

XXII LIMES CONGRESS

ABSTRACTS

IN ALPHABETICAL ORDER ACCORDING
TO THE LAST NAME OF THE (FIRST) AUTHOR

Fawzi Abudanah

Notes on the Architecture of the Roman Fortress at Udhruh, Southern Jordan

This paper presents recently recovered evidence concerning the architecture of the Roman legionary fortress at Udhruh. The evidence is based on the results of fieldwork study conducted by the author in 2008, 2009 and 2011. Special attention is given to the architecture of the curtain wall and the interval towers. There have been scholarly questions in respect to the perimeter wall as different phases of construction were suggested. It has also been suggested that the interval towers are not contemporary with the curtain wall. The paper seeks to address these questions and also considers other architectural elements in the fortress.

Fawzi Abudanah
Mark Driessen

The Udhruh Archaeological Project

The Udhruh Archaeological Project is a joint venture between the College of Archaeology, Tourism and Hotel Management of the Al-Hussein Bin Talal University from Ma'an (Jordan) and the Faculty of Archaeology of Leiden University (The Netherlands). The project – dealing with the site of Udhruh (South Jordan) and its surroundings – is an international and interdisciplinary research program that combines archaeology, geo-archaeology, sustainable tourism, heritage management and environmental sciences as irrigation and land degradation.

Silvia Aglietti
Giuseppina Ghini

The *Canabae Legionis* of the *Castra Albana* near Rome

The monumental baths and the amphitheatre, as well as the so-called cemeteries of the soldiers of the Second Parthian legion in Albano Laziale have always attracted the attention of scholars, while the understanding of the general topography of the *castra Albana*'s surroundings has often been neglected. Actually these monuments have been considered to be the only evidence that remained outside the walls of the camp of the *legio II Parthica*. But as known from several other places the installation of the legionary camp in the periphery of Domitian's imperial villa only fifteenth miles away from Rome had a strong effect on the development of its surroundings. From Severan times onwards a civil settlement, the "*canabae legionis*", arose and formed the basis for the bishop's see of the fourth century. Unlike camps at the *limes*, the important pre-existing structures, as the imperial villa, the private villas which occupied the area, the near *municipium* of *Aricia* and the ancient *Via Appia*, however, make it difficult to define the status of the civil settlement and the territory subjected to military jurisdiction. Another difficulty is the continuity of settlement in the area concerned. The paper will present the first research results of a project carried out with the *DAI* Rome. By the combination of the analytical review of old excavations, recent surveys conducted by the *Soprintendenza per i Beni Archeologici del Lazio* and the study of written sources, new data could be collected that allow us to formulate a first hypothesis on the extension of *canabae* and on their internal structure.

Cristina Alexandrescu
Christian Gugl

Troesmis: From the Legionary Fortress to the Byzantine Fortification

Since 2011 the Austrian Academy of Sciences takes part in a cooperation project with the Archaeological Institute of the Romanian Academy of Sciences, which deals with the transformation processes of settlements in antiquity on the Lower Danube. With the application of innovative archaeological documentation and evaluation methods (digital documentation of findings, photogrammetry, geophysical prospection and geoinformation technology), the exposed border town of *Troesmis* shall be examined in order to serve as an example for the transformation of the settlement and living environments from the 2nd to the 6th/7th centuries AD.

Lying to the northwest of the Dobruška, *Troesmis* (near today's Turcoaia, Tulcea County) occupied a strategic key position on the Roman Danube *limes*. The Roman-Byzantine settlement was situated on the steep right bank of the Danube, about 15 km to the south of the modern city Măcin and 4 km to the north of the village Turcoaia. The wide-spread area of the ruins, which today is dominated by two fortifications, extends from the Danube to the east, up to the foothills of the Măcin-mountains.

The paper intends to give an overview on the last year's campaign, which focused on the topographic documentation of the still visible ruins of two fortifications (the so-called eastern fortification of the 4th century AD and the western fortification, presumably erected in Byzantine times) as well as the visible remains on the plateau, which were either a part of the *canabae legionis* or the later *municipium*. In addition to the critical review of the research, done so far, a geomagnetical prospection was carried out, covering an area of ca. 7.5 ha, which delivered new insights into the settlement structure of the site.

Oleg Alexandrov

**The Role of *Legatus Augusti Pro Praetore* in the Religious Life
of *Exercitus Moesiae Inferioris***

Thanks to the military calendar discovered in Dura-Europus (*Feriale Duranum*) practically whole religious system in the Roman army has been successfully reconstructed. The calendar was with over regional character, the military rituals and ceremonies were strictly regulated, including different celebrations, parades, military oaths and etc.

About 30 years ago, after detailed analysis of epigraphic monuments discovered in the *castra* of *legio I Italica (Novae)*, Polish scientist J. Kolendo made significant conclusions concerning the function of the *primus pilus*. It became clear that besides military, the *primus pilus* had a leading religious role in the army. He was the officer with access to the military calendar and had the engagement to organize worshipping the official religion in the legion.

However, despite the discovery of the military calendar (*Feriale Duranum*) and despite the great research of J. Kolendo, there remained an open question – what was the relationship between the *primus pilus* and the imperial administration in Rome. We believe that it was through the governor of the province (*legatus Augusti pro praetore*). In this paper we examine all votive monuments set up by the governors and strongly connected with the Roman army in the province (most were found on the right river bank of Danube or along the Roman military roads in the province).

Lindsay Allason-Jones

The Roman Army in Meroe

The kingdom of Meroe is rarely mentioned in studies of the Roman Empire, following Mortimer Wheeler's dismissal of the kingdom, in 1954, as 'the decayed capital of Nubia'. Work in recent years, particularly on the material from the cemeteries, has revealed that Meroe was more important than is generally acknowledged and that there was considerable interaction between Rome and this area of modern Sudan. However, this interaction is still seen as purely one of trade. This paper assesses the evidence for a Roman military presence in the region from the 1st to the 4th centuries AD.

Penelope M. Allison
Martin Sterry

“Family” Meals? Who Ate Where, and with Whom, in Early Imperial Military Bases?

Given the growing evidence that support personnel, soldiers’ families and other ‘camp followers’ lived inside early imperial military bases is it any longer valid to consider that soldiers ate together in their *contubernia*? And where was food prepared and cooked in officers’ households and by whom? Who frequented the taverns inside these military bases and why? Were meals prepared and eaten inside administrative buildings? This paper will discuss approaches to artefact distribution to develop better understandings of how, where and under what conditions food was prepared and consumed within spaces.

At Limes XIX Maureen Carroll discussed ‘The preparation and consumption of food as a contributing factor towards communal identity in the Roman army’ (Z. Visy (ed.), *Limes XIX*, 363-372, 2005) and emphasised the importance of relationships surrounding food consumption. My paper at that congress included observations on the distribution of ceramics within and between some of the buildings at *Vetera I* (*Limes XIX*, 833-846) towards investigating where these activities were most likely to have been carried out.

This paper will attempt to take further my approaches to artefact distribution for understanding the place and roles of non-service personnel and especially soldiers’ families, inside Roman military bases, focussing on artefacts related to the preparation and consumption of food and drink. As a preliminary investigation it will examine how the types of material culture associated with food preparation and consumption, their associations and their distributions within a selection of military bases can be analysed towards answering these questions.

Colin Andrews

**Are Roman Seal-Boxes Evidence for Letter Writing
by Auxiliaries, Veterans (or Anyone Else)?**

There has never been a major study of Roman seal-boxes; no serious analysis of their function, distribution or design. Yet they have become the major supporting prop for some important theories concerning literacy and acculturation in the provinces.

This paper will examine the link between seal-boxes and stylus tablets. It is based upon a six year research programme, which identified and studied 871 seal-boxes from Britain. Their distribution was analysed and it was found that they are common across a range of different sites. It also became apparent that the specific design features, shared by all seal-boxes were not really suited for tying them to a wooden stylus tablet.

In the last few decades great emphasis has been placed upon seal-boxes as being markers of literacy and the current orthodoxy is that they were used to protect the seals attached to letters written on two-leafed writing tablets or diptychs. Some studies have also found a correlation between seal-boxes and military sites and those civilian areas from which auxiliaries were recruited, which has led to the suggestion that seal-boxes may have been used to seal letters home. Seal-boxes therefore carry a heavy burden; they are used as evidence for literacy in a general sense but also for the presence of veterans. This paper will argue that the link between seal-boxes and stylus tablets should be discarded, along with any connections to literacy.

Georgi Atanassov

**Late Antique Fortification (*Refugium*) under Kartal Kale –
a Medieval Fortress near the Village of Rujno, Dulovo Region**

The early medieval fortress by the name of Kartal Kale is well known in Bulgarian science at the beginning of the 20th century, thanks to K. Škorpil. It is situated on a tongue-shaped rocky eminence, formed by a meander of the dry river Senebir, about 3 km to the south-east of the village Rujno, Dulovo region. Due to research work it became clear that this is one of the biggest fortresses of the First Bulgarian Kingdom, built at about the beginning of 10th c., ruined at the end of 10th c. and finally left in about the mid-11th c.

A small late antique fortification was opened in the northeast angle at the entrance of the medieval fortress during the research work in 2003. It has a triangle form and length of the eastern and western walls is 64 m and 79 m. The south wall is the best-explored one. It is polygonal indented and its length is 46 m. It was built of semi-finished, middle-sized stones, which were soldered with strong white plaster. Almost in the middle of the permanent way in front of the wall, at a distance of 3.50 m one from another, two rectangular wall piers are formed. The length of each is 1.60 m and they are at a distance of 0.40 m outside the wall. This not too massive but strongly built wall defended the fortification from the most accessible southeast side.

During the construction works in the 10th c. the building materials of the late antique fortification were reused in the new fortifications. In the medieval fortress we notice specific and disproportionate big U-shaped turrets, unusual for the 10th c. The turrets had the size of 12 x 5.20 x 7.40 m and flanked the central entrance at the necking of the naturally defended eminence. It is remarkable that no signs of late antique wall were registered in the southeast and the southwest angle and when exploring the western wall tangencing the turret. This particularity necessitated the setting up of two hypotheses. The first and the more likely one is that during the construction of the medieval fortification the ruins of the late antique walls were fully taken to pieces and the wall of the 10th c. was based on them. The second hypothesis assumes that only the passages of an easy access were defended. Thus a wall was built in the south, from a rocky crown to a rocky crown and two massive turrets-bastions were built at the necking in the northeast. That is why they are unnaturally wide and they close the accessible neck. The late antique materials were found only within the borders of the small fortification, which has an area of 1.7 daa. It was built on the ruins of a Thracian settlement, but it is difficult to determine when this happened. The late antique cultural layer is comparatively thin, with building ceramics and pottery from the 4th – 5th c. AD. Single fragments of pottery with comb-shaped decoration are from the 6th c. AD.

The archeological map of South Dobrudja shows that this fortification stands isolated and lonely in a region which no other known ancient fortresses within a radius of about 40 km. However there are two big ancient settlements of the 2nd – 4th c. AD in its immediate proximity. It is not impossible that their dwellers had built a *refugium* during the mass barbarian invasions at the end of the 4th and the first half of the 5th c. AD. According to the coins and the finds, it was ruined in about the mid-5th c. AD. Some adornments, single fragments of pottery, two earrings and a coin of Justin II and Sofia assume inhabitation in the 6th c. AD, too.

Jakob Baerlocher

**Zu frühlagerzeitlichen Gräbern vor den Toren Vindonissas (CH).
Italische Bestattungs- und Beigabensitten nördlich der Alpen**

Im Zuge der Ausgrabungen im Zivilquartier westlich des Legionslagers *Vindonissa* (Vindonissa-, „Vision-Mitte“ 2006–2009) konnten entlang einer Ausfallstrasse aus dem Lager mehrere frühlagerzeitliche Brandbestattungen aufgedeckt werden. Die Auswertung dieser Gräber, die von einer jüngeren Zivilsiedlung überbaut wurden, lassen eine ausgesprochen mediterrane Prägung der Bestattungen erkennen. Diese gehören zu einer bereits in Ausschnitten bekannten Gräberstrasse („Alte Zürcherstrasse“), für die bereits durch Grabsteine Bestattungen von höher gestellten Angehörigen des Militärs belegt sind. Die eigentlichen Bestattungen sind relativ fundarm, wobei mediterrane Beigabenelemente dominieren. So fanden sich beispielsweise in drei Gräbern beinerne Knochenschnitzereien, die als Verkleidungen von prächtigen Klinen anzusprechen sind. Auch konnten in allen Gräbern verbrannte, teilweise auch unverbrannte, gläserne Balsamarien nachgewiesen werden, die Zeugnis einer verschwenderischen Beigabe von „Wohlgerüchen“ im Zuge der Bestattung sind. Auch die naturwissenschaftliche Auswertung der Grabinhalte fügt sich in dieses Bild. Neben Südimporten wie Granatapfel und Feigen wurden den Verstorbenen auch in grosser Menge Bohnen sowie qualitativ hochwertige Fleischbeigaben, wie Huhn und Schwein, mitgegeben. Zudem zeigt die anthropologische Bestimmung der Leichenbrände, dass bis auf eine Ausnahme in allen Gräbern männliche Individuen beigesetzt wurden. Diese Bestattungen präsentieren sich also als in mediterraner Tradition stehend und sind mit den Gräbern vor den Toren des Legionslagers Haltern vergleichbar. Es scheinen mit den hier Bestatteten Angehörige des Militärs fassbar zu sein, die aus Italien selbst oder aus bereits frühromanisierten Regionen, wie Norditalien und Südfrankreich, nach *Vindonissa* gelangten und fern der Heimat gemäss ihrer Grabsitten bestattet wurden.

Grażyna Bąkowska-Czerner

Images of Venus on Ancient Gems from *Novae*

In a result of works of the Polish-Bulgarian archaeological expedition conducted in the Roman baths in *Novae*, among numerous monuments, were also found a considerable number of gems showing various images, symbols and inscriptions. Most have a military character referring to the policy of the empire. Shown are the deities and symbols emphasizing the victory and prosperity. However, there can also be find gems with images of magic nature. There are also images of the goddess of love and Eros, shown in the various conventions. On one of the gems the goddess accompanied by two Erotes, is shown in the type of *Aphrodite Anadyomene*, another time with a lance and shield. Visions of Venus on gems from *Novae* refer to works of art from earlier periods. They show different features of the goddess. They are also testimony to the popularity of Venus during the Julian-Claudian dynasty; show the political and social background.

Marcin Baranowski

Distribution of Pottery Made in the Production Centre Butovo

In this paper the results of a literature study regarding the distribution of pottery made in Butovo will be presented. The production centre of Butovo has been one of three production centres localized near the city of *Nicopolis ad Istrum*. Its pottery production is dated from the end of the first century to the first half of the third century AD. The pottery production in Butovo mostly is red slipped ware, at other places called *terra sigillata*. The main characteristic parameters attributing pottery fragments to a production in Butovo are the typical shapes and the typical style and technique of decoration. The distribution of the Butovo fine wares was detected from twelve sites from where such vessels have been published. The main customers of pottery from Butovo were *Novae*, near *Sucidava* (Dacia), *Nicopolis ad Istrum* and *Singidunum* (Pannonia). Apart from this pottery from Butovo has been found in *Iatrus*, *Serdica*, Sliven, Miladinovo, Prosenik, Plovdiv, *Deultum*, Karanovo.

Niels Bargfeldt

Elite Societies on Display within Military Zones

This paper revises evidence for upper classes and civilian administration within the *canabae legionis* of the Pannonian legionary garrisons with special focus on families from the *Brigetio canabae* and civilian settlement.

Despite the apparent clear division between civilian and military life constituted by the walls of the legionary fortress it has gradually become evident that the situation was not that simple. The *canabae* was in many ways a grey area between the two spheres. In terms of formal management, the area of control of the legion reached well beyond the walls. However, inscriptions on monuments and altars as well as from funerary contexts give testimony to civilian administration within the *canabae* settlements.

From the mid 2nd century in *Brigetio* we get examples of soldiers obtaining positions in or maybe even establishing a local *ordo* upon emission from the legion. As both veteran families and civilian families came to take part in the running of the *canabae* and nearby civilian settlement it is compelling evidence for the close connections between men enrolled or formerly enrolled in the legion and the surrounding society. This must have created a local elite that by no means could compare to the top brass of the empire living in the officers mansions inside the fortress. Nevertheless, this was where the young men, who were to govern the empire, got their first-hand experience of the actual empire. It gives an interesting outlook of how the empire influenced and was influenced through interaction at its outermost rims.

Silvia Bekavac

Roman Religion and Cults at the Dalmatian *Limes*

This paper encompasses the area of the Dalmatian *limes*, and particularly the legionary camps in *Burnum* and *Tilurium*, the auxiliary camps in *Burnum*, *Promona*, *Andetrium* and *Bigeste* and the beneficiarial stations in *Burnum*, *Promona*, *Magnum*, *Tilurium*, *Novae* and *Salvium*. The religion of this area, in the context of the entire territory of Dalmatia, is analyzed on the bases of the interpretation of active soldiers' inscriptions, architecture and sculpture. Paper deals with idea of worshipping indigenous Dalmatian deities, identified with the Roman deities in process of *interpretatio Romana*. This case is most visible in the example of Italic and indigenous components of the cults of *Silvanus* and *Diana*.

Legions and most of the auxiliary units were stationed in Dalmatia during the 1st century AD, before the mystery cults penetrated or significantly affected Roman religion in the provinces. Therefore, the paper will consider the uncritical understanding of the army as the main conveyor of mystery cults, especially the *Metroac* and the *Mithraic* ones and the use of the term 'military cults'.

Analysis of soldiers' dedications and their ethnic origins confirms that the deities of the official Roman religion were exclusively worshiped. The same aspects of the cults were associated with the beneficiarial activity during 2nd and 3rd centuries AD.

Dispersion of the monuments offers the possibility to locate some of the shrines precisely and to complete the picture about religion of Roman military units, which were stationed in the province of Dalmatia.

Chaim Ben David

From Peter Thomsen to Israel Roll – The Research of the Roman Roads and Milestones to and from Jerusalem/*Aelia Capitolina*

In 1917 Peter Thomsen published his monumental article “Die Römischen Meilensteine der Provinzen Syria, Arabia und Palaestina” describing all the existing information on the milestones and the roads along which they were placed. Thomsen noted 66 milestones along the roads leading to Jerusalem, 21 of them bearing inscriptions, some of which with the title “*Colonia Aelia Capitolina*”.

In 1970 the Israeli Milestone Committee was formed and ever since then and until his untimely death, two years ago, Israel Roll was the leading expert on Roman roads in Judea/Palaestina. In his research, together with other colleagues, Roll noted more than 50 new milestones along the roads leading to Jerusalem and spotted physical remains of stretches from these roads.

In the lecture, we shall describe the Roman roads leading to Jerusalem from the following sites: *Neapolis*, *Jericho*, *Hebron*, *Eleutheropolis*, *Joppa* and *Caesarea*. Some of these roads are marked in the Peutinger Table that describes the road network of the Roman empire, data which will be compared with the data gleaned from the archaeological research. Special attention will be given to the milestones bearing the title “*Colonia Aelia Capitolina*”, and the roads along which they are found and their chronological framework will be further examined.

Stephan Bender

The Odenwald *Limes* between Wp. 10/75 and the Jagst (Bad Friedrichshall, Baden-Württemberg, Germany) – a Plea for a Complete Survey of the *Limes*

The Limes Information Centre Baden-Württemberg, a department of the Heritage Management Service of Baden-Württemberg, has started to carry out systematic surveys along the Upper German-Raetian *Limes* – along not just the *limes* that is part of the World Heritage Site, but also along the older frontier in the Odenwald and along the Neckar. The aim of this work was to improve our knowledge of the installations on the Roman frontier, thus providing a better basis for both research and heritage management.

The example of the Odenwald *Limes* between Wp. 10/75 and the Jagst is presented here in order to demonstrate how aerial archaeology and geophysical survey have added to what we know about the *limes*. Its complexity as a structure is reflected in the remarkable results, which in turn demonstrate the necessity for a return to intensive fieldwork – quasi ad fontes. Forts, military vici and the chain of watchtowers, as well as the fortification itself all need to be taken equally into account.

Julian Bennett

Units of *Phalangarii* in the 3rd Century Roman Army – Fact or Fiction?

The literary record provides us with four specific references to units of the 3rd century Roman army that were armed as, and so presumably fought in the manner of, the Macedonian phalanx. Three of these references are in connection with Caracalla's campaigns against the Parthians in AD 216-217 (Dio 78.7.1-2, and Herodian 4.8.2-3 and 4.9.4), the fourth is to Severus Alexander's campaign against the Sasanians in AD 231-233 (HA Sev. Alex. 50.5). In the absence of any supporting proof for the existence of such units, there has never been any agreement amongst scholars as to whether there was any basis in fact for these literary references. This paper will review the evidence for such units as it now stands, and argue that the re-analysis of a now-lost Greek inscription from Cilicia indicates that this originally referred to soldier who served in a unit that was formally described as a *numerus Phalangariorum*.

Andrew Birley

A Different Type of *Vicus* – The Severan Roundhouse Complex at *Vindolanda*

The site of *Vindolanda* has produced some of the finest archaeological data for the study of military occupation on the northern frontier of Roman Britain. There were no less than nine separate forts constructed at the site, many with associated extramural settlements. The excavation of the extensive 3rd century *vicus* at the site, which started in 1970, continues to illuminate how complex such settlements became. Throughout the settlements history a striking aspects was the interchangeable nature of fort and *vicus*. During the Severan campaign in Britain the traditional fort and *vicus* complex at *Vindolanda* was demolished and replaced by a fortlet and something unique on the Roman frontier, a carefully planned and unique extramural settlement, comprised almost completely of circular huts. The question remains for whom and what purpose were these circular huts built at *Vindolanda*?

Szilvia Bíró

Recent Research in the Military *Vicus* of *Arrabona* (Pannonia)

The military *vicus* of *Arrabona* (Győr, Hungary) has been long researched and known by the excavations of Dénes Gabler and Eszter Szőnyi. In the last few years, we had the possibility to excavate on several spots of the *vicus*.

In 2008-2009, partly joining the previous excavation areas, further buildings of the settlement came to light. A market place can be reconstructed in this area, which is the first identified market place in the Pannonian military *vici*. The establishment of the place can be chronologically connected with the first stone building period, which took place under Hadrian.

Smaller investigations on different spots of the settlement help us to draw some conclusions about the geographical situation of the military *vicus*, e.g. the location of the different lines of sand-hills, and the ancient riverbeds.

Thanks to the small excavations and observations of the last twenty years the information on the topography and the development of the settlement can be refined as well.

Marta Błażejewska

Painted Wall Plaster from the Great Legion Baths in *Novae*

Excavations conducted in 2005–2007 on the area of the Great Legion Baths in *Novae* uncovered numerous fragments of painted wall plaster. Three of them were analyzed by MSc. Elizabeth Jeżewska (paint layers) and Irene M. Koss (plaster) from the Academy of Fine Arts in Warsaw.

The research showed that the samples were double plastered and painted. The plaster made in fresco technique consisted of mineral ingredients and micro-crystalline calcareous binder, probably with inclusions of hydraulic lime. The analysis of paint layers defined that the paint was made of natural pigments and most likely calcareous binder. The pigments used were red iron oxide, natural green soil, and black plant.

Comparison of the fragments with painted wall plaster found both in Great Legion Baths and other areas of *Novae* let us interpret the material under discussion as an example of provincial art imitating III or IV Pompeian style. Analogies from the Roman and provincial paintings as well as the archaeological context of the find let us date the fragments to the 3rd – 4th centuries.

*Eduard Ble
J. Noguera
P. Valdés*

Metal Detecting for Surveying Marching Camps? Some Thoughts Regarding Methodology in Light of the Lower Ebro Roman Camps' Project's Results

The location of Roman marching camps has been generally based on aerial photography, or more recently, on satellite imagery, looking for anomalies that could show traces of the remaining defence system of a military camp. Being confirmed later through field surveys, and, in specific cases, the punctual excavation of a trench cutting the defensive system.

In the case of the sites studied in the framework of the Archaeological research project on the Roman camps located in the lower Ebro, La Palma and Camí del Castellet de Banyoles, this has not been possible. In fact, both were identified from metal findings found by amateurs and, despite the application of geophysical surveys, no remains of structures attributable to the camp have been discovered yet. Instead, all the date comes from the objects recovered through visual survey, and especially, metal detecting survey.

This is obviously a delicate matter. In the Iberian Peninsula, following the success of this method in the study of battlefields, it has raised the use of metal detector in archaeology. They are often applied indiscriminately to the study of Roman military camps, even on those who still have remains of fortifications, and therefore contain archaeological layers that could be excavated. Fortunately, this misguided approach has been recently criticized.

Still, we consider that in some cases metal detector is a very useful tool. Therefore, we present all the methods applied by our team and an assessment of its effectiveness and results, comparing them with other known cases from around the empire, trying to establish which are the causes of the difference in conservation: chronology, degree of temporality or post-depositional processes. In conclusion, we want to show that in our case it was not just another methodological option, but the only possible solution to an archaeological problem.

Dorel Bondoc

**German Elements on the Northern Lower Danube
during the Late Roman Period**

It is very well known that in the Late Roman period, the Roman rule was reinstated to the north of the Lower Danube. There were built new fortifications or were repaired the old ones. A lot of discoveries like stamped bricks or tiles, coins, brooches, weapons, pottery and others, come from these sites.

Some discoveries are in contrast with the previous ones, because of their origins and owners. In many cases it is easy to recognize the artifacts belonging to the German culture. Discoveries of this type have been made inside Late Roman fortifications (*Sucidava*, *Hinova*, *Drobeta*) or near the Danube (*Lișteava*, *Potelu*, *Bistreț*). They were not only isolated objects, but also graves, so we have to deal with the presence of some *foederati* inside the Roman garrisons.

The importance of the foreign allies in the Late Roman army of the Lower Danube, and also the significant presence of the Germans in its structure have been pointed out in this case once again.

David J. Breeze

The Role of Water in Defining the Roman Empire

The lack of water was instrumental in defining the boundary of the southern half of the Roman empire. In the north, the great rivers, Rhine, Danube and Euphrates were frequently cited by the Romans as forming the boundaries of their empire. Except between the headwaters of the Rhine and Danube and in Dacia, in Europe the empire did not extend beyond these rivers, and from the 260s they became again the northern frontier line. The rivers were useful for supplying the troops along their line. But to a bureaucratically minded people like the Romans, the rivers also formed a clear boundary and once the frontier settled upon them they proved to be too useful to abandon in favour of a move forward to a less convenient line. Thus in the north it was the existence of water which defined the frontier of the Roman empire.

David J. Breeze
Sonja Jilek

The Frontiers of the Roman Empire: Challenges and Opportunities

The creation of the Frontiers of the Roman Empire World Heritage Site has extended the range of opportunities for work on frontiers. These include the possibilities of wider collaborative archaeological research and publications thereby including our understanding and knowledge of frontiers, the improved management and presentation of the archaeological remains, the twinning of museums and schools on frontiers, and in general raising the profile of frontiers. There are also challenges. These include being inclusive in our activities, more rigorous in our definitions, more flexible in our approaches to national and regional differences, and more appreciative of the distinctive differences between sections of frontiers. Today we decide about the cultural heritage surviving into tomorrow.

Clive Bridger

**New Roman Finds from the East Bank of the Lower Rhine in Germany –
or Where Did They Put the Border? (CRFB vol. D8 – The Rhineland, 2012)**

In late 2012 volume D8 of the ‚Corpus der römischen Funde im europäischen Barbaricum‘ will appear, mostly comprising the Rhineland directly east of the River Rhine. From an area of only 770 km² between the Dutch border in the north, Westphalia in the east and a little way south of the River Lippe in the south some 197 sites have provided a wide scope of Roman finds. This stretch of the *limes* was chronologically the longest of all Rome’s frontiers / borders, i.e. from ca. 19 BC to ca. AD 420, and the finds directly east of the river reflect this: the earliest date to the beginning of the 1st century BC (!), the latest to the first half of the 5th century AD. Irritatingly, apart from the Roman military sites and the central places to the west of the river, the material culture of this part of the *limes* reveals little difference between the west and east banks. Indeed, we may have to consider whether the Rhine formed a fixed border here at all.

Clive Bridger

**Recent Advances on the Lower German *Limes* (German Section).
Re-searching the Data as a Basis for Proposing a World Heritage Site**

In 2009 work started in the Netherlands and in Germany on collating old and new data along the Lower German *Limes* (LGL) with the aim (among others) to propose the LGL for a nomination as a UNESCO-World Heritage Site. This stretch of the *Limes* was chronologically the longest of all Rome's frontiers / borders, i.e. from ca. 19 BC to ca. AD 420, so a great deal of archaeological material is to be expected.

Excavation reports and other archival material are being assessed or reassessed, each site is being digitally mapped and exposed to a series of scientific and technical questions. Moreover, new, mostly remote-sensing investigations are leading to old sites being better understood, but also to a series of new sites being found. In the northern section of the German *Limes* between Krefeld-Gellep (*Gelduba*) in the south and Kleve-Rindern (*Harenatium*) in the north alone we have recently found one new auxiliary fort (Till-Moyland; Brüggler 2011) and a couple of watchtowers (unpublished), rediscovered another auxiliary fort (Wesel-Büderich; Bridger 2010), carried out new work in and around the legionary fortresses of *Vetera* I (in press; see N. Hanel's paper in session 5a) and *Vetera* II (in press) and located several new temporary camps.

David Brough

**Challenges Facing the Future Development of the
Frontiers of the Roman Empire World Heritage Site**

In 2005 the Obergermanish-Raetish *Limes* in Germany became part of a new serial transnational WHS, *The Frontiers of the Roman Empire*, alongside Hadrian's Wall, itself inscribed in 1987. It was envisaged that further sections of the Roman Imperial frontier in potentially 19 modern day countries would be added to the Site through a sequence of nominations.

To date only the Antonine Wall in Scotland has been added to the Site, although five countries have registered sections of the frontier on their Tentative Lists for nomination as World Heritage Sites, and Hungary and Slovakia have now prepared their nomination documents. Preparatory work for potential nomination of further sections has commenced in several other countries in Europe, but little has been undertaken in the Middle East or North Africa.

What then are the practical, policy and political challenges influencing progress in the geographical expansion of the WHS?

In addition questions remain about what is meant by "*a serial transnational WHS*" and how it should be governed and how it should function. What are the implications and what are the potential benefits of being part of one multinational WHS?

This paper sets out the principal issues facing those seeking to progress the development of the FRE WHS and suggests some limitations on the potential inscription of all sections of the Roman frontier and on its establishment as a functional entity.

James Bruhn

Measuring the Impact of the Roman Occupation on the South of Scotland

When the Roman army established their extensive network of forts and roads in the south of Scotland they did so within a densely occupied and organised landscape. Over the last twenty years there have been numerous excavations that have led to considerable advances in our understanding of late Iron Age pre-Roman society in Scotland. By modelling this indigenous landscape in a multiscale, diachronic and holistic manner, it is possible to better understand the placement of forts and analyse the impact of the Roman military infrastructure. Rather than a simple monolithic response to the Roman presence, the inhabitants of southern Scotland reacted in a variety of ways. These responses may be broadly interpreted as regional, but there are subtle nuances, which highlight the pluralistic nature of frontiers in central Britain. This paper will explore the implications of these studies on how we understand interaction within and beyond the frontier in central Britain.

Vinka Bubić

Bricks with Stamps of Military Units on the *Limes* in Croatia

The Croatian part of the Danube *limes* covers an area of 188 km along the river Danube from Batina Skela (*Ad Militare*) to Ilok (*Cuccium*). This is the area of Roman military fortresses where a large quantity of Roman construction material has been found. It includes some pottery, coins and bricks with stamps of military units. This poster represents bricks that were found at the sites Batina Skela (*Ad Militare*), Zmajevac (*Ad Novas*), Osijek (*Mursa*), Petrijevci (*Mursella*), Nemetin (*Ad Labores*), Sotin (*Cornacum*), Dalj (*Teutoburgium*) and Ilok (*Cuccium*). These brick findings inform us about the presence of military units in the Croatian part of the *limes*.

Gerda von Bülow

**Das spätrömische Limeskastell *Iatrus* – Krivina.
Bilanz einer bulgarisch-deutschen Kooperation**

Am Anfang der zweiten Grabungsetappe (1992 – 2000) in der deutsch-bulgarischen Gemeinschaftsforschungen in dem spätrömischen Kastell *Iatrus* am Unterdonaulimes lag die Bilanzierung der von 1958 bis 1981 dauernden ersten Etappe als Publikation vor (s. Beitrag Klaus Wachtel), und die dort aufgeführten offenen Fragen bildeten die Grundlage für das Forschungsprogramm der nächsten neun Grabungskampagnen. Im Vordergrund stand dabei einerseits die Vervollständigung der Kenntnisse über die in konstantinische Zeit datierte Erstanlage und die historischen Gründe für deren Veränderungen im Laufe der fast dreihundertjährigen Existenz des Kastells. Andererseits war zu untersuchen, ob an einer strategisch wichtigen Einmündung eines weit aus dem Hinterland kommenden Flusses wie der im Balkengebirge entspringenden Jantra (antiker Name: *Iatrus*) in die Donau, die auch während der Existenz der norddanubischen dakischen Provinzen im 2./ 3. Jh. n.Chr. im Grenzabschnitt lag, mit einem älteren Militärstützpunkt zu rechnen sei. Dieser Frage wurde sowohl durch gezielte Grabungen auf dem ummauerten Kastellgelände nachgegangen wie auch durch eine großräumige archäologische Feldbegehung, unterstützt durch geophysikalische Prospektion.

Alexandra W. Busch

**Von der Kaiservilla zu den *castra*. Das Lager der *legio II Parthica*
in Albano Laziale und seine Vorgängerbebauung¹**

Das Lager der *legio II Parthica* in Albano Laziale ist eines der am besten erhaltenen, zugleich aber am wenigsten erforschten Legionslager im gesamten römischen Reich. Unter Septimius Severus wurde es gegen Ende des 2. Jahrhunderts n. Chr. als erstes und einziges dauerhaftes Legionslager auf italischem Boden in nur 20 km Entfernung zur Hauptstadt des römischen Reiches errichtet. Der Bau einer solchen Anlage vor den Toren Roms stellte wegen der dortigen Stationierung von mindestens 5.000 regulären Soldaten einen gravierenden Traditionsbruch dar, in dem sich die Macht des Kaiser besonders deutlich zeigte.

Für den Bau der *castra Albana* wählte man ein stark ansteigendes Terrain, das im späten 1. Jahrhundert n. Chr. zum Areal der Kaiservilla des Domitian gehörte. Durch seine exponierte Lage und seine Ausrichtung auf die *Via Appia* beherrschte das Lager nicht nur das südliche Umland der Hauptstadt, sondern auch den wichtigsten Zugang von Süden.

Im historischen Stadtzentrum von Albano sind noch heute große Teile der Umfassungsmauer des Legionslagers erhalten. Seine Innenbebauung ist mit Ausnahme eines Kuppelsaals und einer großen Zisterne so gut wie unbekannt, gleiches gilt für sein unmittelbares Umfeld, die *canabae legionis*. Für den gesamten Bereich fehlt zudem eine konkrete Vorstellung der Siedlungs- und Nutzungsabfolgen. Im Rahmen des Vortrags sollen die ersten Ergebnisse eines seit 2009 am DAI Rom laufenden Projekts vorgestellt werden, das darauf abzielt, den Charakter und die Funktion der vorlagerzeitlichen Bebauung, sowie die wesentlichen Grundzüge der *castra Albana* und der zugehörigen *canabae legionis* zu bestimmen.

¹ The paper will be presented in English: 'From the *Villa* to the *Castra* – the Legionary Camp of the Second Parthian Legion in Albano Laziale'

Jorge Camino Mayor
Esperanza Martín Hernández

The Carisa and the Conquest of *Asturia Transmontana* (*Hispania*) by Publius Carisio

Giving credibility to historical sources, recent archaeological discoveries show that the overflow of the Cantabrian mountains was the greater difficulty of military operations – *bellum Cantabrum et Asturum* – by which Augustus completed the conquest of *Hispania* between 29 and 16 BC.

Several roads crossing the mountains were built with careful military planning, allowing troops to reach the Cantabrian coast from the hinterland of the Iberian Peninsula. An important number of seasonal camps located at high altitude to get a strategic domain, accompanied the occupation of the territory, usually following the layout of the roads by long mountain ranges.

Carisa is one of these scenarios, in this case intended to enter into the land of *Asturia Transmontana*; consisting of two *castra aestiva* and a road, which are located on the axis of the range at nearly 2,000 m altitude. Investigations have provided interesting data about constructive characteristics and the nature of the occupying forces. The numismatic findings fit into the period of the Cantabrian Wars and in particular, the toponym Carisa, referring to the name of the road, facilitates its attribution to Publius Carisio, the legate of Augustus who commanded wars against the *Astures* between 26-22 BC.

Jean-Philippe Carrié

L'archéologie de l'agglomération romaine d'*Abritus* : état de la recherche en 2012

Le site urbain d'*Abritus*, situé au voisinage de Razgrad en Bulgarie possède un intérêt majeur pour la compréhension de la Mésie inférieure romaine. Cette agglomération du II^{ème} s. ap. J.-C., qui fut le théâtre de la fin malheureuse de l'empereur Dèce et de son fil Herenius en 251 ap. J.-C., a été fondée autour du camp romain installé dès le I^{er} s. ap. J.-C.

Malgré un urbanisme très développé, comme l'ont montré les fouilles d'A. Javašov dès 1887, puis les travaux dirigés par T. Ivanov entre 1953 et 1978, *Abritus* n'a jamais bénéficié semble-t-il du statut de municipes. On remarque également qu'elle ne figure pas sur les itinéraires romains, comme la Table de Peutinger, et qu'elle est très peu mentionnée par les sources antiques.

Or, la pérennité d'occupation remarquable du territoire environnant (IV^{ème} s. av. J.-C. – X^{ème} s. ap. J.-C.), ainsi que l'architecture défensive prononcée, l'urbanisme et la richesse du corpus épigraphique et numismatique du site, entraînent à penser qu'*Abritus* occupait à la fin de l'Antiquité une place certainement importante en Mésie inférieure.

Nous proposons de retracer les étapes de la recherche archéologique à *Abritus* dans la perspective d'une reprise prochaine des travaux sur le site. Nous profiterons de ce récapitulatif des travaux consacrés au site pour présenter les problématiques qui pourraient guider les futures études pluridisciplinaires consacrées à *Abritus*.

Maureen Carroll

Families and Dependents of Soldiers

‘The Roman family’ has developed in the last couple decades as a distinct research theme in ancient social history, and it is now clear that the *familia* is better characterised as a household of differently related individuals, rather than the traditional nuclear family of parents and children. Various edited volumes on aspects of the family, such as marriage, children, divorce, social structure and household composition, have appeared in the last years (Wiedemann 1989, Rawson 1987, Bradley 1991, Dixon 1992, Rawson and Weaver 1999, George 2005). Even more recently, an entire conference devoted to the family in Antiquity took place in 2009 in Gothenburg, its aim being to contextualise and refine approaches to this topic in the twenty-first century. All these studies focus on the civilian family, rather than on the families and dependents of Roman soldiers stationed along the frontiers and on secondment in provincial towns, however the advances in the theoretical methodologies apparent in this earlier research can be applied fruitfully to study military communities and the social relationships formed through military and civilian interaction. Important examinations of archaeological and historical evidence, such as those by Speidel (1989), Speidel (1996), Wells (1997), Allison (2006) and Van Driel-Murray (2008), show some of the methods and materials used to explore the multi-dimensional experience of ‘family life’ on the frontiers and in the provinces. But there are many more possible avenues of enquiry.

The aim of this session is to explore the evidence from various regions within and on the empire’s margins for the life and social values of the Roman *familia*; variations in family practice; gender roles; legitimate and illegitimate children; kin and non-kin relations; the role of slaves and servants; the economics of family life; dislocation in the Roman family; and the mobility of families and households. The papers will draw on artefactual, documentary, scientific and pictorial evidence.

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Maureen Carroll

Commemorating Military and Civilian Families on the Danube *Limes*

This study focuses on civilian and military families and extended households living on the Danube frontier. It examines the copious epigraphic and pictorial evidence from the cemeteries outside settlements and forts to gain information on communities and the social relationships formed through military and civilian interaction. The Danubian funerary monuments are particularly eloquent in highlighting the importance of children and their role in replicating ethnic and gender values of families. The ways in which families and dependents constructed an image of their lives, achievements and aspirations for posterity, using the inscribed gravestone as a particularly Roman cultural vehicle, illuminate the social values of the *familia* in this region. This body of evidence also sheds light on non-kin relations and the dislocation and physical and social mobility of families and households on the Danube.

Julia Chorus

**Timber Forts along the Rhine in the West-Netherlands:
New Thoughts from Old Field Drawings**

In 1949, at the first Limes conference in Newcastle the Dutch archaeologist Professor A.E. van Giffen gave a lecture on his excavations in Vechten, Utrecht and Valkenburg in The Netherlands. Here he had excavated parts of the Roman forts in the decades before. Some of these old excavations have never been published.

Now, more than sixty years later, some of these ‘forgotten’ projects are pulled out of the archives and are being published. From my research it is clear that one can very well make up for lost ground with field drawings, photographs, finds and – if available – excavation reports. New discoveries and ideas come to light because we can compare these data with our knowledge from more recent excavations of other forts. And with our current knowledge we can also assess the information from the old reports that did appear.

My research reveals ‘new’ interval towers in Zwammerdam because of a change of interpretation of traces of the rampart. New ground plans of the Valkenburg forts can be drawn due to new approaches. In fact, in each fort in the research area of my PhD project ‘Timber forts along the Rhine in the West-Netherlands’ old field drawings have provided new information that clears the way to new interpretations.

Maybe it is time to re-open the archives and re-assess the old excavation data.

Bogdan Ciupercă
Andrei Măgureanu
Alin Anton

The Presence of Rome in Barbaricum: Archaeological Evidence of the Interaction between Romans and “Barbarians” in the Târgșoru Vechi Area

The Roman camp at Târgșoru Vechi is a well known site in the Prahova County. It belongs to a fortification line that also includes the camps at Mălăiești and Drajna. The existence of the camp was short, in the reigns of Trajan and Hadrian, as evidenced only by the numismatic finds. Due to the stamp bricks, we know that here were *vexillationes* of *Legio XI Claudia P.F.* and *Cohors I Commagenorum*.

Better known are the bath, placed in the very proximity of the camp, in the south-west corner. Here, the archaeological research was more intensive.

On the other border of the Leaota River, in the 2nd century, a settlement of the so-called ‘free Dacians’ was developed. It was an open settlement, formed by 20 structures that yielded a lot of pottery.

In this paper we try to discuss this archaeological situation, starting from the question regarding the chronology of these two sites (Roman camp and Dacian settlement) and the nature of their relation.

Rob Collins

After the Auxiliaries: Identifying Veteran Settlement in the 4th Century

Veteran settlement served an important role in the process of imperialization, but the vast majority of studies have focused on veterans of the early Roman empire. Textual sources refer to veterans in the 4th century, but these are a little studied. Our ability to identify veteran settlement after the Tetrarchic period is made more difficult by changes in the structure and organization of the Roman army as well as fundamental shifts in the material culture of the military. This paper will provide a brief review of the evidence for veterans in the 4th century (and later), using *Britannia* as a case study for addressing the challenges faced by the archaeologist in the Western provinces.

Rob Collins
Meike Weber

You Call That a *Principia*?
Interpreting Building Function and Garrisons in Post-Tetrarchic Forts

A flurry of building activity in the frontiers at different stages from the late 3rd – 5th centuries saw the establishment of new types of military installations and internal plans. The internal arrangement of space was no longer subject to traditional layouts seen in the 2nd century, and as a consequence the standard buildings of a military garrison – the *principia*, the *horrea*, the *praetoria*, and the barracks – changed in their form and position. Due to the fundamental shift in the organization of the late Roman army, the archaeologist is faced with the problem of interpreting sometimes scattered remains of unknown function.

Questions of regionality in military organization have to be asked and possible differences within and between certain *limites* must be identified to understand developments in the internal structuring of late Roman forts and fortresses. How far can we still observe set standards and sizes of architectural structures for different garrison sizes as known during the height of the Roman Empire? Can we identify certain types of constructions and their function and assign them to specific military garrisons?

The *Notitia Dignitatum* provides an advantageous insight into the organization of the late Roman army in the early 5th century, but does the written evidence reflect any physical correlations with observed internal structures in late Roman military fortifications? And to what extent do factors such as location, external threats and climate influence the choice of garrison and layout of internal structures in late Roman military fortifications?

Jon Coulston

Romans and Barbarians on the *Tropaeum Traiani* at Adamclisi, Romania

Scholars have often been concerned about the differences in the depictions of Roman soldiers and their barbarian adversaries on Trajan's Column in Rome and the sculptures of the Adamclisi *Tropaeum Traiani* in Romania. This has often contributed to confused historical, ethnographic and material cultural interpretations pertaining to Trajan's Danubian wars. The present paper will examine both these iconographic divergences and the elements which the monumental sculptures share, with a view to contextualising and interpreting their meaning. Comparative pictorial sources and artefactual evidence will be deployed in the enquiry. The key considerations lie in the nature of the sculptural projects, one huge and created by sculptural workshops in the metropolis, the other on a more manageable scale, carved by knowledgeable soldiers on the frontier. Conclusions may then be drawn about the barbarian groups depicted on the Romanian monument.

Jelena Cvijetić

Roman Hoard of Iron Objects – *Notae* from the Upper Moesian *Limes*

The presentation is dedicated to iron seals with inscriptions, which are not studied enough in the archeological literature. The reason for writing about this subject are finds of seals from one of the biggest hoards of iron tools in Serbian Danube, which was stored in the 4th century close to a military base and a residence of civilian administration in Moesia Superior.

On the territory of the former Roman Empire were found several of similar trade marks and about their use were presented numerous assumptions (for marking brick, wood or beeves). The way in which they are derived shows that before they were used, they were heated on high temperature, indicating that they were used primarily for marking live stock. The custom of marking horses and cattle is described in the written historical sources – the heated iron seal was placed on the animal where it left the name of the owner or grower, and its purpose was to protect the right of ownership. This primarily refers to military horses or horses which are bred specifically for competitions and games in the hippodrome and arenas as seen, besides in the texts of Pliny and Martial, in numerous mosaics in the western provinces of the Empire.

A hoard of such seals from the vicinity of Smederevo indicates the existence of larger economies where the breeding of bovine cattle, or probably horses was carried out. The proximity of a legionary camp and the amphitheatre in *Viminacium*, where were held the games for the crowd, lead to the conclusion that there was breeding of horses in the area, either for military purposes or for competitions.

Rafał Czerner

**A Presentable Building in the North-Western Part of the
Episcopal Complex in *Novae***

The results of years of research on the architecture of the Episcopal complex in *Novae* show that the north-western part of its territory for the most time remained undeveloped. In this space there was a large, presentable square, which preceded the main entrance to the complex, leading from the north by the entrance building, to the *atrium* of the great Episcopal basilica. Recent excavations carried out between 2008 and 2009 showed that in this space, however, has been constructed building, which functioned in a relatively short period, built in the late fifth century, and destroyed and abandoned after an earthquake in AD 518. The structure of the building and its construction technology indicate that it was erected in a hurry. Its considerable dimensions and exceptional position in the middle of the square in front of the main entrance, near the great basilica and Episcopal residence indicate that it had to play an important and representative role.

Wolfgang Cysz

**Neue Untersuchungen zum Limeskastell und *Vicus* von
Dambach-Hammerschmiede, Bayern, Germany**

Rund 5 km nordöstlich des Hesselbergs liegt in der Gemarkung Dambach das seit dem Ende des 19. Jahrhunderts bekannte Kastell Dambach-Hammerschmiede. Dieses Limeskastell liegt quer im Moosgrabental unmittelbar an der raetischen Mauer, die im nassen Talgrund auf rund 2000 Holzpfehlern fundamntiert war. Anhand von mehreren Hölzern konnte ein erstes Dendrodatum für die Errichtung der Mauer in severischer Zeit gewonnen werden.

Das Gelände des *Vicus* war in der Latènezeit (um 300 v. Chr.) noch als Viehweide genutzt worden. Später überfluteten Hochwässer von Zeit zu Zeit die Niederung; ein heftiges Überschwemmungsereignis wird aufgrund von Jahrringeinlagerungen in das Jahr 171 n. Chr. datiert. In dem vernässten, dann von Erlen bestandenen Bruchwald lagerten die Bewohner des Lagerdorfs Siedlungsmüll ab: Schuster warfen den Lederabfall, Zimmerleute die abgelängten Balkenreste ab. Über 1000 Metallkleinfunde weisen auf die Nähe von Bronze gießern und anderen Handwerkern. Nachdem man den Bruchwald gerodet und durch die Anlage von Faschinen (Flechtwerkwände mit Astmatten) trockengelegt hatte, überzog man das Gelände um 200 n. Chr. mit einer Sandplanierschicht, auf der dann Streifenhäuser errichtet wurden. Am Bach konnten wir eine Wassermühle nachweisen.

Inmitten der Streifenhäuser lag ein Quellheiligtum der Zeit um 200. In einem Bassin waren hölzerne Körpervotive (Arme, Beine, Oberkörper) niedergelegt, wie sie in der antiken Welt nur noch zwei Mal, aus der Seinequelle bei Dijon und Clermont-Ferrand bekannt sind.

Ilija Danković

Route of the Eastern Road at *Viminacium*

The paper presents the results of geophysical surveys and archaeological excavations that are being conducted on the territory located to the east of *Viminacium* legionary camp since 2002. During this period *Viminacium*'s eastern communication was discovered on several locations. Until now, its route was only roughly known through ground reconnaissance surveys, and often was interpreted as *Viminacium – Lederata* road.

Newest informations acquired on the field had made the precise routing of this communication possible. Also, we are now able to position it in the broader context of the Roman road system on the Danube *limes*, known to us from contemporary itineraries.

The second part of the paper will deal with the way the road was built, and an attempt will be made to compare it to the roads in other parts of the Empire.

Robert Darby

**Of Caravans and Shifting Sands: Regional Variation and Design
in Late Roman Legionary Baths at El-Lejjun (Betthorus), Jordan**

Although the ancient literary sources regarding Roman military baths and their use are sparse, they do provide small, but tantalizing, vignettes of quotidian life for soldiers stationed along Rome's frontiers. Frequent themes among these texts are the employment of the army in the construction and repair of the baths. Further attesting to this building activity by Rome's legions is, of course, the archaeological evidence. The ubiquitous remains of both legionary and auxiliary bath-houses built to serve the bathing needs of the Roman army stretch across her frontiers from Britannia to Arabia and indicate their role as fundamental architectural forms in the same manner as other subsidiary structures such as *praetoria* or *principia*.

This paper examines the late Roman legionary bath at El-Lejjun (*Betthorus*) within its regional architectural contexts illustrating the dramatic changes to the size, placement, and plan of legionary *thermae* between the second and fourth centuries. Further, it draws comparisons with contemporary bathhouses from numerous desert *castella* of *provincia Arabia/Palaestina* which indicate a shared design may have been utilized by both the legionary and auxiliary garrisons of the region at the beginning of the fourth century. Contributing to these developments were variety of environmental and socio-economic factors, including climate, resource management, and caravan trade. The combination of these elements required unique, regionally specific, adaptations to the standardized forms utilized by the army in bath construction from the mid-first century CE onward raising many new questions regarding an old architectural form born anew in the shifting sands of the desert.

Malgorzata Daszkiewicz
Bernd Liesen
Gerwulf Schneider

**Pottery as Evidence of Trade:
The Example of *Gadara/Umm Qais*, Jordan**

Pottery sherds besides their significance for dating are an indication of trade over long distances as well as of regional trade if the production centres can be determined. From *Gadara*, a town of the *Decapolis*, fine table wares and kitchen wares of Late Hellenistic to Roman periods therefore were analysed using combined laboratory methods. The results of typological comparison and of laboratory analysis were used to determine provenances. Some 250 Late Hellenistic and Roman pottery fragments were selected for chemical analysis. Some objects were also studied using petrologic thin-section analysis and MGR-analysis (Matrix Group by Refiring). Eastern *sigillata* A produced in the region of Antiochia represents the major part of the fine wares. Other chemically ascertained provenances for fine table wares are sherds deriving from production centres in nowadays Cyprus, Italy, Greece, Tunisia and Asia Minor. Kitchen wares common in Galilee were traded on a regional scale. These vessels found in *Gadara* represent wares both from Galilee, probably from the Hananya valley region, and from the Golan region. Some kitchen wares originated from long-distances as e.g. from Naples and from Phocaea.

Dino Demicheli

Dalmatians in the Roman Imperial Fleet

Between 1st and 3rd century many sailors of Dalmatian origin were serving in Ravenna and Misenum fleets. According to the epigraphic monuments, there are more than 70 names that belonged to Dalmatians attested in inscriptions, which is much more than the number that can be found in the works about Roman imperial fleet. The biggest part of these inscriptions can be dated in the 2nd century AD. In those two fleets, they served mostly as peregrines, but there were people with Roman citizenship as well. Their Dalmatian origin can be recognized by the expression *natione Dalmata/Delmata* or by the names typical for the Dalmatian autochthonous population. In military service, there is hierarchy from the common sailor to the prefect of the fleet. The high number of Dalmatian sailors does not surprise because of the neighborhood with Italy, the tradition of sailing from the pre-Roman times and the fact that native people of Dalmatia were heavily recruited in first two centuries AD. This new data will show the more precise representation of Dalmatian sailors into Roman imperial fleet and hopefully correct their number known so far.

Muzaffer Demir
Murat Keçiş

***Nisibis* at the Border of Romans and Sassanids
between the Third and Seventh Centuries AD**

Located on the ancient trade routes, *Nisibis* was bordered between the two largest powers, Romans and Sassanids. As being the only main trade center in its region, *Nisibis* was one of the cities in the marches where Roman and Sassanid powers confronted each other. Because of its strategic importance on the Sassanid border, though heavily fortified, it was often taken and retaken. With the fresh energy of the new Sassanid dynasty, Shapur I conquered *Nisibis*, was driven out, and returned in the 260s. In 298, by a treaty with Narseh, the province of *Nisibis* was acquired by the Roman Empire. In 363 *Nisibis* was ceded back to the Sassanids after the defeat of Julian. By the Islamic conquest in 639, *Nisibis* saved itself from being a political target of Romans and Sassanids. Apart from these political developments, the most significant socio-cultural aspects of the city were accommodated by means of the *Nisibis* Academy. This academy in the early period was subject to the Roman Empire and afterwards it began to hold a very important status in the history of Christianity by the practice of Nestorianism.

In this study, we shall briefly concentrate on the political struggles between the Romans and Sassanids at this border city from the 3rd to the 7th century AD. Then we shall especially strive to enlighten the problems of the reflections of the socio-cultural and economic structure of the city on the political developments between Romans and Sassanids during this period.

Zdravko Dimitrov

Architectural Decoration in the Roman Colony of *Ulpia Ratiaria*

The paper aims to launch a study of the architectural orders in one of the largest centers of Roman power in the Lower Danube *limes* zone. Studies of *Ratiaria* – a Roman military camp, a Roman colony, even the capital of a late-Roman province – continue for decades, but today we have no information on the architectural ornaments of this city, which had such a strong impact on the life of the province of Upper Moesia. The order systems used in the colony and their constituent individual architectural units remain unknown to the scholarly community. Also, nothing can be told about the development of monumental decorations in public buildings, religious centers and even in private, residential architecture.

The main subject of the paper will be the full analysis of the architectural details found in *Ulpia Ratiaria*. Some of them are preserved today in the collections of NAIM-BAS (Ionic order – base and cornice), others have been found and deployed on the ground in villages around the city center itself (a large group of Corinthian capitals, for example) and a third group of monuments is preserved in the fond and lapidarium of the Museum of Vidin. Based on the study of architectural elements from these various sources we can construct a general idea of the initial development of the orders in this important colony on the Lower Danube.

Focus of this study are the monuments of the Principate, but the basic idea of the author is to use this study to address the international scholarly community on architectural problems of the Roman colony of *Ulpia Ratiaria* so that systematic studies of this aspect of her long life can be initiated.

Ventzislav Dintchev

About the Urbanization near the Legion Camps along Lower Danube.

The subject of study of this paper is the development of the civil communities near the legion camps along Lower Danube during the 2nd – 3rd c. – *Novae, Durostorum, Troesmis, Noviodunum*. It is known that during the second half of the 2nd c. and the beginning of the 3rd c. they obtain the status of *municipia*. The main conclusion from the study is that despite this fact, these settlements did not reach the level of urbanization of the rest of the municipal centres of the province of Moesia Inferior.

Erik Dobat
Christof Flügel

**Main Limes Mobile and Limes Mittelfranken Mobile – Presenting
Archaeology and Museums with the Help of Smartphones**

The technological development of mobile devices such as smartphones or tablet PCs enables new possibilities for the presentation of archaeological sites. Short films, audio sequences, stills and text can be displayed in good quality as location based services.

The archaeology of the Roman Frontiers in particular provides many opportunities to play a pioneer part in the field of mobile information systems. Roman Frontiers provide often outstanding archaeology in the landscape whereas the finds are on display in many museums. The idea of the project is to merge the landscape with the museum and vice versa.

The information systems Main Limes Mobile and Limes Mittelfranken Mobile provide archaeological content right at the current location (either in the museum or in the landscape). And the technological devices (i.e. smartphones) provide a true multimedia experience for the user. Through GPS navigation the smartphone will alert the user when approaching a hotspot with archaeological information. The application will run offline. Therefore an internet connection is not mandatory. This is especially important for remote regions and also for users from different countries (roaming costs).

In Bavaria the *limes* along the river Main has been chosen for the pilot project. The *limes* in Mittelfranken is the succeeding project that integrates new functionalities (i.e. Augmented Reality).

Peti Donevski

**A Comparison between *Novae* and *Durostorum* in Lower Moesia.
Topography, Defensive System and Legal Status**

The paper compares the best investigated Roman legion fortress in Bulgaria at *Novae* and the best investigated Roman civil structures around the camp of *Legio XI Claudia* at *Durostorum* and is based on the archaeological excavations in *Novae* and *Durostorum* made by the author.

The two cities were investigated in a different manner. In the case of *Novae* it was done through regular excavations while in *Durostorum* it was a result of rescue excavations and incidental discoveries. Those affected the degree of knowledge about both cities. At the same time we can evaluate their advantages and disadvantages for the better understanding of the Roman presence on the Lower Danube.

At first glance it could be said that there are a lot of identical traits between the sites but actually there are distinctions concerning the choice of the place of fortresses, *canabae* and their necropolises. Differences can also be observed in the defensive systems of the early and late fortresses. The information which comes from the ancient sources and stone inscriptions regarding the legal status of *Novae* and *Durostorum* is more scant about the former and richer for the latter. In addition, the observations show that the so-called settlement's dualism can be confirmed for both sites. The available data is still controversial particularly in the case of *Novae* and does not determine exactly which of the settlements – *canabae* or *vicus* was granted a legal status at the end of the 2nd or at the very beginning of the 3rd century AD.

Deyan Dragoev

The *Principia* of the Late Roman Castle of *Sexaginta Prista*

As a result of the rescue archaeological excavations, conducted in the 2005-2010 period within the territory of the contemporary town of Ruse, the *principia* of the Late Roman castle of *Sexaginta Prista* was investigated. It is a building with size of 30.50 x 16.50 m, consisting of a peristyle yard, a rectangular hall and an exedra. On the basis of the stratigraphic observations and the character of the elevated archaeological material, two construction periods of the building's functions as *principia* are distinguished. The first one falls within the chronological frames from the beginning of the 4th century to the end of the 360s. *Terminus post quem* for the construction of the building is a coin of Diocletian, minted in AD 292, discovered inside a pit, sealed by the floor level of the sanctuary of the flags. The second construction period of the *principia*'s functioning is related to the over-all transformation of its interior space. A good chronological benchmark for this reconstruction activity from the end of the 360s are the tegulae with a seal *RVMORID(us)*, coming from the roof construction of the building and the data from the stratified numismatic material.

Due to the lack of data for a forced demolition of the building, the most probable reason for its destruction is its abandoning during the years following the Second Gothic War of Emperor Valens, as a result of the disintegration of the Late Roman model of military organization.

Monica Dragostin

**La concession de la citoyenneté romaine aux soldats recrutés en Syrie et Arabie :
l'inscription à la tribu *Collina***

Dans cette étude je me propose de recenser et analyser les cas où des soldats ou des vétérans issus de la Syrie et de l'Arabie, mentionnent la tribu *Collina* dans leur nomenclature. On ne connaît pas la modalité par laquelle un citoyen était assigné à telle ou telle tribu, mais on sait depuis W. Kubitschek que les Romains inscrivaient à la tribu *Collina* les nouveaux citoyens syriens. Puisque la *Collina* était l'une des 4 tribus urbaines, on a conclu que les personnes inscrites dans cette tribu, avaient acquis la citoyenneté *viritim*, c'est-à-dire à titre personnel et non pas à l'occasion de la promotion de leur cité d'origine au rang de *municipium* ou *colonia*. D'ailleurs l'histoire institutionnelle de beaucoup de villes syriennes à l'époque romaine, demeure mal connue. Dans ces villes les vétérans formaient peut-être le groupe le plus important de citoyens romains et il serait important d'essayer de déceler quelques règles dans la composition de leur onomastique citoyenne et d'établir un rapport entre type de promotion et type de dénomination.

Mark Driessen

**The Roman City of Voorburg-Arentsburg:
A Supply Centre for the Military on the Dutch Coast**

Excavations at the Roman city of Voorburg-Arentsburg (*Forum Hadriani*, the Netherlands) have revealed a Roman harbour. At this site located along the channel of Corbulo, right between the Rhine and the Meuse large amounts of ceramics, building materials and other cultural and organic find assemblages were retrieved. These assemblages show we are dealing with large-scale trading activities. There are strong arguments to suggest that this site played an important role in the supply of the military sites at the Dutch coast. We should hereby think of a trading mechanism which was controlled by the army in order to supply the small coastal fortresses.

Piotr Dyczek

The Most Splendid Town of the “Novesians”

In 2011 a fragment of a new Greek inscription was found by archaeologists from the Center for Research on the Antiquity of Southeastern Europe, University of Warsaw, digging on the site of the first cohort barracks along *via principalis* (a new sector, no. XII, opened recently). The archaeological context indicates that the inscribed limestone block had been broken up and reused for domestic building purposes. The inscription itself should be dated to the 5th c. AD, because the *terminus ante quem* provided by building layers gave a date in the beginning of the 6th c. AD. Preliminary analysis of the text has led to the conclusion that the inscription comes from a statue base and was dedicated to the *Legio I Italica* and “the most splendid town of the Novesians” by the leaders of some Hellespont towns, among them Ilion. Of particular interest in the case of this inscription is the first ever mention of the town’s name in stone, but its major importance lies in confirming once again epigraphically the strong economic bonds that linked *Novae* with the Hellespont in late antique times. In the paper, the epigraphical source is confronted with archaeological finds known from late antique *Novae*.

Mads Drevs Dyhrfeld-Johnsen

Charon Custom in the Southern Scandinavian Region

The presence of the Charon custom in southern Scandinavia has received a fair degree of attention by several scholars in recent years. This is largely due to recent excavations of several graves from Late Roman Iron Age (AD 150/160-375) in the region west and southwest of present day Copenhagen, where the deceased has had payment in terms of glass shards, gold clippings or amber placed in the mouth.

The focus of this paper is on the emergence of this particular burial custom in an area outside the *Limes*. Especially attention will be paid to the type of graves this burial custom occurs in and what else characterize these graves. Other topics will be the transformation of the original custom of using coins as means of payment. A presentation of these graves will lead to a discussion of the possibility that knowledge of the Charon custom was brought back to southern Scandinavia by returning veterans having served as auxiliaries in the Roman army. Furthermore the way which knowledge of this burial custom spread within this region will be touched upon.

Michael Eisenberg

**Military Architecture of Antiochia Hippos of the Decapolis:
A Test Case for Early Roman Fortifications**

There is no basis for assuming that the fortification systems in the Decapolis poleis would be essentially different from other Hellenistic poleis. Until recently it was claimed that when the Decapolis poleis came under the control of the Roman Empire in the 1st century BCE, they ceased fortifying them. The *Pax Romana* was the main culprit to “blame” for this lack in urban defense.

Nevertheless, the surveys and excavations recently carried out in a number of Decapolis cities present a different picture. In the course of the excavations conducted during 12 years in Hippos on the eastern side of the Sea of Galilee, a number of fortified segments of the early Roman period were exposed that had very unique characteristics. Among those one should mention the Early Roman Period east city gate, the bastion over the southern cliff and some unique outworks. Hippos can serve as a fascinating test case for the alterations in the military architecture in the Decapolis region between the Hellenistic and Roman periods.

Some of the new findings allow us to compare the recommendations of Philon in his *Poliorcetics* with the urban fortification systems in the region, and to assume for the first time, with all due caution, that Philon’s manual for siege warfare of the 3rd century BCE served as the guidebook for the military architects fortifying their cities during the early Roman period.

Dorit Engster

**Technische Innovation und Grenzverteidigung –
das Werk des „Anonymus de rebus bellicis“**

In der Schrift „de rebus bellicis“ eines anonymen Autors des 4. Jahrhunderts v. Chr. finden sich Vorschläge, wie die Grenzverteidigung mit Hilfe des Einsatzes moderner Kampfmaschinen und neuer Erfindungen verbessert werden könnte. Die Schrift ist an den Kaiser gerichtet und soll neue Möglichkeiten der „Barbarenabwehr“ aufzeigen. Verbunden mit den Entwürfen sind detaillierte Zeichnungen, so von Geschütz- und Sichelwagen oder einer Art mobiler Schlauchbrücke zur Überbrückung von Flüssen. Besonders hervorzuheben unter den technischen Innovationen ist der Entwurf des ersten von Schaufelrädern (bzw. Kühen) angetriebenen Schiffes. Der Autor geht zudem ausführlich auf die schwierige Lage des Reiches ein und argumentiert, dass seine Erfindungen den in der Spätantike immer spürbarer werdenden Mangel an Arbeitskräften ausgleichen können. Die durch die neuen Techniken ermöglichte Arbeitersparnis wird gerade auch mit Blick auf die angespannte Lage an den Reichsgrenzen positiv hervorgehoben.

Der Vortrag soll sich insbesondere folgenden Aspekten beschäftigen:

- Auf welchen technologischen Entwicklungen beruhen die Vorschläge des Autors?
- Ob und wie funktionieren seine Erfindungen?
- In welcher Weise berücksichtigt der Autor die Verhältnisse seiner Zeit, insbes. die Lage an den Grenzen?
- Wurden seine Entwürfe jemals umgesetzt?

Abschließend soll ein kurzer Blick auf die Rezeptionsgeschichte der Schrift geworfen werden. Das Werk wurde zwar im Mittelalter kopiert, aber erst in der Frühen Neuzeit (erste Druckausgabe 1552) stärker rezipiert. In der Renaissance wurde die Schrift dann von einer Reihe erstrangiger Wissenschaftler benutzt. So lässt sich nachweisen, dass Leonardo da Vinci die darin enthaltenen Entwürfe als Vorbild für seine Erfindungen nutzte.

Christine Ertel

**Legionslager und Kaiserkultbezirk *Mogontiacum* (Mainz).
Apotheose des Drusus (?)**

Der charismatische Heerführer Drusus der Ältere, ein Stiefsohn des Augustus, verstarb 9 v. Chr. in *Mogontiacum*. Sein Geburtstag wurde alljährlich mit einem militärischen Waffenlauf (*decursio*) und Ehrendarbietungen der 60 gallischen Stämme (*supplicatio*) gefeiert. Diese Darbietungen fanden vor den Toren des Legionslagers in dem Gelände um den Drusus-Kenotaph und das Theater statt. Zu dem spontan entstandenen Personenkult um Drusus gesellte sich später die Verehrung seines Sohnes Germanicus und des Augustus hinzu. Aufgrund der Quellenlage gilt der augusteische Ursprung des Kaiserkultbezirks als sicher.

In den letzten Jahren wurden neue Aufschlüsse über die Gebäude des Kultbezirks gewonnen. Westlich des Drusus-Kenotaphs ragte auf der Hochterrasse des Rheins ein großer Kaiserkulttempel auf, dessen Architektur aus Spolien in der spätantiken Stadtmauer rekonstruierbar ist.

Die Cavea des Theaters nutzte die Hangböschung des Rheintals. Obwohl ihre frühkaiserzeitlichen Fundamente zerstört sind, dürfte das Bauwerk schon in augusteischer Zeit in Stein errichtet worden sein. Im Scheitel der spätantiken Orchestra fand man einen Eckblock eines Konsolengesimses, der im 4. Jh. als Altarsockel fungierte. Ursprünglich gehörte er vermutlich zum Pulpitum des frühkaiserzeitlichen Theaters.

Sowohl nördlich als auch westlich des Bühnenhauses dehnten sich geräumige Höfe mit Pfeilerstellungen aus. Hier gab es mindestens einen begehbaren Kaiserkultaltar, an dem vor den zahlreichen Teilnehmern Zeremonien stattfanden. Der Westhof und seine Architektur lassen sich aus dem Inhalt eines Kalkofens erschließen. Ein Relieffragment stammt von einer Apotheoseszene des Drusus (?). Die über den Rhein hinweg weithin sichtbare prächtige Architektur des Kaiserkultbezirks stellte die Macht des römischen Reiches zur Schau.

Miriam Etti

Fort and Civil Settlement of Zugmantel (Germany, Hessen)

The fort and civil settlement of Zugmantel are famous for the extensive excavations carried out there and for the abundance of finds of which some exceptional pieces have already been published. However there is no synthesizing study of the excavations applying modern research-standards and, especially no analysis of the relationship between features and find material which is very important for the understanding, interpretation and detailed study of the site itself.

The first excavations were carried out in the middle of the 19th century, but the most important period was started in 1901 by Louis and Heinrich Jacobi on behalf of the Saalburgmuseum. Although the early excavators worked very conscientiously, there are many problems resulting from the excavation techniques and documentation methods of this time.

The research is based on the original excavation diaries in combination with the published reports. There are obvious faults in the publication which can be corrected. In addition it is possible to complement the published reports with information about features and finds which are mentioned in the documentation. So a new and more detailed analysis is possible with this new information, carried out in accordance with current scientific knowledge.

Christof Flügel

**“Time Slice” Regensburg-Niedermünster:
From Roman Legionary Fortress to the Heart of Bavaria**

From 1963-1968 the Deutsche Forschungsgemeinschaft conducted large-scale excavations under the 12th century Romanesque Niedermünster Church just behind the Dome of Regensburg (Bavaria). More than 40 years later the results of the complicated stratigraphy are presented to the general public by means of virtual reconstructions combined with a didactic LED-illumination system bringing to light only the walls existing in a certain period. The “document niedermünster” is a keypoint in our understanding of early Bavarian history. This paper will concentrate on the “making of” of this new presentation and how the different reconstructions were achieved.

The history of the Regensburg according to the Niedermünster excavations can be outlined as follows:

In 179 AD the 3rd Italian Legion took up quarters in a new fortress. “*Castra Regina*” was surrounded by a 2,000 metre long wall made of large, rectangular stones. The two-phased legionary barracks as well as a late antique civilian re-use of the former military area could be traced underneath the Niedermünster church. In the early 5th century the Roman troops withdraw from Regensburg and the Bavarii moved in. Parts of the Roman walls were used to build the first church here – encircled by a cemetery. The palatine chapel belongs to the nearby court of Theodo, Duke of Bavaria. When he died around 717/718, he was buried in the first church under the actual Niedermünster.

As the location of Saint Erhard’s grave, Niedermünster gains unique historical significance. The bishop from Francia was buried after 700 AD at the northern wall of the palatine chapel. His grave is made of tufa slabs and is sealed by the lid of a Roman sarcophagus. In 1052 the revered Erhard was canonized. The site of his grave was left intact by all later changes to the church. The sarcophagus, however, “grew” upwards with the rising floor level.

The palatine chapel was rebuilt in the 9th century and became a house of worship for the female nobility of the newly-founded “Damenstift”. Here, within the walls of the former Roman fortress, well-educated and independent women lived together in a spiritual community.

Henry I, Duke of Bavaria and younger brother of Emperor Otto the Great, and his wife Judith ordered a completely new construction of the Niedermünster. In 955 Henry I was buried in front of the choir of this basilica, which had three aisles. As abbess, Henry I’s widow directed the “Damenstift”, which became one of the leading institutions of this kind in Germany. Judith was buried in Niedermünster, as was her daughter-in-law, Gisela of Burgundy. Gisela was the mother of two famous children: Queen Gisela of Hungary and Emperor Henry II.

All these phases are brought to life by means of virtual reconstructions included in three short films “Romans”, “Medieval Churches” and “Saint Erhard”. “The Document Niedermünster” was opened on July 20, 2011 in the presence of the Archbishop of Regensburg.

Florin Fodorean

**Roman Fortresses along the *Limes* in Pannonia, Dacia and Moesia.
Searching Proportions and Regulatory Lines**

The idea of searching proportions and regulatory lines in the plans of the Roman fortresses represents, in my opinion, an interesting, not exploited, research topic. In 1987, Mihai Bărbulescu analyzed the Roman fortress of *Potaissa* (today Turda, Cluj County) from this perspective. Interesting data were later added by Cornelia Bărbulescu. For other fortresses in other Roman provinces, investigations like this are almost unknown. Charles-Marie Ternes calculated the ratio between the length and the width of the auxiliary Roman forts of Germania Superior, but she did not extend her research in order to obtain graphic constructions and regulatory lines.

At *Potaissa*, the proportion between the length and the width of the fortress (573:408 m) is very close to the value $\sqrt{2}$ (1.4142135...). The proportion between the length and the width of *principia* (124.70:72 m) is very close to the value $\sqrt{3}$ (1.7320508...). So, the shape of the Roman military camp is of a rectangle of theme $\sqrt{2}$ and the *principia* has the shape of a rectangle of theme $\sqrt{3}$. *Locus gromae* is placed in a way in which it marks on the longitudinal axis of the camp the gold section. The gold number ϕ is 1.6180339... At *Potaissa* the distances *groma – porta decumana* and *groma – porta praetoria* form the proportion 354:219 = 1.6164383..., very close to ϕ .

It is recognized today that Romans executed small size plans, which were then translated in the field to a real scale. The succession of operations performed to reconstitute the regulatory plan probably respects the succession of the antique operations necessary to realize the plan. The ancient literary sources are few and laconic in this issue. The oldest is Polybius, which, in his description of the Republican fort (VI, 27, 2; VI, 31, 10), refers to its squared form. The square has the biggest area at the most reduced perimeter, therefore, a minimum working volume could strengthen a maximum area. From this point of view, we cannot explain why the Romans abandoned the square form and adopted the rectangular one, and no source brings solid arguments in favor of the rectangular shape. Josephus Flavius mentions the rectangular fort (*Bell. Iud.*, III, 5). Hyginus is a little more specific: fortresses, where possible, must have the sizes in the ratio 2 to 3 (*castra ... tertiata esse debebunt*); he gives an example that clarifies the meaning of the expression *castra tertiata* (2400 feet long and 1600 feet wide). His explanation for this shape is “because the wind must cool the army” (*ut flatus aurae aestus exercitus leniat – De mun. castr.*, 21). In the third century AD Iulius Africanus recommended the rectangular fort with “elongated” shape. A century later, Vegetius ensures us that, depending on the terrain, the camp may be square, triangular or semicircular. In the same book he returns to the aspects related to the shape of the fortresses, adding to possible shapes the circular and rectangle one. He outlines that “the most beautiful” is the camp whose length is one third bigger than its width (*tamen pulchriora creduntur quibus ultra latitudinis spatium tertia pars longitudinis additur – Epit. rei milit.*, I, 23).

I apply this type of investigation and analyze the fortresses along the Danube River in Pannonia, the fortresses along the Dacian *limes* and those along the Danube River in Moesia. In total, I will analyze around 50 fortresses. Interesting data can be obtained if we follow the size of the fortress and its various components expressed in ancient measurement units.

Regina Franke

The Tetrarchic Fort at Nag'al-Hagar in the Province of Thebaïs (Upper Egypt)

The fort at Nag'al-Hagar (Upper Egypt) is situated on the East bank of the Nile, c. 17 km south of *Ombos*/Kom Ombo and c. 30 km north of *Syene*/Aswan. With a square layout (142 x 142 m) and defences with projecting U-shaped towers and square corner towers, the fort shows characteristic features of late Roman fortifications. A construction date around c. AD 300 is suggested by the finds material. The interior buildings, however, show some additions highly unusual for a military fort. In the south-western quadrant there is a palace-complex (*palatium*) with a sequence of apsidal rooms, a courtyard and an audience hall (*aula*). The headquarters building, facing the main gate on the Nile front, was also built in a particularly impressive architectural style with stairs leading up to the entrance into the *principia*. Behind lay an anteroom, giving access to an octagonal hall behind, which probably served as the regimental shrine (*aedes*). Hitherto halls or rooms of polygonal shape had been known mostly from civil contexts, particularly as part of representative quarters in palaces and palatial villas. In the late Roman fort at Nag'al-Hagar these highly unusual features indicate a special rôle for this fort going beyond purely military or strategic considerations, which will be discussed in the lecture.

Paul Franzen

Some Old and Some New News from Nijmegen. The Roman Military Presence on the Hunerberg at Nijmegen between the Augustan and Flavian Periods

In the eastern part of modern day Nijmegen there are several heights where the Roman Army had bases. There are two fortresses on the Hunerberg, and a base at the Kops Plateau. The fortresses are Augustan and Flavian-Trajanic in date. The base at the Kops Plateau is circa 3.5 ha large and dates between circa 10 BC and 69 AD.

After the abandonment of the Augustan fortress the Roman occupation shifted to the nearby Kops Plateau and the oppidum Batavorum. Both can be dated between circa 10 BC and 69 AD. A briefly occupied fort, dated to the late Augustan – Tiberian era, at one time flanked the *oppidum* on its eastern side. But it were the two legionary bases that constituted the main military presence during the Roman period, and which drew most modern scientific attention.

The generally accepted phasing for these two fortresses is as follows:

1. Augustan base, 42 ha large, between circa 19-10 BC;
2. The base for the *Legio II Adiutrix* in September 70;
3. A possibly 29 ha large base, pre-dating 4;
4. The 15 ha timber fortress of the *Legio X Gemina*;
5. The 16.5 ha stone fortress of the same legion. During the second century AD this fortress seems to have accommodated also some units from Britain (*Vex. Brit.* and *Legio VIII Hispana*) and units from the Xanten based *Legio XXX V. V.*

To complicate matters even more, excavations in the 1980's and 1990 revealed a ditch (nicknamed X) that seems to date between phase 1 and 4.

A re-examination combined with recent research yielded some new structures and defensive works. Amongst these are a large cavalry parade ground, and the blocking of the old Augustan gate(s). Can we date these structures, and put them in context?

*Alik Gabelia***Sebastopolis – a Fortification of the Pontic *Limes***

At the beginning of the Christian era Rome began placing regular armed forces along the East Black Sea Coast, having begun the creation of Pontic *limes* – a chain of Black Sea fortifications with garrisons for the guarding of approaches to the eastern frontiers of the Roman Empire.

The Roman garrisons on the East Black Sea Coast appeared immediately after Vespasian placed two legions in Cappadocia. In 1st – 3rd century these fortifications were under the authority of Cappadocia governors, and after the formation of the province *Pontus Polemoniacus*, all Colchis forts (already Byzantine) were transferred to Cappadocia control. This union of Black Sea fortifications in 4th century included more than ten sites, and was a stronghold at first for the Romans, and then for the Byzantines in the East Black Sea region (Y. Voronov, O. Bgzhba).

Roman fortifications had been placed along all the East Black Sea Coast. They were: the fortress of *Apsaros* in Gonio village, south of modern Batumi in Georgia; a rectangular in plan fortress with four towers at its corners in *Phasis*; the fortress of *Ziganeis* in the village of Gudaa; the largest Roman fortress in *Pitiouss*, and also other monuments in the territory of historical Abkhazia.

The major link in the chain of Pontic *limes* was *Sebastopolis*. We meet the first mention of *Sebastopolis* in Pliny the Elder (1st century). In AD 137 the fortress was visited by Flavius Arrianus. *Sebastopolis* was the terminal point of voyage for the governor of Cappadocia on the instructions of the Roman emperor Hadrian. *Sebastopolis* is repeatedly mentioned in ancient sources (Hippolytus – 3rd century, Eusebius of Caesarea – 4th century, Stephanus Byzantinus – 5th century). In *Sebastopolis* there was a *cohors Prima Claudia equitata* (First Claudian equestrian cohort), then up to AD 542 there was a Byzantine garrison. *Sebastopolis* has been thoroughly investigated by archaeologists (A. Apakidze, V. Levkinadze, M. Trapsh, L. Solovev, L. Shervashidze, M. Gunba, L. Khrushkova, etc.). During their excavations the walls of three fortresses have been revealed. Parts of the Roman fortifications have been found in the powerful walls of the Sukhum fortress, constructed much later during the Turkish period (16th-17th centuries). One of the most interesting archaeological discoveries in the territory of the Sukhum fortress is an octagonal church from the end of 4th century (L. Khrushkova) and a one-apse church with a mosaic floor (D. Bzhania, etc.).

The Roman Empire erected fortifications along all the East Black Sea Coast, involuntarily involving the local population within the sphere of influence of classical antiquity which promoted the formation of complex and highly developed ethno-political groups.

Michael Geschwinde
Henning Hassmann
Petra Lönne
Michael Meyer
Günther Moosbauer

**Rome's Forgotten Battle. New Research on the
Harzhorn Battlefield (Kalefeld, Ldkr. Northeim, Germany)**

In 2008 a Roman-German battlefield was discovered on the Harzhorn close to Kalefeld, Ldkr. Northeim. The finds mainly consist of projectiles, but also personal equipment and parts of the supply train of a Roman army. Weapons that can clearly be identified as German products are rare. According to the typology of the finds, but also considering the coins found so far and the several C14-datings the battle can be dated roughly between 230 and 240 AD. An inscription on a Roman *dolabra* makes it probable that the battle is part of Maximinus Thrax' campaign against the Germans in 236 AD.

Intense metal detector prospection in the area has recently yielded a new find spot, so that the landscape of conflict that can be identified so far is several square kilometers large. The lecture will present the current results of the prospection and the excavations.

Snežana Golubović

The Eastern Cemeteries of *Viminacium* – Latest Excavations

The excavations of the cemetery spreading to the east from the military fort began in 1997. Then the most eastern part of *Viminacium* cemetery was uncovered at the site called Pirivoj. The complex of a mausoleum (square, 20 x 20 m) with a tomb in the centre was surrounded by a wall. About twenty gold objects and a gilded fibula have been found in the graves around the central one. The necropolis was biritual – 412 graves with inhumation and 68 with cremation were explored.

At the site Kod Koraba in the broader zone of *Viminacium*, approximately 650 m to the South-East from the military camp, rescue excavations including geophysical survey lasted from 2005 until 2008. Also both types of burials were detected – 132 cremations and 79 inhumations. According to the types of graves and the goods found in them, the necropolis dates back to the period from the middle of the first century AD till the middle of the third century, with the exception of a single fourth-century grave.

Finally, in 2009 at the site Nad Klepečkom, the easternmost cemetery of the Roman period appeared. The number of 49 graves with inhumation and 87 with cremation is not final, because excavations are still going on. In the moment it seems, judging on the grave inventory, that it is slightly earlier than the south cemeteries explored at the end of 20th century. The form and typology of the constructions whether of inhumation or cremation do not differ too much from those found before. However, graves or groups of graves surrounded by walls built of stone are considerable. These last researches are leading us to the conclusion that *Viminacium*'s necropolis developed primarily at the eastern side of the city and it seems that this suggestion will soon be confirmed.

Erik Graafstal

**Squeezing Juice from Stones: New Perspectives on the
Date and Building Order of Hadrian's Wall**

It is usually thought that the construction of Hadrian's Wall followed from the emperor's visit to Britain in AD 122. This paper argues that the Wall decision came much earlier, c. 119, following Hadrian's first difficult year of succession and a wave of wars that had shaken every corner of the empire.

The visit of 122 was part of a well-prepared journey of inspection that also encompassed the German palisade that had been commissioned c. 119. If Hadrian inspected work in progress in Britain as well, it is the so-called 'fort decision' that presents itself as the direct outcome of his visit to a project that clearly embodied the emperor's personal vision of the ideal frontier barrier. The structural time slice of the resulting Narrow Wall decision sheds light on the Wall's very disjointed building order. This is usually explained as following from allotment patterns, work logistics and/or the availability of building materials. Renewed analysis, however, suggests that work was segmented and prioritised on the basis of a thorough terrain assessment, both on a macro-level (defining the successive seasons' targets) and on a more local level allowing individual stretches and structures, or even parts of them like milecastle towers, to be prioritised according to topographical sensitivity.

Thomas Grane

**Germanic Veterans of the Roman Army in Northern Barbaricum –
Can We Identify Them?**

It is well-known that the Romans used Germanic man-power in the army. We know this both from literary evidence and from stone-cut depictions like the monumental friezes on Trajan's and Marcus' columns. We also have a number of grave stones commemorating soldiers and veterans of the Roman army of Germanic origin. Obviously, these Germanic veterans chose to stay and died within the Roman frontiers. But what about those veterans, who decided to pack their things and go home to their native tribes? Is it possible to identify them from the grave goods of Germanic graves or from Roman objects among settlement finds? Having in mind the information gained from various literary and epigraphic sources and sculpture, when we study Germanic finds containing certain Roman objects allows us to interpret some of them as evidence or rather indications of Germanic homecoming veterans.

There are, however, also layers to the level of engagement with and dependence on the Roman army invested by Germanic warriors. One layer is constituted by veterans of a Roman military auxiliary unit. These soldiers joined a Roman unit and lost their independence until they were released from duty again. Other layers are constituted by allies or *foederati*, who acted on their own. This raises another question; can we separate the two layers in the archaeological remains? This paper will address these questions investigating Germanic finds from the first four centuries AD.

Liubov I. Gratsianskaya

The Barbarians in Strabo's "Geography": Tradition and Reality

The opposition of the Greek, later the Roman to the barbarian is apprehended by the modern scientists as an unchangeable moral-ethical stereotype, functioning practically during the whole period of antiquity. Among the main trends of its semantics the moralizing aspect is usually stressed. But it is quite clear that during such a long period of literary development the description of the real barbarian meets with the stereotype image of the barbarian on the pages of the literary works. And it is natural that both are liable to change: there might occur alternations both in the stereotype itself and in the real features of the barbarian world. At last, stereotype is practically transcendent in the wild limits between plus and minus.

By the time of Strabo's literary activity there were two common stereotypes, positive and negative, with obligatory structural elements and variants. These features characterize a barbarian so to say naturally – stereotypical. But it should not be neglected that at the same time Strabo develops also another image of barbarian that is the Ephorus' concept of the so-called ethically-stereotypical barbarian, Scythian and Sauromatian, simple-minded, just and meek, living a nomadic life, who can serve as an example of positive idealization.

Thus, the "Geography" of Strabo comprises in a unified hierarchical system stereotypical characteristics of a barbarian but belonging to various stereotypes, created in different times and under different conditions. The exposition of stereotypical elements in any description of a barbarian shows the necessity to regard its reliability as to the facts with great care. On the other hand, this situation provides materials for the investigation of Strabo's theoretical ethno- and geographical ideas: *a priori* dependence of the appearance, essence and activities of the barbarians on the geographical milieu.

Elizabeth M. Greene

**Roman Military Pay and Soldiers' Families:
The Household Contribution to Subsistence**

It has been suggested that the standard pay of an auxiliary soldier would not have been enough to support a family during a soldier's service. That no pay raise was given for nearly 100 years in the 1st c. makes the potentially inadequate salary even more problematic if supporting others. However, we know that soldiers did indeed start families during service, and more than a few diplomas suggest that military families had upwards of four or even six children. This fact suggests that soldiers likely had secondary forms of income to support themselves and it is probable that their family contributed in some material way to household subsistence. In modern European armies in the 16th – 19th centuries the income contribution made by wives was crucial for basic subsistence (Hacker 1981). Possible trades open to women, particularly of the equivalent social class as an auxiliary foot soldier, would have been for instance as laundress, shop keeper, or even prostitution in some cases. This paper starts by considering the secondary incomes made by soldiers and looks further at other individuals working in the military community. We know from *Vindonissa* that a female inn keeper worked within the fort itself (Speidel 1996), and Allison's (2006) conclusions at Ellingen suggest women worked in some economic role in public areas of the fort. These aspects of a working world within the military community will be explored, particularly as it pertains to the maintenance of families while serving in the Roman army.

Stefan Groh
Balázs Komoróczy
Marek Vlach

**Engelhartstetten (Lower Austria) – Roman Military Camp on the
Barbarian Territory North of *Carnuntum***

The Roman temporary camps on the barbarian territories of the Middle Danube region are standing subject of interest of archaeological science and represents unique source of information for knowledge of spatial extent, strategic concept and Roman-Barbarian interactions during the offensive actions of the Empire.

Research of the Roman temporary camps is also regularly presented on the Roman Frontier Conferences, while from the areas to the west of the Lesser Carpatians were the most frequently presented results of excavations from the central military base situated on Burgstall at Mušov during last decade. In contrast with Quadian territories to the east of the Lesser Carpatians, where in cooperation of the Institute of Archaeology of the Slovak Academy of Sciences in Nitra and RGK in Frankfurt am Main recently have taken place series of systematic terrain verifications of the Roman temporary camps, in Moravia and especially in Lower Austria this issues remained in the background. The interpretations of historical processes remain are without archaeological terrain verification and dating still substantially hypothetical.

Therefore, in 2010 was initiated a long-term cooperation of research teams of the Austrian Archaeological Institute and the Institute of Archaeology of the Academy of Sciences in Brno, aimed on systematic research of the Roman temporary camps in Lower Austria and Moravia and development of unified methodological approach of archaeology and natural sciences for research of this category components. In 2010 and 2011, under the leadership of S. Groh and B. Komoróczy, the first research activities were carried out within the cooperation on the area of the well-known camp in Engelhartstetten, about 10 km from the Danube. Current results of these activities are the main topic of the presentation.

Maaike Groot

**Batavian Farmers and Roman Markets:
Exploring Economic Interactions on the Frontier**

The *civitas Batavorum* offers great opportunities to study frontier markets. The settlement density is high, and there is a huge amount of archaeological data. Furthermore, the area has good preservation for zooarchaeological and archaeobotanical remains, which are of vital importance to understand the basis of the local economy: agriculture.

Whereas the local landscape used to be considered marginal, it is now believed to be fertile enough to sustain the hundreds of rural sites, as well as to produce food for the army and towns in the area. Some if not most of the staple food consumed by soldiers and urban people was produced by local farmers. The presence of imported goods in indigenous sites is a further indication that local people were active participants in economic networks. Differences in agriculture between settlements show that it was not just technology and landscape that determined production; the farmers' identity and life experience (e.g. did they have contacts in army and towns?) also played a role.

What is lacking is a theoretical framework and economic model that allows for the complexity and variety that is visible in the data. The army and Roman authorities have traditionally been given the dominant and active role in economic relationships with local farmers. It is time to put more emphasis on the role of local people, and the choices they made in interacting with the military and urban consumers. This paper will use animal husbandry in the *civitas Batavorum* as a case study to explore these issues.

Lily Grozdanova

Emperor Trajan Decius and His Sons on the Lower-Danubian *Limes* (AD 249-251)

During the second half of the third century AD the Roman Empire confronts severe internal problems. The central power has to find a way to overcome the deepening regionalism and the insubordination of the troops that turn to be the actual predominant of the imperial institution. The soldiers manage to raise the ones they chose to the throne. In the same time the external enemies of the Empire become very active, often attacking on several fronts in the same time. The Lower-Danubian *limes* and the adjoining territories become one of the key regions where Rome has to defend its integrity.

These tendencies are strongly represented in the time of Decius and his sons (AD 249-251). Their rule is an intriguing example for the importance of the Lower-Danubian area in the period of the military emperors. The origin and the whole carrier of Decius are connected with the Balkan territories. Careful re-evaluation of the historical evidence reveals some interesting elements of the Emperor's presence, together with his family, for instance in Lower Moesia and Thrace. They take special care to improve the provincial road system and to strengthen the Lower-Danubian *limes* as a measure against the Trans-Danubian threat. Its scale is shown by the fact of two emperors – Decius and his son Herennius – dying at the battlefield near this border.

Markus Gschwind

Investigating *Raphaneae*, a Legionary Base in Central Syria

Raphaneae, a city in central Syria, was a legionary base from the 1st to 3rd centuries AD. From historical sources we know that Elagabalus was proclaimed Roman Emperor at this site in AD 218. After the withdrawal of the legion, *Raphaneae* continued to exist as a city well into the time of the crusades. As the archaeology of *Raphaneae* was practically unknown and it was in acute danger from building activity and cultivation, a Syrian-German cooperation project was initiated in 2005. During the first two seasons the extent of the settlement area was determined by surface surveys in order to protect the site. In the course of the following four seasons, the large scale application of Ground Penetrating Radar (GPR) led to the identification of substantial structural evidence for parts of the legionary fortress as well as for parts of the Roman, Byzantine and Medieval city. So, for the first time, the survey results provide insight into internal structures of an Early to Middle Roman legionary fortress in the Roman Near East. In addition to that, a preliminary evaluation of the surface pottery indicates that urban settlement at *Raphaneae* developed only once the legion had been garrisoned in the previously sparsely populated valley and thus raises the question, in which historical context the legionary fortress of *Raphaneae* was founded.

Nicolae Gudea

The Northern Frontier of Dacia Ripensis (275-380)

After a long period of research (excavations and archaeological investigations in late Roman fortifications on the northern frontier of Dacia Ripensis – Mehadia, Orsova) excavations carried out at Hinova, Putinei and Ostrovul Mare, the author has elaborated a primary repertoire of the sure and of the supposed fortifications on the province's frontier.

He has registered 45 fortifications from among 27 *quadriburgia*, 4 old restored forts, 2 fortified towns and 9 small towers. The bulk of these are found in Serbia (26), Bulgaria (10) and Romania (9).

Systematic research has been carried out in 19 fortifications on the right bank of the Danube and at 6 on the left bank of the Danube. Complete research has been carried out only at the *quadriburgia* of Hinova (Romania) and Kula (Bulgaria).

The elaboration of the repertoire allows the author to make a series of observations concerning:

- a) The date of the construction;
- b) The style of construction and its architecture;
- c) The typology of the fortifications;
- d) Information about certain categories of the archaeological material.

*Nicolae Gudea
Constantin Inel
Ovidiu Oarga*

**The Roman Camp of *Apulum*. *Porta Principalis Dextra*.
A Proposal for Reconstruction**

The archaeological research at the *porta dextra* of the *Legio XIII Gemina* camp in *Apulum* started in 1990. As a result of this work the plan of the relatively well preserved *porta* was brought forward. Based on this plan a provisional restoration has been made.

In 2011 the reconstitution plan of *porta principalis dextra* was accomplished. This work was done in several stages and required a lot of study on the part of the authors who

- a) gathered the ancient sources;
- b) studied the reconstitution process of camps for auxiliary troops, accomplishing either on archaeological bases or from imagination;
- c) collected architectural fragments belonging to the Roman gate being extracted from secondary positions: stone blocks, architrave fragments, cornices, friezes, window frames, shaft, gate threshold, merlon;
- d) on the basis of ancient models, of some valuable theoretical attempts as well as of identified architectural elements belonging to the ancient gate, the proposal for the reconstitution might hopefully be achieved on the ground.

This scientific work will constitute the base for the reconstitution project of *porta dextra* of *Apulum*. The actual carrying out of the reconstitution brought to an end would mean a success when on scientific bases, following the above mentioned criteria, a Roman legionary camp is reconstituted.

Nicolae Gudea
Constantin Inel
Ovidiu Oarga

The Roman Camp of *Apulum*. Archaeological Research in the *Principia*

During the adjustment works of urban infrastructure carried out in 2011-2012 inside the Austrian military stronghold Alba Carolina, the central zone of the former legionary camp of ancient *Apulum* was also affected.

Parallel to the execution of the infrastructure project under archaeological supervision some elements of the internal architecture of the *Apulum* camp were discovered, which were subsequently researched in order to determine their characteristics and identity, respectively the degree of their conservation.

In the headquarters of *Legio XIII Gemina* the following elements have been identified:

- a) Parts from its back side (*oecus*), rooms in the south-western corners, the central room and an external *porticus*;
- b) *Basilica* – the covered courtyard between the *oecus* and a wall which separated it from the *atrium*, with rooms of a military tribunal type on the southern side;
- c) *Atrium* – the inner courtyard paved with large flag-stones, having on its southern side rooms with hypocaust installations;
- d) Honorary inscriptions, most of them dating from the second century being connected with the visit of emperor Marcus Aurelius Antoninus (Caracalla) and his mother Iulia Domna; fragmentary marble plates with names of soldiers on them, stamped tiles and bricks and also numerous fragments of pottery artefacts, coins, metal or glass pieces or osteological materials.

On the basis of this research it was possible to draw up a plan of the camp, to locate the building of the headquarters of *Legio XIII Gemina*, the *via principalis* and other discovered buildings (barrack walls), military buildings, a *mithraeum*, curtain towers.

In order to go on with the research at the *principia*, at the *via principalis* and the *mithraeum* and reevaluate them through restoration and the creation of a small Roman archaeological park we are working on a financial project which we hope to obtain from the competent authorities.

Peter Guest
Andrew Gardner

**The Roman Legionary Fortress at Caerleon –
Results of Recent Research and New Discoveries**

Caerleon lies above the remains of *Isca*, one of only three permanent legionary fortresses in Roman Britain. The site was the base of *Legio Secunda Augusta*, one of the four legions that invaded Britain in AD 43, and Caerleon has been the focus of intensive study since the first antiquarian explorations conducted by John Edward Lee and Octavius Morgan in the nineteenth century. Major campaigns of archaeological excavations throughout much of the twentieth century revealed a great deal of information about the fortress, its history and its garrison, and today Caerleon is one of the best known legionary fortresses of the Roman Empire. The site, particularly the magnificent amphitheatre excavated by the Wheelers in the 1920s, the National Roman Legion Museum and the Fortress Baths, is visited by tens of thousands of people each year and Caerleon is one of Roman Britain's most important and iconic monuments.

A series of research projects to expand our knowledge of Roman Caerleon was initiated in 2006 and, since then, much new and valuable information has been added to our understanding of the fortress. The presentation will include a summary of the results of this new work, including extensive geophysical surveys inside and beyond the fortress walls, a major excavation of the legionary store-building in Priory Field, as well as the discovery of a previously unknown suburb of monumental buildings between the amphitheatre and the River Usk, and the first exploration of these remarkable remains in 2011. Caerleon still has much to tell us about the conquest and pacification of the native tribes in western Britain and the formation of Roman Britannia almost 2,000 years ago.

Christian Gugl
Jürgen Trumm

Forum, Campus or Market Areas? Squares in the *Canabae Legionis*

In several *canabae legionis* of the northern frontier area, huge squares form an outstanding architectural element outside the legionary fortress. Since András Mócsy's interpretation of these buildings in the 1970s as areas intended for cattle markets, their function has been disputed. According to the known examples from *Carnuntum*, *Vindonissa*, *Noviomagus*, *Mirebeau* and *Burnum*, an open square is always enclosed by narrow halls which sometimes resemble a basilica-like structure. Although their layout looks similar and they all share a remarkable building area of 1.7–4.11 ha, several propositions have been made concerning their use, for instance as forum for the *canabae legionis*, as special market areas or as campus, the military training ground.

In our paper we would like to present the new excavation results from *Vindonissa* and the actual state of research on the *canabae legionis* in *Carnuntum*, which will be a starting point for the interpretation of these squares as the military campus of the legions. The latest excavation results from *Vindonissa* particularly offer new insights into their internal layout, like the unstructured design of the enclosing halls, which were not divided into a sequence of several rooms. In *Carnuntum*, there is evidence for a large hall on the south side of the square, with massive apse-like structures on both ends, which could be interpreted as a *basilica exercitatoria*.

Finally, some considerations will be presented about the architectural origins of this kind of training area which seem to have predecessors in Greek sport arenas, i.e. the so-called *xystoi* of Greek *gymnasia*, dating back into the Hellenistic age.

*Norbert Hanel
Baoquan Song*

**Neue Luftbilduntersuchungen zu den römischen Militärlagern
Vetera castra I auf dem Fürstenberg bei Xanten**

Seit 2003 finden regelmäßige Befliegungen des Xantener Raumes und besonders des Gebiets der frühkaiserzeitlichen Militärlager von *Vetera castra* I statt. Bei guten Wetterbedingungen und hervorragend sichtbaren Bewuchsmerkmalen konnten erneut beeindruckende Erkenntnisse zu den Bodendenkmälern auf der eiszeitlichen Stauchmoräne gewonnen werden. U. a. ist es gelungen, Einzelheiten der Umwehrung des neronischen Zweilegionenlagers zu dokumentieren; dabei konnten erstmals ein Eckturm an der Nordostecke und einige Zwischentürme am Süd-, Ost- und Nordabschnitt der Lagerbefestigung lokalisiert werden, so dass die Gesamtzahl der Wehrtürme dieses Militärlagers und ihre Anordnung im Umwehrungsverlauf zu rekonstruieren ist. Die Innenfläche des Lagers lässt sich jetzt auf ungefähr 56,3 – 57,1 ha berechnen. Als besondere Neuentdeckung kann die Identifizierung eines Gebäudes in der *praetentura* des neronischen Lagers gelten, das auf der östlichen Lagerseite (*latus sinistra*) an der *via praetoria* lag. Dieser Baukomplex weist einen annähernd identischen Grundriss wie das *valetudinarium* auf der Westseite an der *porta principalis dextra* auf und war folglich das Lazarett der *legio XV Primigenia*. Damit gehören die Legionslager auf dem Fürstenberg zu dem Standort mit der größten Zahl von Militärhospitälern im *Imperium Romanum*, da ein drittes Lazarett einer vorneronischen Anlage bereits früher erkannt worden war. Neben den Spezialgebäuden zeichnen sich in den Luftbildern mehrere Mannschaftsunterkünfte der Legionscenturien (Kohortenblock) an der Südumwehrung ab und vervollständigen damit das Bebauungsbild der *praetentura* des neronischen Zweilegionenlagers. Auch Spuren vorneronischer Gebäude sind auf den Luftbildern zu erkennen.

William S. Hanson
Ioana A. Oltean

**Defining the *Limes* of Dacia and Moesia Inferior:
The Contribution of Aerial and Satellite Remote Sensing**

Over the last 14 years the authors have undertaken aerial reconnaissance and/or the analysis of historical aerial photography and satellite imagery in several regions of Romania, extending across the Roman provinces of Dacia and Moesia Inferior. This paper offers an overview of results from this work relating to the military occupation of those areas. It will focus on how remote sensing has furthered our understanding of: the maintenance of internal security within the provinces of Dacia and Moesia Inferior; the character of the *limes* in Dobrogea; the remains of the *limes Transalutanus*; and the development of extensive military *vici* in western Transylvania.

William S. Hanson
Ioana A. Oltean

The ‘Valu lui Traian’: A Roman Frontier Rehabilitated

Cutting across the Dobrogea in eastern Romania from the Danube near Cernavodă (*Axiopolis*) or Cochirleni to Black Sea coast near Constanța (*Tomis*), covering an overall distance of up to 61 km (38 miles), are three separate but interlinked linear fortifications: a Stone Wall, a Large Earthen Wall and a Small Earthen Wall. When first recorded in the 19th century, all three monuments were considered to be Roman in origin and came to be referred to collectively as the ‘Valu lui Traian’. Since the 1950s, however, the system has been assumed by Romanian archaeologists to be of Byzantine or early Medieval date, primarily on the basis of an unstratified Slavic inscription from one associated fort. As a result, the complex has gradually disappeared from the consciousness of Roman military archaeologists and no longer features in specific surveys of the Roman military archaeology of the area or in standard overviews of Roman frontiers. This paper critically reviews the evidence for the overall character and general date of these linear fortifications and their associated forts and fortlets. As a result it seeks to return two of the lines to their rightful place as elements of a well-preserved and chronologically complex Roman frontier system, the most easterly example of a man-made barrier in the Roman Empire.

Stefan R. Hauser

**The Nodal Point of the Roman – Arsacid/Sasanian Frontier:
The Final Siege of Hatra and Its Implications**

Despite the long-standing interest in the Roman – Arsacid/Sasanian frontier little is known about the military installations, organization and capabilities of Rome's strongest opponents. Research was often limited or concentrated on specific tactics. As a result in reconstructions Rome's only frontier with an equally strong power remained populated by and large just by one side. Despite the current political limitations for archaeological research, the evidence for Arsacid/Sasanian military skills and strategies is mounting in recent years. Especially the demonstration that a number of presumed Roman castella were in fact Arsacid military installations affords important changes in our perception of the Roman-“Parthian” frontier.

Equally important and much more impressive is the new evidence for Sasanian siege works. Using satellite images and aerial photographs of Hatra and its environment in present day northern Iraq we could recently detect archaeological remains connected to the destruction of Hatra in antiquity. Nearly 25 km in length they form the largest siege operation system known from the Near East. In this paper we will argue that these walls are the material evidence for the final, two year long siege of Hatra, the then capital of the ‘Kingdom of the Arabs’ and a nodal point of the frontier region. The siege walls offer impressive evidence for the military capabilities of the Sasanian army already in the very early years of the Sasanian rule.

Ian Haynes
Tony Wilmott

The Maryport ‘Altar Pits’: New Research and New Interpretations

In 1870, 17 Roman military altars dedicated to Jupiter Optimus Maximus by commanders of *Cohors I Hispanorum* and other units in garrison were found buried in pits near the fort of Maryport on the Cumberland Coast. The fact that three to four altars had been dedicated by the same commanding officers gave rise to the interpretation that these were the products of annual dedications during the term of service of a commander. In 1939 it was proposed both that these altars were dedicated alongside the fort’s parade ground, and that they had been buried either annually on the dedication of a new altar or at a periodical *lustrum*. These interpretations have become fundamental to interpretations of the practice of Roman military religion.

In 2011 the first season of a new excavation project was initiated by Newcastle University for the Senhouse Museum Trust, in order to examine the archaeological context of the altar find using modern methods. Although interpretations based upon the texts of the altars remain valid, the excavation proved that the idea of ritual deposition was wrong. On the contrary, the altars had been used as packing stones in the post pits of a very large timber building. Excavations in summer 2012 will attempt to establish the plan, function and date of the structure, and will further explore the context of the altars. This paper will summarise the as yet unknown results of this work for the first time.

*Tom Hazenberg
Tessa de Groot
Steve Bödecker*

**Closing the Gap. The Lower German *Limes* –
a River Frontier Nominated as World Heritage Site**

Ten years after the start of the Bratislava group, Germany and the Netherlands join the initiative to declare the Roman *Limes* a World Heritage Site. German and Dutch archaeologists work together in nominating the Lower German *Limes* (LGL) and closing the gap between Hadrians Wall and the Upper German-Raetian *Limes*. The ultimate goal is a serial, transnational World Heritage Site encompassing the Roman Frontiers of Europe, Asia and Africa.

But that is still in the future. A lot of work has to be done, before the LGL is ready for nomination. In this presentation we will reflect on three aspects of the LGL: the process of nomination, the character of the LGL and the story that can be told. Special attention is paid to the rich (research) history of the LGL, its meaning and quality in the context of the Roman Frontier and the threats and chances of the setting of the LGL in a densely populated area.

The LGL made up the eastern and northern border of the Roman province of *Germania Inferior*. Over 40 forts, fortlets and watchtowers were situated on the riverbanks of the river Rhine, guarding the transport on the river. Their remains are relatively well preserved by the high groundwater levels. Although they are for the greater part buried and invisible, several projects aim to visualise this part of the Frontier and combine the Roman heritage with recreation and tourism.

Orsolya Heinrich-Tamaska

Kastell – Stadt – *Refugium*? Spätromische Innenbefestigungen in Pannonien

Im Vortrag werden neue Forschungsergebnisse zu der Funktion und Ausstattung der pannonischen Innenbefestigungen präsentiert, von der bisher am besten erforschten Fundort Keszthely-Fenékpuszta ausgehend. Es werden zudem Fragen der Datierung thematisiert, sowie nach Vorbildern in anderen römischen Provinzen gesucht. Der Präsentation greift auf die Ergebnisse eines Forschungsprojektes zurück, der die bisherigen Ausgrabungen in Keszthely-Fenékpuszta ausgewertet hat, sowie auf neue Erkenntnisse, die im Rahmen eigener Ausgrabungen in den letzten Jahren erzielt werden konnten.

Nick Hodgson

**Native Settlements on the North Side of Hadrian's Wall:
New Evidence for Their History**

Archaeologists have long lamented their ignorance of the day-to-day lives of 'the peoples that Hadrian's Wall controlled and divided'. It is generally thought that most native settlements north of the Wall continued in occupation after the Wall was built. This paper reports on five Iron Age- and Roman-period rural settlements on the south-east Northumberland coastal plain discovered and excavated in advance of commercial development in 2002-2008. For the first time multiple radiocarbon dates allow the period of occupation of such settlements immediately north of Hadrian's Wall to be closely dated. The new evidence suggests that the Wall had a much more drastic impact on the lives of local inhabitants than previously thought. All of the dated sites were abandoned in the second century, probably not long after the Wall as built. It is argued that rather than regulating the economic movements of its northern neighbours, Hadrian's Wall brought an agrarian civilisation of long standing to an end.

Stefanie Hoss

The Persian Wars of the 3rd Century and the Origin of the Ring Belt Buckle

The Roman military belt was the distinguishing symbolic object visually setting the soldiers apart from civilian men in Roman society and marking them as *milites* even when not wearing arms and armour. It kept this important function even after the sword was carried on the baldric from the 2nd century onwards. During the 3rd century, belt fashions suddenly introduced a different system of fastening the belt: the ring buckle. This fashion quickly spread to soldiers in all the regions of the Roman Empire and is depicted on a vast number of funerary monuments.

The origin of this belt fashion has previously been assumed to lie in the German, Danubian or Sarmatian regions, but some evidence from reliefs in Iran now points towards a different origin, namely the Persian armies. The emergence of this belt fashion in the 3rd century coincides with the commencement of large armed conflicts between Rome and the Persian Empire. This region was an almost constant theatre of war during the 3rd century, with large Roman armies gathering and coming into contact with the enemy, facilitating the transfer and exchange of belt fashions from the latter and among each other.

In my paper, I would like to explore this connection and use it to try and refine the dating of the belt fashion. Another aim is to attempt a theoretical explanation of the process by which belt fashions were introduced and passed on in the Roman army.

Fraser Hunter

**Interpreting Celtic Art on the Roman Frontier –
The Development of a Frontier Culture in Britain?**

Objects decorated in styles of Celtic art are a recurring feature of the frontier zone in Britain – in apparent contrast to other “Celtic” areas of the *limes*. A detailed study of the different types of object and the different styles suggests a number of different processes are at work. A connected phenomenon is the development of Romano-British art styles. Some of these are most common in the frontier zone but others are more widespread, both to the south and beyond the frontier line itself. This material provides a way to explore whether a frontier culture developed on the British *limes*.

Mihaela Iacob

**Découvertes monétaires sur le *limes* danubien de *Beroe*
jusqu'à *Halmyris*, I^{er} – III^e siècles**

L'auteur analyse les principales lots de monnaies de I^{er}-III^e s. ap. J-C., trouvées dans les sites antiques du *limes* : *Beroe*, *Troesmis*, *Arrubium*, *Dinogetia*, *Noviodunum*, *Aegyssus*, *Salsovia*, *Halmyris*. La distribution des monnaies dans les lots en discussion est différente d'un site à l'autre. C'est l'importance du site dans l'antiquité qui a influencé une vive circulation monétaire – e. g. *Troesmis* a été le siège de la *Legio V Macedonica*, *Noviodunum* a été le siège de la *Classis Flavia Moesica*, mais encore le niveau de la connaissance du site parmi les fouilles archéologiques reste à prendre en considération.

La circulation des monnaies est analysée par rapport aux informations historiques et archéologiques qui sont à notre disposition concernant le site. Les échantillons du *limes* seront mises en comparaison avec les autres lots du Nord de la Dobroudja. Les cartes de la distribution des découvertes des monnaies par les périodes historiques/empereurs seront ajoutées pour bien comprendre le debut de l'occupation romaine au Nord de la Dobroudja.

Emilio Illarregui

Veterans of the *Legio IIII Macedonica* in Hispania

With this contribution to the Limes Congress we aim to analyze the phenomenon of the veterans and the establishments of a quite unknown legion, the IIII Macedonian.

This legion was recruited towards 48 BC and dissolved in AD 69. It gave services both in Italy, in Hispania, and Germania, generating diverse types of establishments through different phases.

In this paper we will try to analyze three phases of its establishments: Late Republican; Augustan-Tiberian and Claudio-Neronian period, in different countries and places as Italy, Hispania, Gallia, or the Balkans.

This analysis will serve to contribute a series of unpublished finds connected with these veterans in different places of *Hispania Tarraconensis*, *Baetica* and *Lusitania*.

Claudiu Ionuț Iov

**Weapons Used for Distant Combat along the North-Western *Limes*
of Dacia Porolissensis. Case Study: The Lance**

The study I shall be presenting focuses on a category of distance combat weaponry, namely lance tips.

These weapons were discovered in five different Roman camps along the North-Western border *limes* of Dacia Porolissensis. From South Northwards these camps are: Bologa (County of Cluj), Buciumi, Românași, Romita and Moigrad – *Porolissum* (County of Salaj).

1. I will be presenting the lance tips found in each particular camp and order them according to a typology. Thereafter I shall compose a typology valid for all the weapons found in the aforementioned camps.

2. Several interesting conclusions arise. Once typologies are compared, similarities and differences can be spotted. Such can be the result of different ethnic origin of the troops and tactics used by Roman combat units and enemy organization before the *limes*.

Janka Istenič

**Study of a Group of Scabbards and Associated Swords:
Research into Romano-Barbarian Interactions**

A group of scabbards with elaborate copper alloy (or rarely silver) openwork plate on the front and the associated swords from the transition of the Late La Tène to the Roman period were examined. Joachim Werner (*Spätlatène-Schwerter norischer Herkunft. – In: Symposium Ausklang der Latène-Zivilisation und Anfänge der Germanischen Besiedlung im mittleren Donaugebiet, Bratislava 1977, 367-401*) put forward the hypothesis of their Norican origin, while in later publications their production on the territory of the Treveri is also presumed (A. Haffner, *Spätkeltische Prunkschwerter aus dem Treverergebiet. – In: Berichte zur Archäologie an Mittelrhein und Mosel 4, Trierer Zeitschrift Beiheft 20, Trier 1995, 137–151*).

The study, based on four items from Slovenia and including PIXE and metallographic analyses, suggests that they were made in a Celto-Roman milieu (and not Celtic, as was the hitherto prevailing view), presumably by Roman craftsmen; their distribution seems to suggest the North(-East) of ancient Italy as the possible area of their production.

We assume they were intended for cooperating Celts and other Barbarians who liked such weapons and to whom the Romans wanted to show favours.

Tatiana Ivleva

How to Find a Veteran through Material Objects

The study of 242 British-made brooches found on 102 sites across Europe has shown that their distribution relates to various factors, not in many cases as straightforward as trade, but to the service of British auxiliary units to possible British-born recruits serving in legionary and auxiliary forces of a different ethnic origin and in the German fleet, but also evidences the returning from Britain veterans. In this paper the attempt is made to identify the groups of people who wished not to settle in Britain upon their discharge but to undertake a journey back home, wherever this home might have been. Military diplomas and epigraphic evidence are silent about these veterans coming home, but their personal accessories, in the present case-study brooches, provide a narrative for such undertaking.

Fibulae are not the only objects that can be effectively used to search for the returning veterans, as the papers presented in the session show: the range of materials varies from keys and house plans in Roman Netherlands to coins in southern Scandinavia burials. The session also looks at the veterans of the Late Antiquity army as well as challenges the established fact that the seal-boxes evidence for the returning veterans.

Simon James

The ‘Conflict Landscape’ of Dura-Europos, Syria

The siegeworks of Dura-Europos, Syria, attesting the Sasanian attack on the Roman-held city c. AD 256, are justly famous. Excavations between the world wars, and by the modern Franco – Syrian expedition (MFSED), have revealed graphic evidence of the subsequent fighting, including a Sasanian assault ramp, mines and counter-mines. MFSED has also confirmed that the earthwork enclosure facing the city defined the Sasanian siege camp. However, Dura had previously twice been captured by the Romans, and a few traces have been tentatively identified as belonging to these episodes. High-resolution satellite imagery has now added further dramatic evidence to the military archaeology of Dura. The Sasanian siege camp proves to be just one of three enormous enclosures stretching for several kilometres to the West of the city. Remote sensing imagery reveals characteristic ‘*tutulus*’ entrances on all three, indicating they are Roman temporary camps. While that closest to the city was doubtless used by the Sasanians, it may have been a refurbishment of an earlier Roman camp. But how may we interpret the other two camps? These three enclosures appear to comprise the largest temporary camps known anywhere in the Roman empire. A number of historical contexts may be suggested for their creation, although the current tragic political situation in Syria will prevent any effort at ‘ground-truthing’ for the foreseeable future. Nevertheless it at least seems clear that the archaeologically preserved ‘conflict landscape’ at Dura-Europos is even more dramatic, and stretches over a far greater area, than we have realised.

Jaroslav Jiřík
Jiří Vávra
Milan Kuchařík

**Germanic Burial Ground from the Migration Period
in Prague-Zličín, Czech Republic**

The paper will present substantial information on the excavation and evaluation of the largest Germanic cemetery from the Migration Period in Bohemia (Czech Republic). The site is situated in Prague-Zličín, belongs to the so called Vinařice Group of early stage of the Migration Period and dates to the 5th century AD. The excavation of the complete cemetery took place from 2005 through 2008 and revealed 174 graves with at least 177 inhumation burials. Almost all graves showed traces of secondary reopening that happened shortly after emerging of the graves as evidenced by several aspects of archaeological and anthropological observation in the field. Despite of ancient looting a rich set of artefacts was rescued: many pieces of jewellery from precious metal (mainly fibulae and buckles), glass and amber beads, and bone combs etc. In graves there were 26 ceramic and 18 glass vessels. Mainly the glass vessels and some of the ceramic ones were placed in niches above heads of the buried individuals. The artefacts prove broad cultural contacts of the population of Bohemia in this historical period. With the help of them we can trace influences from various parts of the so called Barbaricum, such as the River Main, the lower Elbe, and the middle Danube territories, and also from provinces of the Roman Empire, such as northern part of Gaul, Italy, Raetia, Noricum, Pannonia etc. Such contacts and influences are connected especially with the frontier territory of the Danube and Rhine *limes* of the Late Antiquity.

Rebecca H. Jones

Remote Sensing on Roman Frontiers

Remote sensing techniques offer great potential for unlocking information about Roman frontier archaeology. Airborne and terrestrial laser scanning, high definition ground penetrating radar, large scale magnetic surveys, aerial photography and the interpretation of satellite imagery have all been utilised to expand our knowledge of the extent and layout of Roman frontier installations and their surrounding landscapes and our understanding of the movements and garrisons of the Roman army.

Integrated approaches utilising Geographic Information Systems enable the interpretation of Roman and contemporary sites in their landscape contexts, forming the basis for new understandings of individual sites and their interaction with their surroundings.

The purpose of the session will be to communicate and present the latest methodological and technological developments and concepts in the field of Remote sensing on Roman Frontiers, describing the state-of-the-art as well as outlining the road ahead and how such techniques have revolutionized our understanding of Roman Frontier archaeology.

Rebecca H. Jones

Classifying the Past: Using Thesauri to Interpret Roman Frontiers

The Limes congresses provide an invaluable forum for scholars of Roman Frontiers to exchange knowledge and study frontier remains in other countries. The many different languages now in use by scholars around the Roman Empire provide challenges for cross-border research. The European Union Culture 2000 project Frontiers of the Roman Empire (FRE) (2005-8) created a thesaurus of Roman Frontier monument sites in seven languages (English, German, Hungarian, Polish, Slovakian, Slovenian and Spanish) and is now hosted on the Austrian *Limes* website (<http://www.limes-oesterreich.at/thesaurus/123>). This paper will look at how the language we use to interpret Roman Frontier archaeology affects our ability to work collaboratively across the Roman Empire and present our work to wider audiences.

Kai Juntunen

Cohors IX Maurorum and the Early Severan Garrison of Mesopotamia

The proposed paper is a continuation to David Kennedy's alternative explanation (ZPE 53 [1983], 214-216) to the numerals of *cohors XX Palmyrenorum* and *cohors XII Palaestinorum*. It will suggest that *cohors IX Maurorum* belongs to the same recruitment pattern as the two other units and thus its numeral indicates the size of the auxiliary garrison in the province of its origin and the ethnic name refers to the original cadre of recruits. Instead of associating the place of recruitment with any of the African provinces as has been occasionally done, it will be argued that the unit was recruited in the very province from where we have the only evidence of its existence – namely the province of Mesopotamia. The contradiction between the ethnic name and the province of origin will be explained by a further suggestion that the original cadre was drawn from the men serving in the *numeri Maurorum*, which are well documented in the Eastern provinces, just as *cohors XX Palmyrenorum* was most likely created from troops already serving in *numeri Palmyrenorum*, instead of raw recruits. If accepted, the hypothesis would seem to imply that the early Severan garrison of Mesopotamia included in addition to the two legions (i.e. *I* and *III Parthica*) originally eight auxiliary cohorts, which were soon supplemented by creation of the ninth unit.

Gergana Kabakchieva

**Das frühromische Legionslager in *Oescus* vom 1. Jh. n. Chr.
Ergebnisse von neuen Ausgrabungen**

Das Legionslager des V Makedonischen Legion in *Oescus* ist eines von frühesten im Unteren Donaugebiet. Noch in der spätaugusteischen Zeit wurde dieses Legion nach diese Gebiet geschickt. Das ständige Legionslager wurde in der Nähe der Mündung des Flusses *Oescus* gebaut worden. Bei der neuen Ausgrabungen im südwestlichen Bereich der *Oescus* wurden Reste vom Umwährungssystem vom 1. Jh. n. Chr. freigelegt. Sie gehören zum Typ Stein-erdemauern und zeigen, dass das Legion nach dem Zurückkehr vom Osten im Jahr 71 n. Chr. diese neue Bautechnik anwendet wurde.

Radosław Karasiewicz-Szczypiorski
Radosław Gawroński
Oleg Ja. Savelja

The Remains of the Roman Fort at Kadykovka (Balaklava) in the Crimean Peninsula

During the excavations in 2009-2011 we had unearthed the remains of the barracks and fortifications of a small Roman fort. The remains come from the end of the second and beginning of the third centuries CE. The fort was a part of a defensive system, which guarded the approaches to the city of Tauric Chersonesos. Thanks to our research we are able to reconstruct the layout and location of the fort, which was built in the very broken terrain.

Dmitry A. Karelin

Architectural Peculiarities of the Late Roman *Principia* in Egypt

The aim of the paper is a study of architectural features of *principia* with shrines of the Standards, the *Genius castrorum* and the Imperial cult in Egypt. Mainly they were built not earlier than at the end of the 3rd century AD. The most interesting monument was located in the Diocletianic fortress which was built around the Luxor temple at the beginning of the 4th century AD. On the one hand these *principia* were influenced by the Roman military culture. On the other hand they were impacted by the Oriental and Hellenistic cults of the kings and the ancient Egyptian cult of divine kingship. Late Roman *principia* in Egypt have more common features with civil Imperial cult temples of the 2nd – 3rd centuries AD than earlier examples. One can explain this fact by the general tendency of monumentalization of these edifices during the period of the 2nd – 4th centuries AD. This tendency was connected with increasing of the Imperial cult's significance. One *principia* in Egypt became a church later. Some churches were built on the typical place of *principia* in new fortresses in the 5th century. The architectural peculiarities of the *principia* gave some effect on the Christian culture. Such elements as apse, *ciborium* or baldachin got a wide expansion in the Christianity. Some of these peculiarities came from the ancient Orient. Therefore the late Roman *principia* in Egypt are examples of the connection between the art of the ancient Orient and Byzantine, early Christian and Medieval art and architecture.

Ildar Kayumov

Heron's *Cheiroballistra*: The Last Ten Years of Discussion

A short technical treatise entitled «Ἡρώωνος χειροβαλλίστρας κατασκευὴ καὶ συμμετρία» attracted the attention of the Graeco-Roman artillery researchers since the 19th century. In 1970s, E. Marsden and D. Baatz made an important contribution to understanding the *cheiroballistra* – the throwing engine that the treatise describes. The archaeological finds of the last 40 years that occurred in two small Late Roman bridgehead forts in the Danube *limes* in Romania, as well as in France, Morocco and Bulgaria, also played a significant role. But it was in the last decade that the questions about the construction of the *cheiroballistra* caused a particularly heated debate with the involvement of such researches as A. Wilkins, A. Iriarte, C. Miks, M.J.T. Lewis, D. Campbell, and T. Rihl. This discussion, which produced multiple physical reconstructions, focused on the following major issues:

- What was the diameter of the torsion springs of the *cheiroballistra* or whether it is possible to enter conjectures into the treatise
- What was the purpose of the crescent-shaped piece, attached to the rear end of the stock: was it a withdrawal-rest of the *gastraphetes* type for the draw, or did it serve the same function as a buttstock of a modern rifle
- How powerful was this engine and did it have a tripod base
- And finally, where did the *cheiroballistra* arms rotate: outside or inside of the torsion frame.

This article surveys the discussion and attempts at a satisfactory resolution of the majority of the issues regarding the construction of the *cheiroballistra* and the all-metal spring-frame *ballistae* in general.

Vedat Keleş

A Roman Veteran Colony: *Parion*

Located on the Anatolian coast of the region of Propontis which comprises the Biga Peninsula in Western Anatolia, *Parion* is accessed through a 14 km long side road that diverges at the 15th kilometre of the Biga-Lapseki (*Lampsakos*) highway to the North, and is situated at the Kemer village which is subordinate to the municipality of Balıklıçeşme in the Biga district of Çanakkale.

Parion was the most important city in northern Troas region in Roman times. The grant of autonomy to *Parion* during the first Mithridatic War is evidenced by the coins with the legend CGIP, “*Colonia Gemella Iulia Pariana*”. This is also proven by the fact that a variation of the same legend is found on *Lampsacus* coins as CGIL, “*Colonia Gemella Iulia Lampsacus*”. *Gemella* means ‘twin’ in Latin, making clear that *Parion* and *Lampsacus* were founded as twin colonies (veteran colonies). We will focus our study on the ancient city of *Parion* as a Roman veteran colony.

John Kenny

**The *Carnyx*: War Trumpet or Ritual Horn? Does Form Serve Function?
Comparisons of the Deskford and Tintignac *Carnyces***

After 15 years of research and performance on the reconstructed Deskford *carnyx*, I had already become convinced that the “orthodox” description of this magnificent instrument as a war trumpet is almost certainly only partially accurate. Whilst the Deskford *carnyx* is undoubtedly an enormously powerful instrument, the range of playing techniques developed clearly demonstrates far greater flexibility player more quietly. However, its height of 4 metres and balance makes it highly effective as a signalling instrument, and the player can be mobile.

The first reconstruction of Tintignac *carnyx*, completed by Jean Boisserie in September 2011, proves to be a very different beast – slightly longer than Deskford, its tubing is straight to the mouthpiece, thus making it most unlikely to be played vertically. Furthermore, the acoustic structure of the instrument lends itself far more to soft and sustained sounds.

I believe that the *carnyx* came not only in varied forms, but that these forms reveal varied purpose. Were these giant instruments used only in conflict, or were they also involved in ritual? Are the voices of the Celts raised only in anger at the *limes* – or are they also heard in mystery of list ritual at the conjuncture of cultures?

Soňa Klanicová

Die Beziehungen zwischen Römern und Barbaren am Beispiel der Keramikfunde des 2. und 3. Jahrhunderts aus Südmähren

Die Beziehungen zwischen Römern und Barbaren sind durch eine ganze Reihe von archäologischen Quellen charakterisiert, die auf dem Gebiet in unmittelbarer Nachbarschaft der Nordgrenze Pannoniens von Keramikfunden dominiert werden. Deren Menge und Zusammensetzung sind dank zahlreichen Grabungen der letzten Jahrzehnte wesentlich reicher geworden. Der Beitrag setzt sich deswegen zum Ziel, einige Aspekte der Interaktionen zwischen Römern und Barbaren im Gebiet Südmährens anhand der neuen Kenntnisse über die Keramikimporte erläutern zu versuchen. Zu den wichtigsten in der Kollektion der Keramikimporte in Südmähren zählen die Terra-Sigillata-Funde, die eine sehr präzise Datierung der Fundverbände möglich machen. Zu einem Anwuchs an ihrem Vorkommen auf dem Untersuchungsgebiet kommt es erst in der zweiten Hälfte des 2. Jahrhunderts während der Markomannenkriege. Es ist jedoch auffallend, dass zu dieser Zeit Terra Sigillata (mittelgallische und die Früherzeugnisse aus Rheinzabern) in größter Menge in der römischen Militärstation Burgstall bei Mušov und in deren nächster Umgebung vorkam, was offensichtlich mit der Anwesenheit des römischen Heers zusammenhing. Im germanischen Siedlungsbereich in Südmähren ist Terra Sigillata (Rheinzabern, Westerndorf) in größeren Mengen erst nach dem Ende der Markomannenkriege vorgekommen, insbesondere während der severischen Periode.

Eine Frage bleibt, in welchem Ausmaß die einheimische Germanenbevölkerung von der römischen Kultur beeinflusst wurde, sei es eine Folge intensiver Militäraktivitäten der Römer auf dem barbarischen Gebiet Südmährens oder intensiver Handelskontakte zu dem unweiten Provinzialmilieu. Als Beleg für einen gewissen Kultureinfluss können wir in germanischen Siedlungen das Vorkommen einiger Gefäßformen betrachten, wie zum Beispiel Mortaria und Amphoren, die zur Aufbereitung oder Aufbewahrung von spezialisierten Gerichten der römischen Küche gedient haben. Obwohl das Ausmaß dieser Beeinflussung in der Siedlungsumwelt nur schwer bestimmbar ist, dokumentieren die antiken Schriftquellen sowie zahlreichen Neufunde rege geschäftliche und politische Kontakte.

Balázs Komoróczy

**Archäologische Belege der Interaktionen zwischen Römern und Barbaren
am Beispiel der Mikroregion Mušov-Pasohlávky (Mähren, Tschechische Republik)**

Im Gebiet am Mittellauf der Thaya, ungefähr 80 km nördlich der Grenzen der Provinz *Pannonia Superior*, erfasst man schon eine Zeitlang bedeutende Belege für die Anwesenheit des römischen Heers, besonders zur Zeit der Markomannenkriege. Die ständig verlaufenden Feldforschungen zeigen, dass die mächtige befestigte Militärbasis auf dem Burgstall bei Mušov als ein zentraler Stützpunkt der römischen Militärkräfte gedient hat. Zahlreiche Relikte kurzzeitiger Lager in ihrer Umgebung belegen anschaulich die militärstrategische Bedeutung der ganzen Region für die strategischen Vorhaben der Römer. Die gegenwärtig zu beendende Auswertung der Erforschung einiger germanischer Siedlungen liefert auch Belege für eine ziemlich bedeutungsvolle Auswirkung der militärischen Operationen auf die einheimische Population der Markomannen. Diesen Einfluss beobachtet man sowohl als Eingriffe in die bestehenden Siedlungsstrukturen, als auch als eine direkte Eindringung der römischen Sachkultur, die durch ein unterschiedliches Fundspektrum charakterisiert wird, als es bei den sogenannten Importwaren der Fall war. Besonders deutlich ist dann der Zufluss einer ziemlich hohen Menge an Metallerzeugnissen römischer Provenienz in die Siedlung von Pasohlávky, der eine Rohstoffbasis für die Entwicklung der Handwerke innerhalb der germanischen Kommunität gewährleistete.

Jelena Kondić
Christoph Rummel

Reassessing the Roman Frontier in Serbia and the Case Study of *Diana* (Karataš)

Since 2010, a joint project between the Serbian Institute of Archaeology and the Römisch-Germanische Kommission of the German Archaeological Institute has been re-evaluating military sites along the Danube in the Republic of Serbia in preparation for the future inclusion of this part of the frontier in the transnational World Heritage Site 'Frontiers of the Roman Empire'. Part of the project is a database that will present sites that are to be included in this Heritage Site.

The fort of *Diana* near Kladovo is a key site on this stretch of the frontier. It was chosen as a case study for the Limes evaluation project as research and protection plans have been in place since the beginning of systematic excavations in the course of the Djerdap hydroelectric dam projects (1978/79). In order to present *Diana* as an example site, geomagnetic surveys could be carried out in the currently unexcavated parts of the interior of the fort, as well as the areas of the necropolis and the presumed *vicus* in 2011 and 2012.

This paper will outline preliminary results of the joint Serbian/German Limes project as well as recent research carried out at *Diana* by J. Kondić and C. Rummel. As such it will present the newest results of an integrated programme of long-term excavation complemented by geomagnetic survey and landscape reconstruction applied not only to target further invasive research but also to evaluate the site and its extent in a topographic context and so help to demarcate heritage protection zones.

Julia Kopf
Karl Oberhofer

Von Spitzgräben und Gürtelblechen... Neue Grabungsergebnisse zur frühkaiserzeitlichen Militärpräsenz in *Brigantium* (Bregenz, Österreich)

Bei einer Ausgrabung der Jahre 2009/2010 im westlichen Randbereich der römischen Siedlung *Brigantium* (Bregenz, Österreich) konnten zwei parallel liegende Spitzgräben freigelegt werden, welche als Teil der westlichen Umwehrung eines frühkaiserzeitlichen Militärlagers angesprochen werden können und wahrscheinlich zwei aufeinander folgende Befestigungsphasen repräsentieren.

Damit liegen erstmals stratigraphische Grabungsergebnisse zu diesem Militärlager auf dem sogenannten Ölrain-Plateau vor, welches in der Fachwelt schon seit langem postuliert wird, von manchen Forschern aber aufgrund zweifelhafter Befunde der Altgrabungen bisher in Frage gestellt wurde. Abgesehen von den Baustrukturen der Militärlagerzeit, zu welchen neben den Spitzgräben auch Gruben und Gebäudestrukturen gehören, kamen bei der neuen Ausgrabung zahlreiche frühkaiserzeitliche Militaria ans Tageslicht (u.a. Gürtelbleche mit Niellodekor, Dolchscheidenfragmente, Waffen). Diese lassen sich einer ersten Einschätzung nach vorwiegend in tiberisch-neronische Zeit datieren. Besonders vielversprechend im Hinblick auf die Datierung bzw. das Ende des Militärlagers ist das Fundmaterial aus den Verfüllungen der beiden Spitzgräben sowie aus der ersten nach-kastellzeitlichen zivilen Siedlungsphase. Die *terra sigillata* aus den betreffenden Schichten weist in die Mitte des 1. Jh. n. Chr. (die Auswertung ist allerdings noch nicht abgeschlossen).

In Zusammenhang mit der Errichtung dieses frühkaiserzeitlichen Militärlagers ist auch die Anlage der Hauptdurchzugsstraße von *Brigantium* zu sehen, deren mehrphasiger Aufbau stratigraphisch mit dem Militärlager und den folgenden zivilen Bauphasen auf dem Ölrain-Plateau korreliert werden kann. Die archäologische Aufarbeitung der Grabungsergebnisse erfolgt im Zuge eines mehrjährigen Forschungsprojekts an der Universität Innsbruck und verspricht bedeutende neue Erkenntnisse zur Frühzeit von *Brigantium* zu liefern.

Ludmila Kovalevskaya

**Supplying a Lower Danube Legion in Neronian Times.
Amphora Finds from the Headquarters Building at *Novae***

During the recent two seasons in the headquarters building two large pits situated in the eastern portico of the courtyard were excavated. Originally dug out to quarry loess for building purposes they were filled then with rubbish collected by the soldiers of the *legio I Italica* in the early 70s AD while preparing the site for the construction work. The pits produced rich material, the most numerous group of finds being substantial partial amphora sherds, with at least 30 fabric groups. This assemblage includes more than 100 fragments of rim, handle or base, representing as many individual amphorae. Much of this material can not be joined but still we hope to be able to restore about 20 whole or nearly intact vessels. Given the results of preliminary analysis and current state of our knowledge many recovered amphorae can not be classified at the moment according to the existing typologies. The majority of transport vessels can be identified as amphorae Zeest 90 originating from some unidentified Aegean centres. There are also some pseudo-Koan examples, amphorae similar to Peacock and Williams class 1 and merely a few body sherds of Late Heracleian Vnukov's type CA2 vessels. Some amphorae, including relatively numerous items of probable western origin seem not to have good parallels among types from stratified contexts on other sites in the Mediterranean. The best part of finds is represented by wine amphorae and only a few smaller vessels were carrying oil. About 15 fragmentary amphorae deposited in the pits were labelled with short *tituli picti*, painted red.

Alexander Kyrychenko

**The Roman Army on the Eastern Frontier in Greco-Roman,
Jewish, and Christian Sources: A Comparative Study**

The references to the Roman army of the Eastern frontier of the Empire are found in a vast array of diverse contemporary sources. This presentation will focus on the depiction of the Roman troops in Palestine in the first century CE with particular attention given to the writings of the Eastern historians of the period, Josephus and Luke. The discussion will be placed in a larger matrix of relevant Greco-Roman, Jewish, and Christian sources, including both literary and non-literary evidence, dating from the mid-second century BCE to the early second century CE. The study will demonstrate that the depiction of the Roman army in the East by the local contemporary sources is distinctively more positive than its stereotypically negative portrayal found in the external witnesses. The presentation will address the reasons for this phenomenon and will explore its significance for understanding the issues of co-existence of the indigenous population of the Eastern frontier with the Roman troops stationed there.

Orsolya Láng

**The Beginnings: New Data on the Earliest Settlement Phases
at the *Aquincum* Civil Town**

The earliest settlement phases and/or a possible indigenous predecessor of the *Aquincum* Civil Town have been long debated among scholars. Over the past 120 years, there have been theories promulgated that the town was preceded by a military fort or a *vicus* (?) that developed along the main north-south road of the settlement, i.e. what was later to become the *limes* road. However, these theories and references concerning the early phases of town development were based either on old theories, or “excavation results” that have never been published or have appeared only partially in preliminary reports. Thus, locating these early features or identifying the finds that came from them remained an impossible task.

Reevaluating old excavation-documentations and find materials from the north-eastern zone of the *Aquincum* Civil Town surprisingly revealed some still unknown, “early” archaeological features and finds. This work enabled us to create a periodization for this part of the town. Based on this recent revision of old data, the earliest features in this zone belonged to two construction phases containing semi-subterranean, rectangular pit houses, as well as other features, displaying a certain degree of regularity. The aim of this paper is to examine these phases, features and finds and decide whether – for the first time in the research history of *Aquincum* – it is possible to delineate an outline for the ground plan for the earliest settlement phase and speak about some kind of structured settlement – concept in the area of what was later to be the *Aquincum* Civil Town.

Tino Leleković

Roman Cemeteries and Burial Rites on the Croatian Part of the Danube *Limes*

The paper will focus on the burial customs from the Croatian part of the Danube *limes*. During the past decade several excavations were conducted on the cemeteries on the sites along the *limes* and in its rear. In total 543 graves have been excavated, producing a good basis for an overview of the development and change of burial rites in this part of the *limes*. Also, owing to these excavations, a typology of graves can be given, along with the historical and cultural contextualization of each of the defined types. Emphasis will be given on the distribution and typology of *busta*, a burial custom that seems to be characteristic for the cemeteries along the *limes*. The origin and interpretation of the *bustum* type of grave have not yet been explained. One theory has it that such graves originated in north Italy and that the legionaries spread them to the provinces, especially those of the Rhineland and the Danube/Balkan regions. On the other hand, it is possible to perceive of the *bustum* as a funerary feature imported to the West by the army and immigrants from the East. Others believe that *busta* originated among the native Balkan (south-east Pannonia included) ethnic communities. On the basis of new finds from Croatia, this paper will try to give a satisfactory explanation of this feature and its connection with the Roman army.

Martin Lemke

**Towards a Military Geography of *Moesia Inferior*. A New Approach
of Detecting and Classifying the Danube *Limes* Sites**

The question of locating and describing the *limes* sites in *Moesia inferior* can be approached from two sides: a variety of recognition and sensing techniques employing ancient sources, historic maps and literature (old and new) as well as aerial and satellite photographs. While none of these techniques are self-sufficient, all can be used in a complementary way together.

The other side of the approach is a way of interpreting the region by means of the factors summarized in “military geography”. Military geography is a way of using geospatial concepts in terms of military problems. It is the influence of various physical and cultural factors on potential military actions in a given region. These factors include: topography, geology, vegetation, weather and climate on the physical side, as well as cultural factors such as population patterns, social structures or transportation networks. In this context, chosen sites from the Lower Moesian *limes* will be presented (*Novae*, *Oescus*, *Scavidava*, *Asamus*, *Regianum*, *Appiaria* and a number from the Dobrudja) in their historical and geographical context, which includes a number of analogies from modern times, such as the army river crossings of the Danube in 1877 and 1916.

Kris Lockyear
Adrian Popescu
Timothy J. T. Sly

**Supplying *Noviodunum*: the Granary at Poșta (Tulcea County, Romania)
and the Provisioning of Forts along the Danubian *Limes***

The fortress at *Noviodunum*, near modern Isaccea, Tulcea County, Romania was occupied during the Roman and late Roman periods, as well as being reoccupied during the Byzantine re-conquest in the 10th-12th centuries, during the Ottoman period and in the 20th century. It formed a key location on that stretch of the Danubian frontier being the point at which the Danube may be most easily crossed east of its confluence with the Prut. During the Roman period it is generally thought to be the principal base of the *Classis Flavia Moesica* and as such was a key installation for the supply of the chain of forts along the Danubian shore. Since 2000, the *Noviodunum* Archaeological Project has been investigating this site and its hinterland with the final season of excavations taking place in 2010. Currently, the programme of post-excavation analysis is underway.

In 2007 a small 10 x 10 m trench was excavated near the village of Poșta in order to investigate a surface concentration of ceramics discovered during field walking. It was assumed that this concentration represented a rural site, but the excavations revealed the remains of a granary. The collapsed roof of the granary included tile stamps of the *Legio V Macedonica* and the *Classis Flavia Moesica*, as well as a tile with unusual graffiti of a horseman and two feet. This paper presents the results of this excavation as well as preliminary results from the post-excavation analysis and some thoughts on the implications of this site for the provisioning of the Danubian frontier.

Constanze Lösch

**Ländlicher Grabluxus an der Peripherie des Imperiums –
Das nördliche Gräberfeld zur *villa rustica* von Rheinbach-Flerzheim**

1982 wurde inmitten eines Kiesabbaugebietes bei Rheinbach ein aus 26 Gräbern bestehender Friedhof, der einer in unmittelbarer Nähe gelegenen *villa rustica* zugeordnet werden kann, ergraben. Er datiert in die Zeit zwischen dem späten 2. Jahrhundert bis in das letzte Drittel des dritten Jahrhunderts n. Chr. Das Gräberfeld erlaubt es durch Unterschiede in der Ausstattung und seiner Anlage, Rückschlüsse auf soziokulturelle Fragen innerhalb der provinziellen Bevölkerung Niedergermaniens zu ziehen. Fünf Gräber hoben sich nicht allein durch Lage und Grabbau vom Rest der Gräber ab, sondern auch durch ihre, selbst für das Rheinland des frühen dritten Jahrhunderts außergewöhnlich reiche Ausstattung.

Das reichste Grab des Gräberfeldes barg die Brandbestattung eines jungen Mädchens. Sie wurde unter anderem mit einem goldenen Prunkhaarnetz, Schmuck, einer großen Menge qualitativvoller Gläser und Glasobjekte sowie Bernsteingegenständen begraben. Ein Prunkhaarnetz ist in Niedergermanien bislang nur aus einem weiteren Fundkontext bekannt, die Mehrzahl der wenigen bekannten Vergleichsobjekte stammt aus dem Mittelmeerraum. Das Netz zeigt die deutliche Verbindung der ländlichen Eliten Niedergermaniens mit mediterraner Kultur. Der unter den Schmuckbeigaben gefundene Goldring mit „*dextrarum iunctio*“-Darstellung und griechischer Inschrift, sowie eine kleine Dionysosbüste aus Silber betonen ebenfalls die starke Durchdringung provinzieller Kultur – auch am nordöstlichen Rande des Reiches – mit originär römischer Bildsprache und Philosophie.

Michael Mackensen
Florian Schimmer

**Interior Buildings of the Severan Oasis Fort at Gheriat el-Garbia
in the Late Antique Period**

Archaeological excavations at the oasis fort on the *limes Tripolitanus*, Gheriat el-Garbia, were conducted between 2009 and 2010 and provided for the first time evidence of late Roman building activities. The interior buildings of the Severan fort show a bad state of preservation. However, parts of the headquarters building (*principia*) could be observed including the *aedes* as well as an adjacent room (*officium?*). A large rectangular building was added to the northeastern side of the *aedes* and *officium* probably during the 2nd half of the 4th c. and may have incorporated the rooms of the Severan *principia*. Another late antique building of almost quadrangular shape, possibly dating to the 1st half of the 5th c., was located in the (former) *praetentura* of the Severan fort. Further late antique building activities within the fort comprise repairs and the blocking of the gates. It remains uncertain, however, if they are contemporary with the late antique buildings in the area of the *principia* and in the *praetentura*. Moreover, a stratigraphic sequence of the early 6th c. near the *porta praetoria* attests a late antique settlement, but no corresponding structural remains have been excavated. The evidence of late Roman occupation within the fort (*castra*) may be attributed to the deployment of a unit of *limitanei* between AD 360/380 and 430/455 as well as to the presence of a Libyan chieftain and his tribe during the second half of the 5th c., continuing thereafter until AD 540+.

Dragoș Măndescu
Ion Dumitrescu

**The Archaeological Monuments at the North-Balkan Periphery
of the Roman Empire in Old Cartography**

The paper tries to display from the perspective of history of archaeology the image of the archaeological monuments from the Balkan boundaries of the Roman world as it was perceived in old maps (the 17th – 19th c.). There are presented the cartographic works of some map-making pioneers in this field, belonging to the French (Guillaume Delisle, Nicolas de Fer), Habsburg (Giovanni Morando Visconti, Luigi Ferdinando de Marsigli), Russian (The Russian Map of Romanian Principalities) or even Romanian (Constantin Cantacuzino) cartography, up to the military maps at the beginning of the modern period. Particularly sought are the representations of the *Limes Alutanus* on the Olt River and of the *Limes Transalutanus* in Western Wallachia, the highlighting of important Roman archaeological monuments (Trajan's Bridge to *Drobeta*, "Jidova" Roman station in Câmpulung), and some lines of fortifications in Oltenia, Wallachia ("The Novac furrow") and Southern Moldova and Boudjak (Vadul lui Isac – Sasâc *vallum*). For some of these Roman archaeological monuments, the old maps were their first historical mention and the first episode of their research. On the other hand, these cartographic documents provide a clear view of how scholars of early-modern period have referred to the ancient relics of an Eastern Europe still unaware of its Roman heritage.

Felix Marcu
George Cupcea

The Northern Dacian *Limes* – New Approaches, New Features

One of the best known sectors of the Dacian *limes*, the Northern part, has actually not been precisely documented concerning topographical and geophysical data. During a three-year project we will attempt to thoroughly identify the topographical situation of the actual frontier line, as well as to execute geophysical surveys on the main sites, in all the three main methods – GPR, magnetometry and resistivity. We will also try to identify as many towers as possible on the frontier, as well as any traceable fortified line. The second main objective is to identify what has been considered and outposts line, further north of the known frontier line, and that has been assumed, but documented scarcely in the recent past. This presumed barrier line (with forts and *clausurae*) lies at about 15 kilometres to the north of the presently known *limes* line. The final purpose is to ensure the registration of all the heritage sites in the standards required through the new Management Plan – Parts of the International Heritage Site “Frontiers of the Roman Empire”.

Dan Matei

Das nachrömische Leben in den *castra* von Dakien

Gleichzeitig soll man unbedingt den Unterschied zwischen die *castra*, die in dem Spätromischen Reich gebliebenen oder in konstantinischen bzw. justinianischen Zeiten wiedereroberten Territorien geblieben sind und denjenigen, die sich in auf dem Gebiet außer kaiserlicher Kontrolle befanden, machen. Während die ersten von der gleichen römischen Armee, die sie vor 271-275 aufgebaut haben, weiterhin bewohnt oder wiederbesetzt und wiederaufgebaut werden konnten, befanden sich die letzteren mit weit offenen Toren für alle, die dort wohnen wollten oder die Möglichkeit hatten, sich da anzusiedeln: römische Bevölkerung oder verschiedene Wandervölker und barbarische Völker, die nach dem Verschwinden der dakischen *limes* freien Zugang in die ehemalige Provinz hatten.

Ein ständiger Aufenthalt oder eine vorübergehende Anwesenheit für eine dieser ethnischen Gruppen setzte entweder eine Vorrangstellung der militärischen Kraft dieser Gruppen auf dem Gebiet, wo sich das Kastell befand voraus, oder dass sie dort von anderen mächtigeren ethnischen Gruppen toleriert wurden. Ein postaugustinisches Leben in den ehemaligen römischen *castra* aus Dakien fand sicherlich statt und wurde beurkundet, ohne immer von Dauer zu sein und sich auf der ganzen Fläche auszubreiten. Durch dieses postaugustinische Leben meinen wir nicht die täglichen Tätigkeiten, die innerhalb des Flächeninhaltes während der Jahrhunderte statt gefunden haben und die manchmal auch heute noch fort dauern, sondern das Leben, in dem die alten römischen Bauten und die lebensfähigen Anlagen den *castra* von den neuen postromischen Besitzern wieder verwendet und an die eigenen Standards angepasst wurden.

Florian Matei-Popescu

The Auxiliary Units in Moesia Superior and Dacia. A Review and Update

The bulk of the auxiliary units of the newly created Dacia province were previously part of the army of the Moesia superior, to which some units from Pannonia were added. The publication of the new discovered Roman military diplomas allows us now to determine in a more accurate way the deployment of the units, both in Moesia superior and then in Dacia and, thereafter, in Dacia superior and Porolissensis. Moreover, it is also now possible to see the important impact of the making of the Dacia province on the distribution of the units on the *limes*, from Pannonia to the Black Sea. It will be therefore the task of this paper to have an overlook on the deployment of the auxiliary units in the mentioned area from Domitian to Hadrian, when the system was settled until the Marcomannic Wars.

Stephen Matthews

Supplying the *Limes* Garrison in the Dobrogea

The business of supplying the Roman garrison with food is not documented in the ancient literary sources, thus only through archaeology can one see possible supply solutions, as for instance in the Vindolanda tablets and Egyptian papyri that list supplies to the military. When it comes to the agricultural potential of the landscape one enters the realm of theoretical archaeology. Recently the cIMeC database of archaeological sites in Romania, has offered the researcher an opportunity to examine a wide landscape specifically in my case the Dobrogea. This paper will suggest what part of the arable landscape necessary to feed the Dobrogean garrison is still visible in the archaeological record at a remove of 2,000 years. With reference to the size of those few excavated agricultural settlements and with some supposition over the size of the *vici* and their available manpower in the region, it is possible to suggest how much land was farmed close to the *limes* zone. Thereafter a simple model will be posited of how many soldiers were fed by how many labourers in the region. Although nowhere near all the necessary arable land to feed the garrison is visible in the record, it is hoped that this argument might be compared with more detailed sight survey elsewhere along the Danube, thus in time constructing a robust model of how the army was fed in the Lower Moesian province.

Thomas Maurer

**New Research on the Early Roman Military Site of Rheingönheim
(Rhineland-Palatinate, Germany)**

From 2008 to 2010 large scale excavations – managed by the *Direktion Landesarchäologie Speyer* – took place on the Roman military site Ludwigshafen-Rheingönheim, which is situated on the left bank of the Upper Rhine. We are dealing here with the first larger excavations at the site for nearly one century. The work was concentrated on the area directly east and southeast the well-known auxiliary camp of the pre-Flavian period. During the excavations traces of a settlement and parts of a huge camp, which was surrounded by two V-shaped ditches, have been unearthed. The evidence of a monumental gate and parts of interior buildings (soldier's barracks) indicate that the camp was occupied for a certain period of time or was at least in preparation for a long-lasting occupation. Considering the excavation's results and aerial photography, the camp covers a surface of at least 20 ha and offers space for approximately one legion. The dating of the camp will be determined by the current scientific research project, perhaps it belonged to the campaigns of Caligula in 39/40 AD or to the time of consolidating the Rhine frontier in the 70s AD. Especially southeast of the camp many archaeological traces show the existence of a civilian settlement (*vicus*), which was inhabited until the third century AD. The results of the new excavations show the development of the Roman military site Rheingönheim in a different light and let us reconsider its history.

Alistair McCluskey

The First ‘British Way in Warfare’: Threat and Response in the Late Roman North

In 1932 the renowned military commentator, Basil Liddell-Hart, published a collection of essays in which he proposed the existence of a specific strategic culture belonging to the British Isles. Writing in the shadow of the Great War, he argued that the large scale deployment of British troops to Continental Europe during the First World War was a historical aberration, and a misuse of British strategic assets. In his eyes Britain’s strength lay in sea power, enabling the provision of financial and military support to allies, and the conduct of amphibious raids against points on the enemy coastline. Although Strachan has convincingly dismissed Liddell-Hart’s work as poor history, the concept remains a valid device through which we can consider the delivery of strategic effect. This paper will reconsider recent analysis of the archaeological and historical evidence relating to the 4th and early 5th centuries in late Roman North East Britain to suggest that a strategic culture similar to Liddell-Hart’s ‘British Way’, may have been in operation by the Romans and their Pictish adversaries.

Frances McIntosh

The Clayton Collection: the 19th Century Creation of a 21st Century Resource

The material held at the museum in Chesters, Northumberland was mainly collected by John Clayton between 1840 and 1890. He excavated at Chesters and at many other sites along Hadrian's Wall, often buying pieces of land to save the Wall and allow their study. The collection ranges from inscriptions to dress accessories, jet items to weaponry and pottery to keys, including objects of stone, metal, bone, glass and ceramic.

My PhD (funded by the Trustees of the Clayton Collection) aims to produce an analysis of the material to study what this important assemblage can tell us about occupation of Chesters, and its place within the Central and Eastern sector of Hadrian's Wall. I will also be looking at the material from the other sites such as Housesteads, Cawfields and Vindolanda and adding the new information to what is already known about these sites. I hope to show what can be achieved from the 21st century study of a 19th century antiquarian's collection, and highlight the role John Clayton played in Hadrian's Wall studies.

As many excavations from Hadrian's Wall have been published in the last decade, study of the Clayton Collection (in particular the Chesters material) is long overdue and this poster will present the start of this work. This poster will present my initial results, taking stock of the potential of this material and highlight some of the avenues for research.

Branka Migotti

**“Pagans”, Christians and “Barbarians” at the
Late Roman Cemetery at Štrbinci (NE Croatia)**

The site of Štrbinci, the probable location of the Roman road settlement *Certissia*, is situated thirty-odd km west of Vinkovci (Roman *Cibalae*) along the road *Emona – Sirmium*, that is, in the hinterland of the Croatian portion of the Middle Danube *limes*. So far 160 4th-century graves have been excavated there, all of them supine inhumations; the majority were earth pits, but there were also quite a few tile-constructed tombs. Some half of the burials contained grave goods, but the fact that almost all of the tile graves were robbed and/or destroyed, renders the quantity of the diagnostic material much lower than its original amount. Besides, very few of the grave goods are clearly indicative of religious ritual, as the majority pertain to undecorated dress accessories, items of jewellery and glass or pottery vessels. Nevertheless, it has been attempted in this paper to affiliate certain finds to the presumed religious background of their owners. The quotation marks with the words “pagans” and “Barbarians” are related to the fact that only Christians can be fairly securely detected from the grave goods, while the remaining two groups stay unrevealed behind a conception of Romano-Barbarian cultural *koinē* of the *limes* area. Furthermore, an apparently mistaken formulation of the title, in which the word Barbarians figures as juxtaposed to the other two groups in terms of religion, while it is obviously not so, only stresses the complicated nature of late Roman *limes* society.

Lucrețiu Mihailescu-Bîrliba
Iulia Dumitrache

**La colonisation romaine dans le milieu civil et militaire de *Troesmis*.
Notes prosopographiques**

Notre démarche vise l'analyse prosopographique de certains colonistes dans le milieu civil et militaire de *Troesmis*, en envisageant, d'un côté, les *canabae legionis V Macedonicae*, et de l'autre côté, le *municipium Troesmis*. Nous observons d'abord une continuité de l'élite appartenant à ces deux entités administratives est formée par des vétérans. Qui sont ces vétérans et d'où proviennent-ils? L'analyse prosopographique révèle qu'une partie d'eux a été recruté en Orient, soit à l'occasion des guerres parthiques de Trajan, soit pendant la campagne d'Hadrien en Judée. Nous analyserons également ceux qui sont originaires d'autres régions de l'Empire, comme les provinces occidentales, l'Italie ou l'Afrique.

Une deuxième approche regardera les personnes appartenant au milieu civil du *municipium*. Selon les connexions prosopographiques, on essaiera d'établir, sinon l'origine, au moins les zones de leur possible migration.

Željko Miletić

Limes Delmaticus: State of Research

The topography of the legionary camps in *Burnum* and *Tilurium* with satellite auxiliary *castella* is much better known due to the recent archaeological researching of the *limes Delmaticus* – the system of fortifications in the hinterland of the province of Dalmatia formed in late Augustus' and early Tiberius' reign. At *Burnum* a military amphitheatre was excavated, building phases are determined, first in Claudius' and second in Vespasian's reign. Amphitheatre makes architectural unity with the campus, huge buildings with *palaestra* on the east, north and west sides. An auxiliary *castellum* is discovered few hundred meters east of the legionary camp. Internal structures of the *castra*, with military barracks, two subsequent *principia*, and *valetudinarium* are researched by non-invasive methods. *Burnum* was a command post of an auxiliary *castellum* in the village of Kadina Glavica, recognised two years ago during terrain prospecting. Excavations of *Tilurium* concentrate on the legionary camp which is command post for two auxiliary *castella*, *Andetrium* and *Bigeste*. The last is identified with the architecture on the site Humac near Ljubuški, which is put in question by some authors. A network of military roads connects the described strongholds. New details about stationing of legions, *alae* and *cohortes* will be presented.

Nigel Mills

**The Frontiers of the Roman Empire WHS –
Public Presentation and Interpretation Planning**

The Frontiers of the Roman Empire WHS can serve as an exemplar for promoting UNESCO's core values in developing the concept of World Heritage – promoting understanding, toleration, co-operation and respect amongst the nations of the world through awareness and appreciation of their distinctive heritage. Symbolic of occupation, conflict and division, the Frontiers of the Roman Empire WHS provides an ideal context through which to promote UNESCO's values in the modern world.

The Frontiers of the Roman Empire WHS also offers unrivalled opportunities for presenting and interpreting the Roman world to a wide range of the audiences. The frontiers of the Roman Empire evolved and adapted in response to political, economic and other strategic factors at the heart of the Empire. The history of the frontiers is symbolic of the whole concept of the Empire and resonates with modern times.

To achieve this potential, and to engage with the visiting public, interpretation and presentation needs to move beyond the narrow definition of Outstanding Universal Value to embrace a wider, thematic approach which enables visitors to better understand the story and significance of the Frontiers of the Roman Empire WHS. These approaches are illustrated by two recent interpretation projects on Hadrian's Wall and on the Bavarian Raetian *Limes*.

An Interpretation Framework for Hadrian's Wall was published in 2011 following extensive audience research and stakeholder consultation. The Interpretation Framework advocates the use of best practice principles of audience engagement and interpretation planning in developing exciting, visitor facing experiences that enhance understanding of the Roman *Limes* and their history and role within the Empire. The Framework advocates a thematic approach that sees the *Limes*/Frontiers as part of the evolving and dynamic story of the Empire as a whole and which explores resonances and legacies in the modern world.

The paper explores the application of these principles and approaches in the development of two important museum complexes – the new Roman Frontier Gallery at Tullie House Museum in Carlisle and Roman Weissenburg on the German *Limes*.

Claudia Minniti
U. Albarella
J. Collis
A. Hammon
M. Maltby
S. Valenzuela
K. Vickers

**Animal Husbandry and the ‘Romanisation’ Process of Britain:
A Case Study from Owlsebury (Hampshire, Southern Britain)**

Animal remains from archaeological sites can inform on the complex web of economic, social, religious, political and domestic circumstances that affect human behaviour. In particular, the analysis of material from Iron Age and Roman contexts in Britain can contribute to the continuing debate over cultural contact and change following the Roman invasion.

Previous studies of animal bone assemblages from south-east Britain indicate that the process of Romanisation had a very important impact but was neither homogeneous nor universal. For instance changes in animal husbandry seem to have occurred more rapidly in small towns and more gradually in large towns, and more substantially in the East and South than the West and North of the country. At Elms Farm, Heybridge (Essex) two main stages of change were identified: one that occurred early after the arrival of Romans and another about a century later. This suggests that livestock importation and/or improvement occurred throughout the Roman period, rather than merely as a reaction to the initial Roman invasion.

The rural site of Owlsebury (Hampshire, southern Britain) has produced a huge animal bone assemblage reflecting the long occupation from the Iron Age to the Romano-British period and is therefore ideal to provide evidence to compare with the other key site of Heybridge.

The combined analysis of the originally collected evidence with a new approach to the study of the material has contributed to questions related to change and/or improvement of husbandry techniques, the contribution of local breeding, the introduction of livestock, the use of the land, the role of market, the influence of local culture and the permanence of the Iron Age tradition.

The project relies on a diversity of methodological approaches, including biometry, kill-off patterns and biochemistry. The data confirm the huge impact that the original Roman invasion had on local culture, but also complements and enriches the evidence obtained from Heybridge. It highlights further the diversity of the cultural responses to the invasion and also illustrates aspects of its geographic and chronological variation.

Attila Molnár

**Supply for the Military? Excavations on the Edge of the
Military *Vicus* of *Arrabona* (Frigyes-Barrack, Győr, Hungary)**

South of the military fort of *Arrabona*, on the edge of the military *vicus* investment-led excavations were executed in 2009 in the courtyard of the former Hungarian Imperial and Royal, later Soviet Military Garrison. On the basis of the archaeological finds it can be presumed that the Roman “settlement” could serve as a supply or magazine area for the troops garrisoned in the fort of *Arrabona*.

The site is situated along a north-south running Roman road. The area was used for an agricultural purposes, 13 wells, large post-structure horrea and smaller sole-timber-structure magazines were excavated. Beside ditches and larger pits 3 pit-houses (*Grubenhäuser*) and several rectangular sunken-featured storage buildings with 2-2 or 3-3 postholes came to light. We could not document any traces of industrial activity.

The connection between the site and the military unit can be proved by the several military equipments. Among the finds emerges the great amount of terra sigillatas, thin-walled potteries, imports from the Rhine Region etc. Most of the finds are related to the typical kitchen wares, but also “indigenous” ceramics and one piece of Quadian ceramic could be found.

The majority of the finds can be dated to the turn of the 1st – 2nd century – first half of the 2nd century. In the 3rd century the site was abandoned, but not the Roman road (as evidenced by a coin of Severus Alexander), along which the agricultural features were replaced by Roman graves.

Ángel Morillo
Javier Salido Domínguez

***Canabae* and Military *Vici* in Roman Spain**

In this paper we present an approach to the study of Roman *canabae* and military *vici* in Spain. Relatively little attention has been paid so far to this topic. As the general interest of historians and archaeologists was mostly directed towards the military troops and their fortresses, hardly anything became known about the *canabae* and *vici*. At the moment we do not know the urban layout or even the location of the military *vici* of the permanent forts, such as Cidadela or Baños de Bande, and little is known about the vicus of Rosinos de Vidriales. Recently there has been some progress in the understanding of the Augustan *cannabae* of the *Legio IIII Macedonica* at Herrera de Pisuerga.

There is no doubt that the excavations in León have experienced a more significant progress in this regard. In addition to the growing number of remains of the *canabae* located under the modern city, across from the ditches of the camp, there was found the presence of military *vicus*, just a few kilometres apart. The *vicus* of Puente Castro has similar characteristics to those located on the northern borders of the Roman Empire. The road from the camp towards the southeast is the backbone of the *vicus*. It is dated from the mid-first century AD until the AD 270, when it suffered a violent destruction.

Jennifer Morscheiser

Neue Grabungen im Legionslager Bonn

Im Legionslager Bonn fanden in den letzten Jahren in drei größeren, baubegleitenden Kampagnen Untersuchungen des Zentrums der Anlage statt. Dabei handelte es sich um Teile der Principia, des Praetoriums sowie gehobener Mannschaftsunterkünfte. Insgesamt betrafen die Grabungen eine nicht zusammenhängende Gesamtfläche von etwa 4500 m². Da das Gelände zu Beginn des 20. Jahrhunderts erstmals bebaut wurde und nur in kleinen Bereichen Keller die Befunde störten, konnten flächig die Grundmauern, in Teilbereichen sogar aufgehendes Mauerwerk, Fußböden und Laufhorizonte freigelegt werden. Durch die vergleichsweise guten Erhaltungsbedingungen lassen sich für Bonn erstmals zusammenhängende Strukturen der *latera praetorii* erkennen. Besonders aufschlussreich sind die Umbauten des vierten Jahrhunderts in der nachlagerzeitlichen Nutzungsphase. Dabei zeigte sich, dass in die nur noch teilweise stehende mittelkaiserzeitliche Bebauung Fachwerkwände eingezogen wurden und damit kleinere Raumeinheiten entstanden. Bemerkenswert ist, dass ebenfalls in einer späten Nutzungsphase in einem Raum eine schlecht ausgeführte, aber vergleichsweise aufwändige Fußbodenheizung eingebaut wurde. Von dieser aus wieder verwendeten Ziegeln errichteten Hypokaustanlage sind Pfeiler bis zu sechs Ziegellagen hoch erhalten. Auch zur Aufbauphase des Lagers lassen sich aus den neuen Befunden Rückschlüsse ziehen: So deuten Latrinengruben unter der Bebauung des späteren Praetoriums auf eine temporäre Nutzung der Fläche während der Errichtung der Principia. Unter den Kleinfunden finden sich neben etwa 120 Fragmenten einer Großbronze, die vermutlich einen berittenen Kaiser darstellte, mehrere Kleinbronzen, zwei Münzschätzen wie auch allgemein Gegenständen eines gehobenen Lebensniveaus.

Nemanja Mrđić
Angelina Raičković

Suburban Settlements of *Viminacium*

Suburban settlements of *Viminacium* were subject of systematic excavations for almost a decade. Because of their protective character today we know the city surroundings better than the city itself. Different types of settlements including *canabae legionis* of *Legio VII Claudia* surround the Roman city and legionary fort from all sides. These settlements had full urban infrastructure. Vast cemeteries occupied the area between them and *colonia Viminacium*.

The largest and most important settlements are located to the north and to the east of the legionary fort – or along the roads towards the river port on the Danube and along the *limes*. Several individual villas, of which one was fortified, were also located. Geophysical surveys covered most of the area preceding archaeological excavations.

Special attention is to be paid to the complex of villas and warehouses 2.3 km to the east from the legionary fort. This recent discovery revealed large warehouses and workshops with porticoes along 350 m of road. Buildings were densely distributed along both sides of communication. Behind this industrial row large villas with water supply and floor heating were excavated. Luxurious imported pottery and glass vessels, weapons and military equipment were found. Some of the pits within some buildings included a lot of semi-finished items.

These suburban settlements can be dated from late first to the fourth century AD and existed throughout the entire period of the city's life.

Mircea Negru
George Mihai

Philip the Arab's Wall of Romula

Romula was a Roman Town on the right bank of *Alutus* River close to border of Danubian Province of Dacia Inferior (Malvensis). There was also the residence of procurator of the province.

At the end of 18th century, Fernando Marsigli draw there three Roman forts. Only one of them has been identified. In the middle of the Roman town, archaeological excavations were made inside the Central Fort. In the 19th century, there was observed another fortress that surrounded almost the entire Roman town. Later, it was named 'Philip the Arab's Wall', by the name of the Emperor who supervised its brick construction.

In the present paper we present the earlier and latest archaeological surveys and excavations on the Philip the Arab's Wall. The latest excavations bring new information about this wall and its relationship with the northern cemetery of the town. This fort was built by units of *Legio XXII Primigenia Pia Fidelis*, *Legio VII Claudia Pia Fidelis*, *Cohors I Flavia Commagenorum* and *Numerus Syrorum Sagittariorum*. The brick wall has a length of 1.20 to 1.75 meters. Berma is from 2.40 to 4.90 meters, and fossa had a deep of 3.05 to 3.20 meters. This wall was built between the high bank of the *Alutus* River and the Teslui River that crossed the Roman town. The main part of the surrounded town was in the north of Teslui River. Outside of it remained the cemeteries, some residential buildings and the northern pottery workshops.

This fort was an answer to the barbarian expeditions of Carpi and Goths from the middle of the third century AD. Soon after its construction of bricks it was abandoned and the Northern Roman cemetery was extended until its berma.

Eduard Nemeth

**The Southwestern Limes of Roman Dacia and Beyond –
New Surveys and Excavations**

The southwestern frontier of the Roman province of Dacia is still one of the relatively little understood sectors of the northern Roman *limes*. Different opinions placed the frontier in this part of Dacia along quite different lines and the common dating of its structures in the literature has come to be contradicted by recent excavations. Because of the insufficient field surveys in this area, some Roman forts have been even misplaced on archaeological maps. A recent survey project identified and placed the forts and the roads correctly on georeferenced maps and satellite images. On the other side of the fort lines, several recent rescue excavations found new settlements and graves belonging to the neighboring peoples of southwestern Roman Dacia, mostly to the Sarmatian Jazyges. The new data change quite significantly some of the old assumptions about this frontier sector.

Snežana Nikolić
Ivan Bogdanović

Excavations of the Amphitheatre of *Viminacium* (Upper Moesia)

This paper provides an overview of the results of recent excavations on the *Viminacium* amphitheatre. Investigations of the building began at the end of 2007 and they are still in progress. The amphitheatre is situated in the north-eastern corner of the city, c. 60 m from the north-western corner of the legionary fortress. The excavated parts of the amphitheatre include: the arena, the arena wall, main entrances, chambers that flanked the main entrances, recesses on the short axis of the building and traces of the timber-framed seating. Next to the amphitheatre a part of the northern rampart was excavated. Based on previous investigations the approximate overall dimensions of the amphitheatre are 84 x 74 m, and the dimensions of the arena are 55 x 45 m. It is possible to conclude that the amphitheatre was built in the first quarter of the second century and that it was used until the turn of the third and fourth centuries. So far, it was possible to suggest at least three construction phases: an older timber phase that dates back to the first quarter of the second century and two stone-timber phases that date back to the period from the second quarter of the second until the end of the third century.

Peter Norris

The Frontier Experience in Roman Hispania

The experience of the frontier in Hispania entailed the integration of communities in terms of social, economic, religious and political complexities. Such a process has been viewed through the straight jacket of 'Romanisation' in whatever varied forms this takes. The frontier experience is normally written with reference to; military conquest, urbanisation, countryside and mines, but as stand alone concepts. However, the change/evolution of a region following contact and/or conquest by Roman arms did not necessarily involve a mimicking of the Roman way of life. Indeed, the interaction of differing population groups provided the catalyst for change, not so much in the format of pursuing a goal of imitation, but of evolution. In essence, creating something that was not there before, but has traces of multiple and varying involvement.

The idea of an evolutionary process was first espoused by F.J.Turner in the late 19th century as a framework for understanding the development of the frontier as a process of change. In frontier studies, this comprised a staged developmental concept, of increasing cooperation of populations in response to the conditions they found themselves. The influence of the homeland was mitigated by the distance from the frontier. The result of this lack of dominance was the creation of an evolutionary dynamic which produced inertia of its own, eventually controlling the actions of the central government itself.

This paper will discuss the lengths to which the process of change is recognisable in *Hispania* in terms of social and economic development, and in what ways these events became an imperative of change on Rome itself.

Coriolan Horațiu Opreanu
Vlad-Andrei Lăzărescu

New Research upon the Buildings of the Frontier Fort at *Porolissum* (Dacia)

The paper presents the research performed in the fort at *Porolissum* on the Northern frontier of Dacia between 2010-2012. The fort was investigated by geophysical methods, which revealed some new information in a few distinctive areas of the fort. The main result was the identification of three large stone buildings in the *retentura*, an area totally unknown till now.

The excavations were focused on a group of buildings identified by old trenches of N. Gudea, all situated very close to the gates and apparently built on top of the *via sagularis*. For this reason they were considered as “late buildings” with unknown function. In *pretentura dextra* one such building was excavated. Its dimensions are 10 x 25 m. It was built immediately behind the back of the defence tower of the northern defence wall. No road was identified under it. The chronology of the building goes back to the late 2nd century AD. A large quantity of military equipment and weapons suggests it was intensively used in connection with the watching and defending of this side of the fort, looking to the barbarian world. The lack of any inner partition does not allow for interpretations such as living space destined for the soldiers.

The geophysical surveys showed also that to the North-Eastern corner of the fort the natural slope visible nowadays also existed in Antiquity and that the Romans used it as a natural defence system of this side.

Adriana Panaite

Roman Roads in Moesia Inferior. Epigraphical and Archaeological Evidence

The system of Roman roads in Moesia Inferior was never the subject of a monographic study. This issue was only tangentially discussed in different works. Moesia Inferior lies on the territory of two contemporary countries, Romania and Bulgaria, and that is why, in most of cases, the system of Roman roads was studied taking into account the borders of modern states. Even so, the researchers were mainly interested to localize some ancient toponyms and not to establish the lines and directions of the roads.

In our paper, we are trying to present the roads from Moesia Inferior based on archaeological and epigraphical evidence. Only in few places were preserved traces of the Roman roads. In this case, the reconstruction of the system of Roman roads can be made based on inscriptions and other archaeological evidence. First, we take into account the milestones. There are about 105 milestones from Moesia Inferior. Their spreading over the territory of the province and their dating permit us to obtain a whole image of it. In addition, inscriptions mentioning the construction of the roads, repairing or building of road stations are analyzed. All these data allow us to establish the main constructive phases of the road system. Another category of inscriptions is those with *beneficarii consulares*. They were soldiers used by the governors to oversee the traffic along the provincial roads. There are about 44 inscriptions with *beneficarii* from Moesia Inferior.

The archaeological information gathered during the excavations together with data from ancient itineraries permitted us to establish the line of a very important road, the so-called “central road”, crossing Dobroudja from South to North, through the middle of this area. Excavations and field researches provide information about the structure of the roads or about the different stop points along the roads (*statio, mutatio, mansio*). By the use of this type of data, it is possible to trace the lines of the local roads (*semitae*) as well.

Szilamér Péter Pánczél

East and West in Roman Dacia

In this paper we intend to present the results of intensive geophysical and topographical survey done in Porolissum in North-Western Dacia, and the outcome of the aerial archaeological, geophysical and topographical survey done on individual sites at the Eastern *limes* of the province.

Our research at *Porolissum* was made during two recent projects (Necropolis Porolissensis Project 2006-2010 and the Porolissum Project 2008-2011) and focused on the Roman necropolis on the Ursoieş Hill, parts of the settlement and the military fort from the Pomet Hill.

Our survey on the Eastern *limes* started in 2008 in the frame of the LIDOR project and the work was focusing on the sector between the forts of Brâncoveneşti/Marosvécs and Sânpaul/Homoródszentpál.

S. Thomas Parker

The Roman Army at *Petra*

When Trajan annexed the client kingdom of Nabataea in AD 106 and transformed it into the new Roman province of Arabia, the regional capital moved from *Petra* in the heart of the former kingdom to *Bostra* in the far north. The latter city henceforth served as the usual seat of the provincial governor and the headquarters of the new province's legionary garrison, *legio III Cyrenaica*. Yet there is much evidence to suggest that *Petra* remained a city of considerable size and importance after the annexation. Various lines of evidence, including papyri and inscriptions (some of the latter only recently discovered), suggest a substantial Roman military presence in and around the city. The evidence attests the presence of both legionary and auxiliary forces. It has been suggested that one sector of the city, the North Ridge, which commands the center of the city, may have even served as a military compound after the annexation. This area will be the focus of new excavations at *Petra* to be launched in the summer of 2012. This paper will summarize the available evidence and consider the strength and mission of the Roman army at *Petra* from the second to the end of the fourth centuries.

John Pearce

**Monuments to the Dead on Frontiers, Their Setting and Lifespan:
Evidence from Roman Britain**

This paper argues that evidence for the commemoration of the dead among the garrisons of Britain's frontier regions has further potential to illuminate military societies. It takes its cue from recent approaches which have emphasised the active construction of identities among military communities through portrait representations. Its focus however lies on the broader form, scale and context of monuments. Drawing on inscriptions, sculpture and the in-situ remains of monuments it outlines a new synthesis of funerary monuments on the frontier. While individual categories of evidence have received extensive attention, no overview of frontier monuments has been attempted from their integration for many decades. The paper argues for a greater diversity in monument form and scale than has hitherto been acknowledged, including a handful of (problematic) examples of which the scale and complexity may rival those of some larger Mediterranean tombs. This differentiation which can be observed among the dead contrasts with the emphasis on collective identities among soldiers and 'outsider' groups in recent work on portrait sculpture. The paper also explores to what audiences these representations by monuments were made, exploiting the evidence of recent excavation and survey for their spatial setting. It further considers over what time period their messages endured through some examples of the difficult but underexploited evidence for monument 'lifespan' and reuse.

Liviu Petculescu
Cristina Mitar

Military equipment in the Roman auxiliary fort at *Cumidava* (Râșnov, Brașov county)

The Roman fort at Râșnov was excavated on a relatively large scale by M. Macrea (1939), N. Gudea and I. I. Pop (1969-1973) and a team of archaeologists led by L. Petculescu (2006-2011). However apart from the stone built structures there is few published information on these diggings and consequently the research of all the available military equipment objects discovered so far at Râșnov seems worth being undertaken.

Even if the military items are still few, all the category are present: weapons, armour, personal equipment and harness fittings. Even though the excavations at *Cumidava* are in progress one can draw some conclusions. As for the weapons it is characteristic the presence besides the common leaf-shaped spearheads of the bolt heads and the sling shots and the absence of the arrowheads which suggest that the military unit was not *sagittaria*. Out of common but not exceptional for an auxiliary fort is the presence of the *lorica segmentata* – a cuirass thought to have been specific of the legionary equipment. And significant is the use at *Cumidava* of only the variants of broad belts dated from the end of the second century to the middle of the third century AD. The harness fittings are still not frequent enough as against the total number of military objects to account for the quartering in the fort of an equestrian unit.

The military pieces dated more precisely, part of them found on the floor of the wooden barracks of the first building period attested in *praetentura sinistra*, belong to the period c. AD 180-250. Almost all the military items, with the possible exception of only two types of objects, the lunula pendant and the junction loops, are a characteristic sample of the equipment of an auxiliary unit in the period of time extending from the end of the second to the first half of the third century AD, which is also evidence for the dating of the fort.

Vladimir Petrović
Vojislav Filipović

***Timacum Maius: New Archeological Discoveries in the Hinterland
of the Danubian Limes***

Systematic archaeological excavation in the area of the village of Niševac near Svrlijig (eastern Serbia) has been going on for four successive years. We already unearthed a large area of an ancient Roman settlement, possibly the *Timacum Maius* station in the hinterland of the *limes*, on the main Roman road *Lissus – Naissus – Ratiaria* connecting the Adriatic and the Danube. The results of previous archaeological investigations – Roman road, drainage channels and representative structure with system of floor and wall heating based on perforated circular-sectioned ceramic tubuli filled with pebbles, as well as pottery, metal objects and coins – provides serious support for interpretation of Roman settlement in Niševac as *Timacum Maius*. The 2011 geophysical survey of the *Timacum Maius* site provided a lot of new data about the urbanization and architectural remains.

Dávid Petruț
Monica Gui

**Illuminating the soldiers' homes. The evidence of lighting devices
from the barracks of forts and fortresses in Roman Dacia**

Recent studies addressing the question of soldiers' communities within the Roman army in the time of the Principate emphasize the role of the barracks as places where the communal identities of the soldiers were strengthened through a wide range of collective occupations, including food preparation, dining and various leisure activities. According to our current knowledge of the soldiers' barracks in the abovementioned period, the architectural features of these structures did not provide access to a suitable amount of natural light, therefore the need to attend to this shortcoming by means of artificial lighting would seem evident. Conversely, the question of lighting in the barracks has not been addressed so far through the systematic analysis of the lighting devices pertaining to these buildings. The presentation intends to offer insight into the question of illumination in the barracks of legionary and auxiliary soldiers from Roman Dacia, by analyzing the evidence of lighting devices discovered in the respective buildings. Along with the primary question related to the degree to which artificial lighting was employed, further problems which will be addressed include the proportion of lighting implements found in the barracks compared to other internal structures, the possible discrepancy between "lamp consumption" in auxiliary forts and legionary fortresses, as well as the assessment of the assumption that the intensity of lamp use in military context was subjected to chronological variation. A comparative analysis of military sites from other areas of the Empire where this type of data is available will also be employed.

David Petts
Rob Collins

Late Roman Barracks at Binchester

The Roman fort at Binchester (County Durham) lies on Dere Street, the main communication route between the legionary headquarters at York and Hadrian's Wall. It has been subject to several campaigns of archaeological investigations, including significant excavation within the *praetorium*. One of the most important outcomes of this work has been the realisation that occupation continued on the site well into the 5th century AD. This takes the activity on the site beyond the traditional early 5th century date for the end of Roman political control of *Britannia*. Recent excavations carried out jointly by Durham University, Stanford University and Durham County Council have been focused on the northeast corner of the fort. This has revealed a late Roman barrack building, which appears to have continued into use into the 5th century. It had clearly been structurally altered during its period of use and was also associated with evidence for the large-scale processing of animal products, possibly tanning. This paper compares the Binchester barrack with other late Roman barracks from the Northern Frontier and explores how it can help improve our understanding of sub-Roman activity within forts in this key frontier region.

Galina Pirovska

Legal Context for the Protection and Prerequisites for the Inclusion of the Roman Fortifications on the Danube River in Bulgaria on the Tentative List of the Cultural and Natural Heritage of the Republic of Bulgaria – Part of the Project “Danube *Limes* – Future Transnational Property on the World Heritage List”

The successful Bulgarian participation in the transnational World Heritage Property Danube Limes requires achieving compliance with the national legislative provisions. The review of the legal protection of the proposed sites will serve as a basis to identify the issues to address while implementing the project. Following an analysis of their statute all the necessary actions on behalf of the scientific, national and local structures concerned with the view to define and update the regimes of protection under the Cultural Heritage Act will be pointed out.

It is crucial to meet the requirements of the Convention Concerning the Protection of the World Cultural and Natural Heritage and the Guidelines for the Implementation of the World Heritage Convention. In addition to the mandatory UNESCO criteria for the inscription of cultural properties on the World Heritage List, such as outstanding universal value, authenticity, integrity etc., the properties must have an adequate protection and management system to ensure their safeguarding.

Under the Cultural Heritage Act any natural or legal person is entitled to address to the Minister of Culture a request for the inclusion of an immovable cultural property on the Tentative list. The requests are assessed by the Specialised Panel of Experts on the Protection of the Immovable Cultural Properties (SPEPICP) under the auspices of the Minister of Culture. A standard nomination format is filled for each property including the identification and description of the property, a justification of its outstanding universal value: compliance with the criteria under which the inscription is proposed, guarantees for its authenticity, or integrity, comparative analysis of similar properties. Upon examination of the submitted documentation the World Heritage Centre notifies the State Party whether the proposal for complementing its tentative list has been approved. At every stage of elaboration of the project it must be coordinated with the countries participating in the Danube Limes Transnational World Heritage property.

The next most important stage is the drafting of the detailed documentation to be submitted to the World Heritage Centre.

Ioan Piso

Zum Judenkrieg des Q. Marcius Turbo

Im Judenkrieg von Ägypten ist es mit drei Phasen zu rechnen: eine erste, welche die ersten Turbulenzen des Jahres 115 und Anfang des Jahres 116 enthält, eine zweite, diesmal gewalttätige Phase ab Sommer 116, als der *praefectus Aegypti* M. Rutilius Lupus mit wenigen Truppen die Lage zu meistern versuchte, und eine Endphase, die durch das Eingreifen von Q. Marcius Turbo gekennzeichnet ist. Man versucht, wenig klare Ereignisse zu deuten und zu datieren. Zum Beispiel, ist in CPJ II 438 von einer ἄλλη λεγεών des Rutilius (Lupus) die Rede, die in Memphis eintreffen sollte. Anders als in der bisherigen Geschichtsschreibung, behauptet man, dass in diesem Fall λεγεών (*legio*) keine regelrechte römische Legion, sondern, wie so oft, ein zusammengeflicktes Heer bedeutet. Von der legionären Besatzung Ägyptens ist nach Anfang des parthischen Krieges sehr wenig übriggeblieben und so verfügte M. Rutilius Lupus über ein improvisiertes Heer. Mit anderen Worten, Die Legionen (*XXII Deiotariana* und *III Cyrenaica*) sind erst mit Q. Marcius Turbo Anfang 117 nach Ägypten zurückgekehrt. Man versucht zu erfahren, welche anderen Truppen Turbo in Ägypten unterstanden. Da er über Legionen verfügte, ist es unwahrscheinlich, dass Turbo noch den einstigen Titel eines *praefectus classis Misenensis* getragen hätte. Damit er Legionen befehligen konnte, wurde er wahrscheinlich zum *praefectus* ernannt und erfüllte die militärischen Befugnisse eines *praefectus Aegypti*, ohne jedoch *praefectus Aegypti* zu sein. Dasselbe Verfahren wird sich im Falle Dakiens wiederholen.

Horea Pop
Daniel Culic
Csók Zsolt

**Recent Discoveries and Interpretations on the North-Western
Limes of Dacia Province**

The north-western *limes* of Dacia province was intensely researched mostly during the second half of the 20th century (I. Ferenczi, N. Gudea, Al. V. Matei). The role of this frontier, to protect Dacia on its north-western sector, was determined by the existence of an ideal access route, through the Meseş Mountains, also known under the name of Meseş Gate. The pass is crossed by the valley of Ortelec, as a result of the heights of the three former volcano peaks (Măgura Moigradului, Pomet și Citera), that have interrupted the mountain chain in the area of what will be later the Roman city of *Porolissum*. The Roman *limes*, consisting of towers, ramparts and ditches, stone walls and *burgus* type fortresses, was mapped on the researched segments, but not very precisely and incompletely.

The new research has established that some of the *limes* elements were erroneously interpreted, localized and dated. Furthermore, the main access routes towards the Meseş Gate from Barbaricum (Zalău and Crasna Valleys) were many time and oft fortified and supervised by the Romans, 40 kilometers deep, in many points in the Barbaricum area. The discovery of some new elements, that allow this kind of interpretation is an argument to this theory. These new Roman elements, far from the *limes* itself, are superposed by a massive Germanic presence, specific to the Przeworsk cultural group.

The level of knowledge concerning the north-western *limes* of Dacia was improved even on its route on the Someş River, an important communication line that was included in the province due to its military and economic importance. A series of newly discovered sections of ramparts, ditches and *burgus* type fortifications sustain this affirmation.

Applying new mapping techniques and recent field research allowed a better understanding of the Roman presence in north-western Dacia and its relations to the Dacian-Germanic barbarian world beyond, but close to the *limes*. The archaeological researches, necessary for arguments on this archaeological topography process will be able to bring even more elements in the close future.

Alexandru Popa

**Interdisziplinäre Forschungen im Auxiliarkastell von Brețcu
im süd-östlichen Siebenbürgen**

Das Kastell Brețcu liegt am südöstlichen Ende der Karpaten in Siebenbürgen am Fuß des Berges Stejar vor dem Oituz-Pass, der eine der wichtigsten Verbindungen vom Karpatenbecken in das Barbaricum und zu den antiken Städten des nordwestlichen Schwarzmeergebietes bildet. Das Auxiliarkastell sicherte den Eingang in die Pârâul Negru-Ebene, eine von Bergen eingeschlossene Beckenlandschaft, an deren westlichem Eingang die Römer das Kastell von Boroșneul Mare anlegten.

Seit einigen Jahren werden dort interdisziplinär angelegte Forschungen betrieben. Die geophysikalische Untersuchungen (Geomagnetik und Georadar) brachten aussagenkräftige Messbilder zur Struktur und zum Erhaltungszustand der Kastellbefunde.

Darüber hinaus wurde 2010 eine Pilotstudie zur mobilen Kartierung des Phosphatgehaltes innerhalb des Kastells durchgeführt. Der Hauptzweck der Phosphatbestimmung in den Böden dieses Fundplatzes bestand in der Kontrolle der Funktionalitätsinterpretationen der durch Geophysik gewonnenen Befundgrundrisse insbesondere des Nachweises von Stallungen für Pferde. Für die Antwort auf die Frage der Archäologie – ob unter der antiken Laufoberfläche ein Raster unterschiedlicher Phosphor-Konzentrationen zu verzeichnen ist, scheinen uns die Phosphorgehaltswerte in der von mobilen RFA gelieferten Qualität viel versprechend.

Zusammenfassend lässt sich festhalten, dass trotz einer über 100 Jahre alten Forschungstradition die archäologischen Hinterlassenschaften von Brețcu fast unbekannt sind. Die geophysikalischen und geochemischen Messungen haben jedoch ein großes wissenschaftliches Potential dieser Fundstelle aufgezeichnet, das durch eine gute Erhaltung der Befunde bestimmt ist. Die Aufgabe der zukünftigen Forschungen besteht darin, diese Befunde sowohl mit zerstörungsfreien Methoden als auch mit gezielten kleinräumigen archäologischen Eingriffen zu untersuchen, um die immer noch zahlreiche Fragen zur Archäologie und Geschichte dieses besonderen Fundplatzes der römischen Provinz Dacia beantworten zu können.

Stefan Pop-Lazić

Recent Research in the Legionary Fortress of *Singidunum* (2004-2010)

The legionary fortress of *Legio III Flavia* was built in *Singidunum* after the Dacian wars and the return of the legion to Moesia Superior. Literary sources as well as epigraphical data provide us with the information that the legion stayed there till the end of the antiquity. During the last 60 years remains of some parts of fortress were identified on the hill above the confluence of Sava and Danube rivers. Although it was heavily destroyed by the erection of medieval Belgrade and later fortresses, especially in the *retentura* part, some of the characteristics of Roman *castra* could be identified.

The length of the fortress was identified with certainty by defining NW and SE walls, and we know today that it was precisely 568 meters. On the other hand NE wall was excavated by several occasions, but the SW side remains doubtful, since we can not measure precise width which was according to other architectural finds 420 and 430 meters. *Principia*, *porta principalis dextra* and *sinistra* were destroyed for good by medieval ditch and bastion fortifications. On the other hand, *porta praetoria* and *porta decumana* have been identified.

During the last 10 years protective excavations were undertaken in the SE part of *retentura* and in an area in front of *porta decumana*. Besides numerous buildings, channels, *fossae*, two late Roman streets and parts of SE wall were excavated. This article will deal with the specific questions raised by these new results.

Andrew Poulter

**Works of Brick and Mortar, Stone and Mud.
Buildings in Forts on the Lower Danube and the Implications for a Change
in the Character of Garrisons and Military Organization in the Late Roman Period**

The late 3rd century witnessed a revolution in military architecture, certainly initiated under Diocletian and not later, as was once thought, under Constantine. But the internal organization of the forts was modelled on traditional lines with two roomed *contubernia* and, as far as possible, a regular layout of ancillary buildings. The *principia* was still of traditional form and function. It continued to be used throughout the 4th century. Internal buildings were either of mortared limestone and brick or fine ashlar construction. Only in the size of the legions is there clear evidence that the main bases had only small garrisons, no larger than that which would have been assigned to an auxiliary fort in the early Empire. Whether the Danubian legions were dramatically reduced in size, from 5,000 to only c. 500, remains unclear. The outposting of 'legionary detachments' (attested by tile-stamps and in the *Notitia Dignitatum*) may partly account for this diminution of forces occupying the legionary bases. Even if these detachments remained under the same central command, it still points to a significant change in military tactics; a development for which evidence can be found to link this new system with the Diocletianic rebuilding of the frontier defences. Unlike the western provinces, there was no sharp collapse of military organization c. AD 400. After the departure of Alaric with his Gothic army in 407, control was quickly restored. Forts were built in the interior, behind the *limes*, equal in quality and sophistication to the standards exemplified in the late 3rd century defences on the Danube. Supervision, if not full protection, was exercised by new towers along the right bank of the Danube and by reinstating the inter-provincial organization of military supply (*annona*) which still functioned as late as the 430's.

Nevertheless, there were remarkable changes in the internal arrangement and structure of buildings c. AD 400. In former auxiliary forts and in newly built fortifications, mortar was not used, except sparingly, and brick very rarely. Walls were of roughly hewn stone and earth, the superstructure of mudbrick. In the new fort of Dichin, there was no *principia*, but two storied 'barracks', almost certainly for families, not regular *contubernia*. At Dobri Dyal, another fort was built c. 400. The impressive defences on top of a hill were of high quality (though they lacked towers, its walls supported on the outside by buttresses). No signs here of administrative buildings but large buildings, in only one half of the site, regularly bonded into a series of massive earth and stone revetments, creating terraces running around the inside of the defences.

It will be argued that these developments mark a distinct break, introduced c. 400, and that, although some essential characteristics of organization survived, the role of fort garrisons and their composition had undergone profound change.

The entire system collapsed in the late 440's when effective Byzantine control was lost for over 50 years. What emerged in the late 5th and 6th century was a very different form of defence and social order, deserving of consideration but beyond the scope of this contribution.

Hristo Preshlenov

**Untersuchungen der frühbyzantinischen Verteidigungslinie
im östlichen Haimos-Gebirge (Eminska planina)**

Infolge der administrativ-territorialen Reformen Diokletians und Konstantins erweist sich die Pontosküste Moesia inferioris und Haimimontos an den nordöstlichen Zugängen zur neuen Hauptstadt *Constantinopolis*. Das gut gepflegte Wegenetz verwandelt die Region in einen bevorzugten Korridor für den Durchzug der Militäreinheiten zum *Limes* an der Unteren Donau, aber auch für die Nomadenstämme auf der Landroute von der osteuropäischen Steppe bis in den Mittelmeerraum. Dieser Umstand liess den Aufbau eines tief gelegenen Verteidigungssystems, das der natürlichen geographischen Scheide, dem Haimos-Gebirge folgte, sowie die Erneuerung der Befestigungseinrichtungen der Siedlungen in der Region. Die am rechten Ufer des Dvoinica-Flusses zwischen Obzor und Panitsovo errichtete Festungsmauer verwandelt sich an manchen Teilen in Erwall mit eingebauten steinernen Türmen. Mit ihr sind konstruktiv verbunden kleine Festungen oder sie ragenen vor ihrer Front hinaus, sowie Siedlungen, wo das Leben in Friedenszeiten organisiert war. Sie bildeten de facto die Festungslinie im östlichen Teil des Haimos zwischen den beiden strategischen Transportkorridoren durch den Pomorie- und den Djulino-Paß. Die letzteren verbanden die regionalen Zentren südlich und nördlich des Gebirges – entsprechend *Anchialos* und *Mesembria* – mit *Odessos* und *Marcianopolis*.

Samuel Provost

Retour à *Abritus* : pour une relecture historique et archéologique du site

Au regard de l'importance de ses vestiges archéologiques, le site fortifié d'*Abritus* et son agglomération, en Mésie inférieure, demeurent relativement mal connus : si les grandes fouilles menées sous la direction de T. Ivanov entre 1953 et 1978 ont apporté des résultats considérables, à commencer par la preuve épigraphique définitive de l'identification du site, ils n'ont pas permis d'éclairer complètement la nature de l'établissement aux différentes périodes de sa longue histoire qui s'étend jusqu'au X^e s.

Les publications de T. Ivanov, au début des années 1980, ont en effet avant tout concerné les fortifications d'*Abritus*, qui figurent depuis dans les exemples les plus fréquemment cités d'architecture militaire romaine des III-IV^e s. D'autres édifices mis au jour, comme la grande « maison à péristyle VII », ont aussi attiré l'attention des spécialistes d'architecture de l'Antiquité tardive. Mais probablement dans l'attente de travaux ultérieurs et d'une publication complète des résultats, plusieurs édifices dégagés (notamment les n^o X et XII dans la nomenclature de T. Ivanov) n'ont fait l'objet que d'hypothèses et d'interprétations partielles.

À la lumière des découvertes archéologiques réalisées, pendant les trois dernières décennies, sur des sites comparables, dans les provinces balkaniques et plus généralement dans l'Empire romain tardif, il peut être intéressant de réexaminer ce dossier.

Dans la perspective d'un nouveau projet de recherche sur le site et sa région, nous nous proposons donc de dresser un nouveau bilan de son apport archéologique, en insistant particulièrement sur les périodes tardives d'occupation.

Ivan Radman-Livaja
Vlatka Vukelić

Roman Military Inscriptions from *Siscia*: An Overview

The town and subsequently colony of *Siscia* was one of the major Roman military bases in the northern *Illyricum* in Julio-Claudian times but even after the departure of the IX legion, an auxilliary garrison most likely stayed in place for several decades, till the Flavian period. Although it would seem that there was no permanent garrison from the late 1st till the mid 3rd century AD, *Siscia* remained an attractive place for veteran settlers as well as a beneficiary post and a small naval base. It would thus seem that the town had never been entirely devoid of military presence. It should be pointed out that most inscriptions from *Siscia* related to the military have been published but an overview presenting them in a synthetic and analytic manner has never been done despite the fact that such a study is long overdue. This paper aims to present this epigraphic evidence as thoroughly as possible, in order to get a clearer picture of army units which were garrisoned in *Siscia* for longer or shorter periods of time, as well as of individual soldiers and veterans who happened to stay in *Siscia* for whatever reason.

Ján Rajtár

Der Fall des Holz-Erde-Lagers von Iža

Das Lager von Iža liegt am nordpannonischen Limesabschnitt gegenüber von Brigetio direkt am linken Donauufer. Es diente als vorgeschobenes Brückenkopfkastell dieses Legionslagers.

Unter den mächtigen Schichten des Steinkastells wurden hier erhebliche Teile einer früheren Bauperiode entdeckt. Exakten Ausmaße dieses Holz-Erde-Lagers sind nicht bekannt, doch ist eine Größe von etwa 3 ha sicher anzunehmen. Von seiner Umwehrung hat man den Verlauf des doppelten Spitzgrabens im Norden festgestellt. Im Süden konnten von der Innenbebauung bislang Teile von 11 aus ungebrannten Lehmziegeln erbauten Mannschaftsbaracken freigelegt werden. Ihre Reste waren von einer Planierschicht bedeckt, die diese Befunde klar von den jüngeren Schichten des Steinkastells trennte. Im Bereich aller Baracken wie auch in ihrem Umkreis erfasste man ausgeprägte Zerstörungsspuren, die auf eine plötzliche Katastrophe im gesamten Lagerareal hinweisen. Aufgrund der Münzfunde – zwei jüngste Prägungen von Mark Aurel, – kann man den Untergang des Lagers verlässlich in das Jahr 179 n. Chr. datieren. Es ist sehr wahrscheinlich, dass das Lager bei einem überraschenden germanischen Angriff zerstört wurde.

Der Fall des Holz-Erde-Lagers von Iža zeigt deutlich, dass die Lage an den nordpannonischen Donaugrenzen noch im Jahre 179 n. Chr., während der zweiten Phase der Markomannenkriege, äußerst kritisch war. Die entscheidende Wende in diesem langjährigen Konflikt mit den Markomannen und Quaden brachte erst die massive römische Offensive und Okkupation ihrer Stammesgebiete in den Jahren 179/180 n. Chr.

Michel Reddé

L'*aedes* du *praesidium* de *Xeron Pelagos* (Égypte)

Les fouilles menées en janvier 2012 à Wadi Gerf (*Xeron pelagos*) dans l'un des *praesidia* du désert oriental d'Égypte, sur la piste de Bérénice, ont révélé une nouvelle *aedes* sans doute attribuable au début du 3^e siècle, avec des aménagements bien conservés. C'est la troisième fois qu'on observe, sur cette route caravanière, le déplacement topographique de l'*aedes* à cette époque, et sa transformation architecturale. Dans les deux *praesidia* voisins et contemporains de *Didymoi* et de *Dios*, les aménagements et le matériel traduisent la célébration du culte de *Zeus Helios Megas Sarapis*, mais les dispositifs cultuels ne sont absolument pas identiques d'un site à l'autre. À *Xeron Pelagos* on observe encore un troisième exemple, totalement différent, ce qui montre la variété architecturale de ces chapelles au sein d'un même milieu militaire et religieux.

Anna-Katharina Rieger

**Zawiyet el Agdab – An Unknown Roman Fortress in Egypt
in the Context of the Roman Saharian Border**

Recently a Roman fortress was discovered in ancient Marmarica in the semi-arid plains south of the Mediterranean coast close to *Sollum*. First reconnaissance surveys at the small “*tetrapyrgos*” point to ancient phases of use from 3rd to 6th century AD.

Situated between Nile Valley and Cyrenaica the fortress sheds light on the concept of the Saharian border of the Roman Empire, of which little is known in the eastern Libyan Desert. Egypt itself is fortified along the Nile, along important routes and in the Oases. West of the Roman camp of el-Burdan that marks the western border of the Delta, until the Gebel Akhdar only a small number of military structures of Roman Imperial times are known in written or archaeological sources (*Paraitonion*, *Katabathmos megas*, *Antipyrgos*, *Darnis*). South of the Mediterranean coast there are no traces of military strongholds in the eastern Libyan Desert. However, the southern frontier of the Roman Empire is usually given at the height of Siwa. Even though Roman influence reached this oasis, military manifestation of a frontier are found only further north.

The paper seeks to interpret the new building as part of the Saharian frontier zone. Since the positions of the known military structures coincide with the line where desert touches the Mediterranean coast with its Graeco-Roman urban culture, the question has to be addressed, what kind of frontier we are confronted with and if the desert regions were perceived as part of the Empire. A comparison with the layout of desert frontiers in the eastern provinces with *limites* marked by a dense chain of fortresses and the *limes Tripolitanus* will be drawn, taking account of different regional exigencies and external threats which influence the concepts of fortification and frontier.

Renate Rosenthal-Heginbottom

**The Kilnworks of the *Legio Decima Fretensis* in Jerusalem:
Pottery Production and Distribution**

On the western approach to the ancient city of Jerusalem near the International Convention Center kilnworks were established by the Roman military after 70 CE, taking over Jewish pottery workshops active since the middle of the second century BCE. Besides roof-tiles, bricks and pipes, many with stamps of the Tenth Legion, a great variety of tableware, lamps and utilitarian vessels were manufactured from the clays and soils of the nearby Moza formation. Within the city a large 'dump' was recently unearthed which yielded much evidence for the local ceramic production. Both assemblages were analysed petrographically. Comparing the finds from the kiln site and the city dump it appears that an earlier and later phase of production is represented, with the Second Jewish Revolt (132-135 CE) forming the chronological division. The presentation will focus on the types fulfilling the characteristics of 'military style'. Fruitful insights can be gained about changes in the cultural setting in Jerusalem after the dramatic political upheaval in 70 CE. The stationing of military units led to the establishment of a settlement of soldiers' dependants, of merchants and artisans, though at the beginning Jerusalem was not a colony of discharged soldiers (as opposed to Emmaus where 800 veterans were settled). Locations with a fair amount of 'military' pottery define the social identity of the dwellers as non-native and foreign. With the legionary pottery now clearly defined its distribution in the Jerusalem area can be better assessed.

Alan Rushworth

Chieftains, Officers or Gentlemen? Tribal Elites in the North African Frontier Zone

This paper focuses on the tribal elites – *optimates* and *principes* – in the province of *Mauretania Caesariensis* during the later Roman empire, examining their interaction with the imperial state, and specifically its military authorities.

Two main case studies are examined. The first comprises a group of Moorish landowners whose estates (*praedia*) can be identified in valleys of the western Ouarsenis on the basis of epigraphic and archaeological evidence. Their distinctive fortified residences, or *castella*, have in the past been misinterpreted as components of a *limes*. Although in some respects conventional landowners, these individuals were probably still enmeshed in a tribalised environment, acting as ‘big men’, maintaining a clientage of poorer tribesmen who may have served as tenants and labourers on their estates.

The second is concerned with the house of Nubel, the Moorish magnate well-known from Ammianus Marcellinus’ description of the revolt of Nubel’s son, Firmus. It is argued that Nubel was not simply a Moorish chieftain. Instead he cultivated wide-ranging links with numerous tribes, acting as an intermediary between the imperial authorities and Moorish tribal communities, a role which made him invaluable to the military administration. Finally attention is drawn to other, more typical *optimates*, embedded within a single tribal grouping, who emerge from Ammianus’ account, enabling us to see how such lesser figures interacted with the Roman state and occasionally played a role on the wider stage, men such as Masilla, a chief of the Mazices, who was instrumental in bringing about the final demise of Firmus himself.

*Suram Sakania***Cult Constructions on the Pontic *Limes* in Abkhazia**

Early Christian cult monuments in Abkhazia are more often met nearby or inside of the defensive constructions in which Roman (and later Byzantine) garrisons were placed. The best known early defensive constructions are *Pitiosus-Pitsunda* and *Sebastopolis-Sukhum*. The presence of such fortifications is possible in other ancient coastal settlements such as *Gudaa-Ziganeis*, *Ochamchira-Gyenos*, *Gagra-Nitica*, *Tsebelda-Tzibile* and *Hashupsa*. Remnants of early Christian temples have been found at these sites.

A new spiritual and religious culture penetrated into the territory of Abkhazia due to Christ's disciples. Andrew the First-called and Simon the Canaanite, and later the Apostle Matthew, all were believed to have preached here. Christian beliefs among the local population may have been spread by former soldiers who had served in Egypt in the *Ala Prima Abasgorum*, which protected the southern boundaries of the Roman empire.

The earliest Christian temples in Abkhazia are found in the old settlement of *Pitiosus-Pitsunda*, including three from the late antique period. The most ancient, and simplest in form and design, is temple no. 1 which has length of 26.2 m, and width of 11.3 m. This temple faces east, and its apse is slightly oval, merging into longitudinal walls. In this temple bishop Stratophilus of Pitiosus, a participant in the First Ecumenical Nicene Council of AD 325, may have served. This temple was destroyed by fire in the middle of the 4th century. On its site the townspeople constructed a new temple which in its size exceeded the previous one. Unlike the old temple this had three naves with narthex and baptistery, a mosaic floor and a pentahedral dissymmetric apse. The temple is dated to the 4th – 5th centuries, and after a fire in the 5th century a third temple in classical style, with a three naves basilica with narthex and a pentahedral apse, was erected on the same site. This had length of 28.4 m, and width of 14.6 m. After damage in the 6th century, on the west side a fourth temple with one nave, a wide narthex and a trihedral apse was attached to it. In the territory of *Pitiosus* there were more temples, and among them of great interest is a double temple from the 6th century with two pentahedral apses, which is unique in Abkhazia.

Additional early temples are listed as being at different stages of ruin in Abkhazia: *Gyenos-Ochamchira* (5th c.), *Sebastopolis-Sukhum* (4th-5th c.), *Nitica-Gagra* (5th-6th c.), *Tzibile* (6th c.), *Ziganeis-Gudaa* (5th c.), *Hashupsa* (5th-6th c.).

Mirjana Sanader

The Roman Legionary Fortress at *Tilurium* – 15 Years of Archaeological Research

The legionary fortress at *Tilurium* is one of two known legionary fortresses situated in the Roman province of Dalmatia. According to Pliny (N.H. III, 142) the fortress was constructed on the location of a well-placed and strategic, former Illyrian hill fort. The site is today situated within the modern village of Gardun nearby the small town of Trilj and 30 kilometers into the hinterland of the province's capital *Salona*.

The importance of the fortress at *Tilurium* had been very well documented in the scientific literature, although archaeological excavations had never been undertaken there before the current project. The reason for such a great interest in the site is that it has yielded more than a hundred inscriptions, mostly on stelae, raised for the legionaries of the Seventh legion. Despite the great interest of experts in *Tilurium* and its extraordinary epigraphic sources, answers to some important questions had not been established. These primarily concerned the question of the fortress' foundation date (and therefore depended on the deployment of Roman legionary troops during the early Principate in Illyricum). In addition, the parameters of the camp and its precise position on the hill fort were still unknown.

In order to establish the chronology of its construction and its stratigraphic context, archaeological excavations at *Tilurium* started in 1997.

General results of the past 15 seasons of excavations reveal that the fortress was built on the north-eastern part of the plateau which rises above the right bank of the Cetina River and covers an area of 12 ha. It was built of stone with the extensive use of timber. Within the ramparts (partly discovered) are imposing remains of Roman camp architecture (military barracks, water cistern, water canal and drain), all of them associated with ceramics, glass, floor mosaic and minor metal objects – mostly military equipment and coins. Based on the analysis of architecture and finds it can be concluded that the camp was established in the early decades of the Principate. After *legio VII* left the fortress in the period of the mid-1st century AD it had been used by smaller military units. They used – so for now it seems – only a part of the fortress. The military abandoned *Tilurium* not later than the mid-3rd century. However, the fortress area then saw some minor activities like late antique burials.

Claudia Sarge

Römische Bronzestatuen am *Limes* und im Hinterland in den Provinzen *Germania Inferior*, *Germania Superior* und *Belgica*

Fragmente von Bronzestatuen, häufig bereits vor langer Zeit entdeckt und nur wenig bekannt, wirken auf den ersten Blick oft unspektakulär. In einer Kooperation arbeiten das Archäologische Landesmuseum Baden-Württemberg, das LVR-LandesMuseum Bonn und das Institut für Archäologische Wissenschaften, Abt. II der Goethe-Universität Frankfurt a. M. in einem Forschungsprojekt erstmals systematisch alle Bronzestatuenfragmente von der militärisch geprägten Grenzlinie bis zu den zivilen Siedlungen des „Hinterlandes“ auf. In der Kombination aus archäologisch-historischen und archäometrischen Untersuchungsmethoden stehen, abgesehen von Deutung und Rekonstruktion der ursprünglichen Statuen, insbesondere Fragen zu Aufstellungsorten, zur Funktion der Bildnisse in militärischen wie zivilen Kontexten, sowie den möglichen Auftraggebern im Zentrum der Untersuchungen. Auch Zeitpunkt und Art der Zerstörung werden an den Fragmenten untersucht, weiterhin der Umgang mit den Statuen bzw. Statuenresten etwa durch plündernde Germanen.

Einen weiteren Schwerpunkt bilden herstellungstechnischen sowie archäometrischen Untersuchungen der Bronzen. Hier stehen vor allem Fragen zu den Produktionstechniken und möglichen Produktionsorten im Mittelpunkt des Interesses. Dabei werden chronologische und regionale Gemeinsamkeiten bzw. Unterschiede bei der Herstellung von Großbronzen herausgearbeitet.

Tadeusz Sarnowski

**Legionary Fortress at *Novae* in Lower Moesia.
Recent Work *per lineam munitio***

The recent excavation campaigns along the defences at *Novae* were concentrated on the east and north fronts of the fortress. The excavations consisted mostly of completing and recording the old trenches opened still in the 1960s until 1990s by the Polish and Bulgarian teams. New details of the ground plan of the earth-and timber defensive system of Claudian-Neronian date (*legio VIII Augusta*) in existence under the Flavians (*legio I Italica*) until the early 2nd century AD with an earthen rampart, sloping ramp (*ascensus*), a V-shaped ditch and two interval towers have been detected. The excavated areas have also revealed some components of the Trajanic stone defensive system (two about 10 m long sections of the defensive wall, one corner and three interval towers abutting against the rear side of the northern and eastern curtain walls). On the basis of new stratigraphical observations, made mostly in the northern *intervallum*, it is possible to propose not only a modified and more detailed picture of the history of the *Novae* defences but also to reconstruct the entire building process from concept to completion and to understand better subsequent stages of rebuilding. Based on precise measurements and their archaeological interpretation are three-dimensional virtual reconstructions created on the computer.

Eberhard Sauer
Hamid Omrani Rekavandi

**Innovation at Persia's Frontiers:
Sasanian Campaign Bases and Defensive Barriers**

Vegetius (1.21, 3.10) laments that the Late Roman army no longer built marching camps whilst postulating that the Persians had copied doing so from the Romans. The first of these claims is consistent with the archaeological evidence, the second only in part. Rectangular compounds, each of c. 40 ha interior size, have recently been found in the northern borderlands of the Sasanian Empire. Heavily fortified, of standardised design, but lacking substantial buildings in the interior, they are best explained as temporary campaign bases of the Persian field army, as also described in literature. In one of them rectangular enclosures in neat rows have been detected, the remains of a military tent city. Being of much greater proportions than any fortresses in the Late Roman World, they are testimonies for a remarkably strong and well-disciplined Sasanian army. Vegetius is right that the Persian army built temporary (and permanent) military compounds, but the inspiration did not come from the west. Neither they nor the contemporary 5th/6th-century Gorgan Wall, 200 km long and with over 30 forts, are copied from prototypes elsewhere, being of distinctly independent design and unmatched in dimensions. The evidence emerging from a recent joint project between the Iranian Cultural Heritage and Tourism Organisation and the Universities of Edinburgh and Durham suggests that in Late Antiquity the Sasanian army had gone in the lead in terms of organisational abilities, innovation and resourcefulness.

Alfred Schäfer

Neue Forschungen zum spätantiken Kastell *Divitia*

In den Jahren 2010 und 2011 unternahm das Römisch-Germanische Museum mehrmonatige Rettungsgrabungen am Kennedy-Ufer in Köln-Deutz. Am Ort liegt das spätromische Kastell *Divitia*, das durch eine feste Brücke mit der linksrheinischen Kolonie (CCAA) verbunden war. Das Brückenkopfkastell war Teil der Sicherung der römischen Reichsgrenze unter Kaiser Constantin d. Gr. zu Beginn des 4. Jahrhunderts n. Chr. Anlässlich der jüngsten Baumaßnahmen konnten neue Erkenntnisse zur spätromischen Befestigung und Innenbebauung des Lagers gewonnen werden. Der vorliegende Beitrag konzentriert sich auf drei thematische Schwerpunkte:

1. Vorgestellt werden die nördlichen Türme und Kurtinen des Kastells. Bestandteil der modernen Uferbefestigung ist der Unterbau des nordwestlichen Eckturms. In den Kellern des ehemaligen Benediktinerklosters St. Heribert sind Abschnitte des aufgehenden römischen Mauerwerks heute noch zugänglich. Diese Kastellmauern wurden erstmals fotografisch dokumentiert, fotogrammetrisch aufgenommen und mit Hilfe eines 3D-Scanners vermessen.
2. Im südlichen Bereich des Kastells wurde ein Teilstück eines Schürkanals erfasst. Die ostwestliche Ausrichtung und die solide Bauweise der Kanalwandung werfen die Frage auf, ob es sich um ein bauliches Zeugnis einer Fußbodenheizung oder ein Praefurnium einer Bäderanlage handelt.
3. Der dritte thematische Schwerpunkt widmet sich dem Westtor des Kastells *Divitia*, das in der ersten Hälfte des 13. Jahrhunderts durch einen neuen Wehrturm beherrscht worden ist. Anhand vergleichbarer Fallbeispiele wird die Bedeutung römischer Toranlagen für die Standortwahl mittelalterliche Wehrtürme erörtert.

Franz Schafranski

Importance of the EU Large-Scale Demonstrator LIMES for the Development of the European Limes Regions

LIMES is a demonstration project under the “European Mobile and Mobility Industries Alliance” (EMMIA) of the European Commission, Directorate General “Enterprise and Industry”. EMMIA is a cross-sectoral initiative which aims to promote new information and communication technologies in Europe.

New mobile technologies and applications change the tourism sector. These innovations help to create new ways of presenting cultural heritage without compromising it.

LIMES stands for “Large Scale and Innovative Mobile Services for European Culture Tourism in Rural Areas”, i.e. it is a broad approach to promote and develop innovative mobile services for the cultural tourism in rural areas. The approach is developed and implemented by using the example of the ancient *limes*. In the LIMES action partners from Bulgaria, Austria and Germany work together. The “Advisory Board” represents the other seven European countries along the Limes.

LIMES will

- promote the European identity;
- connect touristic sites along the Roman limes;
- create a LIMES App, which offers information for tourists along the historical border;
- help businesses to create new companies and gain additional employment and income opportunities.

As it is typical for a bottom-up initiative stakeholders from politics, economy, local society and culture (e.g. archeology) are included to run the project.

For more information about the EU demonstration project LIMES:

www.limes-mobile.eu

www.facebook.com/limesblog

www.mobilise-europe.eu

Dirk Schmitz

**Die Aussagefähigkeit von Ziegeln mit Kohortenstempeln
auf dem Areal der *Colonia Ulpia Traiana* (Xanten)**

Die *Colonia Ulpia Traiana* (Xanten) war nach Köln die zweite Siedlung in der Provinz Niedergermanien mit dem Status einer Colonia. Um 100 n. Chr. wurde die Siedlung am Rhein von Kaiser Traian erhöht. Eine Besonderheit war, dass in der Nähe der Siedlung weiterhin ein Legionslager Bestand hatte.

Der Aufbau der *Colonia Ulpia Traiana* wurde von Legionen, Alen, Kohorten und der Flotte gemeinschaftlich unterstützt, wie die bekannten Inschriften aus dem Brohltal bezeugen. Der Vortrag beschäftigt sich mit Baukeramik, die von Auxiliareinheiten produziert und auf dem Areal der *Colonia Ulpia Traiana* bei Ausgrabungen gefunden wurden. Insgesamt handelt es sich um 35, zumeist bislang unpublizierte Exemplare, ein Vielfaches von dem, was aus der Hauptstadt *Colonia Claudia Ara Agrippinensium* bekannt ist. Acht unterschiedliche Auxiliarkohorten konnten unter den Produzenten festgestellt werden.

Das Thema des Vortrages wird sein, welche Aussagen diese gestempelten Ziegel zum einen für den Fundplatz Xanten, zum anderen für die Dislokation der jeweiligen Einheit zulassen.

Andreas Schwarcz

**Koexistenz im Untergang. Das Leben mit den Barbaren
am norischen *Limes* im 5. Jahrhundert**

Der norische Donaulimes existierte bis in die zweite Hälfte des 5. Jahrhunderts nach Christus. Hoch aufragende Monumente, mächtige Türme und Stadttore, Wachtürme und spätantike Burgen sind materielle Zeugnisse seiner letzten spätantiken Ausbauphase. Aber auch das literarische Zeugnis der *Vita Severini* gibt uns ein eindrucksvolles Bild von Leben an der Grenze und von den Beziehungen der Provinzialbevölkerung zu den sie umgebenden und mit ihnen zusammenlebenden Barbaren. Die *Vita* kennt noch römische Festungsbesatzungen, bis deren Sold ausbleibt und unzuverlässig, in anderen Kastellen stationierte Föderateneinheiten, bis schließlich das Foederatenkönigreich der Rugier weitgehend die politische Kontrolle übernimmt. Die *Vita* schildert auch die Entwicklung einer politischen und ökonomischen Koexistenz speziell mit diesem Foederatenkönigreich, die durchaus spannungsgeladen war. Aber auch die Beziehungen zu anderen Barbaren bestimmten das Leben. Sueben und Ostgoten versuchten ebenfalls, die Römerstädte als ökonomische Basis zu nutzen und Angriffe der Eruler bedrohten ihre physische Existenz. Schließlich beendete 488 n. Chr. die erzwungene Absiedlung der städtischen Führungsschichten und ihre Deportation nach Italien im Auftrag Odoakers durch seinen Bruder Hunwulf und den Comes Pierus die Geschichte des römischen Noricum.

Steven E. Sidebotham

Results of Fieldwork at *Berenike* (Red Sea Coast), Egypt 2008-2012

After a six year hiatus the *Berenike* Project resumed survey and excavations at this Ptolemaic-Roman Red Sea *emporium* under the aegis of the University of Delaware, USA (co-director: S.E. Sidebotham) and the Polish Centre of Mediterranean Archaeology, University of Warsaw (co-director: I. Zych). Between 2009 and 2012 the project also conducted survey and excavations at a Neolithic or Bronze Age cattle cemetery and continued surveys of the Eastern Desert. Five seasons of fieldwork at *Berenike* itself concentrated on Ptolemaic (third-second century BC), early (first century AD) and late Roman (fifth century AD) trash deposits, the Ptolemaic industrial and military area, and the early Roman harbor (including a late Roman era temple located there). Geomagnetic surveying of subterranean features has now been completed for about 60-70% of the site; analysis of the results has allowed for more accurate placement of trenches. Geological coring has produced some evidence for the location of the city's harbors and shore lines at various times in its eight century history.

Excavations recorded several hundred ostraka dealing with the Roman army's involvement in the procurement of fresh water for the city. Papyri included private letters. A shaped and pierced wooden stick with writing in Greek and a Semitic language was, likely, a tag affixed to some incoming cargo. Fragments of one or more elephant teeth from the Ptolemaic area indicate the presence of at least one pachyderm at the site at that time. Numerous artifacts and ecofacts attest extensive contacts between India, South Arabia (via the Indian Ocean Hadramauti port of Qana') and East Africa on the one hand and *Berenike* on the other throughout its five and a half century Roman occupation. A graffito from early Roman contexts recorded the name of the royal palace at Shabwa, capital of the pre-Islamic South Arabian kingdom of Hadramaut, which arrived via the port of Qana' as did the documentation of quantities of frankincense and South Arabian made pottery. Indian made textiles, beads and ceramics reinforced evidence procured from our earlier excavations of extensive contacts between *Berenike* and India. Axumite sherds documented contacts with that African kingdom, especially in late Roman times.

Cedar ship timbers joined using the mortise-and-tenon construction technique, substantial (13 m long) lengths of rope 6-6.5 cm in diameter, fragments of sheets of lead used to sheath the hulls of merchant ships, brailing rings and vesicular basalt ships' ballast reflected activities in the harbor in the early Roman period. In an area of the early Roman harbor excavations recorded an unusual rectilinear shaped ashlar built depression filled with both early and late Roman material including an inscription of Domitian. Adjacent to this is a late Roman era temple, which contained an inscription of Trajan, a terracotta incense burner, stone temple pools, cowry shells used for prognostication, painted ostrich egg shell fragments, South Arabian style altars and a bronze bull's head. This temple seems to have celebrated multiple cults.

Most surveying in the Eastern Desert concentrated on the emerald mining area of ancient Mons Smaragdus where the project continued to draw detailed plans of three of the Roman era emerald mining areas: Middle Sikait, North Sikait and Nugrus. Survey and initiation of excavations at a Neolithic or Bronze Age cattle cemetery in Wadi Khashab has parallels in Egypt's Western Desert and in Sudan.

Jonas H. Sigurdsson

Late Roman Influences in Germanic Artwork

On the basis of ornamented artifacts produced in the fifth century AD, both north and south of the *limes* border, there is evidence of an interaction between craftsmen from the Germanic tribes and the Roman Empire. The interaction is visible in the chosen motifs, designs and methods of production. This fact has been noted by several scholars, for example the similarities between the motifs on the Roman coins and Germanic gold bracteates. In this paper focus will be on the similarities between provincial Roman military garniture and the Germanic fibulae.

In Germania, both the imported Roman artifacts as well as the locally produced counterparts are associated with high social standing. The Roman Empire is an important source of inspiration for the independent Germanic animal style artwork.

C. Sebastian Sommer

***Legio III Augusta and a New Line of the Eastern Raetian Limes
in the Middle of the 3rd Century***

For a long time the “*burgus*” of Burgsalach in the middle of the Raetian *Limes* has puzzled researchers with its unique ground plan and position behind the line of the *limes* on the plateau of the Frankonian Alb. The layouts of the gate as well as the central courtyard have triggered assumptions that it was erected by soldiers of the *Legio III Augusta* which was disbanded in AD 238 under Gordian III.

In this paper it is argued that the “*burgus*” is part of a series of watch towers erected on the by-passing road coming from the fort of Weißenburg and leading in a perfectly straight line to the fort of Pfünz and beyond to Kösching. Arguments are presented that these towers cannot be the remains of an early *limes* in Raetia – as has been assumed – but that, together with the “*burgus*”, they constitute a late correction of the eastern Raetian *Limes*.

C. Sebastian Sommer
David J. Breeze

**Frontiers of the Roman Empire and the Koblenz Declaration,
Implications for the Future**

An international serial World Heritage is a complicated matter. Nomination files, which have to be approved by the existing member States Parties, heritage questions concerning a growing number of legal systems, management issues which need coordination across the countries and unanimous responses on UNESCO/ICOMOS requests are requirements which need specific attention now and in the future. The relevance to the Congress is that the creation of a World Heritage Site requires the preparation of a management plan and this document must include a research strategy for the Site, as is the value of the World Heritage Site status for raising money to undertake research. In addition to the aspects all states must deal with in “ordinary” national World Heritage Sites “our” Frontiers of the Roman Empire pose a number of challenges, but create great opportunities as well.

This session’s aim is to establish a platform of exchange for all those who are already involved with the administration of the WHS FRE and for those who are considering joining the FRE. For the latter, “how to” information will be provided about the process of preparing a nomination and the phases following nomination. The idea is to promote the fascination of this unique enterprise outside the small circle of the Bratislava Group. Perhaps the session can be installed as a “standing feature” for future Limes Congresses.

Sue Stallibrass

Rethinking Food Supply Systems

The Roman frontier in Britain concentrated a large number of military personnel into a very short corridor of land. The soldiers required large quantities of foodstuffs and livestock, but the local area was too small to produce adequate supplies. Like other resources, food supplies came from a range of locations. Some of the potential source areas lay within the empire, some were beyond the military frontier, and some were in areas that changed between the two. This paper looks at new data on plant and animal remains from sites in northern England and southern Scotland, in the region of Hadrian's Wall (part of the Frontiers of the Roman Empire World Heritage Site). It considers how the food resources may have been produced, who produced them and where they could be produced. It also considers how supplies might have reached the soldiers living in the forts, and the people living in the *vici* outside the forts. The paper will emphasise the variability of the evidence. The landscape and settlement evidence indicates that there were significant differences between geographical areas. This is particularly marked when western Britain is compared to eastern Britain. Comparable differences can be observed in cultural material and in post-Roman ethnic and political entities.

Eva Steigberger

**Syrian Deities, the Army and the Danubian *Limes*. The Case Study
of the Sanctuary of *Iuppiter Heliopolitanus* at *Carnuntum***

The sanctuary of *Iuppiter Heliopolitanus* in the eastern area of the Carnuntine *canabae* (Austria) is the only known sanctuary of the Syrian Deities in the western provinces. We owe its exploration to rescue excavations from 1978 to 1991 that present all the difficulties connected with excavations conducted with the methodology of that period. Its research was resumed recently as part of a programme of the Institute for Studies of Ancient Culture of the Austrian Academy of Sciences.

The life span of the sanctuary covered at least three phases from the early 2nd c. to the late 3rd or the first half of the 4th c. AD. Introduced by the army at a very early stage for an Eastern cult the sanctuary developed three major building phases. Recent research clarified a building concept that shows a combination of Eastern and Western elements right from its beginning.

In my contribution I want to examine the close connection between military personal and the cult which is clearly visible in dedicatory inscriptions. Another link to the military is the extensive usage of tiles from military brickyards. Also, contexts connected with an extensive reorganization of the sanctuary in phase 3, in particular the problematic nature of this reorganization, will be examined.

Guy D. Stiebel

From Jerusalem to *Aelia Capitolina* – The Roman Point of View

Aelia Capitolina presents a key moment in the history of Jerusalem. The new *colonia* that was built over the ruins of the destroyed city re-shaped its image unrecognizably thereafter. The Roman settlement in Jerusalem is often regarded as a unique case, being a camp newly founded over the ruins of the city which preceded it, later joined by a colony that co-existed for over two centuries. Many scholars noted the local population (whether Jewish or Christian) as a major factor in the considerations of Hadrian to found *Aelia Capitolina*. I find this notion a somewhat over-simplified reading of the social and historical mechanisms involved, partly due to a common tendency to view the episodes of the destruction and the subsequent foundation through the eyes of the subjected population. Examining Hadrian's decision to re-establish the *colonia*, this lecture wishes to set the foundation of Roman Jerusalem in context, demonstrating that in fact it fits well into Roman social, political, religious and even morale frameworks and agendas.

Lynn Stoffel

**The Fort, Fortlet and Civil Settlement in Mainhardt
(Germany, Baden-Württemberg, Kreis Schwäbisch-Hall)**

The fort and fortlet of Mainhardt was part of the Obergermanische *Limes* frontier. Since the 18th century the site of modern Mainhardt has been an object of archaeological studies. The results were published in “Der obergermanisch-raetische Limes des Roemerreiches” (1909). Excavations between 1967 and 2001 revealed parts of the breastwork and internal constructions of the fort and parts of the *vicus*. Only one excavation (1975) has been carried out on the adjacent fortlet.

Partially amended by preliminary reports of excavations in the 20th century, the actual state of knowledge about the fort is still mainly that of 1909. Furthermore the fortlet was published in preliminary reports. The documentation of the civil settlement is not yet analysed.

My PhD-research aims at collecting and analysing all information of Roman Mainhardt. The several construction phases of the fort are to be clarified. The examination of the fortlet will provide more information about its function and relation to the fort. Another aspect is the analysis of the structure and development of the civil settlement.

Furthermore the strategic function of Mainhardt on the *limes* is to be clarified. Another question is whether the end of the civil settlement was coincident with the troop withdrawal. Additionally the location of the sanctuary of the *beneficarii* and the parade ground are to be identified.

The overriding question is to clarify the interaction between military and civil structures on the Upper German-Raetian *Limes*, and if in that respect any differences between the frontier lines exist.

This project is financed by a grant – aided by the Deutsche Limeskommission and the Landesamt für Denkmalpflege im Regierungspräsidium Stuttgart and supervised by the Institut für Archäologische Wissenschaften der Albert-Ludwigs-Universität Freiburg.

Eef Stoffels

Kops Plateau: A Roman Fort

The fort-like site on the Kops plateau in Nijmegen (NL) measures around 4-5 ha and is modest in size, but ambitious in respect to the quantity of finds and features it yields. It probably contains the remains of three successive Roman army camps, dating from around the time of Drusus' campaigns in 12 BC until the Batavian Revolt in 69-70 AD. Between 1986 and 1995, large-scale excavations have been carried out, during which unexpected particularities in the architectural remains and the finds assemblages were discovered, while the finds assemblages pointed to the presence of legionairs as well as various groups of auxiliaries. These first tentative hypotheses were presented at the Carnuntun Limes Congress 26 years ago. Since the archaeological analyses of the excavation results (26.000 features and 750.000 finds) were never brought to completion, the precise purpose of the fort remained elusive.

My PhD research deals with the interpretation, function and chronology of the architectural remains and infrastructure, the (changing) nature of the site, its inhabitants and its relations with and meaning for the native population in the wider area. Contextual analyses of finds assemblages lay the foundation for these interpretations. After three years the fieldplans and datasets have been digitally recreated, and it is time to unravel some of the outcomes. This paper will also discuss the methodologies that have been tried to date and assign function to features, buildings and phases, and the structuring of this vast amount of data into meaningful datasets.

Karl Strobel

Dacia, the Lower Danube and the Carpathian Basin AD 180-249

While a main focus of research is laid on the Danubian Wars of Marcus Aurelius, the long term consequences for the northern Roman frontier system are not studied with the same intensity, although they are of great importance for the history of the empire especially in the years 193-197, 213-218 and 231-249 AD. The combination of epigraphic, numismatic and archaeological evidence together with interior development of the Empire and of the imperial system will provide a better understanding of the importance of the achievements under Marcus Aurelius and Commodus.

Máté Szabó

Peaceful Pannonia? – Late Roman Villas in Military Territory

In recent years the Culture 2000 and Central Europe Danube Limes WHS programs have yielded significant results in the research of Roman remains in Hungary – primary through so-called non-destructive archaeological methods and using remote sensing, mainly aerial survey.

These programs – which created the opportunity for Hungary to prepare the World Heritage Site nomination documentation for the Hungarian section of the frontier of the Roman Empire – have provided a large amount of information about the military and civilian places of the *limes*. Beside these results, by flying over Transdanubia further aerial images had been captured inside the Province of other Roman sites.

Along the *ripa*, in the vicinity of the Late Roman fort of Tokod it was possible to observe the remains of a large Late Roman *villa* from the air. Its Late Roman dating is certain through analogies and was confirmed by the results of a former small-scale archaeological excavation.

Its closest parallel is known also from aerial photos. Beside the Late Roman inner fortress of Alsóhetény, which was connected to the Late Roman defence system of *Pannonia*, a similar *villa* was discovered in 2011. Former research on the environment of the fortress has provided contemporary finds in the area of the buildings whose function at that time was unknown.

Our non-destructive archaeological methods provide ground plans of these Late Roman villas which appear in military territory and the information of field survey and excavations can help their dating. The main question is the role what these buildings played in the history of *Pannonia*.

Milica Tapavički-Ilić

The Story of Dacian Pots and Dacian Cups

Dacian pottery is well known to anyone who ever came across Late Iron Age and Roman pottery at the Balkan part of the Danubian *Limes*. It includes two most common shapes – Dacian cups and Dacian pots.

Conical one- or two-handled cups have a simple design and even more simple fabrics. Despite their name in many typologies, they were most likely no cups at all, but lamps. They were very popular among the Dacians and also among their neighbors, like the Scordisci, who also used them as lamps.

Design of Dacian pots is not much different from the one of the cups. They were simple, cylindrical or oval, with a flat base, also of simple fabrics. During the Late Iron Age, they were not used in Dacia only, but also in the neighboring areas.

After the Roman occupation, both Dacian pots and Dacina cups continue to be used and in some cases even become parts of funeral contexts.

In this paper, an attempt shall be made to give an overview of contexts and dating in which Dacian pottery occurs throughout the Roman period at the middle Danubian *limes* and in the inland.

Lino Tavares Dias

La création de villes dans le nord-ouest de l'Hispanie, périphérie de l'Empire et «frontière atlantique», au début du deuxième siècle après J.-C.

Le Nord-Ouest de l'Hispanie a marqué l'une des périphéries de l'Empire, bordé par l'Atlantique, dont les eaux étaient si difficiles à naviguer. La recherche archéologique développée dans les dernières décennies, nous permet de reconnaître la création de villes nouvelles dans des territoires éloignés de l'empire et, selon Strabon, montagneuse et où la circulation est difficile.

Tongobriga était la ville la plus occidentale du bassin du Douro, construite dans la fin du premier siècle et le début du deuxième siècle après JC. Cette recherche interdisciplinaire réunit les domaines de l'architecture, de proportions de Vitruve, le design urbain, le projet architectural, la technique de construction, la chronologie et les matériaux archéologiques, mais aussi la recherche (biologie marine) sur l'utilisation de produits alimentaires provenant de l'Atlantique et, aussi, l'utilisation de la tomographie axiale informatisée pour analyser le contenu des sépultures.

Pour la construction de cette ville ont été appliquées les règles de la topographie, avec les meilleures techniques d'implantation des bâtiments publics et privés, construits selon les projets architecturaux de grande qualité et des techniques d'ingénierie de grande précision. Malgré le déploiement des difficiles conditions granitiques du terrain morphologiquement accidenté, la comparaison des techniques utilisées dans *Tongobriga* avec d'autres villes construites dans le monde romain indique la «transnationalité» des techniques et des politiques constructives. Cependant, nous surprend l'intelligence du déploiement urbain, strictement basée sur le «*actus quadratus*» et la qualité des projets de bâtiments, basée sur le «*passus*», donnant au site une grande qualité visible dans le forum, les thermes, le théâtre et les «*domus*» urbaines.

Imposé par la qualité de la construction et des projets, *Tongobriga*, avec une «Centurie», examine les causes sous-jacentes de l'acculturation romaine déjà dans la phase tardive et situés dans l'extrême périphérie de l'Empire, l'océan Atlantique.

*Ovidiu Tentea***Why There? The Preliminaries of Constructing the Roman Frontier in SE Dacia**

The conquest of the Dacian kingdom, doubled by the transformation of a large part of this territory in a Roman province during Trajan's reign produced major mutation on a wide area situated north to the Lower Danube. The territory analysed by this study refers in fact to the zones abandoned by emperor Hadrian between Dacia and Lower Moesia.

The present study tries to identify and explain the reasons behind such a decision which determined the site location of certain Roman forts (*castra*) in this area during Trajan's reign, namely the ones from Pietroasele, Drajna de Sus or Targsor (nowadays Prahova county, Romania). Also a special topic is the synthesis of data regarding the defensive structures bearing the mark of emperor Hadrian. In this framework will be summarised the most recent archaeological researches, as well as the epigraphic finds, but also the multidisciplinary research projects undertaken in the last years.

Ovidiu Tentea
Florian Matei-Popescu
Corina Bors
Alexandru Ratiu

**Integrating Research for Future Heritage Development:
The Roman Frontier in Romania for World Heritage (UNESCO) List**

The poster brings into attention different contemporary perspectives in regard to the Roman Frontiers, namely its section located on nowadays Romania territory. The Roman Frontiers are just a case study for a more thorough analysis focused on the actual stage of in situ preservation and protection of these archaeological vestiges, the authors emphasizing the current situation at the eastern end of it, respectively the section located in Romania. In comparison with the western and central sections of the Roman *limes*, the eastern part along the Lower Danube is rather a forgotten (illusive) monument for the cultural authorities and large public.

During the last years different Romanian researchers looked forward to a new strategy and study level by changing the perspective as far as the addressability, utility and relevance are concerned for this ancient monument. The starting point for this new approach are a series of results and products gathered by previous research-development-innovation efforts (joint projects, as well as individual investigations), proposing a new approach to an integrated management of the cultural and natural heritage resources (definition and analysis of the “site – cultural landscape – natural environment” matrix applied to a case study represented by the Roman frontier in Romania) and the elaboration of new products of national and international interest in the perspective of managing such resources as vectors for sustainable development, in accordance with EU policies and practice.

One of the main conclusions drawn by STRATEG project’s implementation was that Romanian institutions and their specialists have undertaken research on the Roman frontier and connected issues and have valorised its results at an individual level, omitting the exceptional potential of this ancient structure, at the same time a cultural and natural site of universal importance. The poster will provided basic information concerning the research data which can be used for registering in the World Heritage List (WHL) the “Romanian” sector of the Roman frontier, the exceptional defensive line precursor to a certain degree of mechanisms subsumed today to the Schengen Area. For Romania, but not only, such a direction represents a special opportunity, as the present context offers the possibility of valorising this exceptional ancient vestige at a European level.

Elizabeth Wolfram Thill

Urbanism and the Enemy: Dacian Architecture on the Column of Trajan

One of the most striking aspects of the Column of Trajan frieze is its extensive representation of Dacian architectural structures. Previous scholarship has treated the representations of Dacian architecture as nothing more than topographic markers within the frieze's narrative. I argue that the depictions of Dacian architecture on the frieze were not meant to accurately reflect actual architectural practice or topography in Dacia, but were instead intended to portray Dacian culture in an unfavorable light. On the frieze, Dacian constructions are typically wooden, strange, illogical, and frequently on fire. The more expressly urban features found in the archaeological record of Dacia, such as monumental sanctuaries and densely populated centers, are not present on the frieze, despite the fact that these would probably have been the most likely features to impress themselves on the memories of the participants in the Dacian Wars available for consult in Rome. Yet the frieze also does not employ the simple barbarian huts found on the Great Trajanic Frieze or the Column of Marcus Aurelius. Instead the Dacian architecture on the frieze seems intended to distantly reflect the architectural sophistication of the conquered Dacia, but only in the guise of a limited accomplishment of an inferior enemy, whose glory could be appropriated by Rome. The Dacian architecture on the Column of Trajan frieze thus suggests an awareness in Rome of the complexity and sophistication of indigenous Dacian architecture, as well as a desire to assert Roman superiority in the face of a new cultural threat.

Călin Timoc

Strategic Roads at the Junction of Bistra Valley with Timiș Valley and Ways of Entering the Roman Army in the Dacian Territory in Time of Trajan's Reign

A perspective on the marching steps of the Roman army forces us to accept the existence of camps built along the roads opened by Trajan's troops. The neighborhood of *Tapae* passage, near the confluence of Bistra and Timis had as a consequence of unification here the important marching columns, which crossed the path *Lederata – Arcidava – Bersobis – Aizis – Tibiscum* and who followed the corridor to the Timis – Cerna, the route: *Dierna – Ad Media – Praetorium – Ad Pannonia – Gaganis – Mascilianis – Tibiscum*.

Identification and field research of several fortifications from the Trajan's reign currently offer a perspective on the efforts of the Roman army to occupy the wild barbarian territory of the Dacians and the way they approached from a strategic military confrontation by *Tapae*, the first battle with the allies and warriors of the King Decebal.

Agnieszka Tomas

(with contribution of P. Wroniecki, M. Jaworski, M. Pisz and J. Balcerzak)

Canabae Novae (Moesia Inferior) – Topography, Administration and Inhabitants

A legionary camp, along with the accompanying civilian settlement was a homogeneous structure, both in spatial and social terms. Extramural settlements (*canabae*) emerged on public land, in a radius of Gallic leuga (2.22 km). Beyond this radius is found another settlement (*vicus*).

The camp at *Novae* was located on a plateau surrounded by hills to the east and a plain to the west. The first legion – *VIII Augusta*, came to *Novae* probably shortly after AD 46, but permanent structures were left by *Legio I Italica*, which arrived in the early 70's AD. The main part of *canabae* emerged on the western side of the fortress, although some remains were discovered also to the east. The second civil settlement (*vicus*) is located 2.5 km east of the camp, at the place “Ostrite Mogili”.

In March 2012 we began a three-year research project involving remote sensing, aerial photography and mapping of finds discovered with metal detectors. These methods are supplemented with palynological data. After a series of tests, we have decided to conduct research at first in the area located east of the camp. At the same time, the monuments related to the civilian settlers preserved in the local museum have been catalogued as supplementary information.

We hope that the complex research on *canabae* at *Novae* will bring some answers to its topography, planning and infrastructure. An important question is to determine which of the two settlements was granted municipal status and when. According to the author, it is more probable that the municipal rights were granted to *canabae* not earlier than the beginning of the 3rd century.

Domagoj Tončinić

Die Denkmäler der *Legio VII* in Dalmatien

Die *legio VII* bzw. *VII Claudia pia fidelis* hat während ihres Aufenthaltes in der römischen Provinz Dalmatien bedeutende Spuren hinterlassen, von denen bis heute zahlreiche innschriftliche Erwähnungen der Legion zeugen. Eine Studie über das Inschriftenmaterial der Legion kann auf insgesamt 86 Steindenkmälern und 16 Ziegelstempel verweisen. Hinzu kommen noch 13 wahrscheinliche Erwähnungen der Legion. Diese Denkmäler liefern interessante Hinweise über den Aufenthalt der Legion in Dalmatien, ihre Tätigkeit zu dieser Zeit und den Einfluß auf die Romanisierung der Provinz. Die Legion wird unter den Namen *leg(io) VII*, *leg(io) VII C(laudia) p(ia) f(idelis)* und *leg(io) VII Cl(audia)* erwähnt. Das älteste eindeutig datierte Denkmal stammt aus den Jahren 16./17. nach Chr., während das jüngste vor 50 nach Chr. errichtet wurde. Mit 48 % überwiegen die Denkmäler der *leg(io) VII* aus der Zeit vor 42. nach Chr. Die Denkmäler der *leg(io) VII C(laudia) p(ia) f(idelis)* aus der Zeit nach 42 sind mit 28 % vertreten. Das Inschriftenmaterial bestätigt Tätigkeiten wie Grenzziehungen, Bauarbeiten und Aufsicht über Steinbrüche, sowie Ziegelherstellung.

Die Verbreitung der Denkmäler ist auf das Gebiet in unmittelbarer Nähe der Küste beschränkt, so daß der sogenannte Dalmatinische *Limes*, die Festungskette von *Burnum – Tilurium – Bigeste*, kaum überschritten wird. Der Grossteil der Denkmäler stammt aus Tilurium, dem dalmatinischen Lager der Legion, aus der Provinzhauptstadt *Salona* und der Umgebung des Kastells *Bigeste*.

Die Denkmäler geben Aufschluß über die Herkunft der Soldaten, wobei mit 43 % Kleinasien am häufigsten vertreten ist, gefolgt von Italien mit 33 %, Gallien mit 2 % und Makedonien 9 %.

Sergey Torbatov

**The Transformations of a Roman Military Site:
The Case with Mezdra (Northern Bulgaria)**

Mezdra is a small town and important railroad station in Northern Bulgaria. There is a small rocky hill on the south-western outskirts of the town, which rises on the left bank of the Iskar river. The hill is called Kaleto ('The Fortress') because of the impressive ruins of an old fortification, whose walls still rise to a height of some 7 m on the northern side. The walled area is about 2500 square metres. The site had been intensively excavated from 1974 until 1990. In 2003 the regular excavations resumed and are still going on.

The site proved to be a multi-layer one, with rather complicated stratigraphy. The earliest habitation layer dates back to the Late Chalcolithic. After a long hiatus, the hill was brought into use as a cult place in the Early Iron Age. Then there are no traces of human presence until the 2nd century AD.

By the middle of the 2nd century, however, a strong fort was built on the hill. It is considered to have been one of the numerous fortifications of different type constructed in the reign of Emperor Antoninus Pius to control the road traffic and internal security in the Roman province of Thrace. By size, the fort is identified as a *praesidium*. The control and protection of the nearby strategic ford across the Iskar river, on the Roman road from *Oescus* to *Serdica*, must have been one of the particular tasks of its garrison. The fort was in function for a comparatively short period of time and went out of use during one of the barbarian invasions between AD 170-190.

Some time after the disaster, most probably in the early 3rd century, intensive repair and restoration works began within the fort. However, they were abruptly terminated. Instead, a small temple was built in the central part of the walled area. That temple gave rise to an important sanctuary, which spread all over the territory of the former military post, using the surviving remains of the precinct wall as *temenos*. The earliest evidence for cult practices dates back to the time of Emperor Severus Alexander. The cult infrastructure of the sanctuary during its earlier stage includes a number of hearths and primitive clay platforms used as altars. Built altars, in the form of walled spaces of different shape and size, appeared only in the second half of 3rd century. The latest coins known so far, which are surely connected with the sanctuary, date to AD 290-292, but it probably continued to function a few decades more.

By the turn of the first quarter of 4th century at the latest the pagan sanctuary definitely ceased to exist. The remains of the former Roman fort underwent major repairs. The protected area was densely built in and settled by civil population. In the first half of 5th century the fortified settlement experienced a severe calamity, which combined the effects of a natural disaster (a powerful earthquake) and a devastating enemy attack, probably by the Huns. Restoration works were undertaken only by the end of 5th or in the first half of 6th century. The defenses were considerably modified and the walled area was totally rebuilt according to a completely new plan. Probably another assault imposed a new reconstruction in the second half of 6th century. The early Byzantine fortified settlement was destroyed during the Avar-Slav invasions in the end of 6th or in the early 7th century. A few centuries later a Bulgarian medieval settlement came into being above its ruins and survived until the Pecheneg invasions in the first half of 11th century.

Bettina Tremmel

**Olfen-Sülsen and Porta Westfalica-Barkhausen:
New Augustan Military Camps in Westfalia (Germany)**

Situated about a day's march apart Haltern in the east and Oberaden in the west, the Augustan base of Olfen-Sülsen (district of Coesfeld) was discovered in 2008 on the right bank of the Lippe, the major invasion route into the heart of Germany. The fortress measures approximately 230 x 250 m and spans some 5.5 ha. The permanent camp was defended by a wall made of timber and earth, 2.2 m in width. The V-shaped ditch was at least 4.1 m wide and 1.6 m deep. The military camp is thought to have housed granaries such as the camps of Beckinghausen and Rödgen. Two stamped Arretine wares as well as more than 120 coins, which include Bronze and silver coins, indicate a peak of exploitation during the Drusus expeditions of 11-9 BC. The camp was contemporaneous with the camps at Oberaden and Beckinghausen.

In Porta Westfalica-Barkhausen (district of Minden) the remains of an early Roman marching camp were discovered in 2008 on the left bank of the river Weser. The excavations in the development area of some 3.3 ha have been completed in 2011. As only a part of the inside of the camp was excavated, no camp ditch was preserved. As internal features, 28 field-ovens could be identified, but no remains of buildings could be discovered. More than 60 coins of Late Republican and Augustan date were found. They tend to confirm the existence of at least two phases. The fibulae are dominated by seven Aucissa types. Military artefacts like shoe nails and weapons also were found. The temporary camp belongs to one or two of the various Augustan campaigns (12 BC – AD 16) in Germania.

Bettina Tremmel
Horacio González

**New Materials for Roman Military Supply in the Lippe Valley.
The Roman Amphorae from Haltern**

The Roman military camp of Haltern is one of the most important examples of the Roman military presence east of the Rhine during the Augustan period. This legionary camp lies in the west part of the river Lippe, one of the most relevant tributary rivers of the Rhine in Augustan times used as a penetration road in the so called "Germania Magna".

Among the pottery of Haltern, the amphorae took an important place as archaeological remains of the long distance commerce. The amphora studies of Haltern are based on more than 2.300 numbers of catalogue, which gives a great database for studying supply and consumption of food in the military base. Typology and macroscopic characteristics build the basis for determination of the amphora-origin. Geochemical analysis is conducted at the University of Barcelona, in order that production centres can be specified more exactly. They should give more detailed information about the production regions of the Roman Mediterranean.

The majority were containers for fish sauces, olive-oil, pickled olives, wine and fruit from all over the Roman Mediterranean. Fish sauces came from the Iberian peninsula, the southern Spanish Guadalquivir valley exported olive oil, just as pickled olives, which were also imported from southern Gaul and the Rhone valley. Wine came from northern and southern Spain, southern Gaul, Italy and Asia Minor. Dates or figs came from Egypt or Syria. The Iberian peninsula was the principal origin of the greatest part of the amphorae.

Jürgen Trumm

Vindonissa – Stand der Erforschung

Im antiken *Vindonissa* (heute: Windisch und Brugg, Kanton Aargau, Schweiz) fanden in den letzten beiden Jahrzehnten alljährlich grossflächige archäologische Ausgrabungen statt. Seit dem letzten Forschungsüberblick, 1998 publiziert, hat sich unser Wissen über das einzige römische Legionslager der Schweiz daher stark vermehrt. Das Referat fasst die wichtigsten neuen Fakten zusammen und formuliert künftige Forschungsperspektiven. Der zeitliche Bogen spannt sich dabei vom spätkeltischen *oppidum* über die *castra legionis* der 13., 21. und 11. Legion zum *castrum Vindonissense* der Spätantike. Neue Erkenntnisse zur Zivilsiedlung ausserhalb des Legionslagers, zu den Gräberfeldern und Strassen runden das Referat ab.

Brian Turner

Limitless Empire: Soldiers' Origins on the Roman Funerary Altar at Adamclisi

This paper reinterprets the meaning of the so-called Roman Funerary Altar discovered not far from the more famous *Tropaeum Traiani*, near modern Adamclisi, Romania. Though only fragments of the monument remain, it is clear that the altar was dedicated to soldiers who had died fighting for Rome, and that the names and origins of the war dead (both legionaries and auxiliaries) were inscribed on its walls (CIL III 14214). Since its discovery over a century ago, scholars have been obsessed with deciphering the precise date of the monument, principally whether or not it belongs to the reign of Domitian or Trajan. Its primary purpose, as a memorial to the war dead, has rarely been questioned; nor have scholars thoroughly analyzed the purpose behind the inclusion of the soldiers' origins.

Rather than view the altar solely as a memorial to the war dead, this paper offers a systematic and comparative examination of the origins inscribed on the monument and argues that the altar served to demonstrate Roman power. The inclusion of the soldiers' origins allows viewers to recognize many of the cities, territories, and peoples that made up the Roman world. Collectively these origins could produce a mental image of Roman hegemony. For viewers along the Danube frontier, this image may have been rudimentary at best, but even in this case the array of origins listed on the altar could only serve to illustrate and reinforce the vast (even limitless) extent of the Roman Empire.

Sofie Vanhoutte

**The Late Roman Fort of Oudenburg (Belgium):
Spatial and Functional Transformations within the Fort Walls**

Archaeological research in the period autumn 2001 – spring 2005 by the Flemish Heritage Institute on the southwest corner area of the Oudenburg fort, revealed a complex sequence of five fort periods from ca AD 200 up to the beginning of the 5th century AD. Three consecutive wood and earthen forts and two stone *castella* were built on exactly the same spot, with appr. the same dimensions (except for the presumed smaller first fort). The transition to a stone defensive wall took place around AD 260 (the 4th fort period). The 5th fort period started in the 2nd quarter of the 4th century. The inner area of the southwest corner revealed throughout its occupation a remarkable spatial and functional evolution. During the four fort periods of the 3rd century this corner area was subsequently occupied by traditional soldiers' barracks, a military hospital, free-standing barracks in connection with industrial activities, and metal workshops. The occupation took once again a totally different form in the 4th century. The bath house, which first dominated this area, fell into decay later on in the 4th century, but was never totally removed. In the last quarter of the 4th century, several remarkable structures point to a non-traditional use of the fort area in which horses played an important role. Overall the detailed study of the different find assemblages yields more insight upon these structures and the activities associated with them.

Varbin Varbanov

Roman Sanctuary in *Sexaginta Prista*

During the rescue archaeological excavations at *Sexaginta Prista* in the period 2005-2010, part of a building with an apse plan was revealed. Inside it were found votive plates of the Thracian Horseman and Apollo and an altar with a dedicatory inscription to Apollo *in situ*. The building has been erected over a pit field that has functioned in the period from the 2nd century BC to the 1st century AD. No residential remains have been registered from the period. On an area of around 500 sq. m. were discovered more than 110 pits, with different in quantity and characteristics objects being placed inside them. These structures are related with the rituals of the local population – the Getae. With the settlement of the Romans here, these rituals had ceased. The Early Roman camp of *Sexaginta Prista* was constructed somewhere inwards at the mouth of the Rusenski Lom river (yet unlocalized).

The hill, however, continued to be a sacred territory for the local population during the Roman period as well. It is not by accident that a temple has been erected here, dedicated to the Thracian Horseman and Apollo. Despite that it has been partially preserved, the materials found there allow its accurate dating: from the last decades of the 2nd century AD to the 240's-250's AD. The paper observes in detail the finds discovered in the temple's area.

Dozens of pits have been revealed within the context of the temple, containing votive material. Furthermore, after the demolition of the temple in the middle of the 3rd century, new pits have been dug within its area. This last ritual activity on the hill is dated well at the very end of the 3rd century according to the coins, found in the pits. In the beginning of the 4th century, the Late Roman and Late Antique *castellum* of *Sexaginta Prista* was constructed on the hill. Over the remains of the temple (partially destroying it) was located the *Principia* of the *castellum*.

Zsolt Visy

Corpus limitis imperii Romani.
A New International Academic Program

The Roman Frontiers as a whole represent an important part of the common human heritage. The new program for the investigation of the Roman frontiers is the *Corpus limitis imperii Romani* of the Union Académique Internationale, on the first stage for the Danubian provinces. CLIR has a long-term plan for the systematic investigation, description and scientific presentation of the Roman *limes* in a unified structure. It is the first international research program for the *limes Romanus* as a whole.

In 2010 the program was exactly formulated and sent for decision to UAI. Its first conference, supported by UAI, was held in Pécs, in April 2011. 16 archaeologists from 8 countries, Austria, Slovakia, Poland, Croatia, Serbia, Romania, Bulgaria and Hungary held a two day workshop in the residence of the Pécs Commission of the Hungarian Academy of Sciences to discuss the basic questions and elements of CLIR. The decisions were formulated in a statement and sent to UAI. On the basis of earlier documents and this statement the General Assembly of UAI has adopted CLIR as its 79th international research program.

According to the statement CLIR will include:

- a) all military sites of the Roman army within and outside of the frontiers of Roman Empire together with their adjacent civil settlements and cemeteries;
- b) a scientific database by linking and cooperating with existing *limes* databases and by formulating a system for this special database;
- c) volumes of the *limes Romanus* in the given provinces according to the present boundaries as a CLIR series in a commonly agreed structure.

The lecture will give information about the present stage of the work on CLIR.

Marek Vlach

**Germanic Settlement Structure on the Territories of Middle Danube as a
Complex System of Agent-based Modelling**

Complex approach to some of fundamental problems of wide array of scientific issues of both natural sciences and humanities requires implementation of general system theory. Human societies of past, their settlement structures and dynamics sometimes show remarkable resemblances to the structure of so-called complex systems. An agent-based modelling as a thinking framework, method and analysing set of tools allows us to construct such artificial societies on basis of all available archaeological sources, estimations and existing theoretical models concerning development and overall functioning of such complex systems. The main point is not to approach and reconstruct concrete state of past reality, but to try to understand the studied system and its dynamics using various scale of reduced complexity. In this case study are considered some selected questions such as demography of Germanic populations, spatial patterns and dislocation of Germanic settlement structure or occurrence of specific events with possible impact into studied structure. Spatial scope of the modelling includes territories of Middle Danube region, where can be found significant evidences of the Roman military impact during the Marcomannic wars.

Pavlina Vladkova

Free-standing Towers at *Novae*

West of *Novae*, on the high Danube waterside, three rectangular towers are found and examined. They are situated at about 40 m from one another and at the same distance from the northwestern angle of the camp.

According to the manner of the construction and the found material, their building can be referred to the times of Trajan's and Hadrian's reigns. The end of their functioning is not earlier than the last decades of the 4th century.

The purpose of building the towers was the protection of the road along the Danube and, later, the western aqueduct of *Novae* as well.

Wouter Vos

Identifying Discharged Soldiers on the Batavian Countryside (The Netherlands)

The Dutch River Area is situated in the 'hinterland' of the *limes* of the province of *Germania inferior*. The inhabitants are known as the Batavians and their historical background is clear. It is generally accepted that large numbers were recruited for the Roman army. The impact of this recruitment is visible over time. A wide variety of consumption goods that indicate changing daily practices of the average Batavian peasant family are found in the settlements and indicate direct contact with the Roman army. Seal-boxes and *militaria*, such as weaponry and horse-gear, are the most appealing examples.

Next to this, there are more indications for military material culture on the countryside, like keys, graffiti on Samian ware and fibulae. Batavian veterans could also have introduced the porticus (and other building techniques) to their rural homeland, where it was applied in traditional farmhouse construction. The social interpretation of these porticus-farms are connected with discharged soldiers and called 'veteran farmhouses'. Stone buildings are rare in the Netherlands. They may be explained as variants of the 'veteran farmhouse' and were inhabited by discharged officers who had social networks to obtain the building materials and had wealth to buy these goods.

In short, Batavian veterans are in the center of the integration processes. They play a mediating role between the rural and military communities. One may question, however, how many veterans actually returned to the countryside and as a result how quickly this rural society underwent militarization.

Igor Vukmanić
Branko Mušič

***Ad Militare* 2010: Roman Fort Site Archaeogeophysical Survey Interpretation**

In spring 2010 geophysical research applying geoelectrical mapping and ground penetrating survey was carried out for the first time on one of the sites in Croatian part of the Danube *Limes*. The survey was conducted on the Roman fort site *Ad Militare* in Batina. The exact size and orientation of the fort have formerly not been known. However, the results clearly indicate to the first comprehensive plan of buildings with reliable military purpose along the former frontier of the Roman province of Pannonia and Roman Empire in modern Croatia.

Archaeogeophysical research was planned and executed by the experts of the Limes Office of the Archaeological Museum Osijek (Croatia) and Gearh Ltd (Slovenia) at the area of approximately 1 ha. Favorable signal to noise ratio of ground penetrating radar echoes assured good data set for detailed analysis of architecture remains, determination of their depth, level of preservation and precise layout. As a result it can be concluded that the buildings were probably constructed in the same procedure because they fit in the regular grid structure with minimal deviations.

This research allowed probable reconstruction at least of the central part of the fort, the appearance of the headquarters building (*principia*) and revealed the position of the extended “L-shaped” building which can be interpreted either as barrack (*centuria*) or as part of a larger complex (*praetorium*) occupied by the commander of the fort. On the eastern edge of the topographic elevation the remnants of the fort walls were detected.

Sonja Vuković
Mladen Jovičić

**A Passage to the Underworld? Dog Burials from the
Cemeteries of the Roman City of *Viminacium* (Serbia)**

In the course of many years of archaeological excavations of *Viminacium*'s cemeteries, among more than 14000 human graves, several dog burials were discovered. They were found in different contexts: as individual intentional burials, burials linked to human graves, scattered remains within sacrificial areas and in pits with other animals. As minor attention was paid to animal bones throughout earlier investigations of *Viminacium*, proper archaeozoological and archaeological data on this subject lacks. In this paper we study dog burials from recent excavations of *Viminacium*'s cemeteries. A small, juvenile dog was buried with two terracotta lamps beneath a human cremation grave, while an adult, medium sized dog was buried within another cremation grave. At the dump of the necropolis, two skeletons were found: of an infant small and of an adult large dog. The latter one was placed in a pit with a horse skull. The burials date back to the 2nd and 3rd century AD. Dogs, as symbols of death, were portrayed on some archaeological finds from *Viminacium*, such as terracotta lamps and funerary stelae. In Roman rituals and religion, dogs were linked to chthonic and healing gods and to the Underworld, as companions and guardians of the deceased. In this paper we link archaeozoological evidence of the studied dogs with archaeological finds from *Viminacium* and literally data on dogs in funerary contexts, in order to discuss their symbolic nature.

Klaus Wachtel

Die Geschichte der Grabung *Iatrus* – Krivina

1. Die Grabung – ein Kind der deutschen Teilung – wurde 1958 als Lehrgrabung auf der Grundlage eines Vertrages zwischen der Bulgarischen und Deutschen Akademie der Wissenschaften ins Leben gerufen. In drei Grabungskampagnen 1958 bis 1962 wurde das Ziel der Lehrgrabung erreicht. Gesamtpublikation: *Klio* 47, 1966. Dissertationen B. Böttger (Berlin 1966) und G. Gomolka (Halle-Wittenberg 1966).
2. Die Fortsetzung der Grabungstätigkeit erfolgte 1966 unter zunehmend selbständiger Leitung und Durchführung durch die deutsche Seite. Während der Kampagnen 4 bis 8 wurden von 1966 bis 1973 Stratigraphie und Chronologie des Kastells verfeinert sowie die Topographie vervollständigt. Publikation: *Iatrus – Krivina I und II* Berlin 1979 und 1982.
3. Die mit der Akademiereform von 1968/69 verbundene Gründung des Zentralinstituts für Alte Geschichte und Archäologie unter Leitung des ausgewiesenen Kenners der Slawischen Archäologie und SED-Mitglieds Joachim Herrmann führte zur Verlagerung des Forschungsschwerpunktes der Grabung hin zu den mittelalterlichen Siedlungen in und über den Ruinen des spätantiken Kastells. Die Folge davon war auch die Intensivierung der Mittelalterforschung durch ein selbständiges bulgarischen Team unter Z. Vazarova. 1977 wurden die Feldforschungen im Bereich der mittelalterlichen Siedlungsschichten, 1981 weitestgehend auch am spätantiken Kastell eingestellt. (Die deutsch-bulgarische Zusammenarbeit wurde an anderer Stelle [Carassura im Bezirk Stara Zagora] fortgesetzt. Publikationen: *Iatrus-Krivina III* 1986 (Mittelalter), *IV* 1991 und *V* 1995 (Antike).
4. Nach der deutschen Wiedervereinigung erfolgte 1992 die Wiederaufnahme der Feldarbeiten durch Vertrag zwischen der RGK des DAI und dem AIM der BAN. Bis 2002 wurden insgesamt 9 Kampagnen durchgeführt und Stratigraphie, Chronologie und Topographie des Kastells vervollständigt. Publikation: *Iatrus-Krivina VI* 2007; L. Vagalinski, *Arch. Bulgarica* 7, 2003, 43-82.
5. Außerhalb des Kastellbereichs wurden von 1997 bis 2001 im Gebiet zwischen *Sexaginta Prista* und *Novae* Prospektionen durchgeführt, deren Gesamtveröffentlichung durch Sven Conrad in Vorbereitung ist (vgl. S. Conrad, *Black Sea Studies* 4, Aarhus 2006, 309-331).

Philippa Walton

Barbaricum in Britannia?: The Fosse Way as a Frontier to Material Culture

For many years, archaeologists and ancient historians argued that the Fosse Way, the Roman road running from Exeter to Lincoln, acted as Britannia's first military frontier. Whilst such a notion has long been discarded, the work of the Portable Antiquities Scheme has demonstrated that throughout the Roman period, the material culture of the zones to the north and south of the Fosse Way was quite different. This paper will present some of these differences, concentrating particularly on patterns of coin loss and will suggest that perhaps the Fosse Way should be re-instated as a sort of virtual frontier, beyond which many aspects of Roman material culture failed to penetrate.

Walter D. Ward

The Military Garrison of Palaestina in the Late Third and Early Fourth Centuries CE

This paper examines the military garrison of the province of *Palaestina* from the late third century to the middle of the fourth century CE. The administrative borders of *Palaestina* went through several transformations in less than a century. It was enlarged during the reign of Diocletian with the addition of the Sinai and modern Jordan south of the Wadi al-Hasa. Later, it appears that the province was divided, with a new province, *Nea Arabia*, formed in the southern portion of the province, probably by Licinius. Finally, perhaps during Constantine's reign, *Nea Arabia* became part of *Palaestina* again.

Scholars have often connected these provincial changes to changes in the legionary garrison of *Palaestina*. Specifically, current consensus holds that *Legio X Fretensis* was transferred from Jerusalem to Aila during the reign of Diocletian. I argue in this paper, instead, that the transfer of the *X Fretensis* to Aila occurred during the reign of Constantine in 324-326, at the time of the transfer of *Nea Arabia* back to *Palaestina*. The evidence for this new interpretation derives from an inscription recently published from the fortress at Udruh (ancient *Augustopolis*, just east of Petra) and a re-dating of Eusebius's *Onomasticon* to the 320s, not the late third century.

The paper will conclude with an overview of the military garrison in the southern Levant throughout the provincial changes of the late third and fourth centuries as a result of this new interpretation of legionary bases.

Shlomit Weksler-Bdolah

**From Jerusalem to *Aelia Capitolina* in Light of the New Finds –
The Foundation of the Roman Colony**

Roman historians of the 2nd – 3rd centuries are all of the opinion that the city of Jerusalem was destroyed prior to its reconstruction by Hadrian. They do not name the emperor who razed it to ground, nor do they say whether this destruction happened ‘long before’ or ‘shortly prior’ to Hadrian’s new foundation. The accepted view, however, recognizes the destruction of Jerusalem with the city’s ruin in 70 CE by Titus. Following that, and for the next 60 years, it is believed, the ruins were left untouched, with only the Tenth Roman Legion stationed in the ruined city. Finally, around the year 130, Hadrian founded the smaller-sized city of *Aelia Capitolina* over the central parts of Jerusalem and granted the new city the status of a colony. The accepted view portrays Hadrian as the founder of the new city, not the destroyer of the former.

In my lecture I would like to discuss in detail the physical re-shaping of the urban topography, which took place during the transformation of the Hellenistic – Jewish city of Jerusalem into the pagan Roman colony of *Aelia Capitolina*. I strongly rely upon finds that were revealed in large-scale archaeological excavations in the northwestern part of the Western Wall plaza. There, the monumental remains of the eastern *cardo* of *Aelia Capitolina* were unearthed. The finds demonstrate the enforcement of the Roman orthogonal ‘grid’ layout, while destroying whatever was left of the Second Temple / Hellenistic city. Might it be, then, that Hadrian, after all, was the emperor who – physically and morally – “razed Jerusalem to the ground”?

Conor Whately

The Organization and Function of the Moesian Frontier from Trajan to Commodus

Although the acquisitions and conquests of the Republican period added the greatest amount of territory to the Roman Empire, this process continued from the reign of Augustus, though on a lesser scale. One such area in which there was significant expansion of the Roman *imperium* during the Principate is the lower Danube, particularly the province of Moesia, and what later became Moesia Inferior and Moesia Superior; this expansion was achieved primarily through martial means. When Trajan conquered Dacia early in the second century the frontier Moesias became, at least in part, interior provinces of the Roman Empire. Much important work in the last decade or so has been conducted on the deployment of auxiliaries during the second century AD (Holder); the auxiliary units of the Moesias (Matei-Popescu, Petolescu); and migrations (Batty), strategy (Wheeler), and war in reigns of Domitian and Trajan (Stefan). There has been less work done on the period of consolidation and transformation from the conquest of Dacia to the reign of Commodus. Thus, in this paper I want to outline the changing role of the legions and auxiliaries deployed in the Moesias in the establishment, maintenance, and control of the province, in the process delving into the much-debated issue of grand strategy. For the comparatively sparse population of the Moesias, combined with Roman uncertainty over the new provinces of Dacia, meant that the region remained heavily militarized, something of an enigma given its geographical position as an “interior” province, so to speak.

Martin Wieland

**„Another One Bites the Dust“ – Ungewöhnliche Bestattungen
in Bauchlage vom Nordwestfriedhof des römischen Köln**

Zwischen Herbst 2010 und Frühjahr 2011 konnte das Römisch-Germanische Museum in Köln mehrere größere Bereiche des nordwestlichen Gräberfeldes außerhalb der CCAA aufdecken. Neben einigen Brandgräbern des 1. Jh. n. Chr. und einer großen Anzahl von spätrömischen Körperbestattungen fielen dabei besonders mehrere mittelkaiserzeitliche Sonderbestattungen auf. Diese zeigten gegenüber den umgebenden späteren Gräbern eine abweichende Ausrichtung und die Toten waren in Bauchlage niedergelegt worden. Zudem wies die Sohle der Grabgrube fast immer ein starkes Gefälle auf, so dass der Kopf der Bestatteten viel tiefer als die Beine lag. Zumindest eines der Skelette war gefesselt; gegen eine Interpretation als unsorgfältige Bestattung von „Verbrechern“ sprechen die zum Teil reiche Ausstattung mit Beigaben sowie die regelhafte Verwendung von Holzsärgen.

Die Durchsicht von benachbarten Ausgrabungen aus den 1970er und 1980er Jahren auf demselben Friedhof erbrachte weitere Bestattungen dieser Art; es handelt sich also nicht um ein vereinzelt Phänomen, sondern offenbar um einen festen Bestattungsritus, der innerhalb eines bestimmten Zeitraumes an verschiedenen Stellen zumindest auf diesem Gräberfeld durchgeführt wurde.

Vergleiche mit ähnlichen Bestattungen auf Friedhöfen in Köln und dem Rheinland sollen zeigen, ob es sich um eine regional und/oder chronologisch begrenzte Bestattungsart handelt und ob sich weitergehende Erklärungsansätze für diesen Ritus finden lassen.

Tony Wilmott

**Commemorative Deposits and Ritual Closure?
The Fort Cemetery at Birdoswald on Hadrian's Wall**

The cremation cemetery at the fort of Birdoswald on Hadrian's Wall was discovered during ploughing in 1959. At that time preliminary observations were made and some deposits recovered. In 1999 the *Time Team* TV archaeologists demonstrated good survival of cremation deposits, and in 2009 a large-scale excavation by English Heritage and Newcastle University took place in response to the threat of river-cliff erosion.

The excavation revealed a road leading from the *vicus* to the cemetery, alongside which a large ditched enclosure contained cremation deposits. Most of the deposits excavated were second century in date. Very few of these were urned and a small number were in cists, one of which was ditched. Two *bustum* type burials were found. Most of the deposits comprised small pits containing charcoal and burnt bone. There was an extraordinary paucity of grave goods. There was a great variety in the form that the deposits of cremated material took, and in all cases including urned and cist burials, the quantity of cremated bone recovered was tiny. This paper will argue that such deposits represent individual ways of commemorating deceased individuals, and will propose the use of the term 'commemorative deposits' for such phenomena.

The enclosure lasted in use until the fourth century. The entrance to the enclosure was closed by the insertion of two inhumations lid end-to-end in line with the side of the enclosure. It will be suggested that these may have been Christian burials, laid in the entrance to sealit, while partaking in the tradition of burial in this cemetery.

Pete Wilson

**Change Behind the Frontier: Roman Military Deployment
North of the River Humber (England) in the Third and Fourth Centuries AD**

Archaeologists studying a province that has seen intensive work can have a tendency to believe that they are close to having the full picture – hence Sir Mortimer Wheeler’s unfortunate assertion that the problems of Hadrian’s Wall were largely solved. The distribution of Roman forts in Britain is surely an area where such a temptation exists, but recent discoveries in various parts of the country give the lie to such complacency, as the rash of newly discovered forts in Cornwall at Calstock, Restormel and near St Austell demonstrate. Turning to Yorkshire and the surrounding area recent discoveries, including the confirmation of the presence of fort at Adel and the discovery of a previously unknown fort at Staxton are changing our understanding of the earlier Roman period. However for later periods other changes, such as the confirmation of a sequence of forts at Catterick and the development of third century forts at Newton Kyme and Piercebridge, raise questions with respect to changing military strategy that deserve consideration.

Sally Worrell

**The Contribution of Data Recorded by the Portable Antiquities Scheme (UK)
to the Understanding of the Distribution of Roman *Militaria* in Britain**

This paper explores the contribution of data recorded by the Portable Antiquities Scheme (UK) to the understanding of the distribution of Roman *militaria* in Britain. The PAS, a department of the British museum, records unstratified artefacts made by members of the public, principally metal detectorists and disseminates those records via a publically accessible website (www.finds.org.uk). Since its inception in 1997 c. 770,000 objects have been recorded, of which the largest group dates to the Roman period.

As studies of other artefact types have shown (e.g. coins, personal ornament), this is a significant new dataset for the study of finds in Britain.

After a brief outline of the nature and operation of the PAS, the paper notes significant individual finds related to the Roman army, including the Crosby Garrett helmet (Cumbria), the Ilam (or 'Staffordshire Moorlands') pan and several *diplomata*, but its main emphasis lies on evaluating objects reported to the PAS from the more common categories of military equipment, in particular horse harness, pendants, body armour, belt fittings (buckles, strap ends, belt plates), studs and mounts etc. The several hundred examples of these so far documented represent a significant increase in the quantities of such finds known from the province. While some items of military equipment derive from the immediate frontier zone, many of the commonest examples of first to third century AD types cluster in the rural east of the province. Although some may date to the conquest period their discovery in numbers in regions distant from garrison sites gives new insights into the circulation of military equipment. The processes responsible for its circulation will also be considered.

*Chris Young
Peter Henrich
Reinhard Dietrich*

**The Management and Administration of the Transnational Serial
World Heritage Property “Frontiers of the Roman Empire”**

The UNESCO World Heritage Committee sets out requirements for the management of World Heritage properties in its Operational Guidelines. Each property must have adequate legal protection, and a management system to protect its Outstanding Universal Value. Normally, this will include a management plan, some kind of steering group and coordination mechanism as well as oversight by the state party. For a serial transnational site, the management system must ensure the coordinated management of its individual parts. The states parties involved are recommended to establish a joint management committee or similar body to oversee the management of the site. Any significant action involving the World Heritage Committee requires the explicit approval of all the states parties while the Committee will treat a threat to one part of the site as a threat to the whole of it. Any extension to the property must be approved by the existing states parties. These requirements impose additional complexities on the already complex system of managing a World Heritage property. There is little detailed guidance on what is required.

The Frontiers of the Roman Empire is one of the first transnational serial properties with the added complication that further state parties can propose additional parts of the frontier as extensions to it. This means that the management system must involve through time to deal with this gradual expansion. This paper will examine the current position. So far, three parts of the frontier in Germany and the UK are included in the WH property. Further extensions are in the offing.

An initial summary of the overall management system was developed in 2004 and there is now an Inter-Governmental Committee (IGC) which is the coordinating body. It is advised on scientific issues by the Bratislava Group, made up of scholars and manager of the WH property, and on aspects of management by the Hexham Group.

Each of the three existing components has its own management system. In Germany, the German Limescommission is the organisation bringing together the four responsible ministries for the Upper German/ Raetian *Limes*. In the UK, Historic Scotland is the responsible government body for the Antonine Wall, and English Heritage for Hadrian's Wall. Both Walls have steering groups representing the key stakeholders, including landowners, local authorities, users and archaeologists, and a site coordinator whose role is to encourage cooperation. For the Antonine Wall the coordinator is a single individual but for Hadrian's Wall this role is fulfilled by the Hadrian's Wall Trust which also has a number of other roles. All three parts of the WH property have an operational Management Plan.

Mihail Zahariade

**The First Segment of the Danube *Limes* Upstream: The Garrison of
Extrema Scythiae Minoris between *Gratiana* and *Aegyssus* in the 1st – 4th Century**

The recent years yielded good epigraphic and archaeological evidence on the composition of the Roman army in the extreme north-east of the province of Lower Moesia (1st – 3rd century), later Scythia Minor (4th – 6th century). The first traces of the presence of the Roman army date back to the 1st century CE. There has been an intense military activity in mid 1st century CE at the Lower Danube, in which the segment between *Ad Stoma* and *Aegyssus* seems to have been fully implicated. If the late 1st and early 2nd century CE involved a rather general consolidation of the previous structures, the subsequent period expanded the role of the garrison and civilian life it developed around the main military centers. The 4th century brought a general reshuffling of the composition of the army in the area together with a rethinking of the strategy according to the new significant political and environmental conditions.