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# BLESSED WINE: A NEWLY DISCOVERED WINERY AT THE NORTH-WEST CHURCH IN HIPPOS - SUSITA (ISRAEL)

Upon a hill elevated ca. 350 m above the eastern shores of the Sea of Galilee (Genezareth) there are remains of the town of Hippos, in Jewish sources known under its Aramaic name *Susita*, in the early Islamic period spelled *Susyia* (**fig. 1**). Founded most probably in the 3<sup>rd</sup> century B.C., mentioned as one of the cities of the Dekapolis, in the Late Roman and Byzantine period Hippos was a bishopric of the province *Palaestina* II. Life continued there till A.D. 749, when the town was destroyed by an earthquake and never re-settled again.

The North-West Church, explored by the Polish team (joint venture the Research Centre for Mediterranean Archaeology of the Polish Academy of Sciences, National Museum in Warsaw and the Warsaw University) as a part of an international project (headed by Arthur Segal, University of Haifa) in the central area of the hill since 2000, is one of the four churches excavated so far in Hippos. This is a three-aisled basilica flanked by lateral wings and preceded by a spacious atrium (**fig. 2**). The church was originally constructed in an important spot of the city, to the north of the main public square (*agora*), on the site of a pagan sanctuary, built in the Augustan/Tiberian times.<sup>2</sup> By the Umayyad period, which corresponded with the final phase of the church compound, a complex wine-pressing installation existed on the southern side of the building.<sup>3</sup> Actually, it abutted the southern wing of the church, which contained a two-rooms' *diakonikon* and a mortuary chamber.<sup>4</sup> As to the northern wing of the church compound, it was fully explored only during the recent fieldwork season in July 2005.<sup>5</sup>

The northern wing initially constitued an integral part of the church in terms of its liturgical functioning as proven by a door, which originally connected this wing with the northern aisle of the basilica. Subsequently, the door was blocked, obviously alongside the change of the function of this annexe. Regardless of its previous development, by the mid-8<sup>th</sup> century the entire northern wing was occupied by a series of rooms and compartments constituting a complete winery installation (**fig. 3**). From east to west, the winery comprised: a deep collecting vat (provided with additional facilities), a basalt-paved treading floor, twin compartments for storing grapes, a narrow service compartment ("corridor") and a large fermentation hall. With the exception of the hall which had a partial roofing, the installation was open to the sky.

<sup>&</sup>lt;sup>1</sup> Pliny NH V, 74; Cl. Ptolemy Geogr. 5, 14, 22.

<sup>&</sup>lt;sup>2</sup> Młynarczyk, Burdajewicz 2004, p. 67-68, fig. 25.

Młynarczyk, Burdajewicz 2002, p. 25-28, figs. 46-48; Segal, Eisenberg 2004, p. 20-23.

Młynarczyk, Burdajewicz 2005a, p. 41 and 56, pl. 3.

<sup>&</sup>lt;sup>5</sup> Młynarczyk, Burdajewicz 2005b, p. 36-45.

#### **Description of the winery**

The eastern extremity of the winery is occupied by a collecting vat (L776), which is a narrow (1.60 m) and deep (1.92 m) stepped pool (**fig. LXXII**). Its walls are coated with a double layer of waterproof plaster, the lower one incorporating body sherds of cooking pots and storage jars of local Byzantine/Umayyad types. The length of the vat (4.90 m) equals the width of the northern wing. On the east, it is delineated by an earlier Roman wall (W769), apparently the eastern precinct wall of the temenos, a section of which was also re-used as the eastern wall of the basilica. Built of basalt ashlars, this wall is crowned with a single layer of limestone headers. Their extremely weathered condition proves that this eastern wall of the winery did not support any roof at all. The southern side of the collecting vat is in its upper part the same as the outer wall of the northern sacristy of the church (W237). A protruding part of the wall, its structure completely concealed under the hydraulic plaster of the pool, doubtlessly is the foundation part of the basilica's northern wall.

A flight of eight plastered steps descends from the northern side down to the bottom of the vat. The plan of the topmost step is eloquent proof of a very late construction date of the installation: the stones of the northern border do not even form a straight line as if they were put haphazardly onto the place. There is no threshold, nor any traces of an organised entrance to the pool. The second and the third steps are just 1.10 m wide to accomodate a sort of a short intermediate step constructed on their eastern side. The fourth step corresponds to the width of the vat (1.60 m); the next two steps, however, are shorter again (ca. 1.20 m). On their western side, abutting the pool's wall, there is another square socle: a monolithic basalt block plastered all over. It is situated 0.50 m below the outlet of a channel leading from the treading floor (cf. fig. LXXII). And again, the lenght of the seventh and eighth steps corresponds with the width of the vat. At the foot of the steps, in the north-east corner of the floor, there is a settling pit, roughly cubic in shape (0.60 m to a side). A major part of the vat must have been cut in the bedrock; however, the transition point between the constructed part and the rock-cut one is concealed behind the waterproof coating of the vat.

The treading floor (L775) adjacent from the west (**fig. LXXV**) is approximately square in outline (between 4.40 m and 4.70 m to a side). The eastern and western walls are constructed of basalt stones with only one side dressed, that facing the treading floor. Of the eastern wall (W774) just a single layer of masonry (0.36 m high) has survived, while the western wall (W781) preserves two layers of masonry (0.62 m high). Obviously, they were not much higher than that. The northern, outer wall (W245), built of irregular basalt stones, survives to the height of 0.53 m above the treading floor. The floor itself is constructed of rectangular basalt slabs of varying dimensions. Some of the slabs are marked with single engraved letters (e.g. O, K) like the flagstones of the agora square situated ca. 25 m to the south from the church. In the centre of the pavement there is a rectangular press-bed with a dove-tail mortice for a screw device, placing our installation with type T 831 (Single Fixed-Screw Press, Closed Dovetail Mortice) according to the classification of winepresses by R. Frankel.

The treading floor, which was revetted with hydraulic mortar reinforced by sherds of storage jars, slopes towards the north-east (from 127.56 m above sea level at the south-

<sup>&</sup>lt;sup>6</sup> Segal 2001, p. 3.

<sup>&</sup>lt;sup>7</sup> Frankel 1999, p. 144.

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west corner to 127.38 m at the north-east corner) towards an open channel, actually an inverted rooftile of the *imbrex* type, emptying into the vat. Two drums of small basalt columns (0.38-0.39 m in diametre, 0.71-0.73 m long) were found on the treading floor, doubtlessly used as rollers while crushing the grapes.

In the south-western corner of the treading room, a plastered entryway 0.76 m wide leads to the northern one of twin compartments (L782 and L783), adjoining on the west (figs. LXXII-LXXIII). These roughly square compartments were entirely revetted with two successive layers of white plaster rather than hydraulic mortar. The southern compartment (L782) measures inside 2.15-2.20 m from north to south and 2.30-2.45 m from east to west. Since its floor is slightly higher than that of the treading floor, they are separated from each other by a sort of "threshold" in the entryway, 0.16 m high. The eastern wall is preserved to the height of 0.50 m above the compartment's floor, and its original height remains unknown. A low partition wall, just ca. 0.30 m wide, separates L282 from the northern square compartment (L783). This fence, 0.35 m high, its top rounded and thoroughly plastered, has partially been destroyed by a military trench. The western "wall" has the same height of 0.35 m above the floor, and its plastered top is squarish. The floor slopes slightly to the north-west, towards an oval-sectioned opening (0.16 m high) in the western wall.

The northern compartment (L783) is slightly smaller than the southern one; its inner dimensions being 2.05-2.10 m from north to south, and 2.20 m from east to west. It has been severely damaged by the military trench, so the walls have been preserved to an insignificant height and the central section of the floor has completely been destroyed (fig. LXXIV). Like in L782, the floor slightly slopes from the south-east corner towards an oval opening in the western wall.

The two openings in question lead from the twin compartments to a narrow sunken space on the west (L780), its floor level lower by 0.33-0.40 m. This is the western part of an earlier mosaic-paved room (F785), originally connected with the northern aisle of the basilica by a door (fig. LXXV). After the door was sealed, the twin storage compartments were constructed upon the mosaic floor (with its very simple linear ornaments), leaving a sort of a corridor just 0.60-0.65 m wide. The southern end of this "corridor" is occupied by a solid platform (L784), built of small stones and roughly plastered on top; it abuts the sealed door in the wall of the basilica.

The "corridor" L780 separates the twin compartments L782-783 from a fairly vast hall (8.50 m by 4.50 m) on the west (R210W). The northern wall (W245) of the hall is the limit of the whole church compound, while the western wall (W792), composed of four distinct sections, reflects the changes in the arrangement of the northern wing. The walls of the hall were coated with a white plaster, comparable to that of the twin compartments. In the period of the functioning of the winery, the only direction from which the hall could have been entered was the east. Even if no distinct threshold was detected in the eastern wall, there seem to be traces of an entryway in its middle section.

The room is paved with a well-preserved mosaic (F768, **fig. LXXVI**) made of large cubes (1.4-1.7 cm to a side). The mosaic is plain except for a medallion (Diam.1.40 m) situated in the centre of the room. It is filled with a simple geometrical ornament of diagonal grid with diamonds in the hues of grey, black and brownish red against the background of white- and cream-coloured tesserae. The floor slopes from the

<sup>&</sup>lt;sup>8</sup> Młynarczyk, Burdajewicz 2005b, p. 40-41, fig. 71.

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maximum elevation 127.41 m above sea level in the north-east corner to 127.11 m in the south-west corner, towards a gap in the mosaic, framed by a multiple row of tesserae. In this intentionally unpaved corner of the room, a small horseshoe-shaped plastered basin (L777) was discovered, its bottom 0.32 m below the level of the mosaic. It apparently served as a sort of a sink, a collector for liquids.

There is evidence that the hall had only a partial roofing. In its western part, a layer of debris contained broken roof pieces, ca. 0.12 m thick. They were composed of three distinct layers: pieces of terracotta tiles, mixture of clay and mortar with ashes and tiny pebbles, and pumex stones coated by a thin layer of mortar on the top. In the eastern part of the room, however, the mosaic floor was instead covered with a whitish layer of crushed clay with lime mortar. This would suggest two different systems of the roofing, each corresponding to a limited space, as if a sort of verandah. In addition to this, a partial wooden roof (a sort of gallery?) ca. 1.50 m wide was protecting the area along the northern wall, to judge by the imprints of wooden beams left on the mosaic floor.

## Interpretation of the winery

The wine processing was beginning in the twin plastered compartments (cf. fig. LXXIV), which clearly were destined for prolonged storage of the grapes. This was the method of producing free-running juice or "first must" (prototropum of Pliny 14,12,85, mustum lixivium of Columella 12, 41) to ensure sweeter kind of wine. In the Talmudic sources such wine is mentioned as hylstwn, from Greek heliaston, "of the sun" and indeed, according to an earlier source, Roman agronomist Columella (12,27), this kind of sweet wine (vinum dulce) was obtained when the grapes were left in the sun for three days.

This first must, dripping rather than flowing out of the grapes, doubtlessly was collected into pottery vessels placed under the two outlets in narrow compartment L780 (cf. fig. LXXV). The vessel form suitable for this purpose appear to be "craters" (deep basins) rather than jars, the former being more stable and fairly wide-mouthed so as not to waste any single drop; the distance between the outlets and the corridor's floor (0.33–0.40 m) was ideal to place such vessels there. Actually, similar vessels are still being used in the present-day grape-presses of the Hauran. On the east side, the elevated threshold between the southern storage compartment and the treading floor prevented the juice of stored grapes from getting mixed with the juice of the grapes trodden and pressed on the basalt platform. Only after the required amount of the first must had been collected, the grapes were transferred from the storage compartments onto the treading floor.

It is clear that three methods of extracting the must from the grapes were used on this platform (cf. fig. LXXII). At first, the grapes were trodden barefoot and crushed with the use of the rollers (re-used column drums of basalt) such as those still used in the pressing installations of the Hauran. After that, the grape skins and stalks were gathered and the screw press was used to extract the remainder of the juice. Representations of a screw press in action are known from several mosaic floors in the Byzantine Levant, dated between the mid-6th and early 8th century. The type of our press (screw-press with

<sup>&</sup>lt;sup>9</sup> Dar 1986, p. 162; Frankel 1999, p. 43, 139 and 204.

<sup>&</sup>lt;sup>10</sup> Dentzer-Feydy 2003, pl. 123:3.

<sup>&</sup>lt;sup>11</sup> Dentzer-Feydy 2003, pl. 123:2; Frankel 1999, p. 139 and 146-147, Ts 862.

<sup>&</sup>lt;sup>12</sup> Dentzer-Feydy 2003, p. 170, pl. 121.

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rectangular press-bed) required the use of a rectangular wooden box or press frame called in latin *regula* or *galeagra*,<sup>13</sup> in which the pulp was piled up to obtain what Columella called *mustum tortivum*.<sup>14</sup> Both the must extracted by treading and that subsequently pressed in the *galeagra* were flowing through a single surface channel to the same collecting vat, in which the first stage of fermentation took place.

Before the must reached the bottom of the collecting vat, it probably had to be sieved to remove grape stalks and skins. Apparently, this was the function of the western socle built right under the outlet of the channel (cf. fig. LXXII). It is logical to assume that this was the proper spot to place a strainer, possibly of the type of the Roman *colum* made of soft basketry. The next purifying of the must by separating its residue was ensured by the settling tank cut in the vat's floor at the bottom of the steps. According to Talmudic sources such as *Tosefta*, the first stage of fermentation, carried out in this collecting vat, would continue for three days before the must could be transferred to wine jars. At this stage, the eastern socle in the upper part of the steps could have been used. It would have provided a support for large vessels when it was time to fill them with fermented must drawn from the vat and to transport them to the second fermentation place.

There can be little doubt that the second fermentation, which in this region should have lasted at least 40 days, <sup>17</sup> was taking place in the mosaic-paved hall (cf. fig. LXXVI). The must would be stored there either in *pithoi* (*dolia*) or in jars (amphorae). The *dolia* should have been covered by lids; <sup>18</sup> the narrow-mouthed jars could probably stay open or protected by a piece of fabric. This stage of the fermentation required frequent stirring and removing of foam. The slope of the floor towards a "sink" in the south-west corner ensured the controlled removal of the foam, while the durable waterproof mosaic floor, easy to clean, helped to maintain hygienic conditions. It is certainly interesting to note that here the fermentation process was carried out in rather high temperature (provided it was happening throughout late September and October) instead of in cool and dark conditions. Indeed, S. Dar<sup>19</sup> has expressed the view that some kinds of wines might have "preferred" the warm rather than cold atmosphere.

As mentioned above, the fermentation room could be entered only from the east, that is, through the narrow "corridor" L780. If another sieving of the must or distributing of wine into smaller containers were required, the twin compartments with their outlets leading to L780 could be used again. The function of the massive platform L784 in the southern end of the "corridor" remains obscure (cf. fig. LXXV); it could perhaps provide a room for vessels used in the wine distribution. Another tentative explanation is that it might have supported wooden staircase leading to a gallery and/or roof(?) above the walls of the fermentation chamber.

In the terms of the typology of wineries established by R. Frankel, our installation represents type T962: "Winery – One Axis Plan – Small Intermediate Vat (in our winery replaced by a portable sieving device placed on a socle) – Hanita Screw Mortice T 831". 20 It is smaller and definitely less elaborate than the winery which abuts the southern

<sup>13</sup> Cf. Frankel 1999, p. 148, fig. 42.

<sup>&</sup>lt;sup>14</sup> Frankel 1999, p. 42.

<sup>&</sup>lt;sup>15</sup> White 1975, p. 99.

<sup>&</sup>lt;sup>16</sup> Cf. Dar 1986, p. 156; Frankel 1999, p. 43.

<sup>&</sup>lt;sup>17</sup> Dar 1986, p. 156-157; Frankel 1999, p. 43.

<sup>&</sup>lt;sup>18</sup> White 1975, p. 179.

<sup>&</sup>lt;sup>19</sup> Dar 1986, p. 162.

<sup>&</sup>lt;sup>20</sup> Frankel 1999, p. 139.

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side of the church compound;<sup>21</sup> however, unlike the latter, the northern winery includes an additional, fairly securely identified element: a big fermentation room.

The way of entering the winery complex from outside remains a mystery, as no traces of any entrance have been preserved in the northern wall (W245), built mostly of irregular basalt stones. As a matter of fact, a section of this wall has been severely disturbed by the military trench (cf. fig. LXXIII). The height of the wall in question cannot be ascertained, but it sounds logical that it was rather low with the open-sky rooms (collecting vat, treading platform, twin storage compartments and the narrow "corridor"). It is only in the fermentation hall that the northern (outer) wall was high enough to support a partial roofing. It is rather logical to assume that the entrance was situated close to the twin storage compartments, because it was there that the grape stuff was being unloaded and preparation of wine was beginning. The access could have been provided by a wooden footbridge thrown across the northern wall.

Regrettably, identification of the walking level outside the northern wing also remains problematic, as it was largely disturbed by the military trench mentioned above. This outdoor level has satisfactorily been recorded only to the north of the fermentation room as an earthen floor connected with the outer northern wall (W245) of the compound.

#### Dating of the winery

The winery was obviously destroyed together with the church in a disastrous earthquake of A.D. 749. As to the date of its installation in the northern wing of the church, no sealed context is available which could provide conclusive evidence. However, it is clear that the winery could have been established only when the door connecting the northern wing with the northern aisle was blocked (cf. fig. LXXV). According to the relative chronology of the church's walls and floors, this must have happened during the third phase of the basilica, not earlier than in the 7<sup>th</sup> century.

The central ornament of the mosaic in the fermentation hall (cf. fig. LXXVI) is best paralleled by a number of the Umayyad-period mosaics in the area ranging from the eastern Galilee to Moabitis, such as found in Tiberias and attributed to the end of the Umayyad or the early Abbasid period,<sup>22</sup> in the church of Virgin Mary at Madaba dated to the 8th century,<sup>23</sup> a mosaic of A.D. 717/18 in the lower church of al-Quwaysmah,<sup>24</sup> and mosaics in Qastal.<sup>25</sup> The same simple motives, to be true, occur also in several earlier floors, e.g. in the church of St. Peter at Khirbat as-Samra, dated ca. 637.<sup>26</sup> Poor execution and simple construction methods in individual parts of the winery (such as the use of a ceramic *imbrex* to flow the grape juice to the collecting vat) point to a somehow makeshift character of the winery, installed in the northern wing as if because of a sudden need. To sum up, one is inclined to believe that this winery was not a long-lived one, therefore its establishment could even be as late as the first half of the 8th century.

An interesting question is that about the ownership of the winery: did it belong to the church? The answer seems to be positive, if we are to judge from the very location of the winery on the church grounds, in the area which originally was, just like the atrium, in direct communication with the basilica. This cannot be said about the winery to

<sup>&</sup>lt;sup>21</sup> Segal, Eisenberg 2004, p. 20-22.

<sup>&</sup>lt;sup>22</sup> Talgam 2004, p. 28-30, plan 2.2.

<sup>&</sup>lt;sup>23</sup> Piccirillo 1997, fig. 21. <sup>24</sup> Ibidem, fig. 487.

<sup>&</sup>lt;sup>25</sup> Bisheh 2000, photo. 3-4. Piccirillo 1997, fig. 607.

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The tightly sealed destruction deposits in the basilica provided many proofs that the church remained a place of the Christian worship till the very day of the earthquake in A.D. 749. On the other hand, equally eloquent is a record of the increasing poverty of the local community. This poverty was expressed in the restriction of the liturgical space to the aisles, in gradual removal of those marble elements which were not considered necessary for liturgy, and in the fact that a part of the church was left unrepaired, specifically, the nave, which since then might have served as a sort of atrium situated in between the aisles.<sup>27</sup> No wonder then that the church compound provided also opportunity for the impoverished Christians to be used as an area of domestic activity. Such was the fate not only of the northern wing but also of the atrium. In the eastern portico of the latter we have found iron and wood remains of a threshing machine (threshing sledge) of a type known by the Romans as the "Punic wagonnette" or "Punic cart" (plostellum Poenicum, described by Varro, R.R. I.52.1).28 Indeed, the spacious basalt-paved courtyard of the atrium must have provided ideal conditions for using such threshing device. In the same destruction layer of the atrium a basalt mill was discovered as well as a number of storage jars, all these finds emphasising the domestic character of the atrium. Domestic use was even extended onto a former mortuary chamber (Room 209W) in the southern wing of the church compound, accessed from the southern portico of the atrium. Its twin cist tombs must have been emptied of their contents at some time before the earthquake of A.D. 749, and one of them was subsequently re-used as a wine cellar. It sounds very probable that all this area continued to be owned and/or protected by the church authority.

To sum up, the exploration of the northern annexe of the North-West Church at Hippos has provided a lucid illustration of the wine-making process in around the mid-8th century, adding to the examples of wineries established in the Umayyad period in Transjordan and southern Syria, such as Umm as-Summaq, Umm al-Walid, Umm ar-Rasas and Sī'. It has confirmed that during the Umayyad period the non-Muslim population continued producing and consuming of wine, at the same time demonstrating that by the mid-8th century this once proud city of the Dekapolis had changed into a village-like settlement.

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<sup>29</sup> Dentzer-Feydy 2003, p. 170-171.

<sup>&</sup>lt;sup>27</sup> Młynarczyk, Burdajewicz 2005a, p. 56.

<sup>&</sup>lt;sup>28</sup> Cf. White 1967, p. 154-156 and 191, fig. 117.

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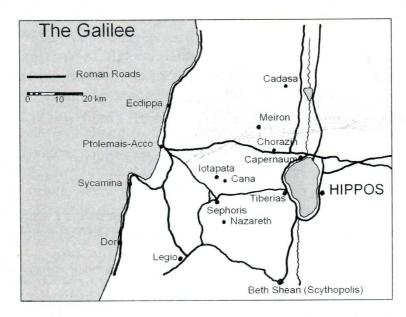


Fig. 1. Situation of Hippos in relation to the ancient Galilee.

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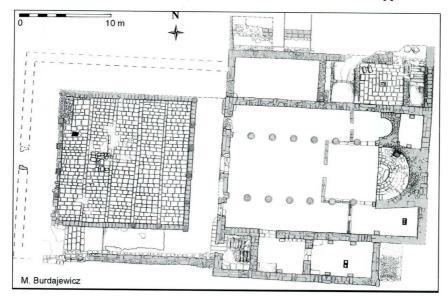


Fig. 2. Plan of the North-West Church at Hippos as exposed in 2005 (M. Burdajewicz).

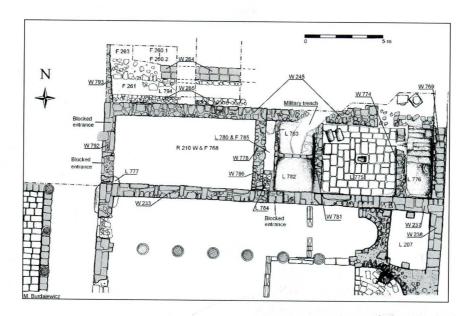


Fig. 3. Plan of the winery in the northen annexe of the North-West Church (M. Burdajewicz).

#### RYCINY KOLOROWE

### Mukhiddin Khudzhanazarov, Karol Szymczak, Michał Przeździecki

The Neolithic Red Dye Finds from Ayakagytma "The Site", South-Eastern Kyzyl-kums, Uzbekistan



Fig. LXX. A general view from the East on a plateau with Ayakagytma 'The Site'. Further to the West – the Ayakagytma depression with a lake. Photo L. Słowicki.

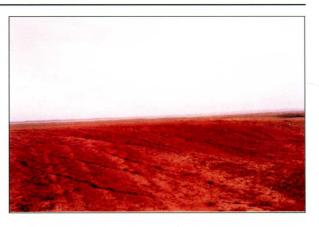


Fig. LXXI. An example of natural outcrops of mineral red ochre, some 1 km West of Ayakagytma 'The Site'.
Photo M. Przeździecki.

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Fig. LXXII. Must collecting vat of the winery as viewed from the north. Note a socle on the right and the settling pit at the bottom. Photo J. Młynarczyk.

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Fig. LXXIII. Treading floor of the winery as viewed from the north-east. Note two column drums used as rollers and a damage done to the northern wall by a modern military trench. Photo J. Młynarczyk.

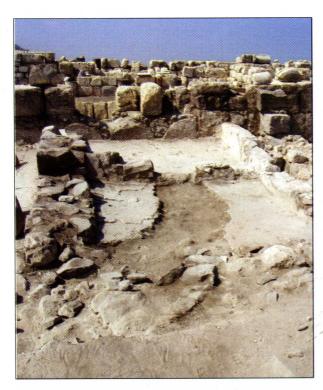


Fig. LXXIV. Twin compartments of the winery as viewed from the north. Note the traces of the modern military trench left on the floor of the northern compartment. Photo J. Młynarczyk.

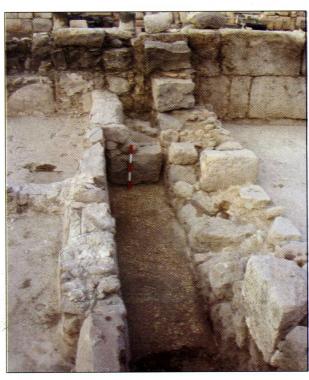


Fig. LXXV. Service "corridor" between the twin storage compartments (on the left) and the fermentation room (on the right). Note an earlier mosaic floor, a stone platform at the southern end, and the blockage of the door once connecting the northern wing with the basilica. Photo J. Młynarczyk.

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Fig. LXXVI. Fermentation hall of the winery as viewed from the west. Photo J. Młynarczyk.

#### Małgorzata Biernacka-Lubańska

Refleksje nad przeszłością i teraźniejszością akweduktów Rzymu



Ryc. LXXVII. Łuki Aqua Marcia przy Porta Triburtina. Fot. M. Biernacka-Lubańska.



Ryc. LXXVIII. Dzielnicowy zbiornik rozdzielczy Aqua Marcia przed dworcem kolejowym Roma Termini. Fot. M. Biernacka-Lubańska.