small Late Bronze Age pottery jars (11th–10th century BC)

Fragmentary Early Medieval jar (7th–8th century AD)

Renewed occupation took place in the Late Roman period or perhaps in the Early Medieval period. Small finds and house remains from that period were limited to 1,000 m² of the excavation area, but they also spread outside the excavated area. Three small houses or outbuildings (3 x 3 m in size), defined by postholes, as well as the remains of a fourth structure, defined by traces of stone paving, were all dated to this period. There were also numerous rubbish pits with Early Medieval pottery. Two of the above-mentioned houses represent occupation from part of the 9th century AD.

PETER TURK

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Drnovo

IRN 128	Drnovo – Drnovo archaeological site
Motorway section	KO 18 Smednik–Krška Vas
Geographical coordinates	x 538339 y 85250 z 158
Primary topographical map sheet TTN5	Krško 48
Cadastral register	c.c. Veliki Podlog, cadastral plot nos. 876, 877/1, 2, 878/1, 879/1, 2, 880/1, 881/1, 2, 882/1, 883/1, 884/1, 885/1, 886/2, 887/1, 2, 888/2, 890/2, 891/1, 892, 919/1, 2, 920/1, 2, 1386/1, 1389/1, 1390/1, 1393/1, 1395/1, 1399/1, 1499/1, 1403/1, 1405/1, 1406/1, 1407/1, 1408/1, 1409/1, 1410/1, 1443/1, 1444/1, 1445/1, 1446/1, 1447/1, 1448/1, 1449/1, 1455/1, 1456/1, 1457/1, 1458/1, 1459/1, 1460/1, 1461/1, 1462/1, 1463/1, 1465/1, 1466/1, 1467/1, 1468/1, 1469/1, 1470/1, 1471/1, 1472/1, 1473/1, 1474/1, 1475/1, 1476/1, 1477/1, 1478/1, 1479/1, 1480/1, 1481/1, 1482, 1483/1, 2, 1484/1, 1485/1, 1486/1, 1487/1, 2, 1488/1, 1489/1, 1491/1, 1492/1, 2, 1493/1, 2, 1494/1, 2, 1495/1, 1496/1, 1497/1, 2, 1498/1, 2, 1499/1, 2, 1500/1, 1501/2, 1502/1, 1503/1, 2, 1504/1, 2, 1505/1, 2, 1506/1, 1507/1, 1508/1, 1509/1, 1510/1, 1511/1, 2, 1512/1, 2, 1513 & 1638
Site type	Archaeological site
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 1999–2000, Gojko Tica and Bojan Djurić
Surveyed area	54,300 m²
Site archive kept by	SAAS

Numerous fragments of Roman building material and pottery were discovered on the northern side of the Ljubljana–Zagreb road and to the north of the village of Drnovo (*Neviodunum*), on the Krško Polje plain. The functional nature of these remains has not yet been determined.

BOJAN DJURIĆ

Jar from tomb, Roman period

References

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1:10,000
Roman Pottery
Burnt clay

Gabrovica

IRN 15549	Gabrovica near Črni Kal – Šturke archaeological site
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	x 412137 y 46377 z 135
Primary topographical map sheet TTN5	Kozina 21
Cadastral register	c.c. Gabrovica, cadastral plot nos. 45/3, 47/2, 3, 48/3, 4, 5, & 6
Site type	Settlement (?), field drainage system
Period	Roman, Modern
Method and date of discovery, site discovered by	Archaeological survey 2000, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2001
Excavation director	Draško Josipovič
Excavated area	2,700 m²
Site archive kept by	ZVKDS, Piran Regional Office

The site has been under cultivation for a considerable period of time. It was the centre of the gardens in Stara Gabrovica, until the hamlet was burnt down in 1944. The area was subsequently abandoned and overgrown for several decades. It was only restored as a terraced vineyard in recent times. The vineyard terraces were up to 2 m high and 4 m wide. They were covered by up to 1.6 m of material, which was moved mechanically during the final terracing. The terraces were built on the flysch bedrock and were oriented south-east/north-west below the Karst Edge (Kraški rob), between two pine forested hills above the canyon of the Osapska Reka seasonal watercourse. There was no surface water in the canyon during the excavations. Data, confirmed by local informants, indicates that the river flooded the valley between Gabrovica and Osp during sudden storms at the beginning of the 20th century.

Stone tools and flakes

Prehistoric artefacts (flint flakes) were discovered in primary contexcts during the excavations.

It is the opinion of the excavation director that the Roman occupation remains on the site, including

Austrian *soldo*

pottery, building material (bricks, tegulae and imbrex), bronze coins (Valentianus I, Valens or Gratianus, Gallienus, Antoninus Pius, Constans, Constantius II, Constantius Gallus or Iulianus), a fragment of a bronze statue, pierced ceramic weights and a fragment of a quern, were deposited in secondary contexts. He suggests that the Roman finds were brought to the site during agricultural improvement at the beginning of the 20th century (unconfirmed information), perhaps from the known site of Grubelce in the immediate vicinity of Osp. The

Skeleton of an ass

geological report suggests that all the archaeological finds are of a colluvial nature, washed down or brought down by landslide from a location above the site.

An analysis of the finds and their stratigraphic relations has not yet been performed, but this will finally confirm or refute the hypothesis of the secondary position of the Roman finds at the site. Similar complete destruction of Roman (and other sites) by intensive agriculture is known elsewhere in the Primorska region.

Roman weight

The drainage ditches discovered on the site are Early Modern in date. The associated material (a bronze coin of Empress Maria Theresa of Austria from 1768) recovered from the fills, dates the ditches to the Late Baroque period. The remaining Early Modern coins (all of them kreutzers, Austrian copper coins minted in the period of Emperor Franz Joseph I dated 1858, 1861 and 1881) provide evidence of the origins of the various terrace fills, which are clearly visible in the sections. An almost entire skeleton of an ass or mule was excavated beside the field path at the same time as work was underway on the terraces.

ALFRED TRENZ

References

DJURIĆ, BOJAN; TICA, GOJKO, *Poročilo o arheološkem intrasite pregledu na najdišču Gabrovica*, Ljubljana 2001.

JOSIPOVIČ, DRAŠKO, *Poročilo o arheoloških izkopavanjih na lokaciji Gabrovica na trasi* AC *Klanec–Ankaran*, Piran 2002.

Gmajna near Spodnja Gorica

IRN 15554 (1)	Stražgonjca – Lavše archaeological site
Motorway section	Pragersko by-pass
Geographical coordinates	x 553367 y 141035 z 251
Primary topographical map sheet TTN5	Ptuj 14
Cadastral register	c.c. Stražgonjca, cadastral plot no. 411/6, 8, 9, 10, 13, 14, 15, 18, 19, 23, 34, 27, 28, 31, 32 & 34
Site type	Settlement
Period	Bronze Age, Late Iron Age, Roman, Modern
Method and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Marija Lubšina Tušek
Excavated area	4,300 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The archaeological site is located on the south-eastern edge of a low terrace. It is bounded by a canal on the west and by a cart track that runs from Stražgonjca to Spodnja Gorica on the south-east. It is also located approximately 150 m north of the route of the *Celeia–Poetovio* Roman road.

The site area consists mainly of agriculturally improved fields. The underlying geology of the low terrace above the Dravsko Polje plain consists of layers of pseudogley (pedogenically transformed sandy silt) with darker layers of silt (palaeosoils). The latter were formed by the deposition of sediments from palaeochannels, which rose beneath the Pohorje mountains (and not from the river Drava). A geological estimate, based the intensity of pedogenesis, suggests that these sediments are over 500,000 years old. No archaeological finds can be expected in them, except where these are derived from later cuts.

Bronze Age jar fragment

Excavation has revealed that the surface of the site was badly damaged by ploughing to a depth of 0.35 m. The occupation layer beneath the ploughsoil was only preserved in limited areas to a depth of 0.03 to 0.20 m. These were largely located in the central and eastern parts of the site, where a fairly distinct prehistoric occupation layer, containing substantial remains of charcoal and pottery concentrations, was recorded beneath the thin grey-brown layer. In direct contrast to the relatively small quantities of recovered and chronologically identifiable archaeological artefacts in the ploughsoil and the occupation layer, the traces of associated wooden structures and buildings were clearly visible on or rather in the subsoil (the grey-yellow clay). Earlier features were more difficult to define due to the superimposition of later features.

Roman vessel fragments

The ground plans of Bronze Age structures are smaller (ca. 3 x 4 m in size) and have sunken floors. The Late Iron Age (La Tène) structures are larger and rectangular, ca. 6 x 8 or 8 x 10–12 m in size. They are characterised by two or more transverse or longitudinal lines of internal roof posts, as well as by traces of sunken hearths or hollows for other purposes. The absence of daub fragments, the density of the wall postholes, as well as a dense concentration of carbonised wood in the destruction layer argues for the existence of log cabins. The economical use of space on the terrace edge suggests that this was a dense or nucleated settlement. Rare Roman artefacts indicate that the settlement continued to function to a lesser extent in the immediate vicinity of an important Roman communication, either in similar rebuilt wooden structures, or in structures that were often renovated on account of their dilapidated state. The space between the residential and other structures was criss-crossed with shallow or deep drainage ditches throughout the occupation of the site. These drained water from the impervious ground in the vicinity of the low-lying streams.

Late Iron Age jar fragments

An Early Modern brick kiln was excavated on the extreme edge of the site beneath the cart track. Brick clay was extracted from the hollow, which is still visible in the terrace edge in the immediate vicinity.

MARIJA LUBŠINA TUŠEK

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DJURIĆ, BOJAN, *Končno poročilo o rezultatih arheološkega pregleda na potencialnem najdišču Gmajna*, Ljubljana 2001.

VERBIČ, TOMAŽ, *Poročilo o terenskem geološkem ogledu arheoloških izkopavanj na najdišču Gmajna*, Ljubljana 2002.

Gornje Njive near Dolga Vas

IRN 15532	Dolga Vas near Lendava – Gornje Njive archaeological site
Motorway section	Lendava by-pass
Geographical coordinates	x 610482 y 161941 z 163
Primary topographical map sheet TTN5	Turnišče 50
Cadastral register	c.c. Dolga Vas, cadastral plot no. 5508
Site type	Settlement
Period	Bronze Age, Roman, Medieval
Method and date of discovery, site discovered by	Archaeological survey 1997, Bojan Djurić, Irena Šavel and Branko Kerman
Fieldwork method and date	Excavation 1997–1998
Excavation directors	Irena Šavel and Branko Kerman
Excavated area	4,400 m²
Site archive kept by	Pokrajinski muzej Murska Sobota

The site is located in the lowland at the foothills of Dolgovaške Gorice and in the triangle between the Kobiljanski potok and Bukovniški potok streams. The 1784 military map indicated the area as a slight rise, which has recently been levelled by intensive arable agricultural and reclamation processes.

A well-suited, slightly elevated area near water courses attracted occupation as early as the Bronze Age. Traces of settlement were preserved in the form of sunken features, large and small pits containing prehistoric pottery and stone tools, as well as traces of wooden structures in the form of postholes.

Bronze Age pottery vessel

The site was re-occupied in the period of the Roman occupation in the 2nd century AD and at the beginning of the 3rd century AD. A number of different structures were excavated: ovens, hearths, an iron smelting furnace, the lower part of a well and building remains, as well as Roman local and imported pottery, bricks, coins and decorative artefacts. Previous research has revealed that the Poetovio–Savaria Ro-

Roman gem with depiction of Jupiter enthroned

man road ran past Gornje Njive. A Roman tombstone from the 1st century AD was discovered in the vicinity in 1852 and a bowl containing Roman coins and jewellery was found by ploughing in 1868. It is therefore assumed that a large farm with craft production activity was located in the Gornje Njive area.

The area was also attractive during the Middle Ages (13th–15th century), a fact which is borne out by the presence of hearths and pits, which contained pottery and metal artefacts from that period.

IRENA ŠAVEL

Medieval jars

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ŠAVEL, IRENA, *Poročilo o arheološkem zaščitnem izkopavanju na najdišču Gornje njive pri Dolgi vasi na trasi lendavske obvoznice*, Maribor 1998.

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Gošča

IRN 15544	Dule – Gošča archaeological site
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 526309 y 84289 z 157
Primary topographical map sheet TTN5	Kostanjevica 2
Cadastral register	c.c. Bučka, cadastral plot no. 3336/57
Site type	Brickyard
Period	Modern
Method and date of discovery, site discovered by	Archaeological survey 2000, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Ivan Žižek
Excavated area	996 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

The site of the Early Modern brickyard is located in a rather marshy area beside the Čolnišček stream. The underlying geology consists of yellow clay, which also served as raw material for brick manufacture. Two similar kilns and a number of oblong clay pits (up to 1.50 m deep) have survived in the forest to the north of the excavated area.

Roof tile fragment

The structural remains are part of a rectangular brick kiln (7.90 x 6.80 m). The northern and eastern sides were cut into the subsoil, whilst the western one was filled with clay that served as thermal insulation. The southern side was built of badly fired brick. Four conduits, 0.43–0.52 m wide and preserved to a height of 0.45 m, led into the kiln. The conduit openings were badly burnt by repeated firing. The kiln interior was poorly preserved, but the external walls survived to a height of 0.72 m. A partially extant small column was found on the brick kiln floor between conduit nos. 3 and 4. It supported the super-

structure of the kiln (grates), on which unbaked brick was laid and subsequently fired.

Part of a badly preserved, possibly residential structure (5.60 x 1.35 m) was excavated to the east of the kiln. A hearth was found on the floor inside it.

A partially preserved pit that served for storing lime and slaked lime was excavated to the north-west of the kiln. Lime was added to the clay, from which brick was made.

A large levelled area was found in front of the kiln. It served as a manufacturing platform, perhaps for making bricks in moulds, or brick drying. Two oblong banks were located to the north-west and south of the kiln. They consisted of clay mixed with burnt clay and broken bricks, the material from which bricks were made. The fired plain rounded roof tiles (bobrovec), manufactured in this kiln were stacked on the platform in front of it. The structure and the material found during excavation can be dated to the period from the middle of the 19th century onwards.

IVAN ŽIŽEK

References

DJURIĆ, BOJAN; PINTÉR, ILDIKÓ, *Poročilo o rezultatih arheološkega pregleda na potencialnem najdišču Gošča*, Ljubljana 2001.

Gradišče above Hrašče

IRN 539	Podnanos – Gradišče above Hrašče archaeological site
Motorway section	HC Razdrto–Vipava
Geographical coordinates	x 421973 y 72937 z 368
Primary topographical map sheet TTN5	Ajdovščina 46
Cadastral register	c.c. Šentvid pod Nanosom
Site type	Settlement, barrow
Period	Bronze Age, Early Iron Age, Roman period
Fieldwork method and date	Archaeological survey 1998
Fieldwork director	Božidar Slapšak
Field survey area	260 ha
Site archive kept by	Faculty of Arts, Department of Archaeology, Ljubljana University

The prehistoric fortified settlement at the site of Podnanos – Gradišče above Hrašče was located by the Institute for the Protection of the Natural and Cultural Heritage, Nova Gorica as part of their regular activities during topographical surveys in the 1974/75 season (Osmuk, 1977). On the basis of the evaluation and assessment of the proposed variants of highway route M 10-7 (section 0374 Razdrto–Selo) undertaken for the area by the Institute in 1995, variant LN was confirmed. This variant proposed a long tunnel in the area of Barnice, which avoided the scheduled area of cultural and natural heritage. The rationalisation of the route was submitted in 1997: three new variants were proposed (Barnice, Barnice 1 and Barnice 2), all of them encroaching upon the periphery of the scheduled archaeological site. The Cultural Heritage Office of the Republic of Slovenia suggested to the investor that further archaeological surveys be performed.

The task included the complementary evaluation of the site as archaeological and landscape heritage (assessment of the nature, preservation, surface visibility and landscape integrality of the archaeological remains), the evaluation of information potential in the preserved archaeological evidence (assessment of the value of the site as an archive of archaeological information) and, above all, a precise spatial definition of the site within the scheduled area. The latter was clearly a priority for the investor in view of the proposals, but it concerned the delicate question of the existing methodology for defining the boundaries of scheduled areas on the basis of modern land plots or boundaries.

The first phase of the multi-stage survey was undertaken (field survey and recording of physical structures of the archaeological site, non-quantitative survey of the surface distribution of archaeological material, archaeological aerial photo-interpretation, the construction of the GIS base for the area in question, analysis of plot division and an analysis of communications). The investor was of the opinion that this phase yielded sufficient data for determining the route and thus further surveys (quantitative surface and sub-surface survey, geodesic


1 : 10.000

measurements of structural remains, geophysical survey and stratigraphic trial trenching) were unnecessary.

The team recorded the prehistoric fortified settlement at the location of Podnanos – Gradišče above Hrašče, using a combination of aerial photo-interpretation and surface survey. This permitted the determination of its extreme external boundaries (a total surface area of 10 ha), as well as possible expansion phases and some elements of internal organisation (11 sectors) with a considerable degree of certainty. Traces of use outside the boundary of the fortified settlement that cannot be accounted for by recorded recent cultivation of land were revealed by aerial photo-interpretation and should be treated as potential archaeological sites. They are either landscape structures (field boundaries, communications, etc.), the organisation of which does not match the documented 19th and 20th century structures (in the Franciscan cadastral register and the modern cadastral register) or traces that indicate more intensive forms of use (enclosures or settlement remains). Some structures can be associated with recent military activities (entrenchments, trenches or paths across plots).

From the aspect of landscape heritage, it was possible to establish a typical stratified landscape complex with an interesting adaptation to earlier intensive use in the core area of the prehistoric settlement and its immediate surroundings. The dynamics of agricultural use and development of communications were also recorded: local communications (development of field paths associated with more intensive agricultural use), regional (paths to Nanos) and super-regional ("Roman road" and "postal" or main road) in the broader background of the last two centuries.

The prehistoric fortified settlement on Gradišče above Hrašče belongs to the category of "primary hillforts", which functioned as central settlements at the micro-regional level and are the basic units of the regional settlement system of later prehistory (the Bronze Age and Iron Age). Surface finds confirm a date in the Iron Age, but some material indicates that occupation began as early as the Bronze Age. Roman finds indicate a typical continuity of hillfort settlement in the first phases of the Roman occupation. The site is thus defined as a hillfort with considerable settlement continuity over a period of at least 1,000 or even 1,500 years. The 10 ha defended area places it in the category of larger settlements. Hence, it conforms to the criterion of a central settlement within a micro-region which comprises the upper Vipava valley (Gornja Vipavska Dolina) between the Slatna (Tabor) ridge and the Močilnik stream basin below the village of Razdrto. The supra-regional communication from the Vipavska Dolina valley to-

wards Razdrto (Ocra), known as the "Roman road", runs from the direction of the town of Vipava (Gradišče near Vipava) or Ajdovščina over the Slatna ridge (the saddle 348 m above sea-level between the summit of Tabor 364 m and the gable of Šentvid 420 m), across Barnice and along the slope of Nanos towards Gradišče above Razdrto. This gives the site a special position in the regional communication system. Its status is comparable to that of the succeeding Šentvid (Podnanos) market as the micro-regional trading centre and a post where horses were exchanged at the beginning of the ascent of the main or "post" road towards Razdrto.

As a cultural monument, the hillfort typically dominates its former economic area or micro-region; it is intervisible with the nearby hillforts at Razdrto (Gradišče near Razdrto and Goli Vrh) and Vrhi (Tabor near Vrabče, Gradišče near Štjak) It is only intervisible with the dominant Sv. Pavel hillfort near Planina in the Vipavska Dolina, because the line of sight to the west is blocked by the Slatna ridge. The recent cultivation and local communication forms are significantly organised along the axis of Gradišče and the archaeological structures on its slopes. The military complex on Barnice was part of the so-called "Mussolini line" in the hinterland of the border with Yugoslavia in the 1920s. It revived some of the original functions of Gradišče in an interesting way, and within the transformed context these functions have remained topical to the present.

At the regional level, the prehistoric fortified settlement on Gradišče above Hrašče is considered part of the then current system that commanded the passes over Ocra, as key points on trans-continental routes between the Mediterranean (or Italy) and the Danube region. It can be concluded that the site of Gradišče above Hrašče must be classified as archaeological heritage, which requires the highest degree of protection. Morphological analyses of the site indicated an interesting division of the settlement area. In spite of the limitations imposed by the instability of the underlying geology, heavy erosion and irregular sedimentation of archaeological layers, potentially favourable conditions for the acquisition of archaeological information by excavation were established over a considerable part of the site. No remains could be defined with any certainty outside the area of the fortified settlement by procedures planned for the first phase of surveys. The areas indicated by aerial photo-interpretation therefore require examination by more intensive forms of archaeological research (systematic sub-surface survey, geophysics and trial trenching). The location of the cemetery associated with the settlement is not known.

A comprehensive evaluation of the site within "spatial memory" and an assessment of the effect of planned

interventions can only be undertaken after consideration of all the above-mentioned aspects. These include the precisely defined information potential of the site as an archive of archaeological information, the recognition of surface remains as immoveable cultural heritage, the site as a dominant landscape feature, recorded landscape dynamics associated with the site, as well as the position of the site within the regional context. Our task was to look in that direction.

BOŽIDAR SLAPŠAK

References

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Grofove Njive near Velika Vas

IRN 9815 (1)	Velika Vas near Krško – archaeological area
Motorway section	KO 18 Smednik–Krška Vas
Geographical coordinates	x 536783 y 85735 z 157
Primary topographical map sheet TTN5	Krško 47
Cadastral register	c.c. Senuša, cadastral plot nos. 1748, 1769/1, 2, 1785, 1786/2, 1787/2, 1788/5, 6, 1790, 1791, 1793/3, 1794/2, 4, 7, 1796/1, 2, 1797, 1798, 1799/1, 2 & 18000
Site type	Archaeological site
Period	Prehistoric, Roman
Type and date of discovery, site discovered by	Archaeological survey 1999–2000, Gojko Tica and Bojan Djurić
Survey area	32,600 m2
Archive of the site kept by	SAAS

The site is located to the east of the village of Velika Vas, which lies to the south of the Roman road *Neviodunum–Emona* near the western mortuary site of *Neviodunum*. Pottery, tile and burnt clay fragments indicate that these are probably settlement remains.

BOJAN DJURIĆ

- Prehistoric Pottery
- Roman Pottery
- Burnt clay

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Grofovsko near Murska Sobota 1

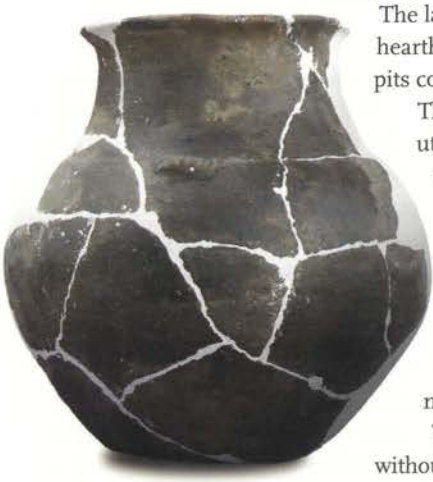
IRN 15541	Murska Sobota – Grofovsko 1 archaeological site
Motorway section	Murska Sobota by-pass
Geographical coordinates	x 588048 y 167744 z 189
Primary topographical map sheet TTN5	Radgona 30
Cadastral register	c.c. Krog, cadastral plot nos. 4214/1, 2, 3, 4, 4217, 4220/1, 2, 4222, 4223, 4225, 4229, 4231/1, 2, 4232, 4233, 4234, 4235, 4236, 4237, 4238, 4239, 4240, 4241, 4245 & 4246/1
Site type	Settlement
Period	Early Bronze Age, Early Medieval
Method and date of discovery, site discovered by	Archaeological survey 2000, Branko Kerman and Bojan Djurić
Fieldwork method and date	Excavation 2000
Excavation director	Matjaž Novšak
Excavated area	18,000 m²
Site archive kept by	Arhej, d.o.o.

The site is located on a fertile plain immediately to the south of Murska Sobota. The underlying geology consists of slight gravel ridges. The shallow hollows between them are filled with layers of sand up to 10 cm in depth. The only exception is a silted-up depression at the northern edge of the excavation, a remnant of the former palaeochannel, which meandered longitudinally in the northern part of the site prior to occupation. It subsequently moved gradually to the north.

The archaeological structures, exclusively negative in character, were cut into the subsoil. Only the features in the low lying silted-up depression were completely preserved, whereas the features in the higher predominately gravel areas were damaged by ploughing. The original ground surface was completely destroyed. In total, 54 features were discovered. On the basis of the associated finds, 40 storage pits or pit dwellings, 11 postholes and three hearths. In addition, 15 negative features, 11 postholes and two hearths are dated to the Early Bronze Age, whilst the remaining 25 negative features and one hearth are dated to the Early Medieval period. The areas of the two occupation phases partly overlap in the central part of the excavated area. The western part was predominately occupied in the prehistoric phase, whilst the structures in the eastern part are exclusively Early Medieval in date.

Bronze Carolingian *phalera*

The prehistoric structures were isolated and surrounded by postholes for the load bearing post of wooden buildings. The stone post packing was extant in some postholes. With the exception of a quern fragment, all the finds consist of potsherds, including numerous fragments of finer pottery with cord impressed straight or wavy line decoration. In addition to the residential complexes, the site was also distinguished by a line of five vertical circular pits in the palaeochannel at the northern edge of the excavation. They all had a larger diameter (up to 60 cm) than was otherwise usual on the site. One of them contained a bowl laid in the pit base, whilst the other pits contained organic remains and potsherds.



Early Bronze Age jar

The layer surrounding the only excavated hearth on the old ground surface between the pits contained numerous Litzen potsherds.

The Early Medieval structures were distributed in scattered groups throughout the area, but they were not associated with postholes. An ornamental horse harness plaque, two clay spindlewhorls and three glass beads were found in them, as well as numerous potsherds. Wet-sieving revealed animal bone fragments, numerous charcoal fragments and other organic food remains.

The excavated pottery was hand-made, without discernible traces of finishing on a potter's wheel. It was decorated with furrowing, occasionally with combing. The most common decorative motif is that of the wavy line, either individually or in groups, followed by horizontal line groups in combination with a wavy line and comb impressions in combination with a wavy line. The latter were executed to high amplitude. The pottery fabric is not of uniform appearance. Intensely rough surfaced pottery with coarse-grained sand temper was found in the same structures as pottery with organic temper, which gave a porous surface after firing.

Radiocarbon analysis has dated the two Early Medieval structures to the second half of the 7th century or the beginning of the 8th century.

MATJAŽ NOVŠAK

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Grofovsko near Murska Sobota 2

IRN 15540	Murska Sobota – Grofovsko 2 archaeological site
Motorway section	Murska Sobota by-pass
Geographical coordinates	x 588717 y 167784 z 189
Primary topographical map sheet TTN5	Radgona 30
Cadastral register	c.c. Murska Sobota, cadastral plot nos. 3152, 3153, 3154, 4510, 4511, 4553/1 & 5154
Site type	Settlement
Period	Roman, Early Medieval
Method and date of discovery, site discovered by	Archaeological survey 1999, Bojan Djurić and Jože Varga
Fieldwork method and date	Excavation 2002
Excavation director	Branko Kerman
Excavated area	7,000 m²
Site archive kept by	Pokrajinski muzej Murska Sobota

The site was discovered during a systematic archaeological field survey in 1998. Sixty-six structures or buildings were discovered during archaeological excavations and the watching brief during construction. It is possible to distinguish three chronological phases, which are also reflected in the spatial distribution of the structures.

The excavated features were of a settlement nature. They comprised rubbish pits of various sizes, burnt areas, hearths, ditches and groups of small postholes for the upright posts of dwelling structures. Numerous pottery fragments, primarily from the Roman and Early Slavic periods, were discovered in the rubbish pit fills.

Stone quern fragments

Roman occupation extended over the southern part of the site. The central area is occupied by a simple rectangular house (2.60 x 2.10 m), which was shallowly cut into the gravel subsoil. Two postholes, one on the

western edge and the other in the eastern edge, are part of the simple building structure. Roman pottery fragments were discovered in the fill of the shallow cut.

Traces of a small burnt area with several pits dug around it were discovered to the east of the house. Some of the pit fills contained Roman pottery fragments.

The largest rubbish pit of the small Roman farm was also the richest in terms of material. It was located to the north of the house. It is oval in plan, measuring 4.30 x 4.60 m and was 1.40 m deep. It contained a large quantity of potsherds, as well as a quern, iron mounts and a mass of burnt clay daub and charcoal.

A group of postholes of a small house or dwelling structure was discovered in the western part of the site. The house is located beside an oblong, L-shaped ditch, which runs in an east-west direction and terminated in a right angled extension on the eastern side. The pottery fragments are very rare and difficult to define. The form is comparable to that of both Roman and medieval pottery.

Early Medieval vessel fragments

The third occupation zone is located on the southern side of the site and is represented by a larger Early Slavic pit (3 x 2.20 m). Numerous decorated potsherds of a range of types, characteristic of the 7th century AD, were discovered in it. The dark grey greasy clay fill contained animal bone fragments, a large amount of charcoal, daub and smashed river cobbles.

BRANKO KERMAN

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Hajndl near Ormož

IRN 6033	Hajndl – archaeological site
Motorway section	HC Ormož–Goričnica
Geographical coordinates	x 587105 y 141116 z 225
Primary topographical map sheet TTN5	Ormož 19
Cadastral register	c.c. Velika Nedelja, cadastral plot nos. 700/1, 2, 4, 5, 6, 706/1, 2, 707/1, 710/1, 827, 828/1, 2, 830, 832/1, 833/1, 2, 3, 4, 5, 834, 835, 839, 840, 841, 842, 848/4, 849/1; c.c. Ormož, cadastral plot nos. 840, 841, 843, 844/1, 2, 845/1, 2, 3, 851, 852, 855, 856; c.c. Hardek, cadastral plot nos. 367 & 369
Site type	Settlement, road
Period	Eneolithic, Bronze Age, Early Iron Age and Roman
Method and date of discovery, site discovered by	Archaeological survey 1999, Branko Kerman, Ivan Žižek and Bojan Djurić
Fieldwork method and date	Excavation 2000
Excavation director	Ivan Žižek
Excavated area	53,333 m²
Site archive kept by	Pokrajinski muzej Ptuj

The archaeological site was first documented on the Archaeological Map of Yugoslavia in 1936, when two barrows recorded were in the wood. Trial trenches were excavated across the Roman road by Stanko Pahič in the 1960s. Bernarda Perc recorded a prehistoric occupation layer during the cutting of a water main in the same time period. Marija Lubšina Tušek documented Early Iron Age structures in the western part of the Ormož by-pass.

The excavated site is located on a terrace, which slopes gently to the south. It is bounded by the Lešnica stream in the east and in the south and south-west by steep slopes, which terminate in the first terrace of the

river Drava. The Slovenske Gorice hills rise above it in the north. The surface of the site is very heavily cut by small natural stream channels, which are dry at present. The lithological structure of the terrace that was formed over 130,000 years ago during the final Glaciation can be observed in these channels. The basal layer consists of Miocene marl, which is succeeded by marl-rich limestone, calcereous sandstone and Lithotamnian limestone. The present subsoil is represented by yellow clay, which appears as a sediment covering the above-mentioned layers.

The Roman *Poetovio–Savaria* road

Over 70 features from various periods were discovered during the excavation. The area was first occupied during the Neolithic and Early Eneolithic periods. Two pit dwellings were excavated. They contained a large amount lot of pottery and lithic material, which can be attributed to the Lasinja culture.

There is also some Late Bronze Age material, but the bulk of the material dates to the Early Iron Age. The structures from this period include four rectangular buildings, semi-sunken dwellings, pit dwellings and seven wells. One had an extant rectangular oak lining. Radiocarbon analysis has dated it to the period between 750 and 600 BC.

The rectangular structures were of larger dimensions. They contained internal postholes, which bore the roof structure. Partly extant hearths and larger circular pits containing a considerable amount of pottery were also found in and around them. The pottery is dominated by portable clay ovens, clay firedogs with zoomorphic terminals, bowls with inverted rims, a variety of different-shaped jars, dishes and large storage vessels.

Eneolithic pottery ladle

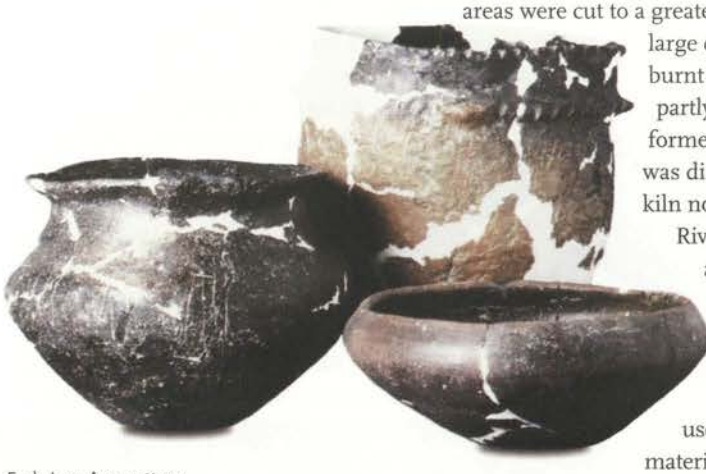
At least 30 pit dwellings and semi-sunken dwellings were excavated. They were paved with complete or broken river cobbles. Fragments of domestic pottery and querns were found on the cobbled surfaces. These structures had dimensions of between 5 m and 12 m. An oblong stone plate that could have served as an archer's

Bronze Age flint arrowhead

wrist guard was excavated in one of the pit dwellings. Numerous clay spindlewhorls indicate that the inhabitants spun and manufactured yarn.

A circa 200 m length of the Roman state road connecting Poetovio and Halicanum was also excavated on the site.

Seven circular lime-kilns for baking lime were investigated to the south of the road. Kiln nos. 2–7 formed a single complex. The circular kiln no. 1 was dug into the yellow clay to the west of the kiln complex. Its wall was heavily fired to a grey colour. A vaulted conduit with a brick-built entrance led to the kiln. A larger access area in front of the kiln was strengthened by a dry-stone wall on the northern side. The other kilns were served by two common access areas, in which the fire was laid. The kiln entrances were built of brick, which bore the stamp of a brick-maker from Poetovio, L.VAL.ROM. Kiln no. 7 was unused, but served as a working place for kiln nos. 2 and 3. The walls were lined with clay on the inside, the conduits served as the firing chamber and the access areas were cut to a greater depth. A large quantity of burnt limestone partly transformed into lime was discovered in kiln nos. 3 and 5. River cobbles and sandstone from the nearby quarries of Hum were used as raw material. Firewood was collected in the nearby woods, whilst burnt lime could be transported along the river Drava and the roads.



Early Iron Age pottery vessels

IVAN ŽIŽEK

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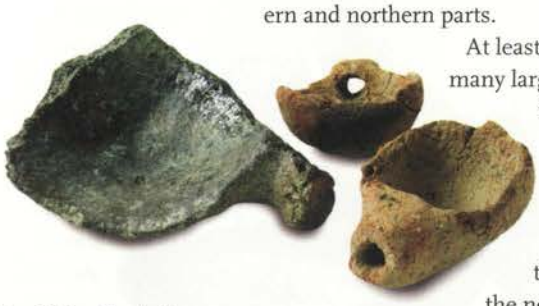
Hardek near Ormož

IRN 6049	Hardek – Na Bregu archaeological site
Motorway section	Ormož by-pass
Geographical coordinates	x 589372 y 141966 z 240
Primary topographical map sheet TTN5	Ormož 20
Cadastral register	c.c. Hardek, cadastral plot nos. 608, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629 & 707
Site type	Settlement
Period	Eneolithic, Early Iron Age
Fieldwork method and date	Excavation 1997
Excavation directors	Ivan Žižek and Ivan Tušek
Excavated area	7,100 m²
Site archive kept by	Pokrajinski muzej Ptuj

The Eneolithic settlement at Hardek close to Ormož is located on the extreme southern edge of the Slovenske Gorice hills., a large Early Iron Age barrow, largely excavated by Professor Franc Ferk in 1899, is also known close to the settlement site. Archaeologists had been active on the site prior to the excavations. Individual surface finds had been recorded; the approximate size of the settlement was established by trial trenching due to recent extensive damaged by the expansion of the clay pits of the Ormož brickworks, primarily in the eastern and northern parts.



Eneolithic pottery ladles

At least 7 buildings, 4 hearths, many large pits and the remains of a fence enclosing these dwelling structures were recovered during the archaeological rescue excavations. The defended entrance to the settlement was located in the north-west. Significant finds include fragments of coarse domestic pottery and deep

bowls. Finer pottery comprised vessels on wide-bellied feet and bowls made of purified clay, usually with black painted exterior surfaces. A large amount of polished and chipped stone tools was found. The pottery and lithic artefacts are attributed to the Lasinja culture (according to Dimitrijevič). Radiocarbon analyses date the site to 5,000–5,300 years BP. The charcoal samples are derived from the following types of trees: oak, pine, hornbeam, poplar, willow, ash, maple, beech and lime.

The palaeochannel of a dried up stream, significant for the settlement, was investigated beside the buildings on the eastern side.

The remains of the Iron Age barrow were excavated as a separate excavation area within the route of the bypass. It yielded no results apart from some fragments of a large pottery pithos with zoomorphic handles and an oval jar. However, Ferk's field notes record that the barrow contained various iron and bronze weapons, as well as gold and a considerable number of bronze artefacts and pottery vessels. Regrettably, these artefacts are now mostly lost or mislaid.

Two vessels from the remains of the barrow

Some fragments of Late Iron Age graphite-slipped pottery were excavated, but the associated features were not discovered.

Two silver-plated buttons in the shape of cicadas and a glass disc were found in the alluvium in the western part of the excavated area. The bodies of the cicadas are triangular in shape and decorated with oblique incisions. The space in between is filled with a series of short incisions and the head is stylised. These artefacts can be dated to the 5th century AD or up to the middle of the 6th century AD.

IVAN ŽIŽEK

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Ilovica near Vransko

IRN 10406	Vransko – Roman brickyard Na Ilovci
Motorway section	SK 06 Arja Vas–Vransko
Geographical coordinates	x 496779 y 121741 z 343
Primary topographical map sheet TTN5	Gornji Grad 29
Cadastral register	c.c. Vransko, cadastral plot nos. 794/29 & 30
Site type	Brickyard
Period	Roman
thod and date of discovery, site discovered by	Archaeological survey 1994, Ildikó Pintér and Slobodan Olić
Fieldwork method and date	Excavation 1995
Excavation director	Irena Lazar
Excavated area	2,074 m²
Site archive kept by	Pokrajinski muzej Celje

Archaeological rescue excavations took place on the Ilovica field near Vransko during the construction of the Arja Vas–Vransko motorway section. The remains of a Roman brickyard were discovered in the direct vicinity of the Bolska stream. Two rectangular brick kilns, enclosed by 1 m thick walls, were built in the central part of the complex. A large building, probably a warehouse, was discovered to the east of the kilns. The poorly preserved walls and brick channel to the west presumably belonged to workshops and residential premises. The brick fragments (roof tiles, paving stones, bricks for central heating, vault bricks) that were discovered in the kilns and a refuse pit to the north of the kilns were stamped with the seal of the Second Italic legion (LEG II ITA). The finds indicate that the brickyard had operated from the end of the 1st century AD to the beginning of the 3rd century. The coin finds indicate that the second half of the 2nd century was the heyday of the brickyard.

A fortress of the Second Italic Legion was located at Ločica near Polzela in this period, because the Roman Empire was threatened by incursions by Germanic tribes. It was probably the army that organised the brickyard and was supplied by it. The location of the workshop by the main communication (*Emona–Atrans–Celeia–Poetovio*) facilitated rapid and regular transport of products. The legion was soon moved to the north, first to Albing and subsequently to *Lauriacum* (present day Enns) in Austria. The Ločica fort was slighted and the main customer of the brickyard in Ilovica had moved away. It is assumed that the range of production initially decreased substantially, until the workshop was finally deserted in the first half of the 3rd century AD.

IRENA LAZAR

Stamped brick

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Ivančna Gorica

IRN 192	Ivančna Gorica – archaeological site
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 485336 y 87932 z 324
Primary topographical map sheet TTN5	Višnja Gora 44
Cadastral register	c.c. Radohova vas, cadastral plot nos. 64/5 & 8
Site type	Via publica Emona–Praetorium Latobicorum with a cemetery
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 1996, Paolo Cattaneo
Fieldwork method and date	Excavation 1998
Excavation directors	Drago Svoljšak and Janka Istenič
Excavated area	96 m²
Site archive kept by	Narodni muzej Slovenije, Ljubljana

Trial trenching with a single trial trench (32 x 3 m) oriented in an approximate north-south direction were undertaken at Ivančna Gorica. The trench was excavated at a right angle to the presumed route of the Roman road.

Excavation revealed a homogenous cobble and stone metalled road laid directly on the silt subsoil in the central part of the trial trench beneath the ploughsoil and distinct karst-derived colluvial layers. The artefacts found on the road, primarily coins struck in the second half of the 3rd century and in the 4th century, indicate that the road was used in the Roman period.

Roman iron axe, bronze key and bronze brooch – fibula

The excavation of a 1 m wide zone along the eastern edge of the trial trench revealed that the southern edge of the road was located at the edge of a ca. 0.6 m high terrace, which was covered with alluvial deposits after the Roman period. It is likely that part of the southern edge

is preserved by the eastern section of the trial trench, where it is bordered by apparent wash from the road, a greyish-yellow layer of silt with dolomite rubble inclusions. There were no finds in it. The course of the road edge was not clearly established in other areas. It is assumed that the width of the road was ca. 4.5 m.

A 10 cm thick layer of soil, mixed with dolomite rubble, lay to the north of the road beneath the ploughsoil. It contained several finds, all from the Roman period: an axe and a coin of the Emperor Constantius I (334–335

The remains of the Roman *Emona–Neviodunum* road

AD) 10 cm away from it, a fibula and another coin of the Emperor Constantius II (355–361 AD) only 5 cm away from it, a conical iron object, two fibulae, coarse ware fragments, local pottery, a pottery tripod fragment and a mortaria, as well as several teeth and some bones. The axe and the conical iron object were partially pressed into the subsoil.

JANKA ISTENIČ

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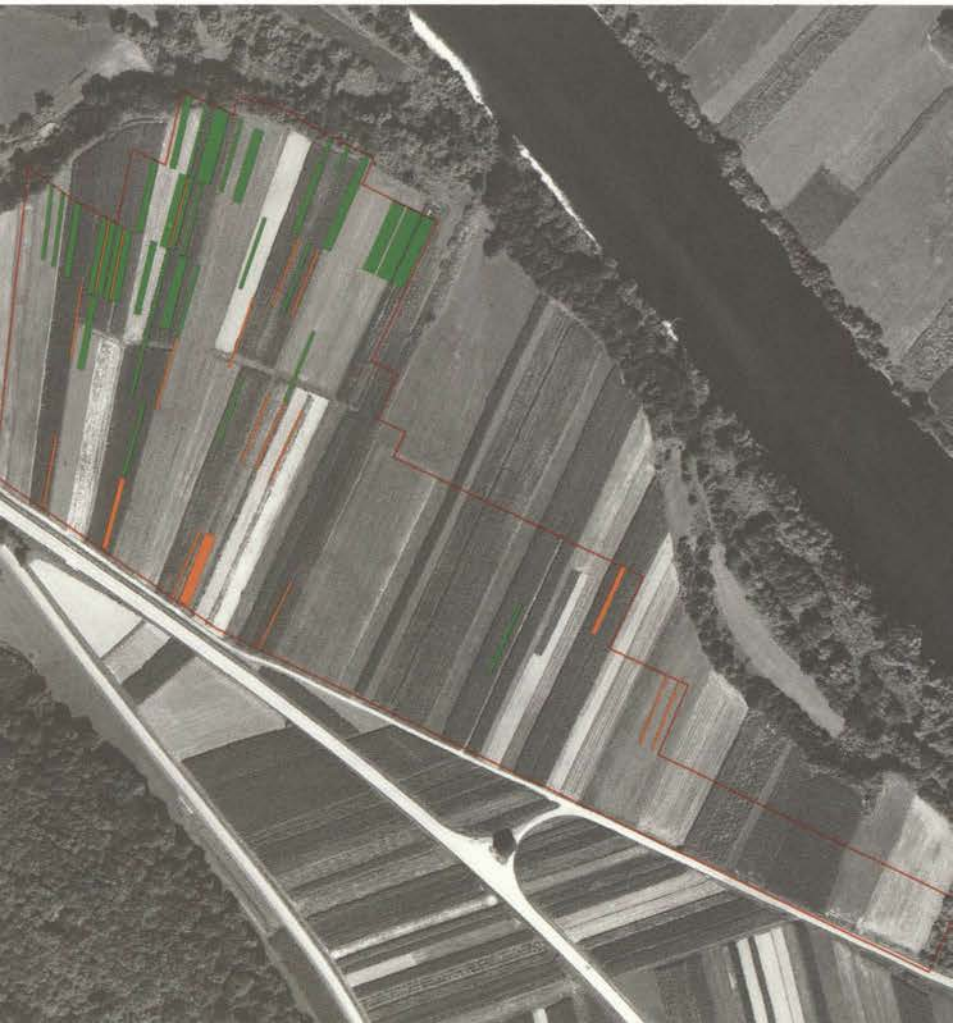
Jaušina near Ribnica na Dolenjskem

IRN 10567	Jaušina near Brežice – archaeological site
Motorway section	KO Krška Vas–Obrežje
Geographical coordinates	x 5552851 y 80469 z 149
Primary topographical map sheet TTN5	Samobor 14
Cadastral register	c.c. Velika Dolina, cadastral plot nos. 300/4, 5, 11, 12, 20, 21, 22, 23, 24, 25, 28, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 44, 48, 63, 64, 65, 66, 73, 74, 76, 77, 80, 83, 85, 118, 301/15, 19, 21, 29, 38, 42, 43, 44, 45, 46, 48, 49, 56, 57, 1006/2, 1010/14, 17, 21 & 1013/1
Site type	Settlement
Period	Early Neolithic, Early Eneolithic and Roman
Method and date of discovery, site discovered by	Archaeological survey 1998, Ildikó Pintér
Survey area	117,500 m²
Site archive kept by	SAAS

The site was discovered during an extensive systematic archaeological surface survey in advance of the construction of the new Krška Vas–Obrežje motorway section. It is located on the Pleistocene gravel terrace of the river Sava, above the flood plain and to the east of the village of Ribnica na Dolenjskem.

On the basis of 171 prehistoric potsherds recovered from the site, it was dated to the Late Neolithic (Lengyel culture) and Early Eneolithic (Lasinja culture) period. The finds comprise a further 478 lithic artefacts including tools made of chert and flint: 22 retouched flakes, 21 scrapers, 17 notched tools, 4 awls and 15 other tools, 131 cores, 115 pieces of debitage and 78 waste flakes, a pol-



Late Neolithic-Early Eneolithic potsherd

ished stone axe of metamorphic stone and other tools, made of sandstone and river cobbles. On the basis of these finds, it is assumed that the site was a settlement.

Findings of 60 Roman pottery fragments, 21 tile fragments and 11 pieces of burnt clay indicate Roman occupation. A Roman road is visible as a clearly defined gravel band on the field surface. It is probably associated with this rural settlement.

ILDIKÓ PINTÉR *and* STAŠO FORENBAHER

Roman potsherd– *terra sigillata*

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Kamna Gorica

IRN 15571	Ljubljana – Brecenkova Njiva archaeological site
Motorway section	KO 08 Šentvid–Koseze
Geographical coordinates	x 458644 y 104516 z 323
Primary topographical map sheet TTN5	Ljubljana–S 32
Cadastral register	C.C. Šentvid, cadastral plot nos. 1112/1 & 1115
Site type	Archaeological site
Period	Prehistoric
Method and date of discovery, site discovered by	Archaeological survey 2003, Bojan Djurić
Survey area	400 m²
Site archive kept by	SAAS

The site is located on gently undulating and sloping terrain to the south of the Gradišče hill. The area is rather waterlogged and open. Surface finds in arable fields, i.e. pottery fragments, indicate a prehistoric, or more precisely a Bronze Age date. The site has not yet been excavated.

BOJAN DJURIĆ

■ Prehistoric pottery

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Kotare near Murska Sobota

IRN 15514	Bakovci – archaeological site Kotare
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 588966 y 166120 z 187
Primary topographical map sheet TTN5	Radgona 30
Cadastral register	c.c. Murska Sobota, cadastral plot nos. 5098/1, 4; c.c. Bakovci, cadastral plot nos. 1821/1, 2, 1822/1, 2, 1824, 1825, 1826/1, 4, & 1827/1
Site type	Settlement, cemetery and barrow cemetery
Period	Early Bronze Age, Early Iron Age, Late Iron Age, Early Medieval
Method and date of discovery, site discovered by	Archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Fieldwork method and date	Excavation 2001–2002
Excavation director	Branko Kerman
Excavated area	45,250 m²
Site archive kept by	Pokrajinski muzej Murska Sobota

The Kotare – baza site is located beside the Dobel stream, beside which occupation in this area was concentrated in different periods. Prior to the archaeological excavations, the site was covered with arable fields. Intensive agriculture had badly damaged the shallow archaeological layers, especially in the western and southern parts of the site.

Early Bronze Age jar (Kotare – baza)

The underlying geology consists of silicate gravel, Pleistocene alluvial deposits of the river Mura. The activity of the Dobel, the site being located at its meander, is visible up to 50 m from its present channel. When the former Dobel stream flooded, its flood deposits levelled out the gravel surface. Numerous resedimented pottery fragments were excavated in these deposits.

The topsoil is very thin and partly mixed with gravel in the western and northern part of the site. The archae-

ological remains are badly damaged and dispersed with only the lower parts of cuts surviving in the subsoil.

The excavated features are of a settlement nature, mostly comprising various structures, rubbish pits, hearths, wells and storage pits.

The earliest features are rubbish pits from the end of the Early Bronze Age. Pottery with corded Litzen culture decoration dominate the finds in the pit fills.

Early Slavic jar
(Kotare – baza)

Early Iron Age structures (residential structures, hearths, rubbish pits and postholes) are numerous. The occupation remains are primarily concentrated in the south-eastern and partly central part of the site. In addition to daub, the rich finds comprise pottery vessels of various forms: shallow bowls, vessels with everted rims and obliquely incised decoration, small band-handled jars, large conical-necked jars with horizontal channelling and small beakers. These are associated with pyramidal loomweights, firedogs with anthropomorphic relief decoration and decorated daub fragments.

A larger sub-rectangular pit with three postholes and a step in the interior was excavated on a slight ridge in the western part of the site. The structure can be identified as a ridged-roofed building, which is dated on the basis of the finds to the end of the Middle La Tène or beginning of the Late La Tène period. An oval bipartite La Tène pottery kiln with two hot-air conduits was discovered on the bank of the Ledava overflow channel. Both the conduits led to a pit where unfired pottery was stacked. The conduits ran to the kiln from the structure, which was located in the immediate vicinity.

In addition, 39 Early Slavic features were also discovered at the site. These were mostly shallow pits with numerous fragments of decorated and polished wide-bodied vessels. The Early Slavic dwelling structures are dispersed over the entire site, but are grouped primarily in its western and northern part. The settlement extended to the south, the structures also appearing on the right bank of the Dobel. The western side of the settlement was cut by the Ledava overflow channel.

Decorated biconical vessel,
Early Iron Age
(Kotare – baza)

The site of Kotare – krogi is located 2 km from Murska Sobota along the Murska Sobota–Bakovci road. It developed on the left bank of the former stream in the area, which is known by the toponym of Grofovsko. It was discovered with archaeological aerial reconnaissance in 1997 and confirmed by archeological finds recovered in surface survey in 1998 and 1999.

Excavation of the site revealed an occupation layer and some pits, which contain Litzen pottery. This dates the settlement to the end of the Early Bronze Age.

It was reoccupied in the Early Iron Age, when four ring ditches of a probable mortuary character dug around small barrows were located to the north, away from the stream. A grave from the same period was discovered to the south of them.

The area beside the Dobel stream was reoccupied by a Celtic population. Most of the La Tène burials were excavated around the ring ditches, part of which was also used as a kind of a smaller dwelling place. It contained pottery and an iron La Tène fibula.

BRANKO KERMAN

Graphitonkeramik jar, Late Iron Age (Kotare – krogi)

Handled cup from grave, Early Iron Age (Kotare – krogi)

Early Bronze Age jug with corded decoration (Kotare – krogi)

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Kračine

IRN 15566	Dragotinci – Roman settlement
Motorway section	MP 03/1 Cogetinci–Vučja Vas
Geographical coordinates	x 580139 y 160232 z 208
Primary topographical map sheet TTN5	Radgona 46
Cadastral register	c.c. Dragotinci, cadastral plot nos. 969 & 973
Site type	Archaeological site
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić
Survey area	8,800 m2
Site archive kept by	SAAS

The site is located on an elevated terrace beneath the hill of Strmec on the eastern edge of the Ščavnica valley. The remains of a small Roman settlement unit possibly associated with a small barrow cemetery in Dragotinci (IRN 932) were discovered in ploughed fields.

BOJAN DJURIĆ

■ Roman pottery

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Kraje

IRN 15542	Petrinje – archaeological site Kraje
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	x 414614 y 49451 z 387
Primary topographical map sheet TTN5	Kozina 13
Cadastral register	c.c. Ocizla, cadastral plot nos. 2064, 2065/1 & 2
Site type	Archaeological site
Period	Bronze Age
Method and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić and Gojko Tica
Fieldwork method and date	Excavation 2001
Excavation director	Alma Bavdek
Site archive kept by	Notranjski muzej Postojna

Bifacially retouched flint blade

The Kraje dolina was located 300 m to the west of Brgod, a limestone hill at the edge of the Petrinjski Kras. Archaeological trial trenching was undertaken during the construction of the Klanec–Ankaran motorway section. According to the established methodology for dolina excavation, a trial trench was cut across the Kraje 1 dolina, reaching a depth of 4 m in the central area. One of the sections was archaeologically documented. The sinkhole was also subject to geological and morphological interpretation.

It was established that fragments of pottery, flint flakes and a flint artefact were present at a depth of 1.10–2.20 m beneath the surface in the section. The pottery fragments are comparable to those from the nearby site of Brgod and likewise date to the Bronze Age.

ALMA BAVDEK

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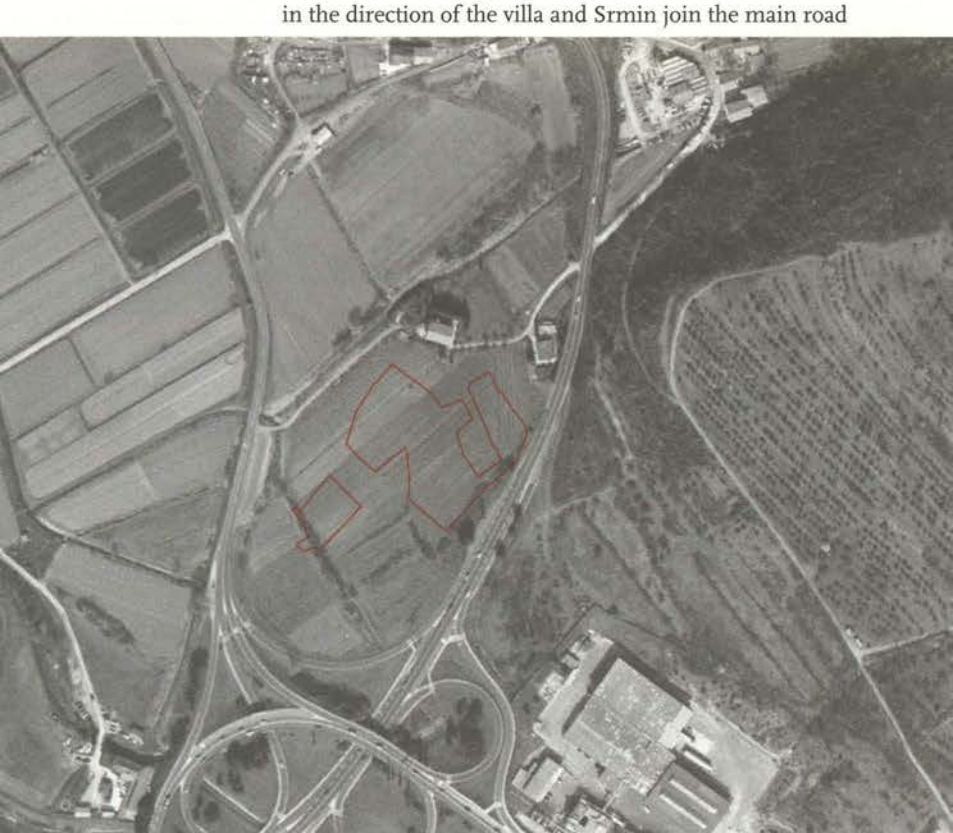
Križišče near Spodnje Škofije

IRN 15565	Spodnje Škofije – Križišče archaeological site
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	x 405628 y 46925 z 10
Primary topographical map sheet TTN5	Koper 29
Cadastral register	c.c. Škofije, cadastral plot nos. 701/1, 702/11, 18, 19 & 1727/1
Site type	Via publica Pola–Tergeste and cemetery
Period	Roman
Method of discovery	Watching brief
Fieldwork method and date	Excavation, 2002–2003
Excavation directors	Alfred Trenz and Matjaž Novšak
Excavated area	6,000 m²
Site archive kept by	ZVKDS, Piran Regional Office, Arhej, d.o.o.

The site is located at the foot of the Bečajevec hill, where the Školarice Roman villa was discovered, between the villages of Dekani and Srmin. Part of a cemetery, a public road with two access roads, one for the Školarice villa and one for Srmin, as well as a large lime-kiln were excavated.

The large *via publica* that was discovered at the foot of the hill ran in a north-easterly direction. On the basis of established historical facts, it may be linked with the *via Flavia* (*Tergeste–Pola*), which crossed the river Rižana (the Roman Formio) in the immediate vicinity. Over the centuries, the river flooded regularly, especially in its lower course and deposited decayed flysch sediments. This created an extensive area of low-lying marsh, which was crossed by the road. The road can be traced in a north-south direction for a distance of 300 m. The cemetery runs for a distance of 170 m on the eastern side of the central part of the excavated area. The road bed in this area was frequently re-surfaced with gravel and is connected with the paved cemetery area. The side roads in the direction of the villa and Srmin join the main road



at the northern corner of the cemetery. The crossroads of these roads was a 400 m^2 contiguous area covered by multiple make-up layers. The main road was still used in the post-Roman period, but the two access roads, on which three inhumation graves were excavated, were undoubtedly abandoned. Two of the burials were located on the road to the villa, whilst the third one was found on the Srmin road. The graves were devoid of grave goods and were oriented in west -east direction facing towards the east.

A Roman urban cemetery with paved mortuary plots was discovered and partly excavated along the eastern edge of the road. It was bounded on the east by a ca. 2 m high, finely built worked sandstone wall. Excavation covered three mortuary plots, while at least a further three can be expected in the unexcavated area.

Roman lamp with theatre mask

The northernmost mortuary plot stands out from the rest, because the square plot was enclosed by a wall (16 x 16 m). The northern part of the plot was partly destroyed by construction works directly before the beginning of excavation. The plan does not indicate a tendency towards systematic organisation of space. The graves differ from each other in terms of construction, burial rite and grave goods. The grave constructions include grave chambers built of sandstone blocks or brick and graves lined with unworked stone. They were covered with stone slabs or, in one case, with brick. Most of the graves contain cremations with the *bustum* type prevailing, i.e. burning of the deceased directly above the excavated grave pit. The quality of the grave goods suggests that several of those interred in the cemetery had a higher social status than the rest of the mortuary population. The location of one grave plot directly on the crossroads of the access road indicates the possibility that it could have been in possession of the villa owners at least within the earlier phase (1st century AD). Their identity is still not known, because all the grave monuments or dedicatory stones were removed or destroyed. Broken fragments of one or more marble spolia were found incorporated in the road surface directly behind the western plot wall.

The two southerly mortuary plots are of the same size. The graves were positioned in rows. They are largely characterised by simple grave pits, in which the creamation and grave goods were placed. The only exception is that of three inhumation graves made in well-built stone slab sarcophagi. A river cobble metalled path runs between the mortuary plots, which also have some internal paths between the graves.

Altogether 17 adult inhumation graves, 27 adult cremation graves and six neonatal graves were excavated on the site. The mortuary plots to the south have been

preserved unexcavated. The investor has in fact altered the project during the excavation and thus avoided the construction of facilities at this site, due the heritage evaluation of the site, comprising well preserved evidence of the urbanisation of mortuary space throughout the entire Imperial period (1st to 5th century).

MATJAŽ NOVŠAK

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PLESTENJAK, ANA; STOKIN, MARKO; TRENZ, ALFRED, *Poročilo o arheoloških testnih izkopih na lokaciji Križišče na trasi* AC *Klanec–Ankaran*, Piran 2002.

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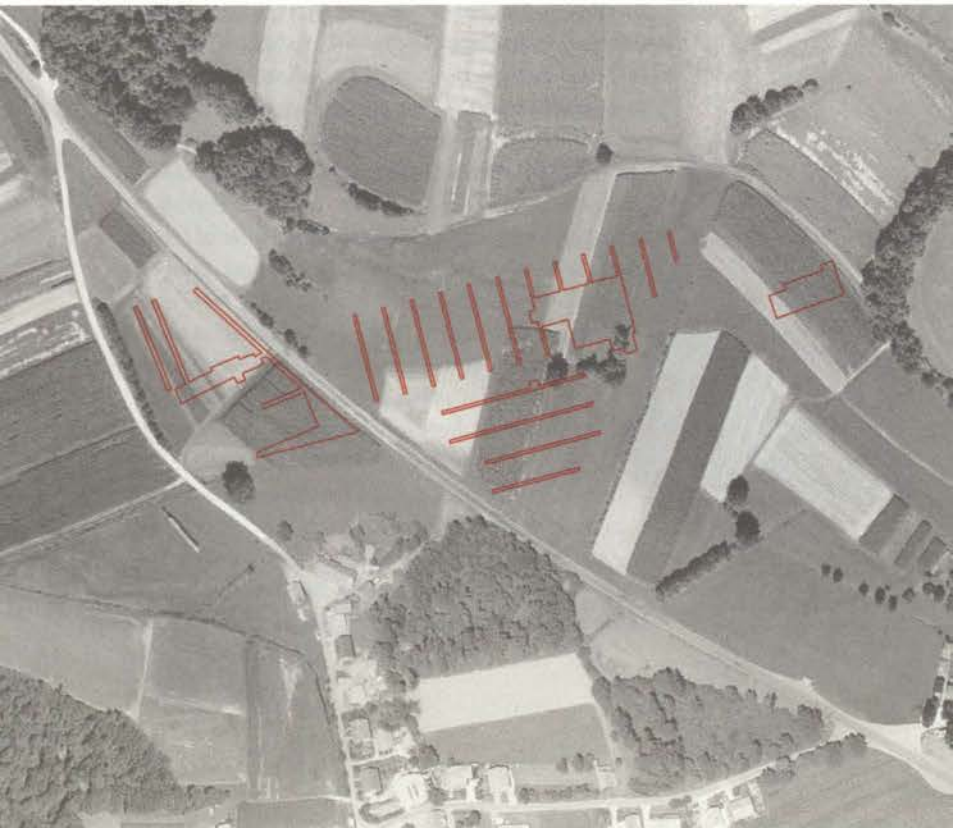
Krtina

IRN 10621	Krtina near Domžale – archaeological zone
Motorway section	SK 08 Blagovica–Šentjakob
Geographical coordinates	x 473528 y 112282 z 315
Primary topographical map sheet TTN5	Ljubljana–s 9
Cadastral register	C.C. Krtina, cadastral plot nos. 309, 310, 312, 312, 314, 964/1, 2, 965/2, 1194/4, 1194/5, 1194/6, 1195/2, 1195/3, 1196/2, 1196/3, 1197/2 & 1198/2
Site type	Settlement
Period	Early Bronze Age, Roman
Method and date of discovery, site discovered by	Archaeological survey 1996, Marija Mertelj
Fieldwork method and date	Excavation 1998–1999
Excavation directors	Damjan Snoj and Draško Josipovič
Excavated area	7,224 m²
Site archive kept by	Zorty, d.o.o. and ZVKDS, Kranj Regional Office

The site is located on the south-eastern flank and at the foot of Krtinski Hrib. Krtinski Hrib hill rises approximately 50 m above the alluvial valley, which surrounds it on all sides. All the streams in the area drain into the river Radomlja, which rises below the Trojane pass. Krtinski Hrib consists of Pliocene Quaternary clay with gravel and chert. Dolga Peč, as the hill was called after the Blekar brickyard, is located in the immediate vicinity of the crossroads of the Ljubljana–Celje road with the road, which has connected the Zasavje region with Kamnik from prehistoric times until the present day. The lowland between Krtina and Dob has been partly marshy and occasionally flooded for at least the last two centuries, as shown by the Franciscan cadastral register. The endeavours of the local population to regulate the brooks and drain the marshland go back to the middle of the 19th century, but the final reclamation of the area in question was only carried out between 1983 and 1987.

Bronze Age stone tools



Twenty-four small postholes for an upright timber structure were excavated in the area of Krtina 1. Pottery fragments date them to the period between the 2nd and 4th century AD. Scattered prehistoric pottery fragments were found in a grey layer beneath the Roman layer. A fragment of the rim of a black polished vessel is an outstanding find. This find and a glass bead with spiral dot and eye decoration represent the earliest datable finds.

In addtion to some prehistoric pottery fragments, a stone arrowhead was discovered at the site of Krtina 2, but it cannot be more precisely dated.

Roman finds are much more numerous at the site. The remains of at least 10 houses with stone paved floors covered with beaten clay were discovered in the destroyed part of this settlement, as well as the remains of at least 2 houses with only beaten earth floors on its southern edge. The stone paving in house S7, probably brought to the site from elsewhere, consists of pieces of dark grey marl limestone (70%), reddish silica sandstone, veinous quartz and greenish slate lithic sandstone. Apart from these types of stone, a layer of gravel (up to 8 cm thick) covered several square metres of levelled ground. This layer was undoubtedly brought from elsewhere, because it is a distinct foreign body within the reddish silt. The composition of the paving stones in house S8 differs significantly from that in house S7. No limestone or dolomite was found there. The paving consisted of silica sandstone and conglomerate, lithic sandstone and conglomerate, as well as veined quartz. Concentrations of carbonate fragments are more common than concentrations of silicates in the paving of house S7. Since numerous fragments of resistant silicates in the pavings are distinctly curved, it is presumed that they were brought to the present location from a stream.

The structures on the site are a distinct feature of the Roman settlement, which opens up an entirely new image of the countryside at that time. Timber structures made of upright posts were not sunk in postholes, but placed on special stone plinths. Even two broken pieces of querns were reused as auxiliary material for such stone settings. The large amount of burnt clay excavated on the site suggests that the walls were made of wattle and daub. The houses in the centre of the settlement were oriented in the same direction and were arranged along gently sloping terrain. Remains of timber structures with postholes were discovered only on the southern edge.

Roman bronze bell

The excavated finds comprise primarily numerous pottery fragments. A rim fragment of an Aegean bowl belonging to late forms of eastern *sigillata* is of particular significance. Such vessels are found in the 2nd century Emona material in Slovenia, but are

otherwise common on Adriatic sites, especially in Aquileia. There are numerous funnel rim and band handle fragments from Keays 1B Mauritanian amphora. Such amphoras were transportation vessels for food products from Mauritania, most probably wine or oil. Pottery of this kind is known from many 3rd and 4th century Mediterranean sites and it appears at the sites of Hrušica and Ajdovščina in Slovenia. A rim fragment and a hollow plug are most probably derived from Spanish amphoras. These contained fish sauces, or perhaps even wine. They are known from 4th century contexts and are not uncommon in early 5th century layers. An amphora rim is part of an African amphora of the piccolo type, which were used for transporting olive oil from Tunisia. They appear in 3rd and 5th century contexts.

Later period forms dominate the fine table ware and domestic pottery. Glazed pottery is a particularly noteworthy part of the pottery assemblage. It appeared at the end of the 3rd century, but is characteristic of the entire 4th and the beginning of the 5th century. The same forms appear in the unglazed pottery, which is dominated by bowls, plates and cups. Grey domestic ware included numerous jars with characteristic slightly everted rims, which are dated to the late 4th century or even later.

The pottery assemblage indicates occupation in the 2nd century that was followed by a more intensive 4th century occupation phase, which almost certainly lasted until the beginning of the 5th century. On the basis of the amphora assemblage, it would seem that the late phase population used a relatively large number of imports, especially sauces, oil and wine when compared to other *villae rusticae* in Slovenia.

Pits and postholes from an Early Bronze Age settlement were discovered in the Krtina 3 area at the foot of Krtinski Hrib.

DAMJAN SNOJ

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Lavše near Šikole

IRN 15554 (2)	Stražgonjca – archaeological site Lavše
Motorway section	Pragersko by-pass
Geographical coordinates	x 553667 y 140946 z 247
Primary topographical map sheet TTN5	Ptuj 14
Cadastral register	c.c. Stražgonjca, cadastral plot nos. 365/2, 3, 5, 6, 9, 368/1, 2, 369/1, 2, 370/1, 3, 386/1, 2, 3, 387, 388/1, 2, 3 & 4
Site type	Settlement
Period	Eneolithic, Bronze Age, Early Irona Age, Late Iron Age, Roman
Method and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Marija Lubšina Tušek
Excavated area	4,555 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The site is located on both banks of the Rakitovec Stream to the north-east of the village of Stražgonjca. It is bounded by a cart track from the village of Spodnja Gorica to the village of Stražgonjca and the Gmajna area in the west. It is bounded to the east by the local road between the villages of Gorica and Šikole and the Dolge Njive area. It is located on a gentle slope of a raised terrace. It consists of the geologically earliest sandy silt (clay) sediment, which was deposited by the Pohorje palaeostreams. This sediment was transformed into pseudogley by pedogenesis. The site is also located on both banks of the lower-lying Rakitovec stream that had additionally flooded and spread silty, sandy sediments over the undulating surface, which consists of Drava gravel and sand.

Decorated Early Bronze Age vessel fragment

The earliest occupation was discovered on the eastern bank of the Ratitovec at a depth of 0.6. to 1 m beneath

the earlier stream deposits, which contained widely dispersed prehistoric and Roman pottery. Timber structures with largely rectangular plans of varying dimensions (ca. 3 x 3, 3 x 5 and 4 x 6 m) were detectable in the numerous postholes. These structures had often been repaired and rebuilt. Hearths were generally located inside the buildings and were dug approximately 0.20 m into the clay subsoil. Relatively numerous Late Eneolithic or Early Bronze Age pottery fragments were discovered in the associated occupation layer and hearth debris.

Radiocarbon analysis of charcoal from the hearth (SE 3) in the building directly to the east of the Rakitovec gave a date of 3020–2050 cal BC, whilst charcoal from the pit (SE 11) inside the building located somewhat to the east was dated to 2500–2250 cal BC. The sample from the pit (SE 920) a further 20 m to the east was dated to 1920–1680 cal BC.

Early Bronze Age jar fragment

The occupation layer rises to the east with the underlying geology and can even be traced 0.30–0.50 m beneath the surface. The upper part of the occupation layer has been destroyed by ploughing. Some Roman pottery and hearths were found in the extreme eastern part of the site.

Similar stratigraphy is also found on the western bank of the Rakitovec, as revealed by geological trial trenches 3 and 4. The earliest occupation layer lay at a depth of 0.90 to 1.30 m and was likewise covered by alluvial sediments (0.50 m thick). However, dispersed fragments from later prehistoric periods only appear in the top stratigraphic layers up to 0.60 m beneath the turf line.

The edge of a former low pseudogley terrace was discovered 100 to 65 m to the west towards the present edge of the low terrace on the Gmajna area. Excavation revealed negative structures from timber buildings and hearths, as well as associated pottery, all of which can be dated to the Late Iron Age. A group of fragmentary Early Iron Age pottery vessels in a shallow cut were found to the north of the edge of the Late Iron Age timber buildings. This closed context indicates the existence of a barrow.

Small shallow Early Iron Age vessel fragment

The palaeochannel of the stream was recorded directly beneath the terrace and the former La Tène settlement. It was secondarily filled with sediment and a substantial number of potsherds from various prehistoric periods. The western part of the site was entirely destroyed by clay extraction,

brick-making activities and kiln construction over a century ago (a smaller pond and a rubbish dump were formed here).

The stratigraphy is typical of sites along larger streams at the interface of earlier and later geological formations. Strong alluvial activity results in the older, often the earliest anthropogenic remnants being covered with deep alluvial sediments. However, these remains are significant for defining the cultural and settlement physiognomy of the landscape.

MARIJA LUBŠINA TUŠEK

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Ledine near Radovljica

IRN 15545	Radovljica – archaeological site Ledine
Motorway section	KO 03 Vrba–Črnivec
Geographical coordinates	x 437050 y 134463 z 500
Primary topographical map sheet TTN5	Radovljica 33
Cadastral register	C.C. Predtrg, cadastral plot nos. 190, 201 & 201/4
Site type	Archaeological site
Period	Roman
Method and date of discovery	Archaeological survey 2000, Marija Ogrin
Survey area	2,600 m²
Site archive kept by	SAAS

A Roman site was defined by means of surface finds and test trenches in the fields to the north of the Kranj–Jesenice road, near the local road turn-off to Begunje. The entire defined site area within the projected construction area amounts to 1,000 m² and has not yet been excavated. Roman material, including pottery, an iron key, a fragment of Roman glass, defines the site, which is otherwise rather damaged by agriculture.

BOJAN DJURIĆ

■ Roman pottery

References

OGRIN, MARIJA, *Končno poročilo o arheološkem pregledu na potencialnem najdišču Ledine*, Ljubljana 2001.

Ločica near Polzela

IRN 15567	Šempeter v Savinjski Dolini – archaeological site Kračica
Motorway section	SK 06 Arja Vas–Vransko
Geographical coordinates	x 508564 y 124225 z 277
Primary topographical map sheet TTN5	Celje 14
Cadastral register	C.C. Polzela, cadastral plot nos. 180/2, 83/1 & 2
Site type	Archaeological site
Period	Roman
Method and date of discovery	Archaeological survey 1995, Slobodan Olić and Alenka Vogrin
Excavated area	Unexcavated and destroyed
Site archive kept by	SAAS

The Roman site was only recognised during a repeated examination of the material, but had already been destroyed in the field. The material, pottery, building material and a 3rd century coin, suggest that it was a settlement.

BOJAN DJURIĆ

Bronze coin of Emperor Claudius II Gothicus, 268–270 AD

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OLIĆ, SLOBODAN, *Poročilo o intenzivnem arheološkem pregledu na trasi avtoceste Arja vas–Vransko*, Celje, 1995.

Log near Vipava

IRN 15523	Dolga Poljana – Prehistoric settlement
Motorway section	HC Vipava–Selo
Geographical coordinates	x 417346 y 81001 z 99
Primary topographical map sheet TTN5	Ajdovščina 14
Cadastral register	C.C. Budanje, cadastral plot nos. 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667 & 2668
Site type	Settlement
Period	Eneolithic
Method and date of discovery, site discovered by	Archaeological survey 1997–1998, Patricija Bratina
Fieldwork type and method	Excavation 1998
Excavation director	Patricija Bratina
Excavated area	6,528 m²
Site archive kept by	ZVKDS, Nova Gorica Regional Office

Stone arrowhead

The site is located in the centre of Vipavska Dolina valley, to the south of the Vipava–Ajdovščina main road, between the hamlet of Log and the toll station. Archaeological rescue excavations were undertaken on the somewhat damaged Eneolithic settlement on the Vipavska Dolina flood plain.

Unfortunately, the prehistoric occupation layer was entirely destroyed by intensive agriculture and fluvial erosion on the greater part of the excavated area. The site was especially damaged by extensive land reclamation in the 1980s and by the construction of walls (foundations) discovered in the central part of the area. The artefacts from the wall area and the building method

Eneolithic pottery fragments

suggest that these earlier structures were associated with military activity during the First World War.

In addition to numerous prehistoric pottery fragments (351) and stone artefacts (34), two prehistoric structures discovered at the edge of the archaeological excavation are undoubtedly evidence for the existence of a settlement.

The first is a palaeochannel (ditch), the bank of which consisted of a layer, rich in prehistoric material. The second structure is a pit cut into a clay and stone chip layer, which probably served as a rubbish pit for the settlement. The pit fill consisted of prehistoric potsherds, stone artefacts, charcoal, animal bones, as well as a larger and smaller stone packing. The prehistoric pottery indicates site continuity from the Middle to the late Bronze Age, or rather the occaisional use of this area during the Bronze Age. The excavated stone tools likewise date to the Bronze Age.

Fragment of First World War bayonet and spur

PATRICIJA BRATINA

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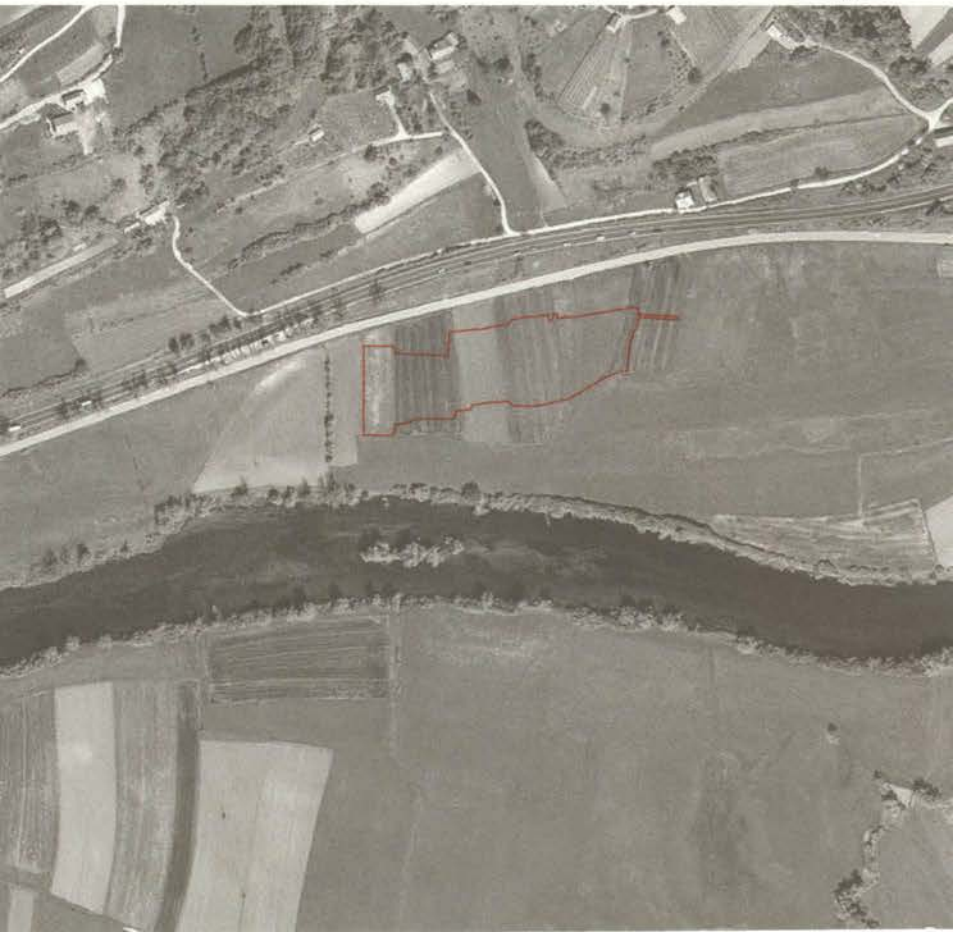
Loka

IRN 15511	Ruhna Vas – archaeological site Loke
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 523251 y 80698 z 153
Primary topographical map sheet TTN5	Kostanjevica 11
Cadastral register	C.C. Tomažja vas, cadastral plot nos. 927/2, 3, 4, 5, 6, 934, 937, 954, 972 & 973
Site type	Settlement, drainage channels
Period	Early Bronze Age, Roman
Type and date of discovery, site discovered by	Ildikó Pintér and Bojan Djurić, 2000–2001
Fieldwork method and date	Excavation 2002
Excavation director	Milena Horvat
Excavated area	12,000 m²
Site archive kept by	Faculty of Arts and Sciences, Department of Archaeology, Ljubljana University

Decorated vessel fragment, Early Bronze Age

The site is located in fields between the Otočec–Ruhna Vas local road and the river Krka. Occupation took place in the small valley of the constant Cedilnik stream, which is carved into the colluvial slope of low hills on the northern side of the river Krka. Its shape indicates that it was formed by the reverse erosion of a Karst spring. This fundametally influenced the development of an alluvial-colluvial mound (153 m a.s.l.) that extends as far as the river bank. The western part of the mound was safe from the frequent floods, despite its direct proximity to the Krka.

The Bronze Age settlement covers an area of ca. 9,600 m². It was established that the entire southern part of the Cedilnik valley in the immediate vicinity of



the river Krka was densely settled. The settlement was located on slightly elevated ground. The only part that remained unsettled was less appropriate from the geological and morphological aspect. It was an open settlement consisting of closed residential and economic units. These comprised at least one to two houses and one to two outbuildings. The buildings were arranged in groups along paths or around larger open areas. The paths were built along natural gravel lenses (from the alluvial-colluvial mound of the Cedilnik) so that they were always dry. Each farmstead had an inner courtyard connected to the central open area by a path. Residential buildings have one or three rooms with a special entrance hallway or a projecting roof above the main entrance. The associated outbuildings were smaller in size, as well as being more narrow and oblong. The buildings were timber-post built. They were oriented in an south-east/north-west direction. The settlement is dated to the Early Bronze Age, the period between 1,700 and 1,500 BC.

Bronze brooch, Roman period

The drainage channels discovered in sectors F and G can be dated to the Roman period. They represent a Roman drainage system used for draining rain-water from the slope to the north of the site (from the Cedilnik valley). The geological and geomorphological conditions on the site indicate the possibility that the alluvial-colluvial area mound of the Cedilnik was maintained as agricultural land during the Roman period. This is borne out by the presence of by these drainage channels. Other locations in this area are less appropriate for cultivation.

MILENA HORVAT

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HORVAT, MILENA, *Poročilo o arheološkem zaščitnem izkopavanju na arheološkem najdišču Loka na trasi Smednik–Kronovo*, Ljubljana 2003.

Loke

IRN 15517	Družinska Vas – archaeological site Loke
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 520996 y 79921 z 163
Primary topographical map sheet TTN5	Novo Mesto 20
Cadastral register	C.C. Družinska vas, cadastral plot nos. 792/1 & 793/1
Site type	Settlement
Period	Early Bronze Age
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 2003
Excavation director	Ana Kruh
Excavated area	750 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

The site is located on a hillside to the north of the river Krka and to the west of the village of Bela Cerkev. Excavation covered part of an early Bronze Age settlement, which extends also outside the motorway corridor to the north-west. The extent of the settlement structures was determined on the basis of numerous pits cut into the underlying geology. They are classified as pit dwellings with extant postholes for roof structures.

The numerous excavated Litzen potsherds with characteristic corded decoration were important for the chronological definition of the excavated settlement units. Such pottery dates to the end of the Early Bronze Age (Bd A2), or ca. 1700–1550 BC. Radiocarbon dating of charcoal samples from the fill will facilitate a more precise definition.

Sites with Litzen pottery have been primarily known so far in the area between the rivers Sava and Drava in

Early Bronze Age vessel fragments, Litzen culture

Croatia, as well as on individual sites in Austria and Hungary. New discoveries in Slovenia were made possible by excavations in advance of motorway construction. These have revealed lowland settlements in areas where they were previously unknown (the sites of Slivnica near Maribor, Kotare, Nova Tabla and Krtina). Only isolated examples of Litzen pottery had been known before this from the sites in the Ljubljansko Barje marshland (Maharski Prekop, Notranje Gorice and Blatna Brezovica), as well as the Brinjeva Gora upland settlement and a sporadic find from Maribor. The significance of the Loke site also lies in the fact that this and another newly discovered site to the east of Bela Cerkev are the only lowland sites with Litzen pottery in the Dolenjska region.

ANA KRUH

Malečnik near Maribor

IRN 15528	Malečnik – archaeological site Pod Meljskim Hribom
Motorway section	SK 03 Pesnica–Miklavž
Geographical coordinates	x 553127 y 157187 z 253
Primary topographical map sheet TTN5	Maribor 4
Cadastral register	c.c. Orešje, cadastral plot nos. 140, 145/2 & 270/2
Site type	Settlement, road
Period	Neolithic, Eneolithic, Bronze Age, Late Iron Age, Middle Ages
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 2002
Excavation director	Mira Strmčnik Gulič
Excavated area	284 m²
Site archive kept by	ZVKDS, Maribor Regional Office

Neolithic vessel sherd

Decorated Eneolithic bowl with potruding handle

The multi-period settlement site was discovered on the left bank of the river Drava. It was located beneath the Meljski Hrib hill to the west of the confluence of the Vodolski Potok stream with the river Drava. It lay on a meander, beneath 5–7 m thick colluvial deposits. It was discovered during the construction of a retaining wall for the local road.

The remains of five settlement phases were recorded on the completely excavated area, as well as a road with three separate phases of river cobble metalling. It is impossible to provide an accurate date for the road, on which wheel ruts (Levels 1 and 3) and drainage ditches were preserved.

The upper occupation layer (10–60 cm thick) was present over the entire excavated area. It was dated to the Early Medieval period. It was badly damaged by the above-mentioned road. 14 pits were excavated. They contained pottery, animal bones and burnt material.

A La Tène occupation layer containing 25 pits lay beneath the Early Medieval phase, except in the areas

where it had been destroyed by the road. This layer was 10–75 cm deep in trench IV and contained occasional potsherds and charcoal fragments.

Late Middle Bronze Age remains were discovered in the western part of the excavated area. A pit (No. 19) containing almost completely preserved Retz-Gayari culture pottery (3,700 BC) was excavated in the same area.

Deeper excavation revealed three larger pits (Nos. 20–22) containing fragments of Lasinja culture pottery at a depth of 6.20 m beneath the sediment layers.

Late Iron Age dish fragment

MIRA STRMČNIK GULIČ

View of the medieval road

Early Slavic pottery platter fragment

Bronze Age jar

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Med Cestami near Šikole

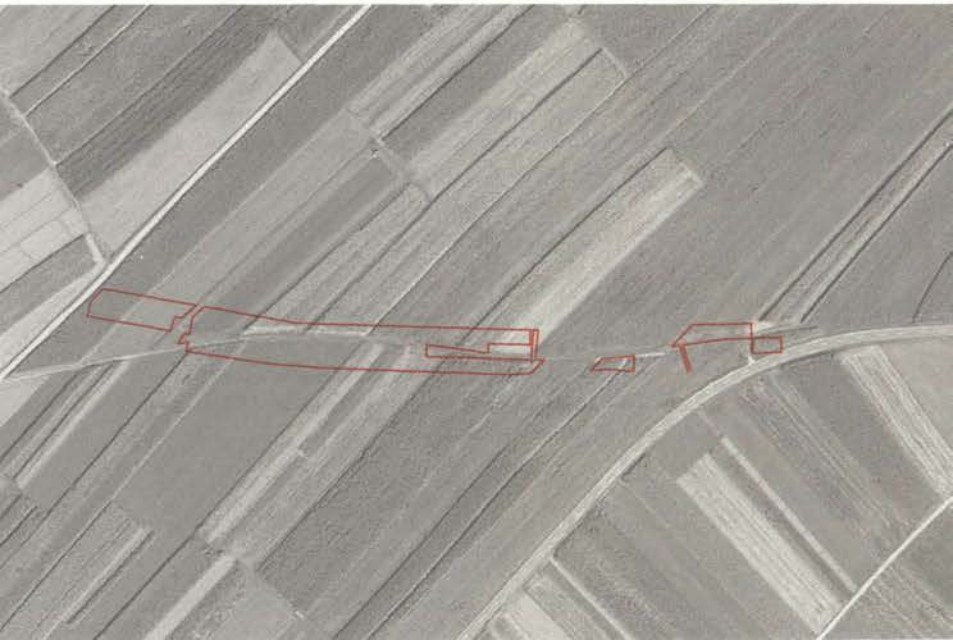
IRN 15557	Šikole –archaeological site Med Cestami
Motorway section	Pragersko by-pass
Geographical coordinates	x 554561 y 140726 z 246
Primary topographical map sheet TTN5	Ptuj 15
Cadastral register	c.c. Šikole, cadastral plot nos. 153, 154, 162, 163, 164/1, 165/1, 167, 168/2, 169, 171, 172, 174/2 & 177
Site type	Settlement, via publica Celeia–Poetovio, cemeteries
Period	Bronze Age, Late Iron Age, Roman
Method and date of discovery, site discovered by	Archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2002–2003
Excavation director	Marija Lubšina Tušek
Excavated area	12,000 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The site is located to the east of the village of Šikole in the Dravsko Polje plain. It is bounded by the Pragersko–Ptuj road in the south-east, the Ptuj–Rače local road in the north-east and the Rače–Šikole road in the north-west. It is linked to the site of Dolge Njive at the latter point. The route of the Roman itinerary road *Celeia–Poetovio* is known in the area.

The underlying geology of the site consists of gravel deposited by the river Drava in the Pleistocene, which is covered by fluvial sediments from numerous streams that flowed from the Pohorje mountains. The site is located on fields and is damaged by ploughing to a depth of 0.30 m. Additional damage was caused by rectangular pits (2 x 1.5. m), which run laterally across the site. These were probably part of some form of military fortification system from the Second World War or the first half of the 20th century.

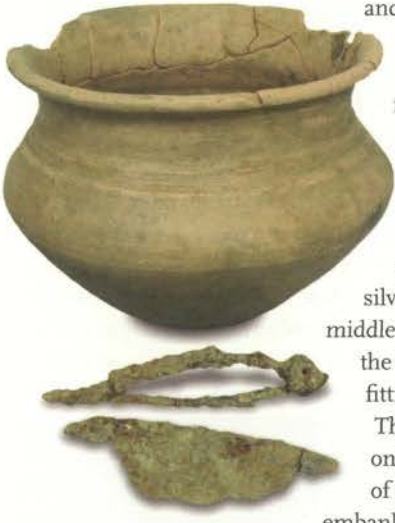
The ploughsoil contained modern, Roman and prehistoric pottery. Beneath it, excavation revealed several occupation layers (0.6–0.8 m and 1.1–1.5 m in depth) with associated artefacts from the Roman period, Late Iron Age and Bronze Age. Various structures were also cut into the subsoil, i.e. timber structures with associated inventory (hearths, ovens, wells, cisterns, storage and rubbish pits, drainage ditches, etc.).

Roman silver ring with glass intaglio



Finds from Celtic warrior cremation grave No. 2

Occupation layers in the extreme western and eastern parts of the stratified multi-period site are separated by visible layers of sandy alluvial sediments. The point bar bases are wider in these areas. They were more disturbed anthropogenically in the prehistoric and Roman periods by negative structures of varying functions. These penetrate to a depth of 2 m and are additionally filled (reo-sediments). The excavations, undertaken here, were, thus, more difficult and demanding. The site was a complex settlement rich with uninterrupted occupation from the Bronze Age to the Roman period. It was founded in direct proxmity to the Amber route and subsequently the itinerary road. Late Iron Age and Roman period cemeteries partially lined this road. A total of 21 cremation graves dug to a depth of 0.50 to 0.90 m were found. A damaged warrior grave containing a badly corroded iron sword, chain, some rivets, a shield boss, fibulae and characteristic pottery was the most significant of the six La Tène (Celtic) graves. Significant Roman finds include a silver ring with an intaglio and coins from the middle of the 2nd century, as well as finds from the surface of the Roman road: bronze harness fittings, a wagon and a bronze weight.



Finds from Celtic cremation grave No. 11

The Roman road with side drainage ditches only survives in two to three layers to a width of 8 m wide, because of ploughing. The road embankment was probably constructed directly on the old ground surface or compacted clay subsoil, without any additional structure.

MARIJA LUBŠINA TUŠEK

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Medlog

IRN 15520	Medlog – Ruins of Forsthof Castle manor
Motorway section	Lopata–Medlog
Geographical coordinates	x 518067 y 121682 z 241
Primary topographical map sheet TTN5	Celje 29
Cadastral register	c.c. Medlog, cadastral plot nos. 1304/1, 27, 28, 1305, 1306 & 1308
Site type	building
Period	Early Modern
Method and date of discovery, site discovered by	Archaeological survey 1999, Bojan Djurić
Fieldwork method and date	Excavation 2001
Excavation directors	Matjaž Novšak and Simona Tomažič
Excavated area	2,078 m²
Site archive kept by	Arhej, d.o.o., ZVKDS Celje Regional Office

A house used to stand at the site, perhaps the manor of nearby Forsthof Castle. It was recorded on the 1825 Franciscan cadastral register (i.e. that from the period of Emperor Franz I of Austria). The building remains were entirely destroyed by intensive cultivation over the course of time. Only truncated traces of settlement remained: the ruins of the house, small finds, e.g. coins (two silver coins from the beginning of the 18th century) and a larger amount of pottery, mostly dated as originating from the period between the 16th and 19th century. Almost all the pottery is derived from a rubbish pit, which also contained a substantial amount of animal bone.

A brief overview of the excavated area is required for an interpretation of the archaeological finds from the site. The Franciscan cadastral register of 1825 records that Forsthof Castle (also called Gozdni Dvor, 'forest castle', part of it still stands and is in use) stood to the north-east of the excavated area with the Tiergarten (recorded as Zverinjak, "bestiary"; present-day Tirgut toponym) immediately to the north-west. Gozdni Dvor was first recorded in documents in 1469, when it was leased out to Wenko von Lustthal, commander of the garrison of Celje. A mill belonging to the court estate was located by the river Ložnica, between Gozdni Dvor and Zverinjak. Great attention was paid to forests in the Middle Ages, not only for firewood and timber, but above all for hunting. Emperor Maximilian I was apparently especially interested in Zverinjak, which was fenced in so that game was bred there according to his orders. The woods were sold in 1682 and some of the proprietors of the forest at Gozdni Dvor are known, among them Baron Moscon in the period between 1754 and 1850.

The above data indicate that the buildings in the vicinity of the site, with the exception of Zverinjak, had been in use for at least 400 years and some of them still serve their purpose. The castle complex certainly included a building that can be interpreted as a manor, where either the stewards of Zverinjak or the millers resided. The building used to stand precisely within the excavated area, but unfortunately its foundations were gradually destroyed. At least two factors contributed to that: the flooding of the rivers Savinja and Ložnica and intensive agriculture in the area for the last hundred years. The building was located at the highest part of the site, which meant that it was severely damaged by agricultural activities.

Glazed tile bearing the coat-of-arms of the Carniolan aristocratic family of Dienersperg

Part of the southern wall recorded in the Franciscan cadastral register coincides with the raised underlying gravel. The foundations of the building were entirely destroyed. They survive as rubble stretching to the south of it. The location of the building is confirmed by the finds in the ploughsoil, where a large amount of pottery appears to the north and south of it (with the greatest density of finds in the ploughsoil directly above the ruins). The layer beneath it has also been infiltrated by pottery and building material. The greatest density of both was discovered beneath the ruins and in the area of the house, or to the north of it. A considerable number of potsherds and glazed tiles (several thousands of them) were discovered in a pit, which was interpreted as a refuse pit. The pottery and tiles vary in type and are dated to the period from the 16th century onwards.

The tiles are the most interesting finds from the Medlog site, both in their artistic quality and date. There is an outstanding find of an ochre-brown glazed tile with a coat-of-arms divided horizontally by a bar and featuring a dog in the upper right-hand corner and a horse in the lower left-hand one. The inscription above the coat-of-arms reads: DF. V. D. H. Z. W. V. R. with the date 1689 incised beneath it. The coat-of-arms belongs to the Dienersperg noble family, part of the knights and landed gentry with one branch living in Carniola and the other in the vicinity of Celje. They were the owners of at least three castles there in the 17th century, including the castle of Vojnik. A fragment of a clay mould for the above-mentioned tile is very interesting at the present stage of excavation, because it indicates that the site of Medlog might include the remains of a stove-making (and perhaps pottery) workshop. It is otherwise difficult to explain the series of deformed, repaired pieces of tiles and a tile mould, because it is not logical to

assume that such semi-manufactures and wasters were transported to Medlog by stovemakers.

The pottery consists predominantly of fragments of kitchen ware, primarily jar and dish sherds. Another large group comprises glazed dishes with sporadic occurrences of fragments of glazed pitchers and flasks. Bowls make the second largest group of pottery in number as well as form. Their number is astonishingly large compared to other sites, e.g. the castles of Šalek, Otok pri Dobravi, Gutenwerth, etc., and the reason for it is probably more complex than at first it seems. The first possibility is the existence of a pottery workshop in the vicinity and the fact that a large number of artefacts consisted of deformed, discarded items. The second possibility, however, indicates a specific economic activity. The closest and only analogies in Slovenia in this case, partly as to their forms and primarily as to their numbers, are found in the Kamniške Alpe mountains. The function and use of pottery here were adapted to stock-breeding and processing of milk (making cheese, sour milk, etc.). The cause of similarity as to the number and form between two such diverse sites, however, is a subject of further research.

17th century polychrome glazed tile fragment

Despite the fact that the building was destroyed, the causes of destruction are more or less known, and allow for the possibility that farmers pulled down the final remains on purpose and used the building material for levelling the minor descent of the terrain to the south of the building. It is possible to confirm its existence with certainty by means of archaeological finds, namely the ruins and small finds, i.e. pottery and tiles and, last but not least, two silver coins from the period between 1708 and 1711. Most of the pottery dates to the 16th or 17th century, while it was possible to confirm the dating of the tiles and pottery by analogy: the tiles date to the 16th or 17th century, the bowls from the period between the 16th and 18th century, while the jars require a more detailed analysis on the basis of a larger sample. The analysis of animal bones from the rubbish pit will reveal the diet of the inhabitants.

SIMONA TOMAŽIČ

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Medvedjek near Veliki Gaber

IRN 10177	Medvedjek – archaeological site
Motorway section	KO 14 Bič–Trebnje
Geographical coordinates	x 493501 y 86999 z 338
Primary topographical map sheet TTN5	Višnja Gora 48
Cadastral register	c.c. Veliki Gaber, cadastral plot nos. 419/2, 420/2 & 490/4
Site type	Cemetery
Period	Roman
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 2002
Excavation director	Primož Predan
Excavated area	973 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

A Roman cemetery was discovered at the northern edge of the existing motorway directly before the point where the Medvedjek hill near Veliki Gaber levels out at Gmajna. The area is part of a larger site known under the name of Medvedjek, which was excavated on the southern side of the existing motorway in the period between 1980 and 1981. The central part of the site was destroyed during the construction of the Ljubljana–Zagreb road between 1958 and 1960.

Sixty-two cremation burials were recorded during the rescue excavation. They display a wide range of grave construction, but date to a relatively short period of time. The finds indicate that the graves date to the period between the middle of the 1st and the end of the 2nd century AD. It is important for the excavation of the northern part of the mortuary site that three Roman cremation graves were additionally cut into a large prehistoric barrow on the southern side of the present road (excavated between 1980 and 1981). A small Noric-Pannonian type Roman barrow with a dome-shaped tomb in the centre was also excavated at that time, but, regrettably, had already been robbed. All the newly discovered stone-built tombs were also plundered. However, the data are important, because they indicate that robbing took place in the period when the tombs were still visi-

ble in the landscape. The fact is also interesting that robbers hardly ever touched the oil-lamps, obolos and personal artefacts (fibulae, bracelets) and the cremation remains. This would indicate that the tombs were robbed in the Roman period.

The prevailing grave construction type consists of rough limestone quarry stone lined rectangular graves covered with one or two stone slabs. 26 such graves were excavated, amounting to 42 per cent of all the graves discovered there.

Stone cists or graves lined with stone slabs were far less frequent. Three or even four such graves were discovered, amounting to 6.5 per cent of all the graves. Two stone-built tombs with extant rectangular or even oval plans (1–2 m in size) were very similar to them. Their entrances were made in one side through a corridor or *dromos*. This type amounts only to 3 per cent of all the discovered graves. The domed tomb or the large circular quarry stone grave (ca. 4 m in diameter) was probably the most prominent structure in the area. A similar type of grave construction had already been discovered in the 1980 and 1981 excavations. A large stone base with an opening for the insertion of grave stelae was found in the mortuary site, suggesting that other markers existed, but are not preserved. Perhaps the markers of simple grave pits were made of less durable materials (e.g. timber), which would account for the fact that the graves have remained untouched.

Roman oil lamp with tragic theatre mask

A very common burial type was that of a grave in a larger oval or less frequently rectangular pit (60–120 cm in size) into which the cremated remains and grave goods were placed. Burials in pits are considered the simplest method of burials in the region of Upper Pannonia during the Early Imperial period. This was the case with 22.5 per cent of the graves, excavated on the site. A more modest method of burial can be added to them, i.e. burials in smaller, irregular pits (oval or oblong in shape) with scarce grave goods. This type comprises 16 per cent of the graves discovered here. Urn burials (typical for this part of the Dolenjska region in terms of size and manufacture) are not distinguished from the usual amphora burials. These account for 8.5 per cent of the burials.

PRIMOŽ PREDAN

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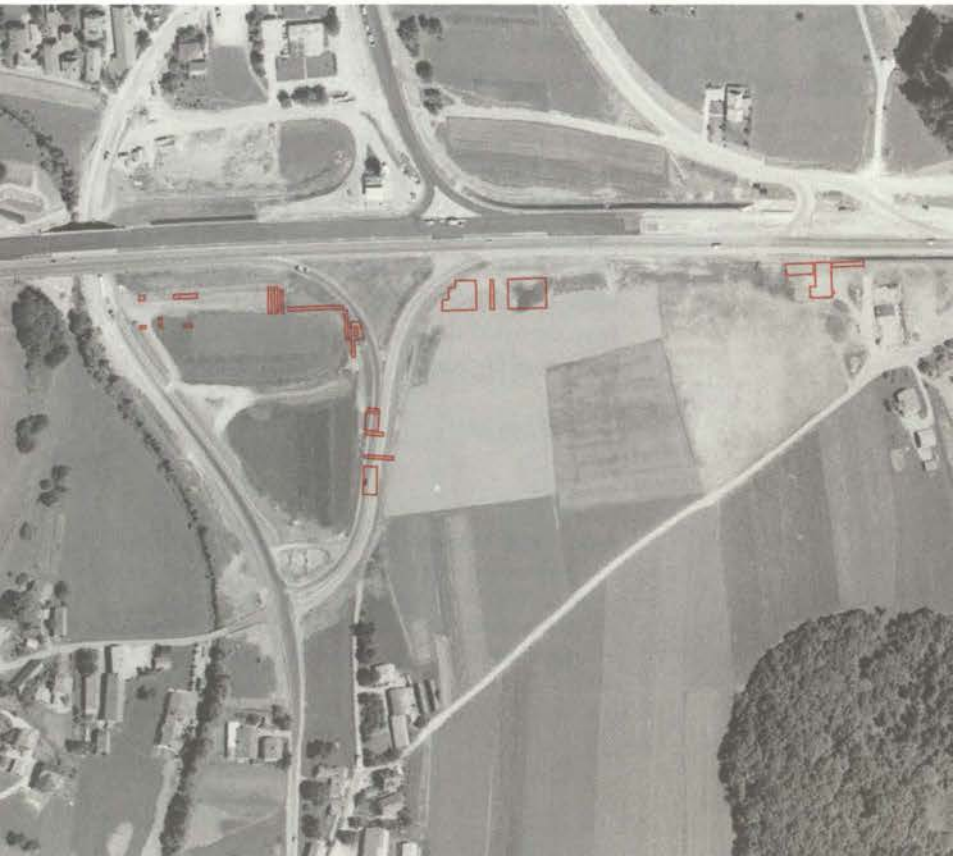
Mrzlo Polje near Ivančna Gorica

IRN 15534	Mrzlo Polje – archaeological site
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 485393 y 87688 z 323
Primary topographical map sheet TTN5	Višnja Gora 44
Cadastral register	c.c. Gorenja vas, cadastral plot nos. 63/3, 64/2; c.c. Hudo, cadastral plot nos. 63/7, 93, 98/2, 100/2 & 780/7
Site type	Via publica Emona–Praetorium Latobicorum, cemetery, road
Period	Roman, Modern
Method and date of discovery, site discovered by	Archaeological survey 1996, Bojan Djurić and Asja Zec
Fieldwork method and date	Excavation 1998
Excavation director	Drago Svoljšak
Excavated area	2,221 m²
Site archive kept by	Narodni muzej Slovenije, Ljubljana

Mrzlo Polje is a small settlement to the south of the Ljubljana–Zagreb motorway near Ivančna Gorica. Pre-excavation geological surveys in the area revealed the remains of prehistoric barrows, while archaeological surveys suggested the presence of a prehistoric and Roman settlement. The existence of the old Stična–Muljava road still discernible as an abandoned cart track is also known from archive sources.

The Mrzlo Polje site was divided into four sections (A, B, C and D) before the beginning of excavation. The results of archaeological trial trenching were negative in sector A, where the resistivity survey had indicated the remains of a prehistoric barrow. However, complex alluvial layers were recorded, which explained the activity of the Višnjica stream in the past to a certain degree. The acquired data helped us to understand the geological transformations of the surroundings that were of greater archaeological interest.



A similar situation was revealed in sector B, where flooding and the construction of an Early Modern road damaged the Roman layer.

Road structures from the period between the middle of the 18th and 20th century (up to 1 m thick) were discovered in sector C. Four metalling phases for the road were distinguished. Each was covered with several layers consisting of larger and smaller stones, rubble and sand, which were defined as new surfaces or repairs on the old road surface. The basal structure was most interesting: a 4.9 to 5 m wide Early Modern road, consisting of several layers of broken stone with a well preserved western edge and traces of ruts, as well as a drainage ditch on each side. The road was dated on the basis of archaeological finds (fragments of coarse ware, fine glazed and unglazed pottery, two small rosary pendants and various small metal objects), the construction technique and historical data (archive sources on the construction of a network of roads in Slovenia, cartographic material, especially the military map from 1763–1787, the period of Emperor Joseph II of Austria) as dating to the middle of the 18th century, the period of Empress Maria Theresa of Austria. It was defined as an important regional road between Stična, Muljava and other places on the river Krka (Žužemberk).

Early Modern road, 18th century

Spindlewhorl and prehistoric pottery fragments

In addition to the two 18th century rosary pendants and a silver coin of Emperor Leopold II from 1690, sec-

ondarily used as a pendant and therefore unsuitable for dating, the most significant finds are coins. These provide a means of dating some layers or road surfaces to the second half of the 19th and 20th century. Metal finds consist mostly of nails, metal parts and various small iron objects, e.g. a horseshoe, connected with horse harness or carts, tiny documents of transportation and travelling along the road. Several potsherds were discovered in embankments and the ditch fills.

Pottery cup base, *sigillata* plate fragment of and two fragments of bronze fibulae, Roman period

A large quantity of prehistoric pottery was discovered in the western part of sector D. Bronze Age forms predominated and several of the most characteristic fragments could be defined on the basis of analogy with pottery from Oloris near Dolnji Lakoš as dating to the Late Bronze Age. Certain red and black painted potsherds dated the site to the Hallstatt period. The excavation revealed no traces of structural remains that would testify to permanent settlement in the area of sector D, but the quantity of domestic finds indicated the existence of such a settlement in the immediate vicinity.

Part of a badly damaged Roman cemetery was excavated in the eastern part of sector D. Seven damaged graves and the remains of four hearths were recorded. The graves were simple and without grave structures, with one exception. Their inventory was modest, mostly consisting of remains of large comb- and furrow- decorated coarse ware urns and fragments of smaller and finer pottery. Other pottery from the graves lay above them in a layer, which was probably damaged by deep ploughing. A Roman fibula and a coin of Emperor Marcus Antonius (161–180) were discovered outside the graves. The pottery, particularly the large urns, can be best compared with the finds from the Roman cemetery in Pristava near Trebnje.

BARBARA JERIN *and* TOMAŽ NABERGOJ

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Na Dolinje near Črnivec

IRN 15536	Brezje na Gorenjskem – archaeological site Na Dolinje
Motorway section	KO 03 Vrba–Črnivec
Geographical coordinates	x 441717 y 130932 z 453
Primary topographical map sheet TTN5	Radovljica 45
Cadastral register	C.C. Brezje, cadastral plot no. 888
Site type	Archaeological site
Period	Prehistoric
Method and date of discovery, site discovered by	Archaeological survey 1999, Gojko Tica and Bojan Djurić
Survey area	100 m²
Site archive site kept by	SAAS

The site is located on a Pleistocene terrace at the western edge of the Peračica stream, near its confluence with the Sava river valley. Former arable fields have been converted to pasture. Sub-surface surveys and two test pits (1 m²) confirmed the existence of structures (postholes) and presence of stone artefacts at the site.

BOJAN DJURIĆ

- Prehistoric pottery
- Flint

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Na Lokah near Grosuplje

IRN 11874	Paradišče – archaeological site
Motorway section	KO 12 Šmarje–SAP
Geographical coordinates	x 471577 y 92019 z 339
Primary topographical map sheet TTN5	Ljubljana–J 28
Cadastral register	c.c. Šmarje, cadastral plot nos. 371/4, 372/1, 3, 375, 377 & 378/2; c.c. Sela, cadastral plot nos. 750 & 760/2
Site type	Archaeological site
Period	Prehistoric
Method and date of discovery, site discovered by	Archaeological survey 2000, Gojko Tica
Survey area	100 m2
Site archive kept by	SAAS

The site is located on a slightly undulating area of fields to the south of the prehistoric settlement on Magdalenska Gora. A surface survey at this place recovered pottery fragments, which confirmed the existence of prehistoric and Roman structures, probably of a settlement nature.

BOJAN DJURIĆ

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■ Prehistoric pottery
■ Roman pottery

Na Vrhu near Stepani

IRN 15527	Stepani – Na Vrhu villa rustica
Motorway section	SK Klanec–Ankaran
Geographical coordinates	x 411298 y 46025 z 215
Primary topographical map sheet TTN5	Kozina 21
Cadastral register	c.c. Rožar, cadastral plot nos. 705/1, 2, 706/2, 713, 714/1, 2, 3, 715, 718, 720, 725/1, 726/2, 6, 7, 8, 9, 10, 11, 12, 13, 17 & 690
Site type	Villa rustica
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 2000, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2000
Excavation director	Gojko Tica
Excavated area	8,500 m²
Site archive kept by	Akord, d.o.o.

The site is located to the north-east of the hamlet of Stepani. Two areas were excavated: Na Vrhu 1 and 2. Between March and November 2000, the former proprietor Reja machined off the soil deposits as far as the underlying flysch and thus destroyed the remains of at least one Roman building.

Roman residential remains at the site of Na Vrhu 1 lay on slightly sloping terrain to the west of the top of the Na Vrhu hill. The very quantity of Roman building material discovered during a preliminary survey indicated intense Roman settlement in the area, which was confirmed by the presence stone blocks of various sizes after the ma-

chine removal of a part of the site. The excavation revealed the modest remains of Roman buildings and other structures: some short walls, part of a Roman ground surface and a rock-cut hollow, perhaps a water cistern.

However, the site did not only undergo destruction in 2000. Comparisons with the condition recorded in the Franciscan cadastral register and the state during the archaeological excavations helped to define the transformations of the surface at the site of Na Vrhu.

Undoubtedly, a Roman farm existed there. The extensive devastation of the area makes it impossible to confirm or to deny the hypothesis that a *villa rustica* existed at this location. Gradual development and transformation of the farm are indicated by the building material and stratigraphic relationships. Over 40 types of tegulae were discovered here. The farm would not have had so many types if it had been built in a single period. The most interesting tegulae are those with TULLIÆ A.F. CRISPINÆ stamps. Similar stamps with abbreviations T. A. F. C. in the middle are known from some sites in Istria. This indicates a limited distribution of such tiles in the *ager* of Trieste. The Crispina workshop manufactured products in the 1st century AD, and most of the finds from the site of Na Vrhu originate from there.

Fragment of manufacturer's stamp on a Roman tegula

Another area (Na Vrhu 2) was excavated on the southern slope of Na Vrhu. The reason for excavation in this area was the presence of numerous Roman surface finds. Terraces were recorded in this area as early as the Franciscan cadastral register, even before the beginning of the 19th century. This signifies intense exploitation that resulted in intense post-depositional processes, which almost entirely destroyed the site. Trial trenching revealed the existence of an undamaged layer of irregular form, which was dated to the 1st century AD on the basis of a coin of the Emperor Tiberius. The layer, at the very least, testifies to the exploitation of the area in the Roman period. The site dates to the same period as the neighbouring sites of Na Vrhu 1 and Boško.

GOJKO TICA

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Nemškarica near Ajdovščina

IRN 4951	Ajdovščina – archaeological site Nemškarica
Motorway section	HC Vipava–Selo
Geographical coordinates	x 413261 y 83049 z 108
Primary topographical map sheet TTN5	Ajdovščina 2
Cadastral register	c.c. Vipavski Križ, cadastral plot nos. 2926/1, 2942 & 2943
Site type	Sacral building
Period	Middle Ages (?)
Type and date of survey	Geophysical survey 1995
Survey director	Branko Mušič
Survey area	6,434 m²
Site archive kept by	SAAS

The protected archaeological site was surveyed for required changes to motorway construction plans. The existence of built structures in this area, traditionally of a sacral nature, was confirmed by geophysical survey.

BOJAN DJURIĆ

References

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Resistivity survey results


1:10.000

Nova Tabla near Murska Sobota

IRN 15512	Murska Sobota – archaeological site Nova Tabla
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 590085 y 166404 z 187
Primary topographical map sheet TTN5	Turnišče 21
Cadastral register	c.c. Murska Sobota, cadastral plot nos. 4877, 4879, 4881, 4883, 4885, 4887, 4888, 4889, 4890, 4892, 4893/1, 2, 4895, 4897, 4899, 4902/1, 2, 4903, 4904, 4905, 4906, 4907, 4908, 4909, 4927/1, 4928, 4929, 4930, 4937/1, 5045, 5046, 5047, 5048, 5050, 5057 & 5182
Site type	Settlement, cemetery
Period	Neolithic, Bronze Age, Early Iron Age, Late Iron Age, Roman, Early Middle Ages
Method and date of discovery, site discovered by	Archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Fieldwork method and date	Excavation 1999–2003
Excavation director	Mitja Guštin
Excavated area	365,000 m²
Site archive kept by	Faculty of Arts and Sciences, Department of Archaeology, Ljubljana University

A dispersed settlement from various historic periods was excavated at Nova Tabla to the south of Murska Sobota. Nova Tabla lies in the direction of Bakovci, in the area to the east and south of the Soboško Jezero (lake). The landscape criss-crossed with streams was probably largely forested, so that individual small and modest farms only cleared the area required for their existence and exploitation. The settlement on the site of Nova Tabla was thus determined by the Dobel stream and its now dry left-bank tributary.

Early Bronze Age jug, Litzen culture

Three Neolithic were succeeded by 18 Copper Age pits and two cremation graves over the course of time in the excavation area. 35 Early Bronze Age settlement structures were also excavated, but only eight Middle Bronze Age structures were discovered. A dense Late Bronze Age settlement with pit dwellings and pits comprised 40 structures, as well as a ritual pit containing pottery and burnt bone. The Early Iron Age is represented with 20 dwelling structures and 102 cremation graves, 11 of which were surrounded with enclosure ditches.

Late Bronze Age vessel with swagging decoration

Central graves were absent from four enclosure ditches and three stone settings. The Late Iron Age is represented by a number of nucleated farms, comprising a total of 58 pits, three wells and 16 graves. Some farms from the Roman period were also uncovered, as well as several workshop structures with 294 pits and a cemetery with 30 graves, 20 of which were surrounded with enclosure ditches. 17 pit dwellings and 130 smaller settlement structures with a well and 13 inhumation graves dated to the Early Middle Ages.

A distinctive feature of the site is a large Early Iron Age and Early Roman cemetery where some graves are

La Tène iron razor

surrounded with characteristic enclosure ditches, from which material for the small barrows above the grave pits was derived (Cf. "Grobišče starejše železne dobe na Novi tabli pri Murski Soboti", pp. 55–57). The Eneolithic, Late Iron Age and Roman burials were cremations. Some Early Medieval inhumation burials were also discovered in the same area.

The site included some Late Iron Age farmsteads, consisting of pit dwellings, pits and rectangular structures with load-bearing posts, as well as several Roman farmsteads with timber-built houses (3 x 4 m). Roman structures further included some workshops or pits for iron production.

Bronze pin, Early Iron Age

Settlement was particularly intensive in the Early Middle Ages. It consisted of numerous residential structures from the period between the 6th and 9th century and individual inhumation burials from the final 9th century phase (Cf. "Zgodnjeslovanska naselbina na Novi tabli pri Murski Soboti", pp. 85–89).

MITJA GUŠTIN

Early Slavic pottery

Roman pottery

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Obrežje – International Border Crossing

IRN 12654 (1)	Obrežje - archaeological site
Motorway section	KO Krška Vas–Obrežje
Geographical coordinates	x 554159 y 78789 z 144
Primary topographical map sheet TTN5	Samobor 25
Cadastral register	c.c. Velika Dolina, cadastral plot nos. 40/2, 42/1, 43/1, 44/1, 46/1, 47/1, 48/1, 49/1, 50/1, 51/1, 88/3, 5, 7, 8, 91/1, 92/3, 94/2, 95/1, 2, 96, 97/1, 2, 3, 119, 124, 125/1, 2, 128/1, 2, 3, 130/1, 131/1, 134/2, 135/2, 138/2, 148/1, 3, 4, 5, 6, 149, 153/1, 155/2 & 1893/7
Site type	cemetery, fort, farmstead
Period	Late Bronze Age, Roman period, Early Modern
Method and date of discovery, site discovered by	Archaeological survey 1999–2000, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2001–2003
Excavation director	Phil Mason
Excavated area	68,903 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

Middle Bronze Age stone axe fragment

The site is located on the Pleistocene gravel terrace of the river Bregana. It is bounded by the Gorjanci hills in the south-west, by the steep edge of the Sava terrace and the now dry valley of the Struga stream in the north-west, by the flood plain of the river Bregana in the south-east and by the flood plain of the river Sava in the north-east.

The earliest phase of settlement is represented by a Late Bronze Age cemetery (10th–8th century BC) in the valley on the southern side of the Struga valley in the north-western part of the site. The cemetery of 358

cremation and 6 inhumation graves was located on the Pleistocene gravel point bars. It extended as far as the bank of the former stream. Evidence of Late Bronze Age settlement, probably connected with the cemetery, was discovered in the south-western and north-western part of the site. It consists of a total of 27 rubbish pits and 155 postholes, which formed rectangular buildings at least on the north-eastern edge of the Bregana terrace above the Struga valley.

The second phase of the site is represented by an Early Roman fort, which was probably constructed in the period around 14 or 13 BC during the final occupation of Pannonia. It was occupied until the end of the great Pannonian uprising (AD 6 - 9), after which it was abandoned.

The fort had a rectangular plan with rounded corners and was protected by a double ditch on three sides and by a single ditch on the fourth side. The ditches enclosed an area of 290 x 210 m, with another ditch being added later to the north-eastern end of the fort to enclose a 210 x 25 m annex. Two entrances were discovered in the middle of the north-eastern and south-western sides.

Gold ring from Late Bronze Age cremation grave

A large number of pits (696) and postholes (434) were excavated in the fort interior. Groups of large, deep pits used as latrines and cisterns as well as a bread oven were discovered along the inner side of the ditch. The central part of the fort was occupied by a number of rectangular barrack blocks, represented by numerous postholes, rubbish pits, latrines and storage pits as well as three ovens. Numerous grain storage pits were excavated in the south-western part of the fort. In addition to these pits, this area was characterised by five large pit groups, which were used as workshop areas over a longer period of time. Four groups of ovens were discovered outside the fort, between the external ditch and the valley of Struga. The two smaller western groups comprised 7 and 3 ovens, respectively, while the two northern groups comprised 12 iron smelting furnaces and 10 ovens, respectively.

Iron Roman styluses

Part of the main Roman *Emona–Siscia* road running past the abandoned fort was discovered in the north-western part of the excavated area. Two parallel ditches of an earlier unpaved road were located to the east of it. Isolated graves and pits from the period after the abandonment of the fort were discovered in the fort interior. Other traces of Roman settlement can be found in the enclosure by the western side of the Roman road on the extreme north-western periphery of the excavated area.

A Late Medieval settlement was located in the north-eastern part of the site towards the terrace edge. At least four rectangular buildings, composed of 328 postholes, were discovered there; 128 rubbish pits were excavated

Medieval silver decorative artefact

in the areas between the buildings. Two river cobbled surfaces, used as threshing floors or for other activities, were located slightly to the north and west of them. Access to the settlement was along two parallel paths paved with river cobbles, which ran in a north-south direction along the terrace edge towards the Struga valley.

PHIL MASON

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Obrežje – Draga – Goričko

IRN 12654 (2)	Obrežje – archaeological site
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 554157 y 78462 z 152
Primary topographical map sheet TTN5	Samobor 25
Cadastral register	C.C. Velika Dolina, cadastral plot nos. 149, 153/1, 155/1, 2, 180/1, 2, 3, 181/2, 183/1, 185/1, 190/1, 197/1, 2, 3, 200/1, 203/1, 4, 1894/14, 15 & 16
Site type	Settlement
Period	Late Bronze Age, Roman
Method and date of discovery, site discovered by	Archaeological survey 2001, Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Phil Mason
Survey area	7,050 m²
Site archive kept by	SAAS and ZVKDS, Novo Mesto Regional Office

A large Late Bronze Age settlement, at least partly contemporary to the cemetery at the MMP Obrežje site, was discovered during extensive surface survey on the Pleistocene gravel Sava terrace on the northern side of the Struga stream. Excavation of a palaeochannel in the southern corner of this complex revealed possible earlier, Middle Bronze Age settlement in the area. The evidence consists of Virovitica group material, which was deposited in the palaeochannel. Traces of Roman occupation were also discovered on the upper terrace.

BOJAN DJURIĆ

- Prehistoric pottery
- Roman pottery

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Pečina near Gorenje Skopice

IRN 15568	Gorenje Skopice – Pečina villa rustica
Motorway section	KO 18 Smednik–Krška Vas
Geographical coordinates	x 542684 y 85100 z 150
Primary topographical map sheet TTN5	Krško 49
Cadastral register	C.C. Krška vas, cadastral plot nos. 2102/2, 2103/4, 2104/2, 2105/3, 2106/2, 2107/2, 2108/2, 2109/9, 2110/2, 2111/2, 2112/2, 2113/2, 2114/2, 3, 4, 2115/3, 4, 2116/3, 4, 2118/2, 2119/2, 2120/2, 2121/2, 2122/4, 2123/2, 2219/2, 2228/2, 2229/2, 2230/2, 3, 4, 2231/2 & 2233/2
Site type	Archaeological site
Period	Roman
Method and date of discovery, site discovered by	Archaeological survey 1999–2000, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Uroš Bavec
Excavated area	5,600 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

Roman bronze fibula

The site is located to the east of the Roman *via publica Siscia–Neviodunum*, at the point where it is intersected by the modern Ljubljana–Zagreb road. The evidence suggests the presence of a settlement, which is located on both sides of the modern road and extends as far as the palaeochannel of the Sava in the north. It can be linked to early reports of a Roman cemetery (ANSI 250).

BOJAN DJURIĆ

- Prehistoric pottery
- Roman pottery
- Burnt clay

References

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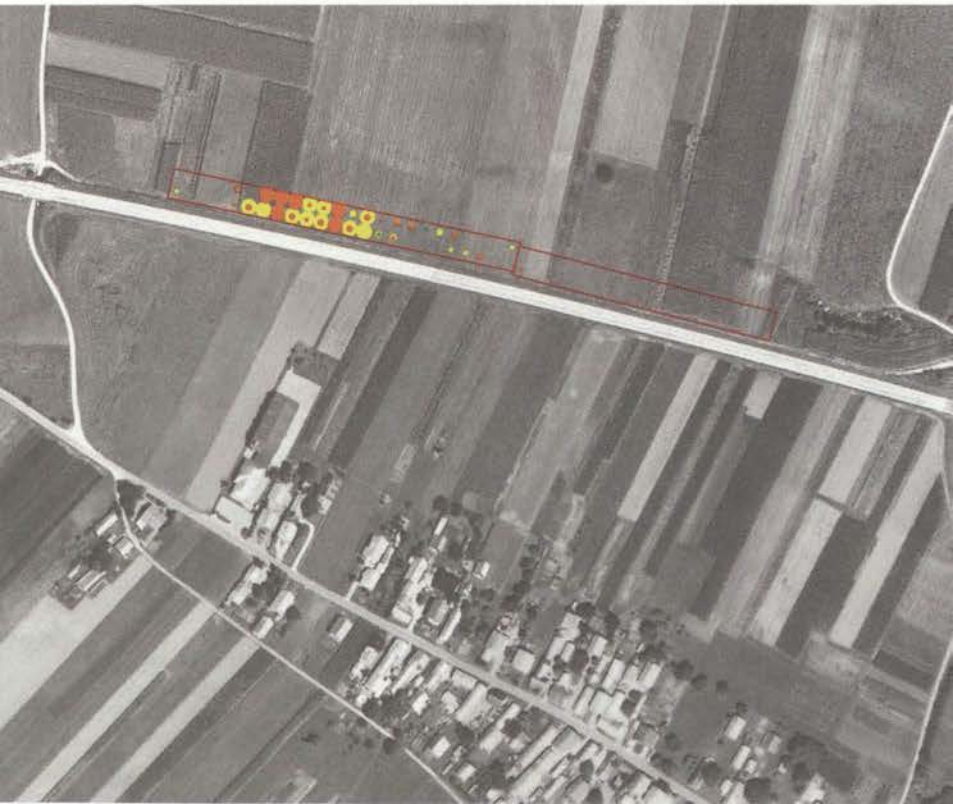

Pobrežje near Maribor

IRN 15526	Maribor – Pobrežje prehistoric settlement
Motorway section	SK 03 Pesnica–Miklavž
Geographical coordinates	x 553434 y 156436 z 256
Primary topographical map sheet TTN5	Maribor 14
Cadastral register	c.c. Pobrežje, cadastral plot nos. 471/2, 473/8, 476/1, 477/1, 477/2, 477/3, 478/1, 483/1, 484/1, 485/2
Site type	Settlement
Period	Late Bronze Age, Late Iron Age, Roman
Method and date of discovery, site discovered by	Archaeological survey 1997–1998, Bojan Djurić
Fieldwork method and date	Excavation 2000–2001
Excavation director	Mira Strmčnik Gulič
Excavated area	15,000 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The lowland settlement site is located on the raised second terrace of the river Drava, which forms its northern boundary. It is not bounded to the south and southwest and reaches far towards the fertile plain of Dravsko Polje. It is a multiperiod settlement. The earliest settlement also exhibits the most intensive and important occupation, which can be assigned to the Late Bronze Age Urnfield culture. The tens of thousands of potsherds are dominated by domestic pottery of this period. The pottery and its decoration indicate that this settlement is associated with the near-by Groblje cremation cemetery, which is known in the archaeological literature as Pobrežje (Pahič 1972). The discoveries made so far date the settlement to the transition from the Ha A2 to the Ha B1 phase and to the Ha B2 phase, that is approximately to the 11th or 10th century BC.

Roman pottery jar fragment

The discovery of some building plans from this period was among the outstanding results of the excavations, because they indicate that a dispersed rural settlement (Teržan 1999) was located on the bank of the Drava. It consisted of individual large and small residential structures and outbuildings. The intervening areas formed the courtyards, the intensive use of which is indicated by numerous contemporary potsherds and some large and small pits.

The Pobrežje site was reoccupied in the 3rd or 2nd century BC. A Celtic grave containing a sword (Pahič 1966) was discovered there a century ago. It dates to the La Tène period and bears witness to this renewed occupation. This find suggests that the associated Early or Middle La Tène settlement should be sought in the immediate vicinity of the excavated part of the site.

The prehistoric pottery density distributed over the entire excavated area increases in the vicinity of houses, at the Drava terrace edge and primarily in the western

Large Late Bronze Age storage vessel, diameter: 75 cm

part of the excavated area. The Roman finds are equally dispersed over the entire area. An increased find density was discovered primarily in the western part of the excavated area beside Malečniška Cesta, which suggests that Roman buildings should be anticipated in the vicinity. They are additionally indicated by a larger amount of Roman roof tiles, as well as numerous pieces of mortuary pottery, which can be generally dated to the late Roman period on the numismatic evidence.

MIRA STRMČNIK GULIČ

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Pod Kotom – cesta

IRN 15524	Krog – archaeological site Pod Kotom – cesta
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 587838 y 165631 z 188
Primary topographical map sheet TTN5	Radgona 40
Cadastral register	C.C. Krog, cadastral plot nos. 1716, 1717, 1718, 1720, 1722, 1723, 1725, 1726, 1727, 1728, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 2703, 2704, 2705, 2706, 2714, 2715, 2716, 2717, 2718 & 2719
Site type	Settlement
Period	Roman, Early Middle Ages
Method and date of discovery, site discovered by	Archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Fieldwork method and date	Excavation 2001
Excavation director	Ivan Tušek
Excavated area	19,210 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The underlying geology consists of gravel deposited by the river Mura, primarily by glacial activity in the Alps during the Final Glacial period (22,000–12,000 BP). The river flow was much greater than at present due to glacial meltwater, with the result that the river Mura flowed through a valley between the Goričko and Slovenske Gorice hills, which was over 1 km in width. The longitudinal pointbars of the then Mura are considered as the underlying geology, on which the archaeological remains from the Palaeolithic period onwards are found. The majority of the depressions between the gravel point bars were filled by alluvial sediments (sand and sandy silt) during subsequent flooding by the Mura,

but some continued to function as stream channels. These natural processes continually transformed the appearance of the landscape throughout prehistory and thus influenced settlement in the area.

Human interventions in the area during the last century, primarily in the form of agricultural improvement and stream regulation, caused the lowering of the water table and, above all, physically damaged or even destroyed archaeological remains with agriculture machinery. Archaeological layers from various periods can mostly be found on the tops of gravel point bars, often directly below the ploughsoil. The former ground surface is represented by the depressions between the point bars filled with alluvial sediments, which contain archaeological remains. These former ground surfaces are represented by darker coloured interfaces between layers (organic rich old turf lines), which have archaeological features from various periods cut into them. The differences in the underlying geology can result in traces of ploughing being present up to 40 cm beneath the present ground surface.

Only occasional fragments of prehistoric potterry were discovered in the layers on the site. They were undoubtedly brought to the area by cultivation or in alluvial deposits in past periods, because there were no prehistoric occupation deposits present that would indicate occupation prior to the Roman period.

The area along the river Mura was part of the Province of Illyricum during the Roman conquest. However, the Prekmurje region became part of the province of Upper Pannonia during the reign of the emperor Trajan in the 2nd century AD. There were no larger urban centres, but there is evidence for the presence of Roman farms with outbuildings, as well as small iron-smelting areas and pottery workshops. A partly preserved pottery kiln with a typical grate for stacking pottery during firing was investigated on the site.

Late Roman jar

The remains of small Roman farmsteads were found in the vicinity. The houses (dimensions approximately 3 x 4 m) were built of wooden planks or beams and were plastered with clay, a material that was available in abundance in the vicinity. Hearths, characteristic Roman potsherds and stone querns fragments were discovered inside some of the single-room houses, in which the families lived. There were few metal artefacts, but these include significant finds, such as a well preserved bronze fibula and an iron axe. It is possible to define at least three Roman houses on the basis of postholes cut

into the subsoil, but no well was found among them. A series of small farmsteads undoubtedly with associated outbuildings (byres, stables, barns and animal pens) indicate a relatively modest occupation of the area during the Roman period from the 4th to the 5th century.

The pottery fragments are characteristic of Late Roman grey-black fired cooking wares, often with characteristic brush or furrowing decoration on the surface. The fragments can be compared chronologically to analogous fragments, which have been found in Late Roman settlements throughout Slovenia (Tinje nad Loko pri Žusmu, Rifnik pri Šentjurju, Vranje pri Sevnici, Svete Gore nad Sotlo, Brinjeva Gora, the Maribor and Slovenska Bistrica area, Kučar, Korinjski hrib, Križna gora, Podloka, etc.). The layer containing these remnants was badly plough damaged and subsequently also by Slavic settlement in the 7th and 8th century. The arrival, settlement and activities of the new settlers damaged the earlier, in this case primarily Late Roman layer.

The latest finds on the site date to the early period of Slavic settlement at the end of the 7th century and the 8th century. With the exception of pottery fragments in Early Slavic pits, no tangible srtuctural remains were found from this period. It may thus be determined largely on the basis of the pottery that the site consists primarily of the remains of a Late Roman settlement with traces of structures from the end of the 4th and the 5th century and a site occupied by our Slavic ancestors.

Rim sherd of an Early Medieval jar

The entire area was partly damaged by Second World War German trenches, which were dug in a zigzag line of entrenchments.

IVAN TUŠEK

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Pod Kotom – jug

IRN 15510	Krog – archaeological site Pod Kotom – jug
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 587457 y 165207 z 189
Primary topographical map sheet TTN5	Radgona 39
Cadastral register	C.C. Krog, cadastral plot nos. 1774, 1775, 1776, 1777 & 1778
Site type	Settlement, cemetery
Period	Eneolithic and Bronze Age, Early Middle Ages
ethod and date of discovery, site discovered by	Archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Fieldwork method and date	Excavation 2001
Excavation director	Irena Šavel
Excavated area	10,074 m²
Site archive kept by	Pokrajinski muzej Murska Sobota

The site is located in an area of tightly packed small fields, which is known by the toponym Pod Kotom (South). It was formed on the alluvial plain of the river Mura to the east of Krog, between the Mokoš and Dobel streams. The gently undulating surface of the plain is the result of longitudinal gravel point bars, deposited between the final Ice Age and deglaciation by the river Mura. This was a anastomosing river in this period and had an entirely different hydrological regime from the present one. When the course of the river Mura shifted away from the area of the later site, it was still within reach of flood waters, which carried sand and silt with them. Flood water ran mostly along the channels at the base of the gravel point bars, where sediments were deposited, but the higher parts of the point bars remained unflooded. After cessation of silt deposition, a stream that meandered and deposited sediment laterally cut a channel into the alluvial deposits in the southern part of the site.

Copper Age urn

A Copper Age cremation cemetery comprising 173 graves was discovered on the summit of the gravel point bars. It lay at a depth of 0.30 m below the surface and was cut into the gravel and sand subsoil. The cremation urns contained the ashes of the deceased, which were accompanied in some cases by ani-

Early Bronze Age jug

mal remains (sheep, goats, cattle and red deer), whilst in other cases small stone artefacts, a ladle, a spindlewhorl or a copper plate were present. Funeral rituals included intentionally pierced urn bases, as well as the presence of small beakers, spindlewhorls and ladles in the immediate vicinity of the graves.

Prehistoric structures were discovered at the base of the gravel point bars in the layer of sand and clay (1.00 to 1.70 m beneath the surface). These comprised large and small pits with concentrations of pottery, small stone artefacts and querns, which can be dated by the presence of Litzen pottery to the Early Bronze Age.

A hoard of bronze artefacts (two axes, fragments of flange handled sickles, an awl, a small plate, part of a spearhead and ingots) was discovered 0.60 m beneath the surface in the layer of grey clay and sand. It is dated to the Late Bronze Age.

An Early Medieval pit dwelling (3 x 2 m) was cut into the same underlying geology as the cemetery. The pit contained several river cobbles, charcoal, burnt material, bones, daub, three spindlewhorls, an unidentifiableleable iron object and several rim, base and body sherds of Early Slavic pottery.

IRENA ŠAVEL

▲ Part of the hoard of Late Bronze Age artefacts

▶ Early Medieval pottery from the first half of 7th century

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Pod Kotom – sever

IRN 15525	Krog – archaeological site Pod Kotom – sever
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 588153 y 165874 z 187
Primary topographical map sheet TTN5	Radgona 40
Cadastral register	C.C. Krog cadastral plot nos. 1355, 1356/1, 2, 1357, 1358, 1359/2, 1360, 1362, 1363, 1367/1, 2, 1368/1, 2, 1372, 1383/1, 2, 1384/1, 1386, 1388, 1389, 1390, 1391/1, 1392/1, 3, 1395/1, 1661/1, 1662/1, 1663, 1665, 1666, 1667, 1668 & 1669
Site type	Settlement
Period	Prehistoric, Late Iron Age, Roman, Medieval
Method and date of discovery, site discovered by	Archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Fieldwork method and date	Excavation 2001
Excavation director	Branko Kerman
Excavated area	24,000 m²
Site archive kept by	Pokrajinski muzej Murska Sobota

Occupation at the site Pod Kotom-sever depended greatly on the underlying geology of sandy gravel and gravel point bars, which were created by the river Mura. Subsequent sedimentation filled the depressions between the point bars with silty sand, which gradually levelled out the terrain. Agricultural activity furthered the levelling process.

One of the earliest finds from the site is a large Early Bronze Age vessel, which was found in the centre of the excavated area on the extreme eastern profile of the pro-

jected motorway route. The storage vessel is an isolated example and is located outside the occupation area. Several small undated features were discovered in the vicinity. A similar example is known from the Kotare-krogi site, where a comparable storage vessel was discovered approximately 30 m from the settlement.

Early Bronze Age pithos

The nature of the Late Bronze Age occupation is more certain. Two concentrations of buildings from this period can be identified on the basis of the excavated structures. The first group is located in the central part of the excavated area. Small features (postholes) are arranged around a large pit that contained a large amount of pottery, including a well preserved Bronze Age vessel. The second greatest concentration of Late Bronze Age structures is located on the northern periphery of the excavated area. The outstanding finds include two wide-bodied Late Bronze Age vessels, which were deposited a few metres away from the remaining structures. In addition to the postholes, the settlement remains consist of three large and two small pits. The former are of irregular shape with flat bases and contain a large number of potsherds. They can be interpreted as rubbish pits. The latter two are more difficult to interpret. Both the pits contained extant pottery flasks, as well as bone fragments, a considerable amount of charcoal and burnt clay.

Wide-bodied Late Bronze Age vessel with bosses and protrusions

The well that was found in the centre of the settlement remains occupied a central position in the Late Bronze Age settlement. Potsherds and charcoal were also found in the fill.

A large ditch or water channel running along the southern side of the excavation played a significant role during occupation in the Late Iron Age as well as Roman period. The channel fill contained mixed La Tène and Roman potsherds, which were found in different fill layers. A thin layer of prehistoric pottery was found in the base of the channel.

Roman jar pot with combed or furrowing decoration

A La Tène warrior cremation grave was discovered at the edge of the channel. The cremated bone and charcoal of the burial were accompaied by metal grave goods, including a clearly visible sword bent around the grave, and scissors, as well as other unidentifiable artefacts. Pottery dishes and small jugs were also present.

The Roman settlement is located to the west of the above-mentioned ditch. The most significant of all the

Late Bronze Age (?) flask-shaped jug with narrow neck

structures that could be attributed to the Romanised indigenous people was a large irregular pit, a large, deep well. In addtion to pottery, the well fill contained traces of a wooden lining beneath a moist layer of silt. A smaller jar was found at the bottom of the well.

Some long and narrow ditches containing Roman potsherds were discovered on the southern side of the excavated area. Occasional finds of Slavic pottery indicate that occupation continued on the Pod Kotom-sever site into more recent periods. A rubbish pit containing High medieval pottery was discovered at the southern edge of the site.

BRANKO KERMAN

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Podgorica

IRN 13728	Dragomelj – Prehistoric settlement at Podgorica near Črnuče
Motorway section	SK 08 Blagovica–Šentjakob
Geographical coordinates	x 469005 y 106465 z 284
Primary topographical map sheet TTN5	Ljubljana–S 27
Cadastral register	c.c. Dragomelj, cadastral plot nos. 324, 325/1, 2, 326, 327, 328, 329, 330/1, 331/1, 2, 332/1, 333/1; c.c. Pšata, cadastral plot nos. 381, 382, 383, 393 & 394
Site type	Settlement, cemetery
Period	Palaeolithic, Eneolithic, Late Bronze Age, Early Iron Age, Roman, Early Medieval
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 2000–2001
Excavation director	Matjaž Novšak
Excavated area	20,000 m²
Site archive kept by	Arhej, d.o.o.

Palaeolithic scraper

Prehistoric potsherds and a large structure built of non-local quarry stone were discovered during the watching brief on construction works in a partially forested area between the villages of Dragomelj, Pšata and Podgorica near Ljubljana. Open area excavations that lasted for a period of two years took place on a 360 m length of the proposed motorway route (2 hectares) up to the right bank of the river Pšata. The site of Dragomelj is located on the opposite bank of the river Pšata.

Past activity at Podgorica was dictated to a large extent by water. Natural palaeochannels were discovered in several places. These represent stream courses, which are either contemporary with occupation on the site, or

were active in the intermediate periods between occupation episodes. Settlement complexes and mortuary structures formed beside them. The varied nature of the palaeorelief was largely masked by subsequent deposits. The area was forested in the Modern period, which has not changed substantially for at least the last 180 years (according to the Franciscan cadastral register). Several occupation phases are present on the site, ranging from the earliest, Palaeolithic period to the latest, Early Medieval period. They appeared in almost the same layers in sand and clay surface and lateral deposits, which were difficult to separate stratigraphically.

An island of pseudogley was preserved in the central part of the site. The summit of the island was occupied by a lithic scatter of Palaeolithic tools, made in the anvil technique, as well as some waste flakes. This activity area was dated by thermo-luminiscence analysis to the period between 11,000 and 13,000 BP.[1] The succeeding occupation phase is represented by isolated finds of pottery and a stone axe from the Eneolithic period. They are dispersed in a low density over a wide area, but are concentrated in the palaeochannel in the extreme south-western corner of the excavated area.

Stone mould for bronze casting, Late Bronze Age

The area was most intensely occupied at the end of the Bronze Age. At least 10 dwelling structures from the end of the 2nd millennium BC and the beginning of the 1st millennium BC can be identified on the basis of postholes, stone paving, storage pits and domestic finds. A bronze smithy and a pottery workshop were active in the peripheral settlement areas in this period. The former, located in the extreme north-eastern part, is represented by the remains of a hearth, casting waste, two stone moulds for casting bronze artefacts and a water cistern in the depression of the palaeochannel. The traces of the pottery workshop to the west of the settlement area comprise a stone platform for drying clay with an unfired portable oven. The excavated pottery and rare bronze objects from this complex are dated on the basis of analogies with comparable sites to the period between the 12th and 9th century BC.

The next occupation phase dates to the 6th century BC. Three stone platforms, aligned parallel to each other along a north-east/south-west axis, were excavated on the site. The largest one was built of non-local quarry stone,

Fragment of Roman balance

1 The luminiscence analysis was undertaken at the behest of Tomaž Verbič by Shanon A. Mahan from USGS, Luminiscence Dating Laboratory, Denver, Co., USA.

while the smaller two were paved with river cobbles. A single cremation grave with characteristic 6th century grave goods (a footed urn, a rhomboid belt hook, etc.) was present behind each of the platforms.

After almost a millennium of tranquillity, some isolated Late Roman finds are recorded (a coin of the Emperor Constantine, bronze scales and occasional potsherds).

The latest material remains on the site date to a single Early Medieval pit dwelling. It was cut into a 15 cm thick sand layer, which covered an earlier occupation phase. It differs in dimensions and shape from other negative features at the site. Earlier, Bronze Age pits are usually part of residential units, because they are associated with postholes, do not exceed a surface area of 1.5 m^2 and vary in shape. The pit dwelling is aligned on an east-west axis and has a rectangular plan with rounded corners (dimensions: 3.05 x 1.7 m). The upper fill contained numerous scattered pottery fragments and several medium-sized, burnt angular stones. The basal layer was burnt and contained a large amount of decayed wood at the bottom. This is interpreted as the remnants of firewood or structural timbers. A charcoal sample from this complex was radiocarbon dated to the second half of the 6th century AD or first half of the 7th century AD.

Early Medieval jar fragments

MATJAŽ NOVŠAK

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Podrečje near Vir

IRN 13750	Dob – Prehistoric settlement
Motorway section	SK 08 Blagovica–Šentjakob
Geographical coordinates	x 470817 y 111526 z 303
Primary topographical map sheet TTN5	Ljubljana–S 18
Cadastral register	c.c. Podrečje, cadastral plot nos. 1441, 1442, 5677, 5687, 5688, 5689 & 5690
Site type	Settlement
Period	Late Bronze Age
Method and date of discovery, site discovered by	Archaeological survey 1997, Marija Ogrin
Fieldwork method and date	Excavation 2000
Excavation director	Milena Horvat
Excavated area	9,261 m²
Site archive kept by	Faculty of Arts, Department of Archaeology, Ljubljana University

Late Bronze Age jar fragment

The site, a prehistoric and Roman settlement, is located at the northern edge of the Ljubljana basin, in a lowland basin formed by the Pleistocene and Holocene alluvial sediments of the river Kamniška Bistrica.

The settlement remains are dated to the Late Bronze Age (Reinecke Ha B3). In addition to the remains of residential structures (10 buildings), pottery was also discovered. The prehistoric residential structures were clustered in two groups, which were seperated by two drainage ditches. The organisation of the buildings indicates that they were built close together according to a plan. Various functions can be attributed to them due to their

size, which ranges from 7 to 14 m in length and 5 to 7 m in width. They were post-built structures grouped in individual residential and economic units. The walls between the posts were made of wattle and daub. The roofs of the larger buildings were ridged, while those of the smaller ones were lean-to roofs, one of the structures having only a protective roof on four posts. The buildings were oriented in southwest – northeast direction.

Roman pottery fragments

It is assumed on the basis of the somewhat modest finds that the manufacture of stone artefacts took place in building nos. 2 and 3, perhaps stone moulds and tools.

Geophysical survey indicates that the Roman settlement can be assumed to be located outside the excavated area, in the area towards the village of Dob. It can be dated on the basis of very numerous small finds (pottery, metal artefacts, a coin, daub) to the 3rd or 4th century AD.

MILENA HORVAT

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Podsmreka near Višnja Gora 1

IRN 15564 (1)	Podsmreka pri Višnji gori – Prehistoric settlement
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 482504 y 89287 z 345
Primary topographical map sheet TTN5	Višnja Gora 33
Cadastral register	c.c. Draga, cadastral plot no. 151/2
Site type	Metallurgical site (Smelting site)
Period	Early Iron Age
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 1999
Excavation directors	Jože Oman and Draško Josipovič
Excavcated area	112 m²
Site archive kept by	Narodni muzej Slovenije, Ljubljana

The site at the base of the northern slope of the Višnjica valley was discovered during a watching brief on construction work. Two heaps of hard, red baked, formed clay objects were found at a distance of 10 m from each other in the excavated area. Individual scatters and larger concentrations of iron slag were found in the area between them. The surface of some of the fragments was vitrified. The slag was interspersed with potsherds, a spindlewhorl, quern fragments and small stones, including bauxite from the gravels of the Višnjica stream.

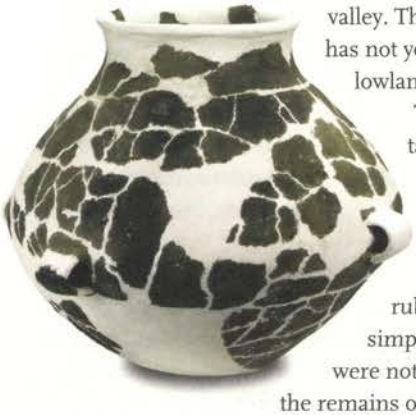
The archaeological record indicates the presence of the remains of a metallurgical site for iron ore smelting. The raw material was most probably bauxite, the iron content of which was sufficient for the extraction of iron. Deposits of bauxite were located in the immediate vicinity of the smelting site, the nearest being in the bed of the Višnjica. The site was located within the borders of the interest zone of the fortified Iron Age settlement at Cvinger above Vir near Stična.

DRAGO SVOLJŠAK

Podsmreka near Višnja Gora 2

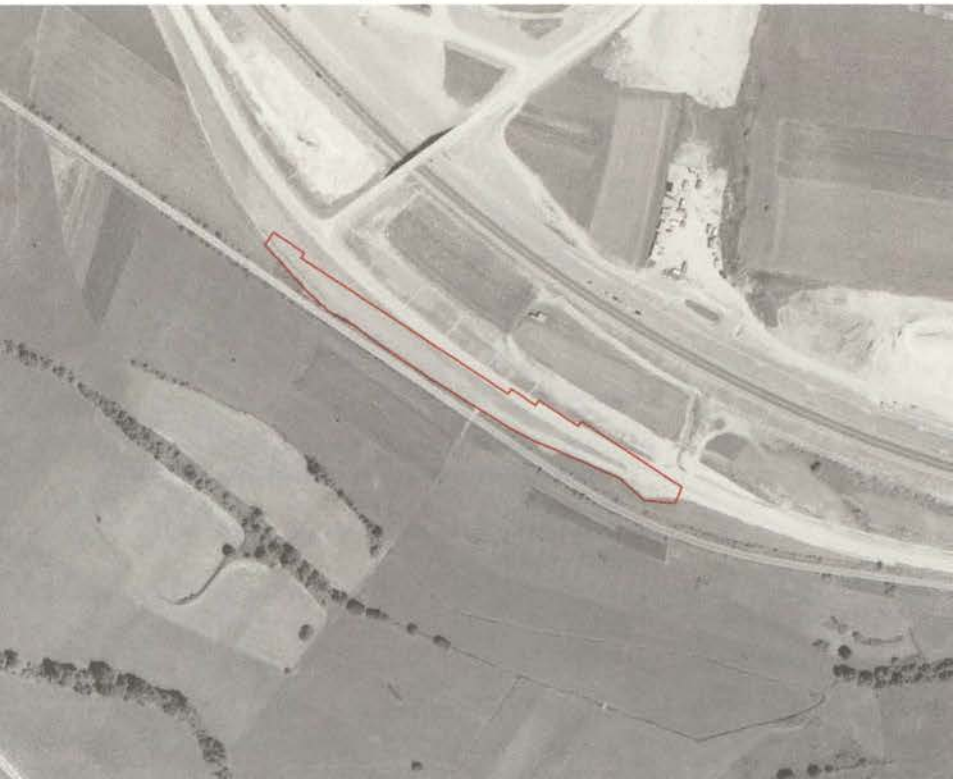
IRN 15564 (2)	Podsmreka pri Višnji gori – Prehistoric settlement
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 481790 y 89445 z 348
Primary topographical map sheet TTN5	Višnja Gora 32
Cadastral register	c.c. Draga, cadastral plot nos. 114/3 & 93/4
Site type	Mining settlement
Period	Middle and Late Bronze Age
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 1999
Excavation director	Drago Svoljšak
Excavated area	7,000 m²
Site archive kept by	Narodni muzej Slovenije, Ljubljana

The Podsmreka 2 settlement site is located between the Ljubljana–Novo Mesto railway and the Višnja Gora–Ivančna Gorica local road. It lies at the foot of the slope beneath the hamlet of Podsmreka, directly above the flood plain of the Višnjica stream in the bottom of the valley. The settlement area, the full extent of which has not yet been fully established, extended from the lowland to the slopes above it (cf. Podsmreka 1).



Pithos with four handles, Middle - Late Bronze Age transition

The settlement exhibits three developmental phases. The first phase is characterised by pottery, which was located in large, even densely concentrated and well defined groups. These were probably the remains of plough-damaged storage and rubbish pits. They were probably covered by simple buildings, the ground plans of which were not recovered. The second phase comprised the remains of a rectangular wattle and daub building. The structure survived as wood charcoal and clay daub, which was most concentrated in the wall area. The associated domestic equipment and furnishings comprised pottery, a votive stone axe and clay spindlewhorls.



Four cremation graves associated with this building were located close to it. Pottery funerary urns were placed in simple grave pits and covered with a pottery vessel or a large potsherd. A similar method of burial is known for example at the Moravče kod Sesveta cemetery site in Croatia, which belongs to the Late Bronze Age Virovitica group.

Fragments of querns for ochre production

In addition to pottery vessels, several deposits of yellow and red mudstone and bauxite cobbles were discovered at the site. These were probably brought here from local deposits. The settlement most probably functioned as a collection centre for raw materials, which were processed into pigments or pigment dust. Mudstone was matured in dumps and broken with stone mauls on loaf-shaped querns, which were discovered in great number in the find assemblage from the settlement. Some even had traces of red mudstone on them.

Single-handled footed beaker, Middle - Late Bronze Age transition

The pottery and the mortuary rite associate the settlement of Podsmreka 2 with the Pannonian area. However, the location of the settlement in the lowland is interesting from a local view point, because it is a novel feature in Slovenia.

The latest finds from the settlement are some isolated Early Iron Age finds, which testify to the use of an already urbanised area. The raw material base suggests they were also used for similar purposes: the mining and smelting of ore (Cf. Podsmreka 1).

IDA MURGELJ *and* DRAGO SVOLJŠAK

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Podsmreka near Višnja Gora 3

IRN 15564 (3)	Podsmreka pri Višnji gora – Prehistoric settlement
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 481724 y 89689 z 353
Primary topographical map sheet TTN5	Višnja Gora 32
Cadastral register	c.c. Draga, cadastral plot nos. 117 & 118
Site type	Settlement
Period	Bronze Age, Roman period
Method and date of discovery	Watching brief
Fieldwork method and date	Registering destruction 1999
Excavation director	Drago Svoljšak
Site archive kept by	Narodni muzej Slovenije, Ljubljana

The site was discovered during a watching brief on earth-moving work for the preparation of the route for a deviation of the local road on the area with the toponym Na Krvici to the north of the Podsmreka flyover. The finds from the site comprised: coins of the Emperor Aurelianus and bronze artefact fragments, prehistoric finds and a road surface. The approximately 0.60 m thick gravel surface of two former roads (in two layers) was mechanically removed. The road surfaces were traced in a north-south direction partly within the new route of the road and were ca. 20 m wide. The direction of the former road is still visible in the route to the north of the new road. In addition to finding a coin, a metal detector survey revealed bronze artefact fragments as well as Roman pottery and glass.

Bronze *Aucissa fibula*, bronze ringlet and ribbed glass cup fragment, 1st century AD

The prehistoric finds resemble those from the Podsmreka 2 site in terms of structure and form: clay daub or plaster, similar pottery and mudstone. The prehistoric assemblage may be associated with the settlement at the Podsmreka 2 site, whilst the Roman material may be derived from a farmstead, or can be connected with the road.

The remains of a prehistoric settlement were discovered in a field (Cadastral plot nos. 117 & 118), which was part of the flyover terminus, approximately 100 m to the east of the roads. The finds include clay plaster or daub, pottery and mudstone, which had decomposed into heavy clay.

DRAGO SVOLJŠAK

Popava near Lipovci

IRN 15559	Lipovci – archaeological site Popava
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 593356 y 166499 z 183
Primary topographical map sheet TTN5	Turnišče 22
Cadastral register	C.C. Lipovci, cadastral plot nos. 265, 266/1, 2, 267/1, 2, 268, 269, 270, 271, 272, 273, 274/1, 275/1, 276/1, 3, 4, 277/1, 3, 279, 280, 281, 282/1, 283/1, 284/1, 285/1 & 286/2
Site type	Archaeological site
Period	Prehistoric, Roman
Method and date of discovery	Systematic archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Surveyed area	21,000 m²
Site archive kept by	SAAS

The site is located in a slightly undulating lowland area between the Dobel and Ledava streams to the west of the village of Lipovci. A concentration of prehistoric and Roman, probably settlement, remains was defined by systematic archaeological survey.

IRENA ŠAVEL

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- Prehistoric pottery
- Roman pottery
- Burnt clay

Požarnice near Družinska vas

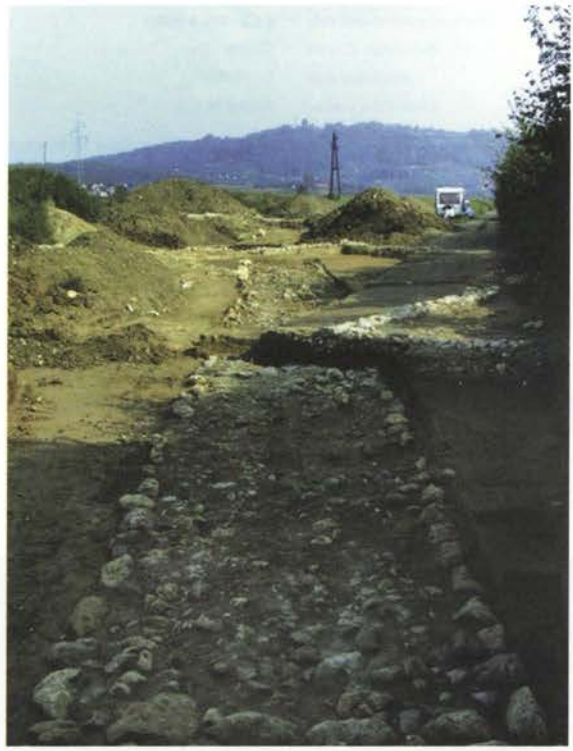
IRN 15535	Družinska vas – archaeological site Požarnice
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 520368 y 79583 z 160
Primary topographical map sheet TTN5	Novo Mesto 20
Cadastral register	c.c. Družinska vas, cadastral plot nos. 665, 668, 669, 673/3, 683/3, 684/6, 8, 12, 1383 & 1422
Site type	Road, villa rustica
Period	Prehistoric, Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 2000–2001, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Gojko Tica
Excavated area	8,150 m²
Site archive kept by	Akord, d.o.o.

Roman bronze anchor fibula

The site is located between the villages of Dolenje Kronovo and Družinska vas. It lies on the first Pleistocene terrace on the left bank of the river Krka and is slightly raised above the water meadows on the Holocene terrace between the above-mentioned villages. It is part of the site which is known under the name of Družinska vas in the archaeological literature. The north-eastern part of the site was excavated by Peter Petru during the construction of the Ljubljana–Zagreb road at the end of the 1950s. The south-western part of the site was covered by the road embankment.

The earliest phase of the site is represented by indications of prehistoric activity. The strongest evidence of this is a prehistoric road (circa 3 m wide), which most probably dates to the Early Iron Age. It is followed by two Roman occupation phases. Finds from the colluvial layer date the earliest traces of human occupation to the Neolithic period. The settlement that these finds are derived from was probably located on the slopes and hill top to the north-west of the Požarnice site.

The colluvial layer containing exclusively prehis-



Prehistoric stone-paved road

toric finds covered the prehistoric road, a 48 m length of which was excavated. It had an average width of 2.85 to 3.10 m and was bounded by large, unworked and partly hewn stones (over 1 m in diameter) that made up the road, which was slightly raised (15 to 20 cm) above the surrounding area. The road between the kerbs was paved with smaller, unworked stones (10 - 25 cm in diameter). Several different types of stone were used in the construction without any discernible cohesive planning. Three slightly elevated transverse structural stone elements were laid in straight lines across the road bed and at right angles to the direction of the road. The road rose slightly to the north.

There are no known parallels for this type of road in pre-Roman Slovenia. It is provisionally dated to the Early Iron Age on the basis of small finds (a quern and prehistoric pottery), which were incorporated in the road

surface, or were located directly above it. Unfortunately, there were very few finds on the road surface itself. The stratigraphy on the site also indicates that it is a pre-Roman road. The Roman structures on the site were built on the up to 40 cm thick colluvial layer, which covered the road. Further evidence for the road's pre-Roman origin is provided by the fact that the orientation of the Roman buildings does not respect the road route, but rather that of an definite Roman road in the immediate vicinity. The prehistoric road is oriented directly on the prehistoric settlement on the Vinji Vrh hill, which is located 3 km away.

The excavated part of the Roman settlement indicates the existence of two construction phases and a demolition phase. Occupation can be dated on the basis of finds to the period between the first half of the 2nd and the second half of the 4th century AD. Six buildings were excavated. It is not known whether these are new buildings or part of those previously excavated by P. Petru, because it was impossible to locate these on the basis of the published documentation. The settlement has not been completely excavated, because it extends outside the motorway construction site to the north and south. One of the buildings was probably stone-built and subsequently rebuilt at least once. It was probably the main building in the complex, because the others had timber superstructures. They probably formed part of a *villa rustica* type complex, which are fairly common in the Dolenjska region.

GOJKO TICA

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Rebrnice – Gladežnica

IRN 15560	Lozice – archaeological site Gladežnica
Motorway section	HC Razdrto–Vipava
Geographical coordinates	x 423697 y 70854 z 330
Primary topographical map sheet TTN5	Ajdovščina 47
Cadastral register	C.C. Lozice, cadastral plot nos. 319 & 344
Site type	Settlement
Period	Bronze Age
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 2003
Excavation director	Patricija Bratina
Site archive kept by	ZVKDS, Nova Gorica Regional Office

An archaeological site was discovered on a temporary spoil dump during the archaeological watching brief on highway construction work. Fragments of prehistoric pottery were discovered in bulldozed spoil heaps at the bottom of a wide hollow throughout the building site. The site has very similar stratigraphy to the nearby site of Šušec. The numerous excavated finds, the naturally protected location with steep rocky cliffs on the southern and partly eastern sides, as well as an excellent location, commanding a fine view over the pass or valley, all argue in favour of the presence of Bronze Age occupation on this terrace.

Bronze Age vessel handle

PATRICIJA BRATINA

Ribnica na Dolenjskem

IRN 9335	Ribnica near Brežice –archaeological area beside the Roman road
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 551808 y 80952 z 153
Primary topographical map sheet TTN5	Samobor 14
Cadastral register	C.C. Velika Dolina, cadastral plot nos. 997/1, 2, 999/1, 1000/1, 2, 3, 4, 5, 6, 1002/1, 2, 3, 1003/2, 1045/1, 2, 1048/1, 2, 3, 4, 1050/1, 3, 5, 7, 8, 1061/1, 2, 1064/1, 2, 1073/1, 4, 5, 1075, 1078/1, 2, 1079, 1080/1, 2, 3, 1085/1, 2, 1087/1, 1088/1, 2, 3, 4, 5, 1089/2, 1090/4, 1093/1, 2, 1094/2, 3, 1096/2, 3, 1099/1, 2, 3, 1100/1, 1102/2, 1117/1, 1127/5, 1907/1, 1914, 1917/1 & 1920
Site type	Settlement, ROMVLA
Period	Bronze Age, Roman
Fieldwork method and date	Excavation 2001–2003
Excavation director	Danilo Breščak
Excavated area	59,000 m²
Site archive kept by	ZVKDS, Novo Mesto Regional Office

The Roman roadside settlement of *Romula* on the *via publica Emona–Siscia* was located in the area of present-day Ribnica na Dolenjskem. Its remains were discovered by Dr. Peter Petru during archaeological rescue excavation, which took place during the construction of the Ljubljana–Zagreb road at the end of the 1950s. A cemetery and the foundations of a series of Roman buildings were found along the Roman road. The roadside settlement was built on the most advantageous strategic position at the point where the valley of the river Krka passes into the Pannonian plain. A settlement developed beside the Roman road on the narrowest part of the terrace between the river Sava and the Gorjanci hills. The location was additionally transversed by the Gračenica stream that flows down from Cirnik between the Kincelj and Škofljančeva Grbina hills, which almost certainly served as observation points. The traffic along the river Sava could likewise be controlled from this point.

Dancing Lar, bronze statue of a domestic divinity

In addition to an enormous quantity of metalwork and ceramic finds, the excavations have also revealed several new features. Part of the previously unknown western cemetery that extends along the road was excavated in the western part of the area near Podgračeno. Individual grave plots were also preserved, as well as the mortuary assemblages and grave structures. Grave goods often comprised house urns and other pottery grave goods, as well as glass, metal and amber artefacts. The Roman road was sectioned at this area, where it was preserved in an up to 20 cm thick gravel overburden deposit. A series of Roman building foundations was discovered on both banks of the stream in the central part of the settlement. It is posited that one building functioned as a temple.

Numerous traces of smithing activities were found in and around the structures, but the large number of


1 : 10,000

coins came as a particular surprise. The main structure on the saddle on the eastern side of the stream was also excavated. Originally a timber building stood on this site in the early 1st century, but it was subsequently replaced by a massive 6–8 m high building. The ground plan indicates that it was a multi-roomed building with buttresses, built against the foundation exterior. An extensive Roman rubble layer was found to the east of this building. Beyond this were traces of prehistoric activity in the area, and also a Bronze Age well. The Roman finds suggest that the settlement had a distinctly urban character as a result of its position and function on the main road. Some fragments of inscribed stones were found, including a particularly significant votive inscription, in which the customs service was mentioned. Two small inscriptions bearing the word ROMVLA are of special significance, because they confirm the name of this itinerary post.

At least two phases of use are apparent in the western cemetery. The earlier graves are cut deeper and stone structures are absent, but burning of the grave pit or cremation of the deceased on the burial site (*bustum*) was common. Many of these graves were damaged by subsequent interventions during the Roman period, so that only thin layers at the bottom of the grave pits were extant. However, grave goods were extant in several cases, where the pits were cut deeper into the subsoil.

DANILO BREŠČAK

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Rogoza near Maribor

IRN 15509	Rogoza – archaeological site
Motorway section	SK 04 Miklavž–Slivnica
Geographical coordinates	x 551680 y 151560 z 269
Primary topographical map sheet TTN5	Maribor 23
Cadastral register	C.C. Rogoza, cadastral plot nos. 79/2, 87/2, 100/2, 143/2 & 158/2
Site type	Settlement, barrow cemetery
Period	Eneolithic, Late Eneolithic, Early Iron Age
ethod and date of discovery, site discovered by	Systematic archaeological survey 1998, Bojan Djurić
Fieldwork method and date	Excavation 1998–1999
Excavation director	Mira Strmčnik Gulič
Excavated area	30,000 m²
Site archive kept by	ZVKDS, Maribor Regional Office

Two-footed vessels from barrow burials, Early Iron Age

The archaeological site of Rogoza is located to the west of the settlement of the same name on a slightly raised terrace between the Spodnje Hoče–Miklavž road and the Maribor–Celje railway. The area was subject to agricultural improvement in the past and the fields were consolidated, which has resulted in the disappearance of the natural landforms (a stream, paths and marshes). The site area was formerly part of the Castle Rogeis estate.

The multi-period settlement site developed on a slightly raised gravel terrace beside the meandering

stream and marshland. The excavated settlement remains date from the Eneolithic to the Late Bronze Age, with emphasis on the earlier phase of the Late Bronze Age. Various residential structures and outbuildings formed a dispersed settlement, the boundaries of which were not identified in the excavations. A paved path was discovered in the northern part of the excavated area. Some Early Iron Age finds were associated with it, as were four barrows with a single central burial, which date to the same period.

Seventeen structures were excavated. The residential structures were located several metres apart and exhibited to four types of ground plan. They were mostly of small or medium dimensions. The final number of structures and the extent of the settlement cannot be determined, despite thorough excavation, because the settlement extended to the east and west along the former stream, which is no longer visible. Numerous postholes for upright structural timbers, hearth pits and other pits filled with pottery, metalwork and lithic material were cut into the subsoil.

Late Bronze Age pottery

MIRA STRMČNIK GULIČ

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Sela near Dob

IRN 15533	Sela pri Dobu – archaeological site Pod Bučarjevim Hribom
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 490272 y 86871 z 308
Primary topographical map sheet TTN5	Višnja Gora 46
Cadastral register	c.c. Podboršt, cadastral plot nos. 379/1, 2, 4, 5, 11 & 650/1
Site type	Settlement
Period	Late Bronze Age, Roman
ethod and date of discovery, site discovered by	Systematic archaeological survey 1996, Boris Vičič
Fieldwork method and date	Excavation 1998–1999
Excavation director	Milena Horvat
Excavated area	3,446 m²
Site archive kept by	Faculty of Arts, Department of Archaeology, Ljubljana University

The multi-period settlement site is located at the foot of Bučarjev Hrib between the villages of Sela near Dob and Podboršt. Four occupation phases were identified in the 7,500 m² excavated area.

The earliest, Late Bronze Age phase was represented by scattered potsherds. The excavated evidence suggests that the settlement was more significant in its second phase. This is represented by hearths and an assemblage of Iron Age pottery, which cannot be dated more precisely.

Iron bloom from smelting furnace

Six post-built buildings and some metal-working activity areas were assigned to the third occupation phase, which dates to the beginning of the 1st century BC. It was impossible to locate all the elements that generally constitute the complete range of activities

associated with ore smelting in the excavated area. Only two iron furnaces with iron bloom with discarded liquid slag were discovered. Smithing activities took place in and around building no. 7. Four further smithy hearths were discovered at the site. Three of them were stone-built structures, whilst the fourth was a fired clay structure. The air regulation facilities, bellows nozzles and tuyères of the forge were not excavated.

Early Roman vessel fragment, 1st century AD

The excavated pottery from the third occupation phase clearly shows the association of Mokronog La Tène group domestic pottery and imported Roman pottery.

The settlement was not abandoned after the third phase, but rather continued uninterrupted into the 1st century AD. The drystone-walled building (9.15 x 7.50 m) was attributed to this phase.

MILENA HORVAT

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Slivnica near Maribor 1

IRN 6822	Slivnica near Maribor – archaeological site
Motorway section	SK 04 Miklavž–Slivnica
Geographical coordinates	x 550992 y 148403 z 273
Primary topographical map sheet TTN5	Maribor 33
Cadastral register	c.c. Slivnica, cadastral plot nos. 315/1, 315/4, 315/5, 315/6, 429/1, 430/1 & 432
Site type	Settlement
Period	Eneolithic, Early and Middle Bronze Age, Late Iron Age, Roman, Early Medieval
Method and date of discovery, site discovered by	Systematic archaeological survey 1997, Bojan Djurić
Fieldwork method and date	Excavation 1996–1997
Excavation director	Mira Strmčnik Gulič
Excavated area	9,000 m²
Site archive kept by	ZVKDS, Maribor Regional Office

Slivnica lies in the fertile lowland in the north-western part of the Dravsko Polje plain at the foot of the Slivniško Pohorje mountains. It is located on the river terraces cut by the river Drava in its own sediments at the broad exit point from the Dravska dolina valley. The terraces consist of gravel, sandy gravel, sand, silt and sandy clay. The Slivnica-Hoče plain is watered by Pohorje streams, which were also the main factor behind ancient waves of settlement, in addition to the presence of fertile land and forests.

Decorated Eneolithic vessel fragments, Retz-Gajary culture

The archaeological site was formed on the banks created by the Polanski stream in the north and one of its tributaries in the south. Constant erosion and fluvial deposition was even recorded in modern times, when the inhabitants of the immediate area had fields and meadows located in the environs.

The old core of the settlement formed around the parish church of Sv. Marija (the Virgin Mary), which is

Early Bronze Age single handled jar with corded decoration, Litzen culture

renowned for two fragments of a relief with pre-Romanesque interlace decoration. Recent discoveries suggest that they may be linked to Early Medieval settlement in the immediate vicinity.

Excavation has revealed the southern edge of the settlement complex. The results can be summarised in six main occupation phases on the site: (1) an Eneolithic settlement with residential and storage structures (Retz-Gajary culture), (2) an Early Bronze Age settlement with the remains of houses and associated structures, (3) Middle Bronze Age occupation and possible ritual remains (Middle Danube Tumulus culture), (4) La Tène occupation remains with numerous residential structures (the end of the middle – LT C2,180–110 BC, and beginning of the late LT D period, 100 BC–beginning of 1st millennium AD), (5) Roman stone buildings and outbuildings (the middle of the 1st century - 4th century), and (6) Early Slavic settlement remains (second half of the 8th century and first half of the 9th century AD).

Two Middle Bronze Age vessels

The site is exceptional among archaeological sites in Slovenia, because of the discovery of Eneolithic and the Early Bronze Age lowland settlements, which were not known before this. It should also be noted that only a few Late La Tène and the Early Medieval lowland settlements are known. The Bronze Age occupation remains indicate that the area was culturally connected with northern Transdanubia, the area between the rivers Sava and Drava and eastern Austria.

MIRA STRMČNIK GULIČ

La Tène glass bracelet fragments

Roman pottery vessel and iron pitchfork

Early Slavic pottery tray

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Slivnica near Maribor 2

IRN 15522	Rogoza – archaeological site by the railway
Motorway section	SK 04 Miklavž–Slivnica
Geographical coordinates	x 551229 y 149523 z 267
Primary topographical map sheet TTN5	Maribor 33
Cadastral register	C.C. Rogoza, cadastral plot nos. 209/4 & 209/68
Site type	Settlement
Period	Late Bronze Age, Late Iron Age
Method and date of discovery, site discovered by	Systematic archaeological survey 1997, Bojan Djurić
Fieldwork method and date	Excavation 1997
Excavation director	Mira Strmčnik Gulič
Excavated area	5,000 m²
Site archive kept by	ZVKDS, Maribor Regional Office

La Tène pottery vessel fragments (2nd century BC)

The lowland prehistoric site covers an area of ca. 10,000 m², which is located on gravel subsoil beside a palaeochannel in the north-western part of the Dravsko Polje plain. The archaeological remains are badly damaged due to intense cultivation of long duration and changes in the former riverbed. The pottery and daub finds indicate the existence of a prehistoric settlement in this area from the Late Bronze Age to the Celtic period (2nd–1st century BC). Structural elements of the settlement are only fragmentarily preserved.

MIRA STRMČNIK GULIČ

Late Bronze Age pottery vessel with fingertip impressed cordon (10th–9th century BC)

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Sodolek

IRN 15561	Grabonoš – archaeological site Sodolek
Motorway section	MP 03/1 Cogetinci–Vučja Vas
Geographical coordinates	X 577764 Y 160649 Z 209
Primary topographical map sheet TTN5	Radgona 45
Cadastral register	C.C. Grabonoš, cadastral plot nos. 1308, 1309, 1310 & 1314/2
Site type	Archaeological site
Period	Prehistoric
Method and date of discovery, site discovered by	Systematic archaeological survey 2000, Bojan Djurić
Survey area	22,000 m²
Site archive kept by	SAAS

The site is located to the south of the village of Grabonoš, on slightly raised, undulating terrain on the western edge of the Ščavnica valley. Prehistoric pottery and burnt clay fragments define it as a settlement site.

BOJAN DJURIĆ

- Prehistoric pottery
- Roman pottery
- Burnt clay

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Spodnja Gorica

IRN 15555	Spodnja Gorica – archaeological site Gmajna
Motorway section	Pragersko by-pass
Geographical coordinates	x 552974 y 141103 z 250
Primary topographical map sheet TTN5	Ptuj 14
Cadastral register	c.c. Gorica, cadastral plot nos. 340/3 & 30
Site type	Archaeological site
Period	Prehistoric, Roman, Early Medieval
Method and date of discovery, site discovered by	Systematic archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Marija Lubšina Tušek
Excavated area	3,600 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The site is located on the terrace edge to the west of the Spodnja Gorica–Stražgonjca road and to the east of the lower-lying Cediljeki site. It is bounded to the west by stream channels, which that are entirely filled in by agricultural improvement activities. The site extends to the north and south, but its parameters have not yet been defined.

The results of systematic surface survey indicate that the site is characterised by at least Neolithic occupation (stone axes and querns), which was, on the basis of the pottery assemblage, followed by Roman and Early Medieval occupation.

BOJAN DJURIĆ

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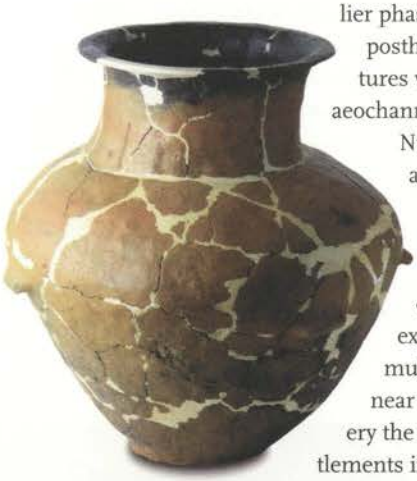
- Prehistoric pottery
- Roman pottery
- Burnt clay
- Flint
- Axes

Spodnje Hoče

IRN 10328	Hoče – Settlement
Motorway section	HC Slivnica–BDC
Geographical coordinates	x 550243 y 150962 z 276
Primary topographical map sheet TTN5	Maribor 33
Cadastral register	c.c. Spodnje Hoče, cadastral plot nos. 650/1, 650/2, 650/3 & 650/10
Site type	Settlement
Period	Late Bronze Age, Roman, Early Medieval
Method and date of discovery, site discovered by	Systematic archaeological survey 1996, Bojan Djurić
Fieldwork method and date	Excavation 1997
Excavation directors	Mira Strmčnik Gulič and Matjaž Novšak
Excavated area	1,923 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The extension of the Slivnica–Maribor trunk road encroached on the edge of the settlement at Spodnje Hoče, which is a scheduled archaeological monument. The remains of several occupation phases were excavated here.

The earliest occupation on the site dates to the earlier phase of the late Bronze Age. A storage pit, postholes from residential and other structures were excavated along the edge of the palaeochannel stream.



Late Bronze Age pithos

Numerous fragments of Roman pottery and tile were discovered in the partially disturbed and re-deposited Roman layer.

The most notable discoveries were the remains of Early Medieval structures or pit dwellings in the central part of the excavated area. These structures and the simultaneously discovered remains at Slivnica near Maribor were at the time of their discovery the first definite traces of Early Medieval settlements in Slovenia. Pit dwellings were a common house form, culturally connected with the neighbouring sites in Austrian Styria and Lower Austria, as well

as in Slovakia, Poland and in the Balkans. Some of the above-mentioned examples are pit dwellings covered with wooden superstructures, while others present no such traces. The pit dwellings from Hoče belong to the latter type.

Only four negative structures with fills and external hearths were excavated on the site. All were discovered at practically the same level, i.e. 45–55 cm below the modern ground surface. The associated pottery was coarse, hand-made on a slow potter's wheel, irregular in form and decorated with repetitive decoration combining horizontal channelling and variously executed wavy lines.

Early Slavic pottery, early 7th century

The area of the rescue excavations in Spodnje Hoče was dictated by the projected construction work, which meant that only a part of the settlement was investigated. The extension of the settlement is expected in an easterly direction, beneath the route of the present motorway and perhaps as far as the modern cemetery at Spodnje Hoče.

The selection of the settlement location confirms the known preferences of Early Slavic settlers, who found appropriate resources for their existence along old roads and in the vicinity of ruined Roman buildings.

MIRA STRMČNIK GULIČ

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Spodnje Škofije – Kortinca

IRN 15548	Spodnje Škofije – archaeological site Kortinca
Motorway section	HC Škofije–Srmin
Geographical coordinates	x 405808 y 48107 z 75
Primary topographical map sheet TTN5	Koper 29
Cadastral register	c.c. Škofije, cadastral plot nos. 482/5, 483/4, 7, 484/1, 5, 515/3, 516/2, 517/3, 519/5, 15, 16 & 19
Site type	Archaeological site
Period	Roman, Medieval and Modern
Method and date of discovery, site discovered by	Systematic archaeological survey 2003, Bojan Djurić and Gojko Tica
Fieldwork method and date	Excavation 2003
Excavation directors	Alfred Trenz and Matjaž Novšak
Excavated area	5,000 m²
Site archive kept by	ZVKDS, Piran Regional Office, Arhej. d.o.o.

The area that slopes gently to the south-west of Spodnje Škofije is now entirely occupied by vineyards. It was transformed in the 1970s by invasive agriculture, whilst the upper part was subject to unregulated building activity on the edge of Škofije. Local informants report that Roman building remains were destroyed during these construction works.

Excavation has recorded the presence of earlier structures that provide only limited information, because of the modest nature of the archaeological features and the effect of subsequent interventions.

The upper part of the excavated area was formerly occupied by terraces with well-built stone retaining walls. The route of the earlier road ran at a right angle to the terraces. These structures were the result of intense exploitation of the area in the late Middle Ages or at the beginning of the Early Modern period.

A drystone foundation wall was located at a right angle to the former slope direction (the present gradient of the terrain differs significantly from the direction of the underlying geology). It contained Roman tegulae fragments and survived on the underlying flysch at the extreme western foot of the slope. The underlying flysch in its vicinity was levelled out to form a surface. A small amount of Roman pottery fragments and iron tools survived in the shallow ploughsoil. The excavated structure is associated with the as yet unexcavated structural remains in the immediate vicinity, which represented the centre of agrarian use for the excavated area.

Roman pottery vessel fragment

MATJAŽ NOVŠAK

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Spodnje Škofije – Reber

IRN 15547	Spodnje Škofije – archaeological site Reber
Motorway section	HC Škofije–Srmin
Geographical coordinates	x 405898 y 48200 z 80
Primary topographical map sheet TTN5	Koper 29
Cadastral register	c.c. Škofije, cadastral plot nos. 408/6, 413/5, 6 & 1675/4
Site type	Archaeological site
Period	Roman
'ethod and date of discovery, site discovered by	Systematic archaeological survey 2003, Bojan Djurić and Gojko Tica
Fieldwork method and date	Excavation 2003
Excavation directors	Alfred Trenz and Gojko Tica
Excavated area	2,350 m²
Site archive kept by	Akord, d.o.o.

Roman amphora handle

The site on the western edge of the settlement of Spodnje Škofije is located on a saddle, over which the road to Jelarji (Elleri) runs. The area was intensely cultivated in the past, primarily as a vineyard. Deep ploughing reached as far as the underlying flysch bedrock and even penetrated it in several places, according to the excavated evidence.

Intensive cultivation entirely destroyed the site, so that it cannot be functionally defined. Roman pottery and building material fragments are mixed with medieval and modern material in a relatively homogeneous layer.

GOJKO TICA

Glazed vessel fragment, 16th century

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Sredno Polje near Čatež

IRN 15546	Čatež ob Savi – archaeological site Sredno Polje
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 547543 y 83040 z 145
Primary topographical map sheet TTN5	Samobor 2
Cadastral register	c.c. Čatež, cadastral plot nos. 35/4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 27, 29, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 57, 36/2; c.c. Cerina, cadastral plot nos. 282/2, 285/1, 2, 286/1, 288 & 289
Site type	Settlement, marching camp
Period	Neolithic, Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 1998, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Mitja Guštin
Excavated area	31,238 m²
Site archive kept by	Faculty of Arts , Department of Archaeology, Ljubljana University

Roman iron spearhead

The site of Čatež – Sredno Polje is located in fields along a regulated stream in the lowland beneath the settlement of Čatež and is at present fairly distant from the Sava river channel. The area of a Neolithic settlement and a Roman fort is located on a river terrace between the Čatež–Mokrice and Brežice–Čateške Toplice local roads, which are intersected by the modern Ljubljana–Zagreb highway.

The remains of 25 Neolithic features, radiocarbon dated to the period ca. 4,800–4,600 BC, were discovered beneath the ploughsoil. A free-standing house and some small Eneolithic and Bronze Age pits were also discovered. The Neolithic finds provide evidence for the existence of a large settlement of numerous irregular pit dwellings (circa 5–8 m in diameter). The excavated material suggests that stone tools were manufactured there. Numerous fragments of pottery from the pit dwellings show similarities with the pottery of the developed Central European Lengyel culture. They belong to the complex of the Sava cultural group, which is represented

by occupation phases e.g. in Resnikov Prekop in the Ljubljansko Barje marshland, Drulovka near Kranj, Dragomelj, as well as the Ozalj – Stari Grad site in the Kolpa river valley beyond the Žumberačka gora mountains.

The modest remnants of a defence system with two ditches, several ovens, characteristic stone querns for

Neolithic pottery

grinding corn and individual military artefacts (*militaria*) are the only extant evidence of the Roman marching camp. They date the fort to the final decades BC, together with two bronze fibulae and a Republican silver coin.

MITJA GUŠTIN

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Stranje

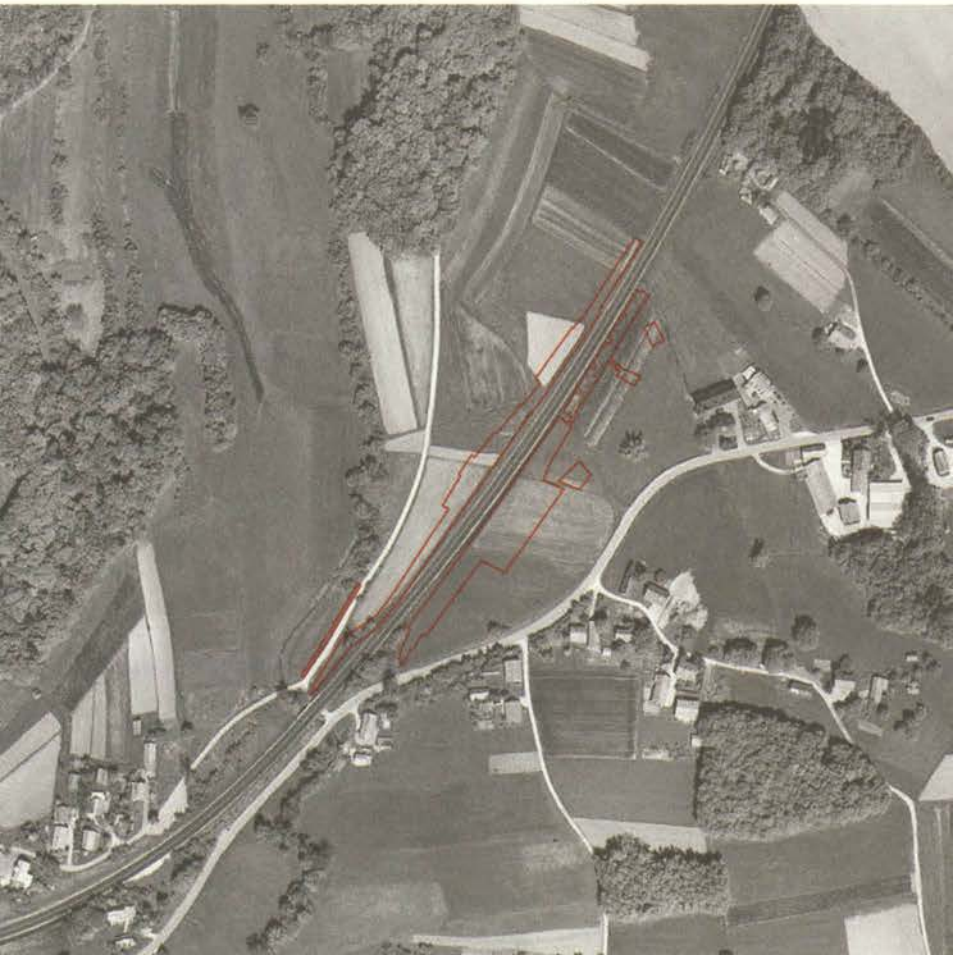
IRN 8651	Stranje near Škocjan – archaeological site
Motorway section	KO 17 Kronovo–Smednik
Geographical coordinates	x 523889 y 81134 z 160
Primary topographical map sheet TTN5	Kostanjevica 11
Cadastral register	C.C. Tomažja vas, cadastral plot nos. 215/2, 221/1, 3, 224, 240/5, 1170/2, 3, 1172/1, 2, 3, 4, 5, 1181/1, 2, 3, 4, 1221/1, 2 & 1237
Site type	Villa rustica
Period	Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 2000–2001, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Gojko Tica
Excavated area	9,000 m²
Site archive kept by	Akord, d.o.o.

The remains of three chronological periods were recorded on the site: the Prehistoric period, the Roman period and the medieval period. However, it should be noted that the site was badly damaged by ploughing and by the construction of the Ljubljana–Zagreb road at the end of the 1950s.

The material remains of prehistoric activity were only recorded in secondary contexts. Numerous prehistoric pottery fragments were discovered in layers, which are the result of natural processes. Remains of a prehistoric settlement are posited to the north of the excavated area.

Roman bronze fibula

The remains of Roman activity were also badly damaged. The Roman ground surface was 10 - 20 cm



beneath the modern ground surface. This meant that occupation evidence was only preserved in the less damaged part of the site, which had otherwise extended over a much larger area.

The building excavated on the site was most probably a component part of a larger complex. Several graves including the remains of a domed tomb with several burials and negative linear structures in the immediate vicinity indicate the basic delineation of the archaeological landscape during the Roman period: elements of economic activity in the area (an outbuilding), various activity areas (hearths and fireplaces), a ritual area (the cemetery) and probable elements of Roman land division in the area (boundaries and enclosures). The construction of the above-mentioned "Cesta bratstva in enotnosti" (Road of Fraternity and Unity) badly damaged the Roman part of the site: at least one building and much of the cemetery.

A hearth and several cuts of an unknown function, indicating various medieval activities in the area, were attributed to the Late Middle Ages on the basis of preliminary finds processing.

GOJKO TICA

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Studenec near Stična

IRN 821	Vir pri Stični – Prehistoric hillfort and barrow cemetery
Motorway section	KO 13 Višnja Gora–Bič
Geographical coordinates	x 486047 y 88380 z 335
Primary topographical map sheet TTN5	Višnja Gora 34
Cadastral register	c.c. Radohova vas, cadastral plot no. 42
Site type	Two buildings
Period	Prehistoric
Method and date of discovery, site discovered by	Systematic archaeological survey 1997, Bojan Djurić
Fieldwork method and date	Excavation 1999
Excavation director	Drago Svoljšak
Excavated area	310 m²
Site archive kept by	Narodni muzej Slovenije, Ljubljana

Three trial trenches (23 x 2 m, up to 1.1 m in depth; 16 x 2 m up to 0.75 m in depth; 36 x 2 m up to 0.90 m in depth) were excavated on the Studenec site. They were located on the barrow, according to the configuration of the terrain, the geophysical survey grid and the anomalies indicated by these measurements. The trial trenches did not confirm the hypothesis that the site was a barrow within an extensive Iron Age barrow cemetery.

Studenec – concentration no. 1 was defined by a single layer, thin surface of small charcoal fragments, red baked clay and clay plaster fragments, as well as pottery fragments. The pottery indicated that the archaeological feature was of prehistoric origin and was probably associated with the Iron Age fortified settlement of Cvinger (Vir near Stična), because it is located in its immediate

proximity. Circular flecks of charcoal concentrations and burnt earth, partly as the remains of burnt daub, indicate the existence of an improvised wooden (wattle and daub) structure, a square shelter on an unlevelled slope. The finds favour such a hypothesis: pottery fragments, slag and charred grain. The structure was destroyed by fire.

Extensive structural remains were excavated at the Studenec – Marjanov Hrib location. They survived as a single layered dispersed stone cairn (ca. 160 m²) of three concentrations enclosing an empty core area. One of the concentrations covered a 2.50 m long row of levelled stone slabs, perhaps forming part of a foundation. There were numerous fragments of flat or loaf-shaped quern, slag, melted bronze fragments whetstones, quartzite, potsherds of a prehistoric appearance and part of a clay loomweight and daub fragments between the stones. The presumably prehistoric structure with stone foundations, in the chronological and economic zone of Cvinger near Stična, was located in a shallow hollow on the pass between Marjanov Grič (340.80 m a.s.l.) and the location of the modern village of Studenec.

Stone quern

DRAGO SVOLJŠAK

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Šentpavel

IRN 10649	Šentpavel pri Domžalah – archaeological site sv. Pavel
Motorway section	SK 08 Blagovica–Šentjakob
Geographical coordinates	x 469576 y 107875 z 286
Primary topographical map sheet TTN5	Ljubljana–s 27
Cadastral register	c.c. Študa, cadastral plot nos. 196/7 & 198
Site type	Cemetery
Period	Roman
Method and date of discovery	Watching brief
Fieldwork method and date	Excavation 2001
Excavation director	Matjaž Novšak
Excavated area	2,000 m²
Site archive kept by	Arhej, d.o.o.

Residential structures of a Roman *villa rustica* have been discovered in the immediate vicinity of the Church of Sv. Pavel (St. Paul) in the village of Šentpavel during ongoing archaeological rescue excavations, which began in 1997. Motorway construction works began in the area in 2000 and fragments of Roman artefacts were discovered during the archaeological watching brief.

The underlying geology on the site in the alluvial lowland consists of gravel from the river Kamniška Bistrica. This is cut by several erosion channels, which are filled with silty clay deposits. The course of the channels is unusual, and their location suggests the possibility of an anthropogenic origin. However, it is certain that one of the channels running along eastern side of the site was functioning during the Roman period. All the

archaeological structures date to the Roman period and were either cut into the underlying gravel (graves, postholes and two roadside ditches), or else this gravel surface represented part of the ground surface (i.e. road paving). Layers of silt were deposited into longitudinal hollows in the Roman or post-Roman period, a hypothesis confirmed by metal artefacts (e.g. a catapult projectile point) and pottery (e.g. an entire jug) discovered in the channel bottoms. The terrain was gradually levelled out by fluvial activity during subsequent periods.

Four undamaged or rather partly preserved cremation graves from the 1st century AD were excavated. They were rectangular in plan with 90 to 190 cm sides. They survived to a depth of 40 cm. The grave goods were placed in simple pits with no grave constructions, the ashes of the deceased being placed in urns (Grave no. 2) or amphorae (Grave no. 1). The artefacts in grave Nos. 1 to 3 were almost undamaged, while grave No. 4 was considerably damaged. The assemblages are characteristic of local burials in the early phase of Roman colonisation (1st century AD).

Metalwork and pottery were found in the disturbed layer between turf and the underlying geology (e.g. an iron knife and razor, coins, an iron fragment, etc.), which raises the possibility that several further graves existed in the excavated area. It is possible to suggest with certainty on the grounds of the location of the graves in the central part of the excavated area that this was a small cemetery, which was only in use for a short period of time.

Eleven postholes for vertical timbers in a rectangular plan were located approximately 30m from the graves and were cut into the same layer. The structure formed by the postholes contained no finds.

A local road with side ditches ran through the excavated area in the 3rd or 4th century AD. It was 2.10–2.20 m wide and ran in a north-south direction, with a slight deviation to the north-east. The gravel subsoil was used as a road surface and had longitudinal drainage ditches on both sides. The width of the road surface suggests it was not an inter-town communication route, but was a local road connecting villas with the rural hinterland, or a connection as far as the *via publica* road. The use period of the road can roughly be dated on the basis of finds from the ditches. A cruciform fibula from the period between the second half of the 3rd century and the first half of the 4th century AD belonged to a male, distinctly military costume. A penannular fibula dates to the period between the reigns of Claudius and Nero and the 3rd century. A larger circular

Roman *sigillata* plate

pit was subsequently cut into the ditch from the western side of the road. Its base was filled with wooden beams with a butchered horse skeleton thrown in on top of them. The find of a late Roman coin above the skeleton, suggests that the time distance between the "burial" and the use of the road was not great.

The cultural-historical activity on the gravel terrace surrounded by natural or artificially cut ditches a few hundred metres to the west of the village of Šentpavel is now being linked to the recent discovery of a *villa rustica*, on which the Church of Sv. Pavel was erected in the village of the same name. It is interesting to observe the relation between the limited duration of the cemetery and the longer duration of the building complex, in which only some isolated finds and modest remains of the earliest phase of the Roman villa are overlapping in time. Two phases of the representative part of the villa date to the second half of the 2nd century up to and including the first half of the 4th century and are certainly later than the cemetery in question, but they correspond to the finds associated with the Roman road. The question is raised as to where burials were performed in the following two centuries and what the reasons were for the removal of the cemetery. One of the possibilities is the expansion of commercial areas, which resulted in the relocation of the cemetery to a point further away. Such expansion would have been possible by improvement, indicated by the unusual course of the palaeochannels, which are discernible on old cadastral maps (e.g. the Franciscan cadastral register). However, it can only be established that an excellent starting-point for the analysis of the land use of a Roman villa as a closed economic entity exists in the environs of the village of Šentpavel.

MATJAŽ NOVŠAK

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Šiman near Gotovlje

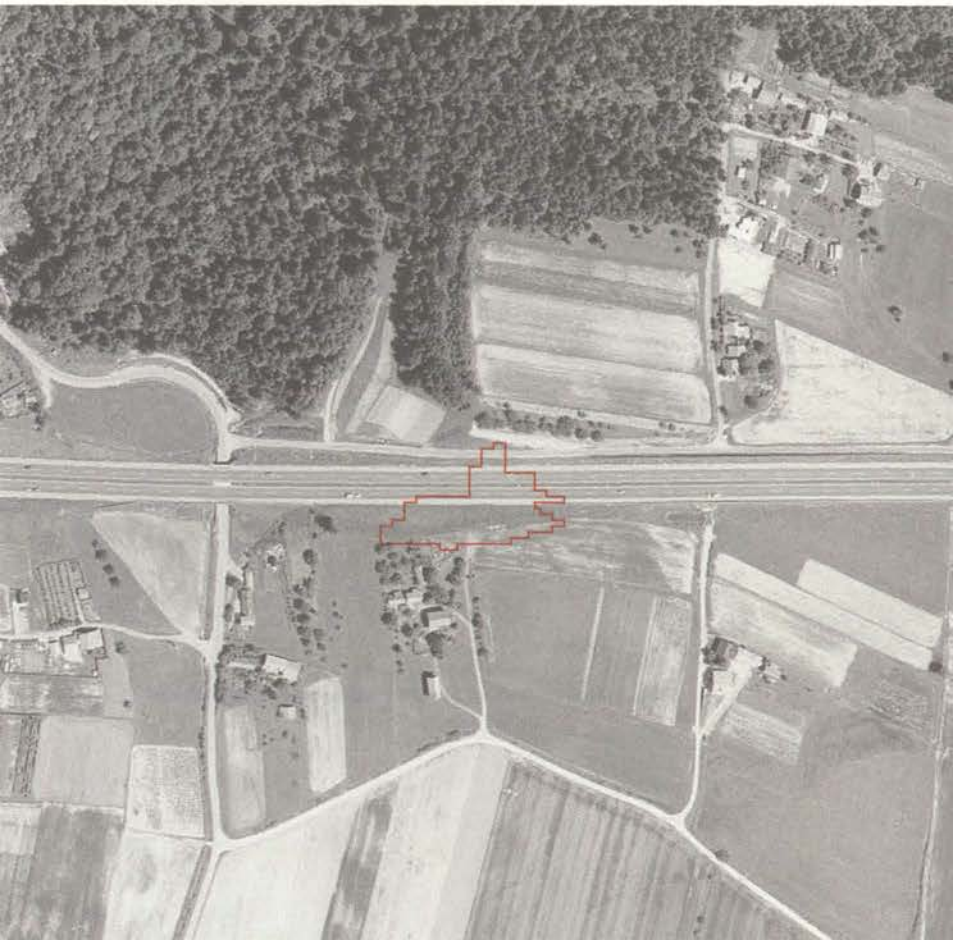
IRN 10397	Gotovlje – Bronze Age settlement
Motorway section	SK 06 Arja Vas–Vransko
Geographical coordinates	x 512684 y 125076 z 284
Primary topographical map sheet TTN5	Celje 16
Cadastral register	c.c. Gotovlje, cadastral plot nos. 590, 591, 594, 600, 603/1, 613, 614, 778/4, 779/2 & 3
Site type	Settlement
Period	Eneolithic, Early and Middle Bronze Age, Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 1995, Bojan Djurić, Slobodan Olić and Alenka Vogrin
Fieldwork method and date	Excavation 1995–1996
Excavation directors	Slobodan Olić and Alenka Vogrin
Excavated area	3,100 m²
Site archive kept by	ZVKDS, Celje Regional Office

The site is located on one of the higher terraces deposited by the river Savinja near Gotovlje on the northern edge of the central part of the Celje basin.

The structures (pits and stone platforms) at Šiman indicate the existence of a settlement at this location. The extant structures can be defined as elements of individual residential structures, but it should be noted that associated postholes for structural timbers were not discovered. All the structures were similar in size (circa 2 x 2 m; one circa 8 x 4 m). They all contained pottery and lithic artefacts, but one also contained two glass beads.

Middle Bronze Age vessel

When was the site at Šiman occupied? The range of analyses undertaken (typological analysis of the pottery



and its decoration, lithic artefact analyses and radiocarbon dating) suggests that four phases existed. The first is radiocarbon dated to the Early Eneolithic period. This date is confirmed by two arrowheads, which could derive either from the end of the Eneolithic period or the Early Bronze Age or even earlier periods, according to S. Forenbaher. Some pottery fragments likewise indicate the settlement at Šiman falls within the context of the Lasinja culture.

The second occupation phase was defined by pottery typology as analogous to the Late Eneolithic or Early Bronze Age Ljubljansko Barje and Vučedol cultures, as well as the Cetinje culture in Dalmatia, Croatia, and partly also the Eastern Transdanubian Csepel culture.

The third phase of settlement is defined by analogies in the pottery typology to the Carpathian sites of the Middle Bronze Age Tumulus cultures and the Piliny culture, as well as to that of the transition to the early period of the Urnfield culture by analogies with the Virovitica group.

Selection of stone tools

It is likely that the broader area of the Šiman settlement (the excavations comprised only a smaller part) was occupied more or less continuously up to the Late Bronze Age, but it would be difficult to talk of the continuity of the same settlement. However, it is assumed that the settlement of one group was continuous for the entire time period of the group. One should also take into account the possibility that old structures were abandoned in the settlement and new ones were erected in their place during the long-term settlement of this area.

There are only sparse occupation remains after the Late Bronze Age, but two pits can be dated by radiocarbon analysis to the Roman period.

SIMONA TOMAŽIČ

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Školarice near Spodnje Škofije

IRN 14299	Spodnje Škofije – archaeological site Školarice
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	x 405784 y 46846 z 25
Primary topographical map sheet TTN5	Koper 29
Cadastral register	c.c. Škofije, cadastral plot nos. 79/5, 673/14, 673/22, 673/23, 702/15, 702/16, 702/27, 702/28, 703/2, 703/3, 703/4, 704/6, 708/3, 710/3, 711/4, 711/5, 711/6 & 714/5
Site type	Villa rustica
Period	Roman
ethod and date of discovery, site discovered by	Topography 1991, Giordano Labud; Systematic archaeological survey 2001, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation directors	Alfred Trenz and Matjaž Novšak
Excavated area	6,136 m²
Site archive kept by	ZVKDS, Piran Regional Office

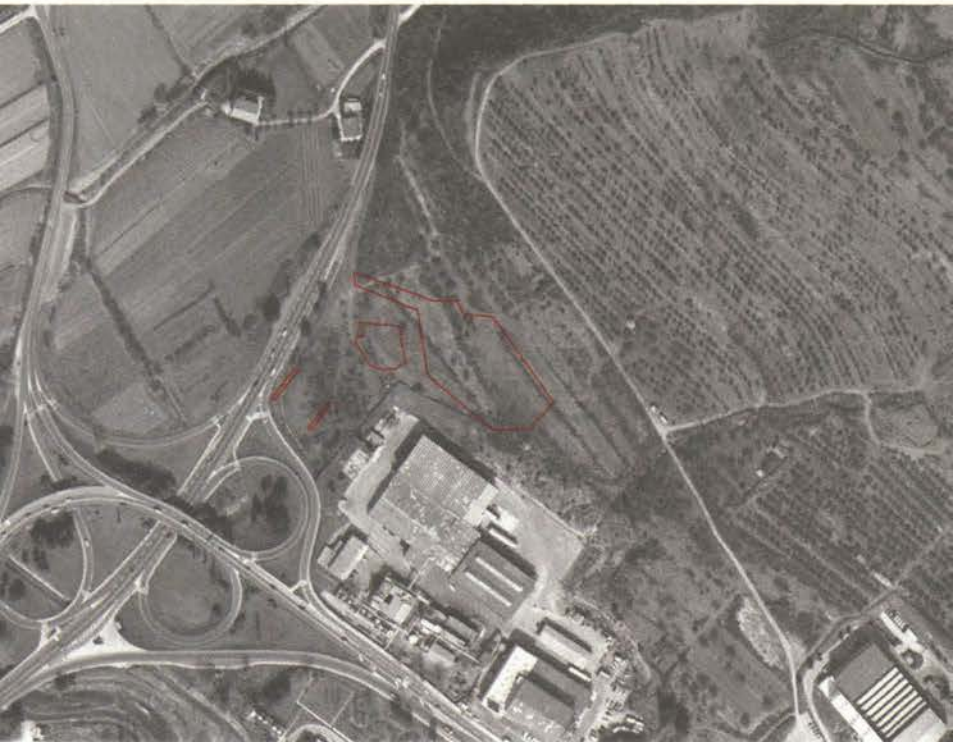
The remains of a Roman settlement are located on the south-western terraced slope of the Bečajevec hill between Dekani and Sermin. The underlying geology consists of Eocene flysch, which stretches from Črni Kal, Kubed and Sočerga in the east to the Dragonja–Buzet line in the south.

Small Late Roman jar

The Školarice toponym, derived from the Italian Scoladizzi (Ital. scolare means 'drip', 'trickle'), indicates the presence of small springs in the area. The landscape around the site is hilly and mostly covered with olive groves and vineyards. The numerous terraces are indicators of intense anthropogenic influence on the landscape.

Two large building complexes were excavated in the two parts affected by motorway construction within the excavated part of the site. The architectural remains indicate that an extensive country villa (*villa rustica*) was built here during the period of the Early Roman Empire.

The size and preservation of the remains are representative and exceptional in the territory of Slovenian



Istria. The excavated artefacts indicate that the villa was occupied throughout the period between the end of the 1st century BC and the 5th century AD.

Several functionally different parts can be identified in the excavated part of the villa. The commercial zone with manufacturing units is located on the present second and third terrace of the Bečajevec hill, which already was terraced in the Roman period. The ruins of the building in this area are particularly well preserved. The finely dressed, mortared walls here survive to a height of 2m. The floors, covered with screed, floor tiles and mosaic are preserved in the interior. The stone-built stairway is almost entirely extant. The remains of stone bases for a press and receptacles (dolia, amphorae, a stone bowl) are the preserved parts of furnishings and equipment for processing olives and making wine. The warehouse with an internal peristyle (600 m²) and a drainage system was built in extension to the north of the commercial buildings. It originally served as a storage area. The roof was used as a floor, after it collapsed in the Late Roman period. The interior of the building was subdivided with drystone walls and wooden superstructures for commercial purposes. An oven was erected in one of the rooms, and numerous scattered fragmented metal artefacts were discovered around it. After the villa was abandoned, a massive supporting wall was preserved, as well as several stone bases of the colonnade, but the floors in the rooms were buried beneath rubble.

Roman relief-decorated incense burner

The bathhouse (termae) and the ruins of the residential structures likewise developed in several phases. The apse of the at least six-roomed building was panelled with white marble floor and walls tiles in the *opus sectile* technique. Fragments of the richly furnished interior were discovered among the ruins: fragments of ornamental stucco, smaller cubes of the mosaic paving and fragments of frescoes with vegetal motifs.

An access path with a compact surface was discovered to the north of the bathhouse building. It was probably the link between the villa and the main *Tergeste–Pola* road, which was discovered at the foot of the hill.

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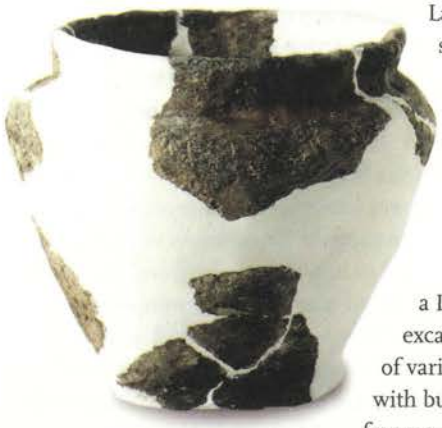
Šmatevž

IRN 10403	Šmatevž – Prehistoric settlement
Motorway section	SK 06 Arja Vas–Vransko
Geographical coordinates	x 503645 y 123730 z 293
Primary topographical map sheet TTN5	Celje 22
Cadastral register	c.c. Matevž, cadastral plot nos. 5/1, 49, 50, 51/1, 2, 55, 57, 58, 63, 64/1, 496; c.c. Trnava, cadastral plot no. 978
Site type	Settlement
Period	Bronze Age, Late Iron Age, Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 1995, Bojan Djurić and Slobodan Olić
Fieldwork method and date	Excavation 1995–1996
Excavation directors	Damjan Snoj and Gojko Tica
Excavated area	5,900 m²
Site archive kept by	ZVKDS, Celje Regional Office



La Tène situlate vessel

The excavations revealed the modest remains of a Late Bronze Age settlement. It only survived in the form of hearths, functionally unclassified pits, a ditch, and above all in the numerous characteristic potsherds, which were found in the sediments deposited by the river Bolska at the eastern edge of the terrace.

The better preserved remains of a Late Iron Age settlement were also excavated. These comprised shallow pits of various dimensions, which were filled with burnt material, charcoal and pottery fragments. These can be interpreted as the remains of dwelling structures. The remains of a stone-

floored wooden house were also excavated. Its structure of vertical beams and wattle and daub walls was cut into the subsoil.

The archaeological excavations recovered the remains of two chronologically unconnected settlements: the Late Bronze Age and the Late Iron Age. They were located on a low Pleistocene terrace. This had an excellent location in relation to the surrounding area, because the site was beyond the reach of flooding by the river Bolska. It commands a fine view of the area in the direction of the river Savinja and is only a few hundred metres away from the prehistoric amber route, or the subsequent Roman *Emona–Celeia* road. The terrace was settled in the Late Bronze Age at the latest, during the Urnfield culture period. The settlement remains are very modest, although only the south-eastern part of the site has been excavated so far. If they have not been destroyed, then structures from the same period can be expected to the north of the site, in a wood which extends towards Štrovsenek Manor. The terrace was undoubtedly occupied in the later phase of the Late Iron Age, as is shown by the remains of a structure from this period, as well as by small finds and various pits. The end of the Late Iron Age probably also marked the end of the settlement at Šmatevž since the Roman finds exhibit early Roman forms.

Early Roman pottery tripod

GOJKO TICA

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Šušec near Razdrto

IRN 15562	Lozice – archaeological site Šušec
Motorway section	HC Razdrto–Vipava
Geographical coordinates	x 425809 y 69132 z 555
Basic topographical chart TTN5	Sežana 8
Cadastral register	c.c. Lozice, cadastral plot nos. 1836, 1583/1 & 2
Site type	Settlement, road
Period	Bronze Age, Roman period, Early Modern
Method and date of discovery, site discovered by	Systematic archaeological survey 1999–2000, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Drago Svoljšak
Excavated area	890 m²
Site archive kept by	ZVKDS, Nova Gorica Regional Office

The archaeological site is located directly beneath the summit of the southern slope of Nanos with the toponym Rebernice, where the route of the new trunk road runs beside the existing regional road. This is the only natural route over the saddle of Razdrto into the extensive Vipavska dolina valley. This was also the location of the prehistoric and Roman routes (the amber route) from the Danube area towards the northern Adriatic (*Caput Adriae*). The site lies in an elongated depression (circa 115 m long and 75 m wide), which was formed as a result of a colluvial geological event, probably a rotation slip or similar landslide event on the slope of Nanos. The area is bounded on the east by the occasional stream of Krvavi Potok and on the west by the permanent Šušet stream, which was dammed for the Karst water-main in 1917.

The climatically advantageous hollow beneath the Razdrto pass (Roman *Ocra*), at the interface of climatic zones and protected against gusts of the burja (It. Bora: north wind), was occupied, but not continuously settled, from the Bronze Age. However, some of the finds, e.g. stone tools and dewponds, are of even earlier, perhaps Neolithic-Eneolithic origin. Two dewponds (8–10 m in diameter; 1.10 and 0.70 m deep), a rarity on archaeological settlement sites in Slovenia, were probably originally natural phenomena in impervious layers in the very dynamic relief of the hollow. The sides were artificially stone revetted to facilitate movement and access to water. Stone tools discovered around the dewponds testify to human activity in the vicinity and use of the ponds. Bronze Age material provides evidence of (probably) two occupation phases: an earlier Castielliere phase in the Middle Bronze Age and a later, Urnfield phase (HaA 1) in the Late Bronze Age. The former is represented by characteristic pottery and the latter by a bronze sickle tip fragment. The Šušec site functioned within the system of fortified settlements along the route from the Notranjska region to Vipavska Dolina and Soča during this period. Evidence of this has also been found at the nearby sites at Goli Vrh, Gradišče Nanos and Gradišče above Hrašče.

Two tunnel handles, a cordon grip and a boss decoration from different vessels, mid-2nd millennium BC

However, the site was most active in the Early Roman period, when it was part of the (infra) structure of the route between Aquileia and Emona in the pre-Augustan period and partly into the 1st century AD. The chronological framework of the probable halt between the mountain pass and the road station of Ocra is defined by coin finds: silver denarii of Julius Caesar (African mint, 47–46 BC), a bronze *as* of Drusus Caesar (22–23 AD), and a bronze as of Germanicus (37–41 AD). The occupation framework is defined by the permanent location of circular fireplaces, which were either in the open, or perhaps under makeshift roofs. There was also a structure of uncertain plan erected on a deep stone fill and levelling layer in an extensive hollow, which was paved with stone and roofed with tiles. Other finds include domestic artefacts (e.g. whetstones and pottery), dress elements (forged iron hobnails), food remains (animal bones) and a road. The road, surfaced with a thin layer of stream gravel, round sandstone stream cobbles and local sandstone quarrystone (excavated length: 33 m; road width: 1.50 m), was constructed at a slight rise along the bottom of the hollow, over the levelled fluvial layers with prehistoric inclusions. Double wheel ruts (0.35 m wide; 5 cm deep) with a central (axial) distance

Silver denarius of Julius Caesar, struck between 47 and 24 BC

Bronze fibula, 1st century AD

of 1.10 m between them were visible in the road surface. The road bears witness to the Early Roman road link between the Adriatic and the Central Danube region via the route across the Ocra (Razdrto) mountain pass. Its prominence on the alternative *Siscia–Aquileia* road route in the Late Roman period is indicated by the bronze fibula found at the site of Šušec.

A road that was constructed between the 15th and 17th century, and characterised by excellent construction, almost consistently followed the Roman road. The road was up to 3.95 m wide with a ca. 3.20 m carriage way. It was constructed on a thick roadbed (0.20 m), made up of unwashed gravel (75 %) and sharp-edged local rubble with inclusions of sandstone quarrystone (25 %). The deeply incised wheel ruts with several parallel channels and a 1.10 m axial distance testify to heavy freight and dense traffic. This is further confirmed by numerous horseshoe nails, which were discovered in the sand by the roadway. The road was dated by means of a spherical headed bronze pin.

Bronze pin from the Early Modern road, 15th–17th century

Modern land use is apparent in the field terraces and from drainage ditches. It was also cut by a military trench deep in the hinterland of the Soča (Isonzo) Front during the First World War. The more recent topsoil contained an abundance of building material and litter, although some of the inclusions must be attributed to the mill by the Šušet stream, the roadside chapel and the Franco-Austrian conflicts of the Napoleonic Wars between 1795 and 1805. The active and continuous geological processes in the landslide-prone Rebernice area are discernible from the fluvial sand landslide.

DRAGO SVOLJŠAK

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Trnava

IRN 10405	Trnava – Prehistoric settlement
Motorway section	SK 06 Arja Vas–Vransko
Geographical coordinates	x 505850 y 123905 z 282
Primary topographical map sheet TTN5	Celje 23
Cadastral register	C.C. Orla vas, cadastral plot nos. 209, 210, 213, 214; C.C. Trnava, cadastral plot nos. 190, 191/1 & 193/1
Site type	Settlement
Period	Late Iron Age
Method and date of discovery, site discovered by	Systematic archaeological survey 1995, Bojan Djurić, Slobodan Olić and Alenka Vogrin
Fieldwork method and date	Excavation 1995
Excavation directors	Matjaž Novšak and Alenka Vogrin
Excavated area	2,600 m²
Site archive kept by	ZVKDS, Celje Regional Office

A middle La Tène (the middle period of the Late Iron Age, 3rd - 2nd century BC) site comprising residential and outbuilding structures was discovered between the villages of Trnava, Orla vas and Šentrupert in the central lowland part of the Lower Savinja valley. Settlements from this period have long been posited as being present in lowland regions on the basis of known cemeteries (Dobova, Brežice, Slatina in Rožna dolina and Drešinja vas), isolated finds and hoards, together with the important pottery kiln at Spodnja Hajdina near Ptuj (3rd–2nd century BC). However, the discovery in Trnava has for the first time offered a brief glimpse into part of a Celtic settlement in Slovenia.

The underlying geology of the entire site consists of alluvial sandy gravel deposits which are present in areas of high fluvial activity. Gravel was deposited by water in periods of more intense activity, whilst the finer sediments gradually filled the hollows between the ridges in the calmer periods. In the recent past the surface has been levelled by ploughing, which has obliterated the archaeological record to a great extent. A reconstruction of the relief during the occupation of the site from the analysis of sections indicates that some gravel islands in the landscape were formerly exposed and were located higher than the present ground surface. These areas were most damaged by deep ploughing, but they were formerly safe from flooding and the appearance of marshy conditions, which meant that they were most suitable for settlement. Finds were most numerous in the plough soil and at the base of the river bars.

La Tène Graphitonkeramik jar fragment

With the exception of two fragments of Bronze Age vessels, all the identifiable archaeological artefacts were dated to the middle of the Late Iron Age (i.e. absolute date: the middle of the 3rd century up to and including the middle of the 1st century BC). From a cultural viewpoint, the finds were characteristic of Celtic culture. The same holds true of numerous small metal artefacts, fast wheel-made pottery and Graphitonkeramik. Appropriate parallels can be found for the above artefacts in the broader Central European area, which was dominated by Celtic populations during the Late Iron Age, whilst the domestic coarse ware demonstrates features of its own and cannot be appropriately defined due to a lack of similar sites. The finds are settlement in character, but they also bear witness to iron production in this area.

MATJAŽ NOVŠAK

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Trojane cesta

IRN 15521	V Zideh – Roman road Emona–Celeia
Motorway section	SK 07 Vransko–Blagovica
Geographical coordinates	x 492486 y 116286 z 516
Primary topographical map sheet TTN5	Gornji Grad 47
Cadastral register	c.c. Trojane, cadastral plot no. 831/5
Site type	Via publica Emona–Celeia
Period	Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 1995, Marija Mertelj and Milan Sagadin
Fieldwork method and date	Excavation 1997
Excavation directors	Milan Sagadin and Tomislav Kajfež
Excavated area	40 m²
Site archive kept by	SAAS

Trojane (563 m a.s.l., Lat. *Atrans*) is located on a pass in the mountains, which descend from the eastern Karavanke to the canyon of the river Sava. It divides the Ljubljana basin from the Celje basin, as well as the Kranjska region from the Štajerska region. In the Roman period, this was the border between Italy and *Noricum*, or between the areas of *Emona* and *Celeia*. *Atrans* belonged to the latter. The mountain pass is narrow and oblong, with three streams flowing into three valleys from its slopes: the Radomlja into Črni Graben, the Orehovica into the Izlake valley and Bolska in the direction of Vransko.

The *Aquileia–Emona* road and both its branches in the directions of *Poetovio* and *Siscia* were built during the reign of the Emperor Augustus (27 BC–14 AD) and his successor Tiberius (14–37 AD), when the Roman Empire finally extended its frontiers to the Danube.

The *Emona–Celeia* road was a *via publica* indicating the road that was laid out, built and fitted with resting places and milestones, as well as being recorded by the provincial administration in the civic office in Rome, the

so-called *cura viarum*. The records for the existence of the road are based on the itineraries, the Roman geographers, milestones, topographical data, archaeological research on the road and the associated settlement remains.

The trial trench revealed evidence of a 6-m-wide Roman road, which was bounded on the north by a hill and by the Bolska stream valley on the south. The sand and quarrystone make up of the road had a characteristic lenticular section. It was bounded by a drainage ditch on each side and constructed on brown impervious clay.

Section through the Roman *Emona–Celeia* road and the *Laibach–Cilli* state highway

Hollows in the original ground surface were levelled with a bed of large quarrystone. The modest depth of the surviving road (20–25 cm) is the result of intensive erosion, as is shown by the deep gravel fill from the road in the drainage ditches.

The road over Trojane lost its significance in the Middle Ages, because the feudal lords of Carniola (Kranjska) redirected traffic to the provincial road via the valley of Tuhinjska Dolina, through Motnik and over the Kozjek mountain pass to Kamnik and on towards Škofja Loka. In 1727, Charles VI, Emperor of Austria decreed the reorganisation of the Viennese commercial road, including the Zajsovik–Baba–Trojane–Lukovica section. Thereafter Trojane once again experienced increased traffic.

The macadam road discovered directly beneath the turf line is the old Austrian road, which led from Celje across Trojane to Ljubljana. It was used until the construction of the present main Ljubljana–Celje road between 1958 and 1959.

TOMISLAV KAJFEŽ

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Valmarin near Spodnje Škofije

IRN 15563	Spodnje Škofije – archaeological site Valmarin
Motorway section	SK 20 Klanec–Ankaran
Geographical coordinates	X 405475 Y 47193 Z 10
Primary topographical map sheet TTN5	Koper 28
Cadastral register	C.C. Škofije, cadastral plot nos. 79/11, 12, 17, 18, 569/1 & 4
Site type	Farm building
Period	Early Modern
Method and date of discovery, site discovered by	Systematic archaeological survey 2001, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2001
Excavation director	Radovan Cunja
Excavated area	456 m²
Site archive kept by	Pokrajinski muzej Koper

The archaeological excavation at the Valmarin site was carried out on the basis of the results of a preliminary archaeological surface survey within the systematic archaeological surveys on the projected route of the Klanec–Ankaran motorway section. The object of the excavation was the ruins of a farm building in the immediate vicinity of the extant large building of the former manor of the Diocese of Koper, which is located on the slope between the road branches from Ankaran to Trieste and between the Ankaran crossroads and the Lazaret border crossing. The latter is located circa 300 m away from the line as the crow flies in a south-westerly direction from the Ankaran crossing. The farm building in question collapsed and lost its function in the second half of the 20th century, because of its dilapidated state.

Rectangular bronze belt clasp with iron buckle, 16th–17th century

Prior to archaeological excavation and recording, the extant building remains comprised as part of the external walls, which did not exceed ground floor height with the exception of the south-eastern corner. There were also two partition walls, which divided the interior into three rooms. The excavation was limited to the southern half of the building, while its northern part, still private property at that time, remained unexcavated. After the removal of vegetation, the situation was geodesically recorded before the beginning of archaeological excavation, and a digital relief model was made. The rubble was removed in all three rooms as far as the stone paving, as well as on the slope to the west of the building. Trial trenches were excavated in all the rooms and in the yard to the east of the building in order

to establish the stratigraphy and building development, whilst the dynamics of building collapse were established by trial trenching on the slope to the west of it.

The site was excavated stratigraphically with photographic recording, which employed a digital camera and A-tripods for vertical photography. This was a time-saving process, because immediate computer processing facilitated the production of photographs or photographic plans for further processing and interpretation on site. Over 100 photographic plans were produced. These served as a basis for stratigraphic interpretation and definition of the identified stratigraphic units, that entirely replacing manual drawing. An external geodesic group participated daily at the site employing a GPS receiver for surveying in grid points. The standing building remains were recorded by the same group: the entrance to the southern room, individual, partly or entirely extant narrow funnel -shaped wall slits, as well as two wall niches.

Bipartite iron horse-collar tie, 19th–20th century

It was possible to reveal and record by excavation the entire floor plan of the southern part of the building, its external walls, as well as the two partition walls, and to explain its basic building development. It seems that the entire building, ca. 25 x 8 m in size, came into existence in a single phase. There were no earlier surfaces beneath the stone paved floors inside the rooms, but only a thick layer of clay, stones and brick fragments, associated with the levelling of the terrain, which sloped in a southerly direction. Similar interventions were recorded also in both trial trenches in the yard to the east of the building, where the entrance ramps in front of the access to the central and southern rooms were revealed. The collapsed western wall, still *in situ*, as well as two of the wall slits were discovered in several places and recorded on the slope to the west of the building.

Sparse, fragmentary remnants of pottery from the period between the 16th and 17th century are associated with the stratigraphically earliest layers and indicate the earliest possible origins of the building. Most of the remaining finds are from the 19th and 20th century. The sporadic and fragmentary Roman small finds cannot be associated with the building and were probably brought there from its immediate environs.

After the completion of excavation, the building remains were removed mechanically during the construction of the motorway section in question.

RADOVAN CUNJA

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Veliki Dol near Velika Vas

IRN 9815 (2)	Velika Vas pri Krškem – archaeological zone
Motorway section	KO 18 Smednik–Krška Vas
Geographical coordinates	x 534956 y 85713 z 160
Primary topographical map sheet TTN5	Krško 160
Cadastral register	c.c. Senuša cadastral plot nos. 1578/1, 1579/1, 1580/1, 2, 1581/1, 2, 3, 4, 1582/1, 2, 1583/1, 2, 1584/1, 2, 1584/1, 4, 5, 1591/3, 4, 1592/2, 1593/3, 1939/2, 1940/3, 4, 1943, 1944/1, 2, 1945, 1946/1, 7, 1947/1, 1948/1, 1949/1, 2 & 1959
Site type	Archaeological site
Period	Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 1999–2000, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Boris Vičič
Excavated area	14,000 m²
Site archive kept by	SAAS

Roman brick fragments
(*tegula, imbrex, tubulus*)

The site is located on slightly elevated, forested terrain to th e west of the Senuša stream and partly extends into the low-lying area on the left bank. Numerous Roman pottery and brick fragments indicate that this is a settlement site.

BOJAN DJURIĆ

- Prehistoric pottery
- Roman pottery
- Burnt clay

References

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1 : 5.000
Prehistoric Pottery
Roman Pottery
Burnt clay

Velike Njive near Velika Vas

IRN 9815 (3)	Velika Vas pri Krškem – archaeological zone
Motorway section	KO 18 Smednik–Krška Vas
Geographical coordinates	x 535801 y 85651 z 158
Primary topographical map sheet TTN5	Krško 46
Cadastral register	c.c. Senuša, cadastral plot nos. 1785/1, 1786/1, 1856/2, 1857, 1890, 1891, 1893/1, 1894/1, 1895/1, 1896/1, 1897/1, 1908/2, 1945/2, 1946/3, 4 & 1947/2
Site type	Archaeological site
Period	Prehistoric, Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 1999–2000, Ildikó Pintér and Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Phil Mason
Excavated area	20,400 m²
Site archive kept by	SAAS

The site is located in the lowland area on the right bank of Velikovaški potok (stream) to the north of the Ljubljana–Zagreb road. Numerous prehistoric pottery and burnt clay fragments indicate that it is a settlement site. Prehistoric and Roman artefacts occur in the eastern part of the site.

BOJAN DJURIĆ

Late Bronze Age pithos fragment

Roman bronze fibula fragment

References

DJURIĆ, BOJAN; PINTÉR, ILDIKÓ, *Poročilo o rezultatih arheološkega pregleda na potencialnem najdišču Velike njive pri Veliki vasi*, Ljubljana 2000.

Za Raščico

IRN 15531	Krog – archaeological site Za Raščico
Motorway section	MP 03/2 Vučja Vas–Beltinci
Geographical coordinates	x 588506 y 166078 z 188
Primary topographical map sheet TTN5	Radgona 30
Cadastral register	c.c. Krog, cadastral plot nos. 1362, 1364, 1357 & 1363
Site type	Settlement
Period	Eneolithic and Bronze Age
Method and date of discovery, site discovered by	Systematic archaeological survey 1998–1999, Bojan Djurić, Branko Kerman and Irena Šavel
Fieldwork method and date	Excavation in 2001–2002
Excavation director	Irena Šavel
Excavated area	22,469 m²
Site archive kept by	Pokrajinski muzej Murska Sobota

The site is located in a lowland area that is intersected by numerous watercourses to the east of the village of Krog and to the south of the Dobel stream. The underlying geology on the site consists of gravel point bars deposited by the river Mura during the last Glaciation. The gravel point bar bases were later filled with various sediments by the Mura and smaller streams. These processes have, together recent with intensive agriculture, completely transformed the landscape and gradually levelled it. The gravel point bars are covered with sandy sediments in certain areas, whilst in others they are covered by a dark clay layer (up to 90 cm), which are a result of continuous deposition of fluvial material to

the former ground surface. Three silted stream palaeochannels were recorded in three places.

The area offered conditions for occupation and thus for the construction of dwellings during the Eneolithic/Bronze Age interface (ca. 2,200 BC). The remains of free-standing structures and negative features (pit dwellings) were discovered. The average dimensions of the former are 8 x 10 m and of the latter 6 x 5 m. Large and small pits, as well as hearths and fireplaces were excavated in close proximity to the structures. An oven was discovered, as well as several cisterns (3 m in diameter; 2 m in depth).

Footed cup, end of the Eneolithic and beginning of the Bronze Age

A cemetery, represented by an isolated, badly damaged cremation grave, was probably located in the north-eastern part of the site in the Late Bronze Age (circa 900 BC). This area has been subject to deep ploughing and other forms of intensive cultivation (deep harrowing) in recent years.

A Roman building (3rd century AD) in a rectangular ditched enclosure was discovered on the slightly raised terrain in the extreme eastern part of the site.

IRENA ŠAVEL

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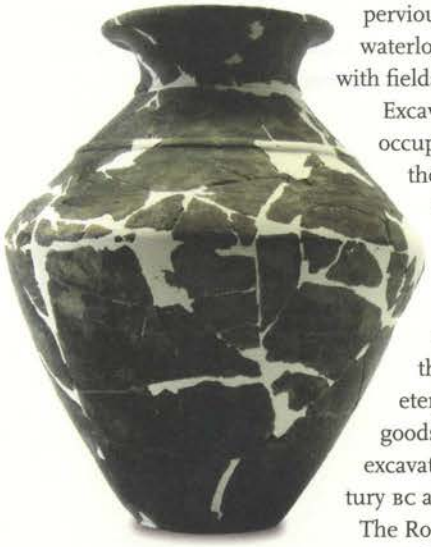
Zagorica near Bič

IRN 15513	Zagorica pri Velikem Gabru – archaeological site Zagorica – Bič
Motorway section	KO 14 Bič–Trebnje
Geographical coordinates	x 492023 y 86566 z 306
Primary topographical map sheet TTN5	Višnja Gora 47
Cadastral register	c.c. Zagorica, cadastral plot nos. 63/1, 132, 133, 134/1, 2, 145/1, 2, 3, 150/1, 2, 152, 181/2, 188/1, 190 & 970/2
Site type	cemetery, villa rustica, settlement
Period	Late Iron Age, Roman, Early Middle Ages
Method and date of discovery, site discovered by	Systematic archaeological survey 2001, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2002
Excavation director	Boris Vičič
Excavated area	25,000 m²
Site archive kept by	ZVKDS, Ljubljana Regional Office, Faculty of Arts, Department of Archaeology, Ljubljana University

The site is located between the villages of Bič and Zagorica in the eastern part of the Dobska uvala, one of the basins of the Dolenjska valley system, at the foot of Medvedjek. The relief is gentle and characterised by impervious clay subsoil, which becomes extremely waterlogged in heavy rain. The area was covered with fields and meadows prior to excavation.



Pottery urn from a La Tène grave

Excavation revealed slight traces of prehistoric occupation connected with water sources and the exploitation of the water ecosystem, as well as the activity of karst swallow-holes. The area surrounding one of these was probably occupied in the Eneolithic period. Later, La Tène occupation remains were located on the raised ground beneath the Reber hill, whilst the associated cemetery of 20 cremation graves with rich grave goods (pottery, jewellery and weaponry) was excavated in the lowland. It dates to the 2nd century BC and beginning of the 3rd century BC.

The Roman settlement with a small associated cemetery is located on the lowland, which was flooded until recently and has partly covered the La Tène cemetery. Four buildings had drystone cobble and quarry

stone foundations without evidence of extant mortar, whilst a further three buildings were fairly large (dimensions: 20 x 15 m). No architectural elements which might indicate the nature of the superstructure were discovered. The best preserved excavated building had a square plan with an extension that pierced the external wall. It is assumed that the external walls did not exceed parapet height and served as enclosures with economic functions. One of the buildings was smaller in size (circa 11 x 11 m) and was partly damaged by a recent cut. Four pits, filled with stone and mortar, were discovered in the interior. Unfortunately, the building functions cannot be determined with a great degree of certainty. Very few small finds were discovered inside the buildings, but they can be dated on the basis of two fibulae and a coin to the period between the late 1st and early 3rd centuries AD.

Roman bronze fibula

A small associated cemetery, comprising a domed tomb and four graves, was excavated at the eastern edge of the settlement. All the graves were cremation burials and were characteristic in terms of structure for the Dolenjska region. The graves goods indicate that the cremation cemetery and the settlement were contemporary.

The lowland site was abandoned in the 3rd century AD, but the settlement on the raised area beneath Reber was re-occupied in the Late Roman and Early Medieval period. The earliest indications of occupation date to the Late Roman period, when pits and postholes appeard throughout the western area of this part of the site. The next two occupation phases are dated to the Early Medieval period on the grounds of the material evidence and follow closely one after the other; the earlier phase has a central, probably enclosed area with some buildings and a common manipulative area, whilst the later phase was unenclosed, with three large buildings. The latest phase is present on the edges to the north and west of the central depression, and has finds, which date to the very end of the Early Middle Ages.

Small Early Slavic jar

BORIS VIČIČ

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Zasavje near Krška Vas

IRN 10782	Krška Vas – archaeological site Zasavje
Motorway section	KO 19 Krška Vas–Obrežje
Geographical coordinates	x 544760 y 84356 z 146
Primary topographical map sheet TTN5	Kostanjevica 10
Cadastral register	C.C. Krška Vas, cadastral plot no. 1823/1
Site type	Village
Period	Middle Ages and Early Modern
Method and date of discovery, site discovered by	Systematic archaeological survey 1998, Ildikó Pintér and Bojan Djurić
Survey area	100 m²
Site archive kept by	SAAS

The site is located on the lowest, Holocene gravel terrace of the river Sava to the north of Krška Vas, between the Ljubljana–Obrežje road and the present channel of the Sava. On the basis of 28 large medieval/modern pottery fragments, 1 stove tile, 6 pieces of building material and ploughed-out building remains (i.e. limestone blocks), the site can be identified with the village of Zasavje. The village was destroyed on 25th January, 1781, when the river Sava flooded, shifted its course and washed away 14 houses and the Church of Sv. Nikolaj (St. Nicholas).

ILDIKÓ PINTÉR

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Zemono near Vipava 1

IRN 15519	Duplje – Bronze Age settlement
Motorway section	HC Razdrto–Vipava
Geographical coordinates	x 418047 y 80047 z 98
Primary topographical map sheet TTN5	Ajdovščina 14
Cadastral register	C.C. Vrhpolje, cadastral plot nos. 1667, 1668, 1670, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682 & 1683
Site type	Settlement
Period	Bronze Age
Method and date of discovery, site discovered by	Systematic archaeological survey 1996, 1999, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2000–2001
Excavation director	Patricija Bratina
Excavated area	14,976 m²
Site archive kept by	ZVKDS, Nova Gorica Regional Office

Denticulated stone blade

The site of Zemono 1 is located at the centre of the Vipavska dolina (valley). It lies to the south-east of the Church of Sv. Marija (the Virgin Mary) in Log near Vipava, to the south of the main road between Ajdovščina and Vipava.

Rescue excavation revealed traces of the edge of a settlement, the continuation of which was anticipated on the other side of the main road, in the direction of a slight rise, which is planted with vines. The exposure of the site to the intensive effects of hydrological activity, agricultural improvement and continuous agicultural activity meant that only features cut into the subsoil (i.e. pits and cuts) can be interpreted as remains of anthropogenic interventions in Prehistory. Postholes were discovered for the upright timbers of wooden structures, or

else for Bronze Age houses. The pits, the fills of which contained animal bones (often burnt), charcoal, charred grain and archaeological evidence of anthropogenic origins (prehistoric pottery, clay spindlewhorls, stone tools, stone flakes and whetstones), served for storage or rubbish disposal.

The stratigraphy and typology of the excavated material from the Zemono 1 site is similar to that at the site of Log near Vipava, 1 km away. Prehistoric pottery fragments, with the exception of some fragments found in pits, were also extremely poorly preserved there as well and had abraded and damaged surfaces as the result of post-depositional processes, primarily intensive hydrological processes. Most of the potsherds (2557) consisted of coarse ware vessels with thick walls, usually decorated with applied cordons. They date to the Bronze Age. Stone tools included the following typological forms: scrapers, burins, retouched blades, denticulated blades, various point forms, trapezes, retouched flakes and two polished axes. The stratigraphic position of the lithic material indicates that it undoubtedly dates to the same period as the excavated pottery.

Stone point and stone core, excavated together

The excavation further revealed later stone structures, which are interpreted as drainage features. These were the result of extensive and carefully planned works from the end of the 19th century. They were part of a system that collected runoff during heavy rains and drained it towards the river Vipava, thus regulating level of the water table.

PATRICIJA BRATINA

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Zemono near Vipava 2

IRN 14086	Zemono –archaeological site
Motorway section	HC Razdrto–Vipava
Geographical coordinates	x 418400 y 79331 z 99
Primary topographical map sheet TTN5	Ajdovščina 14
Cadastral register	c.c. Vipava, cadastral plot nos. 3125/6, 7, 8, 9, 14, 3126/6, 7, 8, 9, 3127/4, 5 & 6
Site type	Base camp (?)
Period	EpiPalaeolithic
Method and date of discovery, site discovered by	Systematic archaeological survey 1999, Gojko Tica and Bojan Djurić
Fieldwork method and date	Excavation 2000–2001
Excavation director	Gojko Tica
Excavated area	8,000 m²
Site archive kept by	Akord, d.o.o.

Flint nodule deorated with incisions

The site is located beneath the isolated hill of Zemono beside the main Ajdovščina–Vipava road on an area which is slightly raised above the Vipavska dolina (Vipava valley). The underlying geology of most of the site consists of yellowish-brown silt with rubble in a small area. The south sloping subsoil lay beneath an occupation layer (20 to 30 cm in depth), which was only 60 cm below the ground surface in the northern part of the site, but over 2 m below the ground surface in the southern part. The site stratigraphy indicates that this is a pedogenetic layer, a so-called buried, fossil soil or palaeosol. The occupation layer came into existence during the process of pedogenesis on the underlying geology of the site. The layers above it mainly consisted of alluvial deposits (sandy gravel, sandy silt, and silt), which buried the occupation layer and protected it against anthropogenic intervention and erosion. The alluvial deposits were deposited

by a stream, the palaeochannel of which was recorded as an erosion channel in the occupation layer.

There were numerous traces of human occupation from the end of the Palaeolithic period. Several thousand flint artefacts were discovered, including several hundred typologically definable stone tools: scrapers, backed blades, transverse retouched blades, Gravettien points, etc. The large quantity of artefacts, retouched tools, numerous flakes, waste flakes and core remnants indicate that the tools were manufactured on site and not brought in from elsewhere. Several fireplaces were also discovered, as well as a large quantity of mostly burnt, highly fragmented bones of red deer, wild boar, possibly other animals and a worked red deer antler tine. The most important finds on the site are two stones, decorated with shallow incisions. A prism-shaped flint nodule was marked on all four sides with shallow incisions made by a flint tool. A small shale slab was decorated on one side with single parallel wavy lines, which were bounded by a convex incised line at the base. The other side was decorated with incisions reminiscent of herring-bone decoration, followed by horizontal incisions bounded by pairs of vertical incisions. The stones are the earliest evidence of rock art in Slovenia.

Chert Scraper

Zemono is the first large open site in Slovenia from the Palaeolithic period, or more precisely its final stage, the Epigravettien. However, it has to be pointed out that the excavations did not include the central part of the settlement, but only its extreme north-western edge consisting of an area of circa 2,500 m^2. The centre of the site is located outside the route of the present road between Vipava and Ajdovščina, probably beside a former meander of the river Vipava. There are other partly excavated settlement traces from the Palaeolithic period in Slovenia, at Jurklošter (Moustérien), Podrisovec near Postojna (Epigravettien), Vrbičev Hribec (Final Late or Final Palaeolithic) or Breg near Škofljica in the Ljubljansko Barje (Mesolithic), but the discovery of such a large open site is surprising.

The layers beneath the plough soil and above the alluvial layers also revealed the sparse remains of a badly damaged Late Bronze Age settlement.

GOJKO TICA

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Žutreki near Spodnja Gorica

IRN 15553	Gaj pri Pragerskem – archaeological site Žutreki
Motorway section	Pragersko bypass
Geographical coordinates	x 552493 y 140715 z 250
Primary topographical map sheet TTN5	Ptuj 14
Cadastral register	c.c. Spodnja Polskava, cadastral plot nos. 639/1, 3, 642/1, 2, 3, 4, 643/1, 2, 3, 4, 5, 6, 7, 8, 711/3, 4, 5, 6, 712/2, 3, 715/3, 728/3, 4, 5, 6 & 732/2
Site type	Settlement
Period	Middle Bronze Age, Roman
Method and date of discovery, site discovered by	Systematic archaeological survey 2000, Bojan Djurić
Fieldwork method and date	Excavation 2003
Excavation director	Marija Lubšina Tušek
Excavated area	7,500 m²
Site archive kept by	ZVKDS, Maribor Regional Office

The site is located in the Dravsko polje plain. It lies to the east of Pragersko and is bounded by the large Črnivec stream in the east. The underlying geology consists of Pleistocene sand and gravel deposited by the river Drava and covered with later alluvial sediments, which were deposited by numerous small Pohorje watercourses and their tributaries with intermediary flood plains, which were often marshy. This part of Dravsko polje and the entire surface of the site (now fields) was reclaimed in the 1980s. It is bisected longitudinally by a 3-m-wide drainage channel, which is fed by lateral channels at intervals of 15 to 18 m. The surface has been further damaged by ploughing up to 0.3 m deep, which means that the former ground surfaces are no longer ex-

tant. Isolated prehistoric and Roman pottery fragments were discovered when the plough soil was removed. An occupation layer was only preserved in the eastern part of the excavated area, which was over 120 m long, in front of the present course of the Črnivec or else on its western bank. The layer (0.20 - 0.30 m deep) consisted of grey-brown loamy silt and contained charcoal fragments, occasional broken river cobbles and pottery. The remains of upright timber posts from structures of various dimensions (5 x 9, 3 x 6 and 10 x 5 m) and other cuts were present in the grey-brown-yellow loamy silt subsoil beneath the occupation layer.

Bronze Age vessel fragments

One structure (Context 73) (Dimensions: 7 x 13 m), with its floor cut to a depth of 20 or 30 cm into the subsoil, stands out from the other remains of timber structures on the site. The floor was covered with the remains on carbonised wood and pottery, which date the structure to the Middle and Late Bronze Age. Post-excavation analysis of the material will provide a definitive chronological and cultural classification of the site. The site used to stand by the meandering channel of the Črnec stream, the palaeochannel of which was discovered ca. 20 m to the west of the present course.

MARIJA LUBŠINA TUŠEK

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Dolinas

Motorway sections	SK 16 Divača–Kozina, SK 17 Kozina–Klanec, SK 18 Klanec–Črni Kal
Site type	Archaeological sites
Period	Prehistoric, Roman
Method and date of discovery, site discovered by	Systematic archaeological surveys, Alma Bavdek
Fieldwork method	Excavation
Excavation director	Alma Bavdek
Site archive kept by	Notranjski muzej, Postojna

Kraje dolina

Dolinas (Slovene 'vrtače') are the most common relief feature in areas of Karst geomorphology. They came into existence primarily in places where the surface gradient was slight. There are several types of dolina in terms of dimensions, shape and origin. Dolinas also differ with regard to the amount of sediments and soil on the slopes and the bedrock base. The thickness of sediment in a dolina depends on its size, location, slope gradient, rock type, erosion power and the amount of earth in the vicinity of the dolina. There is considerably less sediment on the surface and in dolinas in the Divača Karst region, than there is in the Kozina area. Human influence is also a significant factor for the transportation of sediment on the Karst surface and in dolinas.

It is known that there are layers containing archaeological artefacts deep beneath the surface in dolinas and hollows filled with sediments, because fragments of prehistoric pottery have been found in dolinas, from which soil was transported to fields. Dolinas were defined as potential archaeological locations, which were threatened by frequent earth-moving activity (Osmuk 1992; Novaković, Simoni 1997).

The removal of sediment from dolinas was subject to monitoring during earth-moving activity on the route of the present motorway section between Razdrto and Divača and further in the direction of Sežana. Several dolinas with archaeological layers containing prehistoric artefacts were recorded. Special attention was paid to dolinas within the context of the rescue archaeological

programme during the continuation of motorway construction across the Kras (Karst) region, from Divača to the Karst edge. 108 dolinas that were entirely or partly destroyed by motorway construction were recorded by means of systematic archaeological surface surveys on the Divača–Kozina, Kozina–Klanec and Klanec–Ankaran (Karst periphery) motorway sections. The location and primarily the amount of sediment in 13 dolinas led to their selection for excavation in advance of construction work. A further 17 dolinas were subject to strict

Dolina No. 100 near Kozina

monitoring during construction work and were subject to archaeological recording (machine excavated trial trenches and associated recording).

The purpose of advance systematic excavation in dolinas was to acquire as much data as possible on the sediment origin and thus the function of dolinas in the past. The method of investigation was adapted to this purpose and could be adjusted if required. The excavations took place in four phases. A machine trial trench was first dug in each dolina to a depth of 2.5 to 3 m. This provided a section through the dolina and the shape of its wall. It was also possible to establish whether the dolina was archaeologically positive during the machine excavation and examination of the excavated spoil. This stage was followed by the archaeological

recording of one of the sections. The layers in the section were geologically and archeologically defined and recorded. The geo-morphological features of the dolina were likewise determined. The final, fourth phase consisted of an attempt to retrieve as many artefacts as possible by excavation of the occupation layer.

Altogether, 9 of the 13 excavated dolinas were archaeologically positive. Each of them contained an active or recently active arable field with recent artefact fragments. Several layers without archaeological remains were identified beneath the plough soil. A layer containing prehistoric pottery fragments was defined at a depth of 0.7 to 2.2 m, but most of the dolinas also contained lithic artefacts and flakes. Artefacts were discovered in two layers in three dolinas. No other anthropogenic traces were found in the so-called occupation layers, other than charcoal fragments, which would define the function of dolinas in the past. Only geological layers were recorded deeper in the section. Fragments of Roman pottery were discovered in a single dolina, but their position could not be determined more accurately due to earth-moving work prior to our excavation.

Even before the conclusion of post-excavation analysis of the site archive, it can be established that strong erosion processes were active in the environs of the dolinas. It may also be concluded on the basis of rim, lug and handle forms that the remains date to the Prehistoric period, or the Bronze Age. An analysis of the distribution of archaeologically positive dolinas indicated that seven of them were concentrated in two groups: near Divača along the old road in the direction of Lokva and near Kozina. It is posited that there was a prehistoric settlement in their immediate vicinity. The final excavations in the Petrinjski kras (Petrinja karst region) have confirmed the hypothesis of the association of dolinas with prehistoric settlements. The archaeologically positive Kraje 1 dolina was located in the immediate vicinity of the Brgod hill, which has been identified as a settlement area. The finds from both archaeological sites are comparable in terms of form and fabric.

ALMA BAVDEK

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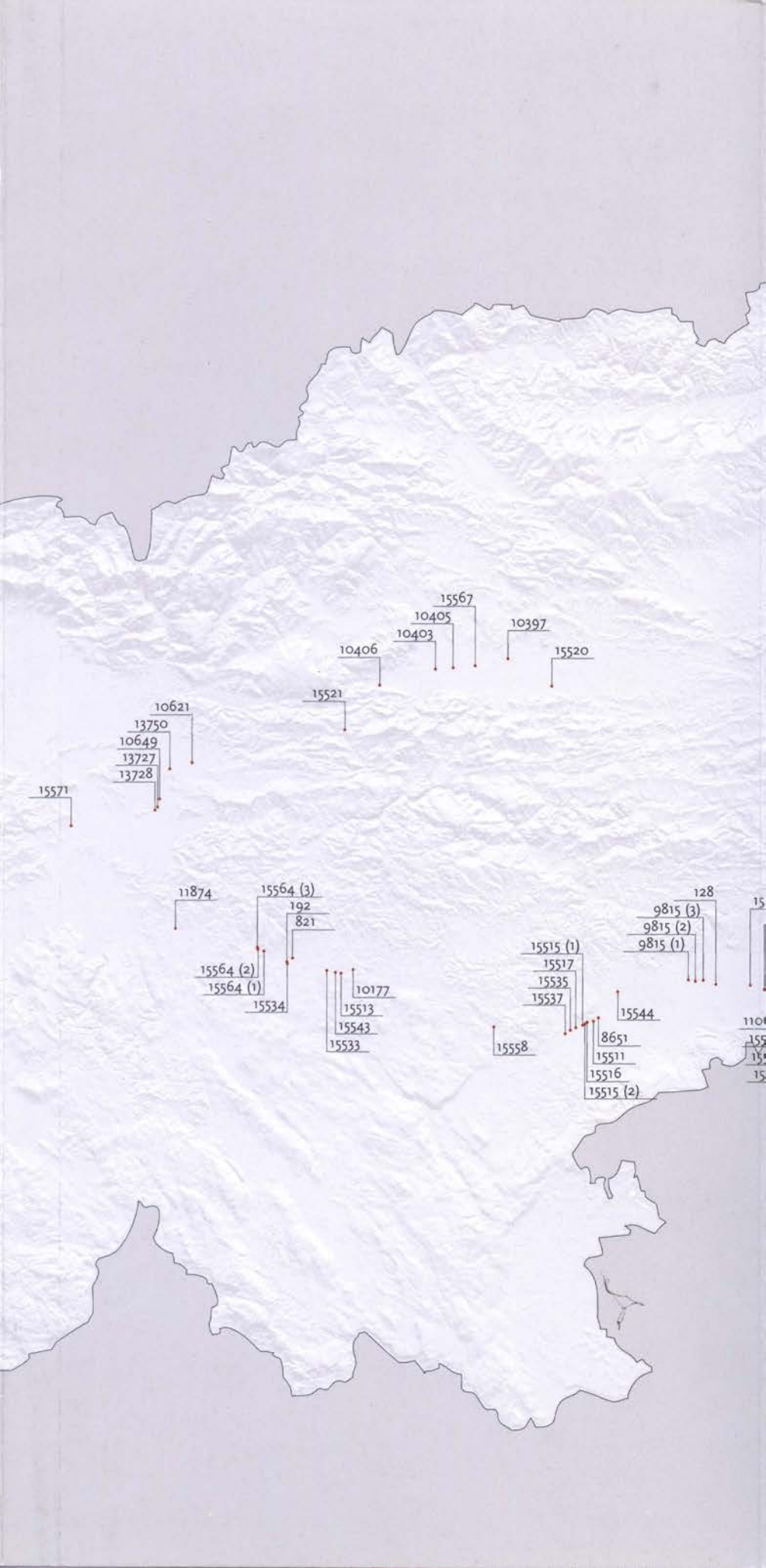
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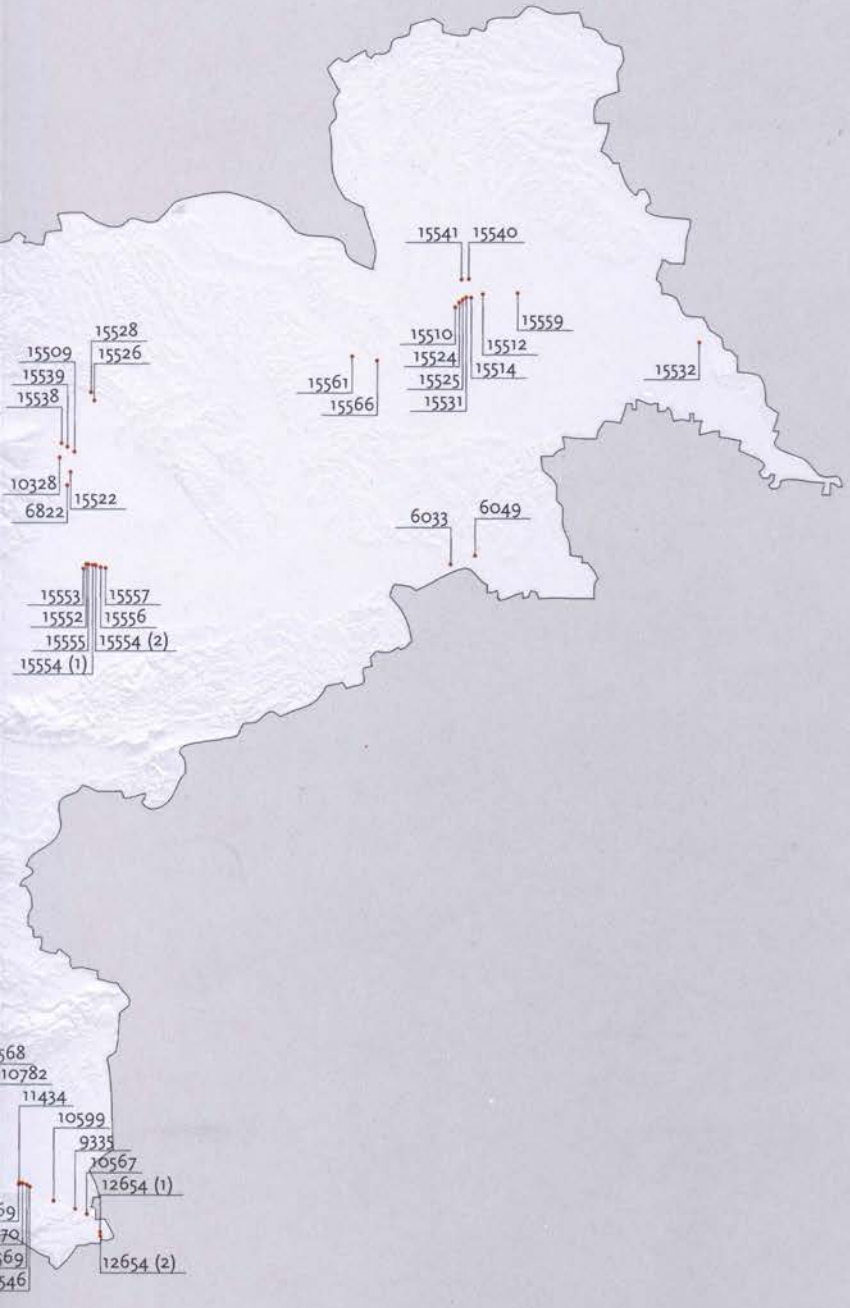
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