

Mirjana SANADER, Domagoj TONČINIĆ & Ivana OŽANIĆ

## TILURIJ – ARHEOLOŠKA ISTRAŽIVANJA 2004. GODINE

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## TILURIUM – ARCHEOLOGICAL RESEARCH IN 2004

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Mirjana Sanader  
Filozofski fakultet  
Odsjek za arheologiju  
Ivana Lučića 3  
HR 10000 Zagreb  
[msanader@ffzg.hr](mailto:msanader@ffzg.hr)

Domagoj Tončinić  
Filozofski fakultet  
Odsjek za arheologiju  
Ivana Lučića 3  
HR 10000 Zagreb  
[dtoncini@ffzg.hr](mailto:dtoncini@ffzg.hr)

Ivana Ožanić  
Filozofski fakultet  
Odsjek za arheologiju  
Ivana Lučića 3  
HR 10000 Zagreb  
[iozanic@ffzg.hr](mailto:iozanic@ffzg.hr)

*U selu Gardunu nastavljena su 2004. sustavna arheološka istraživanja na mjestu rimskog legijskog logora Tilurija. Istraživanja su provedena na dvama logorskim lokalitetima koja su istraživana i prethodnih godina (sonde A i Z1), a započeto je istraživanje i na jednoj novoj lokaciji (sonda KJZ). Na sondi A nastavljeno je istraživanje sa sjeverne i južne strana zida A. Pri tom je dokumentirana antička razina hoda s južne strane građevine koja će se moći datirati zahvaljujući nalazu četiriju kovanica. Ispod antičke razine hoda nađena je otpadna jama koju su naknadno presjekli zid A i kontrafor K22. Temelji kontrafora odmaknuti su od temelja zida A i nešto su plići. Zid A i kontrafori međusobno su fizički vezani jedino antičkom razinom hoda. Sonda Z1 proširena je prema istoku pri čemu je dokumentirano da se zidovi sj 2 i 3 penju na tvrdo nabijeni krupni šljunak, odnosno na sterilni sloj nabijene žute gline. Pod zid sj 2 podvlači se sj 22 u kojoj je nađena paragnatida okvirno datirana u sredinu 1. st. Sonda KJZ otvorena je na mjestu na kojem je na osnovi analize zračne fotografije pretpostavljena jugozapadna kula logorskog bedema. Istraživanjima nisu dokumentirani ostaci arhitekture koji bi se mogli povezati s rezultatima spomenute analize.*

*Ključne riječi: Tilurium, legijski logor, kontrafori, kula.*

*In 2004, the systematic archaeological research was resumed in the village of Gardun, at the site of the former Roman legionary camp Tilurium. Research was conducted at two camp sites that were examined in previous years as well (probes A and Z1), and research commenced at a new position as well (probe KJZ). The research, which in the probe A continued on both southern and northern side of the wall A, documented the Roman period walking level on the southern side of the building which will be dated by four coins found in that layer. A disposal pit was discovered below the Roman walking level. In later periods it was cut by wall A and counterfort K22. Foundations of the counterforts are detached from the foundations of wall A and they are somewhat shallower. Wall A and counterforts are mutually connected only by the Roman walking level. The research in probe Z1 which was extended eastwards established that walls marked as s.u. 2 and 3 were built over the layer of dense and thickly stomped large gravel, as well as over the sterile layer of yellow clay. Under the wall s.u. 2, there is stratigraphic unit 22, in which a cheek-piece (paragnatida) was discovered. Based on initial analysis can be generally dated to the mid-first century (Fig. 5). The probe KJZ was located on the spot which was upon analysis of aerial photographs conditionally designated as the southwestern tower of the camp fortification. Archaeological*

U selu Gardunu, na mjestu nekadašnjega rimskog vojnog logora Tilurija, ove su godine po osmi put vođena sustavna arheološka istraživanja koje provodi Odsjek za arheologiju Filozofskog fakulteta u Zagrebu. U njima su sudjelovali djelatnici Odsjeka i njihovi studenti.<sup>1</sup> Istraživanja su se ove godine vodila uz potporu Ministarstva znanosti i tehnologije RH, Ministarstva kulture RH, Županije Splitsko-dalmatinske i Grada Trilja.<sup>2</sup> Nastavljeno je istraživanje na dvama logorskim lokalitetima koja su istraživana i prethodnih godina, a započeto je istraživanje i na jednoj novoj lokaciji. Osim toga, počela je i konzervacija dijela objekta na sondi A koji je potpuno istražen.

## SONDA A

U sondi A od 1998. godine istražuje se građevina s kontraforima (Sl. 1). Radovi su započeli na mjestu na kojem su se ostaci antičkih zidova nazirali u recentnom suhozidu (Sanader 2003: 63). On je, položen u smjeru istok – zapad, poput kaskade dijelio sjevernu stranu s okućnicom braće Roguljić od južne strane gdje su se, na razini nižoj od 2 m do 5 m, nalazila polja. Kamena građa na više je mjesta probila južno lice i rasula se prema polju pa je suhozid mjestimično ličio na gomilu rasutog kamenja obraslog šikarom. Uklanjanjem raslinja i kamenja oslobođen je zid koji je također položen u pravcu istok – zapad (zid A) i koji je s južne strane poduprt potpornim zidovima odnosno kontraforima. Sa sjeverne strane za njega je pod pravim kutom vezan zid I. Ispod ovog objekta dokumentirani su ostaci drugog objekta (Sanader 1998: 248–249, crtež 1).

Usporedba s građevinama u drugim rimskim logorima pokazala je da se kontraforima najčešće učvršćivalo skladište za žito, *horreum*. Stoga je glavni zadatak istraživanja 1999. bio pokušaj utvrđivanja funkcije građevine. Iskopavanja sa sjeverne strane zida A, odnosno u unutrašnjosti građevine, pokazala su da je do sačuvane visine zidova bila ispunjena kamenjem i da se ispod nje nalazi zidani odvodni kanal s imbreksima. Na istraženoj površini unutar

*research did not confirm any architectural remains which could be related to the results of the aerial photo analysis.*

*Key words: Tilurium, legionary camp, counterforts, tower.*

This year systematic archeological research was conducted for the eighth time in the village of Gardun, at the site of the former Roman military camp Tilurium, by the Archeology Department of the Faculty of Arts and Letters in Zagreb. The Department's staff members and their students participated in the work.<sup>1</sup> Research was conducted this year with the support of the Croatian Ministry of Science and Technology, Ministry of Culture, Split-Dalmatia County and the Town of Trilj.<sup>2</sup> Research was resumed at two camp sites that were examined in previous years as well, and research commenced at a new site as well. Additionally, conservation of a portion of this structure at the fully researched Probe A commenced.

## PROBE A

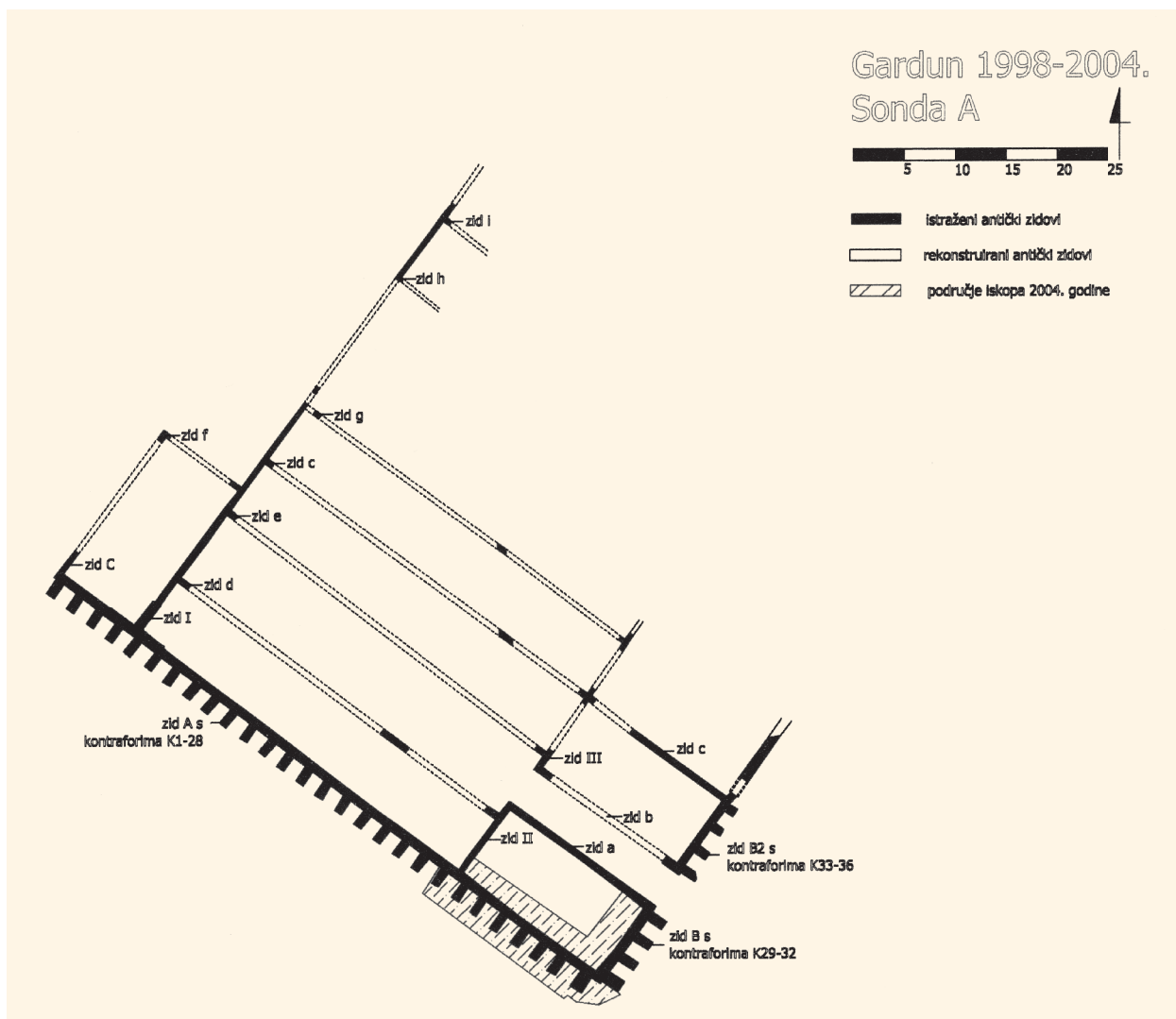
Since 1998, a structure with counterforts has been examined at Probe A (Fig. 1). Works commenced at a place where the remains of Roman-era walls could be discerned in recently built dry stone walls (Sanader 2003: 63). It is situated in an east-west direction, separating cascade-style the northern side with the yard belonging to the Roguljić brothers from the south side where, at a level lower by 2 to 5 m, there is a field. The stones broke off the south face at several places and tumbled down, so at places the dry stone wall assumes the appearance of loosely stacked rocks overgrown by underbrush. A wall also situated in an east-west direction (wall A) was freed by removal of vegetation and stones; it is supported on the south side by retaining walls, or counterforts. Wall I is connected to it at a right angle on the northern side. The remains of another structure have been documented under this structure (Sanader 1998: 248–249, Sketch 1).

<sup>1</sup> Osim voditeljice prof. dr. sc. M. Sanader i asistenata mr. sc. D. Tončinića i mr. sc. Ivane Ožanić u istraživanjima su sudjelovali: prof. dr. sc. M. Miličević–Bradač, dr. sc. Helena Tomas, mr. sc. Zrinka Šimić–Kanaet kao i arheolozi Ina Gale, Kristina Glicksman i Krešimir Karlo. U ovogodišnjim istraživanjima sudjelovali su studenti: Valentina Maleć, Martina Jalšovec, Igor Vukmanić, Ana Pavleković, Anita Sičić, Martina Miletić, Ivana Milat, Suzana Malović, Marta Franjić, Petar Sekulić, Vjekoslav Iličić, Nada Begić, Tonka Matana, Tin Lemac, Iva Kaić, Hrvoje Vulić, Dino Demicheli, Miroslav Razum, Sara Popović i Andrea Devlahović.

<sup>2</sup> Istraživanja se provode u sklopu znanstveno-istraživačkog projekta *Rimski legijski logori u Hrvatskoj – Tilurij* (0130460) koji od 1997. podržava Ministarstvo znanosti i tehnologije RH.

<sup>1</sup> Besides research leader M. Sanader, Ph.D. and assistants D. Tončinić, MS and Ivana Ožanić MS, also participating in the research were: M. Miličević–Bradač, Ph.D., Helena Tomas, Ph.D., Zrinka Šimić–Kanaet, MS, and archeologists Ina Gale, Kristina Glicksman and Krešimir Karlo. Also participating in this year's research were the students: Valentina Maleć, Martina Jalšovec, Igor Vukmanić, Ana Pavleković, Anita Sičić, Martina Miletić, Ivana Milat, Suzana Malović, Marta Franjić, Petar Sekulić, Vjekoslav Iličić, Nada Begić, Tonka Matana, Tin Lemac, Iva Kaić, Hrvoje Vulić, Dino Demicheli, Miroslav Razum, Sara Popović and Andrea Devlahović.

<sup>2</sup> Research was conducted as part of the project *Roman Legion Camps in Croatia – Tilurium* (0130460) which has been underwritten by the Croatian Ministry of Science and Technology since 1997.



Slika 1/Figure 1

građevine nisu nađene konstrukcije koje bi se mogle povezati s poznatim tlocrtima skladišta za žito (Sanader 2000: 51–52, crtež 1). Osim toga, površina iskopa je u produžetku zida A proširena prema zapadu do suhozida na granici sa susjednom parcelom, a u produžetku zida I proširena je prema sjeveru. Ni u jednom slučaju nije dosegnut kraj zida pa je cilj istraživanja u 2000. bio definiranje zapadnog i sjevernog ruba građevine (Sanader 2001: 185). Nakon uklanjanja suhozida, koji je na rubu sa susjednom parcelom položen u smjeru sjever – jug, površina iskopa proširena je prema zapadu. Ispod suhozida nađen je zapadni kraj zida A na koji se u pravcu sjevera pod pravim kutom nadovezuje zid C. Istovremeno je proširen iskop prema sjeveru, i to u smjeru

A comparison with other Roman camps has shown that counterforts most often reinforced the granary, or *horreum*. Therefore the principal task of research in 1999 involved an attempt to determine the building's function. Excavations on the northern side of wall A, i.e. in the structure's interior, showed that the level up to the height of the walls was filled with stones and that there is a walled drainage canal with imbrices beneath it. No constructions were found on the examined surface within the structure that could be linked to known floor-plans of granaries (Sanader 2000: 51–52, Sketch 1). Additionally, the surface of the excavation was expanded in the extension of wall A toward the west to the dry stone wall at the boundary with the neighboring property, and



Slika 2/Figure 2

pružanja zida I. On je djelomično uništen, a djelomično su, na horizontalno položenom sloju žbuke, sačuvani samo njegovi tragovi (Sanader 2001: sl. 2). Južni dio zida I širok je 0,6 m, ali se na udaljenosti od oko 20 m od zida A njegova širina naglo smanjuje na 0,45 m. Za zid I vezano je ukupno sedam zidova. Svi su položeni u pravcu istok – zapad, odnosno paralelni su sa zidom A. Njihova širina iznosi oko 0,6 m. Šest ih se od zida I pruža prema istoku i raspoređeni su u razmacima od 6 m do 8 m, a samo se jedan zid pruža prema zapadu. Probnim blokom potvrđeno je da zatvara kut sa zidom C, odnosno da sa zidovima A, C i I omeđuje prostoriju 1 (Sanader 2003: karta 9).

Iako su do kraja iskopavanja 2000. istražena 63 m zida I, nije dosegnut njegov sjeverni kraj ni zid koji bi odgovarao zidu A i koji bi mogao biti označen kao sjeverni rub građevine (Sanader 2001: 188). Naime, ostaci zida I nastavljaju se pod suhozid koji pridržava susjednu terasu, a na njoj istraživanja nisu mogla biti nastavljena.

Raščišćavanjem istočnoga kraja suhozida koji je prekrpio zid A iste se sezone pokušalo utvrditi dokud

expanded toward the north in the extension of wall I. In neither case was the end of the wall reached, so the objective of research in 2000 was to define the western and northern boundaries of the structure (Sanader 2001: 185). After removal of the dry stone wall, which was placed in a north-south direction at the boundary with the neighboring plot, the excavation site was expanded toward the west. The western end of wall A was found beneath the dry stone, joined to wall C at a right angle in the northern direction. The excavation was also expanded to the north, in the direction of wall I. It is partially destroyed, and only its bare remains have been partially preserved on the horizontally applied layer of plaster (Sanader 2001: Fig. 2). The southern part of wall I is 0.6 m wide, but at a distance of approximately 20 m from wall A its width suddenly expands to 0.45 m. A total of seven walls are connected to wall I. All are arranged in the east-west direction, i.e. parallel to wall A. They are approximately 0.6 m wide. Six of them extend from wall I toward the east and are set in intervals of 6 to 8 m, while only one wall extends toward the west. A probe confirmed that it closes the corner with wall C, i.e. with walls A, C and I it encloses room 1 (Sanader 2003: Map 9).

Although 63 m of wall I were examined by the conclusion of excavation work in 2000, its northern end was not reached, nor was a wall that would correspond to wall A and which could be designated as the northern boundary of the structure (Sanader 2001: 188). Namely, the remains of wall I continue under the dry stone which supports the neighboring terrace, and its examination could not continue.

Clearing out the eastern end of the dry stone wall that covered wall A in that same season represented an attempt to determine the extent to which wall A stretches to the east, i.e. to find the structure's eastern boundary. Although part of a wall with counterforts was found, its end was not defined (Sanader 2001: 188). This task was only accomplished in the following year, 2001 (Sanader 2003: 66–69). At that time, the dry stone wall covering wall A was completely removed. This revealed the preserved top of the wall, so research into the entire length of its southern face began. The northern face, just adjacent to the Roguljić brothers' property, could not be examined at that time. Therefore not even the south face was examined down to the humus, rather only along the western and eastern end of wall A. Wall A is 66.97 m long and 0.9 m wide. It has only been preserved to a height of 0.36 m on its eastern side, and to a height of 2.18 m on its western side. The external and internal faces are made of cut stone of unequal size, while the central part of the wall is filled in with small stones and mortar. The exter-

se prema istoku pruža zid A, odnosno gdje se nalazi istočni rub građevine. Iako je nađen dio zida s kontraforima, nije definiran njegov kraj (Sanader 2001: 188). Taj je zadatak obavljen tek naredne, 2001. godine (Sanader 2003: 66–69). Tada je potpuno uklonjen suhozid koji je prekrivao zid A. Time je oslobođen sačuvani vrh zida pa je započelo istraživanje cijele dužine njegova južnog lica. Sjeverno lice, na koje se naslanja okućnica braće Roguljić, u tom trenutku nije moglo biti istraženo. Stoga ni južno lice nije istraženo do zdravice, nego samo dio uz zapadni i istočni kraj zida A. Zid A dugačak je 66,97 m, a širok 0,9 m. Na istočnom kraju sačuvan je samo do visine od 0,36 m, a na zapadnom do visine od 2,18 m. Vanjsko i unutarnje lice zidano je od klesanoga kamenja nejednake veličine, dok je središnji dio zida ispunjen sitnim kamenjem i vezivom. Vanjsko lice zida bilo je ožbukano. Na vanjskom licu zida nalazi se pravilan kanal četverokutnog presjeka čija su donja, stražnja i gornja stijenka obložene žbukom. Taj se kanal proteže uzduž čitavog zida A i nije zabilježen samo na njegovu istočnom kraju, gdje se zid spušta ispod razine kanala.

Kanal je naizgled vodoravan, no na mjestu koje se nalazi oko 62 m od zapadne prema istočnoj strani pada za 1.94 m, odnosno oko 3%. Kanal je visok 4–8 cm, a dubok 11–16 cm. Na stražnjoj stijenci kanala u nepravilnim se razmacima nalaze otvori četverokutnog presjeka. Riječ je o vodoravno položenim otvorima kanala koji poprečno prolaze kroz zid A. Njihove su stijenske također obložene žbukom. Na osnovi različitih otisaka u žbuci jasno je vidljivo da su uzdužni i poprečni kanali zapravo otisci drvenih greda koje su nekoć bile ugrađene u zid. U žbuci se naime mjestimično prepoznaju otisci strukture drveta. Nadalje, jedan segment uzdužnoga kanala nema pravilnu i ravnu donju stijenku nego je ona polukružna. Očito je greda koja je stajala na tom mjestu bila izrađena od obodnog, dakle od oblog dijela debla. Na gornjim stijenkama kanala dokumentirani su i pozitivni i negativni otisci klinova u obliku trapeza odnosno lastina repa. Riječ je o jednom od načina spajanja drvenih konstrukcija (Adam 2001: 101, sl. 231/3). Ovi tragovi mogli su nastati jedino ako su prilikom gradnje na zid bile položene tesane drvene grede. Na uzdužnim je gredama klin izdubljen, a na vrhovima poprečnih je zasječen i imao je oblik trapeza odnosno lastina repa. Poprečne grede na taj su način uklještene u one uzdužne. Dokumentirano je da su na isti način međusobno povezane i uzdužne grede. Ova konstrukcija potom je zalivena vezivom i nastavljeno je podizanje zida. U vezivu je stvoren negativni otisak drvene konstrukcije te otisci strukture drveta i klinova kojima su grede međusobno povezane. Nakon što su drvene grede istrunule,

nal face of the wall was plastered. There is a straight groove on the external face that has a rectangular cross-section, with its lower, back and upper walls are covered with plaster. This groove extends all along wall A and has not been registered only on its eastern end, where the wall drops below the level of the groove.

The groove is apparently horizontal, but at point approximately 62 m from its western to its eastern side, it drops by 1.94 m, or approximately 3%. The groove is 4–8 cm high and 11–16 cm deep. Openings with rectangular cross-sections are on the back side of the groove in irregular intervals. These are horizontally placed openings in the groove which run through wall A. Their sides are also covered with plaster. Various impressions in the plaster clearly indicate that the lengthwise and transverse grooves are actually the impressions of wooden girders that were formerly incorporated into the wall. The impressions of wood composition can be discerned in places in the plaster. Furthermore, a segment of the lengthwise groove does not have a regular and straight lower side; it is semi-circular instead. Obviously the girder here was made of the round section of a tree trunk. Positive and negative peg impressions on the upper sides formed like trapezoids or swallowtails were also documented. This was actually one way to connect wooden constructions (Adam 2001: 101, Fig. 231/3). These traces could have only emerged if cut wooden girders were posted during construction of the wall. The pegs were deep on the lengthwise girders, while the tips of the transverse pegs were cut and had the form of trapezoids or swallowtails. The transverse girders were thus wedged into the lengthwise ones. The lengthwise girders were connected to each other in the same manner. This construction was then covered with mortar and the raising of the wall resumed. The mortar contains negative impressions of wooden constructions as well as impressions of the wood composition and the pegs used to tie the girders together. After the wooden girders rotted away, their impressions remained in the mortar, i.e. the grooves with what appear to be plastered sides at first glance.

There are also round holes above the lengthwise groove on wall A at irregular intervals. They are 4–7 cm in diameter. These are transverse holes that pass through wall A down its length. Their sides are also covered with plaster. These are probably the remains of wooden billets that served as reinforcements for the wall or as scaffolds during its construction.

A total of 28 counterforts are arranged on the external, southern face of wall A in intervals of 1.23 to 1.83 m. The wall and counterforts are not mutu-

ostali su njihovi otisci u vezivu, odnosno kanali s naizgled ožbukanim stijenkama.

Povrh uzdužnog kanala na zidu A u nepravilnim se razmacima nalaze i rupe kružnog presjeka. Njihov promjer iznosi 4–7 cm. Riječ je o poprečnim rupama koje kroz zid A prolaze po njegovoj širini. Njihove su stijenske također obložene žbukom. Vjerojatno je riječ o tragovima drvenih oblica koje su služile kao armatura zida ili kao skela prilikom gradnje zida.

Na vanjskom, južnom licu zida A raspoređeno je u razmacima od 1.23 m do 1.83 m ukupno 28 kontrafora. Zid i kontrafori nisu međusobno povezani, već su kontrafori prislonjeni na ožbukani zid, a prekrili su i opisanu konstrukciju od drvenih greda. Kontrafori su zidani kao i zid A od dvaju paralelnih redova klesanoga kamenja nejednake veličine, a središnji je dio ispunjen sitnim kamenjem i vezivom. Sva su tri lica kontrafora ožbukana. Široki su između 0,82 m i 1.57 m, a njihova najveće dužina iznosi od 1.72 m do 1.92 m. Tu dužinu kontrafori imaju u svom donjem dijelu. Na određenoj visini skraćuju se za oko 0,1–0,2 m. Od te se točke južno lice kontrafora pod nagibom približava zidu A. Nagib se razlikuje od kontrafora do kontrafora. Nijedan nije sačuvan dovoljno da bi se na temelju toga moglo reći kako je izvorno izgledao odnos zida A i vrha kontrafora.

Na istočnom kraju zida A dokumentiran je tanak sloj sitnog drobljenog kamenja koje je zaliveno vezivom. Ispod tog sloja nalazi se sloj u kojem nije bilo rimskih nalaza, ali je zato pronađeno nekoliko ulomaka grube prapovijesne keramike (Šimić–Kanaet 2003: 109). Sloj sjeda na zdravicu, a u njega su ukopani temelji zida A i kontrafora. Temelji su duboki od 0,2 m do 0,4 m, a riječ je o nabacanom nevezanom kamenju neujednačene veličine. U visini spomenutog sloja žbuke i sitnog drobljenog kamenja temelji su također zaliveni žbukom i od te razine naviše zid A i kontrafori zidani su vezivom. Sve to upućuje na zaključak da je sloj sitnog drobljenog kamenja koje je zaliveno vezivom zapravo antička razina hoda s južne strane građevine.

Na zapadnom kraju zid A završava pravilno klesanim kamenim blokovima. Dio ih je klesan od istog kamena kojim je zidan zid A, a dio od mekše i lakše obradive muljike. Na zapadnom kraju zida A na kutne se klesane blokove u smjeru sjevera nadovezuje zid C. Istražena su 3,5 m tog zida, a probnim je blokom obuhvaćen njegov sjeverni kraj. Zid nije mogao biti potpuno istražen jer je prekriven gromačom koja se nije mogla ukloniti. Širina zida C na spoju sa zidom A iznosi 0,55 m i prema sjeveru se smanjuje na 0,4 m. Vanjsko, zapadno lice zida bilo je ožbukano. Na njegovu istraženom dijelu nisu pronađeni otisci drvenih greda ni kontrafori. Doduše otisci drvenih greda od ugla sa zidom A nastavljaju se prema

ally connected, rather the counterforts lean against the plastered wall, and they also covered the above-described construction made of wooden girders. The counterforts were built in the same manner as wall A, i.e. two parallel rows of cut stones of unequal size, while the middle portion is filled with tiny stones and mortar. All three faces of the counterforts are plastered. They are between 0.82 m and 1.57 m wide, while their greatest lengths range from 1.72 m to 1.92 m. The counterforts have this same length at the bottom. At a specific height they become approximately 0.1–0.2 m shorter. At this point, the southern face of counterforts approach wall A under an incline. The incline differs from counterfort to counterfort. None have been sufficiently preserved to serve as a basis to ascertain the original appearance of the interrelationship between wall A and the top of the counterforts.

A thin layer of tiny crushed stone with mortar poured over it was documented on the eastern end of wall A. Underneath this layer there was another in which there are no Roman-era finds, although several fragments of prehistoric pottery were found here (Šimić–Kanaet 2003: 109). This layer rests on humus, while the foundations of wall A and the counterforts are dug into it. The foundations are 0.2 m to 0.4 m deep, and they consist of loosely deposited stones of various sizes. The foundations are also reinforced with mortar at the level of the aforementioned layer of mortar and tiny crushed stone, and from this level upward wall A and the counterforts are made with mortar. All of this indicates that the layer of tiny crushed stone with mortar poured over it is actually the Classic-era ground level from the southern side of the structure.

At its western end, wall A ends in uniformly cut stone blocks. A portion was cut from the same stone that was used to construct wall A, while another portion was made of softer and more easily workable sandstone. Wall C is connected to the cut blocks to the north on the western end of wall A. 3.5 meters of this wall have been examined, and a probe encompassed its northern end. The wall could not be fully examined because it is covered with a dry stone wall that could not be removed. The width of wall C where it meets wall A is 0.55 m, and it diminishes to 0.4 m toward the north. The external, western face of the wall was plastered. No impressions of wooden girders nor counterforts were found on its examined portion. To be sure, there are the impressions of wooden girders from the corner with wall A that continue in a northerly direction, but they do not exceed the length of wall A. These are actually impressions of the first in a series of transverse girders that linked the lengthwise girders on the exter-

sjeveru, ali ne prelaze širinu zida A. Riječ je zapravo o otisku prve u nizu poprečnih greda koje su povezivale uzdužne grede na vanjskom i unutarnjem licu zida A (Sanader 2003: 69–72). Na zidu C dokumentirane su pukotine te tragovi popravaka tih pukotina (Sanader 2003: sl. 64).

Osim zida C, na zid A se pod pravim kutom u smjeru sjevera nadovezuju i zidovi I, II i B. Opisani zid I nalazi se oko 9 m istočno od zida C, odnosno od zapadnoga kraja zida A. Zid II prepoznat je 2001. godine u sjevernom profilu nakon što je u potpunosti uklonjen suhozid koji je prekrivao zid A. On se nalazi oko 17 m zapadno od istočnoga kraja zida A. Na istočnom kraju zid A završava pravilno klesanim kamenim blokom na koji se u smjeru sjevera nadovezuje zid B. Zid II nije mogao biti istražen 2001. godine, ali su istražena oko 2 m zida B. Za razliku od zida C, na njegovom istočnom, vanjskom licu otkriveni su ostaci jednog kontrafora (Sanader 2003: karta 9). Istraživanje zida B nastavljeno je 2002. godine kako bi se definirao istočni te eventualno dosegnuo i sjeverni rub građevine.

Zid B je poput zida A bio prekriven suhozidom koji je, položen u smjeru sjever – jug, dijelio malu terasu s istočne strane okućnice braće Roguljić od poljskog puta koji se od okućnice braće Roguljić spušta prema jugu, odnosno prema Podvornicama. Dijelom je bio prekriven relativno plitkim slojem humusa, a u južnom dijelu i recentnim nanosima kamena i otpada kojima su očigledno nivelirane okućnica braće Roguljić i mala terasa s njene istočne strane. Uklanjanjem tog sloja oslobođena je cijela dužina vrha zida B (9,5 m). Na sjeverni se kraj zida B u smjeru zapada nadovezuje zid a. Gotovo 4 m sjevernije započinje zid B2 koji leži na istom pravcu kao i zid B. Na južni se kraj zida B2 u smjeru zapada nadovezuje zid b, a na sjeveru zid B2 prelazi u profil. U probnom bloku 6 na udaljenosti od oko 7,5 m od sjevernog profila iste je godine uhvaćen segment zida B2 čime je dodatno potvrđeno da se nastavlja prema sjeveru. Zid c nalazi se 7,5 m sjeverno od zida b i također se okomito na zid B2 pruža prema zapadu. Daljnja istraživanja koncentrirana su na prostor između zidova B i B2 koji je bio zapunjen kamenjem. Dio sonde koji obuhvaća zidove a i b proširen je prema istoku kako bi se na većoj površini i bez opasnosti moglo ukloniti kamenom zapunjenje koje se u jednom trenutku gotovo urušilo (Sanader 2002: 90). Istovremeno je započelo istraživanje cijele dužine istočnog lica zida B. Zapadno lice, na koje se naslanja mala terasa, nije moglo biti istraženo. Od zida B2 istražen je samo površinski. Zid B dugačak je oko 9 m, a širok 0,8 m. Na južnom kraju sačuvan je do visine od samo 0,38 m, a na sjevernom do visine od 2,1 m. Po načinu gradnje vrlo je sličan zidu A. Vanjsko i unutarnje lice zidani su

nal and internal faces of wall A (Sanader 2003: 69–72). Fissures and traces of repairs to these fissures were documented on wall C (Sanader 2003: Fig. 64). Besides wall C, walls I, II and B are also connected to wall A at right angles in a northerly direction. The described wall I is located approximately 9 m to the east of wall C, from the western end of wall A. Wall II was discerned in 2001 in its northern profile after the dry stone wall covering wall A was completely removed. It is located approximately 17 m west of the eastern end of wall A. At its eastern end, wall A ends in a uniformly cut stone block with which it is connected to wall B in a northerly direction. Wall II could not be examined in 2001, but approximately 2 m of wall B were examined. In contrast to wall C, the remains of a counterfort were discovered on its eastern, external face (Sanader 2003: Map 9). Research on wall B continued in 2002 in order to define the eastern, and perhaps reach the northern, boundary of the structure.

Wall B, like wall A, was covered with a dry stone wall which, situated in a north-south direction, separated a small terrace on the eastern side of the Roguljić yard from a field path that descends from the Roguljić yard toward the south, toward Podvornici. It was partially covered by a relatively shallow layer of humus, while in its southern portion it is also covered by recent deposits of stone and waste which were apparently used to level the Roguljić yard and the small terrace leaning on its eastern side. The removal of this layer revealed the entire length of the wall B's top (9.5 m). Wall a is connected at the northern end of wall B in a westerly direction. Wall B2 begins almost 4 m further north, lying in an easterly direction like wall B. Wall b is connected to wall B2 at the latter's southern end, while to the north wall B2 becomes a profile. In probe 6 at a distance of approximately 7.5 m from the northern profile, a segment of wall B2 was located, which additionally confirmed that it continued on northward. Wall c is 7.5 m north of wall b and it also extends vertically from wall B2 toward the west. Further research concentrated on the space between walls B and B2, which was filled with stone. A part of the probe that encompasses walls a and b was expanded toward the east so that these stones filling the space (which almost collapsed at one point) could be removed safely over a larger space (Sanader 2002: 90). Research along the entire length of the eastern face of wall B commenced simultaneously. The western face, adjacent to the small terrace, could not be examined. Only the surface of wall B2 was explored.

Wall B is approximately 9 m long, and 0.8 m wide. It has been preserved to a height of only 0.38 m at its southern end, and to a height of 2.1 m at its north-

od djelomično obrađenog kamena nejednake veličine, a središnji je dio zida ispunjen sitnim kamenjem i vezivom. Na južnom i sjevernom kraju završava pravilno klesanim blokovima muljike. Vanjsko, istočno lice zida bilo je ožbukano. Na vanjskom licu zida nalazi se pravilan kanal četverokutnog presjeka čija su donja, stražnja i gornja stijenska obložena žbukom. Taj se kanal proteže uzduž čitavog zida B i nije zabilježen samo na njegovom južnom kraju, na mjestu gdje je zid sačuvan ispod razine kanala. I u ovom slučaju riječ je o naizgled vodoravnom kanalu, no i on pada za 0,33 m (oko 5%) na mjestu koje se nalazi oko 6,36 m od sjeverne prema južnoj strani. Na stražnjoj stijenci kanala u nepravilnim se razmacima nalaze vodoravno položeni otvori kanala četverokutnog presjeka koji poprečno prolaze kroz zid B. Povrh uzdužnog kanala na zidu B u nepravilnim su razmacima raspoređene i rupe kružnog presjeka čiji promjer iznosi 4–7 cm. Na zidu B zabilježena je jedna duboka pukotina.

Na vanjskom, istočnom licu zida B raspoređena su u razmacima od 1,28 do 1,5 m ukupno četiri kontrafora. Zid i kontrafori nisu međusobno povezani, nego su kontrafori prislonjeni na ožbukani zid, a prekrili su i opisanu konstrukciju od drvenih greda. Zidani su kao i zid A od dvaju paralelnih redova djelomično obrađenog kamena nejednake veličine, a središnji je dio ispunjen sitnim kamenjem i vezivom. Sva su tri lica kontrafora ožbukana. Široki su između 0,9 i 1 m, a njihova najveća dužina iznosi 1,8 m. Toliko je dugačak njihov donji dio. Kontrafori su sačuvani do visine od 0,36 do 1,8 m. Samo je jedan sačuvan dovoljno da se prepozna mjesto na kojem je skraćen za oko 0,1 m i od kojeg se istočno lice kontrafora pod nagibom približava zidu B. Nažalost ni u ovom slučaju kontrafor nije sačuvan dovoljno da bi se moglo reći kako je izvorno izgledao odnos zida B i vrha kontrafora. Istraživanje južnog lica zida B doseglo je sloj žbuke koji se može pratiti duž cijelog iskopa, a zabilježen je i prethodne 2001. godine na samom istočnom kraju zida A. Time je dodatno potvrđena pretpostavka da se radi o antičkoj razini hoda s južne i istočne strane građevine.

Istraživanje prostora između zidova B i B2, odnosno a i b, također je doseglo antičku razinu hoda. Cijeli taj prostor bio je od sačuvanog vrha zidova a i b do antičke razine hoda ispunjen kamenom. To se ispunjenje zajedno sa zidovima a i b nastavlja prema zapadu, ali i mimo istočnog kraja zidova a i b te istočnog ruba sonde prema istoku. Kameno ispunjenje ovdje je omeđeno dvama paralelnim nizovima krupnog kamena koje je složeno tehnikom suhozida. Oni predstavljaju nastavak zidova a i b prema istoku jer njihov razmak i orijentacija odgovaraju razmaku i orijentaciji zidova a i b.

ern end. The construction style is similar to that of wall A. The external and internal faces are made of partially worked stone of unequal size, while the middle section of the wall is filled with small stones and mortar. At its southern and northern extremities it ends in identically cut sandstone blocks. The external, eastern face of the wall was covered with plaster. Running along the external face of the wall is a straight groove with a rectangular cross section in which the lower, back and upper sides are covered with plaster. This groove extends across the entire length of wall B and has not been registered only at its southern end, at a place where the wall has been preserved only beneath the level of the groove. In this case as well it is an apparently horizontal groove, but it also descends by 0.33 m (approximately 5%) at a point that is approximately 6.36 m from the north toward the south side. There are horizontally placed openings with rectangular cross-sections on the back of the groove at irregular intervals that pass through wall B. There are also round holes above the lengthwise groove on wall B at irregular intervals. They are 4-7 cm in diameter. A single, deep fissure was registered on wall B.

There are a total of four counterforts on the external, eastern face of wall B, arranged at intervals of 1.28 m to 1.5 m. The wall and counterforts are not mutually connected, rather the counterforts lean against the plastered wall, and they covered the above-described construction made of wooden girders. Like wall A, they were made of two parallel rows of partially worked stone of unequal size, while the middle portion is filled with small stones and mortar. All three faces of the counterforts are plastered. They are between 0.9 m and 1 m wide, and their greatest length is 1.8 m. That is the length of their lower sections. The counterforts have been preserved to heights ranging from 0.36 m to 1.8 m. Only one has been sufficiently preserved to enable recognition of the point at which it was shortened by approximately 0.1 m and whence the eastern face of the counterfort approaches wall B at an angle. Unfortunately, even in this case the counterfort has not been preserved to a degree that would provide an indication of the original appearance of the relationship between wall B and the top of the counterforts. Exploration of the south face of wall B reached the layer of plaster that can be followed for the entire length of the excavation, and it was also registered in the previous year, 2001, at the very eastern end of wall A. This additionally confirmed the assumption that this is the walking level on the southern and eastern sides of the structure during the Roman era. Exploration into the space between walls B and B2, and between a and b, has also reached the Classic-



Istražena su oko 3 m zida a. Njegova širina u kutu sa zidom B iznosi 0,9 m, ali se prema zapadu lagano smanjuje. Sačuvan je do visine od oko 2 do 2,5 m. Građen je slično kao i zidovi A, B i B2 od dvaju paralelnih nizova djelomično obrađenog kamena nejednake veličine, a središnji je dio zida ispunjen sitnim kamenjem i vezivom. Na vanjskom, sjevernom licu, koje je bilo ožbukano, nastavlja se pravilan kanal četverokutnog presjeka čija su donja, stražnja i gornja stijenka obložene žbukom. Na njegovoj stražnjoj stijenci u nepravilnim se razmacima nalaze vodoravno položeni otvori kanala četverokutnog presjeka koji poprečno prolaze kroz zid a.

Istražena su 2 m zida b. Sačuvan je do visine od oko 2 m. Kao i ostali zidovi građen je od dvaju paralelnih nizova djelomično obrađenog kamena nejednake veličine, a središnji je dio zida ispunjen sitnim kamenjem i vezivom. Vanjsko, južno lice zida bilo je ožbukano. No po konstrukciji se bitno razlikuje od dotada istraženih zidova. Prvo, prilikom njegove gradnje nije upotrijebljena konstrukcija od tesanih drvenih greda i drugo, širina zida je neujednačena. U gornjem dijelu zida iznosi 0,7 m, a do visine od 1,25 m vanjsko, južno lice zida iskače za 0,15 m do 0,2 m. Tako izgleda i istočni kraj zida koji je građen od pravilno klesanih kamenih blokova. Dio blokova klesan je od istog kamena kojim je zidan zid, a dio njih od mekše i lakše obradive muljike. Na ovaj se kraj u smjeru sjevera nadovezuje zid B2 koji je samo površinski istražen, i to u dužini od 9,5 m. Njegova širina iznosi 0,7 m, ali sudeći po južnom kraju i njegovu vanjsko, istočno lice u donjem dijelu iskače za 0,15 m do 0,2 m. Ni prilikom njegove gradnje nije upotrijebljena konstrukcija od tesanih drvenih greda, a zidan je isto kao i ostali zidovi od dvaju paralelnih nizova djelomično obrađenog kamena nejednake veličine. Središnji je dio zida ispunjen sitnim kamenjem i vezivom. Probnim blokom 6 2002. godine i njegovim proširenjem naredne godine (blok 2/2003.) ustanovljeno je da je zid B2 na tom mjestu znatno stradao zbog recentnog traženja kamena. Sačuvan je samo donji, širi dio zida i obuhvaćena je čitava njegova širina od 1 m. Na njemu su sačuvani tragovi prvog sloja žbuke za gornji, uži dio zida i jasno se prepoznaje da je zid bio sužen na vanjskom i unutarnjem licu. Na vanjskom, istočnom licu zida B2 raspoređena su u razmacima od 1,34 do 1,8 m ukupno četiri kontrafora. Zid se nakon četvrtog kontrafora nastavlja prema sjeveru, ali to se ne događa i s kontraforima uz njegovo istočno lice.

Površinski je istraženo 11,5 m zida c. Njegova širina iznosi 0,6 m. Zbog postojanja triju zidova koji su paralelni sa zidom A postavilo se pitanje njihovog odnosa prema zidu II i prema zidovima koji su s istočne strane vezani za zid I. Stoga je otvoren niz

era walking level. This entire space from the preserved tops of walls a and b down to the Roman-era walking level was filled with stone. Together with walls a and b, this stone filling continued toward the west, but also alongside to the eastern end of walls a and b and the eastern edge of the probe toward the east. The stone filling here is bordered by two parallel rows of large stones stacked in the dry-stone wall method. It constitutes a continuation of walls a and b toward the east, since the interval between them and their orientation corresponds to the intervals and orientation of walls a and b.

Approximately 3 m of wall a have been examined. Its width at the corner with wall B is 0.9 m, but it diminishes gradually toward the west. It has been preserved at heights of approximately 2 m to 2.5 m. It was constructed in a manner similar to walls A, B and B2, using two parallel rows of partially worked stone of unequal size, while the central part of the wall was filled with small stones and mortar. On the external, northern face, which was covered with plaster, a straight groove continues. It has a rectangular cross-section and its lower, back and upper sides are covered with plaster. There are horizontally placed openings with rectangular cross-sections on the back of the groove at irregular intervals that pass through wall a.

Two meters of wall b have been examined. It has been preserved to a height of approximately 2 m. Like the other walls, it is made of two parallel rows of partially worked stone of unequal size, while the central portion of the wall is filled with tiny stones and mortar. The external, southern face of the wall was covered with plaster. However, in terms of construction it greatly differs from the walls studied previously. First, during its construction the wooden girder structure was not used, and second, its width is not uniform. In its upper section the wall is 0.7 m wide, while at a height of 1.25 m, the external, southern face of the wall varies from 0.15 m to 0.2 m. The eastern end of the wall, made of uniformly cut stone blocks, has the same appearance. Some of the blocks are made from the same stone as the wall, while some are made of softer and more easily workable sandstone. Wall B2 is connected at this end to the north; only its surface has been examined to a length of 9.5 m. Its width is 0.7 m, but judging by its southern end, its external, eastern face, also varies by 0.15 m to 0.2 m. The cut wooden girders were not used in its construction, either, and it was made in the same manner as the other walls, i.e. two parallel rows of partially cut stone of unequal size. The middle portion is filled with small stones and mortar. In probe 6 of 2002 and its expansion in the following year (block 2/2003), it was determined

malih probnih blokova na mjestima na kojima su se očekivali kutovi ili križanje zidova. Istraživalo se do sačuvanog vrha zatečenih zidova, i to onoliko koliko je bilo potrebno da se dokumentira tlocrt zidova, a time i tlocrtni raspored prostorija. Na taj je način u produžetku zida d prema istoku i zida II prema sjeveru dokumentiran zapadni kraj zida d. Oko 1,5 m sjevernije dokumentiran je kut koji zatvaraju zidovi II i a. Kut je izrađen od pravilno klesanih kamenih blokova, što dodatno potvrđuje da je riječ o kutu i da se zid II ne nastavlja prema sjeveru.

Na isti je način u produžetku zida b prema istoku na pravcu na kojem leži zid II dokumentiran zapadni kraj zida b koji je također izrađen od pravilno klesanih kamenih blokova. Za njega je sa sjeverne strane pod pravim kutom vezan zid III. Probnim je blokovima u produžetku zida III prema sjeveru na udaljenosti od oko 1,5 m dokumentiran zapadni kraj zida e, na udaljenosti od 8,5 m križanje zida III i c, a na udaljenosti od oko 15 m zapadni kraj zida g. Ustanovljeno je da se zid III nastavlja i dalje prema sjeveru.

Na ovaj način definirano je nekoliko prostorija, po najprije prostorija 2 koju omeđuju zidovi A, B, II i a s unutarnjim dimenzijama od oko 7,5 m x 16,5 m i površinom od oko 123,75 m<sup>2</sup>. Nadalje, oko 4 m sjevernije od nje nalazi se, prostorija 3 koju omeđuju zidovi b, B, III i c, a ima iste unutarnje dimenzije i površinu (Sanader 2002: 89–91). Između prostorije 1 i 2 nalazi se prostorija 4 koja je omeđena zidovima A, II, I i d. Unutarnje dimenzije prostorije 4 iznose 6 x 39 m, a površina oko 234 m<sup>2</sup>. Oko 7 m sjevernije nalazi se prostorija 5 koja je omeđena zidovima e, III, I i c. Sa sjeverne strane na nju se nadovezuje prostorija 6 koju uz zid c omeđuju zidovi c, III, I i g. Unutarnje dimenzije prostorija 5 i 6 iznose oko 6 x 39 m, a površina oko 234 m<sup>2</sup>.

Definiranje tlocrtnog raspored omogućilo je da se daljnja istraživanja organiziraju prema prostorijama. Tako je 2003. moglo započeti istraživanje prostorije 2. Najprije su u cijelosti istraženi zidovi II (7,7 m) i a (16,3 m). Oba zida široka su oko 0,7 m i izgrađena od dvaju paralelnih redova vezanog klesanog kamena nejednake veličine, a središnji je dio zida ispunjen sitnim kamenjem i vezivom. Nakon što je postignut dogovor s braćom Roguljić, počelo je pražnjenje cijele prostorije. Pritom je ustanovljeno da se neposredno ispod očuvanog dijela zidova II, a i B nalazi dosta tvrdi sloj žute zemlje. On sa zidovima II i B pada prema jugu, odnosno prema zidu A, a istovremeno i prema središnjem dijelu prostorije 2 gdje nestaje pod recentnim nanosima kamena i otpada kojima je nivelirana okućnica braće Roguljić. Uklanjanjem recentnih nanosa stvoren je presjek kroz prostoriju 2 u smjeru sjever–jug. Presjek je

that wall B2 at this point was considerably damaged by recent searches for stone. Only the lower, wider portion of the wall has been preserved, while its entire width of 1 m has been encompassed. Traces of the first layer of plaster for the upper, narrower part of the wall have been preserved on it, and it is clearly recognizable that the wall was narrowed on its external and internal faces. There are a total of four counterforts on the external, eastern face of wall B2, arranged at intervals of 1.34 m to 1.8 m. The wall continues toward the north after the fourth counterfort, but this does not also occur with the counterforts along its eastern face.

The surface of wall c has been examined over a length of 11.5 m. Its width is 0.6 m. The existence of three walls parallel to wall A imposed the question of their relationship with wall II and the walls connected to wall I from the east. Therefore a series of smaller probes were opened at places at which corners or intersections between walls were expected. Examinations were conducted to the tops of the walls that were found, to the extent necessary to chart a floor-plan of the walls, and thereby the floor-plan of the rooms. In this manner, the western end of wall d was documented in the extension of wall d toward the east and wall II toward the north. A corner was documented approximately 1.5 m to the north which closes walls II and a. The corner is made of uniformly cut stone blocks, which additionally confirms that this is a corner and that wall II does not continue toward the north.

The western end of wall b, also made of uniformly cut stone blocks, was documented in the same manner in the extension of wall b toward the east in the direction on which wall II lies. Wall III is connected to it from the north at a right angle. Using a probe in the extension of wall III, the western end of wall e was documented toward the north at a distance of approximately 1.5 m, the intersection of walls III and c at a distance of 8.5 m, and the western end of wall g at a distance of approximately 15 m. It was ascertained that wall III continues toward the north.

Several rooms were defined in this manner, first and foremost room 2 which is enclosed by walls A, B, II and a, with internal dimensions of approximately 7.5 m x 16.5 m and a surface of 123.75 m<sup>2</sup>. Further, approximately 4 m north of it there is a room enclosed by walls, b, B, III and c, and it has the same internal dimensions and surface (Sanader 2002: 89–91). Room 4, enclosed by walls A, II, I and d, is located between rooms 1 and 2. The internal dimensions of room 4 are 6 m x 39 m, while its surface is approximately 234 m<sup>2</sup>. Approximately 7 m farther north is room 5, enclosed by walls e, III, I and c. Room 6 is attached to it from the north, and besides wall c is

pokazao da je sloj žute zemlje dubok svega 0,15 m, da u središnjem dijelu prostorije nije sačuvan i da se ispod njega nalazi kamenje koje također sa zidovima II i B pada prema jugu, odnosno prema zidu A. Istraživanje je nastavljeno uklanjanjem sloja kamena sve dok se u središnjem dijelu prostorije nije počeo mjestimično pojavljivati žuti glinasti sloj. Osim kamena zabilježeni su sporadični ulomci tegula te amfora ili dolija. Nije uočeno kamenje s tragovima veziva za koje bi se moglo pretpostaviti da potječe sa zidova.

Zbog nedostatka vremena 2003. samo je jugozapadni kut prostorije 2 istražen do zdravice. Ove godine istraživanje je nastavljeno tako da je cijeli prostor uz zidove A i B u širini od oko 2 m istražen do zdravice. Time su, među ostalim, stvorene pretpostavke za polaganje drenaže i početak konzervatorsko–restauratorskih radova. Istraživanje je uglavnom potvrdilo, ali dijelom i upotpunilo prethodne spoznaje o stratigrafskoj situaciji u prostoriji 2 (Sanader/Tončinić: 90–91). Kamenje kojim je bila ispunjena prostorija 2 bilo je položeno izravno uz zidove II i a, ali ne i uz zidove A i B (Sl. 2). Čini se da je kamenje bilo brižno posloženo tehnikom suhozida tako da ne dodiruje zidove A i B. Prostor između kamena te zida A i B poput klina se sužava prema dnu i ispunjen je zemljom. U gornjem dijelu radi se o istom sloju tvrde žute zemlje kojim je bio prekriven sloj kamena. On seže do pravilnog četvrtastog kanala s unutrašnje strane zidova A i B. Prostor između kanala i temeljne stope zida A ispunjen je slojem svijetlosmeđe zemlje. Kameno ispunjenje prostorije 2 u visini temeljne stope zidova A i B položeno je na žutu glinastu zemlju, vjerojatno prebačenu zdravicu. Istraživanja su ove godine pokazala da u većem dijelu iskopa prebačena zdravica sjeda na sloj sive zemlje s dosta oblutaka i antičke keramike. Ovaj je sloj u istočnom dijelu sonde deblji nego u zapadnom i vjerojatno zbog toga nije zamićen prošle godine. Mjestimično čak seže do zida B. Ispod njega nalazi se sloj smeđe zemlje s brojnim sitnim ulomcima grube, crvene i crne pečene keramike koja je jako prhka, lako se drobi u rukama i sadrži dosta primjesa kvarcnog pijeska. Za razliku od prethodnih slojeva ovaj seže do zidova A i B. Temelji svih zidova koji omeđuju prostoriju 2 ukopani su u taj sloj, a dijelom i u zdravicu žute boje koja se nalazi neposredno ispod njega. Ovaj sloj po svim svojim karakteristikama usporediv sa spomenutim slojem koji je 2001. zabilježen na samom istočnom kraju zida A ispod antičke razine hoda oko građevine. Isto vrijedi i za nalaze keramike koji potječu iz tog sloja (Šimić–Kanaet 2003: 109).

Ovogodišnjim iskopavanjem oslobođeno je cijelo unutarnje, sjeverno lice zida A (16,3 m) i cijelo unu-

enclosed by walls c, III, I and g. The internal dimensions of rooms 5 and 6 are approximately 6 m x 39 m, while its surface is approximately 234 m<sup>2</sup>.

Definition of the floor-plan facilitated further examination organized from room to room. Thus in 2003 examination of room 2 could begin. First walls II (7.7 m) and a (16.3 m) were thoroughly examined. Both walls are approximately 0.7 wide and made of two parallel rows of cut stone of unequal size bonded by mortar, while the middle part of the walls is filled with small stones and mortar. After an agreement was reached with the Roguljić brothers, works commenced to empty the entire space. In the process, a relatively hard layer of yellow soil was discovered under immediately beneath the preserved parts of walls II, a and B. It descends toward the south together with walls II and B, i.e. toward wall A, and also simultaneously toward the central part of room 2, where it disappears under recent deposits of stones and waste used to level the Roguljić yard. Removal of the recent deposits created a cross-section through room 2 in the north-south direction. The cross-section showed that the layer of yellow earth is only 0.15 m deep, that it had not been preserved in the middle of the room and that beneath it there are stones which also, together with walls II and B, descend toward the south, toward wall A. Exploration continued with the removal of the layer of stones until a yellow clay-like layer began to emerge in the middle of the room. Besides stones, sporadic fragments of tegulae, and amphorae or dolia were registered. No stones with traces of mortar were found that could be assumed to come from walls.

Due to a lack of time in 2003, only the southwestern corner of room 2 was examined to the humus. This year research continued so that the entire space along walls A and B in a width of approximately 2 m was examined down to the humus. Among other things, such activity created the conditions for installing drainage and embarking upon conservation and restoration works. The research generally confirmed and partially complemented previous knowledge on the stratigraphic situation in room 2 (Sanader/Tončinić: 90–91). The stones used to fill room 2 were placed directly along walls II and a, but not along walls A and B (Fig. 2). It seems that the stones were carefully stacked in the dry-stone wall technique so that they would not touch walls A and B. The space between the stones and walls A and B narrows wedge-like toward the bottom and is filled with dirt. In the upper portion it is the same layer of hard yellow soil that covered the layer of stones. It extends to the straight rectangular canal along the interior of walls A and B. The space between the canal and the foundation of wall A is filled with a layer

tarnje, južno lice zida B (7,7 m). Osim toga je oslobođeno i unutarnje, istočno lice zida II i unutarnje, južno lice zida a (dio od oko 2 m). Temelji zidova A, B, a i II izrađeni su od sitnog kamenja bez upotrebe veziva. Kamenje je položeno u iskop kroz spomenuti sloj smeđe zemlje s brojnim sitnim ulomcima grube, crvene i crne pečene keramike koja je jako prhka, lako se drobi u rukama i sadrži dosta primjesa kvarcnog pijeska. Temelji zidova II i a položeni su na zdravicu, dok su temelji zidova A i B dijelom ukopani i u zdravicu. Na visini od 0,8 m kamenje je zaliveno vezivom, a zidovi su od te razine naviše zidani vezivom. Struktura zidanja je više–manje ujednačena, ali mjestimično se prepoznaju tragovi popravaka ili drugih ruku. Kao i na vanjskom licu zidova A, B i a tako je i na njihovom unutarnjem licu zabilježen pravilan kanal četverokutnog presjeka čija su donja, stražnja i gornja stijenska obložena žbukom. Na njegovoj stražnjoj stijenci u nepravilnim se razmacima nalaze vodoravno položeni otvori kanala četverokutnog presjeka koji poprečno prolaze kroz zid a. Kanal se nalazi na visini od 1 m iznad temeljne stope zida. Oko 5 m od istočnog kraja zida a kanal prestaje, a struktura zida se mijenja. Dio zida iznad linije kanala uži je 0,1–0,15 m od dijela zida ispod linije kanala. Takva struktura zida može se pratiti do zapadnog kraja zida a, nastavlja se čitavom dužinom zida II i završava nešto niže od četvrtastog kanala na unutrašnjem licu zida A. Na sačuvanom vrhu zidova II i a i na njihovom unutarnjem licu nisu pronađeni tragovi ulaza u prostoriju 2. Isto vrijedi i za zidove A i B na kojima se zbog kontrafora uz vanjsko lice zidova vrata nisu ni očekivala. Iako je uočeno više struktura zidanja, za sada ih nije moguće povezati s ulazom koji je eventualno naknadno zazidan. Lica zidova prilično su gruba, nisu bila ožbukana, a na nekoliko mjesta iz lica zida viri i po nekoliko centimetara dugo oštro kamenje. Sve to upućuje na zaključak da je prostorija 2 izvorno bila ispunjena kamenom i da je takav način gradnje služio za nivelaciju terena. Tome u prilog ide i činjenica da je kamenje kojim je bila ispunjena prostorija 2 bilo položeno neposredno uz zidove II i a, dakle ništa ih nije dijelilo. Za razliku od toga kamenje je bilo svijesno položeno tako da ne seže do zidova A i B (Sanader/Tončinić 2003: sl. 3).

Uklanjanjem kamenja i otpada kojim je bila nivelirana okućnica braće Roguljić te kamenja kojim je bila ispunjena prostorija 2, uklonjena je i bojazan od mogućeg urušavanja zida A pod pritiskom terase na kojoj se nalazi okućnica braće Roguljić. Stoga je ove godine moglo biti nastavljeno istraživanje s južne strane zida A. Pritom je cijeli prostor s južne strane zida A – između kontrafora K21 i K28 na širini od oko 3 m istražen do zdravice. U prvom koraku

of light brown earth. The stones filling room 2 to the height of the foundation walls A and B is placed on the yellow clay-like soil, probably thrown-over humus. This year's research has shown that in most of the excavation the thrown-over humus lies on a layer of gray earth with a considerable quantity of pebbles and Roman-era pottery. This layer in the eastern part of the probe is thicker than in the western part, and this is probably why it was not noticed in the preceding year. At places it even reaches wall B. Under it there is a layer of brown earth containing numerous fragments of coarse, red and black baked pottery which is very brittle, breaking easily in the hands, and consisting of a considerable amount of quartz sand. As opposed to the preceding layers, this one reaches to walls A and B. The foundations of all walls enclosing room 2 are buried into this layer, and partially into the yellow humus directly beneath it. By all characteristics, this layer is comparable to the aforementioned layer that was registered in 2001 at the very eastern end of wall A beneath the Classic-era walking level around the structure. The same applies to the pottery finds that come from that same layer (Šimić–Kanaet 2003: 109).

This year's excavation freed the entire internal, northern face of wall A (16.3 m) and the entire internal, southern face of wall B (7.7 m). Additionally, the internal, eastern face of wall II and the internal, southern face of wall a (a portion of approximately 2 m) were also freed. The foundations of walls A, B, a and II are made of small stones, using no mortar. The stones were placed in the hole through the aforementioned layer of brown earth with numerous tiny fragments of coarse, red and black baked pottery which is very brittle, breaking easily in the hands, and consisting of a considerable amount of quartz sand. The foundations of walls II and a rest on the humus, while the foundations to walls A and B are partially buried into the humus. At a height of 0.8 m the stone had mortar poured over it, while the walls from this level upward are bonded with mortar. The structure of the masonry is more or less uniform, but at places signs of repair or work by another hand are recognizable. As with the external and internal faces of walls A, B and a, a straight groove was registered which has a rectangular cross-section and plaster-covered lower, back and upper sides. There are horizontally placed openings with rectangular cross-sections on the back of the groove at irregular intervals that pass through wall a. The groove is 1 m above the foundation of the wall. Approximately 5 m from the eastern end of wall a the groove stops, and the wall's structure changes. The part of the wall above the line of the groove is 0.1–0.15 m narrower than the part of the



Slika 3/Figure 3

istraženo je južno lice zida A do sloja sitnog drobljenog kamenja koje je preliveno žbukom. Iako nije svugdje sačuvan u jednakoj mjeri taj je sloj zabilježen na cijeloj površini iskopa, a nastavlja se i u južni i u zapadni profil. Najbolje je sačuvan uz sam zid A, pogotovo u kutovima između zida i kontrafora gdje se lagano uzdiže. Između kontrafora i južno od njih žbuka je slabije sačuvana, mjestimično je i potpuno nestala, ali je sačuvano sitno drobljeno kamenje vezano žbukom. Ovime je dodatno potvrđeno da je riječ o antičkoj razini hoda s južne i istočne strane građevine (SI. 3).

Na prostoru između kontrafora K23 i K24 u ovom su sloju nađena četiri komada rimskog novca. Tri su bila međusobno slijepljena korozijom (SI. 4–5). Četvrti nije bio slijepljen s prva tri, ali je nađen neposredno ispod njih i očigledno pripada istoj cjelini. Novac je po svemu sudeći istovremeno dospio u ovaj sloj, bilo da je slučajno upao, bilo da je na-

wall beneath the groove line. This wall structure can be followed to the western end of wall a, and continues along the entire length of wall II and ends slightly below the rectangular groove on the internal face of wall A. Traces of the entrance to room 2 were not found on the preserved tops of walls II and a and their internal faces. The same applies to walls A and B where, due to the counterforts along the external face of the walls, doors were not even expected. Although several wall-building structures were observed, for now it is not possible to link them with an entrance that may have been subsequently built. The faces of the walls are relatively coarse, they were not plastered, and at several points sharp stones, several centimeters long, protrude. All of this indicates that room 2 was originally filled with stone and that this construction method served to level the terrain. This conclusion is backed by the fact that the stone used to fill in room 2 was placed directly along walls II and a, meaning there was

mjerno bačen. Budući da je nađeni u žbuci, mora se pretpostaviti da je u ovaj sloj dospio u trenutku njegovog nastanka, dok je žbuka bila svježa i dok je u nju mogao potonuti. Sva četiri komada prilično su oštećena korozijom i nisu na licu mjesta mogla biti pročitana. U ovom sloju nisu zabilježeni drugi nalazi. U drugom koraku istraživanje je nastavljeno do zdravice. Pritom je ustanovljen isti slijed stratigrafskih jedinica koji je na južnom kraju zida A zabilježen još 2001, a on je identičan stratigrafskoj situaciji koja je ove godine dokumentirana unutar prostorije 2. Ispod sloja sitnog drobljenog kamena koje je zaliveno vezivom nalazi se sloj u kojem nije bilo rimskih nalaza, ali su nađeni brojni sitni ulomci grube, crvene i crne, pečene keramike koja je jako prhka, lako se drobi u rukama i sadrži dosta primjesa kvarcnog pijeska. Ispod njega nalazi se zdravica žute boje. Temelji zida A i kontrafora ukopani su u taj sloj. Tijekom istraživanja u ovom su sloju među brojnim ostalim ulomcima sakupljeni i ulomci obođa, ručki, pršljena te jedan ulomak s ukrasom. Očekujemo da će tipološka analiza nalaza potvrditi da je riječ o prapovijesnoj keramici koja je već ranije zabilježena na ovom lokalitetu (Šimić–Kanaet 2003: 109). Na prostoru između kontrafora K22 i K23 nađena je jama koja je također bila ukopana u ovaj sloj (SI. 6). U jami su nađeni brojni ulomci triju posuda koje će se moći gotovo u cijelosti rekonstruirati, samo nekoliko ulomaka drugih posuda, nekoliko životinjskih kostiju i brojni ulomci kućnog ljepra. Jama je bila prekrivena slojem sitnog drobljenog kamena koje je zaliveno vezivom, a presječena kako zidom A, tako i kontraforom K22. Ovogodišnjim iskopavanjem u potpunosti je oslobođeno vanjsko, južno lice zida A (19,5 m). Osim toga u potpunosti je oslobođeno istočno, južno i zapadno lice kontrafora K21 do K28. Time je ustanovljen i odnos kontrafora i zida A. Otprije je poznato da su kontrafori samo prislonjeni na zid A, a sada je utvrđeno da su temelji kontrafora i do 0,2 m odmaknuti od temelja zida A. Temelji kontrafora su i nešto plići nego temelji zida A i nisu ukopani u zdravicu. Djelomično su izrađeni od sitnog, a djelomično i od krupnog kamena bez veziva. Vezivo je korišteno tek od antičke razine hoda koja ih okružuje (SI. 7).

## SONDA Z1

Sonda pod radnim nazivom Zid 1 nalazi se na parceli Petra Pezelja, zvanog Perinko (katastarska čestica 2870/1) i djelomično na parceli Stipe Tadinca. Njezino je istraživanje započelo 2002. godine uz zid dugačak 40,9 m ustanovljen u prijašnjim istraživanjima po kojem je i dobila ime (Sanader 2003: 55).

nothing separating them. In contrast, the stones were carefully laid so that they do not reach walls A and B (Sanader/Tončinić 2003: Fig. 3).

The removal of stones and waste used to level the Rogulić yard and the stones used to fill room 2 eliminated any fear of wall A collapsing under the pressure of the terrace on which the Roguljić yard is located. Therefore, this year examinations from the southern side of wall A may be possible. Herein the entire space from the southern side of wall A—between counterforts K21 and K28 at a width of approximately 3 m—has been examined down to the humus. In the first step, the southern face of wall A was examined down to the layer of tiny crushed stones covered with mortar. Although not preserved at all places to an equal extent, this layer was registered over the entire surface of the excavation, and continues to the southern and western profile. It is best preserved along wall A itself, particularly in the corners between the walls and the counterforts where they gradually rise. The mortar has been less well preserved between the counterforts and south of them, and at places it has completely disappeared, although the tiny crushed stones bonded by plaster have been preserved. This additionally confirms that it is a matter of the Classic-era walking level from the southern and eastern sides of the structure (Fig. 3).

Four Roman coins were found in the space between counterforts K23 and K24 in this layer. Three were fused together by corrosion (Fig. 4–5). The fourth was not, but it was found directly beneath them and obviously belongs to the same set. By all indications, these coins ended up in this layer at the same time, either accidentally or intentionally discarded. Since it was found in plaster, it must have ended up in the layer when the latter emerged, while the plaster was still fresh and they could sink into it. All four coins have been considerably damaged by corrosion and they could not be immediately read at the site. No other finds were registered in this layer. In the second step, examination down to the humus continued. Herein the same series of stratigraphic units as at the southern end of the wall A (registered in 2001) was ascertained, and it is identical to the stratigraphic situation which was documented within room 2 this year. Beneath the layer of tiny crushed stones covered by mortar, there is a layer in which there are no Roman-era finds, but numerous fragments of coarse, red and black, baked pottery were found which is very brittle, breaking easily in the hands, and consisting of a considerable amount of quartz sand. Below this there is yellow humus. The foundations of wall A and the counterforts are buried into this layer. During research



Slika 4/Figure 4

Slika 5/Figure 5





Istraživao se blok 1 dimenzija 5 m x 5 m. Te je godine otkriven poprečni zid u pravcu istok – zapad (sj 2) i izuzetno zanimljiva konstrukcija s otiscima drvenih greda i oblica u žbuci – sj 7 (Sanader 2002: 91–95). Godine 2003. između bloka 1 bloka 2 ostavljen je profil od 1,5 m i otvoren je blok 2 dimenzija 5 m x 5 m i proba 3 dimenzija 3 m x 2 m. U bloku 2 otkriven je još jedan poprečni zid (sj 3) i nastavak žbuke s otiscima drvenih greda i oblica – sj 7 (Sanader/ Tončinić 2003: 93–94).

U sklopu sistematskih istraživanja u rimskom vojnom logoru Tiluriju 2004. godine na sondi Z 1 istraživalo se od 14. lipnja do 10. srpnja 2004. Istražena su dva bloka, blok 3 i blok 4 u nastavku blokova 1/2002 i 2/2003 s istočne strane. Blok 3 imao je dimenzije 1,6 m x 5 m i bio je smješten između bloka 2/2003 i probe 3/2003. Blok 4 imao je dimenzije 5 m x 5 m i bio je smješten uz blok1/2002. U bloku 3 tražio se nastavak zida sj 3 koji je u probi 3/2003 nađen samo u negativu. U bloku 3 ustanovljeno je da se zid sj 3 penje na sterilne slojeve koji su sastavljeni od nabijene žute gline (sj 13, 442,45 m), a ispod njega se nalazi tvrdo nabijeni krupni šljunak (sj 25, 442,2 – 442,8) koji se nalazi iznad zdravice – sj 10) (Sl. 8). Sve što je od toga zida nađeno samo je jedan red kamenja. Južno od zida sj 3 u žutoj je glini (sj 13) nađen sloj tamne zemlje s garom (sj 20) koji je

Slika 6/Figure 6

Slika 7/Figure 7







Slika 8/Figure 8

Slika 9/Figure 9



into this layer, numerous other fragments were collected, among them fragments of brims, handles, spindle whorl and a fragment with a decoration. We expect that a typological analysis will confirm that this is prehistoric pottery, which has already been registered at this site earlier (Šimić-Kanaet 2003: 109). A pit was found in the space between counterforts K22 and K23 which was dug into this layer (Fig. 6). Numerous fragments of three vessels were found in this pit which will be almost entirely reconstructable, as well as fragments of other vessels, several animal bones and numerous fragments of a household daub. The pit was covered with a layer of finely crushed stones with mortar poured over it, and crossed over by wall A and counterfort K22. This year's excavations completely freed the external, southern face of wall A (19.5 m). Additionally, the eastern, southern and western faces of counterforts K21 and K28 have been completely freed. The relationship between the counterforts and wall A was also thereby ascertained. Even previously it was known that the counterforts are only leaning against wall A, but now it has been confirmed that the foundations of the counterforts are as much as 0.2 m removed from wall A. The foundations of the counterforts are somewhat shallower than the foundations to wall A and not buried in the humus. They are partially made of tiny and partially of large stones, without mortar. The mortar is only used from the Classic-era walking level which surrounds them (Fig. 7).

nalikovao na kanal (Sl. 9). Točan izgled tog sloja još nije definiran jer se nastavlja u istočni i južni profil koji još nisu istraženi. U sloju sj 20 nađeni su između ostalog ostaci *Sarius* šalice. Između bloka 3 i bloka 4 ostavljen je profil (nastavak profila širokog 1,5 m iz 2003.). U bloku 4 naišlo se na nastavak zida sj 2 iz 2002. te je ustanovljena donekle slična situacija kao u bloku 3. Zid se u ovom slučaju penje na tvrdo nabijeni krupni šljunak (sj 25). Sloj tvrdo nabijenog krupnog šljunka (sj 25, 442,51 – 441,55 m) prostire se kroz gotovo polovinu bloka, a u sjevernom je dijelu bloka tvrdo nabijena žuta glina (sj 13, 442,40 m). Sjeverno od zida sj 2 u sloju tvrdo nabijene žute gline (sj 25) nađena je jama (sj 24, 442,39 – 441,99 m) u kojoj nije bilo nalaza (sl. 10). Uz južno lice zida napravljen je presjek kroz sj 25. Na temelju tog presjeka čini se kao da je sloj tvrdo nabijenog šljunka (sj 25) nasut na sloj lapora (sj 26, 441,97 – 441,65 m) i na tamni masni sloj s garom (sj 22). Tamni masni sloj s garom (sj 22) djelomično se podvlači i pod zid sj 2 (Sl. 11). Ovaj sloj proteže se na dubini od 441,50 – 441,08 u širini od oko 2 m u južnom dijelu bloka. Značajan je zbog najatraktivnijeg nalaza u ovoj kampanji, a to je dobro sačuvana paragnatida koja se po prvim analizama može okvirno datirati u vrijeme oko sredine 1. st (Sl. 12). U ovom sloju bilo je više značajnih nalaza kao što je brončana kopča, željezna strelica i veća količina keramike, između ostalog i ulomak *Sarius* šalice. Prema podacima koji su dobiveni tijekom tri godine istraživanja na sondi Zid 1 možemo zaključiti da je zgrada sagrađena nakon sredine 1. st. Zasad nemamo pravo tumačenje situacije koju čine stratigrafske jedinice 13, 25 i 26. S obzirom na to da su ti slojevi pravilno odrezani i najvjerojatnije nasuti i nabijeni, možemo zaključiti da je ta struktura umjetno napravljena te da je starija od izgradnje zidova sj 2 i sj 3. Donekle se nalazi u ravnini žbuke s gredama i oblicama (sj 7) koja je otkrivena u ranijim istraživanjima. Jesu li zaista u nekoj vezi, ne možemo znati dok se ne nastave istraživanja.

Građevinske strukture sonde Zid 1 na kraju su istraživanja pokrivene geotekstilom i natkrivene drvenom nadstrešnicom.

## SONDA KJZ

Pretpostavljeno područje rimskog legijskog logora Tilurija za potrebe je istraživanja više puta snimano iz zraka u sklopu znanstveno-istraživačkog projekta. Tako su i 1999. snimljena dva niza od ukupno 14 slika na infracrvenom filmu. Snimanje je provedeno s oko 1100 metara nadmorske visine, što pri konstanti kamere od 153,406 mm okvirno odgovara mjerilu od 1:4000.

## PROBE Z1

A probe under working designation Zid 1 ('Wall 1') is located on a plot belonging to Petar Pezelj, also known as Perinko (cadastral unit no. 2870/1), and partially on a plot belonging to Stipe Tadinac. Research into it began in 2002 along a 40.9 m long wall ascertained in previous research after which it was named (Sanader 2003: 55). Block 1 was examined with dimensions of 5 m x 5 m. In that year, a transverse wall in the east-west (sj 2) was discovered, as well as an exceptionally interesting construction bearing impressions of wooden girders and billets in the plaster – sj 7 (Sanader 2002: 91–95). In 2003 a profile of 1.5 m was left between block 1 and block 2, and block 2 with dimensions of 5 m x 5 m and probe 3 with dimensions of 3 m x 2 m were opened. Another transverse wall (sj 3) was found in block 2, as well as the continuation of plaster with impressions of wooden girders and billets – sj 7 (Sanader/Tončinić 2003: 93–94).

As a part of systematic research into the Roman-era military camp Tilurium in 2004, research was conducted on probe Z 1 from 14 June to 10 July 2004. Two blocks were examined: block 3 and block 4 in continuation of blocks 1/2002 and 2/ 2003 from the eastern side. Block 3 had dimensions of 1.6 m x 5 m and was located between block 2/2003 and probe 3/2003. Block 4 had dimensions of 5 m x 5 m and was located next to 1/2002. A search for the continuation of wall sj 3 was conducted in block 3, which was only found in negative in probe 3/2003. In block 3 it was ascertained that wall sj 3 ascends on the sterile layers composed of impacted yellow clay (sj 13, 442.45 m), while solidly packed large gravel lies beneath it (sj 25, 442.2 – 442.8) which is above the humus – sj 10 (Fig. 8). A row of stones was all that was found of this wall. A layer of dark soil with soot (sj 20) that looked like a canal (Fig. 9) was found south of wall 3 in yellow clay (sj 13). The precise appearance of this layer has not been defined, as it continues into the eastern and southern profile which have still not been examined. The remains of a *Sarius* cup, among other things, were found in layer sj 20. A profile (the continuation of the 1.5 m wide profile from 2003) was left between blocks 3 and 4. The continuation of wall sj 2 from 2002 was found in block 4, and a situation somewhat similar to that of block 3 was also determined. In this case the wall ascends along solidly packed large gravel (sj 25). A layer of solidly packed large gravel (sj 25, 442.51 – 441.55 m) extends over almost the entire block, while the northern section of the block contains solidly packed yellow clay (sj 13, 442.4 m). A pit (sj 24, 442.39 – 441.99 m) was found



Slika 10/Figure 10

Slika 11/Figure 11





Slika 12/Figure 12

Interpretaciju snimki na stereoskopskom paru fotografija 12 i 13 izvršio je doc. dr. Michael Doneus koji je i objavio rezultate te analize (Doneus 2003). Ona je unutar pretpostavljenog prostora logora na određenim lokacijama pod zemljom ukazala na građevinske sklopove.

Prilikom ovogodišnje istraživačke kampanje na Gardunu odlučeno je i empirijski potvrditi pretpostavke o građevinama odnosno dijelovima građevina koje je implicirala arheološka zračna prospekcija. U dogovoru s vlasnikom parcele k.br.2895 Melhiorom Banićem istraživalo se na lokalitetu Grebi. Naime na tom je prostoru prospekcijom pretpostavljeno postojanje neke građevine, a u analizi ona je uvjetno označena kao jugozapadna kula logorskog bedema.

Arheološko istraživanje započeto je geodetskom identifikacijom pretpostavljene građevine (5,74 m x 6 m x 6 m x 5,70 m.) Njeni su kutovi potom poslužili i kao kutovi sonde (+ 10 cm) nazvane KJZ. Na jugozapadnom uglu sonde otvoren je kontrolni jarak 2 m x 1 m. Visina livade uz sondu iznosila je 433,16 m. Od četiri štih prva su dva bila humus i pothumus, a sljedeća dva pokazala su dvije različite karakteri-

north of wall sj 2 in the layer of solidly packed yellow clay (sj 25) which contained no finds (Fig. 10). A cross-section was made through sj 25 along the southern face of the wall. Based on this cross-section, it seems that the layer of solidly packed gravel (sj 25) was poured over a layer of marl (sj 26, 441.97 – 441.65 m) and a dark greasy layer with soot (sj 22). The dark greasy layer with soot (sj 22) partially lies under wall sj 2 (Fig. 11). This layer extends to a depth of 441.5 – 441.08 m in a width of approximately 2 m in the southern part of the block. It is significant because of the most attractive find in this campaign, and that is the well-preserved cheekpiece (*paragnatid*) which based on initial analysis can be generally dated to about the first century (Fig. 12). In this layer there were a number of important finds, such as a bronze clasp, an iron arrowhead and a larger quantity of pottery, among it the fragment of the Sarius cup.

According to data gathered during three years of research at probe Zid 1, we can conclude that the building was constructed after the mid-first century. For now we have no genuine interpretation of the situation forming stratigraphic units 13, 25 and 26. Since these layers are uniformly dug out and probably filled and packed, we can conclude that this structure was artificially made and that it predates construction of walls sj 2 and sj 3. The finds are roughly at the same level as the plaster with girders and billets (sj 7) discovered in prior research. Until research resumes, there is no way of knowing if they are linked in any way.

At the conclusion of research, the probe Zid 1 structure was covered with geotextile and a wooden awning.

## PROBE KJZ

The assumed territory of the Roman-era legionary camp Tilurium was photographed from the air for research needs on several occasions. Thus in 1999 two series of 14 photographs on infrared film were taken. The photographs were taken at approximately 1,100 m above sea level, which for a camera of 153.406 mm generally corresponds to a scale of 1:4000.

Dr. Michael Doneus interpreted images on the stereoscopic pair of photographs 12 and 13 and published the results of this analysis (Doneus 2003). These indicated building complexes underground at specific points within the assumed territory of the camp.

During this year's research campaign at Gardun, a decision was made to empirically confirm the as-



Slika 13/Figure 13

stike tla. U istočnom se dijelu pojavio žuti sloj sličan ilovači bez ikakvih nalaza, ali s ostacima gara (432,-72). U zapadnom dijelu u trećem se štihi nastavljao sloj pothumusa s više šljunka i s dosta fragmenata keramike te manje metalnih predmeta nakon čega je slijedio sloj šljunka (432,65) (Sl. 13).

Budući da se šljunak širio u južni profil, otvoren je drugi kontrolni rov izvan parametara postavljene sonde KJZ. Iskopavanja drugog kontrolnog rova pokazala su sličnu situaciju kao i u kontrolnom rovu 1. Međutim u četvrtom štihi situacija se u sjevernoj polovici rova mijenja jer šljunak počinje tonuti. Daljnje je iskopavanje pokazalo da se radi o jami uz koju se nalaze dvije koso položene udubine (jama 1) (Sl. 14). I jama i udubljena bili su ispunjeni gustom, masnom i vrlo kompaktnom glinom u kojoj je bilo komadića keramike, nešto neidentificiranih komadića metala i troske. Već se na osnovi iskopavanja u ovim dvama kontrolnim jarcima pokazalo da sloj šljunka na jugozapadnom dijelu sonde KJZ nema definirane rubove. Stoga se učinilo da će se bolji rezultati postići ako se slijedi sloj šljunka, nego da se iskopava unutar zadanih parametara. Nakon ovih pretpostavki otvoren je kontrolni rov br. 3 kojemu je

sumptions on buildings, or parts of buildings implied by the aerial archeological survey. With the consent of the owner of plot no. 2895, Melhior Banić, research was conducted at the Greba site. It was at this place that the survey indicated the existence of buildings, and upon analysis it was conditionally designated as the southwestern tower of the camp fortification.

Archeological research commenced with the geodesic identification of the assumed structure (5.74 m x 6 m x 6 m x 5.7 m.). Its corners then served as the corners for the probe (+10 cm) called KJZ. At the southwest corner of the probe, a control trench, 2 m x 1m, was opened. The elevation of the meadow along the probe was 433.16 m. Out of four excavation layers, the first two were humus and sub-humus, while the next two indicated two different soil characteristics. In the eastern section a yellow layer appeared similar to loam with no finds, but with the remains of soot (432.72 m). In the western section, the sub-humus layer continued in the third excavation layer, with considerable gravel, pottery fragments and small metal items, followed by a gravel layer (432.65 m) (Fig. 13).

Since the gravel spread to the southern profile, another control trench was opened outside of the parameters set by probe KJZ. Excavations of the second control trench showed a similar situation as in control trench 1. However, in the fourth excavation layer the situation in the north half of the trench changes because the gravel begins to sink. Further excavation showed that it is a pit with two slanted grooves next to it (pit 1) (Fig. 14). Both the pit and the grooves are filled with thick, greasy and very compact clay containing small pieces of pottery, unidentified pieces of metal and slag. Already on the basis of excavations in these two control trenches it became apparent that the layer of gravel in the southwest section of probe KJZ has no definite edges. Thus it appeared that better results could be achieved by following the gravel layer rather than excavating within the given parameters. Based on these assumptions, control trench 3 was opened, enclosed to the north by the western sides of the preceding two trenches. Control trench 3 had dimensions of 2 m x 1.6 m. In the third control trench after four excavation layers only gravel began to appear with the same characteristics as that in the preceding two. The gravel was penetrated in control trench 3, which showed that after eight excavation layers it ends up in almost pure clay. This penetration enabled a sketch of the control trench's profile (Fig. 15).

The opening of the fourth control trench (3.6 m x 1 m) enabled an analysis of the central part of the

sjeverna stranica omeđivala zapadne stranice prethodnih dvaju rovova. Kontrolni rov br. 3 imao je dimenzije 2 m x 1,6 m. U trećem se kontrolnom jarku nakon četiri štiha počeo pojavljivati samo šljunak istih karakteristika kao i onaj u prethodna dva. U kontrolnom jarku 3 napravljen je proboj kroz šljunak koji je pokazao da se nakon osam štihova nailazi na gotovo čistu glinu. Ovaj je proboj omogućio i iscrtavanje profila kontrolnog jarka (Sl. 15).

Otvaranjem četvrtog kontrolnog jarka (3,6 m x 1 m) stvorena je mogućnost analize središnjeg dijela zapadnog ruba sonde KJZ. Iskopavanja su međutim pokazala da se ni na ovom dijelu ne može naslutiti rub nekog planiranog objekta premda je zapadni rub sonde, kako smo naglasili, postavljen uz rub pretpostavljene građevine.

Iskopavanje je nastavljeno otvaranjem kontrolnog rova br. 5 (3 m x 1 m) koji je zahvaćao istočni rub sonde KJZ. Nakon četiri štiha i odstranjivanja humusnog i pothumusnog sloja u petom se štihu nailazi na glinasti sloj s rijetkim, jedva vidljivim komadićima keramike. Sljedeći štihovi (6–8) otkrivaju šljunčani sloj (432,44 m) istih karakteristika kao i u prethodnim kontrolnim iskopima. U jugoistočnom kutu kontrolnog rova br. 5 pojavili su se obrisi jame (jama 2) čija dubina iznosi 432,28 m.



Slika 14/Figure 14

Slika 15/Figure 15



Iako zbog nedostatka vremena sonda KJZ nije u potpunosti istražena, može se već sada posumnjati u pretpostavke koje su proizašle iz arheološke zračne interpretacije.

western edge of probe KJZ. However, excavations showed that even in this section the edge of some planned structure could not be discerned, although the western edge of the probe, as we noted, was set along the edge of the assumed structure.

Excavation continued with the opening of control trench 5 (3 m x 1 m) which encompassed the eastern edge of probe KJZ. After four excavation layers and removal of the humus and sub-humus layer, a clay-like layer with rare, barely visible pottery fragments is in the fifth excavation layer. The next excavation layers (6–8) reveal a gravel layer (432.44 m) with the same characteristics as in the preceding control excavations. The contours of a pit (pit 2) at a depth of 432.8 m appeared in the southeastern corner of control trench 5.

Although probe KJZ was not completely examined due to a lack of time, even now one can begin to question the assumptions that ensued from the archaeological aerial interpretation.

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