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Uniwersytetu Warszawskiego

14

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INTRODUCTION

Jubilees are always an occasion for reflection. Ticking off the days, months and years, we cannot but think of time slipping away inevitably. However, archaeologists profess a specific attitude toward time. Our private chronology is based on a different calendar. Forty years in the life of a man can be a very long time indeed. For an archaeologist it is often just an error margin in the dating. But one of the things our profession, which is also our passion as a rule, teaches us is respect for passing time. Contrary to many non-archaeologists, our work brings results only after many years of concerted effort. Thus, we tend to measure our lives not so much by years, as by field seasons, by completed archaeological projects. But we are also more fortunate than many in that we have younger followers, often our students, who are learning under our direction and who will take over and continue our work. In this sense this new generation extends our not only archaeological life.

These and similar thoughts surely accompany all of you in your work. On an occasion like today, however, we not only turn to the future, to new challenges and projects, but we remember, fondly and with due respect, our Masters. *Novae* has already seen three generations of archaeologists grow and learn at the site, three generations that have left their heart here, devoting their time and efforts to its exploration. Turning over the already yellowed pages of the excavation journals, we return to those first pioneer days. Photographs refresh memories, while for the young they are like a history lesson. I dare hope we have been granted our Masters' dedication, respect for other people and their opinions, an open attitude toward the world and new ideas, a family atmosphere and the capacity for team-work. For all this we are grateful. The rare and condemnable deviations from these principles do nothing to shake our belief in them; they only let us perceive how imperfect we all are.

Sorrowfully we remember today those who have passed away — professors D. Dimitrov, K. Majewski, S. Parnicki-Pudelko, A. Kunisz. We send our warm greetings to those who could not be here in person: professors L. Press, M. Nowicka, M. Biczacka-Lubańska, J. Kolendo, R. Massalski. We warmly welcome Professors M. Čičikova, A. Dimitrova-Mitčeva, V. Najdenova, V. Božilova and all of you, ladies and gentlemen, present here today.

I have also been entrusted with a message from the Rector of Warsaw University, Piotr Węgleński. To all the participants in this conference and to all those working at *Novae* I have the honor of passing on Professor Węgleński's words of greetings and wishes of continued success.

This work would not have been possible without an atmosphere of mutual trust and openness, without friendly relations and mutual assistance. Today I would like to thank the Institute of Archaeology of the Bulgarian Academy of Sciences, the Municipal Museum in Svištov, and my own Warsaw University for their financial support over the years, but perhaps foremost for their assistance in creating the proper conditions for our work at the site.

Not least, I wish to greet today our colleagues from Poznań, who have been working with us at *Novae* for the past thirty years. They have been tremendously supportive and helpful, and I thank them for their contribution to the good working atmosphere for all of us here.

Words of gratitude are also due our German colleagues working at Iatrus. We have always been able to count on their generosity and assistance.

Last but not least, I wish to thank the municipal authorities of the town of Svištov, which are rightly proud of the past of their "small homeland" and have done a great deal to facilitate our work. The daily digging has benefited greatly from the dedication of our Bulgarian workers, whose hard work is, I hope, a constant source of satisfaction to them. They are after all personally helping to uncover the rich heritage of their country.

Novae has an unforgettable climate all its own. When I first came here as a young boy in 1969, not even thinking of archaeology yet, I was charmed by the place and the people working there at the time. I never once dreamt I would be in charge of excavations at the site. Who knows, perhaps that first visit perforce gave my life direction. When I returned here as a student in 1977, the memories returned. It was supposed to be my training season as an archaeologist. Seems like I have continued "training" for the past twenty odd years.

This conference is proof that I am not alone in my sentiments. I had assumed it would be a modest meeting, yet it turns out that *Novae* has made friends around the world, friends wishing to mark the occasion by sharing with others their scholarly accomplishments. I welcome all of the participants of the conference and thank you for accepting our invitation to come here today. There will be sixty papers read by scholars from many countries and many scientific institutions from Germany, Hungary, Romania, Russia, Ukraine, Serbia and, naturally, from Bulgaria and Poland, united in this joint scholarly effort.

It is hardly possible to mention by name all of our benefactors and all those who have left some part of their life and work at *Novae*. To all of them my heartfelt thanks. We hope to continue to benefit from your advice and assistance, from your work. As for the youngest generation, I would like to address to you the following words of encouragement: Don't miss out on this opportunity and work together in harmony - let *Novae* occupy a warm spot in your hearts!

You are all well aware of what Cicero had to say about history: *Historia magistra vita est*. Allow me to quote the Master in full: "History is a witness to the times, the light of the truth, the life of memory, a teacher of life". Let this be a motto for all of us.

The conference could not have been organised without the financial support of all our sponsors, including, the Scientific Research Committee, Warsaw University, local Authority of Svištov, Vinprom Svištov - whom we would like to thank kindly.

Piotr Dyczek
Svištov/*Novae*, September 2001

Piotr Dyczek
Warsaw

FORTY YEARS OF EXCAVATIONS AT *NOVAE*

Lothar I, King of the Franks, was said to have said in travesty of Ovid: *Tempora mutantur nos et mutamur in illis*. The history of research at *Novae* stands in confirmation of these words. The realities of the actual digging have changed the original objectives and research questions, giving them in many cases a new direction. In 1960 Prof. K. Majewski believed that "the question of trade routes from the southern Orient to our lands is very important... other questions concern the local Thracian elements... and the survival of Graeco-Roman culture of the ancient period in the Early Medieval-Byzantine culture..." [Majewski 1961, 75]. As the work was supposed to cover also medieval *Novae* and Early Slavic archaeological sites in the nearest vicinity, the Warsaw University Archaeological Expedition was to be directed by two persons: Prof. K. Majewski and Prof. W. Hensel [Majewski 1961, 76].

The site was chosen by Majewski from the Warsaw University and by D. Dimitrov from the Institute of Archaeology of the Bulgarian Academy of Sciences (fig. 1 and 2). They were determined in their choice by ancient sources, as well as K. Škorpil's documented reports of remnants of defensive walls and towers [Škorpil 1905, 456-457]. Frequent finds of ancient objects in neighboring fields and the locality name of Stákién suggested the presence of a big and rich archaeological site. Not without importance were the discoveries made by S. Stefanov, director of the local museum, who observed traces ancient aqueducts and described the antiquities found in the stretch of land along the Danube bank from Svištov to Jantra [Stefanov 1931, 265-279]. The collection of the municipal museum, as well as the finds that made their way to the museum in București also testified to the importance of the settlement here. Countless *spolia* were observable in the walls of modern buildings in the neighborhood [cf. Kazarov 1927, 342-344; Dimitrov 1937, 521 f.].

No regular excavation work, except for Stefanov's testing for the ancient water system, had been carried out at *Novae* before. A provisional stratigraphy of the site was obtained from a trench — dug in 1960 to accommodate a new water-

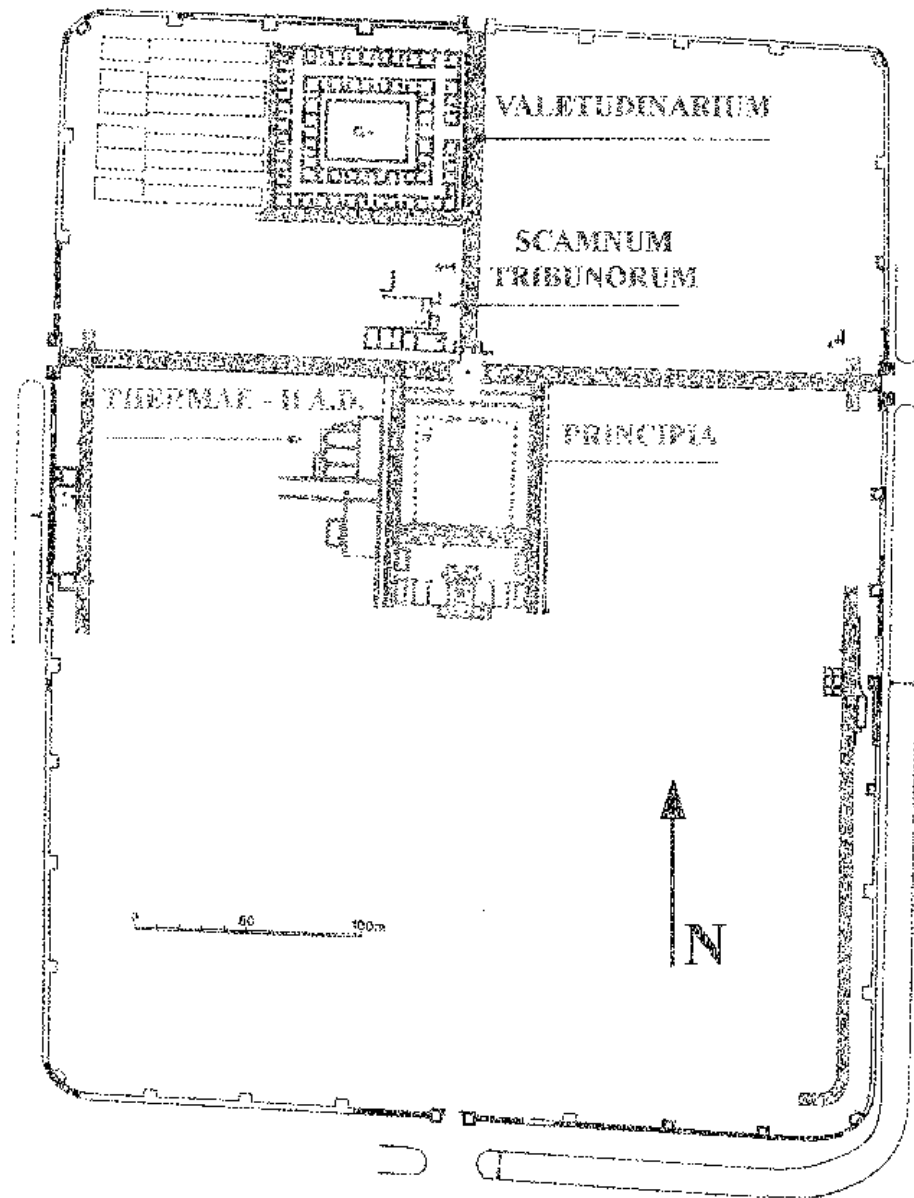


Fig. 1. *Novae* I-II century AD

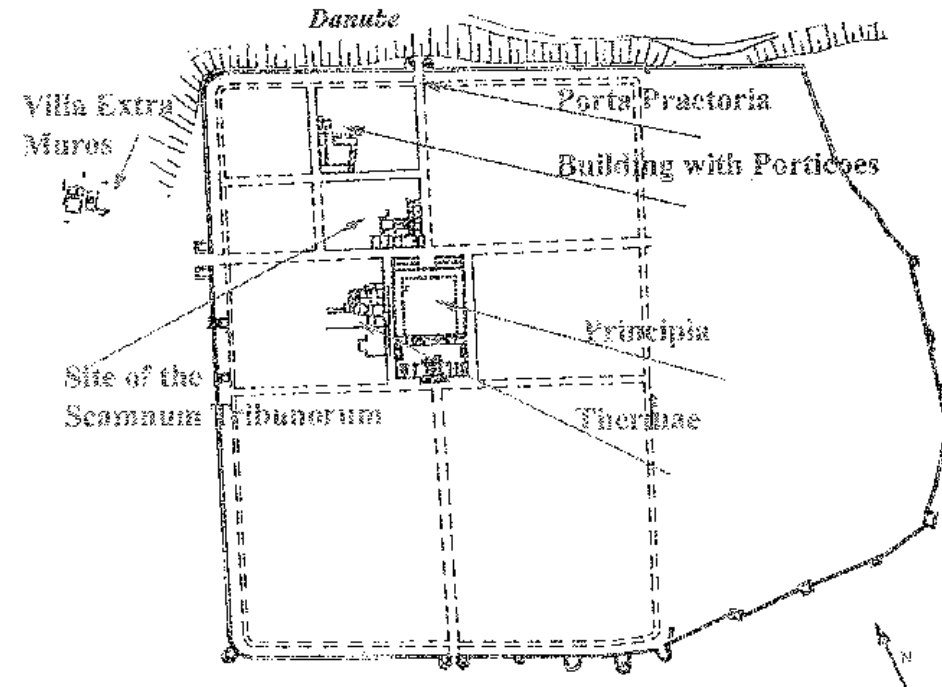


Fig. 2. *Novae* III-IV century AD

supply system -- that cut through the entire site from east to west. The excavations started on September 23, 1960 [Majewski 1961, 76].

From the start there were two archaeological teams, Polish and Bulgarian working at *Novae*, hence the provisional division of the site into eastern and western sectors. The eastern one was investigated by the Bulgarians under D. Dimitrov, the western by Poles under K. Majewski. In the first campaign three regular trenches I, II and IV, each measuring 20 by 40 m, and three probes — III, V and VI, were established [Majewski 1961, 77 see note 3]. In the forty years that research has been conducted on the site, a total of twelve sectors, or closed archaeological units, has been investigated extensively. The numbers of the sectors correspond to the number of the hectare, on which the trench is located, originating from a topographical grid that was traced on the site. Although after many years of work the borders of particular hectares have been crossed, this traditional method of designating the trenches has been maintained (fig. 3).

Work is currently progressing in five areas:

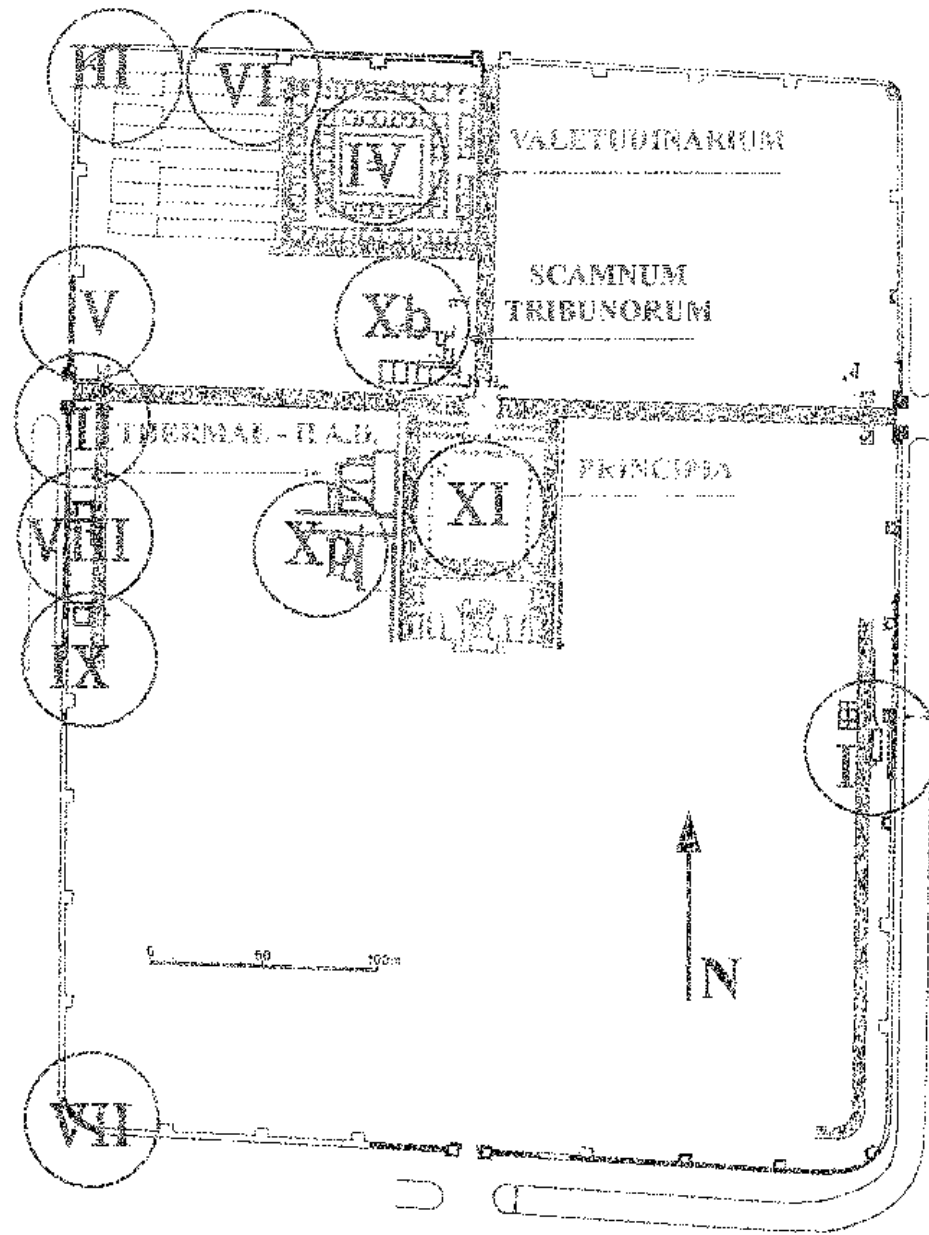


Fig. 3. *Novae* — localisation of sectors

Sector IV

Archaeological work in sector IV started in 1960 [Majewski 1961, 115-123]. In the course of these investigations the settlement phases in this part of *Novae* have been established. Without engaging in a stratigraphic analysis of the complicated interfacing of the architectural phases and the chronology of settlement development, it may be said that there are three major building complexes in the sector: legionary with baths, another legionary one with a hospital, and a civil one appearing in the area of the abandoned *valetudinarium*, including buildings like the *horreum*, the so-called *Mudbrick building* and the Building of the Porticoes.

The earliest legionary building discovered in sector IV are the baths (fig. 4) [Dyczek 1991, 123-127; *idem* 1994, 6-8]. They are currently assumed to have occupied the northern part of the sector. As a result of investigations carried out ever since 1979 the following major elements of the plan of this big complex have been identified: *palestra*, *apoditerium*, *sudatorium* with a separate heating system, *frigidarium*, *tepidarium* and *caldarium*. It cannot be excluded that the so-called South Building [Dyczek 1997, 44], remnants of which were discovered under the floor of room 45 of the hospital, had actually belonged to this earlier complex, especially as immediately next to it, found reused in the foundation wall of the external hospital portico, there was a statue of a Nymph from the Flavian period (AD 69-96) (fig. 5). The archaeological data indicates that the bath was richly decorated with wall paintings and its floors were made of rectangular ceramic tiles and small bricks in a pattern, which is called *opus spicatum*, while a few featured mosaic decoration.

Archaeological finds, such as the *denarii* of Vespasian found in the joints of the bath foundation walls and impressions of certain stamps of the First Italic Legion indicate that the baths were erected in the Flavian period.

After the baths were dismantled in the early years of Trajan's reign, a military hospital was constructed in the entire area of the *scamnum*, which happens to correspond with sector IV [Press 1990, 69-89]. This rectangular structure consists of two series of rooms separated by a circuitous corridor (fig. 6). The inner porticoed courtyard turned out to hold a *sacellum* (fig. 7) or sanctuary of healing divinities [cf. Dyczek 1995, 125-128; Kolendo 1999, 55-70], including a place for burning offerings, a pavement of roof tiles aligned east-west and crossing the entire courtyard, inscribed altars, statue bases and head of the Asclepius. So far no water supply system leading to the hospital has been discovered. It cannot be excluded, however, that the building had an internal water-supply system based on cisterns. One such cistern was discovered in 1999 close to the *sacellum*, next to the northern portico of the *valetudinarium*.

After the hospital went out of use — which, to judge by the presently available archaeological evidence, must have occurred sometime in the reign of Car-

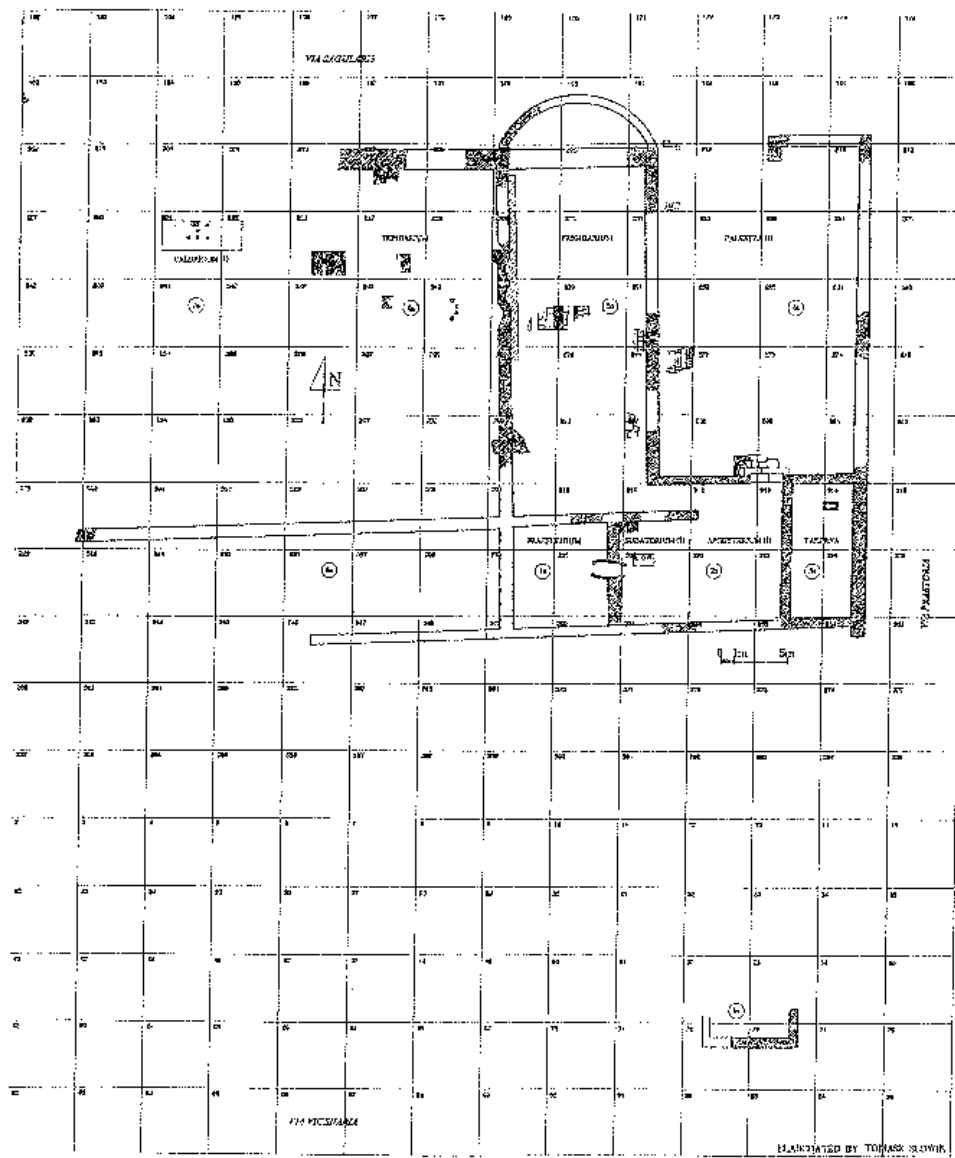


Fig. 4. Flavian baths on sector IV



Fig. 5. Marble statue of Nymph from Novae

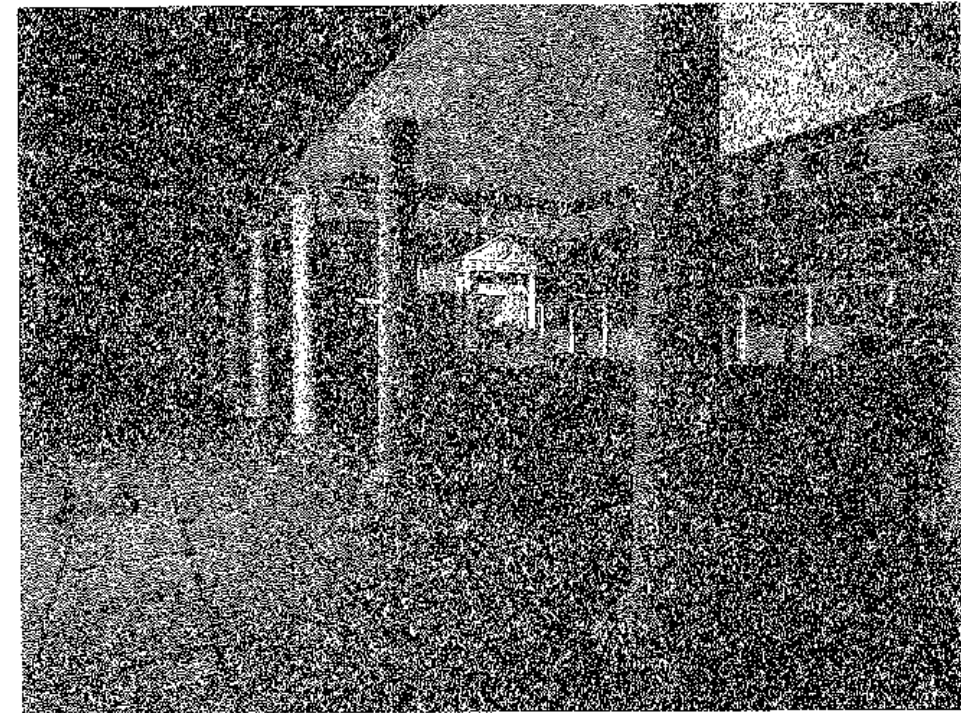


Fig. 6. Legionary hospital -- valetudinarium

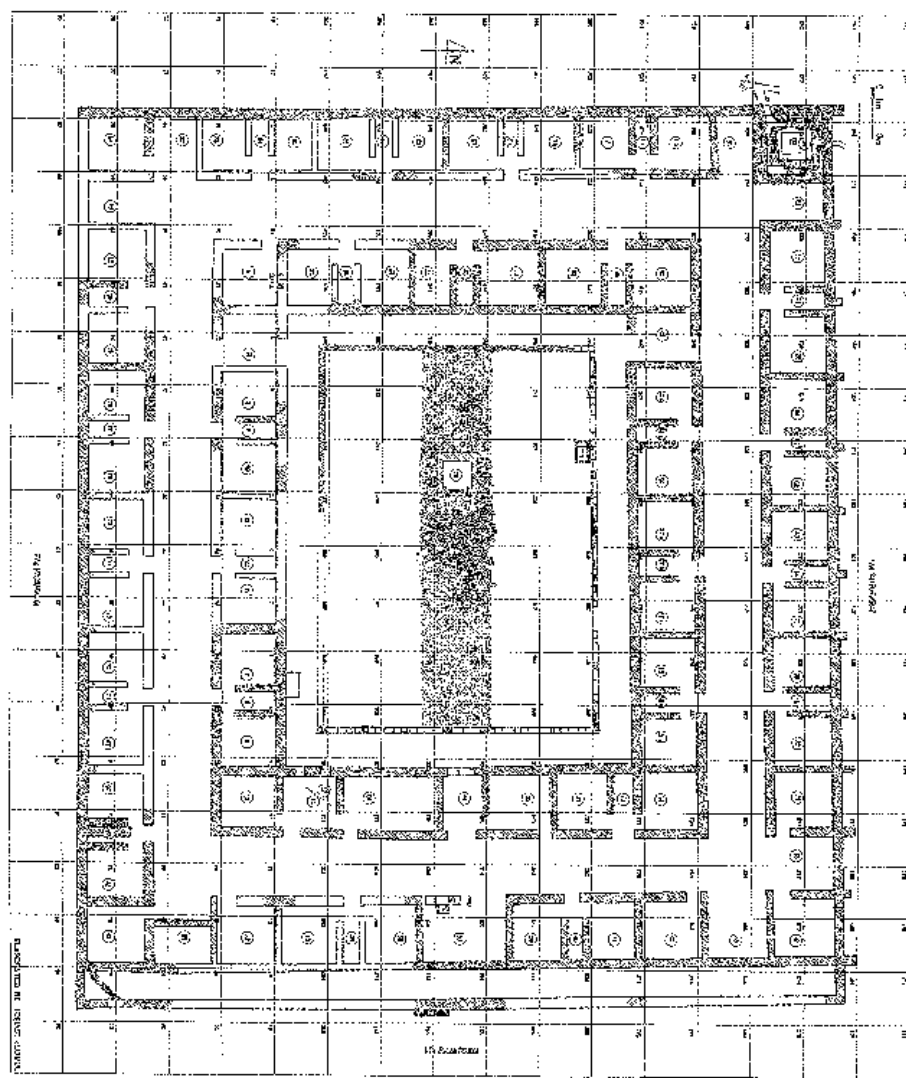


Fig. 7. Computer reconstruction of *sacellum* from *valetudinarium* at *Novae*

acalla — the area seems to have been abandoned, at least for a while. New civil settlers returned in the 280s. They established a new street grid, as suggested by the so-called *via inscriptionum*, a street surface incorporating parts of funerary *stae* and structural elements from a nearby necropolis destroyed presumably during the raid of the Goths in 250 [Dyczek 1998, 17-31; *idem* 1999, 44-51] and the marble head of Maximian Thrax — a Roman emperor which was probably born at *Novae*. A variety of buildings of earth-bonded stone and of mudbrick originates from this time [Dyczek 1999 a, 99-104]. Not all of them have been fully

investigated yet, but among the ones which have been identified in terms of structure and function there is a mudbrick building serving as a glass works and a *horreum* [Dyczek 1997 a, 87-94]. In the wall of this structure we have found another unique Roman marble portrait of emperor Carinus. The first residence of a *villa urbana* type was constructed over the southeastern part of the hospital ruins. The first rooms of another villa, the so-called Building of Porticoes [Press 1984, 367-371; Kudera 1995, 27-63], also date from this period. Most likely in the late 4th century AD, a row type of bath was erected in the southern wing of this structure. Also uncovered is a mixed residential-and-workshop building from the second half of the 5th century and two inhumation cemeteries, one of the 5th-6th centuries and the other of the 10th-11th.

Sector VIII A (*villa extra muros*)

The first archaeological investigations to be carried out outside the walls of *Novae* were started in 1978. They were situated 75 m west of the fortress in a sector designated as VIII A. According to Skorpil the ruins there were those of a basilica, but explorations proved that settlement in this area had a longer history. Indeed, the archaeological layers, which are some 2-2.5 m thick here, correspond to different periods [Čičikova 1994, 127-139; *eadem* 1999, 105-110].

The oldest architecture in this sector is the Peristyle Building in the northern part of the sector. In its center there was a paved courtyard with a pool and a portico running around it. The pool was filled in and covered with stone slabs in the second phase. On both the ground floor and the upper floor there must have been rooms opening off the portico. The structure comprised three wings: two aligned north-south and one connecting wing aligned east-west. The main entrance was situated at the east end of the complex. Two parallel walls formed a passage-vestibule 12 m long leading to the peristyle. Two inscribed bases and pieces of a bronze statue were discovered in the western part of the vestibule. A hypocaust system was recorded south of the vestibule. Investigation of the western part of the sector commenced in 1985. A big square heated room was discovered there with some fragmentarily preserved wall paintings, a *tablinum* in all likelihood, dated to the first half of the 3rd century AD.

The character of the building was determined as private and not public, this in consequence of an analysis of the said structures and inscriptions erected in the times of Alexander Severus and Gordianus III, as well as a dedication of the prefect of the First Italic Legion, Aurelius Saturninus. The structure may have served as a residence of the legate of the legion. In any case, the villa was designed according to Roman standards with prototypes going back to Hellenistic models.

Archaeological material from the fill is dated to the second half of the 2nd and first half of the 3rd century AD. A characteristic feature of the assemblage are lamps, mostly of local production, representing the Butovo type which was en vogue in the late 2nd and the first half of the 3rd century. That this house was occupied at the turn of the 2nd century is further indicated by coins of Antoninus Pius through Gordianus II.

An inscription and fragments of bronze statues have provided important evidence of when the villa was destroyed. The inscription gives the *cursus honorum* of a man of senatorial rank, most probably the legate of the First Legion. It is dated to AD 238-244 and was dedicated most likely by an *optio* or officer of lower rank on the staff of the First Legion in the reign of Gordianus III.

Once destroyed, the villa was abandoned. It was resettled in the last quarter of the 3rd century, when some mudbrick walls were raised. The next recorded destruction occurred presumably in the last quarter of the 4th century, perhaps in connection with the raid of the Goths in AD 375.

In the 5th century a large three-aisled basilica was erected on the spot. A cemetery surrounded it. The settlement here apparently ended in the late 6th century. From this period there is a set of 20 coins connected chiefly with the reigns of Theodosius I and Arcadius, plus some others from the second half of the 6th century. The latest coin is from the reign of Justinian II.

Sector X — Bulgarian

Excavations in the Bulgarian part of sector X located in the central part of the Roman camp started in 1976. Since then a number of phases of this architecture have been uncovered and identified.

The oldest layers revealed the remnants of barracks originating from the wood-and-earth phase of the camp. In the Flavian period two main streets were traced — the *via praetoria* and *via principalis*. Lining them was a series of *tabernae* entered straight from these streets. Beyond these units a villa with a small courtyard surrounded by rooms was erected in the early 2nd century. This was the house of the tribune. In the southwestern corner of this structure there was a row-type bath, while a kitchen and pantry occupied the northwestern corner. The main entrance was in the western facade. In the times of Septimius Severus the building was rebuilt and enlarged to include the *tabernae* siding the *via principalis*, which were now turned into an office. The structure was destroyed during the Goth raids. In the late 3rd or early 4th century, a building of considerable size with a courtyard and wide entrances from the east and south was built on this spot. The front was on the east and was flanked by two rooms, one of which

contained a bath with a separate entrance from the street. The structure was seemingly a roofed bazaar with bath attached to it. The oldest coins suggest that it was partly ruined in the times of Valentinian (AD 364-375) and Valens (AD 364-378). The parts of the building that survived the conflagration remained in use until the invasion of the Huns. At this time ceramic, glass, bone and bronze workshops were located there. In the 5th and 6th centuries there was a basilica here and in the 10th and 11th centuries a church and cemetery.

Sector X — Polish

Work in the Polish part of sector X has been conducted ever since 1972 by the Archaeological Expedition of the Adam Mickiewicz University in Poznań. Several buildings have been uncovered in the process. The earliest complex in the area was a legionary bath dated to the first half of the 2nd century AD. One of the uncovered rooms of this bath was the *caldarium* equipped with a semicircular pool at the end. At the turn of the 3rd century, another bath was erected on top of the ruins of the first. The following characteristic rooms have been identified: *caldarium*, *tepidarium*, *frigidarium*, *apodyterium* and two *praefurnia*. In the early 6th century the entire complex along with the residential rooms to the east and north of it was incorporated into the episcopal residence.

The most important accomplishment was the discovery of a basilica. In the course of research four phases of its functioning have been identified. It was in use from the last quarter of the 5th century to the 6th century. A smaller basilica was located on the northwestern side; it was erected in the second quarter of the 5th century AD.

Sector XI

Explorations, which have been continuing since 1970, have led to the uncovering of the *principia*, which occupy some 0.6 ha of area [cf. Sarnowski 2001, 79-87]. The complex comprises a monumental gate (*groma*), courtyard, transverse hall (*basilica*), series of club and administration rooms and the chapel of the banners (*aedes principiorum*). The beginnings of the command headquarters go back to the times of the Flavians, while the basilica was erected in the reign of Trajan. In the early 3rd century the back wing of the building was reconstructed. Some rooms were given a vault, in others a hypocaust system was installed.

In the 4th century the *principia* suffered damages at least twice. A set of coins from AD 316/317, found in the treasury, testifies to the first damages, the second case of damages is marked by the time when the hypocaust system in room Bw went out of use. To the north of the basilica there was a row of rooms with a monumental facade Tuscan engaged columns and a central set of steps leading to the chapel of banners on the upper floor. Two corridors led to the *retentura* situated to the south. Other rooms were used as the seat of an officers' college as indicated by an altar found there, dedicated to the genius of an unknown association. The remaining rooms housed the treasury, offices, archives and seats of other clubs. Before these rooms there was a square surrounded by a stone wall. Standing in the square were bases under altars, statue bases and a rectangular container made of roof tiles, intended for burning offerings. The command headquarters went out of use around the middle of the 5th century, presumably after the ruination caused during the raid by the Huns in the forties of the century.

This brief summary of the work carried out in *Novae* demonstrates how the original research objectives had to be modified. Some of the sectors have been combined; others have been finished. We now know the layout of the fortifications, which were studied and partly published by Prof. S. Parnicki-Pudelko, and the extension to the east that presumably came into existence after the Goth raids. The plans of the main fortress gates are known, especially the western, southern and eastern gates. Investigations conducted by Peti Donevski, especially by the eastern wall, have led to a better understanding of the defense system. The system of moats, original defensive wall and wooden barrack architecture that was discovered on this occasion and that has continued to be investigated by T. Sarnowski, has thrown new light on the earliest phase of fortress development.

From the scientific point of view, *Novae* has been the site of several important discoveries, which have helped to verify and specify earlier views. Some are our original input into understanding different aspects of the operation of a legionary fortress and the evolution of towns in Late Antiquity:

— The layout and function of particular rooms of the richly decorated legionary bath has been identified, including a marble statue of a nymph that must have belonged originally to the water source architecture.

— The best preserved military hospital has been investigated.

— All the rooms of the hospital complex have had their function identified.

— The question of what the buildings in the hospital courtyards were used for has been solved, completely changing our view of how cult was practiced inside legionary fortresses.

— The process of how the *castrum* changed into a civil settlement has been traced, identifying the first phases in its development.

— Two marble imperial portraits of Maximinus Thrax and Carinus have been discovered.

— New data on the Goth raids has been obtained.

— The development of architecture of the villa urbana type has been traced.

— Unique materials have been recovered concerning the development of medieval settlement in the times of the First and Second Kingdom of Bulgaria.

— The most modern archaeological methods have been applied: aerial and satellite photography, research on ancient DNA, computer processing and virtual reconstruction.

— Over 100 inscriptions, some of them quite unique, have been discovered; they provide information on the history of some of the buildings (*principia*) as well as the entire camp, religious life, significant details from the history of the Lower Danubian province.

— The villa of the legate of the legion has been discovered and its development traced.

— The earliest phase in the development of the fortress in the *scannum tribunorum* area was investigated.

— One of the tribune houses was investigated in detail.

— The official wing of the *principia* with the chapel of the banners and the administration and club rooms has been uncovered.

— Two hoards of coins were discovered in the command headquarters building.

— A few hundred pieces of bronze statues of gods and emperors have been discovered, as well as a marble portrait of Caracalla.

— A "hoard" of vessels from the late 4th or first half of the 5th century has been found in the *principia*.

For forty years *Novae* has engendered the interest and perhaps also the sympathy of scholars. The outcome is an extensive bibliography, containing over 700 items at present. Not just interim reports and in-depth articles published chiefly in the annual *Archeologia* and in the *Novensia*, the annual of the Center of Archaeological Research. Also important monographs, like the two corpora of inscriptions by J. Kolendo, V. Božilova and L. Mrozewicz, S. Parnicki-Pudelko's book on the fortifications, T. Sarnowski's book, the recent study of the terra sigillata from Moesia by A. Dimitrova-Milčeva and my own typology of amphorae in polish and english version [see Dyczek, Kolendo, Sarnowski 2001].

Novae is also present at all the most important congresses devoted to the different aspects of limes and Classical archaeology. Publication plans include volumes summarizing the results of investigations conducted in the particular sectors. Studies are ongoing. Survey work in the vicinity of *Novae* has also been undertaken.

Yet *Novae* is hardly just the studies and scholarly disputes and discussion. It is foremost the people who are devoted to their passion.

Occasionally, we have been close to politics, having as guests ambassadors and other eminent people. Gatherings are part of the atmosphere of these exca-

vations — friendships, singing together by the fireside. Unforgettable moments. For the last forty years the *genius loci* has been protecting us and I hope it will never leave us, not until the end of our activities.

Bibliography

- Čičikova 1994 — M. Čičikova, Novae à l'époque du Bas-Empire, [in:] *Limes a cura di Giancarlo Susini*, Bologna 1994.
- Čičikova 1999 — M. Čičikova, Lampes paleobyzantine de Novae, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999.
- Dimitrov 1937 — D.P. Dimitrov, Römische Grabsteine in Bulgarien, *AA* 53, 1937.
- Dyzek 1991 — P. Dyzek et al., Novae — Western Sector, 1989, *Archeologia* 42, 1991.
- Dyzek 1994 — P. Dyzek Two Baths from Polish Excavations at Novae, *Balnearia* 2, 1994.
- Dyzek 1995 — P. Dyzek, Was it "Sacellum Aesculapi" in the valetudinarium at Novae, [in:] *Nunc de Suebis dicendum est. Studia archaeologica et historica Georgio Kolendo ab amicis et discipulis dicta*, Warszawa 1995.
- Dyzek 1997 — P. Dyzek, Novae — Western Sector, 1996, *Archeologia* 48, 1997.
- Dyzek 1997a — P. Dyzek, New Late Roman horreum from sector IV at Novae, [in:] *Late Roman and Early Byzantine Cities on Lower Danube from 4th to 6th Century AD*, Poznań 1997.
- Dyzek 1998 — P. Dyzek, Via inscriptionum at Novae, *Novensia* 10, 1998.
- Dyzek 1999 — P. Dyzek 1999, The Marble Head of Emperor Maximinus Thrax from Novae. New Methods of Reconstruction, *Études et Travaux* 18, 1999.
- Dyzek 1999a — P. Dyzek, A Glass Atelier from Sector IV in Novae, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999.
- Dyzek, Kolendo, Sarnowski 2001 — P. Dyzek, J. Kolendo, T. Sarnowski, Novae — 40 years of excavations, Warszawa 2001.
- Kazarov 1927 — G. Kazarov, Antike Denkmäler in Bulgarien, *AA* 43, 1927.
- Kolendo 1999 — J. Kolendo, Inscriptions en l'honneur d'Esculape et d'Hygie du valetudinarium de Novae, *Archeologia* 49, 1999.
- Kudra 1995 — W. Kudra, Willa miejska w Novae. Architektura, podział wewnętrzny, przemiany, *Novensia* 7, 1995.
- Majowski 1961 — K. Majowski et al., Sprawozdanie tymczasowe z wykopalisk w Novae w 1960 roku, *Archeologia* 12, 1961, 75-162.
- Press 1984 — L. Press, The Valetudinarium and the Porticoe Building in Novae, *Studia in honorem Chr. M. Danov*, Sofia 1984.
- Press 1990 — L. Press, The valetudinarium at Novae and other Roman Danubian Hospitals, *Archeologia* 39, 1999.
- Sarnowski 2001 — T. Sarnowski, Novae — Western Sector, 1998-1999, *Archeologia* 51, 2001.
- Stefanov 1931 — S. Stefanov, Rimskite vodoprovody na Novae, *Izvestia na Bălgarski Arheologičeskija Institut* 6, 1930/1931.
- Škorpil 1905 — K.V. Škorpil, Nekatoryje iz dorog vostočnej Bolgarii. Izbornik Ruskovo Arheologičeskovo Instytuta vâ Konstantynopol', 10. Sofia 1905.

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LE PREMIER CAMP MILITAIRE A NOVAE

Dans le présent exposé, je voudrais synthétiser les principales conclusions tirées de l'étude à fond des vestiges et des matériaux, témoins de la première période de l'existence du camp militaire à *Novae*.

Un camp militaire à l'origine, la cité n'a pas changé de caractère jusqu'à la Basse Antiquité pour obtenir alors le statut d'une ville et devenir un évêché. Son histoire est marquée de vicissitudes et de siècles entiers de paix relative, mais il apparaît que le plus dynamique et abondant en événements est le I^{er} s. Bien que cette période pose plusieurs problèmes controversés, les résultats des fouilles archéologiques permettent cependant de faire le tableau de la vie et des travaux publics à *Novae*.

Le stationnement de la VIII^e légion d'Auguste dans la Péninsule Balkanique, sa participation à la répression de la révolte des Thraces dans les années 45-46 et des mutineries sur la côte nord-ponique se trouvent confirmés par les informations des sources écrites. Sur le fond de ces événements, il paraît logique que des unités de la légion se retirent de la Dalmatie à l'est. De surcroît, l'annexion de la Thrace par l'Empire romain et la liquidation du royaume client local, situé au nord de la Stara planina, finissent par priver de protection les territoires au sud du cours inférieur du Danube. Ces circonstances exigent l'organisation d'un système défensif puissant dans le secteur.

Du point de vue tactique, le choix de l'emplacement du camp militaire permanent est excellent. D'une part, la haute rive du Danube est naturellement protégée et, d'autre part, la légion assume la défense de l'endroit le plus étroit du fleuve, préféré pendant tous les siècles pour son passage.

Le terrain désigné est relativement plat et entouré de ravins et de collines. Il satisfait à toutes les exigences qu'indiquent les auteurs antiques en pareille occurrence, notamment des ressources en bois et en eau douce et des vivres fournis par la population locale [Vegetius, *Epitoma rei militaris* I, 22]. Les fouilles témoignent que le lieu du futur camp est inhabité. Il n'y a pas de doute que dans

ses alentours il y a des cités thraces, mais elles se trouvent vraisemblablement à proximité des sources d'eau, sur les collines au sud.

On ne dispose pas de récents témoignages épigraphiques et renseignements écrits sur l'établissement du camp de la VIII^e légion d'Auguste. Or, le site a livré un matériel archéologique abondant, révélateur de sa vie. Il est établi que ce camp est identique à celui de l'autre unité militaire liée à l'histoire de *Novae* — la I^{re} légion italique.

Le camp, ceint de murailles, est de plan rectangulaire et mesure 485 (494) x 365 m, il couvre une superficie de 17,70 (ou de 18,03) ha (fig. 1). Le rapport entre la longueur et la largeur est 4:3 et non pas 3:2, comme le recommande Pseudo-Hygin. Mais telles sont aussi les proportions d'autres camps militaires, entre autres Noviomagus, *Novaesium*, Regensburg [von Petrikovits 1975, 113]. Les évaluations faites jusqu'ici montrent que cette superficie n'est pas parmi les plus grandes. Il y a aussi des camps plus petits, dont Carnuntum, qui occupe une superficie d'un peu plus de 17 ha [Genser 1986, 574].

L'étendue du camp à *Novae* indique qu'il ne peut abriter qu'une légion. Si l'on la compare avec les forteresses, destinées à deux légions, par exemple Vetera (Xanten) — d'une superficie d'environ 59 ha, on ne peut pas se rendre compte qu'à *Novae* ne peut stationner qu'une légion. Le parallèle entre les dimensions du camp à *Novae* et celles d'autres camps identiques montre qu'il ne peut pas abriter même des parties des *auxilia* de la légion [une thèse différente chez Donevski 1998, 13-15]. En général, les forteresses s'étendent sur une superficie d'environ 21 ha (Caerleon) à environ 25-27 ha (Deva, Regensburg, Bonna).

Il n'y a pas de vestiges du camp à tentes temporaire et des premières fortifications (s'il y en a). Il est possible qu'il se trouve en un autre lieu, mais ses traces sont difficiles à repérer. Le plus ancien équipement enregistré, c'est le camp en bois et en terre temporaire, entouré d'un *vallum* et de fossés, à l'intérieur duquel se trouvent des baraquements en torchis.

L'objectif primordial des légionnaires est d'ériger des murailles. Les plus anciennes fortifications enregistrées, ce sont le *vallum* en terre et les fossés. Le *vallum* est fait de blocs d'argile superposés. Sa largeur est de 3-4 m et la plateforme au sommet mesure environ 2 m. Sur le profil, exécuté à travers le *vallum*, il n'y a pas de traces de constructions en bois qui seraient destinées à empêcher la terre de s'affaisser. C'est pourquoi je crois que l'hypothèse de T. Sarnowski sur l'existence d'une palissade dans la partie antérieure du *vallum* est insoutenable pour le moment.

Dans la construction des différentes fortifications en bois ou en terre sont employées quelques techniques principales. Le *vallum* peut être en terre, en bois et en terre ou seulement en bois. Le plus grand nombre de *valla* en terre sont découverts en Bretagne, surtout dans sa partie septentrionale, et en Ecosse. La plupart des *valla* en bois sont enregistrés dans les *castella* de la province de

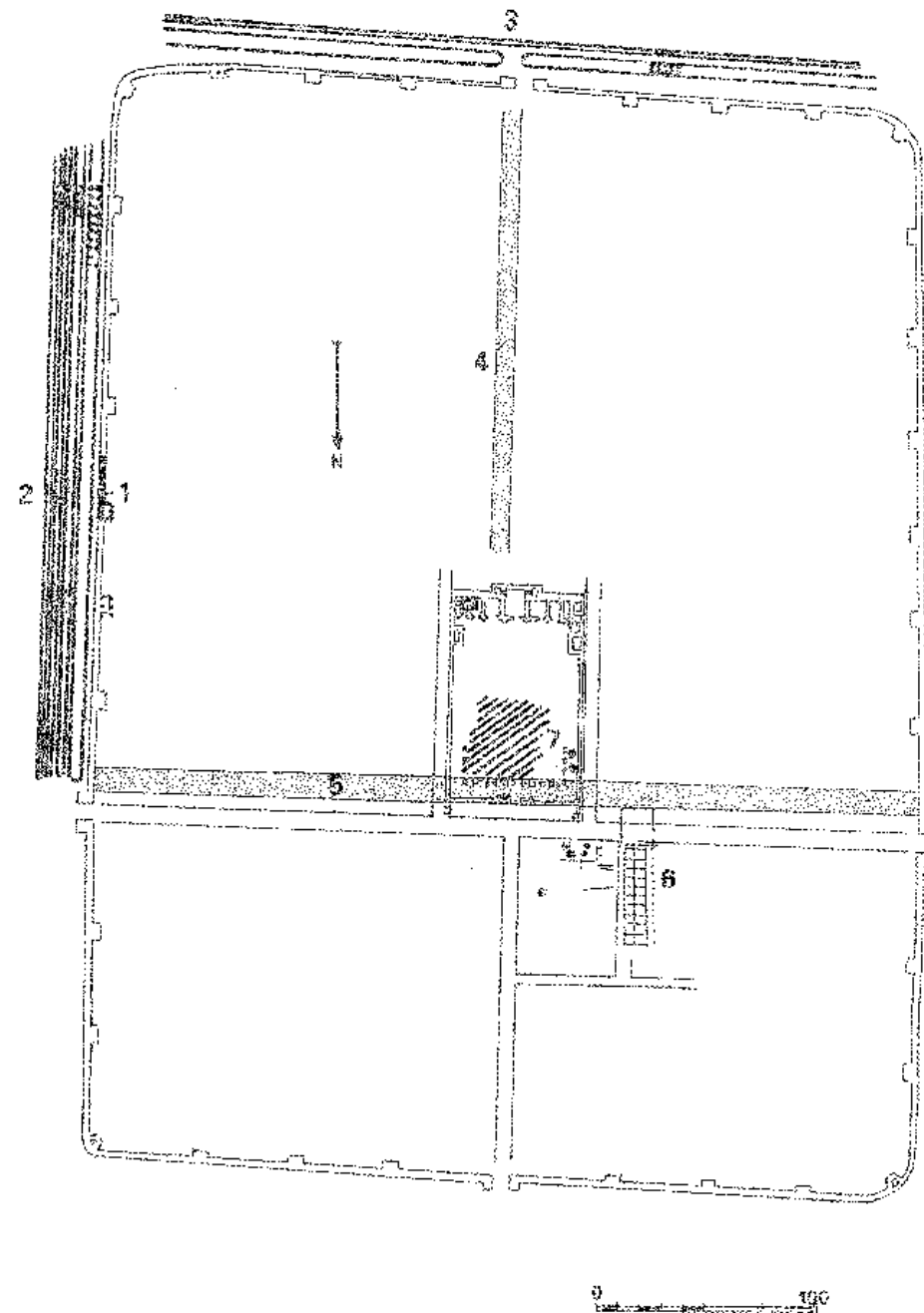


Fig. 1. La camp à *Novae* — I^{er} s.: 1 — *vallum*; 2 — *fossa fastigata*; 3 — *porta decumana*; 4 — *via praetoria*; 5 — *via principalis*; 6 — *scannium tribunorum*; 7 — *principia*

Germanie [Johnson 1987, 77]. Il apparaît que le choix de la technique est déterminé exclusivement par les ressources naturelles.

Quant à *Novae*, la possibilité que le *vallum* soit uniquement en terre, c.-à-d. en argile, est très grande étant donné la petite quantité de bois (il n'y a pas de massifs d'arbres) et la bonne qualité de l'argile dans la plaine du Danube. Tout cela et le manque de traces de constructions en bois me portent à croire que le *vallum* y est construit seulement en terre. Des équipements analogues en Bretagne sont recouverts d'un côté ou des deux côtés de mottes destinées à empêcher la terre de s'affaisser — Baginton, Chesterholm. En Bretagne sont découverts aussi des *valla* en brique crue — Newstead, Brough, les différentes briques mesurant 30 x 23 x 10 cm [Johnson 1987, 76, Abb. 36].

La conservation partielle des fortifications ne permet pas de reconstituer leur forme. Toutefois, si le *vallum* est construit seulement en argile, il aurait une section trapézoïdale. Dans le *castellum* restauré à Baginton (Angleterre centrale) est édifié un *vallum* en terre analogue, recouvert de mottes d'une largeur de 5.50 m, d'une hauteur de 3.60 m et d'une inclinaison de parois de 65°. Il y a aussi des fortifications d'une inclinaison de 45° (Fendoch). Si l'on se fonde sur les données de la reconstruction envisagée, selon laquelle un *vallum*, long de 283 m, et deux fossés sont aménagés dans de bonnes conditions climatiques en l'espace de 9-12 semaines par 210-300 ouvriers [Johnson 1987, 76], on peut définir le temps de l'édification des équipements à *Novae*.

La longueur totale des parois d'environ 1700 m et la participation de 36 à 38 centuries (d'après les évaluations de T. Sarnowski), soit d'environ 3000 personnes, permettent de conclure qu'à chaque ouvrier reviennent environ 0.50 m du *vallum* et une longueur un peu plus grande des fossés. Il en résulte que l'édification de la fortification ne peut durer qu'une semaine. Selon toute probabilité, aux travaux de construction ne participent pas un nombre aussi grand de personnes car les soldats s'occupent aussi d'autres activités.

L'édification du *vallum* de deux parois parallèles, distantes l'une de l'autre de 20 pieds romains (selon le précepte de Vegetius), n'est pas documentée lors des fouilles, ce qui vient confirmer une fois de plus ma thèse qu'il est construit uniquement en blocs d'argile. On ne peut pas parler de briques par le seul fait d'être taillés et séchés au soleil, sans mélanges de paille. Pour le moment, leurs dimensions ne sont pas établies. Il n'y a pas de données sur un recouvrement de mottes et de traces de constructions en bois destinées à empêcher l'affaissement du *vallum* en argile. Le seul moyen de protection de l'équipement (documenté lors des fouilles) est son recouvrement d'une argile spéciale mêlée de calcaire.

Or, il est possible que dans la partie antérieure du *vallum* se trouve un mur en bois, fait plutôt de barres de bois que de grands pieux. Dans ce cas, les grandes poutres porteuses sont disposées à une petite profondeur, parce que c'est une construction légère, et entrelacées de barres plus minces. Dans cette variante, les traces des trous pour les poutres en bois peuvent être effacées par l'édification

à une époque tardive d'un mur de pierre. De telles constructions sont connues de Hesselbach, de Künzing (période 1), de Baginton, dans le premier *castellum*, la distance entre les trous pour les poutres est de 1.20 à 1.50 m [Johnson 1987, 76, Abb. 39].

Sur l'édification de la plate-forme au-dessus du *vallum*, il existe deux hypothèses. Selon la première hypothèse, elle serait entourée d'un parapet en briques, recueillies près du rempart nord. Selon la deuxième, elle serait en bois, crénelée et pourvue d'un podium horizontal de pieux circulaires. Les deux variantes sont enregistrées dans la construction des *castella* romains. Au cas où le *vallum* est protégé par un mur en bois, son prolongement serait, dans sa partie supérieure, le parapet de la plate-forme.

En bois sont les tours mesurant 6 x 3 m, aménagées sur six pieux (fig. 1, 1). Elles sont situées du côté intérieur du *vallum* et la distance entre celles-ci au long des murs est d'environ 41 m, pour changer aux angles de la forteresse et près des portes. Sur les côtés ouest et est se trouvent huit tours sur chacun plus deux à chaque porte et une à chaque angle. Sur les côtés sud et nord il y a six tours sur chacun et deux à chaque porte.

Les tours de forme rectangulaire sont rarement enregistrées, par comparaison aux tours carrées. Elles sont connues de *castella* à Hod Hill (Angleterre méridionale) et à Valkenburg (Pays-Bas), à Oberstim (Bavière), édifiées au temps de Claude, tandis que dans le camp militaire Rottweil III, plus tardif de vingt ans, il n'y a que de petites tours carrées [Planck 1975, 96, Abb. 10]. De telles tours sont aussi découvertes dans les fortifications de la période des Flaviens à Künzing (Bavière), à Hofheim et à Pen Lllystyn (pays de Galles, Grande-Bretagne) [Johnson 1987, 88].

La thèse que les tours de l'époque claudienne sont surtout rectangulaires et celles de l'époque flavienne — carrées, ne peut pas être acceptée sans réserve, car elle n'englobe pas toutes les forteresses connues. Or, sur la colonne Trajane ne sont représentées que de petites tours carrées en bois [Johnson 1987, Abb. 45]. En tout cas, les tours intérieures carrées sont datées surtout de la fin du I^{er} et du début du II^e s., tandis que dans les camps en Bretagne, à l'époque précédant les Flaviens, elles sont rectangulaires.

Lors des fouilles, on n'a pas repéré des traces des fortifications en bois près des portes, aussi ne peut-on pas restituer l'aspect des tours. Selon toute probabilité, elles ont la même forme que celles sur les murs.

On accède aux tours par des rampes aménagées dans le *vallum* (fig. 1, 1). Elles sont enregistrées dans tous les *castella* sur le limes de Germanie Supérieure et de Rétie [Johnson 1987, 81]. L'une d'elles est située sur le "projet inachevé". C'est un mur de pierre long et étroit dont l'une des extrémités porte un mur de brique perpendiculaire. Selon l'interprétation du chercheur, c'est lui qui pose le début de l'édification de la muraille de pierre, interrompue pour des raisons inconnues. Pour le moment, un tel équipement n'est découvert qu'en un lieu.

L'apparition de la construction inachevée est interprétée comme le début de l'édification d'un mur de pierre double dont l'intérieur est comblé de terre. Étant donné qu'on connaît l'organisation des travaux publics, effectués par les légionnaires, on ne pourrait pas expliquer la découverte de ce "projet" en un seul lieu. D'autre part, il est lié incontestablement à la rampe. Des exemples de bases de pierre de rampes dans un *vallum* en terre sont enregistrés dans les *castella* écossais Lyne et Birrens. Il y en a aussi à Saalburg, mais d'une époque tardive [Johnson 1987, 80-81]. Il y a donc quelques hypothèses sur l'existence de la construction et ce ne sont que les recherches à venir qui pourraient expliquer l'apparition des murs de pierre sous un remblai en argile.

À part le *vallum* en terre, la forteresse est protégée aussi par un système de fossés. Sur le côté est, ils s'étendent sur une bande, large de 26 m (fig. 1, 2). C'est une largeur optimale pour faire le guet des postes des tours. En général, les fossés sont distants de 25-30 m des murailles. Bien sûr, cette distance peut être plus petite, notamment dans les *castella* de Domitien Wiesbaden, Hofheim, Heddenheim, Okarben, situés au nord du Main, où les fossés couvrent une bande d'une largeur égale à 60 pieds romains (17.80 m). Or, dans certains camps, elle atteint les 30 m [Johnson 1987, 66].

Sur le mur est, on a découvert quatre fossés (fig. 1, 2). Les deux fossés les plus proches du *vallum* ont une forme de V, caractéristique pour les fortifications romaines (*fossa fastigata*), et une largeur respective de 5.50 et de 3.50 m. Leur profondeur est respectivement de 2.90 et de 3.50 m. Les deux autres fossés sont d'une section hémisphérique et d'une largeur de 2.30 et de 3.50 m. Leur profondeur est d'environ 2 m. Tous les quatre fossés sont enregistrés dans un sondage sur la muraille est. Dans un autre sondage sur le même côté, on n'a découvert que deux fossés.

Les dimensions des fossés correspondent aux dimensions moyennes des *castella* romains dont la largeur varie de 2.50 à 6.00 m et la profondeur — de 1.20 à 3.00 m [Johnson 1987, 63]. La distance entre le *vallum* et le premier fossé est à peine d'environ 0.40 m, mais elle est conformée aussi aux normes, puisque dans les différentes forteresses, la berme est d'une largeur de 0.30 à 6.00 m, le plus souvent — de 0.90 à 2.00 m [Johnson 1987, 69].

Tel serait aussi l'état de choses sur le mur ouest (bien qu'on n'y ait pas creusé des fossés), mais seulement autour de la *porta principalis sinistra*, car aux extrémités nord et sud du mur ouest se trouvent des ravins profonds.

Tout autre est le système de fossés sur le mur sud (fig. 1, 3). On n'y a découvert que deux fossés, la largeur du fossé intérieur est de 2.00 et celle du fossé extérieur — de 0.90 m. Leur profondeur respective est de 1.00 et de 1.40 m. La berme est large de 0.80 m. Un intérêt présente la largeur hors standard du fossé extérieur, conditionnée probablement par les particularités du terrain.

Seul le fossé intérieur est conformé à la *porta decumana*, tandis que le fossé extérieur traverse la voie qui en part. Des cas analogues sont enregistrés aussi dans

d'autres *castella* romains, à Theilenhofen (Bavière) est conservé même le pont en bois [Johnson 1987, 67]. Le fossé coupé se termine à 6 m à l'est de la porte de pierre tardive, c.-à-d. la rue est déplacée à la même distance à l'est par rapport à la *via praetoria* tardive (fig. 1, 4). Le manque de traces des portes en bois ne permet pas d'établir si la *via principalis* suit aussi le tracé de la rue ancienne.

Un tel déplacement est à observer aussi dans le *scannum tribunorum*. Le baraquement des soldats (fig. 1, 6) s'y trouve sous la rue tardive, conformée aux constructions de pierre dans le camp. Il s'avance d'environ 5 m dans la rue. Ces exemples montrent que le centre du camp en bois et en terre est déplacé d'environ 5-6 m à l'est.

On dispose de peu de témoignages sur les travaux de construction à l'intérieur du camp. De la période la plus ancienne de l'existence de la forteresse militaire sont datées des données indirectes sur les *principia*. Les fosses à déchets aménagées des deux côtés de la cour tardive (dans les portiques) témoignent que la cour de l'état-major de la légion est plus petite que celle de l'édifice de pierre ou qu'elle se trouve en un autre lieu. Les chercheurs ne nous informent pas de murs en bois et en terre dégagés sous l'aile sud des *principia*. On n'y a découvert qu'une fosse. S'il existe des traces des *principia* en bois et en terre, elles doivent être recherchées, sur la base du déplacement établi du centre du camp, à l'est de l'édifice de pierre de l'état-major.

Les données sur la rue, qui se trouve à l'est des *principia*, montrent que celle-ci et le canal au-dessous d'elle sont édifiés sous Néron ou au début du règne de Vespasien. Elle est en conformité avec les *principia* de pierre, ce qui prouve qu'ils sont construits à la même époque.

L'édification des *principia* sert de base des travaux publics à l'intérieur. Il est établi qu'à *Novae* il y a des états-majors en bois, du fait qu'ils sont enregistrés même dans les camps temporaires de l'époque d'Auguste (Haltern, Dangstetten). Leurs vestiges doivent être recherchés dans la partie est de l'aile administrative ou en dehors, étant donné le déplacement du camp.

En face des *principia* est situé le *scannum tribunorum*. C'est là qu'on a identifié le plus grand nombre de vestiges des baraquements en bois et en terre. Les édifices commencent à 1.60 m au sud des murs extérieurs des *tabernae* du camp en pierre. L'espace devant ceux-ci est occupé par des fosses et de petits foyers, disposés sans ordre. Les fosses peuvent être réparties en deux groupes. Le premier groupe réunit les fosses circulaires ou ovales aux murs perpendiculaires, d'un diamètre de 1.00-1.20 m et d'une profondeur au-dessus de 2 m — fosses I, II, VI (plan). Elles sont remplies de cendre, d'ossements et de matériaux archéologiques. Au deuxième groupe appartiennent les fosses circulaires ou ovales au fond hémisphérique et d'un diamètre de 0.20-0.80 m. Leur profondeur varie de 0.30 à 1.20 m et elles sont remplies surtout de terre argileuse contenant de petites quantités de charbons et de matériaux archéologiques.

Faute de témoignages, on ne peut pas déterminer la fonction des fosses. Il est possible que les grandes fosses soient faites de *latrinae* aux éléments de construction en bois, tels qu'on y a découverts. Or, on ne pourrait pas interpréter de la même façon les petites fosses.

Le comblement des fosses (surtout des grandes fosses) a lieu lors du nivelage du terrain avant d'entreprendre la construction des *tabernae*. C'est pour cette raison que la datation des matériaux utilisés est d'une grande importance pour l'établissement de la chronologie des édifices de pierre dans le camp. Les *tabernae*, édifiées au long des rues principales, diffèrent, par le mode de construction, de la villa du tribun qui s'élève à l'intérieur du secteur. Les matériaux employés sont de provenance locale — du grès friable, qui est très répandu dans les environs. Il se réduit aisément en menus blocs uniformes qui ne sont pourtant pas résistants. Le même matériau de construction est enregistré dans les plus anciens *principia* de pierre, dans les tours intérieures sur le rempart ouest et dans les parties conservées sur le rempart est.

Le mortier, servant de liaison dans la construction des *tabernae*, diffère lui aussi du mortier utilisé à l'intérieur du secteur. Il est jaunâtre, mélangé de sable fin et n'est pas très stable. Quant à la villa du tribun, le mortier ressemble, par sa composition et sa solidité, au soi-disant béton romain. Il est blanc et mélangé de gravier fin et de sable.

L'insiste sur ces particularités, car elles témoignent de deux phases de construction différentes dans le secteur. La première phase se distingue par l'utilisation de matériaux locaux et l'instabilité des édifices. La deuxième phase met en évidence la recherche de matériaux de construction solides qui proviennent, comme il est établi, des carrières près du village de Hornica, région de Veliko Tarnovo [Skoczylas 1999, 127-130]. D'autre part, c'est l'indice de la bonne organisation de l'approvisionnement de la légion. Ces deux phases de construction se situent dans des périodes différentes.

L'un des murs des *tabernae* dans le carré 311 traverse la fosse I et s'est déformé sous l'action de l'affaissement des matériaux de comblement. C'est un témoignage de plus de la chronologie des vestiges qui implique la datation précise des matériaux.

A part la quantité d'objets, les fosses I et II ont livré cinq monnaies. Dans la première fosse, on a découvert un denier républicain d'argent usé, une monnaie frappée après l'an 22 à la mémoire d'Auguste et une monnaie de Claude. De la fosse II sont les émissions d'Agrippine l'Aînée de l'époque de Caligula (37-41) et une monnaie de Néron.

En ce qui concerne la céramique des fosses I et II, il n'y a pas de formes apparues à l'époque des Flaviens. Beaucoup d'entre elles sont enregistrées aussi pendant la période envisagée, mais leur production est plus ancienne. Parmi les céramiques sigillées prédominent les formes de la période Tibère — Claude. Certains exemplaires se rencontrent rarement dans la deuxième moitié du I^{er} s.,

mais, en général, les vases d'importation ne franchissent pas la limite des années 70. Dans les fosses ne sont pas représentés les *mortaria* sud-gaulois du type Drag. 35 et 36, caractéristiques pour le règne des Flaviens. D'après leur origine, les trouvailles sont: padanes tardives — 33%, arélines — 25%, sud-gauloises — 25% et est-méditerranéennes — 17%. Leur datation est représentée dans le diagramme 1. Il met en évidence que la *terra sigillata* occidentale ne dépasse pas le cadre du deuxième tiers du I^{er} s.

La sigillée orientale est d'une chronologie plus ancienne. Pour la plupart, elle est en usage à l'époque d'Auguste — Tibère, mais se rencontre aussi durant toute la première moitié du I^{er} s.

La céramique vernissée italique, qui n'est représentée que par trois vases, est datée *grosso modo* de la période depuis Claude jusqu'au début du règne des Flaviens, mais ne sort pas du cadre du deuxième tiers du I^{er} s. Le troisième élément des vases d'importation — les céramiques aux parois minces, se situe aussi dans cette période.

La vaisselle des fosses évoque les éléments de la céramique de la première moitié du I^{er} s. On peut la répartir en deux grands groupes. Le premier groupe est marqué de l'influence de la céramique de la dernière période de La Tène. Beaucoup d'exemplaires portent les traits distinctifs de cette céramique — couleur grise, bec oblique épais ou recourbé en dehors, surface lustrée ou seulement certaines bandes [Kappel 1969]. La diffusion des récipients aux éléments de la céramique laténienne sur les territoires où elle se développe ne dépasse pas le milieu du I^{er} s.

Ce type de céramique n'est pas caractéristique pour la Mésie parce que la culture de La Tène ne s'y développe pas sous une forme pure. Il est possible que les vases soient importés de Pannonie où ils sont très répandus. Un témoignage éloquent en sont les coupes à trois pieds dont la diffusion en Pannonie et en Norique est étroitement liée au maintien des traditions de la dernière période de La Tène. Il s'agit de même des autres types de vases exécutés dans ce style.

Du deuxième groupe font partie les formes d'origine méditerranéenne dont les prototypes apparaissent au I^{er} s. av. J.-C., mais qui se développent aussi dans la première moitié du I^{er} s. ap. J.-C. Ce sont surtout les cruches et les brocs. Ils présentent toutes les particularités de leurs prototypes italiques — cois cylindriques, profilés au rebord, panses galbées — sphériques ou aplaties dans la partie supérieure, pieds profilés et fonds concaves ou convexes. Ces vases sont enregistrés avant tout dans les camps d'Auguste (Dangstetten, *Novaesium*), tandis que pour les camps des Flaviens sont caractéristiques les formes allongées à bec conique recourbé en dehors [Planck 1975, 168] qu'on n'a pas découvertes dans les fosses.

L'origine italique et méditerranéenne des bassines et des plats ne fait aucun doute. Les bassines de couleur rouge pompéienne sont importés d'Italie. De là proviennent aussi les encensoirs. Ils sont liés aux croyances et aux coutumes véhiculées par les légionnaires de l'Italie.

Il est établi que la céramique faite à la main, recueillie dans les fosses et les couches les plus anciennes, est de fabrication locale. Cela est caractéristique pour plusieurs camps militaires romains et témoigne que la production de céramique n'y est pas encore organisée.

Il s'ensuit que les vases des deux groupes sont importés en Mésie, ce que vient confirmer le changement radical de la céramique de la deuxième moitié, surtout de la fin du I^{er} s. La *terra sigillata* cède le pas aux sigillées locales, surtout après l'apparition des produits des ateliers à Butovo et à Pavlikeni (diagramme 1). Les vases aux traditions laténiennes finissent par disparaître. La couleur grise et grise-brune de la céramique se trouve remplacée par les différentes nuances de la couleur rouge. Les bords ne sont plus profilés. Les formes changent aussi. Les grandes coupes profondes et les *moriaria*, typiques pour la cuisine romaine, font place aux petites coupes. Les dimensions des cruches diminuent. Tous ces changements tiennent au développement de la production de céramique locale qui commence à pourvoir, déjà dans les dernières décennies du I^{er} s., aux besoins de la légion.

Les amphores attestent de liens étroits avec la Méditerranée orientale et la Méditerranée occidentale. Elles sont apportées de l'Espagne, de la Gaule, de l'Italie et de la côte dalmate, mais principalement de la région de la mer Egée et de la mer Noire par l'intermédiaire d'Aquileia et des colonies grecques pontiques.

Importées sont aussi les lampes d'argile, retrouvées dans les fosses. Elles sont, pour la plupart, d'origine italique, mais il est possible que certaines d'entre elles proviennent de différents ateliers grecs ou est-méditerranéens. Les trouvailles appartiennent aux principaux types de lampes du Haut Empire — à volutes ou à bec arrondi court. La *Firmalampe* de la fosse I est attribuée au premier producteur de ce type de lampes — Strobilis.

Ces observations sont valables dans une mesure plus grande pour les objets en verre. Ils sont issus des ateliers italiques et leurs formes sont caractéristiques pour le milieu du I^{er} s. Certains des produits, ceux en verre de couleur, sont de la première moitié du I^{er} s. (diagramme 2).

Toutes les trouvailles des fosses, y compris les monnaies, nous portent à situer leur comblement à la fin du deuxième tiers du I^{er} s. Le manque de matériaux de l'époque des Flaviens témoigne qu'il a lieu à la fin du règne de Néron. C'est alors que commence l'édification des *tabernae*.

De leur côté, les trouvailles des couches de la période la plus ancienne de l'exploitation des *tabernae* de pierre remontent à l'époque des Flaviens, notamment un sesterce de Vespasien de l'an 71, recueilli sous le crépi tombé des *tabernae*, un fragment d'une *terra sigillata* à reliefs sud-gauloise (No 194 d'après Dimitrova-Milčeva), daté du règne de Domitien, une partie du fond d'une lampe d'argile portant la marque Vettius de la fin du I^{er} s.

Tout cela permet d'affirmer que l'édification des *tabernae* est l'œuvre de la VIII^e légion d'Auguste. En 69, elle est interrompue par son départ pour l'Italie.

Nos. après Dimitrova- Milčeva 2000	25 ans	50 ans	75 ans	100 ans
2				
7				
9				
11				
12				
13				
15				
22				
23				
24				
29				
36				
37				
39				
40				
41				
42				
48				
66				
67				
69				
70				
71				
77				
78				
79				
81				
82				
84				
85				
86				
88				
92				
101				
121				
123				
124				
141				
143				
144				
149				
151 - 160				
163				
188				
194				

Diagramme 1. La confrontation chronologique de la *terra sigillata* occidentale

De cette interruption soudaine témoignent les fondations creusées de la villa du tribun, remblayées par la suite. Elles sont parallèles au mur sud de la villa tardive, mais sont loin des murs des *tabernae*.

Type	25 anne	50 anne	75 anne	100 anne
1a				
Isings 50B				
1b				
Isings 51B				
1c				
Isings 51A				
1d				
Isings 14				
2				
Isings 67B				
3a				
Isings 3A				
3b				
Isings 3A				
3c				
Isings 18				
3d				
4a				
Isings 12				
4b				
Isings 29-30				
4c				
Isings 34				
4d				
Isings 37				
4e				
Isings 44A				
5a				
Isings 71				
5b				
Isings 8				
5c				
Isings 6				
5d				
Isings 28B				
6				
Isings 61				
7				
8				
Isings 74				

Diagramme 2. La confrontation chronologique des vases en verre

A part les fondations de pierre du rempart est, il y a encore un projet inachevé. Si l'on admet que dans le premier cas il s'agit de même d'un projet inachevé, on pourrait conclure qu'il est synchronique à celui du secteur X, c.-à-d. une suite du départ de la VIII^e légion d'Auguste pour l'Italie.

L'édification des *tabernae* sous Néron serait l'indice du début de la construction d'édifices de pierre à l'intérieur du camp. Est-ce possible, étant donné que le *vallum* en argile existe toujours. Les trouvailles des tours explorées sur le rempart ouest ne diffèrent pas des matériaux des fosses et remontent à la période Néron - début du règne des Flaviens. On peut aboutir à la conclusion que la

construction des premiers édifices de pierre dans le camp commence sous Néron et se termine par le retrait de la VIII^e légion d'Auguste.

Aussi la I^{re} légion italique trouve-t-elle à son arrivée une forteresse presque construite. C'est pour cette raison qu'elle ne déplace pas le camp. Or, les constructions nouvelles n'apparaissent pas tout de suite. Les matériaux de l'intérieur du secteur X, bien que mélangés par la suite de matériaux des travaux de construction intenses, remontent plutôt à la fin du règne des Flaviens. Dans les couches précédant l'édification de la villa du tribun, on a découvert des *mortaria* du type Drag. 35 et 36, des brocs en argile de couleur claire et des récipients en kaolin. Un autre motif pour cette datation tardive sont les deux lampes à volutes et à bec obtus de la période depuis les années 70 jusqu'au milieu du II^e s.

La conclusion que les premiers édifices de pierre sont de l'époque de Néron permet d'affirmer que le camp en bois et en terre existe depuis l'an 46 jusqu'aux années 60 du I^{er} s. Pour cette période sont enregistrées trois phases de construction. Des traces de la première phase ne sont repérées que sous le baraquement des soldats dans le carré 285/305/325 et dans le carré 233/253. Il ne s'agit pas vraisemblablement de constructions nouvelles, mais de la réparation d'édifices en ruine ou de la réorganisation ultérieure du plan.

Après la destruction du grand baraquement des soldats, sur une partie de celui-ci est érigé un nouveau bâtiment dont le mur traverse la fosse de la construction porteuse de la toiture. Si l'on en juge par l'épaisseur des murs dégagés — de 0.40 m, il est de petites dimensions.

Sur la base des matériaux découverts, on peut conclure que la destruction du baraquement n'est pas un acte prémédité. Les traces d'incendies dans la partie orientale du camp sont liées généralement aux invasions à la fin des années 70 [Sarnowski 1990, 351]. C'est probablement alors qu'a lieu la destruction du baraquement, car les matériaux et les monnaies, retrouvés dans le dépôt de déchets, sont de la même époque.

Les principales conclusions de l'étude des vestiges et des matériaux archéologiques se rattachent à la chronologie de l'édification du premier camp militaire à *Novae*. Les plus anciennes sont quatre monnaies républicaines — une de la fosse I et trois de la fosse No 4. On peut y ajouter la monnaie de Tibère du *vallum* en argile est, les monnaies frappées à la même époque en l'honneur d'Auguste et l'émission d'Agrippine l'Aînée. Toutes ces monnaies sont usées à force d'être en circulation pendant une longue période. Du début du I^{er} s. est aussi la phalère en verre [Dimitrova 1980, 97], datée des ans 19-23. Elle serait offerte à un soldat de la VIII^e légion d'Auguste lors de la visite de Drusus en Pannonie [Sarnowski 1988, 26].

Les trouvailles ne permettent pourtant pas d'admettre l'existence d'une cité ancienne sur l'emplacement de *Novae* ou d'un autre camp avant celui de la VIII^e légion d'Auguste. En général, les monnaies sont longtemps en circulation et des

objets, comme les phalères, sont gardés précieusement par leurs possesseurs du fait d'honorer leur courage ou leurs mérites envers l'Etat.

La présence de la céramique thrace faite à la main dans le camp le plus ancien est liée à sa vie et n'est point l'indice de l'existence d'une cité ancienne. Partout où les fouilles atteignent une couche stérile, on établit que le camp repose sur celle-ci sans aucune trace de constructions d'une cité précédente.

L'hypothèse lancée par B. Gerov [Gerov 1980, 113, 147-148] que dans les premières décennies du I^{er} s., à *Novae* stationne une petite unité militaire semble être aléatoire pour le moment. Il s'agit de même de l'hypothèse que le camp de la VIII^e légion d'Auguste est situé à l'ouest de *Novae*, dans l'endroit où à 70 m du rempart ouest sont découverts deux fossés. Plus plausible paraît l'hypothèse que ce serait un *campus* [Sarnowski 1990, 348-349].

Les vestiges les plus anciens du camp sont liés aux fortifications — le *vallum* en argile, les tours en bois et les fossés. Les matériaux découverts font dater leur construction vers le milieu du I^{er} s. — du règne de Claude.

L'annexion des royaumes clients thraces par l'Empire romain rend indispensable la mise en place d'un système défensif puissant sur le bas Danube, dans le secteur à l'est d'Oescus. Elle suit la direction ouest-est et se trouve confirmée par les nombreuses trouvailles de Dimum du milieu du I^{er} s. [Mitova-Džonova 1994, 47-63]. C'est pour cette raison que l'édification du camp en bois et en terre immédiatement après l'établissement de la VIII^e légion d'Auguste dans la région de *Novae* semble logique et témoigne de l'ambition de l'Empire romain d'assurer la protection de ses conquêtes dans la partie la plus orientale de la Péninsule Balkanique.

L'aménagement du *vallum* en argile aux tours en bois vers le milieu du I^{er} s. coïncide avec le début des travaux de construction à l'intérieur du camp. Il y a lieu de supposer que leur première phase se situe à la fin du règne de Claude. Elle est représentée par les murs les plus anciens des bâtiments en bois et en terre.

Le grand baraquement des soldats (fig. 1, 6) est construit un peu plus tard, après l'exécution du plan du camp et probablement après l'édification des fortifications. La disposition des édifices du camp en bois et en terre est la même que celle des édifices de pierre: en face des *principia*, qui occupent le centre, se trouvent de petits bâtiments qui serviraient de demeures des officiers supérieurs; à l'est, séparés par une petite rue, s'ordonnent les baraquements. Tout le camp en bois et en terre est déplacé d'environ 6 m à l'est, comparaison faite avec le camp en pierre. Selon toute probabilité, la *via principalis* est déplacée au sud (fig. 1, 5), du fait que la demeure du centurion, qui commence depuis le baraquement, s'étend sur 10 m au moins au sud.

Les dimensions des pièces dans le baraquement correspondent à celles qui sont recommandées pour les camps temporaires — 3 x 3 m [von Petrikovits 1975, 36]. Les analogies les plus proches du baraquement présente le camp à Inchtuthi

où la demeure du centurion est séparée aussi du baraquement par un passage [Lynn, Joseph 1985, 151 ff.]. Il y a aussi des analogies dans les *castella* des *auxilia*, entre autres Valkenburg I de l'époque de Claude [Glasbergen, Groenman-van Waateringe 1974, 8-13, fig. 2]. Il semble qu'à cette époque fonctionnent aussi des *principia* en bois et en terre temporaires, déplacés de 6 m à l'est des *principia* de pierre et de 10 m au moins au sud (fig. 1, 7).

Le début de la construction des *principia* de pierre est daté par les matériaux de la fosse No 4, située sous les pièces est de leur aile centrale [Sarnowski 1998, 122-124]. Ils ne diffèrent pas des trouvailles des fosses au-dessous des *tabernae* du secteur X, ce qui témoigne que l'édification des *tabernae* de pierre et des *principia* a lieu à une même époque. Cela contribue à la construction du centre du camp et des rues principales.

Les principaux repères de la détermination précise de l'époque de la construction de ces édifices sont les monnaies découvertes dans le canal de la petite rue qui est attenante au côté est des *principia*. La monnaie la plus récente est frappée sous Néron et peut servir de moyen de datation [Sarnowski 1983, 150-153]. Il s'agit de même des monnaies de fosses du secteur X, dont les plus récentes sont de la même époque, et des matériaux archéologiques de toutes les fosses. Sur le fond de l'abondance d'émissions de Claude et de Néron, le petit nombre de monnaies de Vespasien et le manque de monnaies de Domitien paraissent étranges. Le fait qu'il est difficile de faire la distinction entre les matériaux des années 60 et ceux des années 70 du I^{er} s. ne permet pas d'établir si les premiers édifices de pierre dans le camp sont l'œuvre de la VIII^e légion d'Auguste ou de la I^{re} légion italique.

Les nombreux exemples d'autres camps abritant des légions montrent que les constructions nouvelles sont liées le plus souvent au changement de l'unité militaire. Aussi peut-on admettre qu'après le retrait de la VIII^e légion d'Auguste et la destruction de ses baraquements par des incendies, la I^{re} légion italique commence à réédifier le camp, mais en pierre. Il y a aussi la possibilité qu'une partie des remparts, les *principia* et les *tabernae* soient construits par la VIII^e légion d'Auguste et que son retrait à l'ouest mette fin aux travaux de construction. Cette alternative permet de mieux expliquer les projets inachevés, à savoir l'aménagement de tranchées pour les fondations de la demeure du tribun et leur comblement ou l'édification éventuelle du mur de pierre est. Les matériaux découverts dans les fosses et dans le canal de la petite rue longeant les *principia*, ainsi que les trouvailles des couches inférieures dans les tours sur le mur ouest ne sont pas en contradiction avec cette thèse. De son côté, l'extension de la construction d'édifices de pierre donne la réponse à la question pourquoi le camp de la VIII^e légion d'Auguste s'identifie avec celui de la I^{re} légion italique.

Vu les événements vers les années 70 — les attaques des *trubus* d'au-delà du Danube, la participation de la légion récemment venue et son état après la bataille de Crémone, elle entreprend, semble-t-il, des travaux publics sous le règne de

Domitien. Sur ce point, très importante est l'hypothèse lancée par T. Sarnowski [1988, 40-41], selon laquelle la légion séjourne à Scupi pour compléter ses effectifs.

Sur le fond des matériaux analysés, une telle conception paraît acceptable et fait attribuer la construction des premiers édifices de pierre à la VIII^e légion d'Auguste, interrompue par son départ. L'édification du camp se termine à la fin du règne des Flaviens, probablement après l'an 86, lorsque la Mésie Inférieure devient une province autonome avec son propre système défensif. Les préparatifs de Trajan pour les guerres avec les Daces ne font que changer le plan du camp par l'édification du *valetudinarium* et le déplacement des thermes à l'ouest des *principia*.

Bibliographie

- Dimitrova 1980 — A. Dimitrova, Portrait romain en verre de *Novae*. *Archeologia* (Warszawa) 31, 1980, 97-100.
- Dimitrova-Milčeva 2000 — A. Dimitrova-Milčeva, Terra Sigillata und dünnwandige Keramik aus Moesia Inferior (Nordbulgarien), Sofia 2000.
- Donevski 1998 — P. Donevski, Inner Arrangement of the Camp at *Novae*. *Novensia* 10, 1998, 13-15.
- Genser 1986 — K. Genser, Der österreichische Donaulimes in der Römerzeit, *Der römische Limes in Österreich* 33, 1986.
- Gerov 1980 — G. Gerov, Beiträge zur Geschichte der römischen Provinzen Mösien und Thrakien, Amsterdam 1980.
- Glasbergen, Groenman-van Waateringe 1974 — W. Glasbergen, W. Groenman-van Waateringe, The Pre-Flavian Garrisons of Valkenburg Z.H. Fabriculae and Bipartite Barracks. Amsterdam-London 1974.
- Johnson 1987 — A. Johnson, Römische Kastelle des 1. und 2. Jahrhunderts n. Chr. in Britannien und in den germanischen Provinzen des Römerreiches, Mainz 1987.
- Kappel 1969 — Kappel, Die Graphittonkeramik von Manching, *Ausgrabungen in Manching* 2, 1969.
- Lynn, Joseph 1985 — H.P. Lynn, J.K.St. Joseph, Inchtuthil. The Roman Legionary Fortress. Excavations 1952-1965, *Britannia Monograph Series* 6. London 1985.
- Mitova-Džonova 1994 — D. Mitova-Džonova, Dimum und Regio Dimensis, [in:] *Limes. Studia di storia* 5, Bologna 1994, 47-65.
- von Petrikovits 1975 — H. von Petrikovits, Die Innenbauten römischer Legionslager während der Prinzipatszeit, Opladen 1975.
- Planck 1975 — D. Planck, Arae Flaviae I. Neue Untersuchungen zur Geschichte des römischen Rottweil. Teil I, II. *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 6 II-III, 1975.
- Sarnowski 1983 — T. Sarnowski, Wschodni bok twierdzy legionowej (ha XXVI). Sondaże, [in:] *Novae — Sektor Zachodni*, 1981. Sprawozdanie tymczasowe z wykopaliisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego, *Archeologia* (Warszawa) 34, 1983 (1985), 153-160.

- Sarnowski 1988 — T. Sarnowski, Wojsko rzymskie w Meczji Dolnej i na północnym wybrzeżu Morza Czarnego, *Novensia* 3, 1988.
- Sarnowski 1990 — T. Sarnowski, *Novae Italicæ* im 1. Jh. n. Chr., *Etudes et travaux* XV, 1990, 348-355.
- Sarnowski 1998 — T. Sarnowski, Wykopaliiska w południowo-wschodniej części *principia* w *Novae*. Kampanie 1995, 1996, *Novensia* 11, 1998, 113-125.
- Skoczylas 1999 — J. Skoczylas, Das Gestein aus dem Steinbruch von Hotnica und die architektonischen Elemente in den römischen Bauwerken von Niedermösien, [in:] *Der Limes an der unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 127-130.

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THE THIRTY YEARS OF THE EXPLORATION OF *NOVAE*
(*MOESIA INFERIOR*) BY THE INTERNATIONAL INTERDIS-
CIPLINARY ARCHEOLOGICAL EXPEDITION
OF THE ADAM MICKIEWICZ UNIVERSITY IN POZNAŃ

The extensive interdisciplinary archeological exploration of the Roman legionary camp and the late Roman and early Byzantine city of *Novae* (Svišov, Bulgaria) is conducted pursuant to the long-term international agreement concluded between the Adam Mickiewicz University (Uniwersytet im. Adama Mickiewicza, UAM) in Poznań on the one hand and the Institute of Archeology and the Museum of the Bulgarian Academy of Science in Sofia on the other, currently covering the period up to the year 2005.

Regular excavation work at *Novae* was started in 1960 by the Archeological Expedition of the Warsaw University, headed by Prof. Kazimierz Majewski, Ph.D., D.Hist. Since the very beginning of the exploration of *Novae*, Prof. Stefan Parnicki-Pudelko, Ph.D., of the Adam Mickiewicz University in Poznań held the post of deputy head of the Expedition of the Warsaw University. In 1961, the Expedition of the Institute of Archeology of the Bulgarian Academy of Science, headed by Member of the Academy Dimitrij Dimitrov joined in the excavation work at *Novae*. After the latter scholar's death, the work of the Bulgarian mission was headed during many years by Prof. Marija Čičikova, followed by Aleksandra Miščeva, and currently by Dr. Evgenija Genčeva. After Professor Majewski's death, the Expedition of the Warsaw University was headed by Prof. Ludwika Press, Ph.D., D.Hist., and its current head is Piotr Dyczek, Ph.D., D.Hist.

Before the establishment of the Archeological Expedition of the UAM, the layout of the defensive walls was ascertained in considerable detail, and the defensive towers and the western gateway were partly unearthed, the latter project being headed by Prof. S. Parnicki-Pudelko.

In 1970, the Archeological Expedition of the Adam Mickiewicz University in Poznań began its work at *Novae*.¹ Prof. Stefan Parnicki-Pudelko, Ph.D., organized it and was its head in the years 1970-1988. He was certainly one of the most devoted researchers of *Novae*, a city to which a considerable part of his scholarly work pertained. Since 1990, the international interdisciplinary Archeological Expedition of the UAM to *Novae* has been headed by Dr. Andrzej B. Biernacki.



Fig. 1. *Novae*. The team of the Archeological Expedition of the UAM and students in 1970. Prof. Stefan Pamicki-Pudeiko, Ph.D., is the first on the right



Fig. 2. *Novae*. The team of the Archeological Expedition of the UAM and students in 2001

The independent archeological exploration conducted by the Archeological Expedition of the UAM focused in the years 1970-1974 on the fortification system of *Novae*. The remnants of the western, southern and northern gateways were entirely unearthed, and fragments of the western defensive wall and defensive towers, partly unearthed.²

The Western Gateway:³ Three stages of its construction and operation are distinguished: Stage 1: late 1st and early 2nd century AD; stage 2: late 3rd and early 4th century AD; stage 3: the reign of Anastasius and the beginning of the reign of Justinian I. In stage 1, the gateway probably consisted of one passageway of the width of 8.15 m, was flanked by two quadrangular towers and featured stairs providing access to the defensive walls. In stage 2, it probably consisted of two passageways and was closed by a dual gate. In stage 3, it still consisted of two passageways, the towers were extended toward the west and had double rooms inside; the western parts of the towers were apparently taller, of a height of app. 18-20 m.

The Southern Gateway:⁴ Based on the discovered remnants of the gateway, two stages of its construction are distinguished: Stage 1: late 1st and early 2nd century AD; and stage 2: late 3rd and early 4th century AD. In stage 1, two roughly square towers defined the two passageways of the gateway; it was probably closed with two suspended cataracts (portcullises) in the south, and with a dual gate in the north. In stage 2, the western and eastern walls of the two towers were thickened, and now the towers had a U-shaped floor projection; the gateway consisted of one passageway only and was probably closed with a gate.

The Northern Gateway:⁵ The discovered vestiges suggest a foot passage (*poterna*) rather than a gateway proper; its width was reduced in view of its disadvantageous location (on a steep scarp on the Danube). This structure is dated to the mid-4th century AD.

Our current knowledge of the development of the fortifications of the legionary camp in *Novae* warrants the conclusion that in terms of the proportions of its layout, the design of the camp followed the classic concepts of the arrangement of a Roman military camp. It had a rectangular shape with rounded corners. Its length inside the defensive walls, measured along the axis "North-South," amounted to 486 m, or 1620 Roman feet, and its width, to 365 m, or 1216 Roman feet. Its total area was 17.75 ha. The southern and the northern gate were in the middle of the shorter sides of the camp, while the axes of the western and the eastern gate were at $\frac{1}{3}$ of the length of the longer sides. Based on the results of the studies conducted so far, we assume that the earlier stone defensive walls date to the late 1st and the early 2nd century AD. The fortified area of *Novae* probably was not extended to the east, and a new eastern wall was not built before the end of the 3rd or the beginning of the 4th century AD. The original legionary camp in *Novae* was undoubtedly defended by earthwork fortifications, whose remnants, constituting a system of moats and towers, were discovered outside the western defensive wall of the camp.

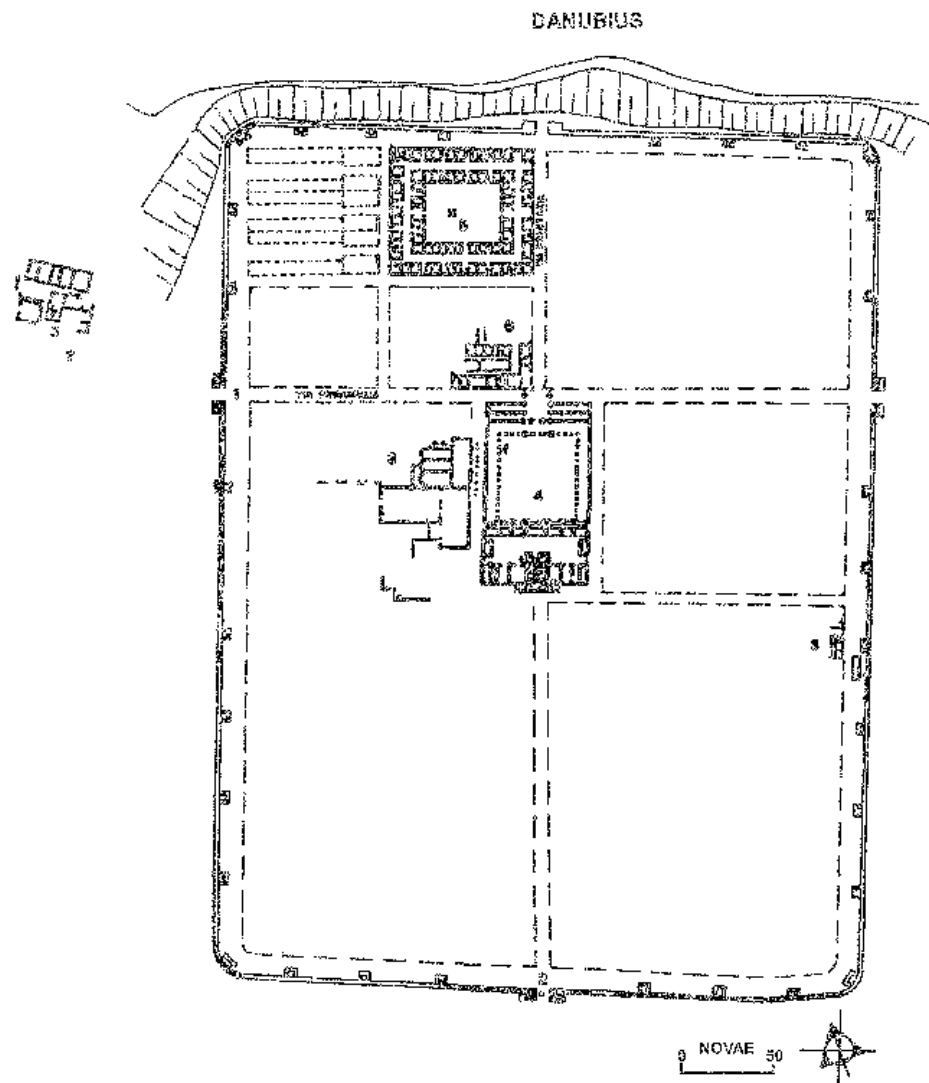


Fig. 3. *Novae*. The general layout of the legionary camp in the 2nd/3rd century AD. Prepared by A.B. Biernacki

Since 1970, the Archeological Expedition of the UAM also investigated the area where the *principia*, or the headquarters of the camp, were expected to be found based on the assumed layout of the two main roads inside the camp, the *via principalis* and the *via praetoria*; since 1976, this project was taken over by the Archeological Expedition of the Warsaw University, headed by Prof. Tadeusz Sarnowski, Ph.D., D.Hist. A dozen years of excavation work entirely confirmed the postulated location of this complex of buildings.

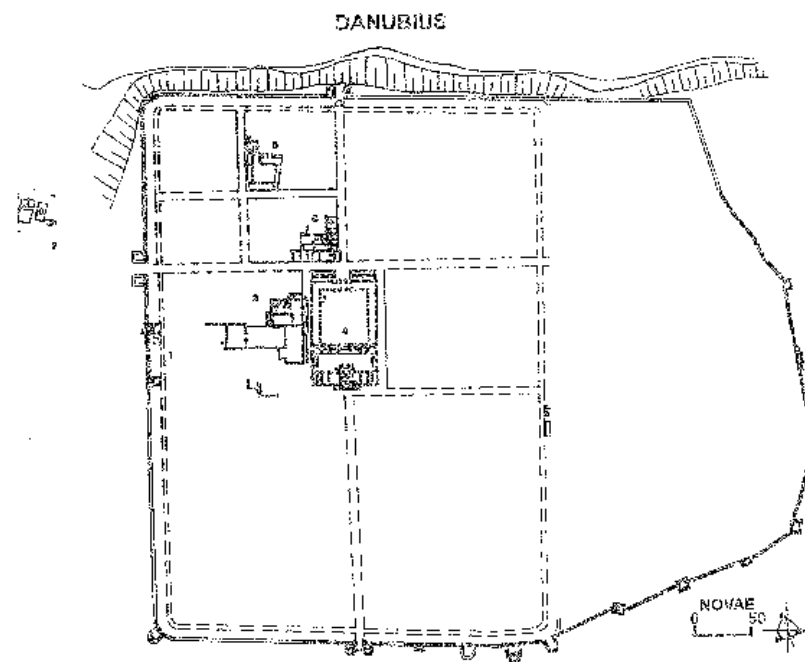


Fig. 4. *Novae*. The general layout of the city in the 3rd/4th century AD. Prepared by A.B. Biernacki

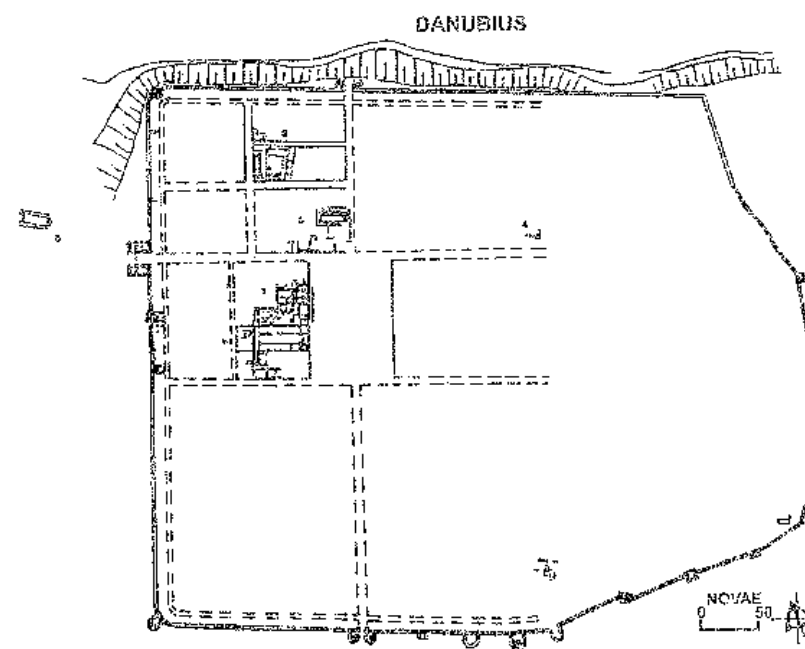


Fig. 5. The general layout of the city in the 6th century AD. Prepared by A.B. Biernacki

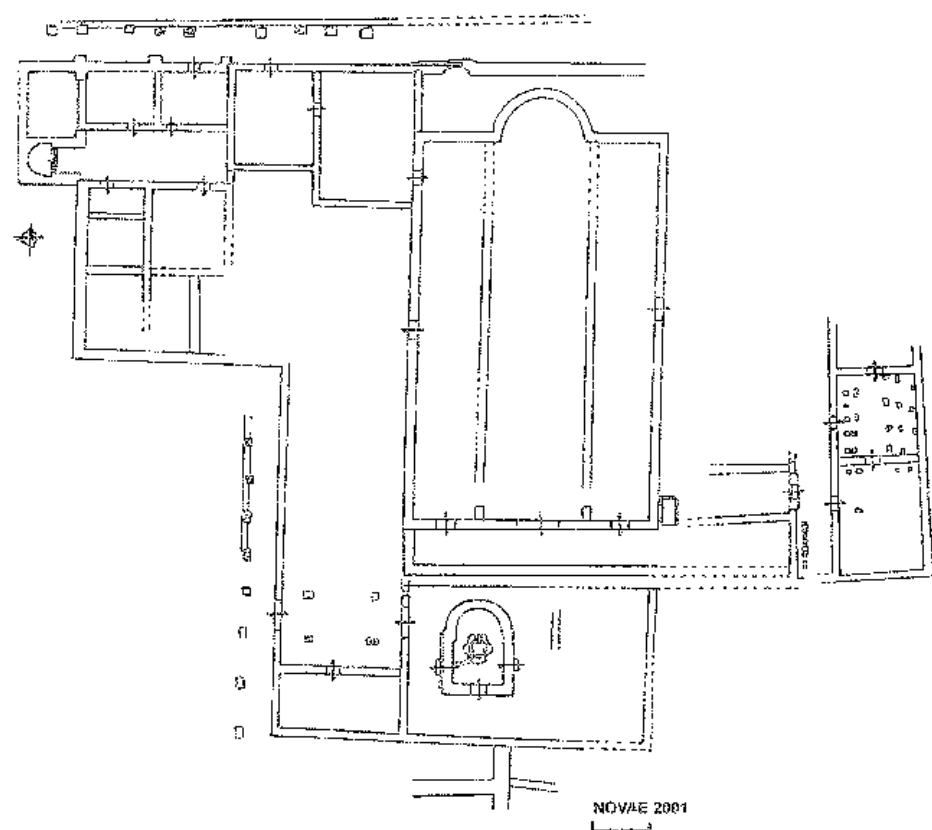


Fig. 6. *Novae*. The complex of the early Christian basilica and episcopal residence in the 5th century; floor projection. Prepared by A.B. Siemacki, S. Medeksza and E. Klenina

In the subsequent period of 1974-2000, the research of the Archeological Expedition of the UAM focused on the area of the center of the city, which at that time was prefatorily referred to as "the forum." Excavation work west of the complex of the *principia* (in an area referred to as Section 10) unearthed the temple complex of the early Christian basilica and episcopal residence from the 5th-6th century AD, the building of the bath from the turn of the 4th century, situated under the latter, and the vestiges of an earlier complex of legionary bath from the second half of the 2nd century AD.⁶

The episcopal temple complex in *Novae*, ranking among the largest in the Balkan Peninsula and the most thoroughly studied, includes:

- an early Christian basilica, one of the largest in the Balkans;
- the episcopal residence with its own bath;
- the so-called minor basilica;

— a complex of buildings south of the basilica, identified as the very rare establishment of the *ptochoorophium* (a shelter for the poor), comprising a *skeno-phylakion*;

— a detached large baptistery in the northern part of the yard, in front of the basilica, with a baptismal tank in a good condition of preservation;

— an interesting peristylar structure, possibly related to the baptistery.

Each building or structure has its own characteristic features, nature and style.

The episcopal basilica⁷ is one of the largest early Christian basilicas on the middle and lower Danube.

The research conducted so far provides evidence that the construction and operation of the temple may be divided into at least five stages:

Stage 1 — a building with two side aisles and the nave, with one apse, with an annexed narthex and atrium (the first quarter of the 5th century AD).

Stage 2 — a building with two side aisles and the nave, with one apse, with a narthex and a baptistery in the atrium (the second half of the 5th century AD).

Stage 3 — a building with two side aisles and the nave, with one apse, with a narthex and an external baptistery or martyrion east of the southern aisle of the church (the turn of the 6th century AD).

Stage 4 — a building with two side aisles and the nave, with three apses and an enlarged narthex, with a separate presbytery and auxiliary liturgical rooms, the *prothesis* and the *diaconicon*; the interior decoration changed through the addition of an iconostasis, a Constantinopolitan pulpit made of Proconnesos marble and other items (the first half of the 6th century AD).

Stage 5 — a building with two side aisles and the nave, with three apses and an enlarged narthex, with a separate baptistery in the eastern part of the southern aisle, with a baptismal tank in the shape of a tetraconch inscribed in a circle (the second half of the 6th century AD).

The maximum external length of the basilica amounts to 46.26 m, and its width, to 24.30 m. Its internal dimensions are 40.60 × 22.32 m. The temple features a semicircular central apse, and two side aisles and the nave separated by columns. The dimensions of the naos are 34.80 × 22.32 m. The inside of the basilica, including the naos, was originally 43.16 m long, and after the enlarging of the naos, it increased to 44.10 m. The dimensions of the irregular quadrangular yard in front of the basilica were: 22.63 (the western and eastern side) × 14.40 (the southern side) × 13.57 m (the northern side). The diameter of the central apse was 7.73 m, of the northern, 2.98 m, and of the southern, 3.10 m. The nave was between 9.15 and 9.29 m wide, the northern aisle, between 5.79 and 5.87 m, and the southern aisle, between 5.66 and 5.74 m. The two stylobates dividing the nave from the aisles consist of alternating sections of brick and stone wall. The brick sections are 0.93 m long, and the stone sections, 2.80 m. Apparently the brick sections provided support for the bases of columns, and the stone sections were therefore intercolumniations. Since fragments of column shafts of di-

aneters of between 0.40 and 0.52 m and of corresponding Corinthian capitals have been found all over the naos, the columns between the nave and the aisle conceivably were in the Corinthian order, and were supported by brick foundations of the length of app. 0.93 m. The width of the stylobates was app. 0.80 m, and the length of the stone sections between the column supports, app. 2.80 m.

The minor basilica⁹ is located directly north-west of the episcopal basilica. It consists of two side aisles and the nave, a central apse and a porch. The maximum external length of the minor basilica, including the apse and the porch, was 16.70 m. The research conducted so far has established that this temple consisted of a nave and two side aisles. The bases, shafts and capitals of columns, mostly preserved *in situ*, prove that it was decorated in the Ionic-Roman order. A stone reliquary was discovered *in situ* under the foundation slab of the altar. The minor basilica was probably erected between the second half of the 5th and the first half of the 6th century AD.

The complex of buildings south of the basilica⁹ has been identified as the very rare establishment of the *ptochotrophium* (a shelter for the poor), here comprising a *skeuophylakion*.¹⁰ Several rooms south of the basilica were unearthed during the last few years. These communicated with the basilica through an entrance 2.00 m wide, discovered in the southern wall of the church.

A room located directly south of the temple, 3.20 m wide, with an entrance in the south: The floor was laid with ceramic tiles of the side length of 0.32 m. A tomb chamber made of stone and brick was discovered in the north-western corner of the room, of the dimensions 2.50 × 1.27 m and the height of 1.30 m, laid along the axis "West-East."¹¹ The room might have been used as a martyrium. The room was enlarged in the west in the early 5th century. A passage in its western wall provided direct communication with the narthex of the episcopal basilica. It was probably at the same time that the room began to be used as a *skeuophylakion*. A *skeuophylakion* was a room where Christians kept liturgical vestments and vessels as well as food products used during the services.

A corridor 3.10 m wide was located south of the room, with two rectangular rooms on its other side. The eastern room had the dimensions 7.20-7.30 m (along the axis "West-East") × 7.50 m (along the axis "North-South"), and the western room, 7.50-7.70 × 9.90 × 10.15 m. The latter was accessed from the corridor through an entrance 1.20 m wide. Both interiors featured wooden floors laid on stone supports made of recycled items, including a water tank, an altar and two other architectural details. Both were destroyed by a fire. Pieces of two marble *mensae sacrae* were found in the layer left by the fire. Directly outside the eastern (smaller) room with a wooden floor, south-east of it, remnants of an oblong kitchen stove were identified. The stove was made of unbrown stones bound with clay; its length was 3.20, and width 0.43 m at the western end and 0.51 m at the eastern end. Stoves of this type were used for cooking food for a large number of people, and are known from other legionary camps and Roman cities. Appar-

ently, since the 440s the two rooms were used as a *xenodochium* or *ptochotrophium*, i.e., a shelter for the poor.

The Baptistery:¹² Remnants of a structure with a rectangular floor projection, featuring an apse, were found in the northern part of the yard of the episcopal basilica. The internal dimensions of this building are 7.40 (length) × 5.05 m (width); the apse is 4.48 m wide at the base. The main entrance to the baptistery, located in its western wall, is 1.60 m wide. There were two other entrances in the eastern and the western wall. The baptistery had a floor of ceramic tiles. When exploring the central part of this building, a round baptismal space was unearthed, with a quadrangular baptismal tank (*piscina*) inside, of the dimensions 1.08 × 0.99 × 0.27 m. The interior of the tank was laid with marble tiles made of recycled items, as the fragment of an inscription (the characters "M" or "W" and "O") discovered in the eastern side of the tank, proves. The tiles are extant in the eastern side of the tank only. The diameter of the round baptismal space, measured along the axis "North-South," amounts to 2.85 m. The tank had the shape of a rectangle inscribed in a circle of the inner diameter of 1.65 m. The wall surrounding the tank is 0.60 m wide. A channel running from the north-west to the south-east removed the water from the baptismal tank. Entrance to the tank was provided by two stone steps each in the east and the west. Its design suggests that it might have been covered by a *ciborium* resting on six quadrangular pillars. The baptistery is dated to the second half of the 5th century.

The location of the baptistery is unique in the Balkans and Greece. Baptistories of such floor projections were built principally in Syria. The baptistery is located in the yard of the basilica, but removed away from the main axis of the temple to the north. This provides easy passage for the faithful going to the church through the yard.

The Bath:¹³ North of the basilica, we discovered rooms belonging to the complex of the bath of the episcopal residence. These are: the rooms housing the pools with hot, warm and cool water (*caldarium*, *tepidarium* and *frigidarium*), the cloakrooms (*apodytheria*) and two furnaces heating the bath (*praefurnia*). The external length of the bath building is 20.76 m, and the width, 16.70 m. It was probably erected in the mid-6th century as a part of the episcopal residence, supplementing the accommodations east and west of the residence. Parts of the walls of the bath building are made up of the walls of the earlier large complex of the *legionary bath*,¹⁴ dated to the late 2nd century AD. Its northern part consisted of three rooms of similar layouts and parallel to one another, extending to the north (the *caldarium*, the *sudatorium*, i.e. a hot and dry room, and the *tepidarium*) and communicating through a large rectangular cloakroom (*apodytherium*). South of the complex, an impressively large *palestra* or *basilica discoperta* was located, which provided a place of rest and recreation for the legionaries after their baths. North of the *caldarium*, a huge *praefurnium* has been discovered, which heated the *caldarium* and supplied very hot water to the two small



Fig. 7. Novae. The baptistery and the baptismal tank in the yard of the episcopal basilica. View from the west. The complex of buildings south of the basilica. Photo by A.B. Biernacki

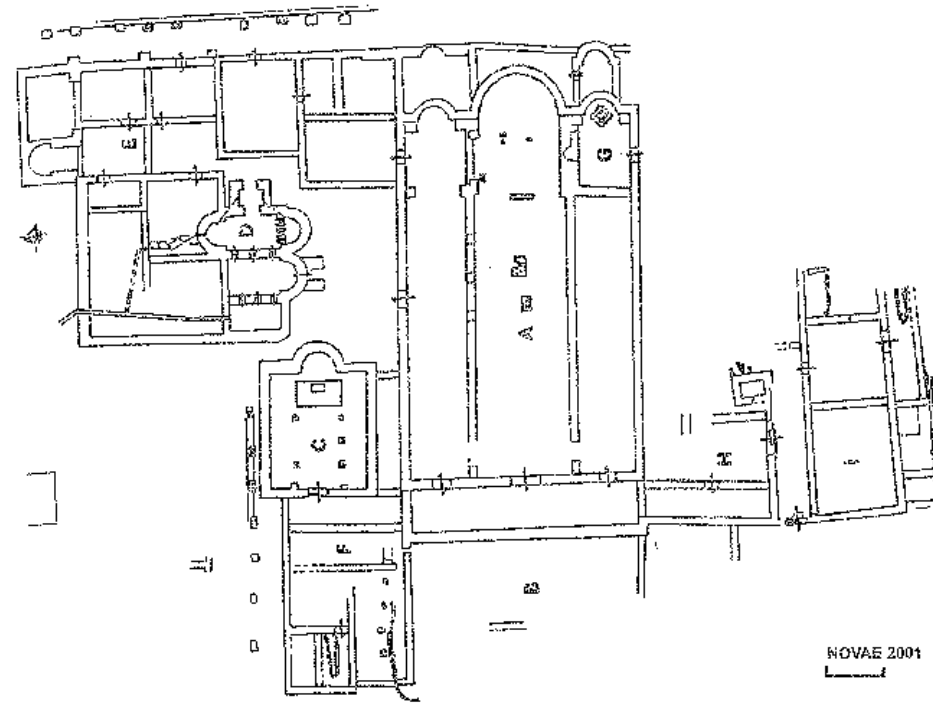


Fig. 8. Novae. The complex of the early Christian basilica and episcopal residence in the 6th century; floor projection. Prepared by A.B. Biernacki, S. Medeksza and E. Klenina

rectangular bathing pools (*alvei*). Another room in the complex of the legionary bath was the *frigidarium* with a rectangular swimming pool (*natatio*), situated in the south-east of the complex. It must be pointed out that most rooms in the building of the legionary bath were provided with underfloor central heating by means of hot air, using a system of hypocaust basements. The complex of the legionary bath in *Novae* probably took up one building *insula* of the camp. Among the smaller items discovered by the Polish and Bulgarian excavation teams, particularly interesting are: more than 140 Latin and Greek inscriptions; 900 architectural details; fragments of marble sculptures and bas-reliefs; more than 100 ceramic oil lamps; a wide assortment of household objects made of glass, bone, bronze and iron; a wide assortment of ceramic kitchenware, tableware and amphorae; ceramic building material bearing the stamps of the legions: the 1st Italian, the 5th Macedonian and the 11th "Claudia"; bronze and silver coins, including a hoard of 380 bronze *folles*; early Christian stone reliquaries; and marble furnishings of the episcopal basilica, including a pulpit, an iconostasis and *mensae sacrae*.

The international interdisciplinary research team of the Archeological Expedition of the UAM consists of Polish, Bulgarian and Ukrainian scholars, scien-

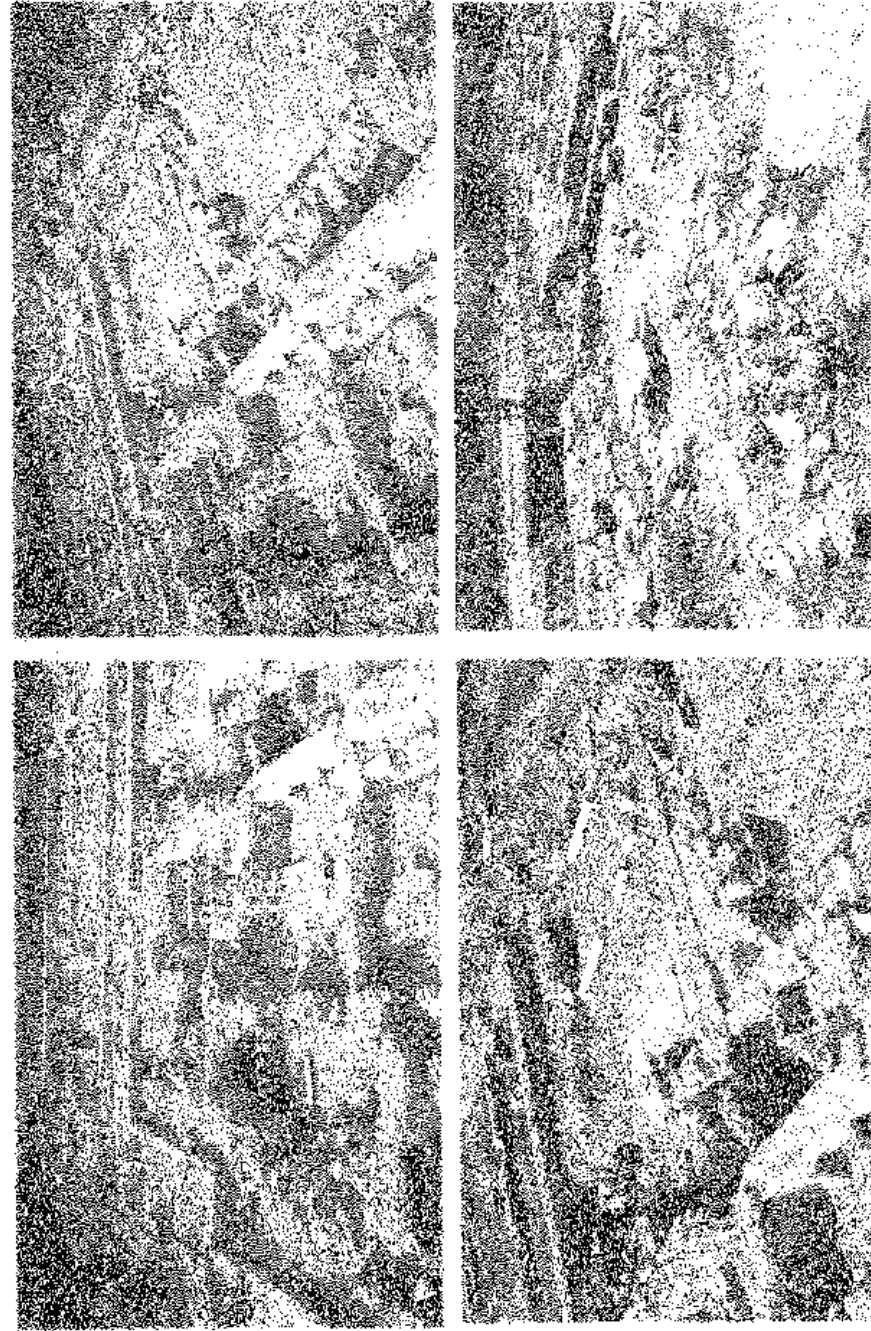


Fig. 9. *Novae*. The complex of the early Christian basilica and episcopal residence in the 6th century. Photo P. Namota and A.B. Biernacki

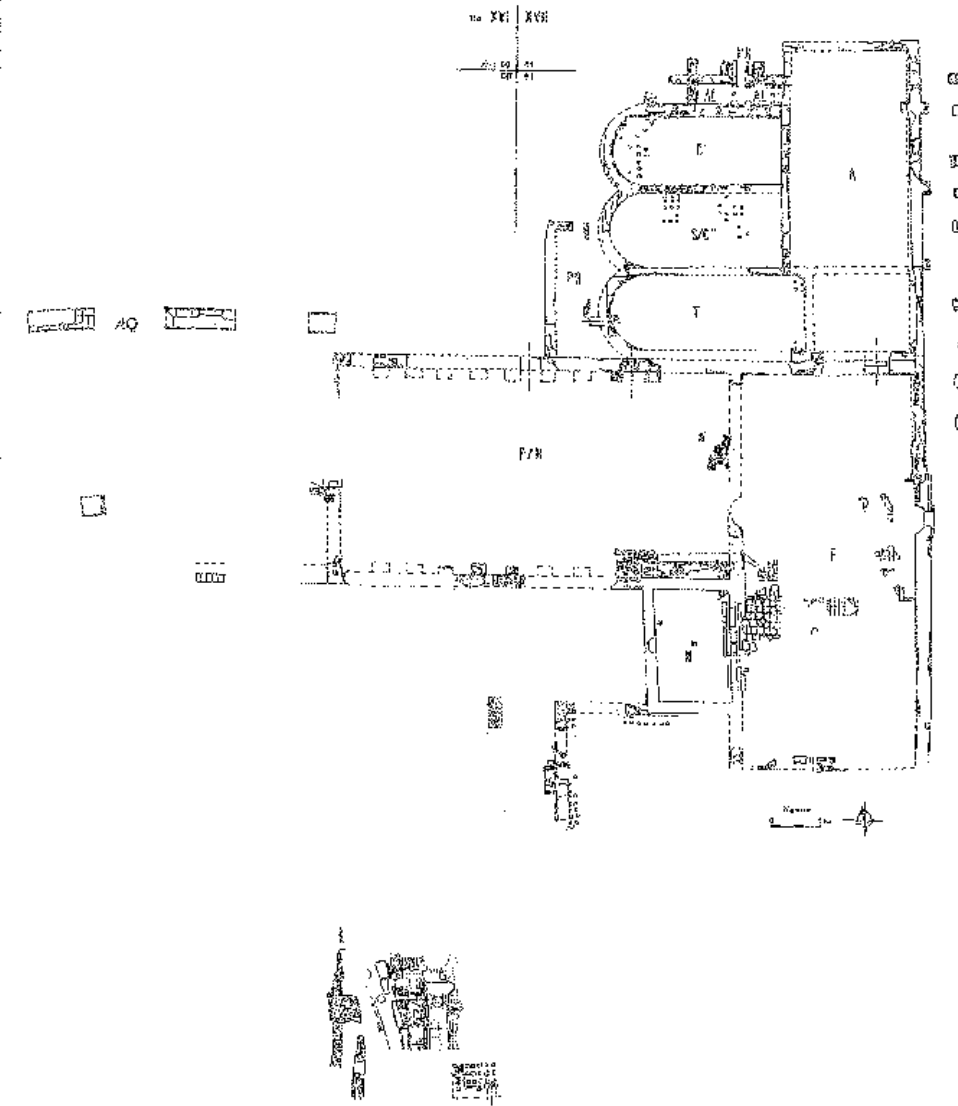


Fig. 10. *Novae*. The complex of the legionary bath in the 2nd-3rd century AD; floor projection. Prepared by A.B. Biernacki

tists and experts, including archeologists, architects, a historian of the art, an epigraphist, a historian, a geologist, an archeozoologist, a numismatist, a photographer and specialists in the restoration of stone and metal artifacts. Archeological field work provides material for various and comprehensive studies of the categories of archeological sources acquired by the exploration by the Polish and Bulgarian archeological expeditions to *Novae*.

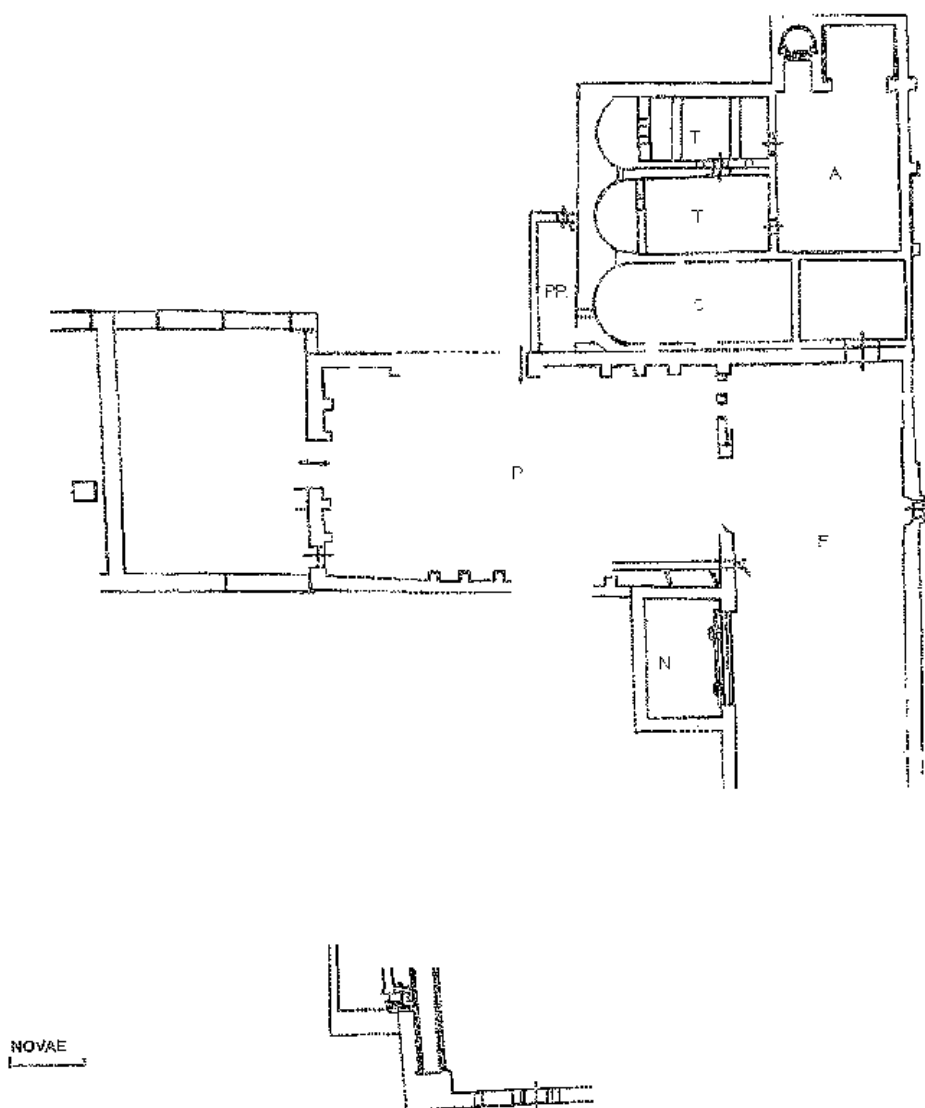


Fig. 11. *Novae*. The complex of the legionary bath in the 3rd-4th century AD; floor projection.
Prepared by A.B. Biernacki and E. Klenina

— Dr. Andrzej Biernacki has been studying Roman and early Byzantine building construction and architecture in *Novae*.¹⁵ He has finished work on a two-volume monograph of Roman and early Byzantine architectural details (in press).

— Prof. Stanisław Medeksza, Ph.D., D.Sc., of the Polytechnic University of Wrocław (Politechnika Wroclawska) has been conducting a comprehensive study of the Roman and early Christian architecture and building construction tech-

niques in *Novae* for a dozen years. As of this year, he is in charge of the restoration work at certain buildings in *Novae* (the minor basilica and the baptistry).

— Prof. Janusz Skoczylas, Ph.D., D.Sc., an archeologist-geologist of the Institute of Geology of the UAM, is continuing his work on establishing the origins of the material of the architectural details in *Novae*.¹⁶ He is also continuing his projects of identifying the quarries which supplied raw stone to *Novae*.¹⁷

— Prof. Jerzy Olczak, Ph.D., D.Hist., an archeologist of the Institute of Archeology of the Mikołaj Kopernik University (Uniwersytet im. Mikołaja Kopernika) in Toruń, has been researching for many years the glass artifacts discovered in *Novae*. In 1998, he published a comprehensive study of the glass material collected in *Novae*, entitled *Produkcja szkła w rzymskim i wczesnobizantyjskim Novae* [*The Production of Glass in the Roman and Early Byzantine Novae*].¹⁸

— Prof. Leszek Mrozewicz, Ph.D., D.Hist., made in the 1980s a comprehensive study of the Latin inscriptions collected by the Archeological Expedition of the UAM to *Novae*.¹⁹

— Ms. Elena Klenina, M.A., of the Nacional'nyj Zapovednik "Chersones Tavricheskij" (the National Reserve "Chersonesus Taurica," Sevastopol, Ukraine) is studying Roman ceramic kitchenware and tableware.²⁰ She is finishing work on her doctoral thesis on this subject.

— Dr. Małgorzata Daszkiewicz and Elena Klenina have carried out comprehensive physical-and-chemical and petrographic tests of 76 specimens of ceramic vessels from *Novae* and *Chersonesus Taurica*. The tests have been conducted in cooperation with Dr. Schneider of the Free University (Frei Universität) of Berlin.

— Dr. Bożena Stawoska-Jundziłł of the Academy of Bydgoszcz (Akademia Bydgoska) has ended her research study on a collection of clay oil lamps from *Novae*,²¹ and written a monograph in the English language entitled *Roman and Early Byzantine Clay Oil Lamps from Novae*. The book, including a catalog, will be published in 2001.

— Mr. Piotr Pawlak, M.A., of the UAM, has been researching various categories of smaller items found in *Novae*.²²

— Dr. Evgenija Genčeva of the Institute of Archeology of the Bulgarian Academy of Science has prepared a description of the bronze relics collected during the excavation seasons of the Expedition of the UAM to *Novae*.

— Ms. Pavlina Vladkova of the Archeological Museum of Veliko Tărnovo has begun a study of bone items found at the sites explored by the Expedition of the UAM to *Novae*.²³

— Dr. Kamen Dimitrov of the Institute of Thracian Studies of the Bulgarian Academy of Science has been cataloging for many years the numismatic finds from *Novae* for the Archeological Expedition of the UAM.²⁴

— Prof. Velizar Velkov, Ph.D., described the Greek inscriptions collected at the sites explored by the mission of the UAM to *Novae* in the late 1980s and

early 1990s. During the same period, he frequently offered to the team of the Expedition of the UAM, comprehensive scholarly consultations in the matters of the history and planning of Roman and early Byzantine cities in *Moestia Inferior*.

— A. Biernacki, J. Skoczylas, L. Jochenczyk and Prof. T. Halas, Ph.D., D.Sc., of the Maria Curie-Skłodowska University (Uniwersytet im M. Curie-Skłodowskiej) in Lublin, have conducted spectral-and-isotopic analyses of the marble architectural details found in *Novae*, establishing that their material came from the quarries in Proconnesos²⁵ and Dokimeion. During the current season of excavation, spectral-and-isotopic analyses of marble have made it possible to establish for the first time that certain items found in *Novae* were made of material from the quarries in Dokimeion (*Asia Minor*, Turkey).

— Ms. Katarzyna Grala, M.A., of the Institute of Prehistory of the UAM, is writing a doctoral thesis of the exportation of Proconnesos marble to the Northern and Western coast of the Black Sea.²⁶

— Dr. Daniel Makowiecki is conducting archeozoological studies of animal bones.²⁷

— Mr. Zygmunt Kalinowski, M.A., is continuing his research into the artistic aspects and the liturgical functions of the episcopal and minor basilicas in *Novae*.²⁸ He has submitted a doctoral thesis on this subject.

— Ms. Monika Nowak has been collecting and preparing material for the reports on ancient cameos, intaglios and other gems, and on the archeological exploration of *Novae* and its vicinity (in cooperation with Peti Donevski and A. Milčeva).

After more than two years of negotiations with the participation of a representative of the Archeological Expedition of the UAM to *Novae*, and following approval by the Ministry of Culture of the Republic of Bulgaria and the Ministry of Culture and National Heritage of the Republic of Poland, the National Museum of Poznań and the Historical Museum of Svištov have signed an agreement for a long-term five-year deposit of seventy-two archeological relics collected during the exploration of *Novae* by Polish and Bulgarian archeological missions; the agreement provides for a possible extension of the period of deposit. This is the first deposit of such length in the post-war history of Bulgarian museums. Most deposited items are highly valuable stone architectural details (capitals, bases and columns), sculptures, bas-reliefs and inscribed pedestals. These items will probably be exhibited at a permanent exposition of the National Museum in Poznań, beginning in 2002.

Pursuant to a decision of the City Council, the Mayor of Svištov granted to the Archeological Expedition of the UAM the use, free of charge, of two camping cabins of the surface of 50 sq. m each. Previously the cabins were owned by the conference center of the City Council of Svištov. The funds assigned by the President of the UAM and the Head of the Institute of History of the UAM

allowed the Polish Expedition to disassemble the cabins and reassemble them in the area of the archeological camp at *Novae*, as well as to renovate them and adapt them to the Expedition's research and living requirements.

The exploration is funded by the Polish Government's Research Committee, the President of the UAM and the Head of the Institute of History of the UAM.

The research results and the experience which the members of the Archeological Expedition of the UAM have gained at *Novae*, are now finding a practical use in other research projects.

Since 1997, the members of the Expedition have also been taking part in the Polish-Egyptian restoration mission to the Roman port of Leucaspis (now Marina El Alamein, Egypt). The head of the mission is Prof. Stanisław Medeksza, Ph.D., D.Sc.

Since 1998, a joint Polish-Ukrainian research project has been underway, with a view to publish a complete description of the early Christian architecture of Chersonesus Taurica (Sevastopol, Crimea, Ukraine). The project is funded by the Polish Government's Research Committee and headed by Dr. Andrzej B. Biernacki. Ukrainian members of the team include Stanislav Ryžov, Elena Kienina, Tatjana Jaševa and Larissa Sedikova of the *Nacional'nyj Zapovednik "Chersonesus Tavričeskij"* (the National Reserve "Chersonesus Taurica").

The results of the exploration of *Novae* have been and are presented at numerous international congresses and conferences worldwide, arousing increasing interest among archeologists and historians as well as epigraphists, geologists, physicists and archeozoologists.

Novae is also a symbol of long-lasting fruitful cooperation between Bulgarian and Polish scholars and scientists. The many years' heads of the Polish and the Bulgarian expedition, Prof. Ludwika Preiss and Prof. Marija Čičikova, have played a particularly important part in this project. Their enormous personal involvement, assistance and support, which are still thankfully remembered, have helped define the professional interests and preferences of many of the archeologists who are now working at *Novae*.

Finally, let us emphasize another significant aspect of the exploration of *Novae* and the Polish-Bulgarian cooperation. This excavation site has also been the place of practical training for more than a thousand Polish students of archeology, architecture, history, ancient languages and literature, history of the art, geology, chemistry and other fields of knowledge. The scholarly careers of several professors and doctors have begun there. A whole army of research workers will always remember *Novae* as their first professional scholarly or scientific project.

Our expedition would not have achieved so much success without the help of hundreds of inhabitants of Svištov and the nearby villages, including Vardim and Carevec, who for thirty years have been taking part in each season of excavation at *Novae* doing the exhausting and demanding physical work. After some years, many of them acquired more experience than the students of the 2nd and

3rd year of archeology who did their practical training there. The third generation of the inhabitants of *Novae* is now working at the excavation sites in *Novae*; the grandfathers or fathers of many present workers helped us discover and study the history of the ancient *Novae*. All of them may now, without undue exaggeration, be considered successors of the *Novae*nsians and of the veterans of the 1st Italian Legion.

Notes

¹ The results of the archeological exploration of *Novae* conducted by the Archeological Expedition of the Adam Mickiewicz University in Poznań are regularly published in the yearbook *Archeologia* and in the series *Novae. Studies and Materials*, appearing in Poznań. Interim reports of the excavation seasons of the Archeological Expedition of the UAM have been published in the yearbook *Archeologia* beginning with 1970, and in *Archeologia* 48, 1997(1998), 35-42.

² S. Parnicki-Pudełko, The Fortifications in the Western Sector of *Novae*, [in:] *Novae — Sektor Zachodni* [Novae: The Western Sector], Poznań 1990.

³ S. Parnicki-Pudełko, Brama Zachodnia — odcinek V [The Western Gateway: Section 5], [in:] *Novae — Sektor Zachodni* 1970, Poznań 1973, 11-60; A.B. Biernacki, Brama Zachodnia — odcinek V [The Western Gateway: Section 5], [in:] *Novae — Sektor Zachodni* 1972, Poznań, 1975, 7-56.

⁴ S. Skibiński, Brama południowa — odcinek VIII [The Southern Gateway: Section 8], [in:] *Novae — Sektor Zachodni* 1970, Poznań 1973, 71-82; S. Skibiński, Brama południowa — odcinek VIII [The Southern Gateway: Section 8], [in:] *Novae — Sektor Zachodni* 1972, Poznań 1975, 57-80; S. Skibiński, Brama południowa — odcinek VIII [The Southern Gateway: Section 8], [in:] *Novae — Sektor Zachodni* 1974, vol. I, Poznań 1978, 7-24.

⁵ J. Ziemiński, Brama (?) północna — odcinek IX [The Northern Gateway (?): Section 9], [in:] *Novae — Sektor Zachodni* 1970, Poznań 1973, 83-90; J. Ziemiński, Brama (?) północna — odcinek IX [The Northern Gateway (?): Section 9], [in:] *Novae — Sektor Zachodni* 1972, Poznań 1975, 81-96; L. Czerniak, Brama (?) północna — odcinek IX [The Northern Gateway (?): Section 9], [in:] *Novae — Sektor Zachodni* 1974, vol. I, Poznań 1978, 25-40.

⁶ A.B. Biernacki, P. Pawlak, Dwadzieścia pięć lat badań Ekspedycji Archeologicznej Uniwersytetu im. Adama Mickiewicza w *Novae* (1970-1994) [The Twenty-Five Years of the Exploration by the Archeological Expedition of the Adam Mickiewicz University to *Novae* (1970-1994)], [in:] *Wielkopolskie sprawozdania archeologiczne* [The Great Poland Archeological Reports], III, Poznań 1995, 257-265 (includes a bibliography of previous literature).

⁷ S. Parnicki-Pudełko, Rejon forum — odcinek X [The Region of the Forum: Section 10], [in:] *Novae — Sektor Zachodni* 1976, 1978, Poznań 1981, 7-46; S. Parnicki-Pudełko, The Early Christian Episcopal Basilica in *Novae*, *Archaeologia Polona* XXI—XXII, Warszawa 1983, 241-270; S. Parnicki-Pudełko, Wczesnochrześcijańska bazylika episkopalna w *Novae* [The Early Christian Episcopal Basilica in *Novae*], *Balkanica Posnaniensia* I, Poznań 1984, 271-304; S. Parnicki-Pudełko, The Episcopal Basilica in *Novae*: Archaeological Research, 1976-1990, Poznań 1995; A.B. Biernacki, L. Czerniak, T. Herbich, J. Kotecki, S. Parnicki-Pudełko, S. Skibiński, *Novae — Sektor Zachodni* 1974, ed. by S. Parnicki-Pudełko, *Archeologia* XXVII, Warszawa 1976, 137-170; A.B. Biernacki, L. Mrozewicz, S. Parnicki-Pudełko, T. Sarnowski, W. Szubert, A. Wyrwa, S. Zawadzki, *Novae — Sektor Zachodni*, 1978, ed. by S. Parnicki-Pudełko, *Archeologia* XXXI, Warszawa 1980, 113-155; A.B. Biernacki, Remarks on the Basilica and Episcopal Residence at *Novae*, *Acta Associationis Internationalis Terra Antiqua Balcanica* V, Sofia 1990, 187-208;

A.B. Biernacki, *Novae* 1990-1994. Raport z kampanii wykopaliskowych Ekspedycji Archeologicznej Uniwersytetu im. Adama Mickiewicza [Novae 1990-1994. A Report of the Excavation Seasons of the Archeological Expedition of the Adam Mickiewicz University], *Balkanica Posnaniensia* VII, 1995, 364-371.

⁸ A.B. Biernacki, S. Medeksza, An Attempt at a Spatial Reconstruction of the Columnar Hall in the Episcopal Residence at *Novae*, *Novae. Studies and Materials* I, Poznań 1995, 9-23; Z. Kalinowski, Baptistery in the Episcopal Basilica at *Novae*, *Novae. Studies and Materials* I, Poznań 1995, 25-35; Z. Kalinowski, Stone Reliquaries at *Novae*, [in:] *Late Roman and Early Byzantine Cities on The Lower Danube from the 4th to the 6th Century A.D.*, Poznań 1997, 81-86.

⁹ A.B. Biernacki, A Marble Sigma-Shaped Mensa from *Novae*, [in:] *Der Limes an der unteren Donau von Diokletian bis Heraklios*, ed. G. von Bulow und A. Mitcheva, Sofia 1999, 75-86; A.B. Biernacki, E. Klenina, Some Remarks about the Episcopal Residence of the 5th-6th Century AD in *Novae*, Proceedings of the Conference *The Roman and Late Roman City* organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print).

¹⁰ R.F. Taft, The Great Entrance. A History of the Transfer of Gifts and Other Proanaphoral Rites of the Liturgy of St. John Chrysostom, Second Edition, *Orientalia Christiana Analecta*, Pont. Institutum Studiorum Orientalium, Roma 1978, 178-191.

¹¹ A.B. Biernacki, L. Mrozewicz, S. Parnicki-Pudełko, T. Sarnowski, W. Szubert, A. Wyrwa, S. Zawadzki, *Novae — Sektor Zachodni* 1978, ed. by S. Parnicki-Pudełko, *Archeologia* XXXI, Warszawa 1980, 120-121; A.B. Biernacki, E. Klenina, Епископская базилика и резиденция V—VI вв. в *Novae* (Moesia Secunda) [The Episcopal Basilica and Residence from the 5th-6th Century in *Novae* (Moesia Secunda)], International Conference, Sevastopol 2001 (in print).

¹² A.B. Biernacki, E. Klenina, Базилика и епископская резиденция V—VI вв. в *Novae* (Moesia Secunda) [The Basilica and the Episcopal Residence from the 5th-6th Century in *Novae* (Moesia Secunda)], *Российская Археология* (in print).

¹³ S. Medeksza, Episcopal Bath. Heating Installations. Preliminary Technical and Functional Analysis, *Archeologia* XLVII, Warszawa 1996, 80-84.

¹⁴ A.B. Biernacki, The Roman Legionary Bath of the 2nd Century AD in *Novae* (Moesia Inferior), [in:] *Limes Congress, Amman 2000* (in print).

¹⁵ A.B. Biernacki, Remarks on Early Christian Architectural Details Made of Proconnesian Marble Found in *Novae* (Moesia Inferior), [in:] *Late Roman and Early Byzantine Cities on the Lower Danube from the 4th to the 6th Century A.D.*, edited by A. B. Biernacki & P. Pawlak, Poznań 1997, 71-80; A.B. Biernacki, J. Skoczylas, The Classification of Rock Material in Juxtaposition with the Typology of the Inscribed Pedestals in *Novae*, [in:] Proceedings of the Conference *The Roman and Late Roman City* organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print).

¹⁶ J. Skoczylas, Differentiation of the Rock Material at *Novae* in the Light of Petrographic Investigation, [in:] *Novae. Studies and Materials* I, Poznań 1995, 91-99; A.B. Biernacki, J. Skoczylas, The Classification of Rock Material in Juxtaposition with the Typology of the Inscribed Pedestals in *Novae*, [in:] Proceedings of the Conference *The Roman and Late Roman City* organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print).

¹⁷ J. Skoczylas, L. Jochemczyk, On Marbles and Other Carbonate Materials used at *Novae*, [in:] *Novae. Studies and Materials* I, Poznań 1995, 87-90; J. Skoczylas, Das Gestein aus dem Steinbruch von *Hotnica* und die Architektonischen Elemente in den Römischen Bauwerken von *Nieder-Moesien*, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 127-130.

¹⁸ J. Olczak, Lampy szklane [Glass Lamps], [in:] *Novae — Sektor Zachodni* 1974, I, 1978, 139-165; J. Olczak, Piec szklarski [The Glass Furnace], [in:] *Novae — Sektor Zachodni* 1974, I,

1978, 127-138; J. Olezak, Szklane lampy oliwne z rzymskiego i wczesnobizantyjskiego miasta Novae (Bulgaria) [Glass Oil Lamps from the Roman and Early Byzantine City of Novae (Bulgaria)], *Acta Universitatis Nicolai Copernici* 10, 1984, 3-50; J. Olezak, Z badań nad oświetleniem rzymskiego i wczesnobizantyjskiego miasta Novae [From the Studies of the Lighting of the Roman and Early Byzantine City of Novae], *Balkanica Poznaniensia* 3, 1984, 267-283; J. Olezak, Produkcja szkła w rzymskim i wczesnobizantyjskim Novae [The Production of Glass in the Roman and Early Byzantine Novae], Toruń 1998.

¹⁹ V. Božilova, J. Kolendo, L. Mrozowicz, Inscriptions Latines de Novae, Poznań 1992.

²⁰ E. Klenina, Table and Cooking Pottery of the 4th-6th Century AD from the Excavation of the Episcopal Residence in Novae, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 87-93; E. Klenina, Earthenware of the 2nd-3rd Centuries A.D. from Excavation of Legionary Bath Canal in Novae (Moesia Inferior), [in:] Proceedings of the Conference *The Roman and Late Roman City* organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print); E. Klenina, Some Remarks about Roman and Early Byzantine Pottery from Novae (Moesia Inferior), *Limes Congress*, 2001 (in print).

²¹ B. Stawoska-Jundziłł, Symbolism of the Cross on Clay Oil-Lamps from Novae, [in:] *Novae. Studies and Materials*, I, Poznań 1995, 47-60.

²² P. Pawlak, A Typological-Chronological Classification of the Fibulae Found During Excavations at Novae in the Years 1970-1992, [in:] *Novae. Studies and Materials*, I, Poznań 1995, 41-46.

²³ П. Владкова [P. Vladkova], Предмети от кост и рог за игри и забавления от Нова и Никополис ад Иструм [Bone and Horn Toys and Game Objects from Novae and Nicopolis ad Istrum], [in:] *Изследванията на старобългаристика. Втори есенни четения [Ancient Balkan and Old Bulgarian Studies. Second Fall Session]*, "Професор Иван Гълъбов", Велико Търново [the Professor Ivan Gălăbov Museum, Veliko Tarnovo] 2001, 483-494.

²⁴ К. Димитров [K. Dimitrov], Нова на Долния Дунав като раннохристиянски център (V—VI в. сл. Хр.) [Novae on the Lower Danube as an Early Christian Center (5th-6th Century AD)], [in:] *Балканские древности [Balkan Antiquity]* 2, Sofia 1992, 83-87; K. Dimitrov, La circulation monétaire à Novae au IV siècle, *Palimpsesta*, 3, 1980, 199-205.

²⁵ K. Matthews, Report on the Stable Isotope Analysis of Three Fragments from a Marble Ambo from Novae, [in:] *Novae. Studies and Materials*, I, Poznań 1995, 83-85; A.B. Biernacki, Remarks on Early Christian Architectural Details Made of Proconnesian Marble Found in Novae (Moesia Inferior), [in:] *Late Roman and Early Byzantine Cities on the Lower Danube from the 4th to the 6th Century AD*, edited by A.B. Biernacki & P. Pawlak, Poznań 1997, 71-80.

²⁶ K. Grala, Einige Probleme des Seetransportes Kleinasiatischen Marmors in Bereich von I bis VI Jahrhundert, [in:] Proceedings of the Conference *The Roman and Late Roman City* organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print).

²⁷ D. Makowiecki, M. Iwaszkiewicz, Fish Skeletal Remains from Excavations at Novae (1988, 1990, 1993 Seasons), *Archeologia* 46, 1995, 52-53; D. Makowiecki, Z. Schramm, Preliminary Results of Studies on the Archaeozoological Material from Excavations in Novae (Season 1992), [in:] *Novae. Studies and Materials*, I, Poznań 1995, 71-81; D. Makowiecki, Animal Economy in the Microregion of Novae in the Light of its Archaeozoological Data, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 131-139; D. Makowiecki, M. Makowiecka, New Archaeozoological Data from Novae, [in:] Proceedings of the Conference *The Roman and Late Roman City* organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print).

²⁸ Z. Kalinowski, The Temple Complex at the Episcopal Residence in Novae: A Double Church or Two Churches? [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 65-73.

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IDENTIFYING THE SPECIES OF BIRDS DEPICTED ON A FUNERARY STELA FROM NOVAE (BULGARIA)

The surviving fragment of a funerary stela from the Roman period comprises a relief including, among others, ten images of birds. Two are placed in the upper part, opposite each other, on either side of a laurel wreath with the yellow bedstraw flower in the middle; these two are designated further on as "A" (on the left) and "B" (on the right). They are flanked by two houselocks (*Sempervirens tectorum* L.), belonging to the *Crassulaceae* family, originally occurring in the mountains of Central, Western and Southern Europe. One should note the precision of the drawing, which permits full identification of the species (one should add that yellow bedstraw flowers and leaves are also present on the tympanum at the top of the stela, testifying beyond doubt to the symbolic significance of this species).

Three pairs of birds are found in the upper part of the frame of the inscription, the fourth pair at the sides. In this paper they are designated as "C" and "D", "E" and "F", "G" and "H" and "I" and "J". They are all composed to fit in the vine (*Vitis vinifera* L.) that frames the inscribed panel.

The bottom part of the stela has not been preserved, but one may assume that there were more animal representations there, perhaps also mammals and, not inconceivably, reptiles.

Representations of animals placed in a scrolling acanthus or vine, and yellow bedstraw in particular, are relatively rare, whether on ritual buildings or on Roman sepulchral monuments. However, butterflies, birds and other small animals appear among the acanthus scrolling ornament on the outer bottom decoration of the wall surrounding the *Ara Pacis* of Augustus on the Field of Mars, raised in AD 9. Swans atop the acanthus branches serve to emphasize the axes of symmetry.

An example of vine, birds and domestic animals being used in sepulchral art is a blue glass vase (h. 0.30 m, diam. 0.15 m), found in one of the Pompeian tombs, hence dating prior to AD 79, presumably Late Claudian in style. The main motif here is the vine, vintage scenes to the music of the zither, head of Bacchus, bird (which may be identified as a raven or one of the thrushes).

The bottom part of the vase bears umbrella-like trees with sheep grazing among them.

The vine is also depicted on a sepulchral wall painting of the second century (the tomb of Marcus Claudius Hermes under the basilica of San Sebastiano on the *Via Appia*). The bird there (a dove in all likelihood) is depicted sitting on two vine bushes. Above the scene, lying in a vase, there are grapes eaten by a rock partridge, *Alectoris graeca* (Meisn.); the parrot painted on the other side of the vase is a Ring Alexandretta or *Psittacula krameri* (Scop.). As writes Sadurska [1980], "this composition of the paintings with the decoration concentrated in the *arcosolia* and scattered in the intervening space, as well as the dominance of plant and animal motifs over anthropomorphic ones and the absence of figural scenes is characteristic of sepulchral interiors of the second half of the second and of the third century AD".

From the first half of the third century comes a sarcophagus, designated as coming from San Lorenzo, of which merely the box has been preserved (San Lorenzo basilica in Rome). The carving, which covers the entire available surface, depicts the vine with five peacocks sitting on it (two hens and three cocks) — *Pavo cristatus* L., and three doves. Seven cotes sitting both in the bushes and on the ground are picking the grapes. Two youths are standing on the ground. One is hunting a dove with a long staff, the other is catching a goose by sitting on it. Among all these vine bushes, erotes and youths there is a cock depicted, *Gallus domesticus* L., as well as a lion, dog and a he-goat packed with vines. Below it there is a small tortoise.

Similar motifs are known from a sarcophagus of Constantine, daughter of Constantine the Great, who died in AD 354. We have here images of the vine, cotes surrounded by garlands, birds (presumably ravens or thrushes), and at the base representations of peacocks, sheep and a youth (likely a shepherd). It was found in a mausoleum, which was turned into a baptistery of St. Constance in medieval times and is currently called St. Constanza (on *Via Nemetana*). A ceiling mosaic has also been preserved there, depicting among other things vine scrolling with at least twelve different bird species in it, shown seated and in flight, as well as six youthful silhouetted figures picking grapes. The mausoleum was additionally decorated with a mosaic picturing, among other things, boughs of fruit trees (e.g. apple, pomegranate, olive, lemon, vine) with birds on them: peacock, parrot and four different species of doves. Sadurska [1980] writes that the vintage theme with erotes entered the repertory of Christian art — unfortunately, there were no other Christian motifs on the ceiling mosaic of the said mausoleum.

Based on the examples already quoted above it may be presumed that the motif of the acanthus, and later the vine and birds, while quite rare, was known in Roman sepulchral art from at least the first to the fourth century AD. As far as the birds are concerned, the most frequently appearing species include peacock, several varieties of pigeon, parrot, swan, raven and thrush. Usually, at the bottom

of these representations there occur images of erotes, youths (likely shepherds), as well as sheep, goats, hens, and dogs. Hence, it should be presumed that the bottom part of the stela from *Novae*, which has not been preserved, had contained a similar set of motifs. It is noteworthy, however, that a cock and hen appear in the middle part of the stela, in a spot where the vine is shown growing from the ground.

The ultimate identification of the species of birds depicted on the stela was made based on a plaster cast of the stela, which is now in Warsaw. The condition of the original, to judge by the plaster copy, is far from satisfactory, encumbering attempts at identification, especially in the case of the smaller representations. The identification was carried out first independently, after which the results were compared and a final conclusion reached, permitting an ultimate objectivity of these difficult identifications. (We would like to thank Dr. Danuta Jędraszko-Dąbrowska, Dr. Hab. Krzysztof Dmowski and Dr. Ryszard Halba of the Ecology Department of Warsaw University, who identified the bird species from the stela independently, based on drawings).

The degree of generalization and stylization of the carving is difficult to estimate, chiefly because of the apparently not very good stone-cutting technique and the damages to the object. For instance, some parts of the birds, which are important for species identification, like the head or beak, were missing. A very serious encumbrance for the identification of particular species is the impossibility to reconstruct the colors of the polychromy on the stela. In Antiquity, objects of this type were commonly painted. On the other hand, the finishing of some parts of the feathering, possibly without importance originally and considered merely as a decorative element, now, in the face of missing colors, has involuntarily become an important diagnostic feature.

Species of a more common character or ones that appear more frequently in iconography were considered first of all in the identification, although a few of the species actually identified on the stela are not known from any other Roman artworks.

It may be assumed that in designing the stela the basic assumptions that were made were of a symbolic nature. The surviving images do not reflect the actual size proportions between the representatives of the various identified bird species. The scale differences ran up to ten or even twenty times occasionally. Proving the symbolic nature of the representations is the fact that some of the species do not occur in vineyards, but occupy other habitats. The identification also took into consideration the symmetrical arrangement of the drawing, because it is very likely that the iconographic program depended upon a juxtaposition of pairs of species, and it seems that at least in a few cases the juxtaposition of species was definitely not accidental.

In consequence, the identification of the species of particular birds was not always possible, and the likelihood of correct identification varied, hence in a few

cases the various possibilities have been mentioned. What is absolutely certain that we are not dealing with any fantastic representations, although these were hardly rare in Antiquity. Despite the fact that the bird representations likely have the meaning of cultural symbolism, and as said above, are not necessarily biologically related to the depicted plants, we have supplemented the identification with remarks concerning the occurrence of the given species in the broadly understood environs of *Novae*. It should be kept in mind that in Rome interest in birds was closely linked to their economic importance (birds were raised, fattened and eaten). The birds that were raised included hens, geese, ducks, peacocks, cranes, fieldfares and other thrushes, guinea fowl, pheasants, pigeons, turtledoves, presumably also partridges. Wild fowl was also eaten presumably (both local and migratory). From December to March wild partridges and rock partridges were hunted, as also quail, black grouse and wood grouse, snipe, coot, mallard and garganey, crane, crested crane, ostrich, wood pigeon, domestic pigeon and turtledove, parrot, stork and swan, flamingo, warbler, flycatcher, nightingale, sparrow, different species of thrush and blackbird, occasionally also cuckoo, greenfinch, magpie, jay and crow. Eggs of hen, goose, duck, dove, pheasant and partridge were eaten, as well as of some species occurring in the wild, like the raven. Peacock feathers were used to make fans. Singing birds were also raised for pleasure, nightingales being ranked very highly, as well as species that could be taught to "talk", such as parrots (imported usually from India), crows, ravens, magpies, starlings and blackbirds. Ducks were given to children to play with, while pelicans frequently decorated prosperous homes and temples. Pigeons were used to send messages. Cock fights and partridge fights as well generated considerable interest.

The worship of animals, including also eight birds, no longer had in Rome of the Empire, as in Greece of the times, the same importance as in past ages, undoubtedly reflecting changes in religious belief. Their symbolic importance was what remained of the old role of the birds. The eagle was considered a sacred bird, a symbol of Jove. Peacocks were dedicated to Juno. The stork was worshipped in Thessaly, and the ibis and flamingo were also believed to be sacred birds. The dove was a bird of Venus and images of doves appeared on the tombs of the dead. Geese were highly respected for saving the Capitol in 39 BC. A cock was sacrificed to Asklepios in gratitude for healing. Chicken, or rather their appetite to be more precise, were taken advantage of in divination [Lasota-Moskalewska 2000]. Taking into consideration the Romans' mixed interest in birds, we have thought it justified to present information about the occurrence of the identified bird species in the environs of *Novae*.

Detailed analysis

A. The bird occurring to the left of the wreath is most certainly a member of the order of woodpeckers (*Piciformes*). This identification can be considered as absolutely certain. A wryneck (*Jynx torquilla* L.) is a distinct possibility, but not very likely in view of the silhouette. Thus, it should be taken for one of the eight species of woodpeckers occurring in this region, namely: black woodpecker — *Dryocopus martius* (L.), green woodpecker — *Picus viridis* L., gray-headed woodpecker — *Picus canus* Gmel, great spotted woodpecker — *Dendrocopus major* (L.), syrian woodpecker — *Dendrocopus syriacus* Hempr. & Ehrenb., white-backed woodpecker — *Dendrocopus leucotos* (Bechst.), middle spotted woodpecker — *Dendrocopus medius* (L.), lesser spotted woodpecker — *Dendrocopus minor* (L.). The most likely choice, with regard to the shape and silhouette, is the green woodpecker — *Picus viridis* or the lesser spotted woodpecker — *Dendrocopus minor* (L.). Both could be observed in vineyards. To our knowledge, there are no other representations of woodpeckers on Roman sculpture, painting or mosaics.

B. The other bird represented in the upper part of the stela has a distinctly squat silhouette, rather thick beak and strong, relatively long legs. The image is clearly stylized and the missing colors make the species identification difficult. It could be a representative of the gallinacean (*Galliformes*) order, e.g. quail — *Coturnix coturnix* (L.). Both quail and partridge are present in Roman art. It could also be a corncrake — *Crex crex* (L.) belonging to the order of crakes (*Rallidae*). The drawing on the wings is in favor of this identification. Quail and crake are both present in the discussed region and they could have been recognized thanks to the highly characteristic sound they make usually at night. The bird could also be identified as a kingfisher (*Alcedo atthis* L.) with fine shining blue feathering. While no other representation of a kingfisher is known from Roman art, a comparison with the silhouette of a roller (*Coracias garrulus* L.) from a painting found in Herculaneum suggests considerable similarity. A bird that assumedly does appear is the pied kingfisher — *Ceryle rudis* (L.).

Finally, there is one other species that could be considered in this case. The exaggerated thickness of the legs could be misleading, as it is characteristic of all the bird images on the stela, and furthermore the two legs are depicted folded one next to the other. Once this is taken into consideration, the legs do not appear as overly thick. The squat silhouette and the place on the stela, in symmetric opposition to the woodpecker (A) permits this bird to be identified as a nuthatch (*Sitta* sp.). Of the many sub-species known to occur in the Mediterranean the most likely is *Sitta europaea* L.

Both birds (woodpecker and nuthatch), although definitely forest birds, could have occurred in vineyards. They are related in terms of ecology and behavior,

and they are associated on the stela with a symbolic representation of the "tree of life" in the shape of the yellow bedstraw. The nuthatch often moves with a very characteristic motion, head down on a tree trunk, not upward as shown on the stela. The position depicted (which it assumes in the wild anyhow) corresponds well with the silhouette of the woodpecker. There are to our knowledge no representations of the nuthatch in Roman art.

C and D. The two centrally positioned images are easily identified as a cock and hen (*Gallus domesticus* L.). The symmetry of the depiction clearly indicates the link between the two representations, while the schematic drawing, the most schematic of all the representations on the stela, could suggest a common species. Images of the domestic hen (both cocks and hens) are quite frequent in Roman art, also in tombs, and are usually found in the lower parts. The same is true of our stela — both birds appear at the bottom of the vine bushes, so in a certain sense "on the ground".

E and F (the second and fifth bird in the upper part of the frame of the inscription). Bird E is most probably a starling (*Sturnus vulgaris* L.). Despite the small size, the silhouette is rendered with enough precision to leave no doubts about the identification. The bird is common in Europe and is generally considered as an orchard pest, also in vineyards. In any case, the starling was raised by Romans and appears in Roman art. Bird F is one of the sparrows (*Passer* sp.). Although the features depicted on the stela are hardly sufficient for an identification of the species, it was assumedly the most house sparrow (*Passer domesticus* L.). The identification leaves no doubt. The sparrow, like the starling, was treated as a domestic pest already in Antiquity. It had its reflection in Roman art and like the starling, it was consumed.

The next two representations, on the left and right of the inscription frame (G and H), may be interpreted as two species symbolizing protection and care. On the left there is the white pelican (*Pelecanus onocrotalus* L.). Features that clearly point to a pelican are the strongly emphasized big beak and the "protectively" spread wings (this continues to be even today the typical way of depicting the pelican). The white pelican is the more common of the two European species, in Antiquity as well as today, and not so rare at all on the Lower Danube. A characteristic ring around the eye is also more suggestive of *P. onocrotalus*. The evident stylization of the lower coverts and flight feathers may serve to indicate the huge size of the bird (it cannot be known anyway what of this could be seen under the paint covering the stela). It should be emphasized, however, that the drawing of the beak with the cere indicated and the ring around the eye is exceptionally fine in execution.

The bird placed on the right is a pigeon. Of the European representatives of the order of *Columbiformes* the most likely one here is the feral pigeon (rock dove) — *Columbia livia* (Gmel.) f. *domestica* or f. *urbana*, although other species, like the stock dove — *Columba oenas* L., wood pigeon — *Columba palumbus*

L., turtle dove — *Streptopelia turtur* (L.) and collared dove — *Streptopelia decaocto* (Fris.) cannot be excluded. All these species were known and prized by the Romans (they were raised and fattened for consumption at feasts, for example). They are also quite frequent in Roman art, also in the tombs. Like the pelican, they were commonly considered in Mediterranean cultures as symbols of protection and the human soul. In this way their link with the vine, symbolizing human life, is self-evident.

I and J. The last two species do not appear to represent any specific pair, in terms of either ecology or symbolism. Spread wings appear to be the only link. Both birds are shown, boughed in differing manner, landing or taking off from the vine.

The identification of the first species (I) is made very difficult by the absence of colors on a highly schematic representation. All that may be said with some semblance of certainty is that it is a "little singing bird" from the *Passeriformes* order, but without going into any specific suggestions regarding the actual species. Taking into consideration its squat body (with no tail indicated) it could be thought to represent a characteristically jumping quail (*Coturnix coturnix* L.).

The second bird (J, on the right) is obviously a raptor (order of *Falconiformes*), although the drawing of the head (rose) does not exclude an owl. It is perhaps a barn owl — *Tyto alba* (Scop.) of the *Strigiformes* order. The silhouette and the characteristic set of the claws during hunting prey could suggest one of the small European birds of prey. The most likely choice everywhere is the common kestrel — *Falco peregrinus* Gmel., hobby — *Falco subbuteo* L., red-footed falcon — *Falco vespertinus* L. or lesser kestrel — *Falco naumanni* Fleisch. Lacking the colors, a sure identification does not appear to be possible. There are no known representations of falcons in classical Roman art. Romans, like the Greeks, did not know falconry.

Bibliography

- Lasota-Moskalewska 2000 — A. Lasota-Moskalewska, Petroglyphs of Mammals in the Sarmisaj Gorce, Uzbek Republik: Archeozoological Analysis, Warsaw 2000.
Sadurska 1980 — A. Sadurska, Archeologia starożytnego Rzymu. T. 2: Okres cesarstwa, Warszawa 1980.

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IMAGES D'OISEAUX SUR UNE STÈLE DE *NOVAE*. REMARQUES PRÉLIMINAIRES

Parmi les monuments mis au jour à *Novae* se trouve une stèle funéraire avec images d'oiseaux, unique dans son genre, que l'on va pouvoir mettre à contribution dans la réflexion sur la façon de représenter les animaux dans l'art antique. Le monument fut dégagé pendant les travaux archéologiques menés sur différentes constructions tardives situées à l'emplacement de l'ancien *valetudinarium* (hôpital militaire).¹ On n'y découvrit entre autres un certain nombre de stèles funéraires provenant des nécropoles extraurbaines, lesquelles avaient été remployées à l'intérieur de la ville. Certaines d'entre elles avaient servi de matériau de revêtement d'une rue construite à cet endroit à la fin du III^e ou au début du IV^e siècle. C'est parmi ces monuments que figure la stèle faisant l'objet du présent article.

Découvert en 1996, le monument fut publié déjà en 1999.² Cependant, l'*editio princeps* contient une description erronée de l'ornement de la stèle (l'erreur concerne plus exactement les motifs végétaux du fronton). En outre, cette publication ne fait que signaler le problème que pose l'identification des oiseaux figurant dans l'encadrement du champ épigraphique. Or, l'identification ornithologique (appartenance à des espèces particulières) des oiseaux de la stèle proposée dernièrement par les ornithologistes K. A. Dobrowolski et K. Piasecki³ ainsi que les remarques que les auteurs formulent sur la façon de représenter les oiseaux permettent de tenter une interprétation beaucoup plus approfondie du monument funéraire. Le facteur qui a décidé de cette nouvelle interprétation était sans aucun doute l'identification de deux motifs végétaux du fronton. En effet, il s'agit de la joubarbe (*Sempervivum tectorum* L.). Aussi semble-t-il opportun de proposer une nouvelle publication de la stèle, monument exceptionnel par la richesse de son décor qui ne trouve aucun analogue ni à *Novae* ni dans la région du bas Danube.

Le monument est une stèle funéraire en calcaire (inv. No 96/93w) de [140] x 90 x 30 cm, avec fronton rectangulaire et cadre richement orné.⁴ La pierre fut retranchée dans sa partie inférieure.⁵ A l'origine, sa surface était couverte de peinture rouge qui restait encore bien visible, par endroits, lors de la découverte

du monument. Le fronton (72 x 90 cm) représente une façade de bâtiment. Deux colonnes (corinthiennes?) soutiennent une architrave surmontée d'un tympanon avec, au milieu, une fleur stylisée et deux acrotères sur les côtés. L'espace entre le tympanon et la bordure supérieure de la stèle est rempli de feuilles disposées verticalement. Au milieu du tympanon figure une couronne de laurier avec des *taeniae* et une fleur stylisée au centre. La couronne est flanquée de deux plants de jubarbe (*Sempervivum tectorum* L.).

Le champ épigraphique est entouré d'un cadre d'env. 16 cm de largeur couvert d'ornement composé de rinceaux de vigne avec des feuilles rendues avec grande précision et des grappes de raisin un peu plus schématiques. Sur les branches sont posés de nombreux oiseaux de taille différente dont l'identification est proposée par K.A. Dobrowolski et K. Piasecki dans l'article mentionné.

Le texte est inscrit dans le champ épigraphique de [50] cm x 55 cm.

D(is) M(anibus)
 Atiliae C(ai) filiae Cry-
 sidi v[er]i x(it) an(nis) XXXX
 h(ic) s(it)a e(st)
 5 C(aius) Valerius C(ai) filius
 Festus coni-
 gi pissimae et

Hauteur des lettres — ligne 1: 8.4 cm; lignes 2-6: 6 cm; ligne 7: 7 cm. Par endroits le texte est peu lisible à cause de l'usure de la surface de la pierre. Les lettres sont gravées avec soin et souci de l'effet esthétique. A la ligne 2, dans le nom Crysis, les lettres CR sont reliées. Il y avait peut-être là une ligature CHR sous forme d'un petit trait horizontal, mais, à l'état actuel, il est impossible de l'affirmer car, à cet endroit-là, la surface de l'inscription est effacée. Le cognomen grec Crysis apparaît plus souvent sous forme de Chrysis.⁶

Née libre, ce dont témoigne la filiation, la femme porte le *nomen gentile* très répandu Atilia⁷ et le *cognomen* grec. L'époux, Valerius⁸ Festus⁹ porte des noms tout aussi banals. Le très riche ornement de la stèle semble dénoncer une situation fort aisée de la famille. Ils pouvaient commander le monument funéraire à un lapicide hautement qualifié ou bien faire venir la stèle de l'autre centre.

Il faut insister tout particulièrement sur le caractère unique du décor de la stèle qui ne connaît point d'analogie dans toute la région du bas Danube.¹⁰ Force est de constater que la jubarbe (*Sempervivum tectorum* L.) de la stèle est rendue avec grande fidélité. Répandue dans les Balkans, cette plante vivace a pu être représentée d'après nature, mais il se peut tout aussi bien que l'artiste se soit inspiré d'une illustration trouvée dans quelque ouvrage manuscrit de botanique.

Les résultats des études faites par les ornithologistes permettent aujourd'hui d'affirmer qu'il ne s'agit nullement d'images schématique ou fantastiques. Bien

au contraire, dans le cas envisagé, nous avons affaire à une représentation fidèle de la réalité à tel point qu'il est possible de déterminer avec certitude l'appartenance des oiseaux à des espèces bien précises.¹¹ Et ceci malgré d'importantes détériorations de certains détails de la stèle. Il ne faut pas non plus oublier que les images étaient polychromes, ce qui les rendait beaucoup plus intelligibles.

La représentation aussi fidèle de nombreuses espèces d'oiseaux semble exclure un éventuel travail d'après nature. En effet, ceci aurait exigé un énorme effort de préparation. Ce qui est plus, dans la réalité, une grande partie des oiseaux figurant sur la stèle apparaissent dans des milieux différents et adoptent diverses attitudes au moment de se nourrir. Pour rendre ces gestes avec autant de précision, l'artiste a certainement dû avoir recours à des modèles.

Compte tenu du caractère unique de cette représentation qui, comme il a été dit, ne trouve pas d'analogie parmi les stèles connues de la région danubienne, il est exclu que l'auteur du décor se soit servi de modèles utilisés habituellement par les artisans locaux. Il est plus probable que le lapicide qui a exécuté un décor de qualité aussi exceptionnelle s'est inspiré d'illustrations puisées dans des livres de zoologie. Ce type d'ouvrages scientifiques illustrés a fait l'objet d'une étude approfondie du chercheur hongrois Z. Kádár dont je vais présenter brièvement les conclusions.¹² Les premières illustrations dans des ouvrages de sciences naturelles¹³ datent du début de la période hellénistique. On associe l'origine de ce phénomène à l'activité scientifique d'Aristote. C'est à cette même époque qu'apparaissent des ouvrages illustrés sur les oiseaux (*Ornithiaca*). Les sources attestent l'existence du traité *Ornithiaca* attribué à un certain Dionysios.¹⁴ On retrouve une version paraphrasée de cet ouvrage dans le célèbre manuscrit de Dioscoride, très richement illustré, conservé actuellement à Vienne (*Cod. Vind. Med. Gr. 1*).¹⁵ En effet, ce manuscrit contient des dessins représentant 23 espèces d'oiseaux (fig. 1, 4), 24 autres espèces ayant été représentées sur le tableau synoptique (fig. 2).¹⁶ Exécutés avec grande précision, les dessins rendent très fidèlement les caractéristiques des oiseaux. Le manuscrit viennois de Dioscoride fut rédigé vers 512, mais ses illustrations proviennent d'un ouvrage beaucoup plus ancien.

Le manuscrit du Vatican, *Vat. Chis. F. VII 159* (fig. 3, 5) contient, lui aussi, des représentations d'oiseaux¹⁷ qui diffèrent en partie de celles figurant dans le manuscrit viennois de Dioscoride. Des images d'oiseaux, représentés souvent aux côtés d'autres animaux, apparaissent aussi dans d'autres manuscrits illustrés de zoologie.

Nous pouvons constater que certaines images d'oiseaux représentés sur la stèle funéraire de *Novae* se trouvent aussi sur les illustrations des traités d'ornithologie.

Coque — *gallus* et poule — *gallina* (C et D¹⁸) = manuscrit du Vatican (*Vat. Chis. F. VII 159*) fol. 229^v, en bas, Z. Kádár, *op. cit.*, pl. 131. (fig. 3).

Pigeon — *columba* (H) = manuscrit du Vatican *Vat. Chis. F. VII 159*, fol. 229^v Avant-dernière ligne. Z. Kádár, *op. cit.*, pl. 131, no 17. (fig. 3).

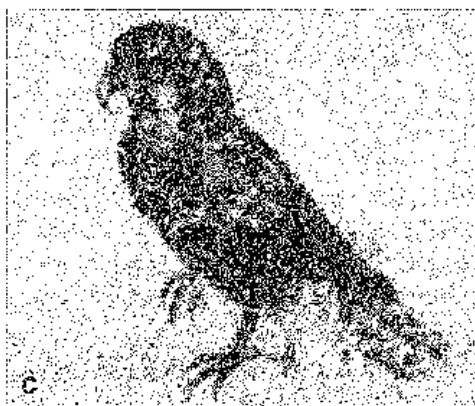
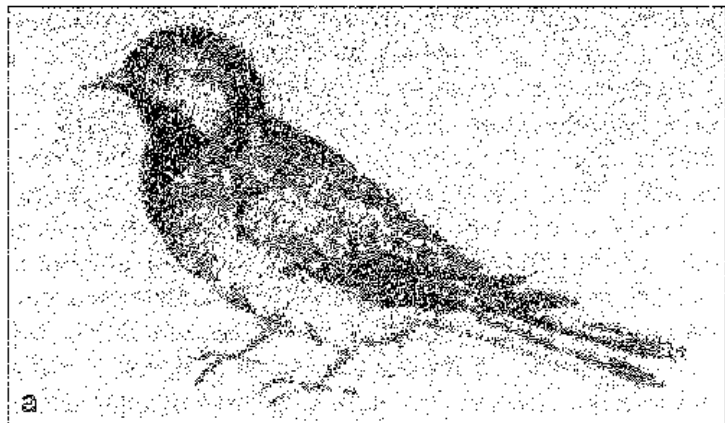


Fig. 1. Manuscrit de Dioscoride *Cod. Vind. Med. Gr. 1, fol. 475^v* — Z. Kádár, *op. cit.*, pl. 120:
 a — mésange à longue queue (*aegithallus*); b — chouette chevechue (*noctua*); c — loriot
 (d'Europe-*icterus*)

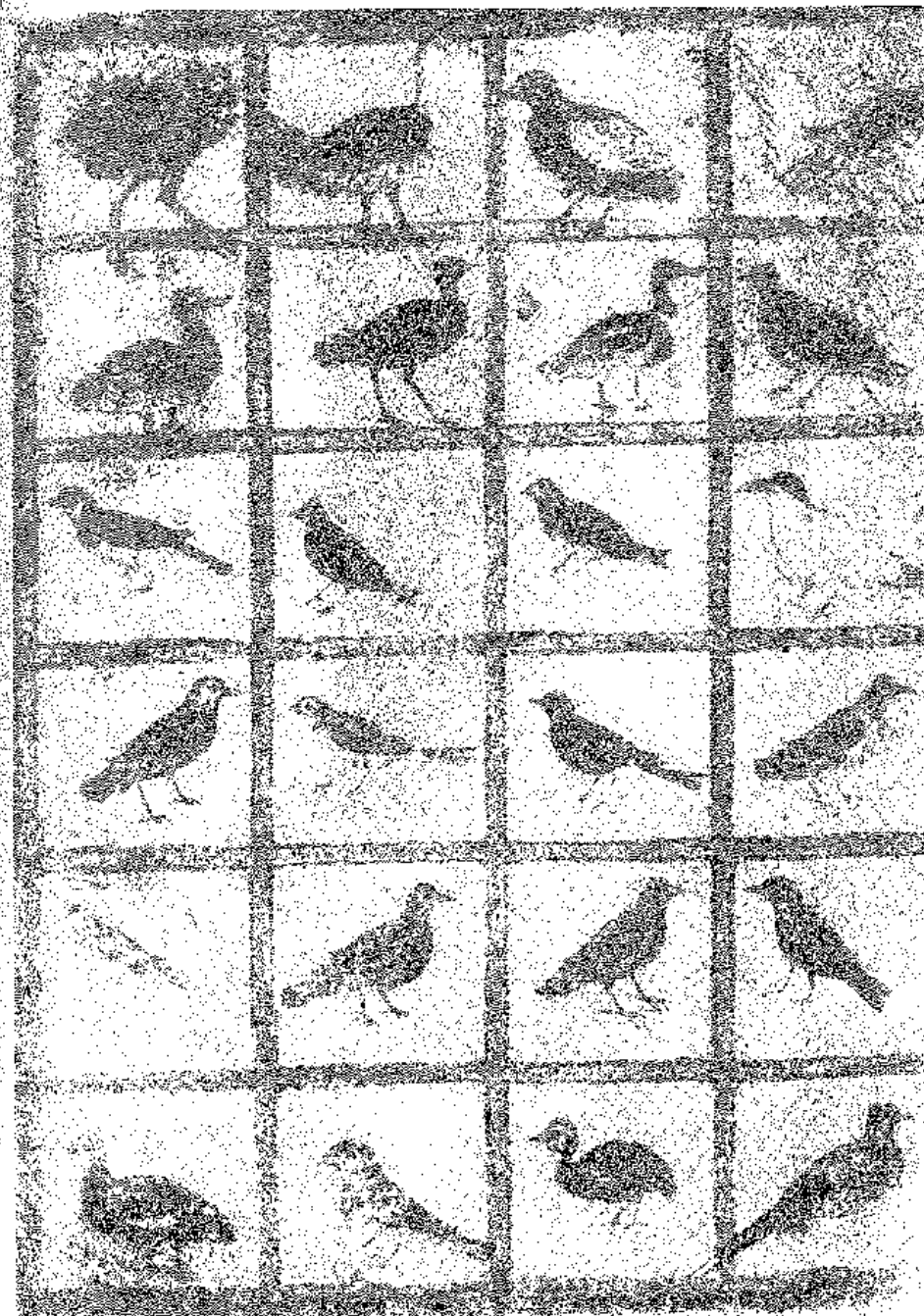


Fig. 2. Manuscrit de Dioscoride *Cod. Vind. Med. Gr. 1, fol. 47^v* — Z. Kádár, *op. cit.*, pl. 128.
 Tableau synoptique des oiseaux

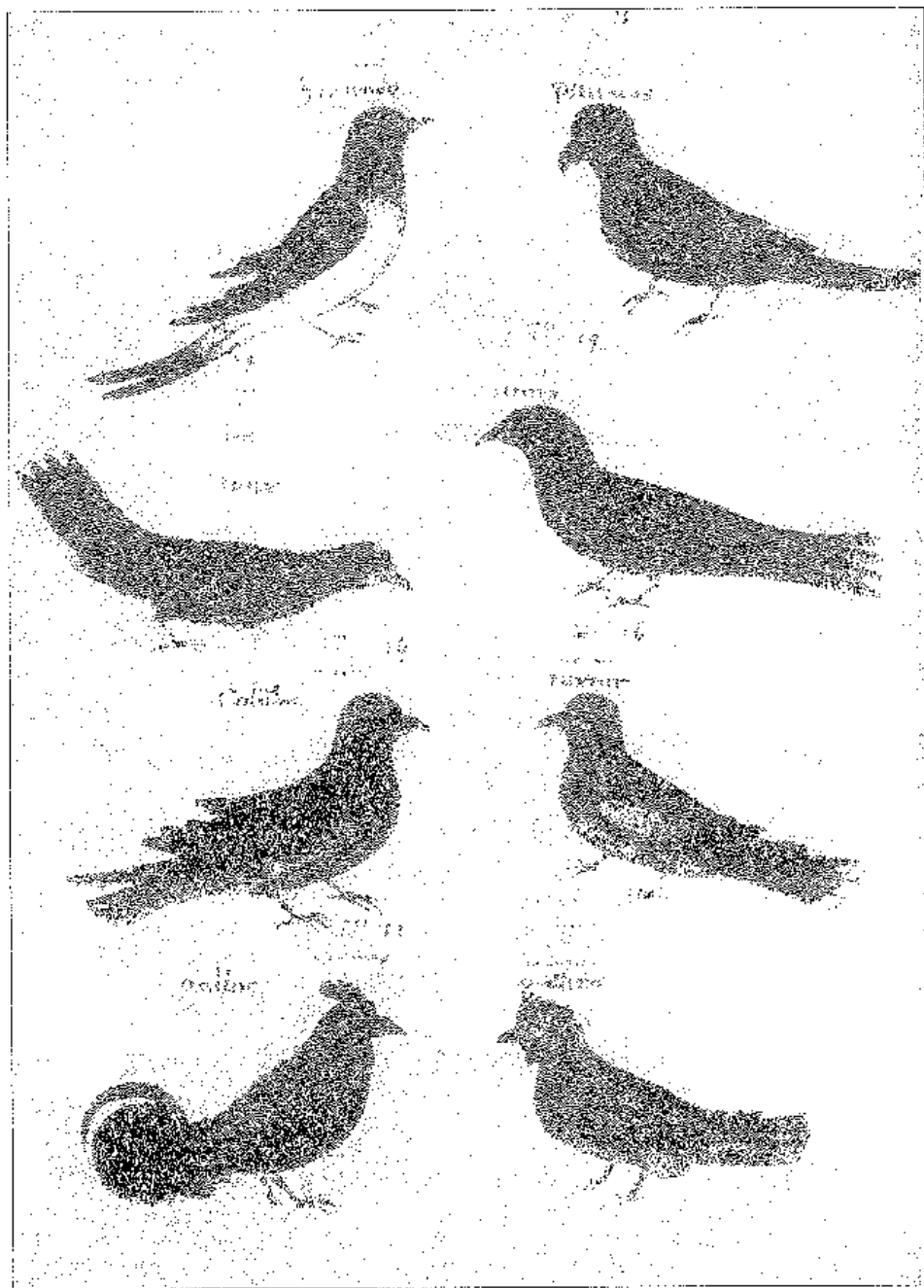


Fig. 3. Manuscrit du Vatican *Vat. Chis. F. VII 159 fol. 229^v* — Z. Kádár, *op. cit.*, pl.131. En bas colombe (*columba*), coque (*gallus*) et poule (*gallina*)

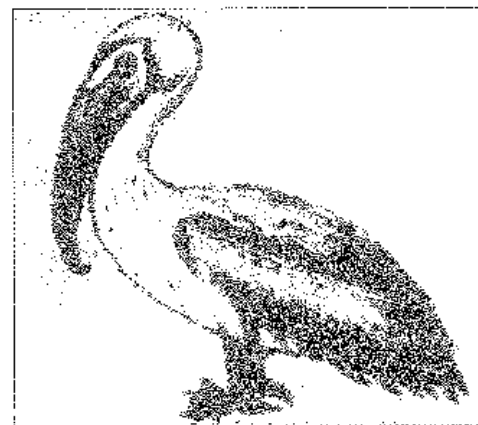


Fig. 4. Manuscrit de Dioscoride *Cod. Vind. Med. Gr. 1, fol. 479^v* — Z. Kádár, *op. cit.*, pl. 125. Pélecan (*pelecanus*)

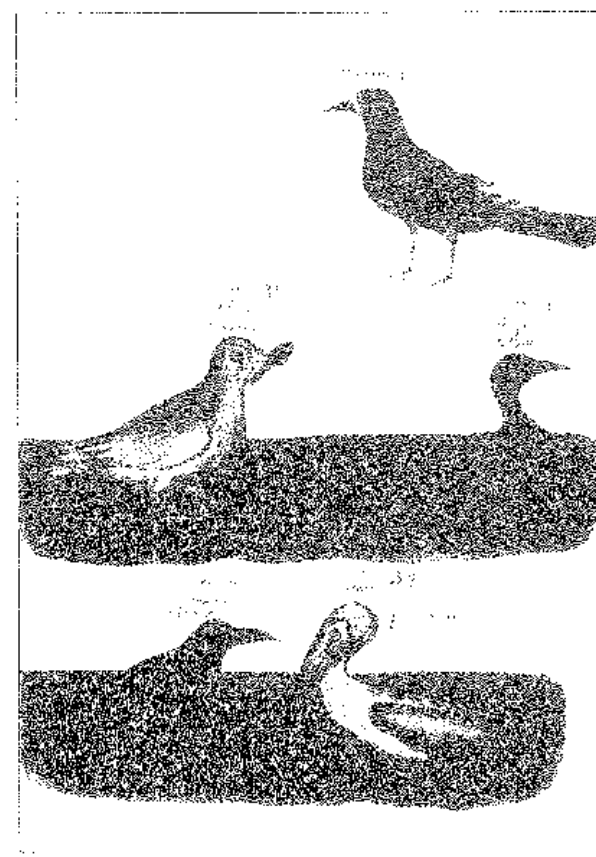


Fig. 5. Manuscrit du Vatican *Vat. Chis. F. VII 159, fol. 231^r* — Z. Kádár, *op. cit.*, pl.134. Pélecan (*pelecanus*)

Pélican — *pelecanus* (G) = manuscrit de Dioscoride *Cod. Vind. Med. Gr. 1*, fol. 479^v et manuscrit du Vatican *Vat. Chis. F. VII 159*, fol. 231^r.

Tout porte donc à croire que l'artisan qui a exécuté la stèle de *Novae* s'est inspiré de quelques traités illustrés d'*Ornithiaca*.

Notes

¹ J. Koiendo, Stèles funéraires réemployées dans la construction d'une rue à *Novae*, *Archeologia* 50, 1999 [2000], 19-38.

² *Ibidem*, 29-31.

³ Cf. *infra*, article publié dans le présent volume.

⁴ Photo et dessin de la stèle dans l'article de K.A. Dobrowolski et K. Piasecki, *infra*.

⁵ Il est difficile de partager l'avis exprimé dans l'article de K.A. Dobrowolski et K. Piasecki selon lequel la partie aujourd'hui inexistante de la stèle de *Novae* pouvait comporter les images d'Amours, d'hommes et d'animaux. La connaissance des motifs ornementaux de stèles de la région danubienne permet d'exclure une telle possibilité. Les cas analogues cités par les auteurs proviennent de Rome et concernent d'autres formes de monuments funéraires.

⁶ H. Solin, Die griechischen Personennamen in Rom. Ein Namenbuch, Berlin - New York 1982, t. II, 1142-1144, s.v. Chrysis.

⁷ A. Mócsy, R. Feidmann, E. Morton, M. Szilágyi, Nomenclator provinciarum Europae Latinarum et Galliae Cisalpiniae cum indice inverso, Budapest 1983 (*Dissertationes Pannonicae*, ser. III, 1), 34.

⁸ Mócsy et alii, *op. cit.*, 300.

⁹ Mócsy et alii, *op. cit.*, 126.

¹⁰ M. Alexandrescu Vianu, Les stèles funéraires de la Mésie Inférieure, *Dacia*, N.S. 29, 1985, 57-79.

¹¹ Sur la connaissance des oiseaux dans l'Antiquité voir W. D'Arcy Thompson, A Glossary of Greek Birds, Oxford - London 1936; J. André, Les noms d'oiseaux en latin, Paris 1967; F. Capponi, Ornithologia latina, Genova 1979. Cf. Plin. l'Ancien, Histoire naturelle livre X, texte établi, traduit et commenté par E. de Saint Denis, Paris 1961 (texte consacré aux oiseaux avec le commentaire approfondi); F. Capponi, Le fonti del X libro della „Naturalis historia” di Plinio, Genova 1985. Cf. aussi J.M.C. Toynbee, Animals in Roman Life and Art, London 1993, 237-282.

¹² Z. Kádár, Survival of Greek zoological illuminations in Byzantine manuscripts, Budapest 1978. Sur les oiseaux - 77-90. S.J. Gąsiorowski, Malarsztwo miniaturowe grecko-rzymskie i jego tradycje w średniowieczu, Kraków 1928 avec le résumé anglais Graeco-roman Miniature Painting and its Traditions in the Middle Ages, I-XLIII. Quant à l'ouvrage de Gąsiorowski, il présente des manuscrits de science naturelles illuminés mais sans tenir compte de la problématique de représentations d'animaux. Cf. aussi M. Nowicka, Antyczna książka ilustrowana [Livre illustré antique], Wrocław 1979, 53-63.

¹³ Les remarques sur les illustrations — C. Nissen, Die illustrierten Vogelbücher. Ihre Geschichte und Bibliographie, Stuttgart 1953, 10-16.

¹⁴ Le texte de cette paraphrase — Dionysii Ixeuticon seu De aucupio libri tres in epitomen metro solutani redacti, rec. A. Garzya, Lipsiae 1963 (Bibl. Teubneriana). Cf. les compte-rendus de F. Capponi dans *Latomus*, 23, 1969, 596-598 et dans *Revue Belge de Philologie et d'Histoire* 1950, 250-253; RF V,1, (1909), col. 925 — Dionysios, no 96 [Knaack]; A. Garzya, Due note. I. Sull'autore e il titolo del perduto poema „Sull'Aucupio” attribuito ad Oppiano, *Giornale Italiano di Filologia* X, 1957, 156-160.

¹⁵ Wien, Österreichische Nationalbibliothek, *Cod. Med. gr. 1*, fol. 487-485. Les éditions: A. Præmerstein, K. Wessely, J. Mantuani, Dioscorides. Codex Aniciae Iulianae picturis illustratus (Codices Graeci et Latini photographice depicti, vol. 10), Lugduni Batavorum 1906; H. Gerstinger, Dioscorides. Cod. Vind. Med. Gr. 1 der Österreichischen Nationalbibliothek, Graz 1970. Cf. S.J. Gąsiorowski, *op. cit.*, 134-151 et XXIV sq.

¹⁶ Z. Kádár, *op. cit.*, pl. 119-129 et pl. II-IV (en couleur).

¹⁷ *Ibidem*, pl. 129-137 et pl. VIII (en couleur).

¹⁸ La désignation des oiseaux d'après l'article de K.A. Dobrowolski et K. Piasecki publié dans le présent volume.

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JUGS FROM *NOVAE*. A STUDY ON FINDS 1960-1999

This paper presents ceramic jugs from the excavations of Warsaw University and Institute of Archaeology of Bulgarian Academy of Sciences in *Novae* from 1960 to 1999. This catalogue comprise 156 fragmentary or entirely preserved jugs.

1. The method

I define a jug as a vessel of up to 40 cm high, with a long, narrow neck and one handle at least. All the jugs found in *Novae* can be divided into two groups: with one or two handles. There are some fragments unclassified, because no handles' traces are preserved. It was possible for me to see and record majority of finds. Unfortunately description of some vessels is differentiated and not sufficient. Various schemes have been used due to evidence ceramic vessels. In spite of incomplete descriptions, I decided to include all the jugs, in order to present as many of them as it is possible and to offer a certain view on ceramic material found during 40 seasons of excavations in *Novae*. A part of jugs presented here was described, recorded and sometimes published by their discoverers. Vessels, which I had a chance to see, were drawn and described according to the standards recommended by A.O. Shepard [1976] and C. Orton, P. Tyers, A. Vince [1993].

Describing fabric I took into account: quantity of inclusions (several particles, little, medium, big amount), grain size (coarse, medium, fine), kind of inclusion (e.g. lime, mica), hardness (soft, hard, very hard), porosity (porous, rather porous, rather dense, dense), surface structure (rough, smooth, buff, lustrous). The description of fabric was made without distinguishing temper from natural inclusions. Inclusion and temper content was estimated quite subjectively. I adapted a method of comparing sample ceramic pieces of different inclusion content

with jugs I was recording. Four sample pieces, with severe particles, little, medium and big amount of inclusion, were compared in sequence with a described fragment. I do not describe shape of inclusion as it mostly results from its natural features: particles refers to sand, lime, pyroxene; crumbs to ceramic temper; leaves to mica. Standard term for grain size description made by petrologists (Wentworth's scale) is recommended by Shepard [1976, 118]. Simplifying the scale, I accepted the following description: coarse — at least 1 mm of diameter or more, medium — 0.5-0.25 mm of diameter, fine — at least 0.25 mm or less. In order to shorten the description, I do not mark medium-sized grain in catalogue. Measuring hardness I used Mohs' method, simplified by Orton, Tyers and Vince [1993, 138]. Available materials can be adapted in order to make scratch test as follows: nail scratch (soft firing; Mohs 2-2,5), plastic scratch (hard firing; Mohs 3), glass scratch (very hard firing; Mohs 4,5). Porosity is defined as "the ratio of the volume of pore space to the total volume of the piece" [Shepard 1976, 125]. Porosity was estimated quite subjectively, also comparing with four sample pieces of pottery. "Surface texture" is determined by two conditions: texture of paste and method of finishing [Shepard 1976, 120-121, 186]. When not covered, I describe surface texture; when slipped or glazed, I describe surface finishing. Smooth surface is in touch like a piece of wood. Identifying surface covering I decided to use three terms: "slip", "glazed covering" and "glaze". Terms used in my work are conventional. I define "slip" as a thin covering, rather matt or slightly glancing or even opalescent. Glazed covering is a thin slightly lustrous and limpid layer. "Glaze" is a thick, vitrified covering, generally limpid. Identifying kind of covering I went by its appearance, not chemical composition or technological details, which are difficult to recognise without laboratory analysis. Colour was described according to Munsell Soil Color Charts [Munsell 1990].

2. Previous research

Interim reports on the excavations at *Novae* published in Polish "Archeologia" and Bulgarian "Arheologiya" or "Izvestiya na Arheologicheskaya Institut" often contain records or even surveys on pottery. Special attention should be given to the works made by S. Koikówna and B. Rutkowski [1961; 1962; 1963; 1964; 1965; 1967]. In the following years, ceramic vessels were only mentioned in the excavation reports, nevertheless pottery from *Novae* is quite well recorded and elaborated comparing to other archaeological sites on the Lower Danube [Soultoy 1983a, 13; Poulter, Falkner, Shepherd 1999, 31]. More detailed works on pottery are published in archaeological series of Poznań expedition (*Novae*

— Sektor Zachodni. Wyniki badań wykopaliskowych Ekspedycji Archeologicznej UAM), and Warsaw expedition (Novaensia. Badania Ekspedycji Archeologicznej UW w *Novae*; from 1992 Novaensia), especially by A. Biernacki [1973], G. Kuraszkiewicz [1973], J. Kotecki and U. Dymaczewska [Kotecki 1977, 1978; Dymaczewska, Kotecki 1981] and P. Dyczek [1981, 1987; 1990a; 1990b; 1991; 1992; 1997].

Table pottery from *Novae* has never been a subject of complex elaboration, except for *terra sigillata* finds worked out by A. Dimitrova-Milcheva [1987] and K. Domżański [1998b]. Several papers were published recently on table pottery from *Novae*, mostly new finds of early (1st century AD) and late (4th and 5th century AD) deposits [Domżański 1998a; Klenina 1999; Kovalevskaja, Tomas, Sarnaowski 1999; Tomas 2000a, in print; cf. also Tomas, 2000b, in print].

Chemical analysis of clay from the area around *Nicopolis ad Istrum* was made in connection with *terra sigillata* production on its territory [Kuleff, Djingova 1996; Daszkiewicz, Bobryk, Schneider, Dyczek 2000]. Very important are publications of pottery from nearby sites: *Iatrus* [Böttger 1967a; Böttger 1982; Kuzmanov 1991], *Nicopolis ad Istrum* [Poulter, Falkner, Shepherd 1999], *Sadovets* [Kuzmanov 1992], and general works on pottery from Lower Moesia and Thrace by G. Kuzmanov [1985] and B. Böttger [1967b; 1974 Böttger, Beckisch 1966]. Equally important are publications of well-stratified finds from two villas in Thrace, destroyed by Goths' invasions: in Armira near Ivailovgrad [Kabakchieva 1986] and Krudev Dol near Pernik [Naydenova 1985]. Many well-dated vessels, especially jugs, were discovered on cemeteries [e.g. Soultoy 1968; Soultoy 1983a, 13].

3. Technology of production

The following comments concern only vessels with complete fabric description. Clay used for pottery found in *Novae* is rather not differentiated. In general, fabric contains lime, silver mica (sometimes big amount), ceramic temper or sand. Pyroxene (e.g. nos. 51, 77, 78) or golden mica (80-82) rarely appear. The most frequent fabric, which comes from the area around *Nicopolis ad Istrum* has already been a subject of study [Nacheva 1981; Kuleff, Djingova 1996; Daszkiewicz, Bobryk, Schneider, Dyczek 2000, 34-35]. It is rich of iron though a large variation in composition was found. Clay used in Pavlikcni production centre contains big percentage of calcium carbonate (CaCO₃), which was sometimes difficult to remove and caused detriment [Nacheva 1981, 5; Soultoy 1983a, 57]. Mica contain, even in big quantities, (42, 55) is also a natural, harmless intrusion [Shepard 1976, 162; Poulter, Falkner, Shepherd 1999, 112]. It is possible

that such mica contain could give a special effect of shine. Almost all of jugs from *Novae* I have described were wheel-turned, except for jugs 32 and 33.

The quality of vessels is rather good. Few defects are slight and have no influence on jugs' appearance, e.g. careless neck to body sticking (97). More serious defect is too thin wall of crusty fabric (61) or wrong proportion of walls to bottoms, which causes deformation during drying up (119). Asymmetric handles of two-handled jugs type II seem to be intentional feature of these vessels.

Jugs from *Novae* are not very differentiated in colour. Majority of them are red or brown, which is an effect of iron oxides content and firing with air access in temperature of about 800°C [Nacheva 1981; Soultov 1983a, 57]. Grey colour of table pottery is frequent in 4th-5th century AD. Adding lead components to watered clay made colour of glaze green. Some vessels, especially dated to the Byzantine period, were possibly made from clay with limonite content ($\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$), which colours them yellowish in high temperature of firing [Doncheva-Patkova 1969, 11; Shepard 1976, 16, 162].

4. Classification of wares

According to observations I have made above, I determined six groups of wheel-turned vessels, each produced in the same technology. My observations confirm that such classification generally refers to the whole ceramic material from *Novae*. Some groups refer to wares from *Nicopolis ad Istrum* [Poulter, Falkner, Shepherd 1999].

„Ware A”. The fabric is fine, containing little amount of calcium carbonate, mica and quite big amount of iron compounds. Ceramic temper or fine-grained sand was often added. Sometimes fabric is very well levigated. Vessels were covered with slip of poor quality, which is often smeared and abraded. They were fired red, orange, yellow, cream, light and dark bronze. Usual thickness of walls 0.5 cm. Fabric and production process is typical for ceramic centres in *Nicopolis ad Istrum* region [Nacheva 1981; Soultov 1983a, 33-60; Poulter, Falkner, Shepherd 1999, 74]. Some types of jugs presented here are known from kilns' findings (e.g. one-handled jugs type I variant A). There are also jugs, which form is not known from these centres, but fabric is typical. “Ware A” refers to “ware 8” in *Nicopolis*.

„Ware B”. The fabric contains big amount of mica. It is fired grey to brown and has burnished surface. Usual thickness of walls 0.4-0.7 cm. These vessels were made very carefully and often decorated. Some features, such as ruffs, flat handles, burnished surface and colour imitate structure and colour of metal vessels. Closed forms are most common [cf. Poulter, Falkner, Shepherd 1999, 73

sq.]. This ware is called “Keramik mit einglätterter Dekor” [e.g. Böttger 1967b]. “Ware 14” in *Nicopolis*.

„Ware C”. Similar to „ware B”. Fired grey or brown to red. Surface is covered with green or brown glaze. Usual thickness 0.4-0.7 cm. Rare in *Nicopolis* [Poulter, Falkner, Shepherd 1999, 87]. In *Novae* often found in the same layers as “ware B”, but some pieces are earlier (149).

„Ware D”. The fabric is badly levigated with big amount of lime and coarse sand inclusions. It is fired grey or orange-grey. Walls are mostly thin and crusty. Average thickness is 0.3-0.5. Some vessels of this group have white eruptions on the surface. One of the kilns with such pottery inside was found in *Novae* [Kotecki 1977].

„Ware E”. The fabric contains very big amount of medium-sized sand, mica and pyroxene. It is fired yellow, yellowish-pink, cream. The core is often two-coloured and a surface has shadows. Surface is very rough, sometimes with a thin slip layer of the same colour. Walls are hard and thin (usual thickness 0.4-0.6 cm). Jugs from this group are only oinochoai and majority of them have stuck spouts. Such form and technology of production is known from Debrudja [Tudor 1968, 82; Popilian 1976, 101; cf. Radulescu 1975, 341-343; Opaiț 1996, 115-116]. In *Nicopolis* — “ware 24”.

5. Decoration techniques

Jugs dated to 1st-3rd century AD were rarely decorated (slip, glaze or other coverings are not under discussion) and their decoration is very simple: horizontal grooved lines (24, 30, 34) or shallow depressions (27). Ornaments on jugs appeared in a mass only from 4th century AD. Jugs with polished ornament (“ware B”) have a special decoration called “Keramik mit einglätterter Dekor”, which origin is very discussed [Böttger 1967a, 299 sq.; Böttger 1967b; Grünwald, Pernicka 1979, 79-81]. According to B. Böttger, such ornament was made with a tough tool (e.g. a bone) before firing, on a dry vessel [Böttger 1967a, 299]. Jugs from *Novae* with burnished ornament were fired in low temperature, which is attested by big porosity.

6. Typology

Jugs are divided into two main groups: jugs with one handle and with two handles. In the material presented here there are also fragments which are defi-

nately pieces of jugs, but the number of handles can't be determined. First two groups have been divided into types and variants according to their morphological features (rim profile). In each group there are fragments classified to the group but not classified to the type (fragments with handles). Unclassified are miscellaneous sherds, which can be fragments of jugs. Fragments without preserved rims classified to a certain type (e.g. type III), in my opinion have characteristic shape suggesting very strongly their restoration (4, 40, 120, 121, 122, 132, 136).

Jugs with one handle

Type I (catalogue nos. 1-16). Tabl. I

A vessel with a splashed truncated cone-shape rim and a narrow neck, simple or with a ruff.

Variant A [= Soultov 1983a, type 7] (catalogue nos. 1-11)

A vessel with a splashed, truncated cone-shaped rim, a narrow neck and a squat body.

Jugs are made from very fine clay, fired pale brown to red. Their upper part is covered with slip, which is often partly abraded. The fabric contains fine-grained lime and mica. Jugs of this type are very frequent in Moesia and Thrace. Mostly they are known from cemeteries: near Boutovo [Soultov 1968, 43, fig. II,2 et 5], Sliven [Batsova-Kostova 1970, 24, fig. 5b], *Oescus* [Kovacheva 1968, 68, fig. 2b et 2v], *Marcianopolis* [Angelov 1983, 86, fig. II,1 et 3], Vidinsko [Djonova 1962, 33, fig. 7a], *Sucidava* [Tudor 1968, 82, fig. 17,2] and *Chernoze* [Detev 1963, 49, fig. 16₂]. Jugs type I are dated by coins from the first half of 2nd century AD [*Oescus*, coins of Hadrian] to the early 4th century AD [Popovica, coin of Constantine I]. Jug from *Chernoze* is dated to the late 2nd century AD by the coin of Commodus. Fragments found in towns and settlements are not so numerous, but also frequent: *Nicopolis ad Istrum* [Poulter, Falkner, Shepherd 1999, 82, no. 812, fig. 9.40], *Marcianopolis* [Minchev, Georgiev 1979, 105, fig. XII₁], Krulov Dol [Naydenova 1985, 32, fig. 22, 23, 65, 69], Ivailovgrad [Kabakchieva 1986, 76, fig. 20, nos. 275-281]. Jugs with cone-shaped rims were very popular in the whole Roman world. They have been found in *Upper Pannonia* [Plesničar-Gec 1977, fig. VI; Urleb 1983, 298-317, fig. 22, 2], where they are dated to the second half of 2nd century AD, in *Carnuntum* dated to AD 1st-2nd [Grünwald, Pernicka 1979, fig. 3, 5], in Germania [Gose 1975, 33, nos. 372-375, fig. 31] and Britannia [Bird, Young 1981, 17, 2]. In *Carnuntum* similar glass

vessels dated to AD 2nd-3rd were also found [Grünwald, Weber 1981, fig. 11, 9 et 11, 20]. Jugs with cone-shaped rims were discovered in production centres near *Nicopolis ad Istrum* [Soultov 1968, 43; Soultov 1983a, 124-125]. The production started in the mid-2nd century AD and was continued in 3rd century AD. Three jugs of this form were found in a kiln discovered in *Aquincum* [Póczy 1956, 99, fig. VI, 5-7].

Among eleven jugs presented here, two are completely preserved (2, 3). Unfortunately they have no inventory numbers. It is possible that they were found in the *Novae* area in 1964 by V. Vulov [cf. Vulov 1965, 29, fig. 7; Soultov 1983a, 73]. Jug no. 4 has no rim, but its form and fabric are identical with the others. Three jugs are dated by context: ca 150-200 AD (1) and to 2nd-3rd centuries AD (5,7).

Variant B (catalogue nos. 12-16)

A vessel with a flat, truncated cone-shaped rim, a narrow neck, profiled or with a ruff.

The quality of most jugs type I variant B is similar to variant A. Among five vessels of this variant, three were ornamented with a ruff (14, 15, 16), two have profiled necks (12, 13). The fabric contains the same inclusions, as variant A. Only one (12) differs from the others: its clay contains quartz, big amount of sand and ceramic temper. It is very hard and a handle is flat in section.

Fabric of jugs no. 13-15 refers to "ware A". Nos. 15 and 16, especially necks, are similar to jugs type V dated to 4th-mid-5th centuries AD, which form originates in glass and metal vessels. Rim analogous to no. 13 was found in *Nicopolis ad Istrum* [Poulter, Falkner, Shepherd 1999, 82, no. 811, fig. 9.40] in context dated to 130-150 AD. Jugs similar in form were produced in *Oltenia* [Tudor 1968, fig. 17.2]. No. 16 was found in context dated to 4th AD.

Type II (catalogue nos. 17-20). Tabl. I

A vessel with a turned out, ring-shaped rim.

Among four jugs type II, two have the same form, similar clay and quality (17, 18). Jugs from *Novae* type II mostly belong to "ware A". Ring-shaped rim of jugs was very popular in the Roman world. Similar glass vessels are also known [Minchev 1989, 17-19, type VII et VIII]. This type of jug was produced for a very long time and can be regarded as universal. Glazed jugs from 4th AD have also ring-shaped rims [Kuzmanov 1985 type I; cf. infra type III et no. 162]. Jugs analogous to type II are known from *Carnuntum* and are dated to the late 1st-early 2nd AD [Grünwald, Pernicka 1979, 61, fig. 55, 7], *Aquincum* 2nd-3rd AD [Póczy 1956, fig. X, 12-14 et fig. XI], *Oltenia*, 2nd-3rd AD [Popilian 1976,

96-97, type 2, nos. 433-462, fig. XLI, XLII], *Nicopolis ad Istrum*, mid-2nd-mid-5th centuries AD [Poulter, Falkner, Shepherd 1999, 222, fig. 9.40, nos. 826, 831]. Jug from Ivailovgrad [Kabakchieva 1986, type I, no. 260] was found together with a coin of Faustina II and Commodus. One-handled jugs type II were produced in centres around *Nicopolis ad Istrum* from the late 2nd AD [Soutov 1983a, 73-74]. Jugs from *Novae* are dated by context from the late 1st and early 2nd centuries AD (19, 20) to the late 2nd-early 3rd centuries AD (17).

Type III (catalogue nos. 21-35). Tabl. II-III

A vessel with a turned out rim.

Variant A (catalogue nos. 21-23)

A vessel with a turned out, thickened rim.

Jugs type III variant A are made of fine clay with little amount of fine-grained mica. Jugs are fired pale brown or reddish. Vessels of similar form are known from *Aquincum* [Póczy 1956, 99-100, fig. V, 13, 14, 16 et 107, fig. VII, 2-4], where they are dated to AD 2nd-3rd. Nos. 21, 22 are dated to the mid-3rd century AD.

Variant B (catalogue nos. 24-27)

A vessel with a firmly turned out rim.

The best preserved jug (27) was made from clay similar to that used in the centres around *Nicopolis ad Istrum*, but there are no published analogies from these centres. Quality of fabric is much better than the quality of slip, which is almost completely abraded. Jug similar to no. 24, but fired red, was found in *Romula (Oltenia)* and is dated to 2nd-3rd AD [Popilian 1976, 96-97, type 2, no. 436, fig. XLII]. Body of the jug no. 25 reminds the form of metal vessels. It was found in context dated to 2nd and 3rd AD.

Variant C (catalogue nos. 28-31)

A vessel with a turned out rim and a profiled neck.

Jugs 28, 29 were made from clay of rather good quality; no. 29 belongs to "ware A" (2nd-3rd AD). Clay and finishing of nos. 30 and 31 differs from others very much. Similar rims were found in *Nicopolis* [Poulter, Falkner, Shepherd 1999, 85, no. 969, fig. 9.47] in context dated to ca 250-350 AD. In *Novae* jugs of this form were found in context dated to 4th/5th AD and in a layer overlying coins of Justinian and Sophia (565-578). But one jug (31) is dated to mid-1st AD.

Other jugs type III (catalogue nos. 32-35). Tabl. III

The fabric of no. 34 is similar to that of jugs from *Novae* type VI variant B dated to 4th-6th AD. Its form refers to the jug from Pernik dated to the early 6th century AD [Kuzmanov 1985, K 81, fig. 22] and imitates metal vessels. Nos. 33, 35 were found in layers dated to the mid-1st AD. Hand-made jug no. 33 can be of local production [Press, Sarnowski 1987, 292]. No. 32, also hand-made, has analogies in Geto-Dacian lands in 2nd-1st BC [Trohani 1980, *passim*; Turcu 1979, 121, fig. 16, 4-6].

Type IV (catalogue nos. 36-46). Tabl. III

A vessel with a straight, slightly profiled rim and a straight neck.

Nos. 39, 40 are similar to three jugs with two handles (113, 114, 116) and their form is characteristic. Nos. 41, 43 and 46 are vessels similar to these produced in Pavlikeni, but the context of no. 46 definitely excludes such origin. They are known from cemeteries near Boutovo (*Kalvaka*), in southern Bulgaria and northern Black Sea coast, where they are dated to the second half of 2nd-early 3rd AD [Soutov 1969a, fig. 3; Soutov 1983a, 71-72, type 2, fig. XXXIII, 2, 3]. According to B. Soutov their form originates in *Asia Minor* [Soutov 1983a, 71-72]. Oil found in some vessels from Gara Svilengrad, Berezov and Plovdiv possibly indicates their function [Soutov 1983a, 71-72]. Similar fragments were discovered also in *Nicopolis ad Istrum* [Poulter, Falkner, Shepherd 1999, 85, nos. 958, 961, 965-68, fig. 9.47], where they are dated by context from the third decade of 2nd AD to 250-350, in Ivailovgrad [Kabakchieva 1986, 25, fig. 35-38] — 2nd to 4th AD, in *Marcianopolis* [Minchev, Georgiev 1979, 106, fig. XIII, 1, 2] — 4th AD, Oltenia [Tudor 1963, 82-83, fig. 17,2 no 22] — 2nd-3rd AD, *Emona* [Plesničar-Gec 1977, 77-78, fig. 3] — second half of 2nd AD, *Aquincum* [Póczy 1956, 108, fig. VIII, 9] — 2nd-3rd AD.

Nos. 36-40 and 46 were found in pits dated to ca 50-79 AD. The others are dated by context from 2nd-early 3rd AD (44), ca 250-350 AD (45), 300-350 AD (42).

Type V [= Kuzmanov 1985, type I = Opař 1996, type II] (catalogue nos. 47-60).
Tabl. III-IV

A vessel with a shallow, funnel-like rim, plain neck or decorated with one or more ruffs. Jugs of this type often have an oval body and a handle flat in section.

Variant A (catalogue nos. 47-49)

A vessel with a shallow rim and a neck decorated with a ruff.

The fabric contains mica and sand inclusions. It is fired grey to brown. No. 47 has burnished surface covered with zigzag ornament. Two other jugs were covered with green glaze. Preserved fragments of handles are flat in section (47, 49). All of them belong to "ware B" or "ware C".

Variant B (catalogue nos. 50-54)

A vessel with a shallow throat, a profiled hoop-like rim and a neck decorated with ruff.

The fabric contains mica and sand inclusions, sometimes lime or pyroxene. Clay was fired brownish grey or red. No. 50 was covered with slip. Preserved fragments of handles (51, 54) are oval in section. Nos. 50 and 53 belong to "ware B". No. 51 is dated by context to late 6th century AD, no. 53 — to the late 4th - early 5th centuries AD.

Other jugs type V (catalogue nos. 55-60)

All these jugs belong to "ware B" or "ware C" and have some features of jugs type V (a ruff on a neck, the fabric, glaze or polished surface with typical ornament etc.), but their form can't be classified to any variant. Preservation of some fragments classified to type V is too poor to restore the form of the rim. Other fragments are necks with characteristic decoration — a ruff (59, 60), green glaze (60) or ornament of polished lines (57). Similar to these fragments are jugs with two handles type IV. The form of jugs type V probably derives from metal vessels [Radnóti 1938, fig. XLV; Opař 1996, 116, type II] or glass [Isings 1967, Forms 120, 121, 122; Minchev 1989, 17-19, type VII et VIII, fig. 2, 10 et 3, 11, 12]. Mostly they are made from fine clay with big amount of mica and fired grey, though some examples of red or brown colour also appear. Burnished surface or glaze seems to be a consequence of the metal imitation. It was very popular in the Roman Empire and is found as far as Gaul, Britain and Sasanid Kingdom [Opař 1996, 116]. The earliest dated jug analogous to type V was found in Thraco-Roman cemetery in Thrace and is dated to the early 3rd AD [Kuzmanov 1985, 28]. But numerous findings on the Middle and Lower Danube are dated to AD 4th [Sági 1960, fig. 2, 3; Böttger 1968, 251 sq.]. In Lower Moesia and Thrace this type is popular till the ca 450 AD and to the north of Danube even to 6th AD [Kuzmanov 1985, 28].

Majority of jugs type V were found in layers dated to 4th AD. Some fragments were found in well filling in the Building with porticoes (47, 53, 57, 59, 66, 96, 154, 155) dated to this period. The latest dated jug is no. 51 (5th-6th AD).

Type VI [= Kuzmanov 1985, type I.1] (catalogue nos. 61-66). Tabl. V
A vessel with a deep, slightly profiled, funnel-like rim.

Variant A (catalogue nos. 61-64).

A vessel with a deep, funnel-like rim decorated with horizontal grooves.

All of jugs belong to "ware D". Height of jugs measures from 20 to 25 cm. Two rims from *Novae* (63, 154) were found in a kiln dated to 6th-7th AD, but one of them has no traces of handles. Fabric and completion of nos. 61, 62 are similar to finds from the kiln. Analogous vessels to type VI variant A are known from Sadovets and are dated to 4th-6th AD [Kuzmanov 1992, 212, type 3, fig. 69, 5 et 6], *Ratiaria*, where are dated to 5th-6th AD [Kuzmanov 1987, 113-114, fig. XXXV, 15], *Topraichioi* (Dobrudja), with dating to the late 4th - first half of 5th centuries AD [Opař 1996, 118, fig. 48, 13].

Variant B (catalogue nos. 65-66)

A vessel with a deep, profiled, funnel-like rim.

The fabric contains sand and lime inclusions and is fired red. The size of jugs is smaller and quality better than variant A. Similar jugs are known from Madara, where they are dated to 4th-5th AD [Dremisizova 1960, 68, no. 1, fig. 2A.b] and Odurei, dated to 6th AD [Doncheva-Petkova 1982, 106, no. 26, fig. II₄ et VI₂], Dobrudja [Opař 1996, 118, type III, fig. 48] dated to 4th - first half of 5th AD. Analogous two-handled jugs are known from *Iutrus* — the first half of 5th century AD [Kuzmanov 1985, type I.1, K 33; Böttger 1982, 55, type II 1, no. 380, fig. 30e] and Sliven district — 4th-6th AD [Borisov 1988, 110-111, fig. 12v]. The earliest dated two-handled example was found in *Aquincum* and is dated to 2nd-3rd AD [Póczy 1956, 108, fig. VIII, 13]. The form was quite popular in the Late Roman and Early Byzantine periods [Kuzmanov 1985, type I.1; Borisov 1988, 111-112]. No. 66 was found in context dated to 4th AD.

Type VII (catalogue nos. 67-101). Tabl. VI, VII

A vessel with a trefoil rim (oinochoc).

Variant A (catalogue nos. 67-77, 96-98, 101)

A vessel with a trefoil rim and an opened spout.

The fabric of nos. 68-72, 74-76 and 101 is related to "ware A". No. 67 differs very much from the others with its form and fabric. Nos. 96-98 were made from clay with sand inclusion and fired light red. Their surface is rough. The fabric of no. 77 reminds "ware E" analogous to nos. 78-83. No. 101 can be regarded as a miniature.

Jug similar to no. 67 is known from *Athenian* agora, where it is dated to 1st-2nd AD [Robinson 1959, 34, no. G 120, fig. 7]; here is also dated by context to 1st AD. Nos. 73 and 80 were found in context dated to mid-1st AD. Others were found in context dated to 2nd-3rd AD (68-70, 74, 76) and 4th AD (96).

Variant B (catalogue nos. 78-95)

A vessel with a trefoil rim and a stuck spout.

Nos. 78-83 belong to "ware E". No. 83 was additionally decorated on a neck. Nos. 84-94 are grey to brown and their walls are slightly thicker than nos. 78-83. Jug analogous to nos. 78-83 was found in Slaveni (*Oltenia*), where is dated by the coin of Alexander Severus (222-235 AD) [Tudor 1968, 101, no. 530, fig. XLIX]. Jugs with trefoil rims fired grey are known from Hotnitsa centre, where they had been produced in 2nd-3rd AD [Soultoev 1969a].

Jugs from *Novae* type VII variant B are dated by context to the mid-3rd century AD (84, 92, 95) or 2nd-3rd AD (88-91, 94).

Variant C (catalogue nos. 99-100)

A vessel with a trefoil rim decorated with horizontal grooves and a handle perpendicular to rim.

The fabric contains quite big amount of sand. It is fired red and the surface is rough. The vessels are rather small (10-15 cm). Jugs found in *Novae* are dated by context to the mid-1st (99) and 2nd-3rd centuries AD (100).

Jugs with one handle of no type (catalogue nos. 102-112). Tabl. VIII

These jugs have miscellaneous forms, but some of them were made from similar kind of clay and in similar technology. The fabric of nos. 103, 106, 108 reminds "ware A". The fabric and completion of no. 109 suggests it belongs to "ware B". The fabric and completion of jugs nos. 102 and 110 is exclusive. Preservation of other jugs is so poor that analogies can't be determined.

Nos. 104, 105, 111 are dated by context to 2nd AD, no. 107 — 2nd-3rd, no. 112 to ca 250 AD.

Jugs with two handles

Type I (catalogue nos. 113-118). Tabl. VIII-IX

A vessel with a wide, straight, slightly profiled rim.

Jugs of this type have a bulging body and a separate foot. The fabric generally contains big sand inclusion and is fired red. Jugs of the same form were also made with one handle (39, 40). Two-handled jugs type I were found in two pits dated to the earliest period of the legionary camp in *Novae*. Such forms are known in the whole Roman world, e.g. from Magdalensberg [Zabehlicky-Scheffencger 1996] or *Novaesium* [Vegas 1975, eg fig. 14, 15]. No. 115 made in different technology has a form of "little amphorae" known from Thrace [Kovachev 1998, type i] dated to 2nd-3rd AD.

Type II [= Soultoev 1985, type I] (catalogue nos. 119-134). Tabl. IX

A vessel with a long, funnel-like rim.

Jugs of this type have oval bodies and a separate foot, their handles are unsymmetrical. The fabric referring to "ware A" is mostly of poor quality. Walls are rather thin. Jugs differ in height (12-18 cm). Among jugs found in *Novae* majority is dated to 2-3rd AD and this corresponds with Soultoev opinion [Soultoev 1983a, 75, fig. XXXV, 1]. Jugs with two handles type II are very often found in cemeteries, but also in towns and settlements. They are dated to 2nd-3rd AD, e.g. on the cemeteries near *Nicopolis ad Istrum* [Soultoev 1968, 43, fig. I] and *Novae* where are dated to the late 2nd-mid 4th AD [Soultoev 1985, 75] and in towns of *Nicopolis ad Istrum* [Poultier, Falkner, Shepherd 1999, nos. 802-804, fig. 9.40], *Marcianopolis* [Minchev, Georgiyev 1979, 103, fig. XIII, 3], villa in *Prisov* [Soultoev 1983a, 75] and many others. They are known also from *Tropaeum Traiani* [Cataniciu, Barnea 1979, fig. 162, 4.1], *Sucidava*, *Romula* and *Drobeta* [Popilian 1976, nos. 546-557, fig. LI; Soultoev 1983a, 75], *Beroe* [Opait 1996, 119, type IV-C, fig. 49, 7].

Type III [= Soultoev 1983a, type 2] (catalogue nos. 135-136). Tabl. X

A jug with a shallow, turned-out, ring-shaped rim.

Form of their rim is similar to one-handled jugs type II. The fabric refers to "ware A". They are known from kilns in Pavlikeni dated to 2nd AD [Soultoev 1983a, 74] and many cemeteries in Thrace [Soultoev 1983a, 74 et note 138], where are dated to the early 2nd-4th AD.

Type IV [= Kuzmanov 1985, type III] (catalogue nos. 137-141). Tabl. X
A vessel with a straight or slightly funnel-like rim and a long neck with a ruff.

Jugs are often covered with green or brown glaze. The fabric was fired red or grey. Majority of them belong to "ware C", but sometimes also to "ware B". The body no. 142 has no preserved rim, but most possibly belonged to a jug type IV. The form is very popular: analogous jugs are dated from 2nd AD [Póczy 1956, 105, fig. 8,8; Tudor 1968, 82-83, fig. 17, 2, nos. 6, 10, 12, 13; Popilian 1976, 102], 3rd AD — jugs from Intercisa with a coin of Philip the Older (244-249) [Bóna, Vágó 1976, 24, fig. XXVII, 3 et 4], 4th AD [Popilian 1976, 102, type 2, fig. L; Kuzmanov 1985, K42, tab. 18], the first half of 5th century AD — from *Iatrus* [Böttger 1982, 56, type II 2, fig. 30; Kuzmanov 1985, 33] and Sadovets [Kuzmanov 1985, K47, fig. 19]. Jugs of this type were found in Episcopal residence in *Novae*, where are dated to 4th-6th AD [Klcnina 1999, 91, fig. 6.1, 2]. Other jugs from *Novae* are dated from 250-350 AD (140, 141) to the early 5th (139).

Two-handled jugs of no type (catalogue nos. 142-143). Tabl. X

No. 142 belongs to "ware A". No. 143 is square in section and was ornamented with circle grooves. Its form and ornament is typical for glass vessels, especially dated to 2nd AD [Isings 1967, Form 89, 90].

Fragments unclassified (catalogue nos. 144-156). Tabl. X Miscellaneous pieces of jugs, which number of handles can't be defined.

Rims, necks, bodies and a handle (catalogue nos. 144-156)

No. 144 belongs to "ware B", nos. 149, 150 belong to "ware D" but their preservation is too poor to restore the form. The fabric and completion of nos. 146, 148 differs from the ceramic material from *Novae* and the context gives a date of mid-1st AD. No. 145 covered with brown glaze reminds glass vessels, very popular from 2nd-5th AD [Minchev 1989, 16-17, type IV et V] and the context also corresponds to it. No. 150 has analogies in Sadovets [Kuzmanov 1992, 212, type 3, tab. 69,5 et 6] and *Ratiaria* [Kuzmanov 1987, 113-114, tab. XXV,15].

Three necks with ruffs probably belonged to jugs with one handle type V or two handles type IV. Their fabric and completion are similar to the jugs of these two types. No. 152 was covered with green glaze ("ware C").

Body no. 154, of quite interesting form, probably belongs to "ware B". Body no. 155 covered with brown glaze ("ware C") most probably belonged to the two-handled jug type IV. Both bodies are dated by context to 4th century AD.

The only handle presented here (156) was fired grey, covered with green glaze and decorated with an appliqué in shape of a human head. Probably it belongs to "ware C" and imitates metal vessels, thus the appliqué in shape of a human head is a typical feature of jugs, often decorated this way [Radnoti 1938, fig. XXXIX-LIII]. Human heads are mostly heads of Dionisos, what seems to be connected with function of jugs as vessels for wine.

7. Function

According to W. Hilgers [1969, 7 sq.] jugs were used as table [Tischgefäße] and toilet ware [Toilettengefäße]. Among tableware described as *ministeriuma* there are also jugs. Two names are especially frequent: *lagoena* and *urceus*. *Lagoena*, *lagona*, *laguena*, *laguna*, *lacuna*, *lagona* [Hilgers 1969, 61 et 203-204, no. 205] — a Greek term [λάγυνος] for a flask or a jug for liquids [here fig. 2]. *Urceus* or *urceolus* [Hilgers 1969, 83-86, fig. 77-80 et 299-300, no. 378] was used as a jug for drinks, preserving consumer goods, medicines, as a toilet vessel (e.g. in baths) or a cult vessel [here fig. 3].

According to K. Roth-Rubi [1979, 12; cf. Hilgers 1969, 66 sq. et 203 sq.] the name *lagoena* was used for jugs in general. Greek term *λάγυνος* refers to the late Hellenistic form jug, and its etymology has connection with woman [Hayes 1991, 18-19; cf. fig. 2]. Probably this name had a wider meaning than nowadays [Roth-Rubi 1979, 12]. Other names used for jugs are *gutturium*, *cuturnium* [Hilgers 1969, 58-60 et 191, no. 183] — a cult jug for wine or water for washing hands, which probably refers to a jug often found together with *paterna* [Nuber 1972; cf. fig. 1]; *arnillum* [Hilgers 1969, 110, no. 35] — a jug for wine, also a cult vessel; *bacario* [Hilgers 1969, 118, no. 49] — a jug for wine and water; a form similar to *urceolus*; *epichysis* [Hilgers 1969, 178, no. 147] — a Greek name [ἐπίχυσις]; a jug with one handle for pouring wine similar to *gutturium*; *vinarium* [Hilgers 1969, 297, no. 372] — a jug for wine (the name known from *graffito* put on a jug from La Graufesenque [Hilgers 1969, 297, no. 372; Hermet 1979, 337 sq.]); *viniferum* [Hilgers 1969, 297, no. 373] — a jug for wine. There are also jugs of special form and function like *hydria* [Hilgers 1969, 60-61, no. 195] or *titina* and *ubuppa* [Hilgers 1969, 80 et 289, no. 356] — a jug for water or wine with a spout on a body used probably for feeding children [Hilgers 1969, 80 et 289; Webster 1981, 249-255].

Some information about function can be obtained from archaeological context. It's difficult on sites, where ceramic sherds were reused as rubbish for levelling or as additive for building material. Some jugs were found in the legionary hospital, so that we can suppose that they were used there.

Jugs had also sepulchral function. Some forms (one-handled jug type I and two-handled jug type II) found in *Novae* are known from cemeteries in the area and are dated to 2nd and 3rd AD [Soultoŭ 1968, 43, tab. I; Soultoŭ 1983a, 122-123]. But I don't think that form could have had a special sepulchral function. Their common appearance may be connected with mass production in that period, inclusion of territory of *Nicopolis ad Istrum* with its pottery centres to Lower Moesia, and thus possibly, with lowering prices of pottery.

The size and form of some jugs may indicate both transport and table functions. Especially it concerns quite big, bulbous jugs which appear in mass (*cf.* nos. 41, 43, 46 and their analogies produced in Pavlikeni), but their size is quite small as for amphorae. This is the group which I would call jugs/ amphorae.

8. Production centres and origin of jugs

Majority of jugs found in *Novae* were produced in local production centres, especially in the territory of *Nicopolis ad Istrum*. But some finds of pottery kilns in *Novae* and its surroundings suggest local small-scale production. Among sixteen kilns found in area of *Novae* [Nowicka 1961, 87; Mitova-Djonova 1966; Ner 1997], four were classified as kilns for tiles and bricks firing and ten for pottery. Condition of other two was too poor to determine their function, but construction indicates firing pottery. First kiln was discovered during investigations made during the first archaeological survey in *Novae* [Nowicka 1961, 87, fig. 16]. About 50 meters to the east from the mouth of Dermendere river, on the Danube slope, a fireplace, a wall and an oven could have been seen. Unfortunately, water and wind erosion caused landslide and its complete devastation. Second one was found in the Building with porticoes, in the room K [Soultoŭ 1961, 118, fig. 84, 85; Dimitrov, Chichikova, Soultoŭ 1963, 121-122]. Tiles used for building are dated to 4th-5th AD. The next two kilns were discovered near the south-eastern corner of the legionary fortress [Dimitrov, Chichikova, Soultoŭ 1970, 60-65]. Inside one kiln many terra sigillata and en barbotine decorated pottery fragments were found and a coin dating both structures to the second half of 3rd century AD. Fifth kiln was located within the *principia* [ha XVII-371; Samowski 1975, 143-144]. By context, it is dated to the early medieval times. Sixth one was discovered between the western gate and headquarters building. It was filled with vessels from the last firing, among them jugs (cat. nos. 63, 148,

149). It is dated to 6th-7th AD [Kotecki 1977]. Next four kilns were discovered together with the kilns for tiles and bricks firing at the mouth of Dermendere river. Stamps on tiles used for furnace walls determined the dating to 4th-5th AD [Mitova-Djonova 1966; Vulov 1966]. Last two kilns, which function is not obvious, were found near the eastern legionary wall [ha XXXIII-291/311; Dimitrov, Chichikova, Soultoŭ 1974, 153-154]. They are dated by context to 4th AD.

Location of kilns seems to be not coincidental. The early ones were placed outside the legionary walls. Kilns from 4th-7th AD were located within the early Byzantine city, not far from private and representative buildings. It is interesting, some glass kilns dated to the same period were unearthed near the street between the headquarters building and Episcopal group. Large-scale pottery production centres have been localised at Boutovo, Hotnitsa, Pavlikeni and Byala Tserkva [Soultoŭ 1962; 1969a; 1969b; 1971; 1972; 1980; 1983a; 1983b]. Further discoveries of kilns in this area were reported by Poulter, Falkner, [Shepherd 1999, 74]. Another pottery centre has recently been discovered at Pet Mogili, 45 km north-west from *Marcianopolis* [Poulter 1983, 90] and in Late Roman settlement in Lesicheri [Poulter 1999, 227]. The connection between demand for pottery of settlers from area of *Novae* and funding the Boutovo centre was marked by Soultoŭ [1983b, 126].

As pottery production centres are placed where clay beds, water and fuel is easily available, they exist in the same place for ages, e.g. in Hotnitsa — 2nd-3rd AD and 9-10th AD [Aleksiev 1977, 55, fig. 1, 2] and also today [Soultoŭ 1983a, 30].

Production places of "ware B" (so called "Keramik mit einglätteter Dekor") is still unknown. The time and area of its appearance (Danubian provinces in 4th-mid-5th AD) suggest the possible localisation in this area. Moesian *sigillata* often coexists with such type of pottery [Grünwald, Pernicka 1979, 80]. According to Falkner, the fabric reach of mica is similar to the medieval pottery, thus the clay material could have been obtained from the same beds. B. Böttger analysed relationship between amount of jugs and amphorae in this period [Böttger 1982, 298]. Increase of imported products, attested by amphorae fragments, implied increase of demand for table pottery. In my opinion, most probably, ceramic vessels replaced metal ones in time of metal crisis in 4th AD. However I do not exclude Böttger's arguments.

Glazed pottery ("ware C") is mostly dated to the same period, but some vessels from *Aquincum* [Póczy 1956, 105, fig. 8, 8], *Oltenia*, *Sucidava* and *Romula* [Tudor 1968, 82-83, fig. 17, 2, nos. 6, 10, 12, 13; Popilian 1976, 102] are dated for 2nd AD. Glazed vessels are present in the whole Roman empire [Arthur, Williams 1981, passim]. Nevertheless the most frequent are in *Pannonia* and *Dacia Ripensis*, thus appears in literature as the "Pannonian pottery". Latest research focused on concentrated findings from northern Italy and Rhine valley dated to 2nd-4th AD [Arthur, Williams 1981, 498]. Probably a part of pottery from *Novae*

was produced not far from the camp, as the longer distance would have risen their price too high.

9. Problems of ethnical identification of producers and users of jugs

Majority of vessels was made in local large-scale production centres in 2nd-3rd centuries AD. Among craftsmen from *Asia Minor*, who came to *Nicopolis* in the early 2nd century AD were also potters. But in kilns and settlements from pre-Roman period localised near Hotnitsa grey "Thracian" wares of good quality were found, which may indicate native craftsmen producing Moesian *sigillata* [Soulto 1983b, 128].

Sudden and massive appearance of vessels made from the same kind of clay and in characteristic technology ("ware B") in layers dated to 4th mid-5th AD in Danubian provinces is often interpreted as a proof for presence of Gothic tribes [e.g. Poulter, Falkner, Shepherd 1999, 111-112]. Similar type of pottery is also known from Macedonia [Hayes 1972, 405] and Gaul as so called "*terra sigillata grisea*" [Hayes 1972, 400]. Such pottery has been found in Athens, Corinth and Constantinopol, southern Gaul and Spain and is dated to the late 4th-5th AD. Pottery produced in Bordeaux region can be called "Visigothian", as it was the country they occupied in that period.

It was noticed that the most numerous quantities of glazed pottery ("ware C") were found on military sites [Arthur, Williams 1981, 503]. This may correspond with the fact that only one piece of green-glazed pottery was found in *Nicopolis ad Istrum* [Poulter, Falkner, Shepherd 1999, 87].

Abbreviations and bibliography

AS	--- Arheologiya (Sofia)
AAAV	--- Acta Archaeologica. Arheološki Vestnik (Ljubljana)
AAHung	--- Acta Archaeologica Academiae Scientiarum Hungaricae
GMPlovdiv	--- Godishnik na Muzeite ot Plovdivski Okrug
GSUIFak	--- Godishnik na Sofijskaya Universitet "Kliment Ohridski" Istoricheski Fakultet
IAI	--- Izvestiya na Arheologicheskaya Institut (Sofia)
IEIM	--- Izvestiya na Etnografskiya Institut i Muzei
INMKalovgrad	--- Izvestiya na Narodniya Muzei Kalovgrad (Shumen)
INMVarna	--- Izvestiya na Narodniya Muzei Varna
IOMVeliko Turnovo	--- Izvestiya na Okruzniya Muzei Veliko Turnovo
IVAD	--- Izvestiya na Varnenskoto Arheologicheskoto Druzhestvo
RCRActa	--- Rei Cretariae Romanae Fautorum Acta

- Aleksiev 1977 — J. Aleksiev, Gurncarski peshti i zilishcha-poluzemfyanki ot IX-X v. kray s. Hotnitsa, Velikoturnovski okrug, *AS* 19, 4, 1977, 55-62.
- Angelov 1983 — A. Angelov, Grobni nahodki ot yuzniya nekropol ot Marcianopol, *IVAD* 19 (34), 1983, 84-97.
- Arthur, Williams 1981 — P. Arthur, D. Williams, "Pannonische glasierte Keramik": An Assessment, [in:] Roman Pottery Research in Britain and North-West Europa, vol. II, A.C. Anderson, A.S. Anderson [eds.], [British Archaeological Reports vol. 123], Oxford 1981, 481-510.
- Batsova-Kostova 1970 — E. Batsova-Kostova, Novi dannii na rimskiya nekropol v Sliven, *AS* 12, 3, 1970, 22-32.
- Biernacki 1973 — A. Biernacki, Ceramika naczyniowa, [in:] *Novae* — Sektor Zachodni 1970, Poznań 1973, 125-129.
- Bird, Young 1981 — J. Bird, Chr. Young, Migrant Potters. The Oxford Connection, [in:] Roman Pottery Research in Britain and North-West Europa, vol. II, A. C. Anderson A. S. Anderson [eds.], [British Archaeological Reports vol. 123], Oxford 1981, 295-312.
- Bóna, Vágó 1976 — J. Bóna, E.B. Vágó, Die Gräberfelder von Intercisa. Der spätromische Südostriedhof, Budapest 1976.
- Borisov 1988 — B. Borisov, Issledovanie rannevizantiyskoy keramiki iz Slivenskogo okruga, *Thracia* 8, 1988, 90-118.
- Böttger 1967a — B. Böttger, Die Keramikfunde aus dem Kastell Iatrus, *Klio* 48, 1967, 289-316.
- Böttger 1967b — B. Böttger, Einglätterter Dekor auf Gefässen aus römischen Donauprovinsen, *Wissenschaftliche Zeitschrift d. Univ. Rostock* 16, 1967, 421-423.
- Böttger 1974 — B. Böttger, Die Importkeramik aus dem spätantiken Donaufineskastell Iatrus in Nordbulgarien, [in:] Actes du IX^e congrès internationale d'études sur les frontières romaines. Mamaia 6-13 septembre 1972, Bucureşti 1974, 131-136.
- Böttger 1982 — B. Böttger, Die Gefässkeramik aus dem Kastell Iatrus, [in:] *Iatrus* — Krivina, Spätantike Befestigung und frühmittelalterliche Siedlung an der unteren Donau, Band II (Ergebnisse der Ausgrabungen 1966-1973), G. von Bülow, D. Schieferdecker, H. Heinrich [eds.], Berlin 1982, 33-148.
- Böttger, Bockisch 1966 — B. Böttger, G. Bockisch, Spätromische und frühbyzantische Keramik, *Klio* 47, 1966, 209-256.
- Buyukliev 1968 — Chr. Buyukliev, Trako-rimski mogilon nekropol v raiona na promishlenniya kompleks Marica-iztok, *AS* 10, 4, 1968, 54-55.
- Cataniciu, Bamea 1979 — I.B., Cataniciu, A. Bamea, Ceramica și descoperți marne, Tropaeum Traiani I. Cetatea, Bucureşti 1979, 177-226.
- Daszkiewicz, Bobryk, Schneider, Dyczek 2000 — M. Daszkiewicz, E. Bobryk, G. Schneider, P. Dyczek, Chemical and mineralogical composition of roman amphorae from Novae and some other Sites in Bulgaria — First results, *Novensia* 12, 2000, 23-42.
- Detev 1963 — P. Detev, Raskopki na mogilniya nekropol pri s. Chernozem, *GMPlovdiv* 7, 1963, 39-62.
- Dimitrov, Chichikova, Soulto 1963 — D.P. Dimitrov, M. Chichikova, B. Soulto, Arheologicheski raskopki v vostochnom sektore Nove v 1960-61 gg., *IAI* 26, 1963, 133-140.
- Dimitrov, Chichikova, Soulto 1970 — D.P. Dimitrov, M. Chichikova, B. Soulto, A. Dimitrova, Arheologicheski raskopki v vostochnom sektore Nove v 1966 g., *IAI* 32, 1970, 55-72.
- Dimitrov, Chichikova, Soulto 1974 — D.P. Dimitrov, M. Chichikova, B. Soulto, et al., Arheologicheski raskopki v Soulto 1974 iztochniya sektor na Nove prez 1967-1969 g., *IAI* 34, 1974, 138-175.
- Dimitrova-Milcheva 1987 — A. Dimitrova-Milcheva, Importierte Terra Sigillata aus Novae, [in:] Recherches sur le culture en Mesie et en Thrace. Bulgarie, I^{er}-IV^e siecle, *IAI* 37, Sofia 1987, 108-152.
- Djonova 1962 — D. Djonova, Mogilni pogrebeniya ot Vidinsko, *AS* 4, 3, 1962, 30-37.
- Domžalski 1998a — K. Domžalski, Ceramika stolowa z principia w Novae. Wypeńisko jany nr 4, *Novensia* 11, 1998, 141-155.

- Domžalski 1998b — K. Domžalski, Terra sigillata z komendantury w Novae. Wypełnisko jamy nr 4, *Novensia* 11, 1998, 127-140.
- Doncheva-Petkova 1982 — L. Doncheva-Petkova, Rannovizantijska Keramika ot s. Odurci, Tolboubinski okrug, *IVAD* 18 (33), 1982, 103-116.
- Dremsizova 1960 — C. Dremsizova, Nepublikovani materiali ot Golemata peshtera kraj s. Madara, *INMKolarovgrad* 1, 1960, 67-81.
- Dyczek 1981 — P. Dyczek, Ceramika z odcinka IV, [in:] *Novae* — Sektor Zachodni, 1979. Sprawozdanie tymczasowe z wykopalisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego. K. Majewski [ed.], (Aneks V), *Archeologia* 32, 1981 (1984), 143-151.
- Dyczek 1987 — P. Dyczek, Uwagi na temat ceramiki odkrytej w Novae w 1979 roku. Odcinek IV. Budowla z portykami, *Novensia* 1, 1987, 253-287.
- Dyczek 1989 — P. Dyczek, Odcinek IV, [in:] Sprawozdanie z wykopalisk archeologicznych w Novae w 1987 r., *Archeologia* 40, 1989, 136-141.
- Dyczek 1990a — P. Dyczek, A Stratified Deposit of Pottery Used in the Roman Military Hospital. Akten des 14. Internationalen Limeskongresses 1986 in Carnuntum [Der Römische Limes in Österreich, vol. XXXVI.2], Wien 1990, 941-948.
- Dyczek 1990b — P. Dyczek, Wybrana ceramika z Novae — kampania 1983 [Balkanica Posnaniensia, vol. V], Poznań 1990, 279-286.
- Dyczek 1991 — P. Dyczek, Ceramika z odcinka IV (1981, 1983), *Novensia* 2, 1991, 101-127.
- Dyczek 1992 — P. Dyczek, Z wstępnych badań nad ceramiką z wypełniska latryny szpitalnej w Novae, *Novensia* 4, 1992, 67-79.
- Dyczek 1993 — P. Dyczek, Valetudinarium w 1987 r. Wstępne wyniki badań Ekspedycji Archeologicznej UW w Novae, *Novensia* 5, 1993, 205-224.
- Dyczek 1997 — P. Dyczek, Remarks on the Roman Amphorae at Novae from the First to the Third Century AD, *Novensia* 9, 1997, 81-94.
- Dymaczewska, Kotecki 1981 — U. Dymaczewska, J. Kotecki, Ceramika naczyniowa, [in:] *Novae* — Sektor Zachodni 1976, 1978, Poznań 1981, 73-83.
- Gencheva 2002 — E. Gencheva, Pärvijat voenen lager v Novae, provinciya Miziya (Severna Bălgariya), Sofia-Warszawa 2002.
- Getov 1969 — L. Getov, Trako-rimski mogilni pogrebeniya ot Kazanfushko, *AS* 11, 1, 1969, 36-47.
- Gosc 1975 — E. Gosc, Gefäßstypen der römischen Keramik im Rheinland [Beilieferung der Bönner Jahrbücher vol. I], Düsseldorf 1975.
- Grünwald 1983 — M. Grünwald, Die Funde aus dem Schutthügel des Legionslagers von Carnuntum [Der römische Limes in Österreich 32], Wien 1983.
- Grünwald, Pernicka 1979 — M. Grünwald, E. Pernicka, Die Gefäßkeramik des Legionslagers von Carnuntum (Grabungen 1968-1974) [Der römische Limes in Österreich 29], Wien 1979.
- Grünwald, Weber 1981 — M. Grünwald, E. Weber, Die Kleinfunde des Legionslagers von Carnuntum mit Ausnahme der Gefäßkeramik (Grabungen 1968-1974) [Der römische Limes in Österreich 31], Wien 1981.
- Hayes 1972 — J.W. Hayes, Late Roman Pottery, London 1972.
- Hayes 1991 — J. Hayes, Paphos III, The Hellenistic and Roman Pottery, Nicosia 1991.
- Hermel 1979 — F. Hermel, La Graufesenque I. Marscille 1979.
- Hilgers 1969 — W. Hilgers, Lateinische Gefäßnamen, Bezeichnungen Funktion und Form römischer Gefäße nach den antiken Schriftquellen, Düsseldorf 1969.
- Isings 1967 — C. Isings, Roman Glass from Dated Finds, Groningen — Djakarta 1967.
- Kabakchieva 1986 — G. Kabakchieva, Keramika ot vilata pri Ivaylovgrad II-IV v. [Raskopki i prouchvaniya, vol. XV], Sofia 1986.
- Klenina 1999 — E. Klenina, Table and Cooking Pottery of the IV — VI AD from the Episcopal Residence in Novae, [in:] Der Limes an der unteren Donau von Diokletian bis Heraklios. Vorträge der Internationalen Konferenz, Svištov (1.-5. September 1998), Sofia 1999, 87-94.

- Końkówna, Nowicka 1961 — S. Końkówna, M. Nowicka, Odcinek II, [in:] Sprawozdanie tymczasowe z wykopalisk w Novae w 1960 r., K. Majewski [ed.], *Archeologia* 12, 1961, 99-105.
- Końkówna, Rutkowski 1962 — S. Końkówna, B. Rutkowski, Ceramika, [in:] *Novae* 1961. Tymczasowe sprawozdanie z wykopalisk Uniwersytetu Warszawskiego, K. Majewski [ed.], *Archeologia* 13, 1962, 104-125.
- Końkówna 1965 — S. Końkówna, Sondaż przy południowym murze obronnym, [in:] *Novae* — Sektor Zachodni 1964. Sprawozdanie tymczasowe z wykopalisk ekspedycji archeologicznej UW, S. Parnicki-Pudełko [ed.], *Archeologia* 16, 1965, 163-168.
- Kotecki 1977 — J. Kotecki, Piec garncarski w sondażu wodociagowym, [in:] *Novae* — Sektor Zachodni, 1975. Sprawozdania tymczasowe z wykopalisk ekspedycji archeologicznej Uniwersytetu Warszawskiego (Aneks III), *Archeologia* 28, 1977, 193-200.
- Kotecki 1978 — J. Kotecki, Ceramika naczyniowa, [in:] *Novae* — Sektor Zachodni 1974, Poznań 1978, 119-126.
- Kovachev 1998 — G. Kovachev, Malki glineni amforki ot Severoiztochna Trakija ot rimskata epoha, *Arheologiya* 39, 1-2, 1998, 58-64.
- Kovacheva 1968 — T. Kovacheva, Novookriti grobove ot Eskus, *AS* 10, 4, 1968, 67-71.
- Kovalevszkaja, Tomas, Sarnowski 1999 — L. Kovalevszkaja, A. Tomas, T. Sarnowski, Flaszki gliniane z principia w Novae, *Novensia* 12, 1999, 107-126.
- Kuleff, Djingova 1996 — I. Kuleff, R. Djingova, Chemical profile of the pottery production in the ceramic centre near Nicopolis ad Istrum, *Analytical Laboratory* 5 (4), 1996, 238-244.
- Kuraszkiewicz 1973 — G. Kuraszkiewicz, Ceramika naczyniowa, [in:] *Novae* — Sektor Zachodni 1972, Poznań 1973, 115-129.
- Kuzmanov 1985 — G. Kuzmanov, Rannovizantijska keramika ot Trakija i Dakiya, IV — nachaloto na VII v., [Raskopki i prouchvaniya, vol. XIII], Sofia 1985.
- Kuzmanov 1987 — G. Kuzmanov, Ceramica del primo periodo bizantino a Ratiaria, in: Atti del Convegno internazionale sul Limes (Decennalia Ratiariensis, Vidin 1985), *Ratiariensis* 3-4, Bologna 1987.
- Kuzmanov 1991 — G. Kuzmanov, Ein spätantikes Wirtschaftsgebäude, in: Iatrus-Kirvina, Spätantike Befestigung und frühmittelalterliche Siedlung an der unteren Donau, Band IV (Ergebnisse der Ausgrabungen 1975-1984), G. von Bülow, D. Schieferdecker [eds.], Berlin 1991, 60-126.
- Kuzmanov 1992 — G. Kuzmanov, Die lokale Gefäßkeramik, [in:] Die spätantiken Befestigungen von Sadovec (Bulgarien). Ergebnisse der deutsch — bulgarisch — österreichischen Ausgrabungen 1934-1937, S. Uenze [ed.], München 1992, 202-220.
- Lányi 1972 — V. Lányi, Die spätantiken Gräberfelder von Pannonien, *AAHung* 24, 1972, 53-236.
- Minchev 1989 — A. Minchev, Antichno stuklo ot Zapadnoto Chernomorje (I-VI v.) III: Kani, *INMVarna* 25 (40), 1989, 13-26.
- Minchev, Georgiev 1979 — A. Minchev, P. Georgiev, Raskopki v Marcianopol prez 1975 g., *INMVarna* 15 (30), 1979, 101-110.
- Mitova-Djonova 1966 — D. Mitova-Djonova, Peshti za keramika i keramidi ot Nove, *AS* 8, 1, 1966, 38-45.
- Munsell 1990 — A.H. Munsell, Soil Color Charts, Newburgh - New York 1990.
- Nacheva 1981 — V. Nacheva, Etude technologique du vernis rouge de centres ceramiques dans les villages Butovo et Hotnica et a Pavlikeni, departement de Veliko Tarnovo, *AS* 23, 3, 1981, 1-7.
- Naydenova 1985 — V. Naydenova, Rimskata vila v s. Krulev Dol, Pernishki Okrug [Raskopki i prouchvaniya, vol. XIV], Sofia 1985.
- Ner 1997 — M. Ner, Piece produkcyjne z Mezji Dolnej, [unpublished MA thesis, under tutelage of prof. T. Sarnowski, Institute of Archaeology, Warsaw University 1997].
- Nowicka 1961 — M. Nowicka, Przegląd dotychczasowych badań i źródeł archeologicznych, [in:] Sprawozdania tymczasowe z wykopalisk z Novae w 1960 r. K. Majewski [ed.], *Archeologia* 12, 1961, 75-162.

- Nuber 1972 — H.U. Nuber, Kame und Griffschale [Bericht der Römisch-Germanische Kommission 53], Berlin 1972.
- Opait 1996 — A. Opait, Aspecte ale vietii economice din provincia Scythia (secolele IV-VI p.Ch.), Bucuresti 1966.
- Orton, Tyers, Vince 1993 — C. Orton, P. Tyers, A. Vince, Pottery in Archaeology, Cambridge 1993.
- Parnicki-Pudółko 1981 — S. Parnicki-Pudółko, Polskie badania nad kulturą rzymską w Bułgarii, [in:] *Novae — Sektor Zachodni* 1976, 1978, Poznań 1981, 205-219.
- Parnicki-Pudółko, Kolkówna, Nowicka 1966 — S. Parnicki-Pudółko, S. Kolkówna, M. Nowicka et al., Archeologiczne raskopki v zapadnom sektore Nove v 1964 g, *IAI* 29, 1966, 83-98.
- Plesničar-Gec 1977 — L. Plesničar-Gec, Keramika emonskih nekropoli [Dissertationes et monographiae, vol. XX], Zveza arheologiških društev Jugoslaviji in Mestni Muzej, Beograd-Ljubljana 1977.
- Póczy 1956 — S.K. Póczy, Die Töpferwerkstätten von Aquincum, *AHung* 7, 1956, 73-300.
- Popilian 1976 — G. Popilian, Ceramica romană din Oltenia, Craiova 1976.
- Poulter 1983 — A.G. Poulter, Town and Country in Moesia Inferior, [in:] *Ancient Bulgaria. Papers Presented to the International Symposium on the Ancient History and Archaeology of Bulgaria*, University of Nottingham 1981, A.G. Poulter [ed.], Nottingham 1983, 74-118.
- Poulter 1999 — A.G. Poulter, "Gradište near Dichin: A New Late Roman Fortress on the Lower Danube, [in:] *Der Limes an der unteren Donau von Diokletian bis Heraklios. Vorträge der Internationalen Konferenz, Svištov (1.-5. September 1998)*, Sofia 1999, 207-227.
- Poulter, Falkner, Shepherd 1999 — A.G. Poulter, R. K. Falkner, J.D. Shepherd, *Nicopolis ad Istrum: A Roman to Early Byzantine City. The Pottery and Glass*, London 1999.
- Press 1962 — L. Press, Odcinek IV, [in:] *Novae 1961. Tymczasowe sprawozdanie z wykopalisk ekspedycji archeologicznej UW, K. Majewski [ed.]*, *Archeologia* 13, 1962, 86-94.
- Press 1969 — L. Press, Odcinek IV — część wschodnia, [in:] *Sprawozdanie tymczasowe z wykopalisk archeologicznych w Novae w 1967 r.*, K. Majewski [ed.], *Archeologia* 20, 1969, 122-138.
- Press, Sarnowski 1987 — L. Press, T. Sarnowski, *Novae, rzymska twierdza legionowa i miasto wczesnobizantyjskie nad Dolnym Dunajem*, *Novaeusia* 1, 1987, 289-322.
- Radnoti 1938 — A. Radnoti, *A Pannoniai Római Bronzedények [Dissertationes Pannonicae, vol. II, 6]*, Budapest 1938.
- Radulescu 1975 — A. Radulescu, Contributi la cunoasterea ceramicii de us comun din Dobrogea Pontica 8, 1975.
- Robinson 1959 — H.S. Robinson, *Pottery of the Roman Period. Chronology [Athenian Agora, vol. V]*, Princeton 1959.
- Roth-Rubi 1979 — K. Roth-Rubi, Untersuchungen an den Krügen von Avanches [RCREActa, suppl. vol. 3], Augst 1979.
- Rutkowski 1961 — B. Rutkowski, Ceramika, [in:] *Sprawozdania tymczasowe z wykopalisk z Novae w 1960 r.* K. Majewski [ed.], *Archeologia* 12, 1961, 133-151.
- Rutkowski 1963 — B. Rutkowski, Uwagi do historii ceramiki rzymskiej w Bułgarii, *Archeologia* 14, 1963, 239-240.
- Rutkowski 1964 — B. Rutkowski, Ceramika, [in:] *Novae — Sektor Zachodni, 1963. Tymczasowe sprawozdanie z wykopalisk Ekspedycji Archeologicznej UW, K. Majewski [ed.]*, *Archeologia* 15, 1964, 246-261.
- Rutkowski 1967 — B. Rutkowski, Ceramika, [in:] *Novae — Sektor Zachodni, 1964. Sprawozdanie tymczasowe z wykopalisk Ekspedycji Archeologicznej UW, Archeologia* 16, 1965, 169-195.
- Sági 1960 — K. Sági, Die spätrömische Bevölkerung der Umgebung von Keszthely, *AHung* 12, 1960, 187-256.
- Sarnowski 1975 — T. Sarnowski, Odcinek XI, [in:] *Sprawozdanie tymczasowe z wykopalisk Novae w 1973 r.* K. Majewski [ed.], *Archeologia* 26, 1975, 142-152.
- Sarnowski 1981 — T. Sarnowski, Odcinek XI, [in:] *Novae — Sektor Zachodni, 1979. Sprawozdanie*

- tymczasowe z wykopalisk Ekspedycji Archeologicznej Uniwersytetu Warszawskiego, K. Majewski [ed.], *Archeologia* 32, 1981 (1984), 106-127.
- Sarnowski 1983 — T. Sarnowski, Odcinek XI, [in:] *Novae — Sektor Zachodni, 1981. Sprawozdania tymczasowe z wykopalisk archeologicznych w Novae w 1981 r.*, K. Majewski [ed.], *Archeologia* 34, 1983, 150-153.
- Sarnowski 1998a — T. Sarnowski, *Novae — Western Sector, 1995-1997. Preliminary Report on the Excavations of the Warsaw University Archaeological Expedition*, *Archeologia* 49, 1998, 73-83.
- Sarnowski 1998b — T. Sarnowski, *Wykopaliska w południowo-wschodniej części principia w Novae. Kampanie 1995, 1996*, *Novaeusia* 11, 1998, 313-326.
- Sarnowski 1999 — T. Sarnowski, *Die Principia von Novae im späten 4. und frühen 5. Jh.*, in: *Der römische Limes an der unteren Donau von Diokletian bis Heraklios. Konferenz in Svištov 1.-5. September 1998*, Sofia-Berlin 1999, 57-63.
- Shepard 1976 — A.O. Shepard, *Ceramics for the Archaeologist*, Washington 1976.
- Soultov 1962 — B. Soultov, *Edin zanajaciski centur v Dolna Miziya*, *AS* 4, 1962, 4, 30-34.
- Soultov 1968 — B. Soultov, *Antichni grobni nahodki vuv Velikoturmovski okrug*, *IOMVeliko-Turnovo* 4, 1968, 41-56.
- Soultov 1969a — B. Soultov, *Novootkrit keramichen centur pri s. Hotnitsa ot rimskata i starobulgarskata epoha*, *AS* 11, 1969, 12-24.
- Soultov 1969b — B. Soultov, *Odin remeslennyi centur v Nizney Mezi*, [in:] *Actes du 1^{er} Congrès International des Etudes Balkaniques et Sud-Est Europeenes*, vol. II, Sofia 1969, 479-488.
- Soultov 1971 — B. Soultov, *Glineni kadilnici ot Boutovo i Hotnitsa*, *IAI* 33, 1971, 176-182.
- Soultov 1972 — B. Soultov, *Proizvodstvo na relesna keramika v Dolna Miziya*, *IOMVeliko-Turnovo* 3, 1972, 21-29.
- Soultov 1980 — B. Soultov, *Centres antiques poteries en Mesie inferieure*, [in:] *Actes du II^e Congrès International de Thracologie (Bucurest, 4-10.09.1976)*, vol. II, Bucurest 1980, 379-388.
- Soultov 1983a — B. Soultov, *Ceramic Production on the Territory of Nicopolis ad Istrum (II-IV Century)*, *GSUIFak* 76, 2, 1983.
- Soultov 1983b — B. Soultov, *The Typology and Chronology of Provincial Roman Pottery from Lower Moesia*, [in:] *Ancient Bulgaria. Papers presented to the International Symposium on the Ancient History and Archaeology of Bulgaria*, University of Nottingham 1981, G. Poulter [ed.], Nottingham 1983, 119-128.
- Tomas 2000a — A. Tomas, *Flasze z Novae*, *Materiały z I Międzynarodowej studenckiej Konferencji Archeologicznej "Europa Środkowo-wschodnia przez tysiąclecia"*, *Novaeusia* 12 (in print).
- Tomas 2000b — A. Tomas, *Flasze gliniane z budowli komendantury w Novae*, *Studia i materiały* 11 (in print).
- Toncheva 1962 — M. Toncheva, *Rimski nekropoli ot Tolbuhinsko i Varnensko*, *AS* 4, 4, 1962, 55-60.
- Trohani 1980 — G. Trohani, *Contributions a l'etude de l'importation de la ceramique romaine dans les etablissements geto-daces d'entre Danube et les Carpatas*, *Dritter Internationaler Thracologischer Kongress I*, Wien 1980 (Sofia 1984), 173-177.
- Tudor 1968 — D. Tudor, *Oltenia Romana*, Bucuresti 1968.
- Turcu 1979 — M. Turcu, *Geto-Dacii din Cimpia Munteniei*, Bucuresti 1979.
- Urleb 1983 — M. Urleb, *Antično grobišce v Cerlenici*, *AAAV* 34, 1983, 298-317.
- Vulov 1965 — V. Vulov, *Antichni nekropoli v Svishtovsko*, *AS* 7, 1, 1965, 27-34.
- Vulov 1966 — V. Vulov, *Pesht za stroitelna keramika ot Nove*, *AS* 8, 2, 1966, 46-52.
- Vegas 1975 — M. Vegas, *Novaeisium VI. Die Augustische Gebrauchskeramik von Neuss [Limesforschungen, vol. XIV]*, Berlin 1975.
- Vyzarova 1976 — Z.N. Vyzarova, *Slavyane i Prbulgari*, Sofia 1976.
- Webster 1981 — P. Webster, *The Feeding Cup: An Unusual Samian Form*, [in:] *Roman Pottery Research in Britain and North-West Europe*, vol. I, A. C. Anderson, A. S. Anderson [eds.], [British Archaeological Reports vol. 123], Oxford 1981, 249-255.

Zabehlicky-Scheffenecker 1990 — S. Zabehlicky-Scheffenecker, Krüge und Kannen, [in:] *Conspicui Formarum Terrae Sigillatae Italico Modo Confectae*, 1990, 186-187.

CATALOGUE

The place of preservation: if not mentioned — archaeological base at *Novae* storehouse.

1. Jug — Inv. no. 124/87w

Dyczek 1989, 138, fig. 5; Dyczek 1990a, *passim*; Dyczek 1993, 210, fig. 5.

Fabric — medium hard, rather porous, big amount of fine grained mica and several particles of lime; smooth surface; slip abraded; colour — 10 YR 8/4 very pale brown (core and surface), 2.5 YR 5/8, red (slip); ware A.

Valetudinarium, room 15a (sector IV, squares III 248/49, 268/69, depth 39.30 m); deposit of pottery under the floor (clay lamps, jugs nos. 104, 105, amphorae dated to the 2-3rd AD) over the coin of Hadrian (117-138 AD).

Dating: 150-200 AD (by context), mid-2nd-3rd (by analogy and technology of production); cf. Soultov 1983a, type 7.

2. Jug — Tabl. I

Fabric — soft, rather dense, fine grained ceramic temper, several particles of fine-grained lime and mica; smooth surface; slip abraded; colour — 10 YR 8/4 very pale brown (core), 2.5 YR 5/8, red (slip); ware A.

Possibly found together with jug no. 3 in graves near *Novae* by V. Vulov in 1964; cf. Vulov 1965, 29, fig. 7; Soultov 1983a, 73.

Dating: ca 150-3rd AD (by analogy and technology of production); cf. Soultov 1983a, type 7.

3. Jug — Tabl. I

Fabric — medium hard, dense, fine-grained ceramic temper and several particles of lime; smooth surface; colour — 5 YR 7/8, reddish yellow (core), 2.5 YR 5/4, reddish brown (slip); ware A.

Possibly found together with jug no. 2 in graves near *Novae* by V. Vulov in 1964; cf. Vulov 1965, 29, fig. 7; Soultov 1983a, 73.

Dating: ca 150-3rd AD (by analogy and technology of production); cf. Soultov 1983a, type 7.

4. Body

Fabric — medium hard, rather dense, little amount of fine-grained lime, mica and ceramic temper; smooth surface; slip abraded; colour - 2.5 YR 5/8, red (core); 5YR 7/6, reddish yellow (surface), 10 R 5/6, weak red (slip); ware A.

Findspot unknown.

Dating: ca 150-3rd AD (by analogy and technology of production); cf. Soultov 1983a, type 7?

5. Rim — Inv. no. 407/HB65

Fabric — fine, medium hard, rather dense, big amount of lime and mica inclusions, smooth surface, slip; colour — 2.5YR 5/8, red (core), from 2.5 YR 5/8, dark reddish brown to 2.5 YR 3/4, dark reddish brown (slip).

Eastern enclosure, tower no. 2 (ha XXI, depth 2-2.35 m), layer dated to 2-3rd AD.

Dating: ca 150-3rd AD (by context, by analogy and technology of production); cf. Soultov 1983a, type 7.

6. Rim — Inv. no. 351/HB68; HMC₁₃ I 1439

Fabric — hard, dense, big amount of fine-grained mica and lime; smooth surface, slip; colour — 5 YR 7/6, reddish yellow (core), from 10 R 5/8, red to 10 R 3/2, dusky red (slip); ware A.

Eastern legionary defences (square XXVI-191, depth 1.20 m).

Dating: ca 150-3rd AD (by analogy and technology of production); cf. Soultov 1983a, type 7.

Gradski Muzej, Svishtov.

7. Rim — Inv. no. 857ΦK/HB79

Fabric — medium hard, rather dense, little amount of fine-grained lime; smooth surface; slip; colour — 5YR 7/6, reddish yellow (core), 2.5 YR 5/8, red (slip); ware A.

Villa extra muros (square VIIIA-193, depth 0.80-1 m).

Dating: 2-3rd AD (by context); ca 150 — 3rd (by analogy and technology of production); cf. Soultov 1983a, type 7.

8. Rim

Fabric — medium hard, rather porous, several particles of fine-grained lime; smooth surface, slip abraded; colour — 5YR 6/6, reddish yellow (core), from 2.5 YR 6/8, light red to 2.5 YR 4/3, reddish brown (slip); ware A.

Findspot unknown.

Dating: ca 150-3rd AD (by analogy and technology of production); Soultov 1983a, type 7.

9. Rim

Fabric — hard, dense, big amount of fine-grained mica and lime; colour — 2.5 Y 5/3, light olive brown (core), 10 YR 6/4, light yellowish brown (surface); ware A.

Findspot unknown.

Dating: *ca* 150-3rd AD (by analogy and technology of production); Soultov 1983a, type 7.

10. Rim.

Fabric — hard, dense, big amount of fine-grained mica and lime; colour — 2.5 Y 5/3, light olive brown (core), 10 YR 6/4, light yellowish brown (surface); ware A.

Findspot unknown.

Dating: *ca* 150-3rd AD (by analogy and technology of production); *cf.* Soultov 1983a, type 7.

11. Rim — Inv. no. 139/67m.

Press 1969, 135, no. 51, fig. V,51.

Fabric — dense, no visible inclusions, thin slip; colour — pink (core), red (slip).

Pit dug out within the street channel along the western wall of the *valetudinarium* (sector IV, square II-277, depth 1.50-1.70 m); found with jug no. 52.

Dating: *ca* 150-3rd AD (by analogy); *cf.* Soultov 1983a, type 7.

12. Rim — Inv. no. 83/88MM — **Tabl. I**

Fabric — hard, dense, big amount of fine-grained sand, quartz and mica, big amount of ceramic temper inclusion, several particles of lime and coarse sand; rough surface; slip rubbed off; colour — 10 YR 7/4, very pale brown (core), 7.5 YR 3/2, dark brown (slip); ware A.

Officer's house/ tabernae (squares X-268/288, depth 0.5-0.75 m).

Dating: 130-150 AD (by analogy); *cf.* Poulter, Falkner, Shepherd 1999, 82, no. 811, fig. 9.40.

13. Rim — Inv. no. 680ΦK/HB79 — **Tabl. I**

Fabric — medium hard, dense, little amount of fine-grained lime, big amount of fine-grained mica; smooth surface, slip abraded; colour — 7.5YR 8/4, pink (core), 7.5YR 4/2, brown (slip); ware A.

Latus praetorii dextrum (square XVIII-4, depth 1.40 m).

Dating: 100-150 AD (by analogy), 2nd-3rd (by technology of production); *cf.* Poulter, Falkner, Shepherd 1999, 82, no. 811, fig. 9.40.

14. Rim — Inv. no. 425/H70; HMC I 1798 — **Tabl. I**

Fabric — medium hard, rather porous, little amount of fine-grained lime and mica; smooth surface, slip; colour — 5YR 5/6, red (core), 2.5 YR 6/8, light red (slip); ware A.

Scannum tribunorum (square XII-247, depth 1.60-1.80 m).

Dating: 2nd-3rd AD? (by technology of production).

15. Rim — **Tabl. I**

Fabric — medium hard, rather porous, big amount of fine-grained lime; smooth surface, slip abraded; colour — 5 YR 7/6, reddish yellow (core), 5 YR 6/8, reddish yellow (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd AD? (by technology of production).

16. Rim — Inv. no. 371/96w — **Tabl. I**

No fabric description.

Principia, room Cw (sector XI, square XVII-359, depth 47.87 m), construction layer.

Dating: 4th AD (by context).

17. Rim — Inv. no. 104/99 w — **Tabl. I**

Fabric — medium hard, rather porous, big amount of fine-grained mica, little amount of ceramic temper inclusions; smooth surface, slip abraded; colour — 5 YR 6/8, reddish yellow (core), 2.5 YR 5/8, light red (slip); ware A.

Valetudinarium, room 10 (sector IV, square X-391, depth 38.91 m); found with a coin of Julia Domna (AD 193-211) and jug no. 90.

Dating: late 2nd-early 3rd centuries AD (by context); 2nd-3rd or *ca* 150-450 (by analogy), 2nd-3rd (by technology of production); *cf.* Popilian 1976, 96-97, type 2, nos. 433-462, fig. XLI, XLII; Poulter, Falkner, Shepherd 1999, 222, fig. 9.40, nos. 826, 831; *Novae* no. 18.

18. Rim — **Tabl. I**

Fabric — medium hard, rather porous, medium amount of fine-grained mica; smooth surface, slip abraded; colour — 10 YR 7/4, very pale brown (core), 7.5 YR, brown (slip); ware A.

Findspot unknown.

Dating: 2-3rd AD or *ca* 150-450 (by analogy), 2nd-3rd (by technology of production); *cf.* Popilian 1976, 96-97, type 2, nos. 433-462, fig. XLI, XLII; Poulter, Falkner, Shepherd 1999, 222, fig. 9.40, nos. 826, 831; *Novae* no. 17.

19. Rim — Inv. no. 1319ΦK/89 — **Tabl. I**

Fabric — hard, rather porous, little amount of fine-grained lime; smooth surface, opalescent glazed covering; colour — 5YR 6/8, reddish yellow (core), 2.5 YR 6/6, light red to 2.5 YR 4/2, weak red (glazed covering).

Officer's house/ tabernae (square X-230/250, depth 1.40-1.90 m).

Dating: *ca* 150-450 AD (by analogy); *cf.* Poulter, Falkner, Shepherd 1999, 222, fig. 9.40, no. 830.

20. Rim.

Sarnowski 1983, 153, no. 6, fig. 1.13.

Fabric — sand inclusion; colour — grey.

Street along the east side of the principia (sector XI, square XVIII-362, depth 48.30 m), filling of sewer no. 2; found with glass vessels dated to the first half of 1st century AD and clay lamps dated to 2nd AD.

Dating: late 1st-early 2nd century AD (by context).

21. Rim — Tabl. II

Fabric — hard, rather dense, little amount of fine-grained lime and mica; smooth surface; colour — 5 YR 7/6-6/6, reddish yellow (core and surface).

Officer's house/ tabernac (square X-167, depth 43.64-43.40 m), destruction layer from *ca* 250 AD.

Dating: *ca* 250 AD (by context), 2nd-3rd (by analogy); *cf.* Póczy 1956, 99-100, fig. V,13,14,16 et 107, VII,2-4; *Novae* nos. 22, 23.

22. Rim — Tabl. II

Fabric — soft, fine-grained sand, mica and lime (shells crumbs); smooth surface, slip; colour — pale brown (core and slip).

Officer's house/ tabernac, squares X-167/168, depth 43.64-43.40), destruction layer from *ca* 250 AD.

Dating: *ca* 250 AD (by context), 2nd-3rd (by analogy); *cf.* Póczy 1956, 99-100, fig. V,13,14,16 et 107, VII,2-4; *Novae* nos. 21, 23.

23. Rim — Tabl. II

Fabric — soft, rather dense, little amount of fine-grained lime and mica; smooth surface; colour — 2.5 YR 6/8, light red (core and surface).

Findspot unknown.

Dating: *ca* 150 AD (by context), 2nd-3rd (by analogy); *cf.* Póczy 1956, 99-100, fig. V,13,14,16 et 107, VII,2-4; *Novae* nos. 21, 22.

24. Rim — Tabl. II

Fabric — hard, rather porous, little amount of fine-grained lime and mica; slip abraded, ornament of vertical grooved lines on the body; colour — 7.5 YR 8/6, reddish yellow (core), from 5 YR 5/4, reddish brown to 5 YR 3/2, dark reddish brown (slip).

Officer's house/ tabernac (square X-?, depth 43.14-42.34 m), destruction layer from *ca* 250 AD.

Dating: *ca* 250 AD (by context); 2nd-3rd AD (by analogy); *cf.* Popilian 1976, 96-97, type 2, no. 436, fig. XLII.

25. Jug — Inv. no. 310/77w — Tabl. II

Fabric — hard, rather porous, big amount of fine-grained quartz sand, mica, lime and ceramic temper inclusions; uneven surface, rather rough; slip abraded; colour — 5 YR 7/6, reddish yellow (core), 5 YR 5/8, yellowish red (slip).

Valetudinarium (sector IV, square II-299), western corridor by the room 3b, occupation level.

Dating: 2nd-early 3rd AD (by context).

26. Rim — Inv. no. 102/5/98 m — Tabl. II

Fabric — rather dense, mica, quartz and lime inclusions; slip; colour — light brown (core), light brown (slip).

House of mudbrick (sector IV, square III-286/287, depth 41.52-40.38 m), occupation level.

Dating: *ca* 250-350 AD (by context).

27. Jug — Inv. no. 264/79w — Tabl. II

Fabric — medium hard, rather dense, little amount of fine-grained lime and mica inclusions, smooth surface, buff, slip; ornament of horizontal grooves and shallow depressions on the body; colour — 2.5 YR 5/8, red (core), from 2.5 YR 5/3, reddish brown to 7.5 YR 5/2, brown (slip); ware A.

Valetudinarium (sector IV, square II-218, the latrine), destruction layer; found with clay lamps dated to 1st-3rd AD, pottery dated to 2nd-3rd AD, a coin of Caracalla (211-217 AD).

Dating: *ca* 250 AD (by context), 2nd-3rd (by technology of production).

28. Rim — Inv. no. 20/6/98m — Tabl. II

Fabric — fine-grained sand and mica; colour — brown.

Late buildings over the house of mudbrick (sector IV, squares III-284/285), layer over coins of Justinian and Sophia (565-578 AD); found with fibula Almgren group VII.

Dating: late 6th century AD (by context).

29. Rim — Inv. no. 240MM/HB89 — Tabl. II

Fabric — medium hard, rather porous, little amount of fine-grained mica and several lime particles; smooth surface, slip; colour — 2.5 YR 7/6, light red (core), 2.5 YR 4/6, red (slip); ware A.

Officer's house/ tabernac? (squares X-171/191, depth 2.30-2.50 m).

Dating: *ca* 250-350 AD (by analogy), 2nd-3rd (by technology of production); *cf.* Poulter, Falkner, Shepherd 1999, 85, no. 969, fig. 9.47.

30. Jug — Inv. no. 59/79 w
Dyczek 1981, 122 - 124, fig. 25 et tab. XII,7; Dyczek 1987, 257, 270, no. 98
fig. XVI, 3.

Fabric — hard, dense, big amount of sand inclusion (stones), lime, several big mica leaves, surface rough, slip, ornament of horizontal grooves on the body
colour — core two-coloured, inner GLEY 15/N, grey, outer 5 YR 5/2, reddish grey, slip 10 YR 7/3, very pale brown.

Building with porticoes, room H (sector IV, squares II-359/379, depth 41.05 m), destruction layer; found with two coins from 4th/5th AD.

Dating: 4th/5th AD? (by context).

31. Jug — Inv. no. 75/87MM/86.
Gencheva 2002, 28, no. 90, tab. XXVI,1.

Fabric — hard, dense, fine-grained sand, lime and ceramic temper; surface rough, fired; colour — from 10YR 6/4, light yellowish brown to 5YR 5/8, yellowish red (core), 5YR 4/3, reddish brown (surface).

Scammum tribunorum (square X-311), pit no. I; found with jugs nos. 39, 40, 67, 113, 114.

Dating: ca 50 — late 70's of 1st century AD.

32. Jug — Inv. no. 119/61w — **Tabl. III**
Kolkówna, Rutkowski 1962, 105, fig. 96 et XI,19.

Fabric — medium hard, porous, fine-grained quartz sand, mica, lime and ceramic temper, surface uneven, burnished; hand-made and wheel-thrown, ornament of two lines of grooved triangles and three horizontal grooves on the body; colour — core two coloured; in the middle 2.5 YR 4/1, dark reddish grey, inner and outer from 2.5 YR 6/4, light reddish brown to 2.5 YR 5/1, reddish grey.

Building to the south-west from the small tower at the western legionary defences, room B (sector II, square XV-14).

Dating: ? cf. Thracian and Geto-Dacian vessels from 2nd-1st BC; Trohani 1980, *passim*; Turcu 1979, 121, fig. 16,4-6.

33. Rim.

Sarnowski 1983, 153, no. 4, tab. I,11.

No fabric description; colour — grey, hand-made.

Street along the east side of the principia (sector XI, square XVIII-362), filling of sewer no. 3; found with 7 bronze coins from Claudius to Neron (54-68), jug no. 35.

Dating: ca 50 — late 70's of 1st century AD (by context).

34. Jug — Inv. no. 692/HB73; Mus. inv. no. 521 — **Tabl. III**

Fabric — hard, porous, big amount of fine-grained sand and mica; surface

rough, smooth with several sand particles (?); colour — 7.5 YR 6/4, light brown (core and surface).

Basilica? (square X-173, depth 1.80 m).

Dating: last quarter of 6th century AD? (by analogy); cf. Kuzmanov 1985, type X?

Gradski Musey, Svishtov.

35. Rim.

Samowski 1983, 153, no. 7, tab. I, 14.

Fabric — little amount of fine-grained inclusion; buff slip; colour — cream core, orange-brown slip.

Street along the east side of the principia (sector XI, square XVIII-362), filling of sewer no 3; found with 7 bronze coins from Claudius to Neron (54-68 AD), jug no. 33.

Dating: ca 50 — late 70's of 1st century AD (by context).

36. Jug - Inv. no. 135/96m-32

Domzalski 1998a, 148-149, no. 44, fig. V.

Fabric — medium hard, big amount of fine-grained mica; slip abraded; colour — 2,5 YR 6/6, light red (core and slip).

Principia, rooms Cw and Dw (sector XI, squares XVII-379/380/359/360), pit no. 4; found with coins of Mark Anthony (32/31 BC) and Drusus (23 AD), clay lamps dated to the early 1st cent. AD, terra sigillata vessels dated to 1st AD, jugs nos. 36-38, 116-118, 148.

Dating: ca 50 — late 70's of 1st century AD (by context).

37. Rim — Inv. no. 135/96m-12

Domzalski 1998a, 148-149, no. 45, fig. VI.

Fabric — soft, big amount of fine-grained mica; colour — 7,5 YR 6/6 - 7/6, reddish yellow (core and surface).

Principia, rooms Cw and Dw (sector XI, squares XVII-379/380/359/360), pit no. 4; found with coins of Mark Anthony (32/ 31 BC) and Drusus (23 AD), clay lamps dated to the early 1st century AD, terra sigillata vessels dated to 1st AD, jugs nos. 36-38, 116-118, 148.

Dating: ca AD 50 — late 70's of 1st AD (by context).

38. Rim — Inv. no. 135/96m-31

Domzalski 1998a, 148-149, no. 47, fig. VI.

Fabric — hard, big amount of fine-grained mica; colour — 7,5 YR 5/4-6/3 (core and surface).

Principia, rooms Cw and Dw (sector XI, squares XVII-379/380/359/360), pit no. 4; found with coins of Mark Anthony (32/ 31 BC) and Drusus (AD 23), clay

lamps dated to the early 1st century AD, *terra sigillata* vessels dated to 1st AD, jugs nos. 36-37, 116-118, 148.

Dating: ca 50 — late 70's of 1st century AD (by context).

39. Rim.

Gencheva 2002, 28-29, no. 92, tab. XXVI, 2.

Fabric — fine-grained sand and lime inclusions, glaze; colour — light brown (core), dark brown (glaze).

Tabernae (square X-311), pit no I; found with jugs nos. 31, 40, 67, 113, 114.

Dating: ca 50 — late 70's of 1st century AD (by context), 1st AD (by analogy); cf. *Novae* jugs nos. 40, 113, 114, 116.

40. Body — Inv. no. 73/87MM.

Gencheva 2002, 28, 85, no. 85, tab. XXV, 1.

Fabric — hard, dense, fine-grained sand, mica, lime and little amount of ceramic temper inclusion; surface smooth, uneven; colour — 5 YR 6/6, reddish yellow (core and surface).

Officer's house/ *tabernae* (squares X-311), pit no. I; found with jugs nos. 31, 39, 67, 113, 114.

Dating: ca 50 — late 70's of 1st century AD (by context), AD 1st (by analogy); cf. *Novae* nos. 39, 113, 114, 116.

41. Rim — Tabl. III

Fabric — medium hard, rather dense, well-levigated, several particles of fine-grained lime; surface smooth, slip abraded; colour — 10 YR 7/4, very pale brown (core and surface), 2.5 YR 5/6, red (slip); ware A.

Findspot unknown.

Dating: ca 150-early 3rd AD (by analogy); cf. Soultov 1983a, type 2?

42. Rim — Inv. no. 101/7/98m — Tabl. III

Fabric — porous, big amount of mica, lime inclusion; colour — orange-grey; ware B.

House of mudbrick (sector IV, squares III-284/285, depth 39.24-39.72 m) occupation level; found with amphorae dated to 4th-6th AD.

Dating: ca 300-350 AD (by context), 4th-mid-5th (by technology of production).

43. Rim — Inv. no. 2854MM/HB85 — Tabl. III

Fabric — hard, rather porous, big amount of fine-grained sand and mica, little amount of lime; surface rough, uneven, burnished, slip; colour — core two-coloured, inner 10YR 6/3, pale brown, outer 5 YR 6/6, reddish yellow, slip 7.5 R 5/6, red; ware A.

Findspot unknown.

Dating: ca 150-early 3rd AD? (by analogy and technology of production); cf. Soultov type 2?

44. Rim — Inv. no. 191/97w.

Fabric — hard, rather porous, big amount of sand and lime inclusions and mica inclusion; surface smooth, uneven; colour — red (core and surface).

Valetudinarium, the courtyard (sector IV, square III-302, depth 39.00 m), occupation level.

Dating: 2nd-early 3rd AD (by context).

45. Rim — Inv. no. 119/98w — Tabl. III

Fabric — fine-grained mica, quartz and lime inclusions, rather porous; colour — red.

House of mudbrick (sector IV, square III-286, depth 39.79 m), occupation level.

Dating: ca 250-mid-4th AD (by context).

46. Jug.

Gencheva 2002, 38, no. 211, tab. XXXI, 3.

Fabric — hard, with fine-grained sand inclusion; colour — light brown.

Officer's house/ *tabernae* (squares X-285/305), depth 43.70-43.90 m, a layer dated to mid-1st AD.

Dating: ca 50 — late 70's of 1st (by context).

47. Rim — Inv. no. 4/93m/29 — Tabl. III

Fabric — with big amount of fine-grained sand and mica; surface burnished, ornament of horizontal zigzags; colour — grey (core and surface); ware B.

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs nos. 53, 57, 59, 66, 96, 1154, 155.

Dating: late 4th-early 5th century AD (by context), 4th-mid-5th (by analogy and technology of production); cf. Kuzmanov 1985, type I, Opař 1996, type II.

48. Jug — Inv. no. 274/79w.

Sarnowski 1981, 123-124, fig. 57, 3.

Fabric with medium-grained inclusion, glaze; colour — greyish-brown (core), dark green (glaze); ware C.

Principia, room Fz (sector XI, squares XVII-393/394), destruction layer dated to 40's of 5th century AD; found with amphora dated to 4th AD.

Dating: before 440 AD (by context), 4th-mid-5th (by analogy); cf. Kuzmanov 1985, type I; Opař 1996, type II.

49. Rim — Inv. no. 78/96m — **Tabl. III**

Fabric — big amount of fine-grained sand and brown particles (iron compound?); glaze; colour — light brown (core), green (surface); ware C.

House of mudbrick and street JL (sector IV, square III-327, depth 39.97-40.00 m), construction level; found with a coin of Probe (276-282 AD).

Dating: ca 250-300 AD (by context), 4th-mid-5th (by analogy and technology of production); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

50. Rim — Inv. no. 394/96w

Fabric — medium hard, dense, big amount of fine-grained mica, surface smooth, slip; colour — 2.5 YR 6/8, light red (core), 10 R 5/6, red (slip); ware B.

Principia, not stratified.

Dating: 4th-mid-5th AD? (by analogy and technology of production); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

51. Rim — Inv. no. 91/83w — **Tabl. IV**

Fabric — hard, rather porous, big amount of fine-grained sand, mica and lime inclusions, several particles of pyroxene; surface rough, uneven; colour — 2.5 YR 6/8, light red (core), 10 R 5/6, red (surface).

Principia, basilica before room Dz (sector XI, square XVII-331, depth 1 m); late occupation layer, found with two coins of Justinian (571/572 and 572/573 AD) and fibula Almgren group VI.

Dating: late 6th century AD (by context), 4th-mid-5th? (by analogy); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

52. Rim — Inv. no. 36/67 w.

No fabric description.

Pit in the channel behind the wall of the valetudinarium (sector IV, square II-317, depth 2.20 m).

Dating: 4th-mid-5th AD? (by analogy); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

53. Rim — Inv. no. 4/93m/24 — **Tabl. IV**

Fabric — big amount of fine-grained sand and mica; colour — light brown (core and surface); ware B.

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs nos. 47, 57, 59, 66, 96, 154, 155.

Dating: late 4th-early 5th century AD (by context), 4th-mid-5th (by analogy and technology of production); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

54. Rim — Inv. no. 68/91w — **Tabl. IV**

Fabric — hard, rather porous, big amount of coarse sand inclusion, mica and

lime inclusions; surface rough; colour — 5 YR 5/6, yellowish red (core), 7.5 YR 5/3, brown (surface).

Principia, room Cz (sector XI, square XVII-372, depth 1.25 m below the floor), walled up in the eastern wall of the room.

Dating: 4th-mid-5th AD (by analogy); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

55. Rim — Inv. no. 205/99w — **Tabl. IV**

Fabric — hard, rather porous, big amount of fine-grained mica, lime inclusion; surface burnished, in the upper part of the body ornament of vertical, polished lines; colour — 7.5 YR 5/3, brown (core), 7.5 YR 5/4, brown (surface).

Principia, unstratified (sector XI, square XVIII-301, depth 49.20 m).

Dating: 4th-mid-5th AD (by analogy); Kuzmanov 1985, type I; Opaït 1996, type II.

56. Rim — Inv. no. 77/71w.

No fabric description.

Eastern building (sector IV, square X-72, depth 1.10 m); found with coins of Justin II (576/7) and Valentinianus (364-367), clay lamps dated to 4th-5th AD.

Dating: late 4th-6th century AD (by context), 4th-5th? (by analogy); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

57. Neck — Inv. no. 4/93m/31.

Fabric — hard, rather porous, big amount of fine-grained mica and sand; surface smooth, ornament of horizontal grooves and vertical polished lines; colour — grey (core and surface); ware B.

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs nos. 47, 53, 59, 66, 96, 1154, 155.

Dating: late 4th-early 5th century AD (by context), 4th-mid-5th? (by analogy and technology of production); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

58. Neck — Inv. no. 57/94w — **Tabl. IV**

Fabric — big amount of fine-grained mica and sand; colour — light brown (core); brown (surface); ware B.

Building with porticoes, room I (sector IV, square II-358, depth 40.50 m); found with a clay lamp dated to 275 - 5th AD, amphorae dated to 2nd-3rd AD.

Dating: late 3rd-early 5th century AD (by context), 4th-mid-5th? (by analogy and technology of production); cf. Kuzmanov 1985, type I; Opaït 1996, type II.

59. Neck — Inv. no. 3/5/98m — **Tabl. IV**

Fabric with big amount of fine-grained mica, quartz and lime inclusion; colour — grey (core and surface); ware B.

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs no. 47, 53, 57, 66, 96, 154, 155.

Dating: late 4th-early 5th century AD (by context), 4th-mid-5th? (by analogy and technology of production); cf. Kuzmanov 1985, type I; Opař 1996, type II.

60. Neck — Inv. no. 37/1/99m — **Tabl. IV**

Fabric — hard, rather dense, big amount of coarse mica, quartz, lime and ceramic temper inclusions, surface smooth, glaze; colour — light grey (core) green (glaze); ware C.

House of mudbrick (sector IV, square III-308), fundament of N-S wall of the house of mudbrick; found with two coins from 4th AD, amphora dated to 4th-6th AD.

Dating: ca 250-350 AD (by context), 4th-mid-5th? (by analogy); cf. Kuzmanov 1985, type I; Opař 1996, type II.

61. Jug — **Tabl. V**

Fabric — medium hard, rather porous, big amount of fine-grained sand (small-size stone particles), mica and lime inclusions, little amount of ceramic temper; surface rough, slightly fired, with white eruptions; ornament of horizontal grooved lines on the body; colour — 2.5 Y 4/2, dark greyish brown (core); ware D.

Findspot unknown.

Dating: 6th AD (by analogy and technology of production); cf. Kuzmanov 1985, type I/1; Opař 1996, type IV.

62. Rim — **Tabl. V**

Fabric — hard, rather porous, big amount of coarse sand inclusion (stones), surface rough with white eruptions; colour — core two-coloured, outside 7.5 YR 5/4, brown, inside grey 2.5 Y 5/1, grey, surface outside burned 2.5 Y 5/2, greyish brown to 2.5 Y 4/1, dark grey; ware D.

Findspot unknown.

Dating: 4th-6th AD or late 6th-early 7th (by analogy), late 5th-late 6th (by technology of production); cf. Kuzmanov 1992, 212, type 3, fig. 69, 5 et 6; Kuzmanov 1987, 113-114, fig. XXV, 15; Opař 1996, 118, fig. 48,13.

63. Rim — Inv. no. 190/75w.

Kotecki 1977, no. 1, fig. III, 3.

Fabric with sand inclusions; colour — dark grey; ware D?

Latus praetorii sinistrum (sector XI, square XVI-59), a kiln; found with jugs nos. 149, 150.

Dating: late 6th-early 7th century AD (by context), 4th-6th or late 6th-early 7th (by analogy), late 5th-late 6th (by technology of production); cf. Kuzmanov 1992,

212, type 3, fig. 69, 5 et 6; Kuzmanov 1987, 113-114, fig. XXV, 15; Opař 1996, 118, fig. 48,13.

64. Rim — Inv. no. 61/5/5/99m — **Tabl. V**

Fabric — medium amount of fine-grained sand and little amount of mica inclusion, surface rough; colour — grey (core), dark grey (surface); ware D.

Possibly a part of the house of mudbrick (sector IV, squares III-368/369, depth 40.75-41.79 m), destruction layer beneath the coin of Arcadius (395-408 AD); found with amphorae dated to 4th-6th AD.

Dating: ca 250-350 AD (by context), 4th-6th (by analogy), late 5th-late 6th (by technology of production); cf. Kuzmanov 1985, type I or I/1.

65. Jug — Inv. no. 61/97w — **Tabl. V**

No fabric description; slip; colour — core two-coloured 2.5 YR 5/1, grey and 10 YR 5/6, yellowish brown, slip 2.5 YR 6/3, light yellowish brown.

Unidentified late occupation room (sector XI, square XVIII-340, depth 48.76 m), the earliest floor.

Dating: 6th-early 7th AD (by context), 4th-6th (by analogy); cf. Opař 1996, type III, fig. 48; Kuzmanov 1985, type I.1, K 33.

66. Rim — Inv. no. 4/93m/25 — **Tabl. V**

Fabric — big amount of fine-grained sand and mica; colour — red (core and surface).

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs nos. 47, 53, 57, 59, 96, 154, 155.

Dating: late 4th-early 5th century AD (by context), 4th-6th (by analogy); cf. Opař 1996, type III, fig. 48; Kuzmanov 1985, type I.1, K 33.

67. Jug

Gencheva 2002, 28-29, no. 86, tab. XXV,2.

Fabric — hard, fine-grained sand and mica, neck with a ruff; colour — reddish-brown (core and surface).

Officer's house/ tabernae (squares X-311), pit no. I; found with jugs nos. 31, 39, 40, 113, 114.

Dating: 1st AD (by context), 1st-2nd AD (by analogy); cf. Robinson 1959, 34, no. G 120, fig. 7.

68. Jug — Inv. no. 79/87w — **Tabl. VI**

Fabric — medium hard, rather dense, little amount of fine-grained mica and sand; smooth surface, concave walls (defect), slip abraded; colour — 10 YR 7/4, very pale brown (core), 2.5 Y 7/4, pale yellow (surface), 10 YR 5/2, greyish brown (slip); ware A.

Valetudinarium, room 30 (sector IV, square III-270, depth 1.9 m), destruction layer; found with jug no. 70.

Dating: early 3rd century AD (by context), late 2nd-mid-3rd (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

69. Body — Inv. no. 961/HB85

Fabric — medium hard, rather dense, little amount of fine-grained sand and mica, several fine-grained lime and ceramic temper particles; smooth surface; colour — 7.5 YR 7/4, pink (core and surface), ware A.

Villa extra muros (square VIII A-51).

Dating: 2-3rd AD (by context); late 2nd-mid-3rd century AD (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

Gradski Musey, Svishtov.

70. Jug — Inv. no. 78/87w — Tabl. VI

Fabric — medium hard, rather porous, little amount of mica inclusion and fine-grained lime; surface smooth, uneven; the hole below the rim (defect); colour — 7.5 YR 7/4, pink (core), 2.5 YR 6/, light red (slip); ware A.

Valetudinarium, room 14 (sector IV, square III-270, depth 2 m), destruction layer; found with jug no. 68.

Dating: early 3rd century AD (by context), late 2nd-mid-3rd (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

71. Rim — Inv. no. 1606/HB71

Fabric — soft, rather porous, fine-grained lime and mica; surface smooth; slip; colour — 5YR 7/6, reddish yellow (core), 2.5 YR 5/8, red (slip); ware A.

Latus praetorii dextrum (square XVII-143).

Dating: late 2nd-mid-3rd century AD (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

72. Rim — Inv. no. 79/88MM/HB88

Fabric — medium hard, rather dense, fine-grained ceramic temper and several lime particles; surface smooth, slip; colour — 10 YR 7/4, very pale brown (core), 2.5 YR 5/6, red to 7.5 YR 4/2, brown (slip); ware A.

Officer's house/ *tabernae* (square X-268/288, depth 0.75-1 m).

Dating: late 2nd-mid-3rd century AD (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

73. Rim — Inv. no. 3085MM.

Gencheva 2002, 28-29, no. 246, tab. XXVI.4.

Fabric — soft, dense, big amount of ceramic temper inclusion, several fine-grained lime and mica particles; surface smooth, slip abraded; colour — 5 YR 7/6,

reddish yellow (core), slip outside 10 R 5/6, red, inside 10 R 4/4, weak red; ware A.

Officer's house / *tabernae* (squares X-308/309, depth 43.40-43.70 m); a layer dated to mid-1st AD; found with jugs nos. 99, 146.

Dating: ca 50 — late 70's of 1st century AD (by context).

74. Jug — Inv. no. 822/HB78; Mus. inv. no. 360

Fabric — medium hard, porous, big amount of fine-grained sand and mica, little amount of fine-grained lime; surface uneven, smooth, slip eroded; colour — 10 YR 7/2, light grey (core), 10 YR 4/2, dark greyish brown (slip); ware A.

Villa extra muros (square VIII A, depth 0.60-0.80 m).

Dating: AD 2-3rd (by context); late 2nd-mid-3rd century AD (by analogy and technology of production); cf. *Novae* nos. 68-76.

Gradski Musey, Svishtov.

75. Neck — Inv. no. 552/HB65.

Fabric — medium hard, porous, big amount of fine-grained sand and mica, little amount of fine-grained lime; surface uneven, smooth, slip abraded; colour — 10 YR 7/2, light grey (core), 10 YR 4/2, dark greyish brown (slip); ware A.

Eastern enclosure, tower no. 5 (ha XXXV).

Dating: ca 250 AD (by context), late 2nd-mid-3rd (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

76. Rim — Inv. no. 31/95m.

Fabric — medium hard, dense, no visible inclusions; surface smooth; colour — light brown; ware A?

Possibly a part of the house of mudbrick (sector IV, squares X-53/54/73/74, depth 39.67-40.00 m), construction level; found with jugs nos. 84, 112.

Dating: ca 250-350 AD (by context), late 2nd-mid-3rd (by analogy and technology of production); cf. *Novae* nos. 68-72, 74-76.

77. Rim

Fabric — hard, porous, big amount of fine-grained sand, pyroxene and mica inclusions; surface smooth; colour — core two-coloured, inside 2.5 YR 7/6, light red, outside 5 YR 7/4, pink, surface 10 YR 8/4, very pale brown; ware E.

Officer's house/ *tabernae* (squares X-231/232/252), sewer filling.

Dating: ca 200-250 AD (by analogy), 2nd-3rd (by technology of production); Tudor 1968, 101, no. 530, fig. XLIX.

78. Rim

Fabric — hard, porous, big amount of fine-grained sand, pyroxene, mica and lime, coarse ceramic temper inclusion; surface rough, slip; colour — 7.5 YR 8/4, pink (core), 10 YR 8/4, very pale brown (slip); ware E.

Basilica no 2 (ha X-7, depth 43,14-42,34 m), destruction layer from ca 250 AD; found with jug no. 46.

Dating: ca 250 AD (by context), ca 200-250 (by analogy), 2nd-3rd (by technology of production); cf. *Novae* nos. 78-83; Tudor 1968, 101, no. 530, fig. XLIX.

79. Rim.

Fabric — big amount of coarse sand and mica (golden and silver), several lime particles; colour — 7.5 YR 8/4, pink (core), 10 YR 8/4, very pale brown (slip); ware E.

Findspot unknown.

Dating: ca 200-250 AD (by analogy), 2nd-3rd (by technology of production); cf. *Novae* nos. 78-83; Tudor 1968, 101, no. 530, fig. XLIX.

80. Rim.

Fabric — big amount of coarse sand and mica (golden and silver), several lime particles; colour — 7.5 YR 8/4, pink (core), 10 YR 8/4, very pale brown (slip); ware E.

Findspot unknown.

Dating: ca 200-250 AD (by analogy), 2nd-3rd (by technology of production); cf. *Novae* nos. 78-83; Tudor 1968, 101, no. 530, fig. XLIX.

81. Rim.

Fabric — big amount of coarse sand and mica (golden and silver), several lime particles; colour — 7.5 YR 8/4, pink (core), 10 YR 8/4, very pale brown (slip); ware E.

Findspot unknown.

Dating: ca 200-250 AD (by analogy), 2nd-3rd (by technology of production); cf. *Novae* nos. 78-83; Tudor 1968, 101, no. 530, fig. XLIX.

82. Rim.

Fabric — big amount of coarse sand and mica (golden and silver), several lime particles; colour — 7.5 YR 8/4, pink (core), 10 YR 8/4, very pale brown (slip); ware E.

Findspot unknown.

Dating: ca 200-250 AD (by analogy), 2nd-3rd (by technology of production); cf. *Novae* nos. 78-83; Tudor 1968, 101, no. 530, fig. XLIX.

83. Rim — Tabl. VII

Fabric — hard, porous, coarse sand inclusion and fine-grained mica and ceramic temper inclusions; surface rough, ornament of two grooved lines on the

neck; colour — from 5 YR 7/4, pink to 10 YR 8/4, very pale brown (core and surface); ware E.

Findspot unknown.

Dating: ca 200-250 AD (by analogy), 2nd-3rd (by technology of production); cf. Tudor 1968, 101, no. 530, fig. XLIX; *Novae* nos. 78-83.

84. Rim — Inv. no. 97/96w — Tabl. VII

Fabric — hard, rather dense, big amount of coarse sand and lime inclusions, big amount of fine-grained mica; surface rough, fired spout; colour — 10 YR 6/2, light brownish grey (core and surface).

Possibly part of the house of mudbrick (sector IV, square, X-51), construction level; found with jugs nos. 76, 112.

Dating: ca 250 AD (by context), 2nd-3rd (by analogy); cf. Soutov 1969a; *Novae* nos. 84-95.

85. Rim sherd — Inv. no. 5MM/HB87.

Fabric — hard, rather porous, coarse sand inclusion (stones), pyroxene and ceramic temper inclusions; fine-grained mica, surface rough; colour — core two-coloured, in the middle 10 YR 7/1, light grey, outer and inner 10 Y 8/4, very pale brown.

Officer's house/ *tabernae* (square X 270/290, depth 1.10-1.35 m), found with jugs nos. 86, 87.

Dating: 2nd-3rd AD (by analogy); cf. Soutov 1969a; *Novae* nos. 84-95.

86. Neck sherd — Inv. no. 5MM/HB87.

Fabric — hard, rather porous, coarse sand inclusion (stones), fine-grained mica, pyroxene and ceramic temper inclusions; surface rough; colour — core two-coloured, in the middle 10 YR 7/1, light grey, outer and inner 10 Y 8/4, very pale brown.

Officer's house/ *tabernae* (squares X-270/290, depth 1.10-1.35 m), found with nos. 85, 87.

Dating: 2nd-3rd AD (by analogy); cf. Soutov 1969a; *Novae* nos. 84-95.

87. Neck sherd — Inv. no. 5MM/HB87.

Fabric — hard, rather porous, coarse sand inclusion (stones), fine-grained mica, pyroxene and ceramic temper inclusions; surface rough; colour — core two-coloured, in the middle 10 YR 7/1, light grey, surface outside and inside 10 Y 8/4, very pale brown.

Officer's house/ *tabernae* (squares X-270/290, depth 1.10-1.35 m), found with nos. 85, 86.

Dating: 2nd-3rd AD (by analogy); cf. Soutov 1969a; *Novae* nos. 84-95.

88. Rim sherd — Inv. no. 81/9/98m.

Fabric — hard, porous, big amount of quartz sand and ceramic temper inclusions, several lime particles; surface rough; colour — core two-coloured, in the middle 10 YR 7/1, light grey, outer and inner 10 Y 8/4, very pale brown.

Valetudinarium, the courtyard (sector IV, squares III-307/308), occupation level; found with amphora dated to 2nd-3rd AD.

Dating: 2nd-early 3rd AD (by context and by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

89. Rim — Inv. no. 272MM/HB89.

Fabric — porous, big amount of fine-grained sand and pyroxene, several mica leaves; colour — 10 Y 8/4, very pale brown (core and surface).

Villa extra muros (square VIIIA-71, depth 0.20 m); found with jug no. 147.

Dating: 2-3rd (AD by context); 2nd-early 3rd AD (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

90. Rim — Inv. no. 111/99 w.

Fabric — hard, rather porous, medium amount of sand (stones) and lime inclusion, little amount of fine-grained mica; surface rough; colour — 2.5 Y 5/2, greyish brown (core), 10 YR 7/1, light grey (surface).

Valetudinarium, room 10 (sector IV, square X-10); found with a coin of Julia Domna (193-211 AD) and jug no. 17.

Dating: late 2nd-early 3rd century AD (by context), 2nd-3rd (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

91. Rim — Inv. no. 84/81w.

No fabric description.

Valetudinarium, room 10, robber trench of the eastern wall (sector IV, square X-11), destruction layer; found with amphora dated to 2nd-3rd AD.

Dating: late 2nd-early 3rd century AD (by context), 2nd-3rd (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

92. Rim sherd — Inv. no. 16/61m.

Koškówna, Rutkowski 1962, 105, fig. 1,4 = XI.16.

Fabric — porous, poorly-levigated, well fired; colour — grey (core and surface).

Western legionary defences (sector II, square XV-13), south from the tower; found with jug no. 93.

Dating: 2nd-3rd AD (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

93. Rim sherd — Inv. no. 116/61m.

Koškówna, Rutkowski 1962, 123, fig. II, 9.

Fabric — porous, poorly-levigated, well fired; colour — grey (core and surface).

Western legionary defences (sector II, square XV-13); found with jug no. 92.

Dating: 2nd-3rd AD (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

94. Rim sherd — Inv. no. 12/93m/20 — Tabl. VII

Fabric — rather porous, with fine-grained lime and mica inclusions; surface rough; colour — light brown (core and surface).

Valetudinarium, rooms 46, 48, 49 and a corridor in the north-western part of the hospital (sector IV, squares III-221/241/261), occupation layer.

Dating: 2nd-early of 3rd AD (by context), 2nd-3rd (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

95. Rim — Inv. no. 100/89w.

No fabric description; slip; colour — grey (core and surface).

House of mudbrick (sector IV, square III-290); found with a coin of Julia Mamca (222-235 AD).

Dating: ca 250-350 (AD by context); 2nd-3rd (by analogy); cf. Soultov 1969a; *Novae* nos. 84-95.

96. Rim sherd — Inv. no. 1/1/98m.

Fabric — hard, fine-grained sand and lime; surface rough; colour — orange (core and surface).

Building with porticoes, a well in the courtyard, (sector IV, squares IX-20/40), well filling; found with jugs nos. 47, 53, 57, 59, 66, 154, 155.

Dating: late 4th-early 5th century AD (by context).

97. Rim — Tabl. VI

Fabric — hard, porous, big amount sand and mica inclusions, little amount of lime inclusion; surface rough; colour — 2.5 YR 6/8, light red (core), surface outside 10 R 6/6, light red, inside 10 YR 8/4, very pale brown.

Findspot unknown.

Dating: ?

98. Jug — Inv. no. 64/HB90 — Tabl. VI

Fabric — hard, porous, big fine-grained sand and lime; surface rough, uneven; colour — 5 YR 7/6, reddish yellow (core and surface).

Officer's house/ *tabernae* (square X-191).

Dating: ?

99. Rim — Inv. no. 3097MM/86.

Gencheva 2002, 28-29, no. 245, tab. XXVI,3.

Fabric — hard, porous, big amount of fine-grained sand, pyroxene and mica inclusions, several lime particles; surface rough; colour — 7.5 YR 7/6, reddish yellow (core), 5 YR 6/8, reddish yellow (surface).

Officer's house/ *tabernae* (squares X-308/309), depth 43.40-43.70; a layer dated to mid-1st AD; found with jugs nos. 73, 146.

Dating: ca 50 — late 70's of 1st century AD (by context).

100. Rim — Inv. no. 332/96w — Tabl. VII

Fabric — fine grained sand; opalescent slip; colour — light brown (core), brown (slip).

Via sagularis (sector IV, square III-169); found with amphora dated to 2nd-3rd AD.

Dating: 2nd-3rd AD (by context).

101. Jug — Tabl. VI

Fabric — medium hard, porous, fine-grained ceramic temper and mica inclusions; surface smooth, slip abraded; colour — 7.5 YR 8/6, reddish yellow (core), from 2.5 YR 6/8, light red to 2.5 YR 4/2, weak red (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd AD (by technology of production).

102. Jug — Inv. no. 2370MM/HB78 — Tabl. VIII

Fabric — hard, porous, big fine-grained quartz sand and mica, surface smooth, matt, rough; colour — 2.5 YR 6/8, light red (core), 2.5 YR 5/6, red (surface).

Latus praetorii dextrum (square XII-370, depth 0.60-0.80 m).

Dating: ?

103. Neck — Inv. no. 1681/HB71

Fabric — medium hard, rather dense, little amount of fine-grained ceramic temper, lime and mica; surface smooth; colour — 7.5 YR 7/6, reddish yellow (core), 7.5 YR 7/4, pink (surface); ware A.

Latus praetorii dextrum (square XVIII-163, depth 2.40 m).

Dating: 2nd-3rd AD (by technology of production).

104. Body — Inv. no. 126/87w

Dyczek 1989, 138, fig. 5; Dyczek 1993, 210, fig. 5.

Fabric — medium hard, rather porous, big amount of fine-grained sand; surface smooth; colour — 7.5 YR 7/6, reddish yellow (core), 5 YR 7/6, reddish yellow (surface).

Valetudinarium, room 15a (sector IV, squares III 248/49, 268/69, depth 39.30 m), deposit of pottery under the floor (clay lamps, jugs nos. 105, amphorae dated to 2-3rd AD) over a coin of Hadrian (117-138 AD).

Dating: ca 150-200 century AD (by context).

105. Body — Inv. no. 126/ 87w

Dyczek 1989, 138, fig. 5; Dyczek 1993, 210, fig. 5.

Fabric — medium hard, rather porous, little amount of fine-grained lime and mica; surface smooth; slip abraded, ornament of horizontal grooves on the neck; colour — 10 YR 7/4, very pale brown (core), 5 YR 5/8, yellowish red to 5 YR 3/3, dark reddish brown (slip).

Valetudinarium, room 15a (sector IV, squares III 248/49, 268/69, depth 39.30 m); deposit of pottery under the floor (clay lamps, jugs nos. 104 amphorae dated to ca 2-3rd century AD) over a coin of Hadrian (117-138 AD).

Dating: ca 150-200 century AD (by context).

106. Body — Tabl. VIII

Fabric - hard, dense, big amount of fine-grained mica, several lime particles; surface uneven, smooth, burnished, slip; colour — 5YR 7/4, pink (core), 5YR 8/3, pink (surface), from 10 R 5/8, red to 10 R 4/1, dark reddish grey (slip); ware A. Findspot unknown.

Dating: 2nd-3rd century AD (by technology of production).

107. Body — Inv. no. 202/60 w.

Soultov 1961, 121-122, fig. 97.

Fabric — fine; slip.

Praetentura to the west of the western wall of *valetudinarium* (sector IV, square II-317); found with amphora dated to 2nd-3rd AD and jug no. 143.

Dating: 2nd-3rd century AD (by context and technology of production).

108. Body — Inv. no. 103/HB90

Fabric — medium hard, rather dense, big amount of fine-grained mica, little amount of lime and ceramic temper inclusions; surface smooth, slip unevenly smeared; colour — 7.5 YR 7/4, pink (core), 10 R 3/2, dusky red (slip); ware A.

Officer's house/ *tabernae* (square X-208).

Dating: 2nd-3rd century AD (by technology of production).

109. Body — Inv. no. 749/HB75; mus. inv. no. 924 — Tabl. VIII

Fabric — hard, rather porous, big amount of fine-grained sand, mica and lime; surface smooth, burnished, slip; ornament of polished horizontal, vertical and wavy lines on the body; colour — 2.5 Y 5/2, greyish brown (core), 2.5 Y 4/2, dark greyish brown (slip); ware B.

Eastern enclosure, tower no. 2 (square XXI-440).
 Dating: 4th-early 5th century AD (by technology of production).
 Gradski Musey, Svishtov.

110. Jug — Inv. no. 89/77 w — **Tabl. VIII**

Fabric — hard, rather dense, big amount of coarse sand and mica inclusions; surface rough fired, slip, ornament of two horizontal grooves on the body; colour — core two-coloured — in the middle 2.5 Y 3/1, very dark grey, inside and outside 7.5 YR 5/3, brown, 10 YR 6/2, light brownish grey (surface).

Building with porticoes (sector IV, square II-299), destruction layer.

Dating: late 4th-early 5th century AD (by context).

111. Handle and a neck sherd — Inv. no. 56/9/99.

Fabric — medium hard, dense, with several lime and mica particles; surface smooth, slip abraded; colour — 2.5 YR 7/6, light red (core), 10 R 6/8, light red (slip).

Valetudinarium, rooms 57 and 11 (sector IV, squares III-370/371/390/391) under the floor; found with amphora dated to 2nd-3rd AD.

Dating: early 2nd century AD (by context).

112. Neck and a handle — Inv. no. 36/95m.

Fabric — dense, little amount of small-size mica inclusion and several fine grained lime; colour — light brown (core and surface).

Possibly a part of the house of mudbrick (sector IV, squares X-53/54/73/74) construction layer; found with jugs nos. 76, 84.

Dating: ca 250 century AD (by context).

113. Jug — Inv. no. 1153ΦK.

Gencheva 2002, 28-29, no. 89, tab. XXV,4.

Fabric — hard, dense, big amount of fine-grained sand; surface rough; colour — orange-yellow (core and surface).

Officer's house/ *tabernae* (squares X-311), a pit no. I; found with jugs nos. 31, 40, 39, 67, 114.

Dating: ca 50 — late 70's of 1st century AD (by context), 1st century AD (by analogy); cf. *Novae* nos. 39, 114, 116, 117.

114. Jug — Inv. no. 1152ΦK.

Gencheva 2002, 28-29, no. 88, tab. XXV,3.

Fabric — hard, dense, big amount of fine-grained sand; surface smooth, glazed covering; colour — bricky-red (core), brownish-red (glazed covering).

Officer's house/ *tabernae* (squares X-311), a pit no. I; found with jugs nos. 31, 40, 39, 67, 113.

Dating: ca 50 — late 70's of 1st AD (by context), 1st century AD (by analogy); cf. *Novae* nos. 39, 113, 116, 117.

115. Jug — Inv. no. 78/67w — **Tabl. VIII**

Fabric — medium hard, little amount of fine-grained temper, lime and big amount of mica; slip abraded; colour — 10 YR 7/3 (core), 7.5 YR 4/2 (slip).

Valetudinarium, rooms 3a/ 3b (sector IV, square II-318, depth 2,60 m), second phase of occupation?

Dating: ca 250-350 century AD (by context), 2nd-3rd century AD (by analogy); cf. Kovachev 1998, type II.

116. Rim sherd — Inv. no. 135/96m-10

Domžalski 1998a, 148-149, no. 43, tab. V.

Fabric — big amount of fine-grained silver mica, soft firing; colour — 5 YR 6/8, reddish yellow (core and surface).

Principia, rooms Cw and Dw (sector XI, squares XVII-359/360/379/380), pit no. 4; found with coins of Mark Anthony (BC 32/31) and Drusus (AD 23), clay lamps dated to the early 1st century AD, terra sigillata vessels dated to AD 1st, jugs nos. 36-38, 117-118, 148.

Dating: ca 50 — late 70's of 1st century AD (by context), 1st century AD (by analogy); cf. *Novae* nos. 39, 113, 114, 117.

117. Jug — Inv. no. 433/96w.

Domžalski 1998a, 148-149, no. 40, tab. V.

Fabric with fine-grained silver mica, soft; slip; colour — 7.5 YR 6/6-7/6 (core), 5 YR 5/6 (slip).

Principia, rooms Cw and Dw (sector XI, squares XVII-359/360/379/380), pit no. 4; found with clay lamps dated to the early 1st century AD, terra sigillata vessels dated to 1st century AD, jugs nos. 36-38, 116-118, 148.

Dating: ca 50 — late 70's of 1st century AD (by context), 1st century AD (by analogy); cf. *Novae* nos. 39, 113, 114, 116.

118. Rim — Inv. no. 135/ 96m-4

Domžalski 1998a, 148-149, no. 46, tab. VI.

Fabric with fine grained silver mica, medium hard; colour — 2,5 YR 6/6 - 5 YR 6/8 (core and surface).

Principia, rooms Cw and Dw (sector XI, squares XVII-359/360/379/380), pit no. 4; found with clay lamps dated to the early 1st century AD, terra sigillata vessels dated to 1st century AD, jugs nos. 36-38, 116-117, 148.

Dating: ca 50 — late 70's of 1st century AD (by context); cf. *Novae* (no. 38).

119. Jug — Inv. no. 135/93w — **Tabl. IX**

Fabric with fine-grained sand, mica and lime; slip; colour — core light brown, slip dark brown; ware A.

Valetudinarium, the courtyard (sector IV, square III-325), destruction layer.

Dating: early 3rd century AD (by context), 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

120. Jug — Inv. no. 27/87w — **Tabl. IX**

Fabric — soft, porous, with fine-grained mica and lime, surface smooth, slip abraded; a hole below the rim intentionally made; colour — 7.5 YR 6/4, light brown (core), 5 YR 5/8, yellowish red (slip); ware A.

Valetudinarium, room 17c (sector IV, square III-247), destruction layer.

Dating: 2nd/3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

121. Jug — Inv. no. 142/96w — **Tabl. IX**

Fabric — medium hard, with big amount of mica and lime inclusion; surface smooth, slip abraded; colour — 10 YR 6/6, light red (core), 10 YR 4/6, red (slip); ware A.

Valetudinarium room 11 (sector IV, square XVII-390), occupation level.

Dating: 2nd-early 3rd century AD (by context), 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

122. Body — inv. no. 465ΦK/HB70; mus. inv. no. 527.

Fabric — medium hard, dense, with fine-grained lime and ceramic temper inclusions, several mica leaves; surface smooth, uneven, slip; colour — core 10 YR 6/4, light yellowish brown, slip 10 YR 4/2, dark greyish brown; ware A.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

Gradski Musey, Svishtov.

123. Rim — Inv. no. 62/96w — **Tabl. IX**

Fabric — hard, rather porous, fine-grained sand; glazed covering; colour — dark brown (core and glazed covering); ware A.

Valetudinarium, room 69 (sector IV, squares X-51/52/71/72), destruction layer.

Dating: late 2nd-early 3rd century AD (by context), 2nd-3rd (by analogy and technology of production); cf. Soultov 1983a, type 4.

124. Rim — Inv. no. 89/85w — **Tabl. IX**

Fabric — medium hard, rather porous, with big amount of fine-grained mica, several lime particles; surface smooth, slip abraded; colour — 5 YR 7/6, reddish yellow (core), 2.5 YR 5/8, red (slip); ware A.

Valetudinarium, room 14 (sector IV, square III-251), destruction layer.

Dating: 2nd-early 3rd century AD (by context), 2nd/3rd (by analogy and technology of production); cf. Soultov 1983a, type 4.

125. Rim.

Fabric — medium hard, rather porous, with little amount of fine-grained lime and mica; surface smooth, slip; colour — 5YR 7/6, reddish yellow (core), 5YR 6/8, reddish yellow (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

126. Rim — Inv. no. 1956MM — **Tabl. IX**

Fabric — soft, porous, with little amount of fine-grained mica; surface smooth, slip abraded; colour — 5 YR 7/6, reddish yellow (core), 2.5 YR 5/8, red (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

127. Rim — Inv. no. 1612MM/HB71

Fabric — medium hard, rather porous, with little amount of fine-grained lime and mica; smooth surface; colour — 5YR 7/6, reddish yellow (core), 5 YR 6/8, reddish yellow (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

128. Rim — Inv. no. 844ΦK/HB80.

Fabric — medium hard, rather porous, no inclusions, smooth surface, slip abraded; colour — 7.5 YR 7/4, pink (core), 2.5 YR 5/8, red (slip); ware A.

Villa extra muros (square VIII A-116, depth 0.80-1.20 m).

Dating: 2nd-3rd century AD (by context, analogy and technology of production); cf. Soultov 1983a, type 4.

129. Rim.

Fabric — soft, dense, with several fine-grained mica and lime particles; smooth surface, slip; colour — 5YR 6/4, light reddish brown (core), 5YR 4/2, dark reddish grey (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

130. Rim — Inv. no. 443ФK/HB70; HMC I 1616 — **Tabl. IX**

Fabric — medium hard, rather porous, with little amount of fine-grained lime and mica; smooth surface, slip abraded; colour — 5YR 7/6, reddish yellow (core), 5YR 4/3, reddish brown (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

131. Rim.

Dyczek 1992, 69, fig. 3,2.

No fabric description. Possibly ware A.

Valetudinarium, latrine (sector IV, squares II-197/198/217/218), destruction layer; found with clay lamps dated to 1st-3rd century AD, pottery dated to 2nd-3rd century AD, a coin of Caracalla (211-217 AD).

Dating: early 3rd century AD (by context), 2nd-3rd (by analogy); cf. Soultov 1983a, type 4.

132. Neck — Inv. no. 211/96w — **Tabl. IX**

Dyczek 1997, 46 (a note).

Fabric with fine-grained mica and sand, slip; colour — brown (core and slip); ware A.

Valetudinarium, room 8 (sector IV, squares X-8/9), destruction layer; found with pottery dated to ca 150-3rd century AD, clay lamps dated to 1st-early 2nd century AD, glass ware dated to the second half of 1st and 3rd century AD.

Dating: early 3rd century AD (by context), 2nd-3rd (by analogy and technology of production); cf. Soultov 1983a, type 4.

133. Neck.

Fabric — medium hard, dense, with big amount of fine-grained mica and lime; smooth surface; slip; colour — 5 YR 7/8, reddish yellow (core), 2.5 6/8, light red (slip); ware A.

Findspot unknown.

Dating: 2nd-3rd century AD (by analogy and technology of production); cf. Soultov 1983a, type 4.

134. Jug — Inv. no. 47/60 w.

Końkówna, Nowicka 1961, 105, fig. 58.

No fabric description. Possibly ware A.

Western legionary defences (sector II, square XV-1), by the late tower, destruction layer.

Dating: beginning of 3rd century AD (by context), 2nd-3rd century AD (by analogy); cf. Soultov 1983a, type 4.

135. Rim — Inv. no. 60/1/98 m.

Fabric — dense, with fine-grained mica, lime and quartz, big ceramic temper crumbs, slip; colour — yellowish-red to brown (core), yellowish red (slip); ware A.

Valetudinarium, the courtyard (sector IV, square III-307), destruction layer; found with amphorae dated to 2nd-3rd century AD.

Dating: early 3rd century AD (by context), 2nd-4th (by analogy and technology of production); cf. Soultov 1983a, type 2.

136. Rim — Inv. no. 221/79w.

Dyczek 1981, 122-124; Dyczek 1987, 254, 260, no. 21, tab. IV.2.

Fabric with mica inclusion, slip slightly buff; colour — light brown (core), brown (slip); ware A.

Valetudinarium, room 6 (sector IV, square X-3), second phase of occupation.

Dating: ca 250 century AD (by context), 2nd-4th (by analogy and technology of production); cf. Soultov 1983a, type 2.

137. Rim — **Tabl. IX**

Fabric with fine-grained lime, rough surface, glaze; colour — 10 YR 4/1, dark grey (core), 5 Y 4/4, olive (glaze).

Findspot unknown.

Dating: 4th-mid-5th century AD (by technology of production).

138. Neck — Inv. no. 9/97w.

No fabric description; glaze; colour — 2.5 YR 6/8, light red (core), 7.5 YR 5/6, strong brown (glaze); ware C.

Unstratified (sector XI, square XVII-351).

Dating: 4th-mid-5th century AD? (by technology of production).

139. Rim — Inv. no. 13/65w — **Tabl. IX**

No fabric description; glaze; colour — yellowish-green glaze; ware C.

Unidentified late building (sector IV, square II-337).

Dating: early 5th century AD (by context), 4th-mid-5th? (by technology of production).

140. Neck — Inv. no. 34/98w — **Tabl. IX**

Fabric — rather dense, with fine-grained mica, quartz and lime, little amount of ceramic temper inclusion, surface burnished, ornament of polished vertical lines on the neck; colour — light grey (core and surface); ware B.

House of mudbrick (sector IV, square III-307), floor level.

Dating: ca 250-350 century AD (by context), 4th-mid-5th century AD (by technology of production).

141. Body — Inv. no. 32/96w — **Tabl. IX**

No fabric description; glaze; ornament of horizontal grooves on the body; colour — brownish-red (core), green glaze; a hole among the handles; ware C. House of mudbrick (sector IV, square X-9), occupation level.

Dating: ca 250-350 century AD (by context), 4th-mid-5th century AD (by technology of production).

142. Body — Inv. no. 632/HB71

Fabric — medium hard, rather porous, with big amount of fine-grained sand inclusion, lime and mica inclusions; surface rough; colour — 2.5YR 6/6 to 2.5 YR 6/8, light red (core and surface); ware A.

Eastern legionary defences (square XXVI-208, depth 3.10 m).

Dating: 2nd-3rd century AD (by technology of production).

143. Rim — Inv. no. 201/60w — **Tabl. X**

No fabric description; ornament of circle grooves on the body; body section square. Praetentura, to the left of the western wall of valetudinarium (sector IV, square II-317); found with amphora dated to 2nd-3rd century AD, jug no. 107.

Dating: 2nd-early 3rd century AD (by context), 2nd (by analogy); cf. glass vessels (Isings 1967, Forms 89, 90) dated to 2nd century AD.

144. Rim — Inv. no. 118/7/98 m — **Tabl. X**

Fabric — porous, mica, quartz and lime inclusions; colour — core two coloured, inner dark grey, outer light grey, surface light grey; ware B.

Valetudinarium, the courtyard (sector IV, squares III-265/266/285/286), a pit; found with amphorae dated from 2nd to 6th century AD.

Dating: 4th-mid-5th century AD (by technology of production).

145. Rim — Inv. no. 111/5/98 m — **Tabl. X**

Fabric — mica and lime inclusions; glaze; colour — red core, orange-brown glaze; ware C.

Valetudinarium, the courtyard (sector IV, squares III-284/285), occupation level; found with amphora dated to 2nd-3rd century AD.

Dating: 2nd-early 3rd century AD (by context), 2nd-5th (by analogy and technology of production); cf. Grünwald, Pernicka 1979, 67-68, fig. 85,4; Minchev 1989, 16-17, type IV and V).

146. Rim — Inv. no. 3098MM/HB86.

Gencheva 2002, 28-29, no. 247, tab. XXVIII,2.

Fabric — hard, dense, big amount of fine-grained mica and sand inclusions (quartz sand with little stone particles), pyroxene, fine-grained lime inclusion; rough surface; colour — 10R 6/8, light red (core and surface).

Officer's house/ *tabernae* (squares X-308/309), depth 43.40-43.70 m, a layer dated to mid-1st century AD.

Dating: ca 50-late 70's of 1st century AD (by context).

147. Rim sherd — Inv. no. 275MM/HB89 — **Tabl. X**

Fabric — hard, rather dense, little amount of fine-grained lime and ceramic temper inclusions, big amount of fine-grained mica; smooth surface, slip; colour — 10YR 6/4, light yellowish brown (core), 10YR 4/2, dark greyish brown (slip).

Villa extra muros (square ha VIIIA-71), depth 0.20 m; found with jug no. 89.

Dating: 2-3rd century AD? (by context).

148. Rim — Inv. no. 135/96m-23

Domzalski 1998a, no. 48, fig. VI et note 33.

Fabric — hard, big amount of fine-grained mica inclusion; colour — 2,5 YR 6/8 (core).

Principia, rooms Cw and Dw (sector XI, squares XVII-379/380/359/360), pit no 4; found with coins of Mark Anthony (32/31 BC) and Drusus (23 AD), clay lamps dated to the early 1st century AD, *terra sigillata* vessels dated to 1st century AD, jugs nos. 36-38, 116-118.

Dating: ca 50 — late 70's of 1st century AD (by context).

149. Rim — Inv. no. 190/75w.

Kotecki 1977, no. 24, fig. III, 2.

Fabric with sand inclusion; rough surface; colour — pale grey (core and surface), surface darker than core; ware D.

Latus praetorii sinistrum (square XVI-59), a kiln; found with jugs nos. 63, 150.

Dating: late 6th-early 7th century AD (by context and technology of production); cf. Kotecki 1977, 197.

150. Rim — Inv. no. 190/75w.

Kotecki 1977, no. 26, tab. III,1.

Fabric — sand inclusion; colour — grey core and surface; ware D.

Latus praetorii sinistrum (square XVI-59), a kiln; found with jugs nos. 63, 149.

Dating: late 6th-early 7th century AD (by context and technology of production), ca 350-6th century AD (by analogy); cf. Kuzmanov 1992, 212, type 3, tab. 69,5 et 6; Kuzmanov 1987, 113-114, tab. XXV,15.

151. Neck — Inv. no. 2430MM/79

Fabric — hard, dense, big amount of fine-grained sand, small stones, mica and lime inclusions; colour — 5YR 5/6, yellowish red (core), 5YR 6/6, yellowish red (surface outside), 5YR 5/3, reddish brown (inside).

Winged corridor house (squares X-332/333, depth 2.30 m).
 Dating: AD 4th-mid-5th? (by analogy); cf. Kuzmanov 1985, type I? Opař 1996 type II?

152. Neck — Inv. no. 35/97w

Fabric — hard, rather porous, big amount of fine-grained mica, quartz and lime, surface smooth, glaze; colour — core two-coloured inner 5 Y 5/2, olive grey, outer 2,5 YR 5/8, red, glaze 5 Y 4/4, olive; ware C.

Principia, basilica (sector XI, square XVII-338), in front of the rooms Bw and Cw, destruction layer dated to 40's of 5th century AD.

Dating: ca 450 AD (by context), 4th-mid-5th century AD? (by analogy); cf. Kuzmanov 1985, type I? Opař 1996, type II?

153. Neck — Inv. no. 2/93m/5

Fabric — hard, rather dense, little amount of sand, lime and iron compounds; surface smooth, glazed covering; colour — brown (core and surface).

Building with porticoes, room R (sector IV, squares X-42/43/62/63), occupation layer.

Dating: ca 250-350 AD (by context).

154. Body — Inv. no. 4/93m/21 — **Tabl. X**

Fabric — coarse sand inclusion and mica inclusion; colour — reddish-brown (core and surface); ware B?

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs nos. 47, 53, 57, 59, 66, 96, 155.

Dating: late 4th-early 5th century AD (by context).

155. Body — Inv. no. 4/93m/30 — **Tabl. X**

Fabric — little amount of sand; glaze, ornament of vertical and horizontal grooves; colour — black core, brown glaze; ware C.

Building with porticoes, a well in the courtyard (sector IV, squares IX-20/40), well filling; found with jugs nos. 47, 53, 57, 59, 66, 96, 154.

Dating: late 4th-early 5th century AD (by context), 4th-mid-5th (by technology of production).

156. Handle sherd — Inv. no. 32/64w — **Tabl. X**

Fabric — porous, glaze; colour — grey core, green glaze; screwed handle on the top an appliqué in the shape of human head.

Unstratified (sector IV, square IX-38).

Dating: 4th-mid-5th century AD (by technology of production).

Kořkówna 1965, 167-168, 184, fig. VII, 10 et 14; Parnicki-Pudolko, Kořkówna Nowicka 1966, 91-92.

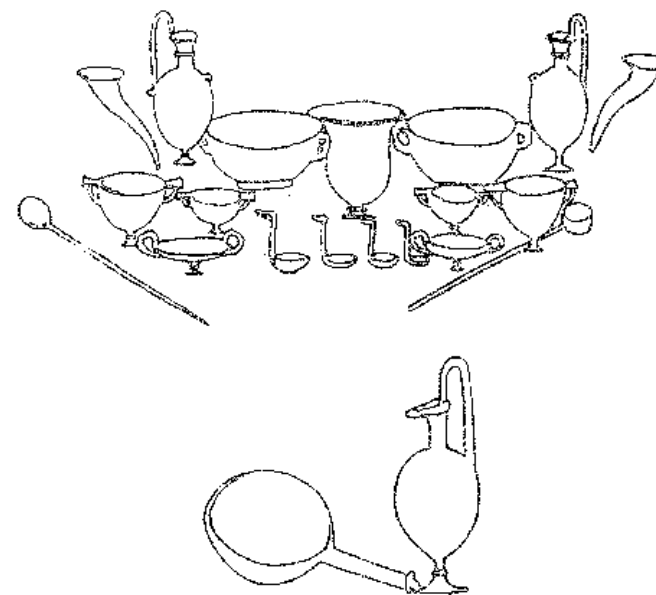


Fig. 1. Roman table pottery after the wall painting from Pompei [Hilgers 1969]

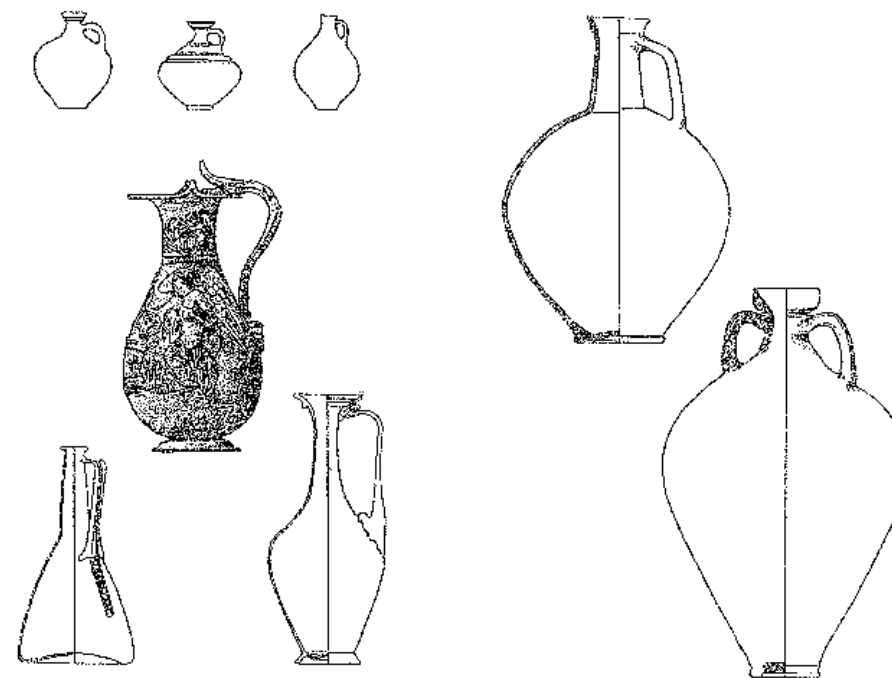


Fig. 2. Lagynos [Hilgers 1969]

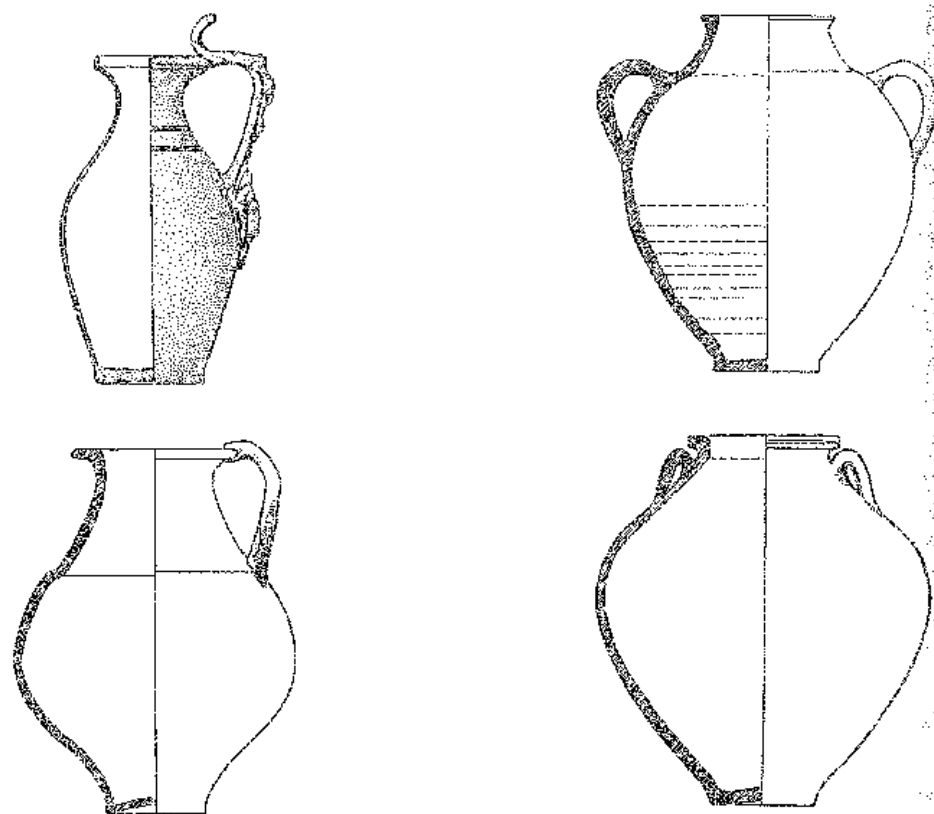
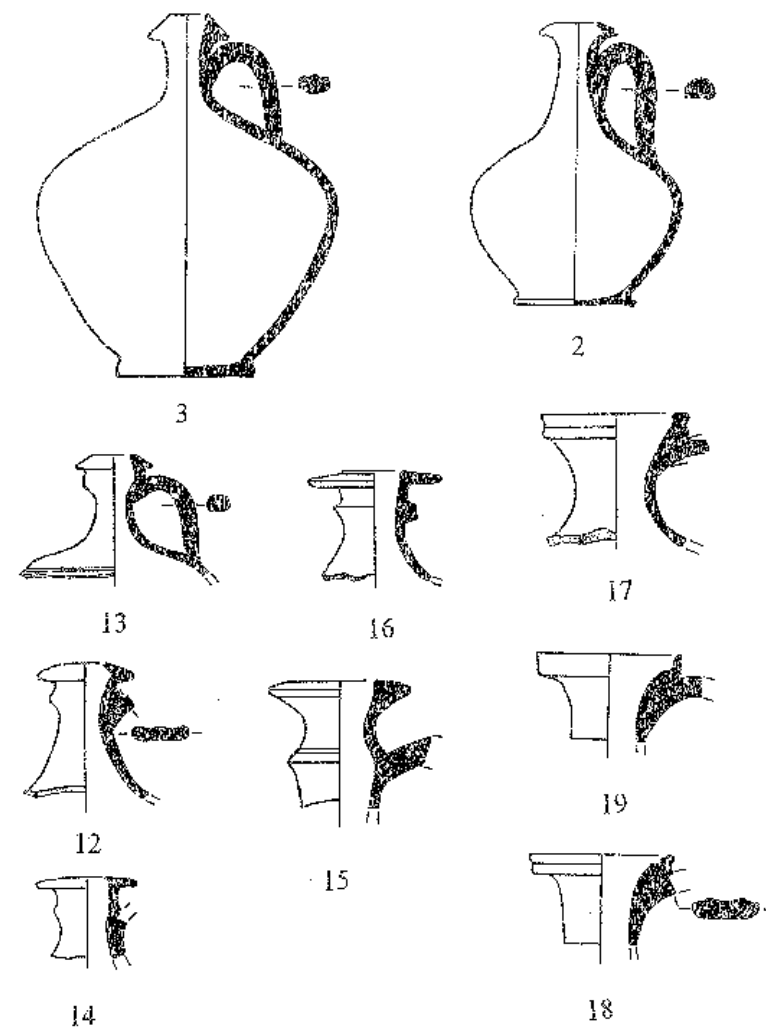


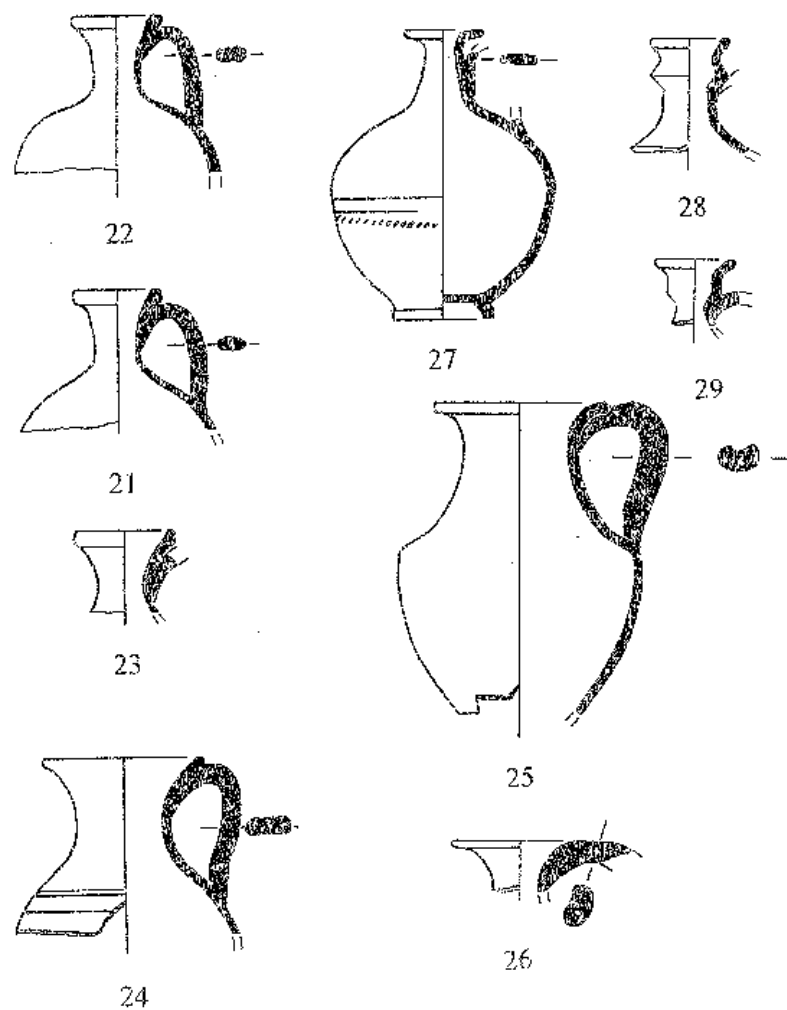
Fig. 3. Urcus and urceolus [Hilgers 1969]

Table I



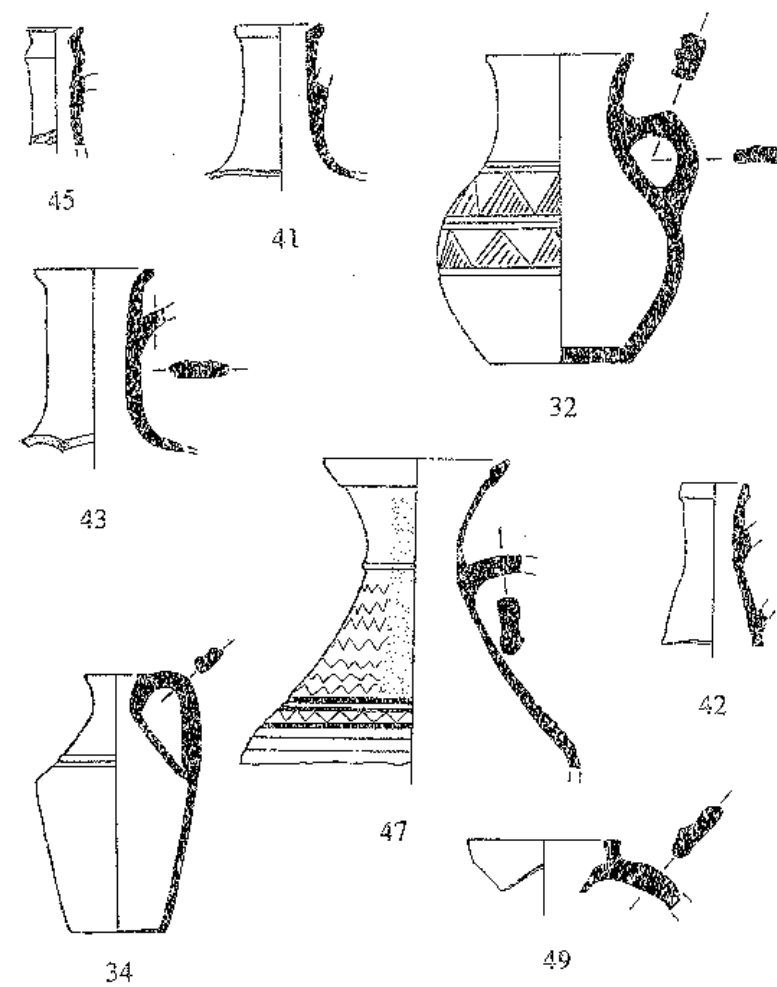
Jugs with one handle. Type I variant A, cat. nos. 2-3, variant B, nos. 12-16; type II, cat. nos. 17-19. By A. Tomas. Scale 1:4

Table II



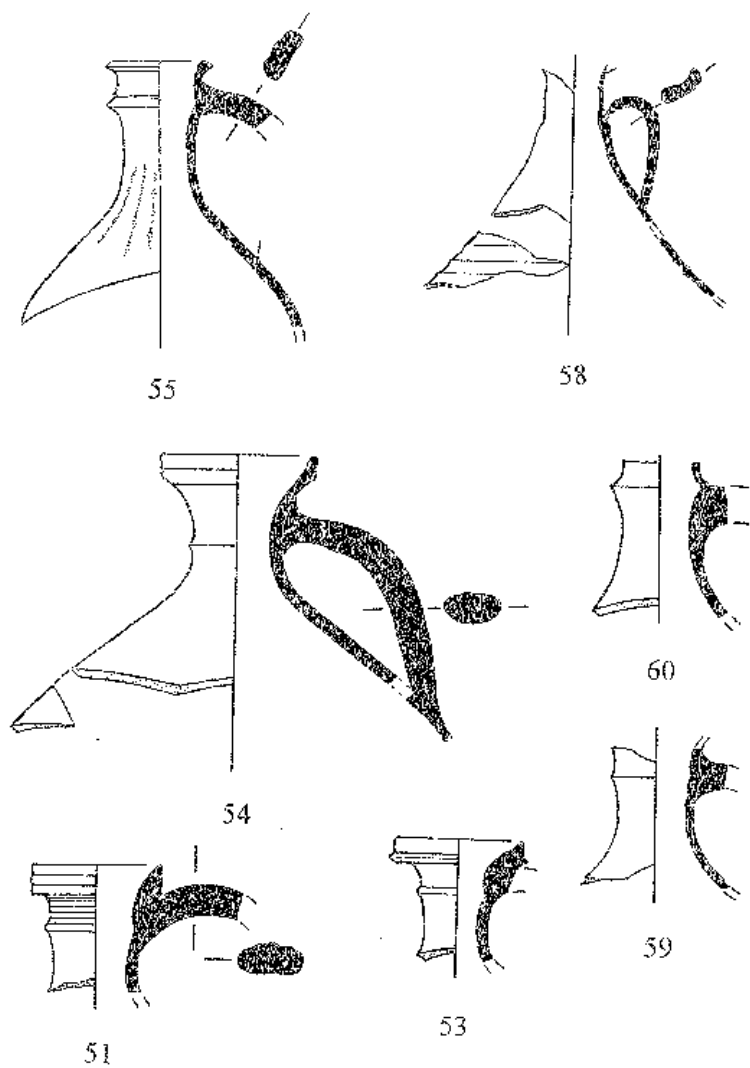
Jugs with one handle. Type III variant A, cat. nos. 21-23, variant B, cat. nos. 24-27, variant C, cat. nos. 28-29. By A. Tomas. Scale 1:4

Table III



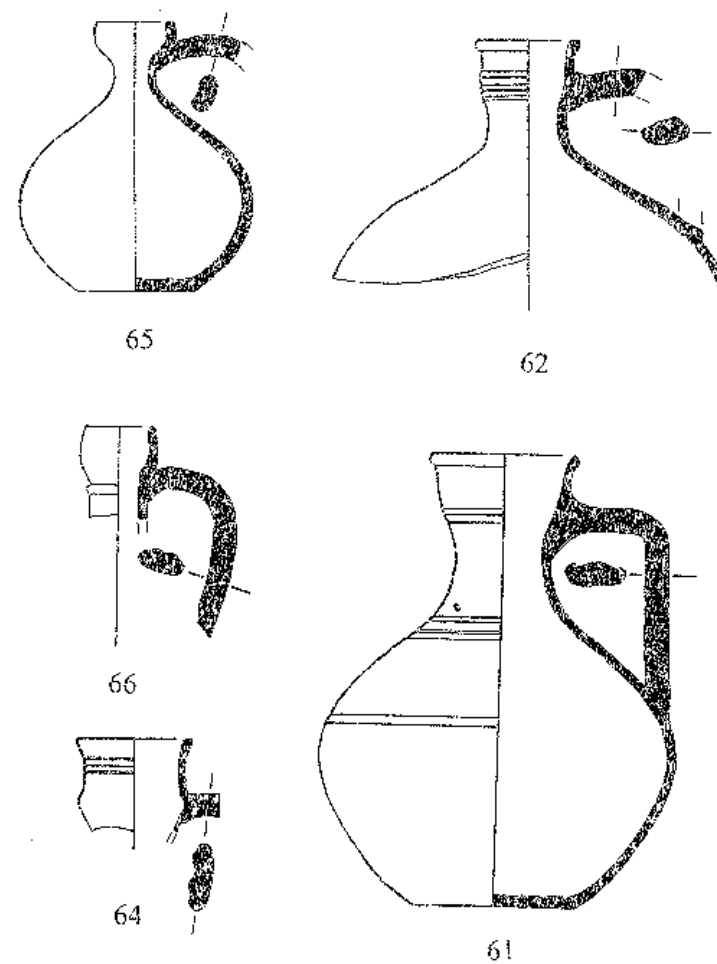
Jugs with one handle. Other jugs type III, cat. nos. 32, 34, type IV, cat. nos. 41-43, 45; Type V variant A, cat. nos. 47, 49. By A. Tomas. Scale 1:4

Table IV



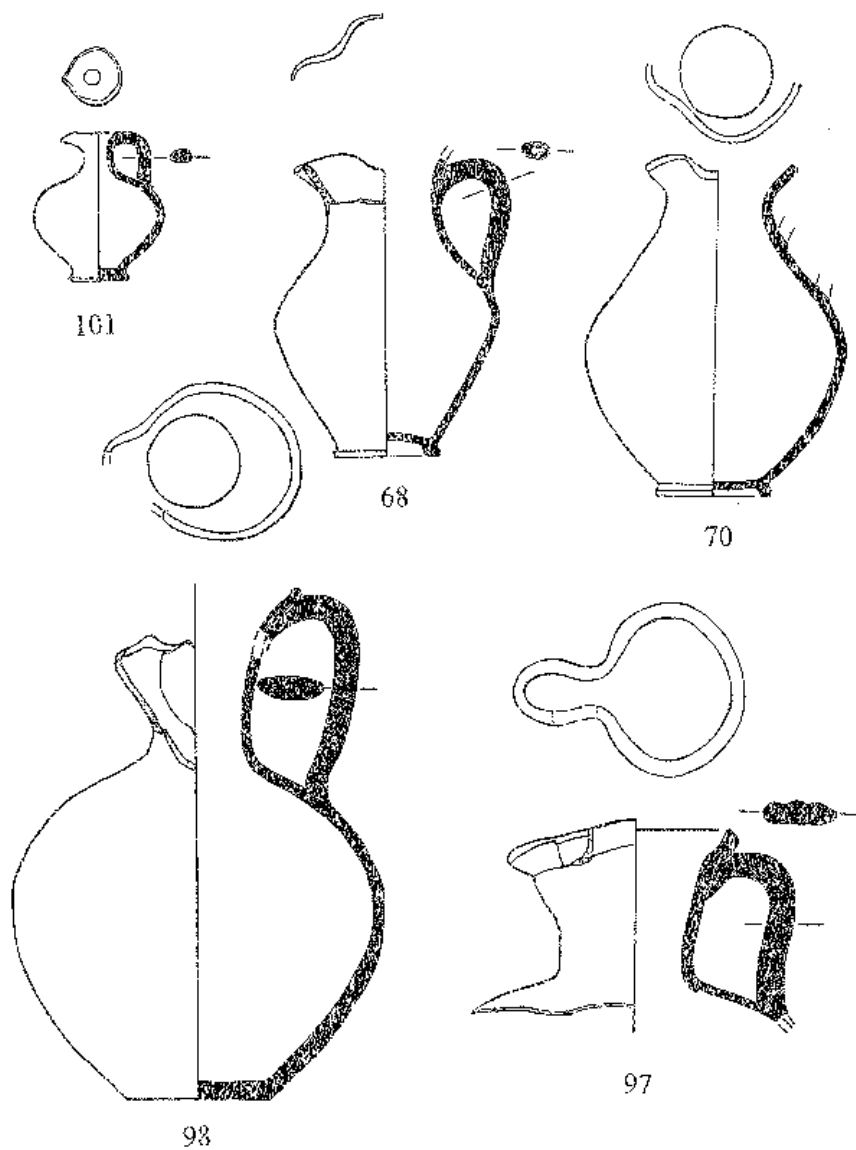
Jugs with one handle. Type V variant B, cat. nos. 51, 53, 54, other jugs type V, cat. nos. 55, 58-60. By A. Tomas. Scale 1:4

Table V



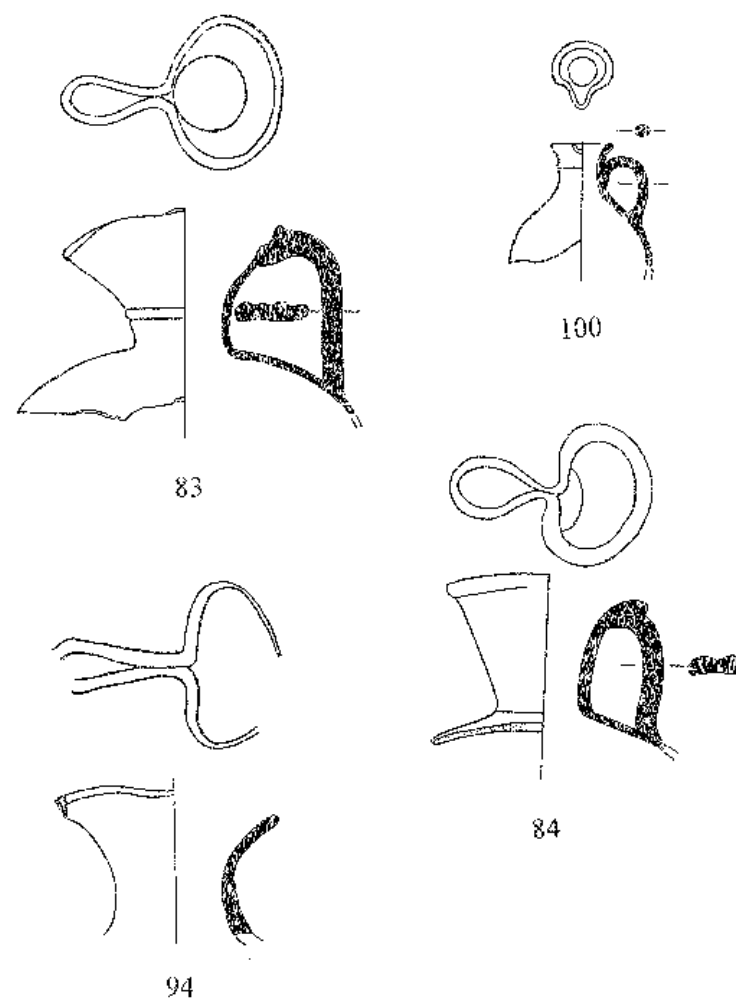
Jugs with one handle. Type VI, variant A, cat. nos. 61, 62, 64, type VI variant B, cat. nos. 65, 66. By A. Tomas. Scale 1:4

Table VI



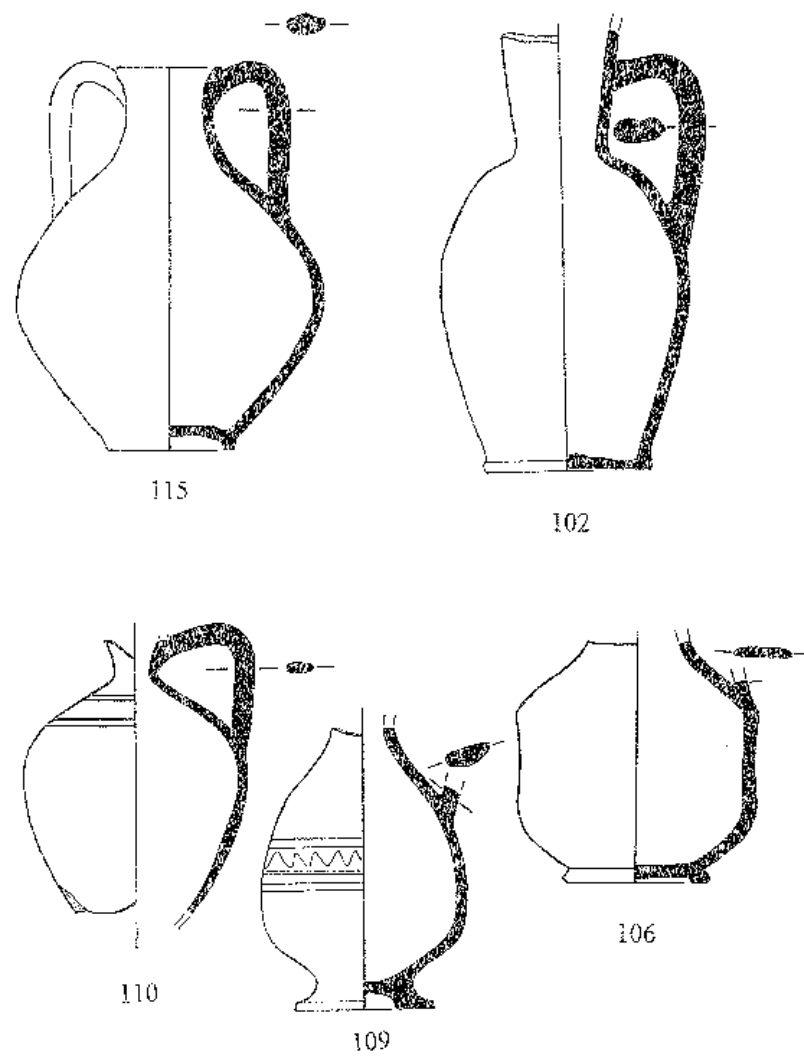
Jugs with one handle. Type VII variant A, cat. nos. 68, 70, 97, 98, 101.
By A. Tomas. Scale 1:4

Table VII



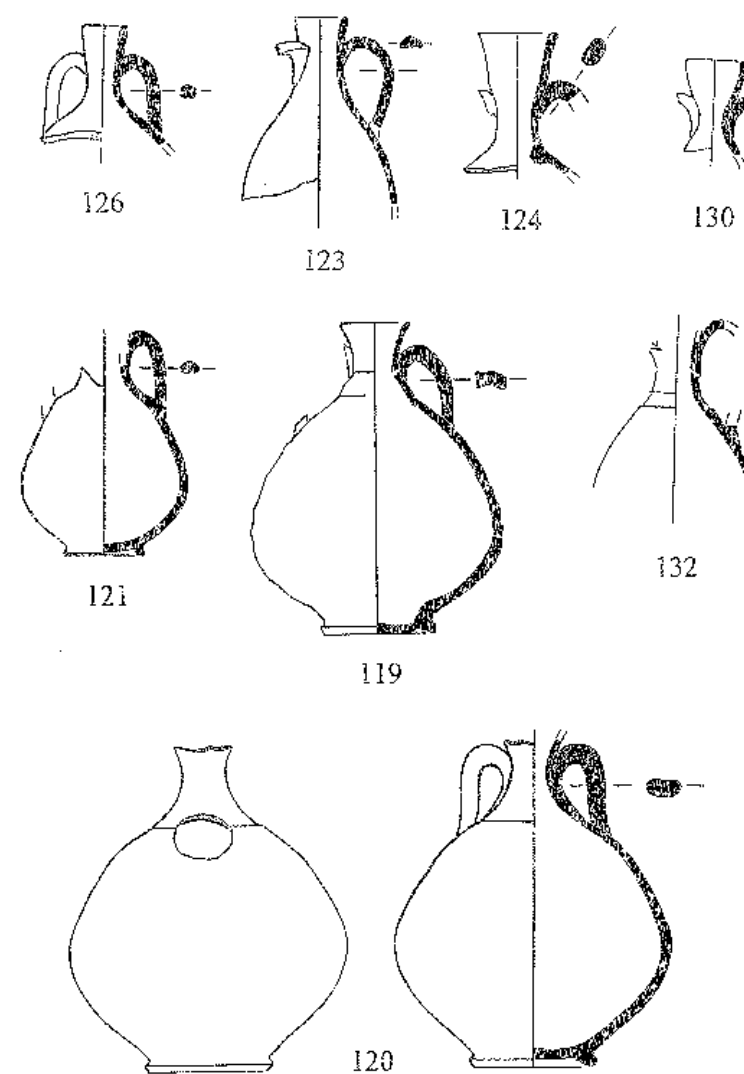
Jugs with one handle. Type VII variant B, cat. nos. 83, 84, 94,
type VII variant C, cat. no. 100. By A. Tomas. Scale 1:4

Table VIII



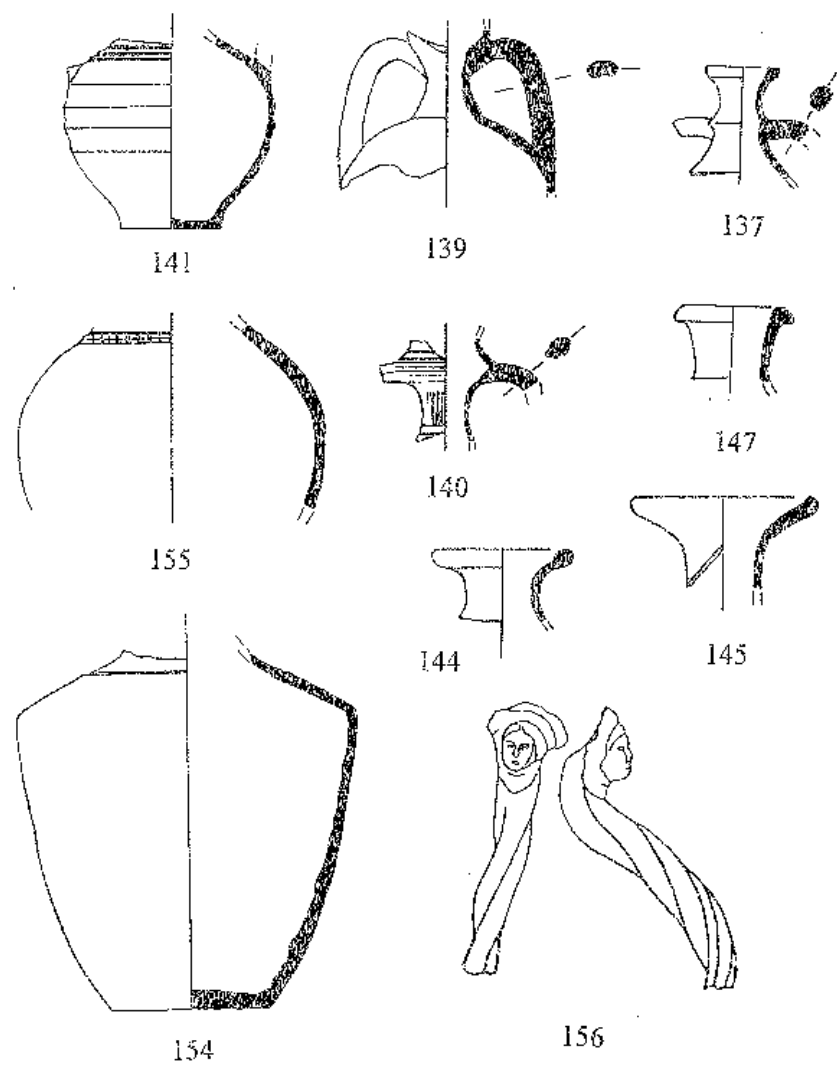
Jugs with one handle of no type. Cat. nos. 102, 106, 109, 110;
jug with two handles type I, cat. no. 115. By A. Tomas. Scale 1:4

Table IX



Jugs with two handles. Type II, cat. nos. 119-121, 123, 124, 126, 130, 132.
By A. Tomas. Scale 1:4

Table X



Jugs with two handles. Type IV, cat. nos. 137, 139. Jugs with two handles of no type, cat. nos. 140, 141, 143. Unclassified fragments. Rims, cat. nos. 144, 145, 147; bodies, cat. nos. 154, 155; handle no. 156. By A. Tomas. Scale 1:4 (no. 156 scale 1:2)

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THE LEGIONARY BATH FROM THE 3RD-4TH CENTURY IN NOVAE (MOESIA INFERIOR)

The international interdisciplinary team of the Archeological Expedition of the Adam Mickiewicz University (Uniwersytet im. Adama Mickiewicza, UAM) in Poznań began its independent exploration of the legionary camp and the later Roman and early Byzantine city of *Novae* (*Moesia Inferior* — Svištov, Bulgaria) in 1970.

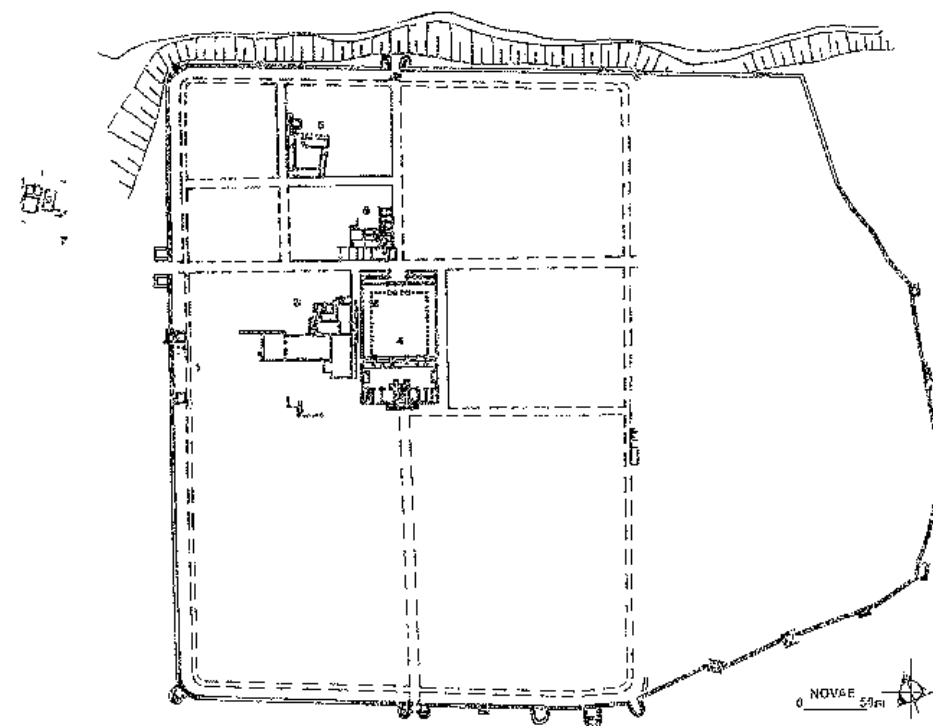
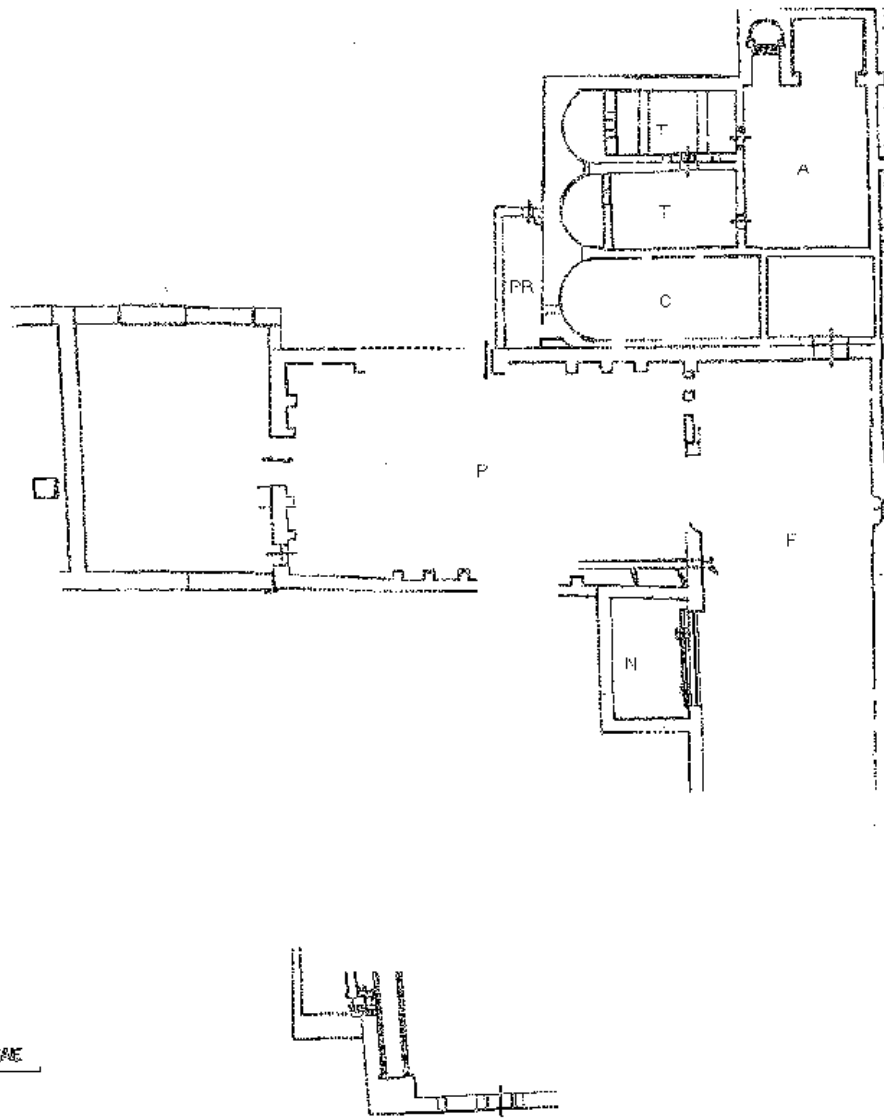


Fig. 1. *Novae*. The general layout of the city in the 3rd-4th century: 1 — one of the western towers; 2 — *porta praetoria*; 3 — legionary bath; 4 — *principia*; 5 — *villa* with *porticus*; 6 — *scannum tribunorum*; 7 — *villa extra muros*. Prepared by A.B. Biernacki



NOVAE

Fig. 2. *Novae*. The legionary bath in the 3rd-4th century: C — *caldarium*; T — *tepidarium*; PR — *praefurnium*; A — *apodytherium*; P — *palaestra*; F — *frigidarium*; N — *natatio*. Prepared by A.B. Biernacki and E. Klenina

In 1986-2000, the Expedition focused its work on the central area of the legionary camp and the early Byzantine city, directly west of the *principia* of the 1st Italian Legion.¹ We have now collected sufficient material to conclude that it was an area of bustling building construction and general human activity in *Novae* between the early 2nd century and the late 6th century AD.

Under the complex of the enormous early Christian episcopal basilica, minor basilica and episcopal residence, excavation revealed a dozen rooms making up two complexes of baths dated to the third quarter of the 2nd century² and the turn of the 4th century. Our studies made it possible to establish in more detail the layout and capacities of the buildings of the legionary baths, and consequently to divide their facilities into chronological and architectural strata. Due to the peculiar nature of these buildings, however, it is only possible to reconstruct their functions only in the context of certain parts of the complex rather than of the entire bath. The north-western part of the complex consists of three rooms of very similar cubic capacities, with semicircular pools in the west. The northern room had the shape of a rectangle of the dimensions 14.55 × 5.85-5.95 m, with a semicircular pool of the diameter of 5.95 m at the base and the depth (the distance from front to back) of 3.70 m. The entrance to this room was in its eastern wall. In the other two twin rooms, which make up a row with the former, we have managed to establish the dimensions of the apses housing the pools: The apse in the middle room had the diameter of app. 6 m and the depth of 3.30 m, and that in the southern room, the diameter of 6.40 m and the depth of 2.41 m. The southern room might have been used as a *caldarium*, and the other two, as *tepidaria*. Outside the pool of the southern room, a *praefurnium* inside a cryptoporticus has been uncovered.³ It is remarkable that the entire building of the legionary bath was hypocausted. The original arrangement of these rooms, built at the turn of the 3rd century, was modified through demolishing the northern *praefurnium*, which was located directly at the wall of the pool. This development occurred in the mid-4th century, as evidence the 380 bronze coins in a wooden box secured with a bronze padlock,⁴ found in the hypocaust under the pool in the northern room. The coins date to the period 330-350, and a majority of them, viz. 124, come from the reign of Constantius II (347-348).

At the north-eastern end of the row of bath rooms, there was a rectangular interior of the dimensions 27.10 × 10.20 m (990 × 34 Roman feet). In the southern wall of this room, we found an entrance, which most probably had a double door. Two pools are located in the northern part of the room: a rectangular one of the dimensions 6.25 × 4.40 m, and a small semicircular one of the base of 2.50 m and the depth of 1.50 m.⁵ Both pools could be accessed from the floor by means of two or three steps. These featured depressions, which might have held cold water for foot bathing.

In the west, the complex of the bath is surrounded by a wall with pilasters, which he have examined along a length of app. 60 m. An entrance in the wall, 1.41 m wide (with a threshold 1.16 m long), leads to an interior which had the function of a *frigidarium*. Exactly opposite the entrance and on its axis, there was a small semicircular niche. From the *frigidarium*, one could pass to the *apodytherium* through a double door in the north, or to the supposed *palaestra* (*basilica discoperta*) through an arcade in the north-west.



Fig. 3. *Novae*. The legionary bath: the *apodytharium* and the later buildings of the episcopal residence. View from the south. Photo P. Namiota



Fig. 4. *Novae*: the *caldarium* of the legionary bath, later rebuilt as the *tepidarium* of the late-3rd century bath. Photo P. Namiota



Fig. 5. *Novae*. The pool in the *tepidarium* of the bath from the 3rd-4th century. View from the west. Photo P. Namiota



Fig. 6. *Novae*. The pool in the *caldarium* of the bath from the 3rd-4th century. View from the north-east. Photo P. Namiota

The enormous rectangular interior south of the *caldarium* has the dimensions 32.80×18.10 m, or app. 110×60 Roman feet; its characteristic feature are rectangular pilasters at the northern and the southern wall. So far we have examined ten of these indoor pilasters; out of these, four, of the dimensions app. 0.90×0.70 m, are at the northern wall. The pilasters are spaced between 1.80 and 2.20 m. In the northern wall of the room, we also registered the remnants of an opening 1.20 m wide, preserved up to the height of 0.67-0.88 m. The exploration of the layer directly under the floor of the north-western part of the nave of the episcopal basilica (squares XVI 240 & XVII 221) revealed the vestiges of the southern wall of the *basilica discoperta*. The uncovered fragment of the wall is 5.70 m long and 0.90 m thick, and preserved up to the maximum height of app. 2.30 m (at the southern face). In the northern face of the wall, three pilasters of a similar size (0.70×0.90 m) were found, constituting integral parts of the design of the wall and spaced at distances of 1.80 m. Both the pilasters and the southern wall of the *basilica discoperta* are made of stones laid in stripes and bound by means of lime mortar. The south-western corner and the entrance in the western wall of the *basilica discoperta* (squares XVI 237, 238) were built using the same technique. The exposed part of the corner is of the length of 1.90 m (along the axis "West-East"), the breadth of 1.10 m and the height of 1.52 m (in the northern face of the southern wall). 0.77 m away from the corner, the entrance to the *basilica discoperta* has been revealed, featuring a stone threshold of the dimensions $1.58 \times 0.57 \times 0.20$ m. Another four pilasters were discovered at the western wall of the *basilica discoperta* in 2001. The first one, located 2.73 m away from the north-western corner, has the dimensions 0.67×0.91 m in its offset lower part and 0.58×0.76 m in the upper part. Fragments of two coats of plaster 2 cm thick are extant on its southern face. The second pilaster is 1.85 m north of the first one, and has the dimensions 0.77×0.91 m. The third pilaster is at the distance of 5.50 m from the second; the dimensions of its lower part are 0.74×0.82 m, and its eastern and northern face feature a visible offset 11 cm wide. Finally, the fourth pilaster is 1.59 m north of the third one and 2.56 m south of the north-western corner of the *basilica discoperta*, and has the dimensions 0.92×0.74 m. The preserved layout of the western wall of the *basilica discoperta* between the second and the third pilaster suggests that originally this was the location of an entrance of the width of app. 4 m, presumably closed with a double door. Interestingly, no signs of a third entrance in this wall have been found between the fourth pilaster and the north-western corner of the *basilica discoperta*. If there was indeed no third entrance, then the doors were arranged asymmetrically in the wall. Based on the data acquired so far, and particularly on its characteristic layout and details of architectural design, this large interior has been identified as a *palaestra* or a *basilica discoperta*, i.e., a place of rest and recreation.⁶

South of the *palaestra* (*basilica discoperta*), there was another large room, the *frigidarium*, featuring a rectangular swimming pool (*natatio*) of the dimen-

sions 9.80×6.50 m.⁷ The floor of this room was laid with large ceramic tiles of the dimensions 0.50×0.50 m. At the east wall of the pool, there were stone seats and two sets of stairs leading from the floor into the water. The bottom of the pool was made of ceramic tiles of the dimensions 0.40×0.25 m. The round hole in the bottom of the pool, at its northern wall, of the diameter of 0.15 m, was used for draining water. In the south-eastern part of the *palaestra*, north of the open-air *natatio* pool, a section of a sewer running along the "West-East" axis and covered with monolithic stone slabs was encountered. The studied length of the sewer (squares XVII 223, 224) is 11.70 m, its width is between 0.76 and 0.83 m, and its maximum depth, 1.04 m. The lower part of the sewer is made of rough-hewn stone blocks bound with lime mortar, and its upper part, of two or three layers of brick. In the north, the walls of the sewer adjoin an arched opening in a wall running along the "North-South" axis. The opening is 0.62 m wide at its bottom and 0.65 m wide at the base of the arch, which is made of brick and pointed. The height of the opening up to the apex of the arch amounts to 0.85 m. The stone bottom of the sewer is 3 cm below the brick bottom of the opening. Two smaller sewers opening off the northern wall of the *natatio* in the west and the east drained water from the pool and carried it to the main sewer described above. The former run at a distance of 3.20-3.60 m from each other, a little diagonally along the "South-East--North-West" axis. The southern wall of the main sewer is 1.20-1.30 away from the northern wall of the *natatio*. South-west of the sewer, a part of a gutter has been exposed, 1.20 m long and 0.77 m wide, covered with ceramic slabs and running along the "North-South" axis. The gutter apparently carried rain water off the roof of the bath directly to the sewer. The gutter entered the wall with pilasters at the very north-west corner of the *natatio*. Smaller objects found in the sewer date the period of its operation to late 2nd-early 4th century AD. Most numerous objects date to the early 3rd century, including coins of Jordanus III (238-244) and fragments of earthenware pottery made at the workshops in Butovo.⁸

A large hypocausted interior has been partly unearthed in the south-western part of the complex of the bath. Only the south-western corner of this room has been exposed so far. Its southern wall has been revealed at a length of 14.30 m, and its western wall, at a length of 1.80 m. 92 brick supporting posts have been encountered in the explored south-western part of the room. The posts, extant up to a maximum height of 0.82 m, consist of a base, made of a ceramic slab of the dimensions of $0.39 \times 0.42 \times 0.06-0.08$ m, on which one, two or three other square ceramic slabs are placed, of the length of the side of 0.27-0.30 m and the thickness of 0.04-0.06 m, and on top of this, several bricks of the length of the side of 0.19 m and the thickness of 0.08-0.085 m, laid one on another. Four vaulted brick channels have been found in the southern wall. The westernmost one is 0.66-0.63 m wide, 0.88 m high (including the vault) and 1.20 m deep. The second one (looking to the east) is 0.70 m wide, 0.85 m high and 0.96 m deep. The



Fig. 7. *Novae*. The *natatio* of the bath: stone seats and stairs leading from the *frigidarium* into the pool. View from the north. Photo P. Namiota



Fig. 8. *Novae*. A sewer used, among other purposes, for draining water from the *natatio*. View from the west. Photo A.B. Biernacki

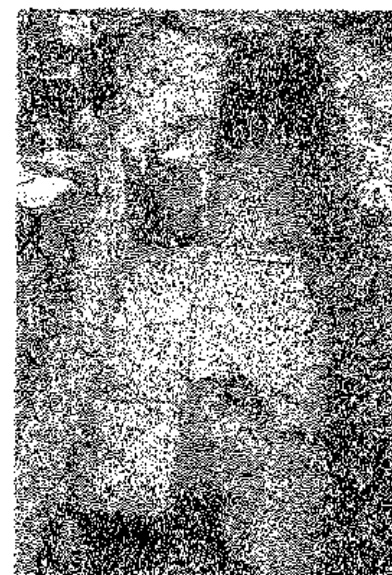


Fig. 9. *Novae*. The passage between the *frigidarium* and the *apodytherium* of the bath. View from the west. Photo A.B. Biernacki



Fig. 10. *Novae*. The western wall of the *palaestra* with pilasters. View from the north. Photo A.B. Biernacki



Fig. 11. *Novae*. The hypocaust below the large interior in the south of the bath complex. View from the north-west. Photo A.B. Biernacki

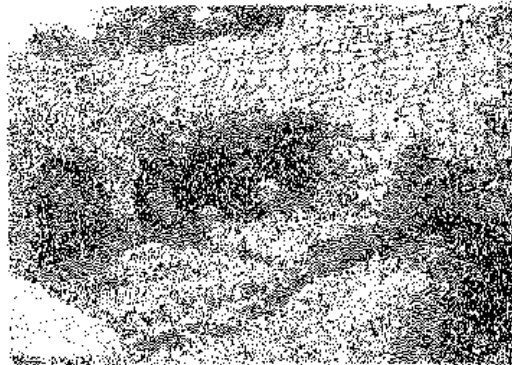


Fig. 12. *Novae*. The hypocaust below the pool in the south of the bath complex. View from the north-west. Photo A.B. Biernacki

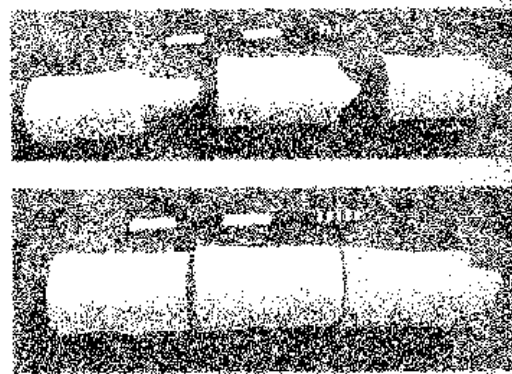


Fig. 13. *Novae*. Ceramic tubes from the ribs of the vaulted ceiling of the large interior in the south of the bath complex. Photo A.B. Biernacki

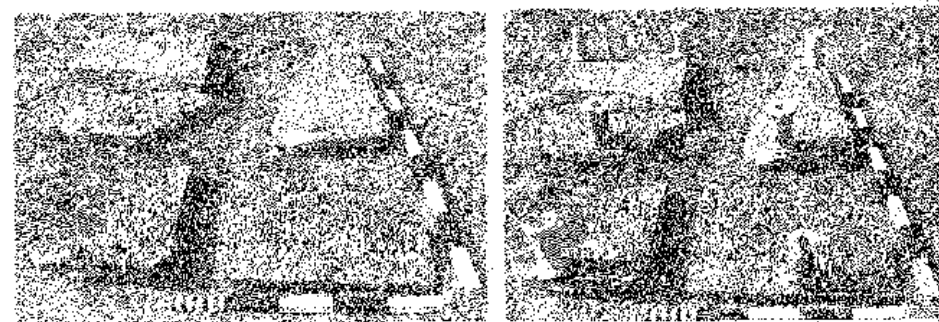


Fig. 14. *Novae*. Ceramic tiles from the heated walls, with ceramic spacing bobbins (*tubuli*). Photo A.B. Biernacki

third one is 0.60 m wide, 0.90 m high and 0.90 m deep. Finally, the fourth, easternmost one, is 0.58-0.60 m wide, 0.95 m high and 0.98 m deep. Interestingly, only one of these hypocaust channels was fully open at the moment of its discovery, and the other three had been closed up in the south by means of brick walls at unknown times. This suggests that the nature and purpose of the room changed as a lower temperature was required inside it. The differences in the floor levels at the two ends of the operational channel evidence that hot air flew from the north to the south, i.e., that the northern room was cooler at the time of its operation than the large interior with the 92 discovered hypocaust posts.

In the northern face of the wall an opening, apparently used for ventilation, has been revealed, of the width of 0.24 m, the height of 0.21 m, and the depth of 1.05 m. Another feature of the southern wall is an entrance of the width of 1.98 m with a preserved monolithic threshold of the thickness of 0.16 m. The southern wall of the bath is preserved up to a maximum height of 3.22 m above the floor of the hypocaust. During the exploration, fragments of large rectangular ceramic slabs have been found, with cylindrical appendages (pins) of the height of 0.013 m and the diameter of 0.033-0.038 m. A slab of the dimensions of 56.0 × 0.43 × 0.025-0.036 m was furnished with three such pins: two in the corners of one shorter side, and a third one in the middle of the other shorter side. The slabs were the tiles which originally lined the heated walls in the room of the legionary bath. They were secured by means of the pins and spacing bobbins (*tubuli*). These are the first wall tiles of this type found in *Novae*; their design differs from those of the other common types of *tegulae mammatae*.⁹ Wall tiles in the discussed room were coated with lime plaster and decorated with simple painted geometrical patterns filled with ornamental plant motifs. Stucco cornices with Ionic *cymatia* adorned the upper parts of the walls. Instances of similar stucco-work and wall painting appeared, e.g., in Pannonia in the first centuries AD.¹⁰ A hypocaust system of a unique design has been found in the western part of the discussed room. It is a system of stone and brick hypocaust posts in an excellent condition of preservation and with extant brick ceiling vaults, one of the very few known from this part of the Empire. The upper parts of the hypocaust were not buried at the moment of its discovery. The section which has been explored so far has the dimensions 5.50 × 3.00 m. The supporting posts, 0.60 m high, are mostly made of ten bricks of the dimensions 0.27 × 0.27 × 0.05 m, bound with white lime mortar with the addition of fine gravel. They support the ceiling vaults made of bricks of the dimensions 0.27 × 0.14 × 0.05 m and 0.40 × 0.27 × 0.05 m. The maximum clearing between the floor of the hypocaust and the intradoses of the vaults is 0.80-0.90 m. A system of five (along the "West-East" axis) by four (along the "North-South" axis) ceiling vaults has been exposed in the hypocaust. At least three of the brick posts were replaced with rectangular posts of rough-hewn stone at a later period. Above the vaulted hypocaust, there is a three-layered floor 0.35 m thick, apparently the bottom of a bathing pool, 1.43 m wide

and at least 5.85 m long. The western wall of the room (which was also a wall of the pool), partly preserved, was 1.30 m thick. North-west of the pool, there was a *prae-furnium* with a furnace 2.70 m long and 0.75 m wide. The *prae-furnium* is made of monolithic stone slabs of the dimensions between 1.21 × 0.70 m and 0.65 × 0.40 m, with marks of intensive use and exposure to high temperature. East of the furnace, numerous thick layers of ashes have been found. The *prae-furnium* was located in a room 3.90 m wide and more than 5.20 m long,¹¹ with a wall 0.70 m thick in the west and 2.00 m thick in the south. The present extent of exploration has not yet yielded sufficient data for reconstructing the layout of this complex of rooms in detail or for establishing their specific purposes. The big brick structure of the dimensions 2.90 × 2.50 m, which constitutes a corner of the room, might well have been the base of the tank which supplied water to the nearby pool. Exploration of the room revealed ceramic tubes having the characteristic shape of an amphora, inserted into one another and filled with lime mortar. These constituted the ribs of the vaulted ceiling of the room.¹² This design of vault ribs was previously known only from Asia Minor and Syria, dating to the period up to the reign of Constantine the Great.¹³

During the excavation seasons 1997-2000, a rectangular structure with impressive walls of the thickness of 1.50 m in the foundation part, was identified directly west of the *palaestra*. Neither the purpose nor the complete layout of this complex have been established yet. Certainly it was related to the legionary bath, and might have housed a large tank on the second story, supplying water to the bath.

It has already been ascertained that the length of the complex of the legionary bath was app. 81 m (app. 270 Roman feet) along the axis "North-South." Its width along the "West-East" axis must have been similar, amounting to more than 80 m. Thus, the total area of the complex of the legionary bath in *Novae* was app. 6400-6500 sq. m. Probably an entire living block of the city was allotted to the bath at the time of its operation.

Numerous small objects and the stratigraphic and architectural evidence gathered in this complex of rooms date the final stage of the rebuilding and operation of the bath to the period between the reigns of Jordanus III and Constantine the Great. The sources found in the layers corresponding to the time of the destruction of the bath prove that this took place during the war with the *foederati* in AD 376-382.¹⁴ It must be pointed out that similar layers with signs of the destruction at the time of the war with the *foederati* have been discovered in all the explored sectors of *Novae*.¹⁵

Notes

¹ Cf. *Novae* — Sektor Zachodni [Novae: The Western Sector] and interim reports of the excavation seasons of the Archaeological Expedition of the UAM in the yearbook *Archeologia* beginning with 1986, and in *Archeologia* XLVIII, 1997 (1998), 35-42.

² A.B. Biernacki, The Roman Legionary Bath of the 2nd Century AD in *Novae* (Moesia Inferior), [in:] *Limes Congress*, Amman 2000 (in print).

³ A.B. Biernacki, P. Pawlak, Preliminary Report on the Excavations of the Archaeological Expedition of Adam Mickiewicz University in Poznań, *Archeologia* XLVIII, Warszawa 1998, 38, 40.

⁴ A.B. Biernacki, P. Pawlak, Preliminary Report on the Excavations of the Archaeological Expedition of Adam Mickiewicz University in Poznań, *Archeologia* XLVII, Warszawa 1997, 75, 75. The coins were described by K. Dimitrov of the Institute of Thracian Studies of the Bulgarian Academy of Science.

⁵ J. Olczak, A.B. Biernacki, J. Kotecki, T. Herbiech, Rejon forum — odcinek X [The Region of the Forum: Section 10], [in:] *Novae* — Sektor Zachodni 1974, vol. I, Poznań 1978, 73-77; S. Parnicki-Pudełko, Rejon forum — odcinek X [The Region of the Forum: Section 10], [in:] *Novae* — Sektor Zachodni 1976, 1978, Poznań 1981, 8-11.

⁶ *Basilicae discopertae* of a similar design have been encountered, e.g., in the Julia Mommia Baths in Bulla Regia (Hammam-Barradji, *Africa Proconsularis*), the Large Baths of the "Palais du Légal" in Lambacsis, and the Bath-Gymnasium in *Odessos* (Varna); cf. I. Nielsen, *Thermae et Balnea. The Architecture and Cultural History of Roman Public Baths*, vol. II, Aarhus 1991, 161, 176, 208.

⁷ A.B. Biernacki, Termy legionowe [The Legionary Thermae], [in:] *Novae* — Sektor Zachodni 1986, Preliminary Report on the Excavations of the Archaeological Expedition of Adam Mickiewicz University in Poznań, *Archeologia* 39, 1988 (1990), 151-155.

⁸ E. Klenina, Earthenware of the II-III Centuries A.D. from Excavation of Legionary Bath Canal in *Novae* (Moesia Inferior), [in:] Proceedings of the Conference *The Roman and Late Roman City*, organized by the University of Nottingham (Great Britain) in Veliko Tarnovo (Bulgaria) in July 2000, Sofia 2001 (in print); E. Klenina, Some Remarks about Roman and Early Byzantine Pottery from *Novae* (Moesia Inferior), *Limes Congress*, Amman 2000 (in print).

⁹ Jean-Marie Degbomont, Le chauffage par hypocauste dans l'habitat privé, *Études et Recherches Archéologiques de l'Université de Liège*, n° 17, Liège 1984, 135-137.

¹⁰ R. Thomas Edit, *Balaca. Mozaik, fresko, stukko*, Budapest 1964, IV, XVI, LXXV-LXXVII.

¹¹ The western wall of the room has been uncovered only at this length.

¹² S. Medeksza, *Willia Tezeusza w Nea Pafos. Rezydencja antyczna [Theseus' Villa in Nea Pafos. An Ancient Residence]*, Wrocław 1992, 57, fig. 46c.

¹³ N. Davey, *Storia del materiale da costruzione*, Milano 1965, 111-112.

¹⁴ R. Hoddinott, *Bulgaria in Antiquity*, London and Tonbridge 1975, 240; E. Klenina, Some Remarks about Roman and Early Byzantine Pottery from *Novae* (Moesia Inferior).

¹⁵ С. Пarnицки-Пуделко [S. Parnicki-Pudełko], Крепостните порти на Нова [The Fortified Gateways of *Novae*], *Археология [Archeologia]*, София [Sofia], 1981, кн. [vol.] 4, 15; P. Dyczek, New Late Roman *Horreum* from Sector IV at *Novae*, [in:] *Late Roman and Early Byzantine Cities on the Lower Danube from the 4th to the 6th Centuries A.D.*, ed. Andrzej Biernacki and Piotr Pawlak, Poznań 1997, 93; E. Genčeva, La production dans le camp militaire romain *Novae* pendant la basse antiquité (à l'instar du *scammum tribunorum*), [in:] *Der Limes an der unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 95.

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THE ANCIENT MARBLE OF *PROCONNESOS*^{*}

Scientists and scholars worldwide, among them archeologists, use many names of the varieties of marble which have been quarried, applied for practical purposes and transported since the antiquity, as numerous more or less reliable studies have established. These varieties of marble include a material called "*Proconnesian*." However, although much information is available on the sites where other varieties of this stone were excavated, relatively little was known of this type of marble until recently. Even in Turkey, where it is quarried at present, the term "*Proconnesian marble*" was not used before 1971. In fact, it is still exported under the trade name "*Marmara White*."

We know that marble quarries existed on this island since as early as the 3rd century BC, but all the available information on such activity comes from inscriptions and other archeological finds located outside the island. It was only in contemporary times that the very thick layer of debris covering the ancient facilities was removed during the construction of two breakwaters.

This discovery not only aroused an interest in the quarries on the island, but also launched investigations into the relationships between the quarries and the sites of the located ruins of stonemasons' workshops in northern Turkey. As a result, the Ancient Department of Ankara was established, and systematic research started, originally directed by Dr. N. Firatlı and now continued by N. Asgari. A debate on the techniques of the excavation and distribution of marble from other ancient quarries began among scientists from various countries. The authors of the numerous studies of this subject include W. Deichmann [1969, 291-307], J.B. Ward-Perkins [1972, 138-158], W.F. Betsch [1977, 287-289], D. Mona, P. Pensabene [1977, 147-173], J.P. Sodini [1977, 423-450] and C. Barsanti [1989, 91-221].

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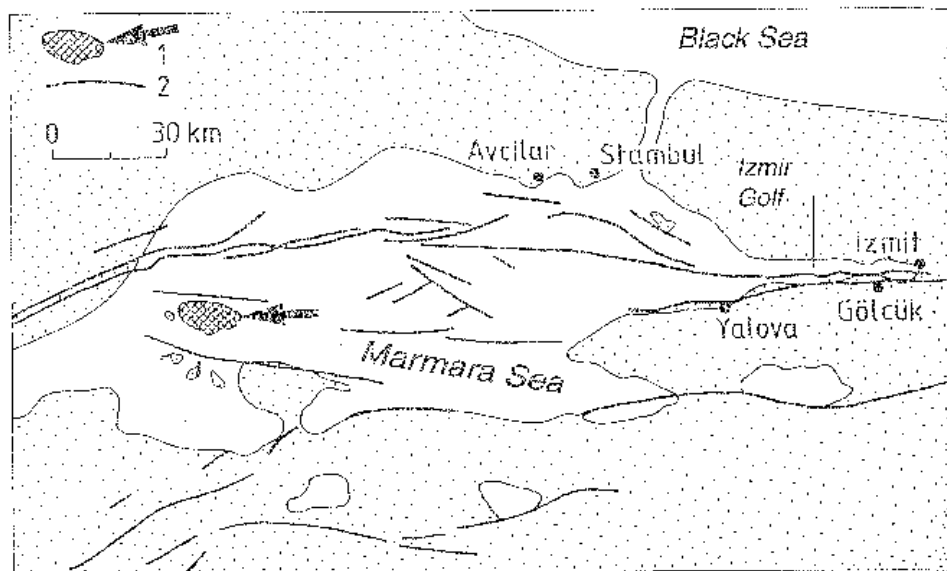


Fig. 1. The geographical and tectonic location of the island of Marmara: 1 — the island of Marmara and the ancient *Proconnesos*; 2 — the lines of the faults

In August 2000, the present authors traveled to the island of Marmara in order to inspect the present condition of the quarries and the remnants of the ancient facilities, take photographs and make drawings for the documentation, and collect samples of marble for petrographic, chemical, X-ray and isotopic tests. The results of such tests shall provide a basis for comparative studies of the Proconnesian marble found at various archeological sites.¹

Marmara (the ancient *Proconnesos*) is the largest island in the Sea of Marmara. It is a part of the Turkish territory, and its Turkish name is "Marmara Adasi." This mountainous island has an area of 75 sq. km, and is 18 km long (from the east to the west) and 10 km wide (from the north to the south). Its highest elevation is 699 m asl. The inland Sea of Marmara, with coasts in north-western *Asia Minor* and the Balkan Peninsula, is a part of the chain of communicating seas (the Black Sea, the Sea of Marmara and the Mediterranean Sea) which divide Europe from Asia and Africa. The names of both the sea and the island are derived from the Greek "*marmaros*," or "marble." The ancient Greeks called the sea "Propontis," or "the threshold of the Pontos (the Black Sea)." The shape of the Sea of Marmara is close to an ellipsis. Its length is more than 200 km, average depth 250 m, and the maximum depth, 1389 m. The estimated area of the sea is 1200 sq. km, and its capacity, 30,000 cu. km.

High salinity is characteristic of the sea, amounting to 26‰ on the surface and up to 38‰ at the bottom [Encyclopedia 1997, 11-53, 491-500].

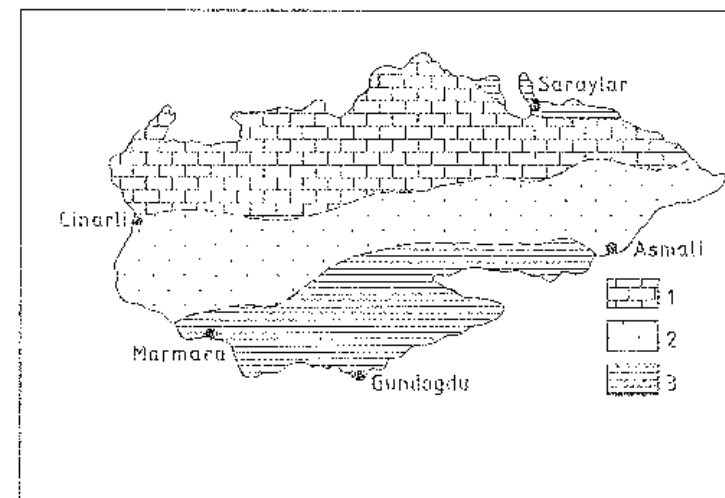


Fig. 2. The geological structure of the island of Marmara (after Asgari 1978): 1 — marble; 2 — gneiss; 3 — shale

The Sea of Marmara fills a tectonic collapse sink which developed in the late Tertiary and early Quaternary. As recently as at the end of the Tertiary Period, the north-western part of Anatolia, bordering on the sea, still communicated with the mountains in Thrace and the Rhodopes. Due to the breaking of the Earth's crust, a tectonic collapse sink developed, which turned a former river bed into the straits of the Bosphorus and the Dardanelles. However, the two straits differ considerably. The Dardanelles, the straits which joins the Sea of Marmara with the Aegean Sea, is app. 120 km long and 1.3-27 km wide. It is relatively shallow, its maximum depth amounting to 153 m, and minimum, to 29 m. It cuts through a layer of Tertiary limestone, marl and sandstone. Its shores are flat and treeless. The strait of Bosphorus is a meandering channel app. 31 km long and 0.7-3.8 km wide. Its shores are steep and abound in inlets (fig. 1). The strait cuts through old Paleozoic structures of shale and sandstone, and old volcanic rock. Both straits allow exchange of water between the seas, the outflow of water from the Black Sea being much larger than from the Aegean Sea.

Earthquakes are frequent in the basin of the Sea of Marmara. The one that took place on July 17, 1999, in the region of Izmit (the ancient *Nicomedia*) was particularly disastrous, taking many lives and causing enormous damage. The earthquake occurred 15 km under the ground, east of Gölcük on the North Anatolian Fault (fig. 1). The Fault, 1600 km long, extends from the east of Turkey to Greece, and basically consists of a series of smaller faults, constituting the boundary between the Eurasian and the considerably smaller Anatolian plates of the lithosphere [Mišar 1987, 219-255; Zuchiewicz 2000, 971-990]. Although the two

plates are joined, the Anatolian plate moves faster westward (toward Greece), at the speed of 2.5 m per 100 years [Gore 2000, 32-71; Tectonics 1982, 515-555]. The North Anatolian Fault has caused thirteen large earthquakes since 1939. Currently its most disturbed area is a section app. 160 km long under the Sea of Marmara, passing some 25 km away from Istanbul. More than 600 documented earthquakes have ravaged this region during the last 2000 years, including forty of a magnitude of over 7 seven steps of the Richter scale. A wave of powerful earthquakes swept through the region between mid-4th and mid-6th century, affecting all of its major cities. This mysterious event is called the Early Byzantine Tectonic Paroxysm [Gore 2000, 32-71; Herz 1988, 6-10; Piccardi 2000, 219-251].

The same fault might well have caused a gigantic flood that filled the basin of the Black Sea some 7500 years ago. We suppose that the general level of sea water rose at the end of the glacial epoch, although a natural barrier located at the present site of the Bosphorus held the water of the Sea of Marmara. When the barrier eventually collapsed, app. 40 cu. km of sea water flow each day to the Black Sea, whose water level was some 150 m lower. The water might have kept moving during many months, at a rate of 1.5 km per day. This theory, proposed by W. Rijn and W. Pitman, is additionally confirmed by the evidence of R. Ballard, who 150 m under the sea discovered a beach with shells of freshwater mollusks dated to app. 7800 years ago and later (7300 years ago) shells of sea mollusks [Gore 2000, 32-71].

Quarries and stonemasons' workshops have been operating on the island of Marmara since the antiquity. Stonemasons' workshops are located in Saraylar, the village around which the quarries are found. Fig. 7 provides an outline of the geological structure of the island. Its northern part is composed of marble, the center of gneiss, and the southern part, of muscovite shale. The boundaries between the various types of rock are very interesting areas. The village of Saraylar, situated in the north of the island, is at present the center of intensive excavation of marble (figs. 7, 8). As the excavation is now conducted twenty-four hours a day, the immediate vicinity of the village has been badly devastated, with mounds of dumped excavation and manufacturing refuse growing among the faces of snow-white marble. This intensive activity must have eradicated any possible traces of the earlier excavation, although such items of ancient stonemasonry as are found at this site are preserved in the seven provisional collections (fig. 9).

The modern excavation consists in mechanical drilling and removing of large lumps of marble, which subsequently, still in the quarry, are cut into blocks of the dimensions of 120 × 100 × 80 cm and 240 × 180 × 120 cm. Bulldozers carry the blocks to the edge of the quarry, where they are loaded on trucks and taken to the port for a further shipment by boat.

The marble is white with gray spots, scored with dark layers or stripes. A microscope study reveals that there are two types of the stone: medium-grained calcite marble and fine-grained calcite-and-dolomite marble containing musco-

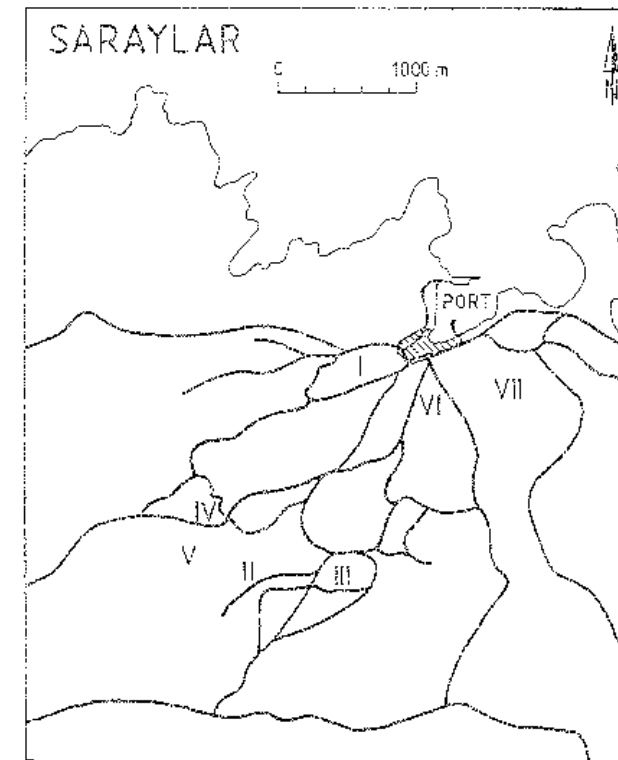


Fig. 3. The location of the collections of ancient stone finds around Saraylar

lite. The dark stripes are made of minerals which are not transparent in a microscope study. The marble may be easily polished, ground and smoothed.

In 1971, the construction of two breakwaters started in the west of Saraylar, during which a necropolis was discovered in a valley and archeological investigation of the quarries began. The necropolis is located between the village and the valley, its area extending from the east to the west (fig. 4). Although the investigation revealed no remnants of the Greek period, numerous objects from the Roman and Byzantine periods were discovered [Asgari 1978, 467, 468]. App. 48 sarcophagi were unearthed in the necropolis, including ten preserved *in situ*. These were family graves of poor people, each containing several skeletons. All the sarcophagi had manufacturing defects, and apparently were rejected from lots of products prepared for exportation. A more thorough investigation exposed seven sites where the prefatory cutting of stone was done in the ancient times. During their stay on the island, the present authors managed to visit four of these sites. Some marble items are exhibited in the collection at the necropolis, which consists of 84 columns, capitals of columns, sarcophagi and sculptures preserved at various stages of the work (figs. 3, 4, 5).

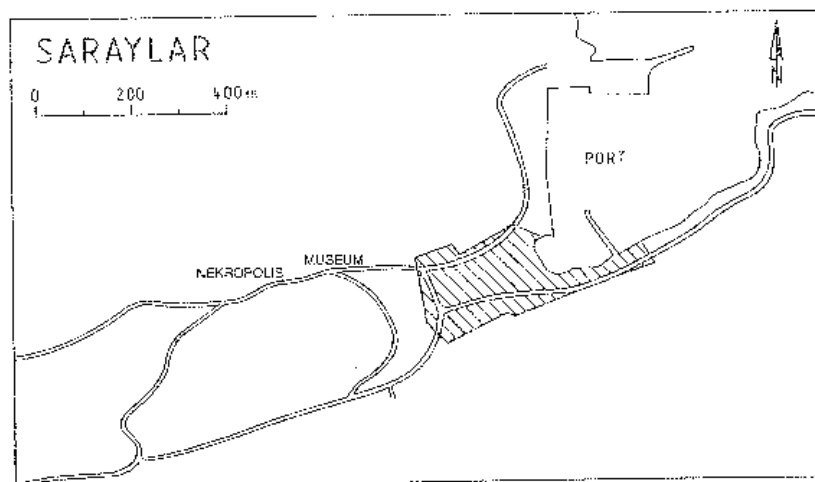


Fig. 4. The location of the port and the first discovered necropolis on the island of Marmara

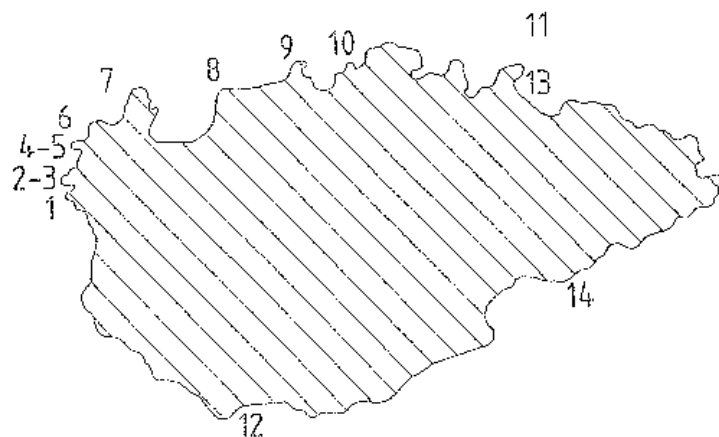


Fig. 5. The location of the underwater archaeological finds, sunk during transportation

Not much is known of the history of the settlement of the island. Source texts tell us that the people of *Miletus* colonized the island in mid-8th century BC, and that afterward the citizens of *Cyzicus*, the largest city in the area, settled there as well [Hasluck 1910, 30-35]. The quarries became famous as early as in the 4th century BC: We read of them in a text by Vitruvius which says that the Proconnesian marble was used for the construction of the Mausoleum in *Halicarnassus* ("although all the ornaments at the palace of the mighty king Mausolus in *Halicarnassus* are made of the Proconnesian marble, its walls are brick..." [Vitruvius 1999, 61, II, 8, 19]).

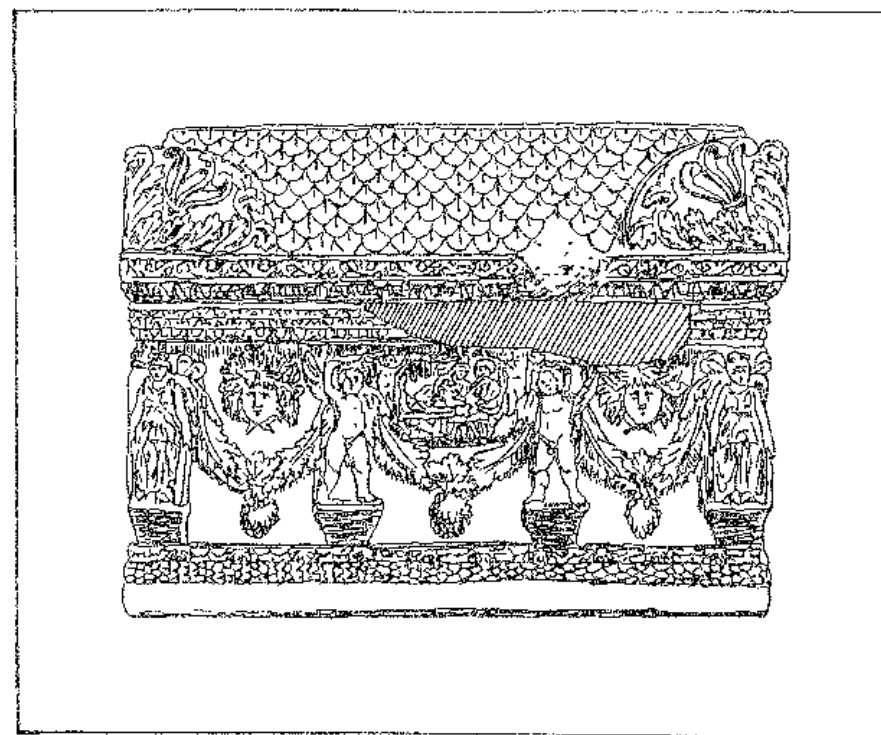


Fig. 6. An example of the "garland sarcophagus," the most often exported type, made of the *Proconnesian* marble

The excavation and exportation of marble must have been a substantial industry on the island since a very early period, but it was only in the 1st century AD, during the reign of Tiberius, that truly large-scale excavation began, when the quarries were reorganized and became property of the state [Wiegartz 1974, 346]. Accordingly, the island grew into a major center of stonemasonry; in the course of the 2nd and the 3rd century its products prevailed on the markets of the eastern Mediterranean, and in the region of the Black Sea, the Proconnesian marble began to compete with the *Pentelicus* marble from Attica (fig. 6).

A completely new system of manufacturing and supply emerged over several decades, and, continuously developed and improved, was to operate until the late antiquity with only minor modifications. The marble items were made either on the island, or in the workshops and storage facilities in the mainland coastal cities of *Cyzicus* and *Nicomedia*. At that time, *Nicomedia* was the administrative center of *Bithynia*. An extremely valuable source of information on this subject is a letter of Pliny the Younger to Trajan, where the author recommends that a canal be constructed between *Nicomedia* and the nearby lake of *Sophon*, in view of the difficulties with the land transportation of marble — not only Proconnesian [Plinius Gaius Caesilius (Minor) 1982, X, 42].



Fig. 7. The marble excavated currently at a quarry in Saraylar

By the 4th century, most of the manufacturing activity took place at the workshops of Constantinople, the new administrative capital. The peak period of exportation was between late 5th and early 6th century.

If the *Proconnesos* quarries were able to export such large amounts of its produce to foreign markets, it was because the deposits of marble were located so close to the sea. Another reason for the lower price of this marble was the cheapness of sea shipment.

At the end of the 6th century, the recycling of finished architectural elements became a common practice, which, combined with the frequent assaults by the Persians and Arabs, limited the amounts of the excavated marble and lowered the prices and the quality of the products [Herman, Sodini 1977, 501]. Since the 8th century, the island was used as a place of exile for persons banished from Constantinople due to religious and political considerations [Hasluck 1909, 10].

The operation of the quarries and the manufacturing activity were resumed in the 9th century, when the extent of the work was similar to that in the 5th and 6th century [Betsch 1977, 287-289]. Evidence of these developments are the items exported to Bulgaria and Russia between the 10th and the 13th century, and the extensive use of the Proconnesian marble in the palaces of Constantinople until the 14th century [Čaneva-Dočevska 1984]. We read in the Ottoman archives that subsequently the quarries fairly regularly supplied the workshops in Istanbul from the 16th to the 19th century.

During all of that time, most population of the island consisted of Greeks, who worked at the quarries. In 1923 Turkey became a republic. The Greek population was forced to leave the island, and the workshops were now staffed by Turks from Ayancik on the Black Sea. Most of the present population of Saraylar originates from Ayancik [Asgari 1978, 469].

The fundamental source texts on the island of Marmara are the accounts of travelers, among them Cristoforo Buondelmonti, Reverendo Covelo and Texier. Many interesting illustrations are found in the diaries of their travels. Thus, the *Liber Insularum Archipelagii*, a historical description of a travel to the islands in the Aegean Sea and the Sea of Marmara, contains the earliest pictorial representation of the island of *Proconnesos*, made in Rodi by the Florentine adventurer Cristoforo Buondelmonti between 1420 and 1430 the *Codex Rossiano* 702 at the Library of the Vatican [Weiss 1964, 105-116].

Another important source is the map which Reverendo Covelo drew in 1677, showing the outlines of the coast with the promontory of *Cyzicus* and the little archipelago of the islands in the Marmara: Pasha, Limani, Aphia, Koutali and *Proconnesos*, the largest one [Hasluck 1906, 211, 212]. During his travel in 1848, Texier drew the port at Saraylar, showing the Byzantine tower (now entirely extinct), which was then located at the top of a hill, defending the access to the village [Texier 1862, 161].

There is very little preserved evidence of the sea shipment of marble, which



Fig. 8. Marble in the deposit *in situ*. A detail of the face of excavated stone. The layers of dark opaque material are visible

must have been the obvious manner of transportation. Two texts (hagiographic texts of high documentary value) contain clear references to this form of dispatch. The events which the anonymous chroniclers relate, albeit in a somehow anecdotal and literary style, are most probably narratives of actual situations and facts.

One text comes from the early 7th century and is a part of the tale entitled "The Miracles of St. George," and the other is one of the stories in the collection "The Miracles of St. Demetrius," originating from the late 7th century. In the first text, an (unspecified) emperor decides to rebuild a church holding the relics of St. George in his home country of Lydia Diospolis in Palestine. After the reconstruction began, it was noticed that the local area did not provide a suitable material for the columns at the church. Ready-made columns were brought from a distant country where a proper material appeared. They were shipped to Palestine on barks which had been made expressly for this purpose [Aufhauser 1913, 2-8].

The other text, better known, tells the story of St. Demetrius' miraculous aid to Cyprian, the bishop of Thaeanae. It features the account of the return of a ship from the capital to the city of Byzacena with a cargo of marble; the items which it brought included a number of columns, a pulpit and a ciborium, which were unexpectedly used at the church that bishop Cyprian was building to honor St. Demetrius [Lemerle 1979, 234-236].

Another important class of ancient source texts are tombstone inscriptions and inscriptions expressing gratitude, funded by private persons, legionary veterans and stonemasons of *Nicomedia*, and made in the Proconnesian marble. These include an inscription dated to mid-2nd century, found in *Nicopolis ad Istrum* (north-eastern Bulgaria) and constituting a dedication to Heracles by two stonemasons of *Nicomedia* called Maximus and Neikon [Ward-Perkins 1980, 34 (IG Bulg II: 674)]; an epitaph of Aurelius Andronicus, who imported the Proconnesian marble from *Nicomedia*, and his wife Aebutia Fortuna, dated to the 3rd century and discovered near Intermana Nahars in Umbria [Ward-Perkins 1980, 34 (IG Bulg II: 2247)]; and a dedication funded by the citizens of *Olbia* during the reigns of Septimius Severus and Caracalla, placed at the building of the bath, and ending with the names of the architects, who lived in *Nicomedia* and *Tomis* [Latyshev 1965, 174].

The most numerous group of sources on this subject are archeological finds, mainly sarcophagi, architectural elements and sculptures. Examples include the sculptures from the basilica of St. Paul in Rome, whose construction started in the 4th century and was financed by the state's funds [Krautheimer 1980, 123]. Other important items are located at the sanctuary of S. Mena nella Mareotide, whose construction was begun by the emperor Arcadius, continued by Theodosius II, and concluded during the reign of Zeno (474-491) [Schläger 1963, 114-120].

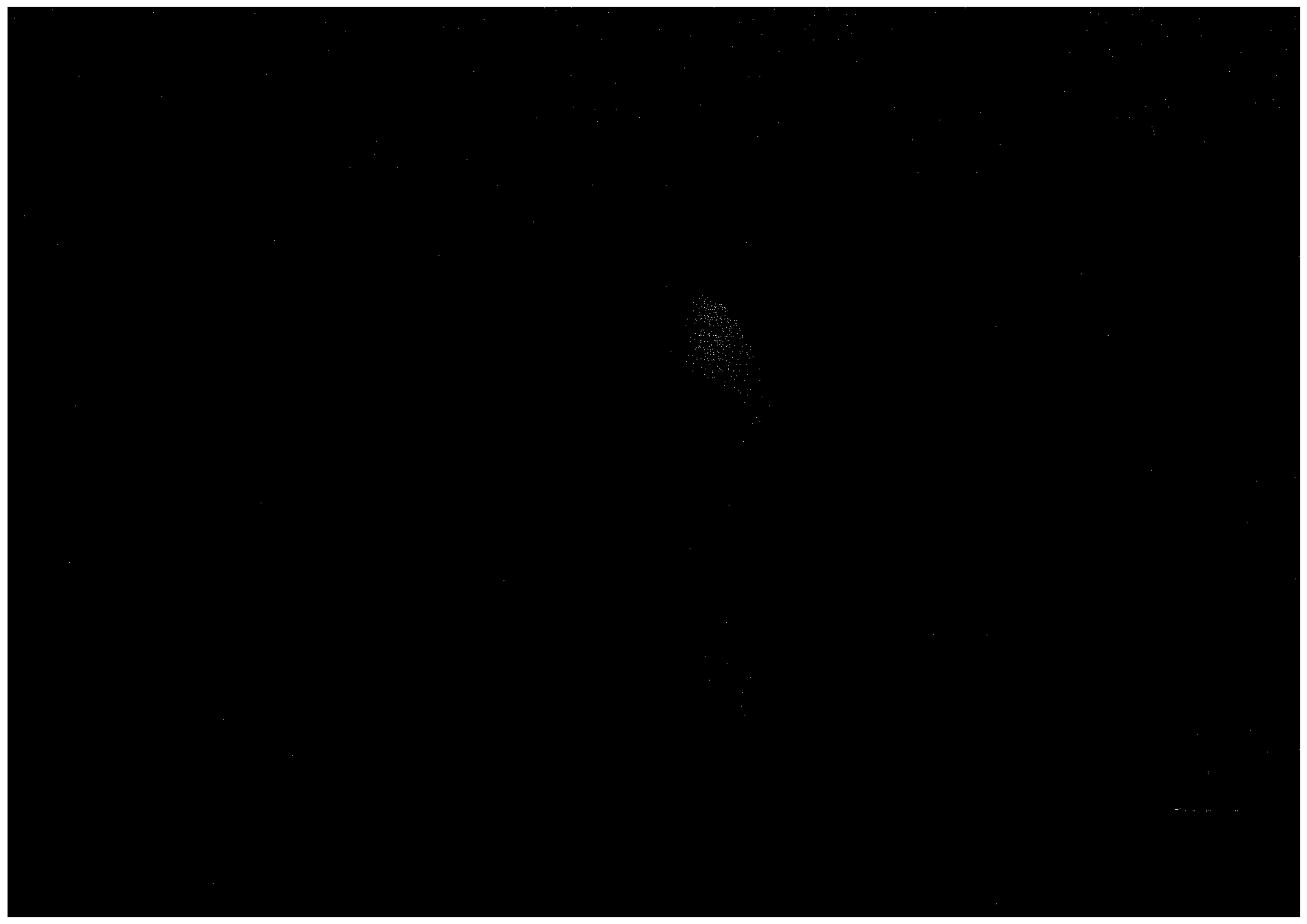




Fig. 9. The entrance to the museum in Saraylar



Fig. 10. A part of the collection of ancient stone finds in Saraylar



Fig. 11. A sarcophagus from the necropolis

Marble objects made at the workshops of Constantinople are found in many edifices, e.g., at the sanctuary of St. Thecla in Meriamlik near Seleuciadi in Cilicia [Herzfeld, Guyer 1930, 73-74], at the sanctuary dedicated to Theotokos on Mount Garizim in Samaria [Schneider 1951, 211-234], at the church and monastery erected in honor of apostle Barnabas in Salamis in Cyprus [Megaw 1974, 57-88], at the monastery Abu Makar in the desert Nitria [White 1932, 224], or at the episcopal basilica in *Novae* in Bulgaria [Biernacki 1997, 71-80].

We are now convinced that the archeological studies at Saraylar are of enormous scholarly importance, and the discoveries of the various items in the area of the present quarries have provided much valuable information on the ancient techniques of the excavation and cutting of marble. Such finds should be lastingly protected, but funds for this purpose are not always available. The objects uncarved near Saraylar are exhibited in a collection in the western part of the village. In the area of the quarries, which are still operating, the archeological finds are collected in dedicated sites. All of them have been cataloged, but as no lasting protection has been provided to them, they are exposed to the weather and to mechanical damage when being handled and carried. Suitable protection must be provided to architectural elements immediately after they have been exposed; otherwise they may suffer irreparable damage by becoming dried up or

moist, which makes them susceptible to parasites (fig. 10, 11). Precipitation settling on their surfaces and penetrating the interior of the stone material produces contaminating sediments of gases and suspended particles of solid matter. The effects of the lack of proper protection are conspicuous now, almost thirty years after the establishment of the collection.

The present authors did not manage to accomplish the main purpose of their travel, which was to identify the locations of the ancient excavation of marble, yet the opportunity for inspecting the marble *in situ* in its natural deposits and to study the numerous preserved ancient sculptures and architectural elements made of this material enabled them to appreciate in its entire extent the importance and potential of the island as an abundant source of marble stone. The deposits of the material are still substantial, which has resulted in the enormous intensity of excavation at modern times, and possibly also in the eradication of the possible signs of earlier activity. By collecting samples of the marble from its deposit and from the locally made architectural elements and sculptures, the authors acquired valuable material for petrographic and physical-and-chemical study. The samples will also be extremely useful in the comparative studies of the origin of marble, a preferred material in the antiquity.

The marble of *Proconnesos* does not display any unusual physical or visual features. In fact, the dark layers of opaque minerals disfigure the appearance of this stone. Why, then, were sculptures and architectural elements made of this marble so popular over such a vast area? This might have well been caused by two factors, both related to the location of the island and of its deposits of the stone. The island of Marmara was situated on a trade route from the coast of the Mediterranean Sea, and in particular of the Aegean Sea, to the region of the Black Sea. Thence, it was a location of enormous political, strategic and economic importance. Secondly, the fact that the marble was found on the very coast facilitated its shipment, minimizing the cost of land transportation and allowing the cheaper dispatch by boat.

Another result of our geological-and-archeological study was the emphasizing of the destructive impact of earthquakes on human settlements, both in the present and in the past.

Bibliography

- Asgari 1978 — N. Asgari, Roman and Early Byzantine Marble Quarries of Proconnesus. Proceedings of the 10th International Congress of Classical Archaeology, Ankara 1978, 467-480.
 Aufhauser 1913 — J.B. Aufhauser, *Miracula S. Georgii*, Lipsiae 1913.
 Barsanti 1989 — C. Barsanti, L'esportazione di marmi dal Proconneso nelle regioni pontiche du-

- rante il IV-VI secolo, *Rivista dell'Istituto Nazionale dell'Archeologia e Storia dell'Arte* serie III, XII, Roma 1989, 91-221.
 Betsch 1977 — W.F. Betsch, The History, Production and Distribution of the Late Antique Capital in Constantinople, Univ. Pennsylvania Ph. Dis. Fine Arts (Ann Arbor 1979).
 Biernacki 1997 — A.B. Biernacki, P. Pawlak, Remarks on early Christian architectural details made of Proconnesian marble and found in Novae (Moesia Inferior), [in:] Late Roman and early Byzantine Cities on the Lower Danube. International Conference Poznań, Poland, 15-17 November 1995. Studies and Materials, Poznań 1997.
 Čaneva-Dečevska 1984 — N. Čaneva-Dečevska, Church architecture of the First Bulgarian State, Sofia 1984.
 Czeżowski 1946 — A. Czeżowska, *Kamieniologia*, Warszawa 1946.
 Deichmann 1969 — F.W. Deichmann, Konstantinopler und Ravennatische Sarkophag-probleme, *Byzantinische Zeitschrift* 62, 1969, 291-30.
 Encyklopedia 1997 — Encyklopedia geograficzna świata [The Geographical Encyclopedia of the World], t. 6: Azja, Kraków 1997.
 Gore 2000 — R. Gore, Gniew bogów. Trzęsienie ziemi w Turcji. Historia wykuwana przez katastrofy, [The Wrath of the Gods. The Earthquake in Turkey. History Wrought by Disasters], *National Geographic. Polish Edition*, vol. 2 (7), 2000, 32-71.
 Hasluk 1906 — F.M. Hasluk, Notes on manuscripts in the British Museum relating to Levant geography and travel, *Annual of the British School at Athens* 12, London 1906, 211-212.
 Hasluk 1909 — F.M. Hasluk, The Marmara Islands, *Journal of Hellenic Studies* 29, London 1909, 8-18.
 Hasluk 1910 — F.M. Hasluk, *Cyzicus*, Cambridge 1910.
 Hermann, Sodini 1977 — J.C. Hermann, J.P. Sodini, Exportations de marbre thasien à l'époque paléochrétienne; le cas des chapiteaux ioniques, *BCH* 101, 1977, 471-511.
 Herz 1988 — N. Herz, Geology of Greece and Turkey: Potential marble source regions, "Classical Marble: Geochemistry, Technology, Trade", NATO ASI Series, 1988, 6-10.
 Herzfeld, Guyer 1930 — E. Herzfeld, S. Guyer, Meriamlik und Korykos. Monumenta Asiae Minoris antiqua, Manchester 1930.
 Krautheimer 1980 — R. Krautheimer, *Corpus Basilicarum Christianarum Romae*, V, Città del Vaticano 1980.
 Latyshev 1965 — B. Latyshev, *Inscriptiones Antiquae Orae Septentrionalis Pontis Euxinae*, I.
 Lemerle 1979 — P. Lemerle, Les plus anciens Internatio recueils des miracles de Saint Démétrius, Paris 1979.
 Megaw 1974 — A.H. Megaw, Byzantine architecture and decoration in Cyprus: Metropolitan or Provincial? *Dumbarton Oaks Papers* 28, 1974, 57-88.
 Mišar 1987 — Z. Mišar, Regionální geologie svcta, [Regional Geology of the World], Praha 1987.
 Mona, Pensabene 1977 — D. Mona, P. Pensabene, Marmi dell'Asia Minore, Roma 1977.
 Piccardi 2000 — L. Piccardi, Active faulting at Delphi, Greece, Seismotectonic remarks and a hypothesis for the geologic environment of a myth, *Geology*, vol. 28, No 7, 2000, 219-251.
 Plinius Gaius Caesilius (Minor) — Plinius der Jüngere. Briefe. Lateinisch und Deutsch von Helmut Kasten, Berlin 1982.
 Schläger 1963 — H. Schläger, Abu Mena, *Kairo Mitteilungen* 19, 1963, 114-120.
 Schneider 1951 — A.M. Schneider, Römische und byzantinische Bauten auf dem Garizim, *Zeitschrift des deutschen Palästina-Vereins* LXVIII, 1951, 211-234.
 Sodini 1977 — J.P. Sodini, Remarques sur la sculpture architecturale d'Attique, de Béotie et du Péloponnèse à l'époque paléochrétienne, *BCH* 101, 1977, 423-450.
 Tectonics — Tectonics of Europe and adjacent areas, Moscow 1982.
 Texier 1862 — C. Texier, *Asie Mineure*, Paris 1862.
 Ward-Perkins 1972 — J.B. Ward-Perkins, Quarrying in Antiquity: Technology, Tradition and Social Change, *Mortimer Wheeler Archaeological Lecture* LVII, 1972, 138-158.

- Ward-Perkins 1980 — J.B. Ward-Perkins, Nicomedia and the Marble Trade, *Papers of the British School at Rome* 48, 1980, 23-59.
- Weiss 1964 — R. Weiss, Un umanista antiquario: Cristoforo Buondelmonti, *Lettere Italiane* 16, 1964, 2, 105-116.
- White 1932 — H.G.E. White, The Monasteries of the Wādī Nīrūr, II, New York 1932.
- Wiegartz 1974 — H. Wiegartz, Marmorhandel, Sarkophagherstellung und die Lokalisierung der kleinasiatischen Saeculensarkophage, *Mélanges Mansel* 1, 1974, 315-350.
- Vitruvius — O architekturyze ksiąg dziesięć, opr. Kazimierz Kumaniński, Warszawa 1999.
- Zuchiewicz 2000 — W. Zuchiewicz, Projekt IGCP 430: Wpływ dynamiki płaszcza na zagrożenia naturalne w obszarze tetyckim, [Project IGCP 430: The Impact of the Dynamics of the Mantle on Natural Hazards in the Tethyan Area], *Przegląd Geologiczny*, t. 48, No 11, 2000, 971-990.

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THE PORTICO BUILDING *EXTRA MUROS* IN *NOVAE*. INVESTIGATIONS AND PROBLEMS

The excavations at the site, situated about 75 m westward from the west fortified wall of the roman lager *Novae*, began in 1978 and are still going on. Even with the beginning of the prospecting of the lager, 40 years ago, the area westwardly from it was not left out of the account of the researchers. There are two reasons for this:

— according to the plan drawn by K. Škorpil in the beginning of the 20th century in that area a basilica was situated, which ruins were clearly seen on the surface [Škorpil 1905];

— the publication of S. Stefanov [Stefanov 1930/1931, 265], who ménages to clear out comparatively well the layout of the west water-main of *Novae*, passing in the immediate vicinity of the later located complex.

Head of the excavations at the site, known in the literature as VIII A, is Maria Čičikova for ten years now. The greater part of the publications about the revealed buildings during their different building periods belongs to her. The researcher pays particular attention to the found inscription and parts of bronze statues, which she publishes many times as a single author or together with V. Božilova [Čičikova 1987, 185-192; Čičikova, Božilova 1990, 44-50; Čičikova, Božilova 1990a, 611-619]. In her researches about clay lamps from *Novae*, M. Čičikova also includes separate specimens from the site VIII A [Čičikova 1987].

As a whole the researcher's opinion is that the building *extra muros* existed during the period between the second half of the 2nd century and the middle of the 3rd century, when it was destroyed by the devastating invasions of the Goths. Using the found inscription as a base, M. Čičikova thinks that the nourse residence of the legat of the I Italic Legion was situated here. She distinguishes two periods in the existence of the building. The main difference between them is that during the first period there was a pool in the inner court and during the second period it was filled up. Using the data from the numismatic material, M. Čičikova ascertains interruption in the life there after the middle of the 3rd century. According to her buildings are partly restored at the end of the same

century and the complex changed its function. An economic-production activity began there and the construction is from stone and mud. The next building period the researcher connects with the basilica and the necropolis attached to it that existed from the 5th century to the beginning of the 7th century [Čičikova 1987, 185-192; Čičikova 1997, 57-60].

While publishing different groups of materials from the Roman and the early Byzantine epochs in *Novae* the authors include some finds found in the site VII A as well — A. Miševa in her monograph about terra sigillata [Miševa 2000, kat. NN 132, 137], E. Genčeva in her publications about the fibulae [Genčeva 1998, kat. NN], Kolendo and collective in the *corpus* with inscriptions from *Novae* [Božilova and coll., 1992, kat. NN 46, 47, 48, 49]. Right here I want to mention that in no one of the publications the researchers didn't have the opportunity to use the whole material acquired during the many years of excavations. In spite of this the dates given by them are very precious in the dating of the different building periods and phases/stages.

I don't want to pass over one indecorous publication of the frescoes, found in the west part of the building, with authors Pillinger, V. Popova and collective in the *corpus* of late antique and early Byzantine frescoes from Bulgaria [Pillinger and coll. 1999, Abb. 51, 31-32]. The authors prefer the mural paintings to the bishop's basilica, which is prospected by the expedition from Poznań. From here comes their incorrect dating.

In some of the summary researches about the problems of the Lower Danubian *limes* a passage is left for the building *extra muros* in *Novae*, for example in those made by L. Press and T. Sarnowski, who consider its function was of a residence where high officials, staging temporary in the lager [Press, Sarnowski 1990, 239], rested as well as the monograph written by R. Ivanov, who states pedantically the option of the above mentioned authors [Ivanov 1999, 237].

In the recent years the archaeological researches of the building, though restricted, gave opportunity her plan and the building periods to be specified. In our research we are based mainly on our personal observation of the area and on the analysis of the movable material, but we also don't ignore the option of the authors, mentioned above. Of great importance is the numismatic material, one big part of the coins are defined by Kamren Dimitrov (AIM — Sofia), the other — by Marko Tzočev from the Historical Museum in Veliko Tarnovo. By the present moment over 100 coins are found.

The foundation of some installations in different parts of the site gave us grounds to propose one new dating of the architectural complex.

The processing of the numismatic material revealed that for the period — the second half of the 1st century- the first half of the 2nd century, there are about ten coins found. The six bricks with seals of the XI Claudius Legion as well as two bricks with seals of the I Italic Legion, which are found, are related to the beginning of the 2nd century. One bronze fibula from the first half of the 2nd century

and two pins made of bone are found. But all this materials didn't come from a firm archaeological area and are not related with architectural ruins. Though having in mind the immediate nearness at the site to the fortified walls of the lager and its west gate we think that in the end of the 1st century- the first half of the 2nd century the site was also inhabited and probably the end of this first building period must be connected with the invasions of the Costoboci in 170 AD. But at this stage of the research this is only a hypothesis, which is still unconfirmed.

In the south central part of the later peristyle court a masoned well, which preserved upper part lies 1.50 m below the level of the stone pavement, was found. The well is cleared at about 5 m in depth. The filling consisted of building and domestic pottery, mortar, fragments of colored plaster, slag etc. For the dating of this equipment most important are the following findings: the fragment *terra sigillata* from the first half of the 3rd century, the brick with a seal from the same time of the I Italic Legion and the coin found in the soil between the upper well masonry row and the pavement of the court, minted during the government of Philip - son (244-249). In this way we date the filling of the well and the end of its function in the middle of the 3rd century, by the time of the invasions of the Goths.

At depth of 1.50 m under the level of the court pavement a clay water-main running beneath it at the southwest corner, which was dugged into the sterile soil, was found. The water-main runs from southeast to northwest. Part of it was found even in the earlier archaeological excavations, but it was left without interpretation.

During the prospecting of the north part of the so called *tablinum* we found out that the south frontage of the north masonry is adjoined to an earlier masonry, on which white lime plaster was preserved. During the next building period these two masonries form the north masonry of the new premises. Important for the dating of these early premises is the found brick with seal of the *consul Marullus*, which is dated between 184 and 186. Another brick with the same seal was found in the hypocaust south from the inner court, about which I'm going to talk later. This bricks are a solid proof that the premises weren't earlier than the mentioned date.

In the premises north from the *tablinum* we found mortar floors, which we refer to the same building period. The results of the researches of the west part of the complex turned to be very interesting and important. There, under preserved stone pavement, forming an inner court, synchronic in time of existence with the big central court, we determinate parts of earlier premises with hypocaust and mortars floors. The walls were coated with plaster in white and red.

During this building period the so-called south hypocaust was built. In our opinion that unexplainable for the researchers diversion of the tiny columns from the wall directions is due to the fact that the above-mentioned water-main probably had taken the water away from it. The function at this part of the building was nothing else but a large in size bathroom.

The researches of the east part of the complex turned out to be very effective too. There parts of two premises were found, which walls were preserved only in substruction. Above these ruins, after leveling the ground up and lifting the level, definite data for buildings during the next building periods is found. Up to this moment the north wing of the complex during the first building period is yet not researched and this is going to be one of the main tasks during the following archaeological seasons.

Third building period of the complex (fig. 1)

To this period the following objects are referred: The inner peristyl court with *impluvium*, the north premises, the east entrance and the passage of limestone blocks formed to it the west wing of the building together with the small inner court the hypocausts (both floor and wall). During this period the sewerage system has the same destination - from south to north, meanwhile the lead water-main is already in use. Special beds in which the lead pipes are laid, are excavated on the stone pavement.

Interesting data connected with the dating of the third building period is found during the cleaning of the *impluvium*. Here, we are not going to discuss its design and site, but we will only mention, that its filling with brick with seal, not earlier than the first half of the third century and a few lamps with the make IANUARI were found. These being a provincial imitation that appeared in the second century were very popular during the third century and could be found even to the middle of the 4th century. Particularly typical is the cut disk (the same type is also known from Archar - 2 in number and from the region of Varna [no 256-257 by Kuzmanov, 1992]). Thus, it can be surely said that the pool wasn't closed earlier than the middle of the 3rd century, and having the materials from the second building period its referred to the second half of the 3rd century.

During this period the buildings were made of ashlars, welded together with very strong mortar mixed with small river stones.

Proceeding of the numismatic material it becomes evident that between the two building periods there was no suspension of life, as well as no change in the usage and function of the complex. Interesting is the fact that there is no numismatic materials from the last fifteen years of the 3rd century and from the first few years of the 4. Explanation for this can be found in the invasions of the Goths and other tribes, who broke trough the middle and lower Danube in the above mentioned period. It's known that at least in the vicinity of *Novae* there are destructions of this time and suspension of life for a known little period of time.



Fig. 1. Third building period of the complex

Here we should draw our attention to the found bases with inscriptions, one of which with autainty dating from the time of emperor Gordian III. According to us, the opinion of some authors (Čičikova, Božilova) that the pedestal belonged to a bronze statue of the legat of the legion of this time and that his residence (*praetoria*) was there is not argumented enough. Further more, during the researches other inscription are found, which are positively dated after the middle of the 3rd century. They are dedicated to Sarapis, Hecate etc. Thus we are more inclined to accept the stated hypothesis that the building *extra muros* is more likely to be a residence, where high officials, staging temporary in the larger, rested judging by the preserved fragments of inscriptions — military, as well

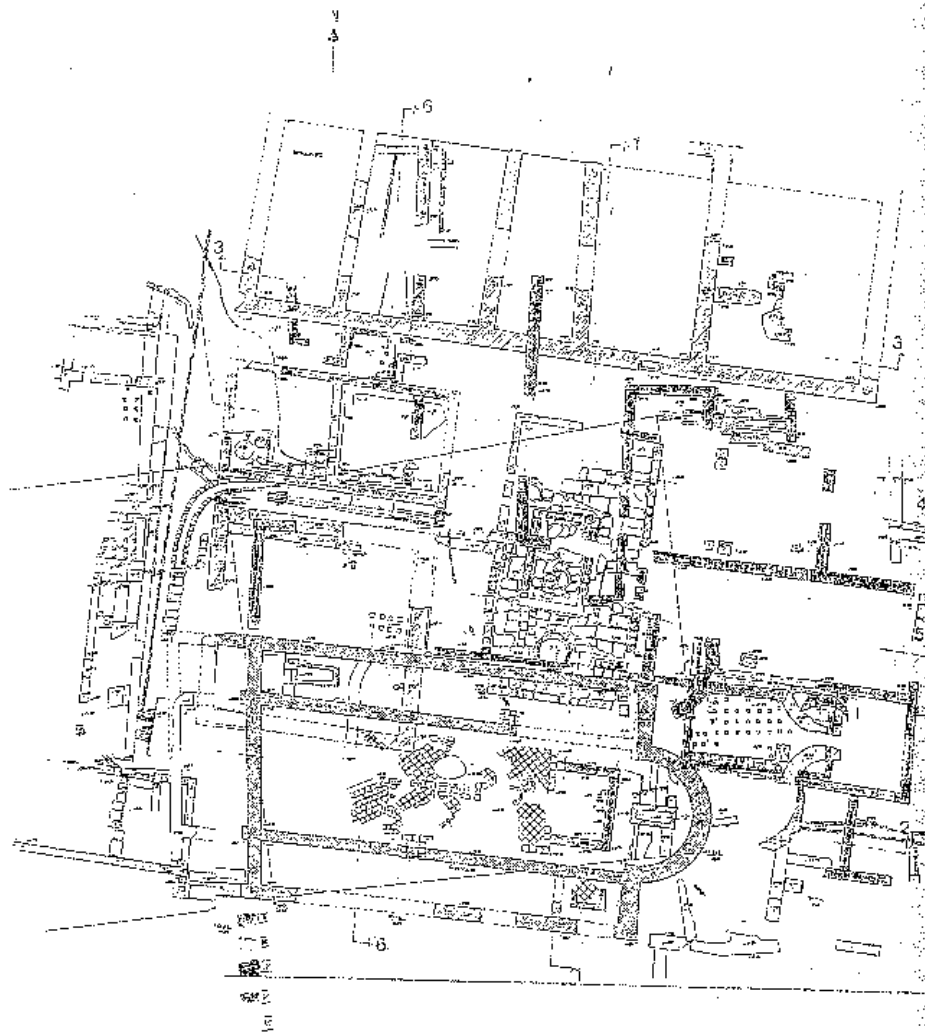


Fig. 2. Building period to the first decade of the 4th century

as civil or with priestly functions. According to us the architectural complex didn't change its usage from the last quarter of the 2nd century to the last fifteen years of the 3rd century. As to the inscription on the pedestal, mentioned above, we think that it is dedicated to high senator, who had visited the residence, respectively the lager, or had given a sum of money for its further building. We can positively state that this building was not a praetoria and that the legat of the legion didn't live there.

During the next building period, which beginning we refer to the first decade of the 4th century, the building changed considerably both its plan and its functions (fig. 2).

Some of the masonries of the early premises had a superstructure with adobe. A greater part of the walls are coated with colorful plasters. In the mortar we found pounded building pottery. Production facilities are built — two ovens. There is data for bone working too. The water mains are made of imbrexis and clay pipes and the direction doesn't change, while the sewers are included to south and east. During this period two phases can be differentiated. The numismatic material shows that the invasions of the Goths in 376-378 AD didn't have a fatal effect. Most probably the building is damaged and is totally destroyed in 408 or 423 AD, after one of the numerous invasions of the Huns. Valuable dating materials are also the bricks seals RUMORID found among the burnt fallen roof. Enough reliable data is known, giving grounds the building pottery sealed with that make to be dated for the period 2nd half of the 4th century, to the beginning of the 5th century. This dating coincides completely to the one proposed by us on the bases of the other archaeological material.

The data for the next building period is quite few in number (fig. 3). The buildings made of stones spoiled with mud welding belong to this period. It is interesting that to a great extent its orientation coincides almost completely to that of the earlier building periods. As an area it is far too small in size. In the west and south parts of the complex there are no traces of it. A floor level wasn't found too, except one section of the brick pavement, which is nearly on the level of the later basilica. We presume that it is about a passage between the two wings of the building. The lack of movable material makes the firm dating difficult. Still the thick layer that had heaped over the ruins of the previous building period shows that a long period had passed before this building was built and that it existed only for a little time. We don't exclude the possibility these buildings to be connected with the time of Theodoric's stay in *Novae* i.e. between 475-488 AD (according to the different interpretations of the researchers). If we accept that viewpoint, then the presence of the necropolis there in the next years, in which mainly materials belong to the culture of the Goths are found, is explainable.

It should be mentioned here, without going into details, some essential particularities connected with the found necropolis, of which 87 graves are researched. Until now it was accepted that the necropolis belonged to the basilica, situated to the south of it. This hypothesis is brought in question after we found a grave in the north nave of the basilica, which is being crossed by its walls. Thus it is categorically proved that the necropolis is not synchronous to the basilica. Furthermore the materials found in some of the graves are dating from the 2nd half of the 5th century.

The basilica belongs to a last building period on the area of the early complex. Two building periods are ascertained in its constructing. On the grounds of the numismatic material and the numerous parallels within the Byzantine Empire it is dated with certainty in the 6th century. Very interesting are the masoned brick graves, covered with stone plates which are found in the apsiada and in the

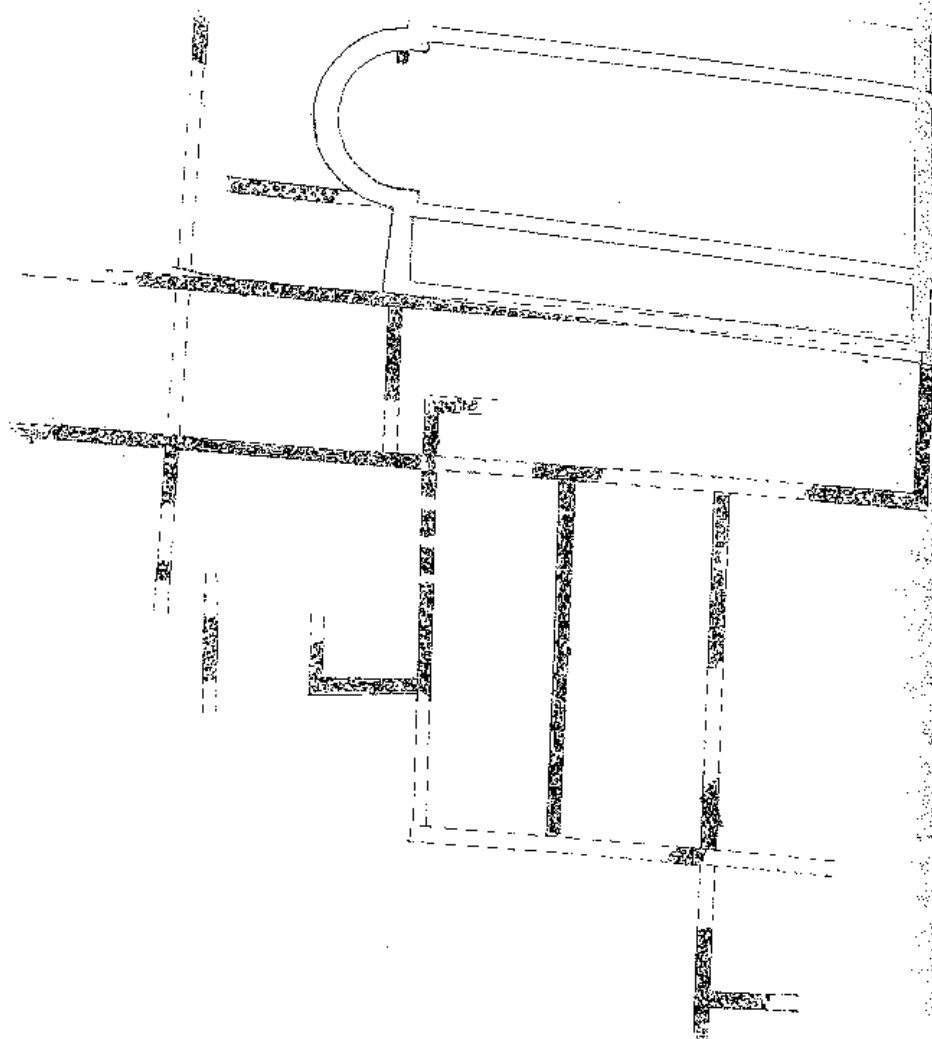


Fig. 3. Late Roman building period

north and south naves. Until this moment there is no interpretation of the problem of the situation of the basilica westward from the early Byzantine town. A complete and serious publication about both the necropolis and the basilica is needed.

During the following seasons the efforts of the researchers will be concentrated on the west and south parts of the complex. Our purpose will be its restriction in these directions and the research of the entire plan during the different building periods. The architectural data together with these of the numerous archaeological material would give us opportunity both for specifying of the dating

as well as for a categorical statement about the usage and the functions of the building *extra muros* in *Novae*.

Bibliography

- Božilova and coll. 1992 — V. Božilova, J. Kolendo, L. Mrozewicz, *Inscriptions Latines de Novae*. Poznań 1992, kat. NN 46, 47, 48, 49.
- Čičikova 1987 — M. Čičikova, Edifice a peristyle *extra muros* a *Novae*, *Ratiarensia* 3-4, 1987, 185-192.
- Čičikova 1987a — M. Čičikova, Pottery lamps from *Novae*, (Lower Moesia) (1st-3rd century) *Recherches sur la culture en Mesie et en Thracie (Bulgarie)*, *Bulletin de l'Institut d'Archéologie*, XXXVII, NN 61, 76, 77, 101, 127, 169.
- Čičikova 1997 — M. Čičikova, La basilique et la nécropole paléochrétiennes *extra muros* de *Novae* (Mésie Inférieure), [in:] *Late Roman and Early Byzantine Cities on the Lower Danube from the 4th to the 6th century AD*. Poznań 1997, 57-60.
- Čičikova 1999 — M. Čičikova, Lampes paléobyzantines de *Novae*, [in:] *Der Limes an der Unteren Donau von Diokletian bis Heraklios*, Sofia 1999, 105-110.
- Čičikova, Božilova 1990 — M. Čičikova, V. Božilova, Carrière sénatoriale d'un magistrat de *Novae* (milieu du III^e s.), [in:] *Studia in honorem Borisi Gerov*, Sofia 1990, 44-50.
- Čičikova, Božilova 1990a — M. Čičikova, V. Božilova, Nouvelle inscription d'un sénateur anonyme découverte *Novae* (Mésie Inférieure), *MEFRA*, 102, 1990, N 1, 611-619.
- Genčeva 1998 — E. Genčeva, Zapiski rzymskie późnoantyczne z *Novae*, *Novensia* 11, 1998, 7-31.
- Ivanov 1999 — R. Ivanov, The Defence System along the Lower Danube between *Dorticum* and *Durostorum* from Augustus to Mauricius, Sofia 1999.
- Kuzmanov 1992 — G. Kuzmanov, *Antični lampi*, Sofia 1992.
- Milčeva 2000 — A. Dimitrova-Milčeva, Terra sigillata und dünnwandige Keramik aus Moesia Inferior (Nordbulgarien), Sofia 2000, kat. 132, 137.
- Pillinger and coll. 1999 — R. Pillinger, V. Popova, B. Zimmermann (red.), *Corpus der spätantiken und frühchristlichen Wandmalereien Bulgariens*, Wien 1999.
- Press, Sarnowski 1990 — L. Press, T. Sarnowski, *Novae*. Römische Legionslager und frühbyzantinische Stadt an der unteren Donau, *Antike Welt* 4, 1990, 225-243.
- Škorpil 1905 — K. Škorpil, *Adoba-Pliska*, *IRAİK*, X, 1905.
- Stefanov 1930/1931 — S. Stefanov, Rimskite vodoprovodi na *Novae*, *IAT VI*, 1030/1931, 265.

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SOLDATS ET LE CULTE DE MITHRA DANS LES PROVINCES MESIE SUPÉRIEURE, MESIE INFÉRIEURE ET DACIE À LA LUMIÈRE DES INSCRIPTIONS

A côté des témoignages archéologique (restes des temples), iconographiques (statues, reliefs, objets de culte) les inscriptions sont une sorte irremplaçable des sources pour connaître le culte de Mithra. L'image la plus large de la situation nous donne l'analyse à tous les points de vue du matériel sur lequel l'inscription a été faite. L'essentiel forment les mesures du monument (du vestige), la précision de la mise en oeuvre, le lieu de son exposition. Ces éléments sont une indication qui peut nous donner les informations sur le donateur, sa situation sociale, économique, l'engagement au culte. Le plus des informations peut nous apporter l'inscription même. Quoique les inscriptions liées avec le culte de Mithra sont plutôt laconiques, essayons d'observer quelles informations nous donnent celles, érigées par les soldats stationnés sur les terrains des provinces Mesie Supérieure, Mesie Inférieure et Dacie.

Jusqu'à la fin des années quatre vingt-dix du XX siècle on a retrouvé sur le territoire de l'Empire Romain plus de 460 mithraca.¹ Grace aux inscriptions consacrées nous connaissons des prenomes de plus de mille hommes qui ont érigé: autel, relief, ont restauré, construit ou équipé le temple en honneur de Mithra. Parmi les gens qui, comme nous l'admettons étaient des fidèles de Mithra, nous trouvons des esclaves, des affranchis, et des marchands. Les inscriptions mentionnent parmi les donateurs: employés, caissiers, percepteurs des impôts. Dieu recrutait ses adeptes dès le simple soldat et greffier, jusqu'aux personnes importantes même de l'entourage de l'Empereur.²

Les Romains ont fait connaissance du mithriacisme dans sa forme hellénisée.

Les plus tôt se sont mis en contact avec lui les soldats parmi lesquels il a gagné tout de suite la popularité. Le culte glorifiait toutefois la vaillance et le combat actif avec le mal. Mithra était dieu et chef. Mithra combattait les forces du mal. Il agissait au service de la justice, du bien et de la vérité. En aidant activement Mithra par le respect de la moralité sévère, de la fidélité au serment et en gardant les secrets, l'homme pouvait contribuer au fait de remporter plus vite la victoire du bien sur le mal. Son culte donnait la conscience des liens de communauté et de fraternité.

Sous le règne des Flaviens on a construit une grande quantité des routes qui unissaient entre elles des régions jusqu'à présent inaccessibles. Les besoins de la défense et de l'administration érigeaient la nécessité de translocation de grandes groupes de la population, surtout de l'armée. Le culte devait sembler intéressant pour les gens qui ont été arraché pour de longues années de leur terre natale, leur communauté, leurs proches. Mithra offrait le sentiment de fraternité, de sécurité, d'appartenance au groupe. Les fidèles initiés aux mystères pouvaient et voulaient s'identifier avec leur dieu.

Nous voyons alors que le culte a été franchement prédestiné de devenir la religion des soldats. On considère les soldats pas tellement comme des adeptes les plus fervants, mais comme des plus fervants propagateurs du culte dans l'Empire. Quoique parmi les militaires nous trouvons beaucoup de disciples de Mithra et personne n'a pas de doute que ce culte jouissait d'une popularité et d'acceptation des milieux militaires, le mithraïsme n'a pas été accepté comme la religion officielle de l'armée.

En Dacie Mithra étaient le plus populaire après Jupiter des divinités parmi les soldats de la garnison. Les soldats lui ont érigé plusieurs inscriptions, plus de 15 % du total des inscriptions à la gloire de ce dieu du terrain de Dacie.³ Parmi les donateurs nous connaissons légats, centurions, principales, soldats des camps auxiliaires et légionnaires.

Sarmizegetusa était capitale de province, centre politique, économique et religieux. Les autels des dédicaces ayant des fonctions militaires sont: *P(ublius) Aelius Hammonius, procurator augg(ustorum)*, autel érigé à plusieurs divinités, parmi lesquelles, *Soli Invictus*.⁴ *Decuriones coloniae Sarmizegetusae Metropolis* sur un fût de colonne votive de *Sarmizegetusa* érigée par Victorinus et Maius, fils de Marcus.⁵ *Aurelius Theofilus, decurio, mun(icipii) Porolissensis*.⁶ relief, mithraeum.

Il y a aussi une grande concentration de monuments épigraphiques militaires (mithraïques) dans *Apulum*, le siège de la légion XIII Geminae. Nous connaissons *M. Valerius Maximianus*⁷ *legatus Augusti legionis XIII Geminae*, dédie un autel *Soli*. Citons encore un *legatus augusti legionis XIII Geminae* sur une dédicace *Soli invicto d'Apulum* élevée par *C(aius) Caerellius Sabinus*⁸ (la dédicace atteste l'existence d'un temple de *Soli Invictus* dans le voisinage immédiat du castrum) et une autre par *Q(uintus) Caccilius Laetus*, qui est dédiée sur la base de statue, au troisième siècle.⁹ *Q. Marcus Victor Felix Maximilianus*, dédie inscription à *Soli*.¹⁰ Quelques inscriptions sont érigées par militaires remplissant diverses fonctions: *Signifer legionis XIII Geminae* sur un autel dédié *Soli invicto Mithrae*, érigée à *Apulum* par *Caius Iulius Marcianus*;¹¹ *Imaginifer legionis XIII Geminae* sur un bas-relief d'*Apulum* élevée par *M. Ulpus Linus*;¹² *speculator legionis XIII Geminae Gordianae*, *Ulpus Proculus*,¹³ érigée base de statue, entre années 238-244; *Conductores armamentarii* sur un bas-relief d'*Apulum* dédiée *Soli invicto Mithrae* par *Turranius Marcellinus* et *Antonius Senecio*

junior.¹⁴ *M(arcus) Aurel(ius) Sila, actar(ius) eq(uitum) sing(ularium)*, à dédié statuette en bronze à *Soli*; *T(itus) Aur(elius) Marcus (veteran)*, a érigée lui-même deux inscriptions.¹⁵

Potaissa était siège de plusieurs détachements et unités militaires jusqu'à 166. Depuis --- le siège de la légion V *Macedonica*. *Tesserarius*, sur un autel de Potaissa dédié *Deo invicto* par *Flavius Marcellinus*;¹⁶ *Milites legionis V Macedonicae*, sur un bas-relief de Potaissa dédié par *Aelius Maximus*,¹⁷ sur un autel découvert dans le même lieu, dédié *Invicto* érigée par *Aurelius Dolens*¹⁸ *milites leg(ionis) V Mace(donicae)* et *Aurelius Montanus*.¹⁹

M.N. Lucretianus,²⁰ *Praefectus alae II Pannoniorum*, dédie un autel *Invicto Mithrae*. Autel de *Gehrla* dédié à *Invicto Mithrae et P(ublius) Ael(ius) Art(emidorus)*, nommé *de[curio]* sacerdos par un groupe Palmyréens, a dédié un autel à *[Invictio] [Soli Deo] Gelnitor*²¹ et autel à *Soli Invicto Mithrae*.²²

De *Pojojena* on connaît *Dizo Posidon(i)* soldat des détachements auxiliaires de la cohorte V *Gallorum*.²³ A *Brucla* dans la proximité de laquelle stationnait la légion XIII *Geminae* le centurion *Iulius Quintus* érigée à *Mithra* une inscription.²⁴

Sur la territoire de la Dacie Inférieure, comme écrit *Cloșca L. Baluța*:²⁵ dans l'état actuel de conservation, on peut identifier un nombre très réduit d'auteurs de dédicaces ayant des fonctions militaires, bien que les unités stationnées ici soient relativement nombreuses.

A *Slaveni* est attesté, sur un autel dédié *Soli s(acrum)*, un princip[ali]s *alae pri(mae) Hispanorum p(iae) f(idelis)*,²⁶ appartenant à la garnison locale.

Entre les formules dédicacées à côté de *ex voto, libens posuit*, la formule la plus fréquemment employée est *votum solvit libens merito*. Aucune des inscriptions connues, dans cette province, n'a pas été consacré *pro salute imperatore*. Et on peut dater toutes les inscriptions pour les années 182-269 après J. Chr. Plus que tout autre culte oriental, le mithraïsme est, en Dacie la manifestation d'une mode du temps, celle l'orientalisation de l'Empire Romain. C'est pourquoi il est dépourvu d'une base ethnico-démographique et n'est pas en mesure de fournir des indications précises sur l'origine de ses adeptes ou de ses prêtres. Il s'agit par conséquent d'un phénomène à signification presque exclusivement culturelle, et non pas ethnique.²⁷

En *Mesie Supérieure* les inscriptions offertes par les soldats consistent seulement à peu près en 15% du total établies. De cette région nous connaissons les prénoms d'un *decurion*,²⁸ deux *vétérans*²⁹ comme aussi d'un centurion dont le prénom n'est pas conservé. Parmi les fidèles il y a aussi un *hastatus legionis*.³⁰ A *Viminiacium*, *decurio aedilis col(oniae) Vim(inacii)* très volontiers a rempli les vœux, en érigeant un relief en marbre blanc, qui représente *Mithra* tuant le taureau, *Cautes* et *Cautopates* et les animaux accompagnants: chien, scorpion et serpent.³¹ Mais *L. Zotović* considère que l'armée n'était donc pas le porteur du culte de *Mithra* en cette province.³²

En Mésie Inférieure nous connaissons les prénoms d'environ 40 dédicataires des inscriptions en honneur de Mithra.³³ Et quoique cette province était un terrain frontière, avec deux (et jusqu'à l'an 166 trois) camps légionnaires à *Durostorum* et *Novae* (et jusqu'à 166 *Troemis*) et avec beaucoup de camps auxiliaires, la participation des soldats parmi les dédicataires des inscriptions en honneur de Mithra consiste à peu près en 25%.³⁴

À côté des simples soldats *alae*, comme *Uipius Demetrius* de *Carsium*³⁵ sont connus aussi: *architectus salarii*,³⁶ *beneficarius consularis*, *centuriones*³⁷ et *praefectus castorum*.³⁸ A *Svištov* on a retrouvé un fragment de l'autel construit en grès, érigé à l'Invincible par le préfet du camp de la légion I Italique *C. Iulius Maximus*.³⁹ A *Durostorum* (*centurio*) *leg(ionis) XI Cl(audiae)*⁴⁰ a érigé l'inscription à *Invictus Mithra*. A *Troemis*, *L. Valerius Fuscus*, (*centurio*) *leg(ionis) V Mac(edonicae)* a élevé l'autel en calcaire.⁴¹

A *Tropeum Traiani*, en honneur de l'empereur *M. Anto(ninus) Verus*, *centurio leg(ionis) XI Cl(audiae), Annius Saturninus*⁴² a fait volontier son voeu et à la gloire de la maison impériale; au Soleil Invincible a érigé l'autel en calcaire, *centurio leg(ionis) I Ital(icae) Q. Lucilius Pis[c]linus*.⁴³ A *Durostorum* on a retrouvé des fragments d'un relief, fait en grès qui représente la scène de tauroctonion. Le fondateur de ce relief est archite[ct]us salariarius de la légion XI *Claudia*.⁴⁴ De *Iatrus* (probablement inscription est d'origine de *Novae*⁴⁵) étaient *signifer leg(ionis) Ti. Claudius Zynodotus*⁴⁶ et *centurio legionis — M. Ulpianus Modianu[s]*.⁴⁷ Aussi dans cette province la formule la plus souvent usée est *votum solvit libens merito*.

Naturellement, ces formules peuvent présenter la cause d'ériger l'inscription (voeux précoces). Elle peuvent être tout simplement une formule banale, ajoutée par routine au texte.

Les inscriptions d'habitude étaient posées sur les reliefs représentant Mithra tuant le taureau, ou sur les autels. Ces autels et reliefs étaient construits surtout en calcaire, plus rarement en grès ou en marbre. L'apparition du culte et sa diffusion au Bas Danube est datée pour le temps d'arriver sur ces terrains des légions romaines et de l'armée auxiliaire. C'est surtout l'armée qui propageait le culte oriental sur les terrains occupés le long de limes. Son activité la plus effective tombe sur la I moitié du II s.⁴⁸ Parmi les donateurs prévalaient les personnes liées avec l'armée: soldats actifs, vétérans et ceux qui basaient leur existence sur l'armée.

L'importance militaire de ces provinces explique pleinement l'établissement d'une grande quantité des mithraea à proximité des camps.

En autant que les nouvelles trouvailles m'apporteront des inscriptions suivantes, quoique les inscriptions érigées par les militaires en honneur de Mithra, ne constituent pas une majorité décisive de celles lui offertes dans les provinces discutées, on peut considérer les soldats comme propagateurs de la religion de Mithra dans cette région.

Dacia

1. CIL III, 899; TMMM II, 232; CIMRM II, 1921; Clauss 1992, 199:
Ael(tius) Maximus miles / leg(ionis) V Mac(edonicae) v(otum) s(olvit) l(ibens) p(osuit).
2. CIL III, 6255; TMMM II, 234; CIMRM II, 1925; Clauss 1992, 199:
Aur(elius) Dolens mil(es) leg(ionis) ex [voto].
3. CIL III, 879; TMMM II, 299; CIMRM, 1929; Clauss 1992, 199:
Invic(t)io Aur(elius) Mon(tianus) mil(es) leg(ionis) V Mac(edonicae) / l(ibens) p(osuit).
4. CIMRM, 1928; Clauss 1992, 199.
5. TMMM II, 236; CIMRM, 1931:
Invic(t)io Mi(thrae) I(ulius) Q(uintus) c(enturiae) / H v(otum) s(olvit) l(ibens) m(erito) Apulum.
6. CIL III, 1122; TMMM II, 249; CIMRM II, 1950; Clauss 1992, 194; IDR III, 5, 279:
[Soli] invic(t)io / Mithrae / M. Val(erius) Maxi(mianus) / leg(at)us Aug(usti) / v(otum) s(olvit).
7. CIL III, 1118; TMMM II, 305; CIMRM II, 1952:
Soli / Q. Marcius Vi(ctor) Felix Ma(ximillianus) leg(at)us Aug(ustorum) leg(ionis) XIII g(eminae) et / Pullaena Caelliana c(larissima) f(emina) eius / et P. Marcius Vi(ctor) Maximilli(anus) c(larissimus) p(uer) filius / voto.
8. CIMRM II, 1955; Clauss 1992, 194:
M. Ulp(ius) Linus imag(inifer) l(egionis) XIII g(eminae).
9. CIMRM II, 1959; Clauss 1992, 193:
D(eo) i(nvicto) M(ithrae) / T(itus) Aur(elius) Fabia (tribu) Marcus vet(eranus) leg(ionis) XIII g(eminae).
10. CIMRM 1960; Clauss 1992, 193:
Deo invic(t)io Mith(rae) / T(itus) Aur(elius) Fabia (tribu) / Marcus / vet(eranus) / leg(ionis) XIII g(eminae) d(eo) d(onum) d(edit).
11. CIMRM 1962; Clauss 1992, 194:
Soli invic(t)io / Mythrae / C(aius) Iulius / Marcianus / signif(er) leg(ionis) / XIII g(eminae) / libens posuit.
12. CIL III, 1111; TMMM II, 302; CIMRM II, 1968; IDR III, 5, 347:
Soli invic(t)io / aedem restituit / C. Caerellius / Sabinus / leg(at)us Aug(usti) / leg(ionis) XIII g(eminae).
13. CIL III, 1013; TMMM II, 303; CIMRM II, 1969:
Soli / invic(t)io / Q. Caecil(ius) / Laetus / leg(at)us Aug(usti) / leg(ionis) XIII g(eminae) / v(otum) l(ibens) S(olvit).

14. CIL III, 989; CIMRM II, 1971:

Ex iussu dei / Apollinis fontem aeterni Ulp(ius) / Proculinus / speculato(r) / leg(ionis) XIII g(eminiae) Gordio(n)ae a solo restituit.

15. CIL III, 1121; TMMM II, 248; CIMRM 1993; Clauss 1992, 193, 194:

S(oli) i(nvicto) M(ithrae) Turranius Marcellinus / et An(t)onius Senecio Iunior conductores armamen(tarii) / ex voto posuerunt.

16. TMMM II, 257; CIMRM II, 2008:

[Invictio S(oli) deo / ge(n)itori P. [Ael(ius) Art]emidorus de[sc]urio...] / sacrum creatus a Pal[myre]nis do(mo) macedonia et adven[tor] huius templi pro / et suis fecit.

17. CIL III, 7941; TMMM II, 277; CIMRM 2031; Clauss 1992, 202:

M(arcii) / Uipi / Victo(rinus) et Maius / dec(uriones) col(oniae) / Sarmiz(egetusae) / metrop[olis] / v(oto) l(ibentes) p(osuerunt).

18. CIMRM 2074; Clauss 1992, 202:

Aur(elius) Theophilus, decurio.

19. CIMRM 2177; Clauss 1992, 200:

Soli invicto Mithrae / libr(arii) cum / Anton(io) Z(oi)lo act(ario) [p(rae)positi] / n(umeri) S(urorum) [s(agittarium)].

20. AE 1972, 491; Clauss 1992, 197:

[...] leg(ionis).

Mezja Górna

21. CIL III, 7596; TMMM, 225a; CIMRM II, 2192:

Aur(elius) Vict(or) veteranus ex praetoriano ex voto posuit.

22. TMMM II, 229; CIMRM II, 2217; Clauss 1992, 216; Zotović 1966, 14:

D(eo) i(nvicto) M(ithrae) / ...dec(urio) aedil(is) / col(oniae) Vim(inacii) ex voto l(ibens) m(erito) p(osuit).

23. CIMRM 2222; Clauss 1992, 215; Zotović 1966, 27:

Deo invicto Mithrae / Caius Iulius Valerius veteranus leg(ionis) VI Cl(audiae) / ex benef(icio) co(n)s(ulum) / nunc dec(urio) / vim temp(estatis) / a solo reffecit.

Ratiaria

24. Zotović 1966; Clauss 1992, 214; AE 1966, 544:

(So)li invicto / Mithrae / M. (C)occeius (V)alens dec(urio) Au(g)ust(alium) col(oniae) pro salute sua et Politt(ae) (co)niug(is) et Cocceiorum filior(um) v(otum) s(olvit).

25. AE 1971, 418; Zotović, *Mithraisme* 91:

Cl(audius) Diogens, Hastatus leg(ionis).

Mezja Dolna

26. CIL III, 6128; TMMM 225; CIMRM II, 2250; Clauss 1992, 225:

T. Tettius / Flou[s] / veteranus leg(ionis) II[II] / Flaviae f(idelis) p(ater) s(acrorum) d(ei) / invicti v(otum) s(olvit) / l(ibens) m(erito).

27. CIMRM II, 2271; Clauss 1992, 224:

Invict[o] / C. Iulius / Maximus / praefectus castr(orum) / leg(ionis) I Ital(icae).

28. CIL III, 7475; TMMM II, 223; CIMRM 2273; Clauss 1992, 221:

[In]vict(o) / Mithrae / Cornel(ius) Fau(s)tu(s) (centurio) leg(ionis) XI Cl(audiae).

29. CIMRM 2313; Clauss 1992, 221.

30. CIMRM 2286; Clauss 1992, 227:

Inv[ict]o Mithrae / [s]ac(rum) / L. Valerius / Fuscus c(enturio) / leg(ionis) V Mac(edonicae) / v(otum) s(olvit).

31. CIL III, 7483; TMMM II, 227; CIMRM II, 2311; Clauss 1992, 227:

Deo / Invicto / pro salute / imp(eratoris) M. Ant(oni) / Veri Annus / Saturninus / (centurio) leg(ionis) XI Cl(audiae) / v(otum) s(olvit) l(ibens) m(erito).

32. TMMM II, 227a; CIMRM 2312:

In hon(orem) d(omi) d(ivinae) / Sol[i] invicto / sacrum / Q. Lucilius / Pis[ci]nus (centurio) / leg(ionis) I Ital(icae) / v(otum) s(olvit) l(ibens) m(erito).

33. CIMRM II, 2314:

Invicto Mithrae / Q. Samacius Serenus archite[c]tus salariarius leg(ionis) XI Cl(audiae) posuit.

34. AE 1985, 762; Clauss 1992, 222:

Ti. Claudius Zynodotus, signifer leg(ionis).

35. H. Krummrey, *Klio* 47, 1966, 359-362; Clauss 1992, 223:

M. Ulpius Modianus, (centurio) leg(ionis).

Notes

¹ Les publications les plus importantes: F. Cumont, *Textes et monuments figurés relatifs aux mystères de Mithra*, t. I, II, Paris 1899; F. Cumont, *The mysteries of Mithra*, New York 1956; M.J. Vermaseren, *Corpus Inscriptionum et Monumentorum Religionis Mithraicae*, Hague 1956, 1960; *Mithraic Studies*, éd. J. Hinnells, t. 1, 2, Manchester 1975; *Études Mithraïques*, éd. J. Duchesne-Guillemin, Teheran 1978; *Mysteria Mithrae*, éd. U. Bianchi, Rzym 1980; R. Beck, *The mysteries of Mithras: a new account of their genesis*, *Journal of Roman Studies* 83, 1998, 115-128; *Studies in Mithraism*, Papers associated with the Mithraic panel organized on the XVIth congress of the international association for the history of religions, Rome 1990, éd. J. Hinnells, Rome 1994; R. Turcan, *Mithra et le mithraïsme*, Paris 1981; R. Merkelbach, *Mithras*, Königstein 1984; M. Clauss, *Mithras: Kult und Mysterien*, München 1990; R. Beck, *Mithraism since Franz Cumont*, *ANRW* II, 17.4, 2099-2115. Voir aussi: B.M. Metzger, *Bibliography of Mystery Religions*, *ANRW* II, 16.3, 1348-1358 et 1413-1415.

² Clauss 1992; Clauss 1994, 385.

³ Trynkowski 1968, 72-73.

⁴ IDR III 2, 246; Baluta 1994, 20.

- ⁵ CIL III 7941; TMMM II, 277; CIMRM II, 2031; Clauss 1992, 202; index nr 17.
⁶ IDR III 2, 274; CIMRM II, 2074; Clauss 1990, 202; index nr 18.
⁷ IDR III 2, 274; CIMRM II, 1950; TMMM II, 305; IDR 5, 279; index nr 6.
⁸ CIL III, 1111; CIMRM II, 1968; TMMM II, 302; IDR III 5, 347; index nr 12.
⁹ CIL III, 1013; CIMRM II, 1969; IDR III, 5, 346; TMMM II 303; index nr 13.
¹⁰ CIL III, 1118; CIMRM II, 1952; IDR III, 5, 343; index nr 7.
¹¹ CIMRM II, 1962; IDR III, 5, 275; Clauss 1992, 194; index nr 11.
¹² CIMRM II, 1955; IDR III, 5, 283; Clauss 1992, 194; index nr 8.
¹³ CIL III, 989; CIMRM II, 1971; IDR III 5, 29; index nr 14.
¹⁴ CIL III, 1121; CIMRM II, 1993; TMMM II, 248; Clauss 1992, 193-194; index nr 15.
¹⁵ CIMRM II, 1959; Clauss 1992, 193; index nr 9; CIMRM II, 1960; Clauss 1992, 193; index nr 10.
¹⁶ CIL III, 7686; CIMRM II, 1928; Clauss 1992, 199; index nr 4.
¹⁷ CIL III, 899; CIMRM II, 1921; TMMM II, 2332; Clauss 1992, 199; index nr 1.
¹⁸ CIL III, 6255; CIMRM II, 1925; TMMM II, 234; Clauss 1992, 199; index nr 2.
¹⁹ CIL III, 879; CIMRM II, 1929; TMMM II, 299; Clauss 1992, 199; index nr 3.
²⁰ CIL III, 12540; CIMRM II, 1918; IDR III, 5, 278.
²¹ IDR III, 4, 30; TMMM II, 257; CIMRM II, 2008; index nr 16.
²² CIMRM II, 2010.
²³ Serban, Baluta 1979, 576.
²⁴ CIL III, 12574; CIMRM II, 1931; TMMM II, 235; index nr 5.
²⁵ Baluta 1994, 26.
²⁶ IDR II, 509.
²⁷ Baluta 1978, 1-6.
²⁸ Zotović 1966, nr 24; Clauss 1992, 214; AE 1966, 344; index nr 24.
²⁹ CIL III, 7596; TMMM II, 225a; CIMRM II, 2192; index nr 21 et CIMRM II, 2222; Clauss 1992, 215; Zotović 1966, nr 27; index nr 23.
³⁰ AE 1971, 418; index nr 25.
³¹ TMMM II, 229; CIMRM II, 2217; Clauss 1992, 216; Zotović 1966, nr 14; index nr 22.
³² Zotović 1966, 33.
³³ Clauss 1992, 220.
³⁴ Clauss 1992, 228.
³⁵ AE 1980, 815; Clauss 1992, 221.
³⁶ CIMRM II, 2314; index nr 33.
³⁷ CIMRM II, 2273; TMMM II, 223; CIL III 7475; Clauss 1992, 221; index nr 28 et CIMRM II, 2286; Clauss 1992, 227; index nr 30 et CIMRM II, 2311; CIL III, 7483; TMMM II, 227; Clauss 1992, 227; index nr 31 et CIMRM II, 2312; TMMM II, 227a; index nr 32 et Clauss 1992, 223; index nr 35.
³⁸ CIMRM II, 2271; Clauss 1992, 224; index nr 27.
³⁹ CIMRM II, 2271; Clauss 1992, 224; index nr 27.
⁴⁰ CIMRM II, 2273; TMMM II, 223; CIL III, 7475; Clauss 1992, 221; index nr 28.
⁴¹ CIMRM II, 2286; Clauss 1992, 227; index nr 30.
⁴² CIMRM II, 2311; CIL III, 7483; TMMM II, 227; Clauss 1992, 227; index nr 31.
⁴³ CIMRM II, 2312; TMMM II, 227a; index nr 32.
⁴⁴ CIMRM II, 2314; index nr 33.
⁴⁵ Kolendo 1992, 102, nr 5.
⁴⁶ AE 1985, 762; Kolendo 1992, 101, nr 4; Clauss 1992, 222; index nr 34.
⁴⁷ Clauss 1992, 223; index nr 35.
⁴⁸ Najdenova 1984, 217-222.
⁴⁹ Dans l'index -- inscription qui sont dans le text.

Bibliographie

- Baluta 1978 -- C.L. Baluta, Le Mithriacisme dans l'épigraphie de la Dacie, [in:] Acta Iranica IV. Etudes Mithraïques, éd. J. Duchesne-Guillemin, Leiden 1978, 1-6.
 Baluta 1994 -- C.L. Baluta, La pénétration et la diffusion du Mithriacisme en Dacie, réflexions par l'épigraphie, [in:] en Studies in Mithraism, éd. J.R. Himmels, Rome 1994, 19-28.
 Clauss 1992 -- M. Clauss, Cultores Mithrae. Anhängerschaft des Mithras-Kultes, Heidelberg 1992.
 Clauss 1994 -- M. Clauss, Die Anhängerschaft des Silvanus-Kultes, *Klio* 76, 1994, 385.
 Kolendo 1992 -- J. Kolendo, Mithra-Invictus Deus w Novae, *Historia* XXVII, 254, 1992, 97-103.
 Najdenova 1984 -- V. Najdenova, Chronologia zabytków związanych z kultem Mitry z terenów między Dolnej i Tracji, *Balkanica Posnaniensia. Acta et studia* I, 1984, 222-227.
 Serban, Baluta 1979 -- I. Serban, C.L. Baluta, On Mithraism in the Army of Dacia Superior, [in:] *Mysteria Mithrae*, éd. U. Bianchi, Leiden 1979, 576.
 Zotović 1966 -- L. Zotović, Les cultes orientaux sur le territoire de la Mésie Supérieure, Leiden 1966.