



# Evaluations of the Byzantine Period Data Obtained from the Archaeological Excavations of the Tuzla Değirmenaltı Monastery in Istanbul

İstanbul Tuzla Değirmenaltı Manastırı Arkeolojik Kazılarında  
Elde Edilen Bizans Dönemi Verilerinin Değerlendirmesi

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## ABSTRACT

The archaeological excavations at the "Tuzla Değirmenaltı Monastery" commenced in August 2023 as part of a project developed by Emlak Konut and in accordance with the decisions made by the Istanbul Regional Board for the Protection of Cultural Heritage No. 5. The ongoing excavations, led by the Istanbul Archaeological Museums Directorate, are located in Tuzla District, Merkez Neighborhood, block 192, plot 1. In these excavations, which date to the Middle Byzantine Period, various structures of the monastery have been identified, including the church, atrium, dining hall, crypt, cistern, workshop, toilet niche, storage area, and burial sites. In addition to these sections, a substantial amount of archaeological material from the 2nd to the 13th centuries A.D. has been uncovered during the excavation process. Despite the destruction that occurred in the 1970s in and around the excavation site, the extensive area exhibited by the complex indicates that this monastery is one of the largest Christian structures on the Asian side of Istanbul. There is a high probability that the monastery is one of the five monasteries mentioned in historical sources, and in this regard, field and archival studies are ongoing

**Keywords:** Byzantium, monastery, church, refectory, crypt, toilet in the niche.

## Öz

Tuzla Değirmenaltı Manastırı arkeolojik kazıları, Emlak Konut tarafından geliştirilen bir proje kapsamında ve İstanbul 5 Numaralı Kültür ve Tabiat Varlıklarını Koruma Bölge Kurulu'nun aldığı kararlar doğrultusunda 2023 yılı Ağustos ayında başlamıştır. Tuzla İlçesi, Merkez Mahallesi, 192 ada, 1 parseldeki kazılar İstanbul Arkeoloji Müzeleri Müdürlüğü öncülüğünde devam etmektedir. Kazılarda; Orta Bizans Dönemine tarihlenen manastırın kilise, atrium, yemekhane, kripta, sarnıç, işlik, niş içinde tuvalet, depolama mekânı ve mezar alanları tespit edilmiştir. Bu yapıların yanı sıra, kazı sürecinde M.S. 2. yüzyıldan 13. yüzyıla kadar önemli miktarda arkeolojik materyal ortaya çıkarılmıştır. 1970'li yıllarda kazı alanı ve çevresinde meydana gelen tahribata rağmen manastırın sergilediği geniş alan, bu manastırın İstanbul'un Asya yakasındaki en büyük Hristiyan yapılarından biri olduğunu göstermektedir. Manastırın tarihi kaynaklarda adı geçen beş manastırdan biri olma ihtimali yüksek olup bu konuda saha ve arşiv çalışmaları devam etmektedir.

**Anahtar Kelimeler:** Bizans, manastır, kilise, yemekhane, kripta, niş içinde tuvalet.



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## Introduction

Kişileştirme Tuzla District is a border district of Istanbul that opens towards Izmit and hosts various industrial establishments. While the district is primarily known for its industry and distance from the city center, it also has a significant archaeological history.

Tuzla was an important settlement area for monasteries during the Byzantine Period. Sources indicate that there were five monasteries in Tuzla, with one dedicated to Theotokos Mary and the others to Saint Tryphon and Saint Demetrios<sup>1</sup>. Although the exact locations of these religious structures are not fully known, a study conducted in 1972 by Prof. Dr. Semavi Eyice and Cihat Soyhan, an expert from the Istanbul Archaeological Museums Directorate, identified a church ruin believed to belong to the monastery. Eyice published this study in an article titled "A Byzantine Ruin in the Değirmenaltı Area of Tuzla"<sup>2</sup>.

About fifty years after the mentioned study, excavation work commenced in August 2023 in a much larger area that includes the plot where the church ruins were found, as part of a project developed by Emlak Konut, in line with the decisions made by the Istanbul 5th Regional Board for the Protection of Cultural and Natural Assets.

Archaeological excavations in the Tuzla District, Central Neighborhood, plot 192, parcel 1, are continuing under the leadership of the Istanbul Archaeological Museums Directorate. During the excavations, a monastery believed to be one of the five monasteries in Tuzla has been uncovered. So far, the remains of a church, dining hall, crypt, cistern, workshop, toilet, storage area, and burial sites from this monastery, which dates back to the Middle Byzantine Period, have been identified (**Fig. 1**). Additionally, a large number of archaeological finds that shed light on the life in the monastery have been discovered. This study aims to provide a general description of the architectural remains, graves, and archaeological artifacts uncovered during the "Tuzla Değirmenaltı Monastery" archaeological excavation work scheduled to continue until the end of 2024.

## 1. The Monastery

The concept of a monastery derives from the Greek word "monazô" which means to live alone or to isolate oneself from society<sup>3</sup>. The practice of withdrawing from the world to seek God through prayer and worship emerged during the early years of Christianity. The first monks began to appear by the end of the 3rd century, coinciding with the period of Christianity's expansion<sup>4</sup>. Monks are hermits who have devoted themselves to the worship of God, renouncing marriage, sexual life, individual property, and all social statuses in this pursuit<sup>5</sup>. Although the ascetic lifestyle was prevalent in Egypt during the early years of Christianity, it spread from Egypt to influence Syria, Palestine, Anatolia, and subsequently Constantinople<sup>6</sup>.

In Rome, during the reign of Emperor Decius, ascetics, seeking to distance themselves from the hostile attitudes directed towards Christians and wishing to practice their worship freely, retreated to the desert and pioneered the monastic movement<sup>7</sup>. Antonius, who withdrew to the desert with his disciples, is regarded as the founder of the monastic ideal. Despite the normalization of attitudes towards Christianity in later periods, monastic life retained its significance, and monasteries continued to function during the Byzantine era.

The peak of monastic development in Byzantium occurred between the 5th and 7th centuries, during which the state provided long-term support for the establishment of monasteries from both religious and political perspectives<sup>8</sup>. Following the iconoclast controversy, the emergence of monasteries and monastic-centered settlements led to a shift in urban life, where public structures like forums and hippodromes were replaced by monasteries, which served social functions<sup>9</sup>.

Monasteries were established in both urban and rural areas in Byzantium. Constantinople served as a monastic center, with the Dalmatou Monastery, founded by Saturninos in 382, being recognized as the first monastery in the city<sup>10</sup>. Significant monasteries in Constantinople include the Studion Monastery, the Pantokrator Monastery, and the

<sup>1</sup> Karakaya, 2012: 97.

<sup>2</sup> Eyice, 1973.

<sup>3</sup> Baş, 2013: 183.

<sup>4</sup> Doğan, 2003: 74.

<sup>5</sup> Baş, 2013: 184.

<sup>6</sup> Doğan, 2013: 74.

<sup>7</sup> Üstündağ, 2010: 8.

<sup>8</sup> Doğan, 2003: 75.

<sup>9</sup> Akyürek, 1997: 72 ; Doğan, 2003: 76.

<sup>10</sup> Talbot, 1991c: 1392; Eyice, 1994: 288.

## Pammakaristos Monastery<sup>11</sup>.

The sustainability of monasteries in Byzantium was significantly supported by production activities. It is known that olive cultivation, viticulture, and consequently wine production were prevalent. A substantial portion of the production was directed towards meeting the monastery's own needs. For instance, records related to the Studion Monastery include references to jewelers, coppersmiths, clog-makers, basket weavers, potters, and net makers, providing insight into the production within this religious institution<sup>12</sup>.

The church is centrally located within the monastery complex and is referred to as the *katholikon*. In front of the church, there is a fountain, known as a *phiale*. The sleeping quarters for monks are typically dormitory-style, and sometimes in small cells. The main structures and facilities within the monastery include the refectory (*trapeza*), kitchen, pantry, bakery, wine cellar, laundry, storages, library, infirmary, guesthouse for the poor, and water cisterns<sup>13</sup>.

## 2. The Excavations

### 2.1. The Church

The initial phase of the excavation work at the site involved the remnants of a church identified by Eyice and Soyhan. Following the cleaning and documentation of these remains, excavations revealed a church dating to the Byzantine Period. The church features a basilical plan with three apses (**Fig. 2**). Displaying characteristics of the early period, the main structure measures 25.00 x 15.00 meters. Due to its proximity to the sea, it was observed that the walls at the foundation level were occasionally 2.30 meters deeper than the upper level. An atrium is located to the west of the church. The exterior of the main apse of the three-apse structure is angular, with *diaconion* and *prothesis* rooms situated in the southern and northern sections. Walls separating these rooms from the naves have survived to the present day at the foundation level. The body walls of the church are supported by two columns each from the south and north, and four columns from the west. Additionally, symmetrical lateral wings, 4.50 meters in width, have been added to the north and south of the structure to support the

body walls.

The structure includes both an interior and an exterior narthex. The interior narthex measures 11.15 x 3.45 meters. Excavations in this section revealed that the narthex had a vaulted ceiling, which was finished with *opus sectile* flooring. Continuing work in this area led to the discovery of a crypt beneath the vault<sup>14</sup>.

To the north of the church narthex and south of the refectory structure, a rectangular space measuring 8.10 x 6.10 meters has been constructed in a north-south orientation. The northern wall of this space, which was modified in the late period, is in a collapsed state today. The external walls of the space are 0.80 meters thick. Within this area, there is a hall with an entrance from the church's narthex and the eastern section. A marble *templon* column has been repurposed as a threshold at the entrance on the eastern side. The hall floor is paved with bricks measuring 0.48 x 0.48 meters. The hall is separated from the main space by a wall that is 0.60 meters thick, with access to the main space occurring in the western section. The passageway is 1.10 meters wide and features a marble threshold. A small channel, designed for draining water from the space, has been constructed in the threshold, with a portable small marble element serving as a stopper placed within this channel.

The interior of the main space is paved with bricks measuring 0.45 x 0.45 meters. The gaps between the brick flooring are decorated with small geometric patterns resembling *opus sectile*. The unique combination of brick and marble in this flooring is significant, as there are no other known examples from Byzantine excavations (**Fig. 3-4**). In the western part of the main space, there is another entrance measuring 1.10 meters in width. Adjacent to this entrance is a wall, 2.70 meters long, that divides the main space in the west-east direction and is understood to have been constructed in a later period. This space is presumed to serve as a transition area from the church to the refectory.

To the west of the church, there is a square-plan atrium (**Fig. 1**). Excavations are still ongoing in the atrium, where the *stoa* sections to the north and west have been uncovered at the floor level. The *stoa* features a series of columns, and the walking areas are paved with bricks arranged in three rows,

<sup>11</sup> Eyice, 1994: 292-293.

<sup>12</sup> Doğan, 2003: 78.

<sup>13</sup> Ahunbay, 1997: 1160 ; Patlagean, 1999: 138; Doğan, 2003: 79.

<sup>14</sup> Kripta is described in this article under the heading of the graves.

each measuring 0.50 x 0.50 meters. The stone surfaces at the base indicate the locations of column bases. Accordingly, it is understood that there are twelve columns in the western section and fifteen in the northern section. The fewer number of columns in the western section is attributed to the entrance opening, which is 3.40 meters wide

One of the column bases in the western stoa has survived in situ. The base, which features an octagonal plinth, has an upper diameter of 0.35 meters. The columns unearthed at the excavation site indicate that the ratio of column height to lower diameter ranges from an average of 5.50 to 6.00 times. Based on this information, it is necessary for the heights of the columns used in the stoa to exceed 2.00 meters. With a base height of 0.20 meters, when added to the column capital, it is understood that the total height of the roof is approximately 3.00 meters.

Excavations in the church area have yielded five lead seals from the Middle Byzantine Period, numerous coins dating between the 2<sup>nd</sup> and 13<sup>th</sup> centuries A.D., and a significant number of pottery fragments primarily dating from the 9<sup>th</sup> to the 13<sup>th</sup> centuries A.D. (**Fig. 5-8**).

## 2.2. The Structure A

Large structures have been identified in the excavations to the north of the church, which have been coded as "Structure A" due to the ambiguity of their function (**Fig. 9**). The dimensions of the structure are 16.70 x 10.20 meters two separate symmetrical spaces have been created at the eastern corners of the structure, transforming its internal layout into an inverted T-shape. Both of these spaces measure 4.50 x 4.30 meters each of these spaces has two entrances located to the west and south of the northeastern corner, with the southern entrance having been later closed off. A notable feature of this space is the presence of a toilet (**Fig. 10-12**).

The toilet is situated within a niche that is 1.40 meters deep and 1.00 meters wide, opened on the northeastern wall. The toilet floor is raised by a step of 0.15 meters relative to the room's floor. The seating plane of the toilet is also elevated approximately 0.45 meters above this floor. A row of pipes has been identified at the back wall of the toilet, indicating that sanitation was maintained through these pipes. This section of the wall, through which the pipe line

passes, has survived to the present day due to repairs made during its period. Only a small portion of the pipe series has been preserved in the opening of the wall. Inside the toilet, stones have been placed at a slope towards the sewer to facilitate better water flow. The method of channeling water through the walls to supply the toilet is significant in understanding the water infrastructure during the Byzantine period.

The northern wall of the space in the southeastern corner of the inverted T-planned structure is collapsed and has not survived to the present day. It is suspected that there was also an entrance in the northern wall, which likely collapsed, of the space that has an entrance on its western side. The floor of this space is adorned with opus sectile flooring. Additionally, a considerable number of opus sectile fragments have been discovered in the excavations in this area (**Fig. 13**). Excavation work in this structure is ongoing.

## 2.3. The Refectory

In Christian liturgy, the space referred to as "trapeza" (refectory) means "a meal eaten together"<sup>15</sup>. Refectories are the second most important structures in Byzantine monasteries after the church, typically located closest to the main church within the monastery<sup>16</sup>. The rituals that begin in the church continue and are completed in the refectory. Although the refectory of the monastery is situated on the western side of the church, close to the monastery's entrance, in some instances, it can be located in different positions, indicating that topography was considered in the placement of the refectory within the monastery<sup>17</sup>.

In monastery refectories, three types of plans can be observed: a single-nave longitudinal space, a three-nave classical basilical plan, and a rectangular space divided by carriers such as columns and piers.

The refectory unit of the monastery has been identified in the excavations to the north of the church (**Fig. 14-15**). A significant portion of this structure, which is still under excavation, has been uncovered. The single-nave structure measures 25.00 x 9.00 meters and extends in an east-west direction. An apse measuring 6.00 meters in width is situated at the short eastern end. The southern half of the apse is completely collapsed. From the surviving section, it can be inferred that the floor of the apse is approximately 0.25

<sup>15</sup> Özyıldırım & Yeğin, 2019: 14.

<sup>16</sup> Özyıldırım & Yeğin, 2019: 15.

<sup>17</sup> Akyürek, 2001: 18.

meters higher than the floor of the other sections of the structure. Four dining tables, symmetrically arranged along the walls, have been identified at the base level within the structure. These tables are made of stone laid on a brick floor and constructed in a "horseshoe" form. Each table measures 1.20 x 1.20 meters and is surrounded by an approximate 0.30 meters gap.

In the center of the structure, there is a dry-stone wall that extends 4.00 meters in length and is 0.80 meters thick, running along the north-south axis. This wall disrupts the symmetry of the structure as it crosses over one of the dining tables. It has been determined that this wall was constructed in a later period, after the structure had lost its original function.

The discovery of numerous fresco fragments during excavations within the refectory indicates that the walls of the structure were covered with frescoes (Fig. 16). The structure, which has largely collapsed and has only reached the present day at the foundation level, features a floor made of 0.50 x 0.50 meters brick tiles. While laying the floor, opus sectile marble pieces were placed at the joints of the bricks, creating a rare type of flooring. Excavations at the refectory are ongoing, and numerous ceramics and animal bones have been found in and around this structure to date<sup>18</sup>.

## 2.4. The Graves

During the archaeological excavations at the Tuzla Değirmenaltı Monastery three simple earthen graves were uncovered, consisting of a crypt and individual burials. Two of the simple earthen graves are located in the church's southern and central naves, while one is situated in the atrium.

### 2.4.1. The Crypt

It is known that tombs were created at the base of the narthex in monastery churches for the burial of deceased clergy<sup>19</sup>. Following the identification of damage at the northern end of the vault in the church's inner narthex within the excavation site, deepening work was conducted in the damaged area, leading to the discovery of the crypt (Fig. 17). The external dimensions of the crypt are 11.45 x 3.15 meters, with a height of approximately 2.00 meters. The interior of

the crypt is plastered, and its long walls are supported by internal piers. Evidence of subsequent damage is indicated by marble window frames, column bases, broken brick fragments, and rubble in the form of a mass with horasan mortar found to the north of the crypt.

To the south of the crypt, a multiple burial has been identified (Fig. 18). Macroscopic observations of the skeletal remains indicate that the individuals have lost their skeletal integrity. It has been observed that there is minimal loss of bone and that the bones are in good morphological condition. Additionally, among the rubble piles to the north of the crypt, one skull has been identified (Fig. 19).

#### 2.4.1. The Simple Earth Graves

Simple earth graves have been identified in the central and southern naves of the church as well as in the atrium. The burial in the central nave is oriented west-east with the individual's head positioned to the west, and their face directed north. The skeletal integrity of the individual is in good condition, although the skull is partially damaged. The left arm of the individual is positioned at the abdomen, while the right arm is aligned with the head. The body skeleton is deformed, but the lower extremities are in relatively good condition. The individual is identified as an adult male. Grave goods from the Middle Byzantine Period were found alongside the individual (Fig. 20-22). The individual found in the southern nave is oriented west-east with the head to the west. This individual is in a dorsal position, facing east. The cranial bones have lost their integrity, and the body skeleton is deformed. The arms are positioned at the abdomen, and the lower extremities are in better condition than the upper extremities. The skeletal integrity has been preserved, and the individual is identified as a young male.

The individual found in the atrium is oriented west-east with the head to the west and is in a semi-hocker position (Fig. 23). The skeletal integrity of this individual has been maintained, although the skull is damaged. The morphology of the lower and upper extremity bones is quite good. The right arm is on the pelvis, while the left arm is on the chest. Macroscopic observations indicate that the individual is male and an adult.

The rituals associated with the farewell of the deceased

<sup>18</sup> The remains of animal bones unearthed during the archaeological excavations of "Tuzla Değirmenaltı Monastery" are being studied under

the supervision of Prof. Dr. Vedat ONAR from the Department of Basic Sciences of Veterinary Medicine, Istanbul University.

<sup>19</sup> Çetinkaya, 2011: 31.

to this world are related to the concept of death. Decisions regarding where and how an individual is buried reflect cultural perspectives on death. In this regard, some cultures have cremated their dead, others have buried them under the floors of their homes, some have mummified them, others have placed them in jars, while some have buried them in the ground<sup>20</sup>.

The typologies of graves identified in archaeological excavation sites, their locations, and burial rituals provide significant information about the socio-cultural lives of individuals. It is known that graves discovered in excavations conducted in religious areas typically belong to individuals of relatively high socio-economic status or clergy, and that these individuals are generally male<sup>21</sup>. The archaeological excavations at the Tuzla Değirmenaltı Monastery have supported this thesis. The locations of the graves identified within the excavation site and the contents of burial gifts suggest that they are likely clergy members. Furthermore, macroscopic observations have indicated that all individuals are male.

In early period graves, individuals are typically laid to rest in a supine position with their heads to the west, arms crossed, and legs extended. This burial form has also been encountered in graves at the excavation site. It has been observed that all individuals documented in the graves to date have their heads oriented to the west in a west-east alignment. The foundation of this burial practice is related to the belief that Jesus will return from the east to resurrect all the dead<sup>22</sup>.

The burial form of individuals in the church naves is dorsal, whereas the burial form of the individual in the atrium is semi-hocker. This suggests that the grave belongs to the early stages of the Byzantine Period. The multiple burial identified in the crypt is a secondary burial form. The manner in which the skeletal remains are positioned within the space and the damage identified within the crypt support this perspective.

Due to static issues within the crypt, work in this area has not yet commenced. Following the resolution of these issues,

anthropological studies will begin. The skeletal remains in the simple earthen graves have been removed for laboratory studies after documentation procedures were completed<sup>23</sup>.

#### 2.4. The Cistern

The term “cistern” derives from the Arabic word “shahrinç” meaning “small pool<sup>24</sup>. Cisterns, whether underground or above ground, are water storage structures made of stone materials designed to collect rainwater<sup>25</sup>. The number of these structures increased during the Byzantine Period, particularly in Istanbul. Cisterns were present in imperial palaces, private palaces, and monasteries during this period<sup>26</sup>. Therefore, it is not surprising that a cistern was uncovered during the archaeological excavations at the Tuzla Değirmenaltı Monastery.

In the northern part of the excavation site, remains of a cistern measuring 9.00 x 12.60 meters were discovered (**Fig. 24-26**). The structure is located closest to the workshop (Figure 26). This north-south oriented rectangular structure has suffered damage in earlier periods. The northern wall of the structure has survived in good condition, while the other walls have been found to have collapsed down to the foundation level. The walls, approximately 1.30 meters thick, are constructed using the alternating masonry technique, with five rows of brick laid following the stone pattern. The plaster on the walls within the cistern has a thickness of approximately 0.04 meters which varies in places. Debris associated with the structure has been found inside, including a granite column measuring 3.55 meters in length and two Ionic impost capitals obtained during cleaning operations. Excavation and restoration work on the structure is ongoing.

#### 2.4. The Workshop

Monasteries are not only places of worship but also religious spaces where various economic activities are conducted to meet the needs of the monastery, allowing monks to work in agricultural or other tasks outside their religious duties<sup>27</sup>. Workshops are known to play a significant role in the agricultural and economic activities of monasteries<sup>28</sup>.

<sup>20</sup> Uysal, 2018: 30.

<sup>21</sup> Sullivan & Rodning, 2011: 79-97.

<sup>22</sup> Rice, 2002 ; Uysal, 2018: 47.

<sup>23</sup> Work on the graves continues under the supervision of Ayşe Yeşim, Research Assistant at the Department of Anthropology, Istanbul University.

<sup>24</sup> Kerim & Süme 2018: 4.

<sup>25</sup> Kerim & Süme 2018: 4.

<sup>26</sup> Eyice ,1989.

<sup>27</sup> Özyıldırım, 2015: 90.

<sup>28</sup> Yeğin, 2016: 211.

During the excavations at Tuzla Değirmenaltı Monastery, remnants of a structure believed to be a workshop have been uncovered to the south and southwest of the cistern (**Fig. 27-28**). Excavation work to the south of the cistern revealed a rectangular structure measuring 7.50 meters in length and 1.65 meters in width. On either side of the structure are symmetrical niches, each measuring 0.72 meters in width and 0.54 meters in depth. Although the upper part of this structure is collapsed, it is understood that the niches were covered with arches. The wall surface of the niches is covered with white plaster. There are two levels of brick courses at the base of the transition area. At the northern end of this brick course, there is a collection pool measuring 0.80 x 0.85 meters and 1.00 meters in depth. Additionally, a series of pipes runs along the north-south axis at the base of the structure. At the southern end of the passage with niches on either side, there is an entrance section flanked by columns. The eastern column of this section is collapsed, while the western one has survived to the present day. A marble door threshold measuring 1.00 meters in width and 0.38 meters in height has also been preserved.

To the northwest of this space, a wall measuring 10.00 meters in length and 0.80 meters in thickness has been identified. To the south of this wall, there are three spaces (a, b, c) arranged in a row. The walls of these spaces have an average thickness of 0.70 m, and there are openings for passage between them. The easternmost space has been identified as having a chamber outside its northern wall measuring 2.65 x 1.55 meters, while the westernmost space has a chamber outside its northern wall measuring 1.15 x 1.60 meters. Numerous amphorae have been recovered during excavations within these spaces.

During the excavations, a round-shaped oven has been documented adjacent to the pier to the east of space a (**Fig. 29**). The body of the oven is supported on three sides (north, south, west), and the eastern part of the oven contains five rows of bricks that have survived, which is important for understanding the covering of the upper structure with a dome. In the center of these bricks, there is an opening measuring 0.40 meters in width used for cooking.

The artifacts documented during excavations in the structure, including the oven, axe, grinding stone, numerous ceramic fragments, and amphorae, suggest that this was

indeed a workshop (**Fig. 30-33**). The function of this structure will become clearer after the completion of excavation work. Additionally, during the excavations in this area, a fragment of a statue head and a pit coin dating to the Byzantine Period have been recovered (**Fig. 34**).

#### 2.4. The Storage

Storage refers to both a behavior that enables the access and utilization of products, goods, money, or information over an extended period, as well as a technological mechanism<sup>29</sup>. One of the fields contributing to the definition of storage is archaeological excavation sites. Among the most frequently encountered group of storage finds in these sites are pithoi. This type of vessel, referred to in Latin as "Dolium," is commonly known as a wine container<sup>30</sup>. Although these vessels are primarily recognized as wine containers, they are also used for storing agricultural products such as oil, grains, and fruits. The structures and artifacts associated with storage are significant for providing information regarding nutrition, organization, and economy.

In the excavations conducted to the west of the church on the excavation site, the storage space of the monastery has been identified (**Fig. 35**). Within this space, a wall composed of regular stone courses laid in a horasan mortar pattern has been uncovered, extending along a south-north axis. The wall measures approximately 20.00 meters in length, 0.50 meters in width, and 0.50 meters in height. Immediately to the east of this wall, nineteen pithoi have been discovered, arranged in two rows. Soil samples have been taken from within the pithoi for analysis. The pithoi have been numbered, and documentation and restoration processes have commenced. Repair traces from the period have been observed on pithos number eight (**Fig. 36**). South of the storage space, a tower-like structure composed of stone courses bonded with horasan mortar has been identified at the foundation level. This structure is supported by two pillars measuring 1.00 x 1.00 meters at both the northern and southern ends. The wall thickness of the remains is 0.60 meters, and the internal diameter measures 1.20 meters. The function of this structural remnant has yet to be defined.

Excavation work in the storage space is ongoing, and it is anticipated that the number of pithoi will increase. During the excavations in this area, a complete dog skeleton (**Fig. 37**) has been uncovered, along with bones belonging to a cat.

<sup>29</sup> Sezgin, 2018: 596.

<sup>30</sup> Sezgin, 2018: 597; Liddel & Scout, 1940:515.

The animal bones have been documented and removed for laboratory analysis.

### 3. Discussion

During the archaeological excavations of the Tuzla Değirmenaltı Monastery which will continue until the end of 2024, numerous archaeological finds have been identified, including sections such as the church, crypt, graves, cistern, workshop, dining hall, storage area, and a toilet niche, as well as artifacts that illuminate monastic life from the Middle Byzantine Period.

The church exhibits early period characteristics and features a basilical plan. It is evident that subsequent constructions were placed around the church, which transformed it into the main structure of the monastery. The dating of other architectural remains identified in the excavation area to the Middle Byzantine Period, along with the majority of artifacts obtained, supports this assertion.

Refectory is one of the most important structures in Byzantine monasteries, located closest to the main church after the church itself. Rituals initiated in the church continue and conclude in the refectory. Refectory identified in the excavation area is situated to the north of the church and, as far as can be determined, is a single-nave structure. The recovery of a significant number of ceramics from this site is noteworthy.

Etymologically, “opus sectile” derives from the Latin word “sectilis” meaning “to cut, to divide” and “opus, -eris (n.)” which means “work”. The term “opus sectile” refers to the technique of creating designs with cut pieces. The use of opus sectile increased during the 5<sup>th</sup> and 6<sup>th</sup> centuries A.D. and became widespread during the Middle Byzantine Period. Examples of opus sectile flooring can be found in religious structures such as the Chora Monastery Church and the Pantokrator Monastery Church in Istanbul. In addition to examples of opus sectile flooring, a considerable quantity of opus sectile excavation finds has been obtained from the excavation area<sup>31</sup>. Alongside these artifacts, the fresco fragments uncovered during the excavation process underscore the meticulous nature of the monastery.

The discovery of a space presumed to be a cellar within the workshop, along with the identification of numerous pithoi and amphorae at various points of the excavation

area, suggests that the workshop was intended for wine production. It is also plausible that the production was utilized for commercial activities. Indeed, according to Saint Basil, it is necessary to engage in economic activities to meet the needs of the monastery. The monastery's location near the sea and the lead seals found in the excavation area further reinforce the notion that trade was conducted.

So far, a significant number of animal bones have been identified in the excavation works. Macroscopic observations indicate that the bones belong to pig, sheep, cattle, red deer, dog, cat, rabbit, chicken, and tuna. Some of the bones exhibit butchery marks. Laboratory work regarding the animal bones is ongoing, and upon completion, it will provide insights into both the dietary practices within the monastery and the fauna of the period.

### 5. Conclusion

The monastery structure unveiled at the Tuzla Değirmenaltı Monastery archaeological excavation spans an extensive area of approximately 15,000 square meters. Despite the damage that occurred in the surrounding area during the 1970s, the extensive spread of the complex indicates that this monastery is one of the largest Christian structures in the Asian side of Istanbul.

The likelihood that this monastery is one of the five monasteries mentioned in historical sources is high, and thus field and archival studies are ongoing. The archaeological excavation work in the project area continues with the participation of a large team under the direction of the Istanbul Archaeological Museums Directorate. After the completion of the excavation work, the results will be shared through further publications.

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**Hakem Değerlendirmesi:** Dış bağımsız.

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<sup>31</sup> Armağan, 2023: 106; Demiriz, 2002.  
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**Figure 1:** Aerial view of the excavation site (iAM<sup>32</sup> archive).

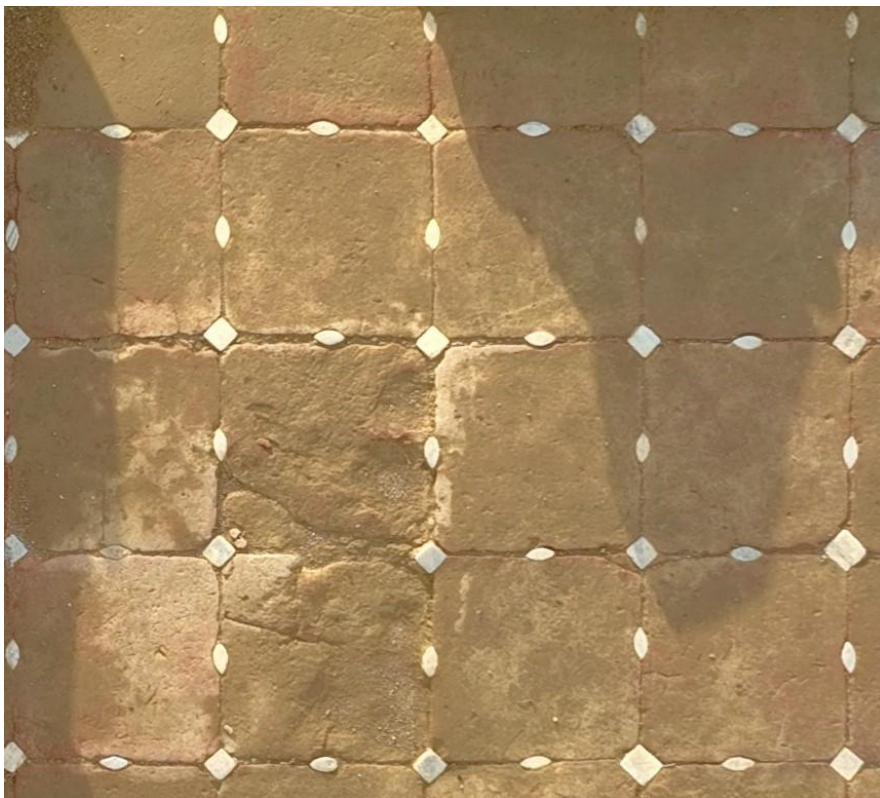


**Figure 2:** Aerial view of the church (IAM archive).

<sup>32</sup> Istanbul Archaeological Museums.



**Figure 3:** Brick pavement decorated with opus sectile fragments (IAM archive).



**Figure 4:** Detail view of the brick pavement decorated with opus sectile fragments (IAM archive)



Figure 5: Lead seal dating to the Middle Byzantine Period<sup>33</sup> (IAM archive).



Figure 6: Coin of Nicomedia<sup>34</sup>, Antoninus Pius (IAM archive).



Figure 7: Anonymous Follis<sup>35</sup> (IAM archive).

<sup>33</sup> Similar lead seals were studied by Vera Bulgurlu in her doctoral thesis titled lead seals in Istanbul Archaeological Museums. See Bulgurlu, 1998: p.22 and n.223.

<sup>34</sup> Ref: Sear, 2002: 205-206 and n.4014

<sup>35</sup> Ref: Doc 3/2, p.48-54 and n.A2.24a.4.



**Figure 8:** Plate depicting a rabbit<sup>36</sup> (IAM archive).



**Figure 9:** Aerial view of the building to the north of the church (IAM archive).

<sup>36</sup>Smilar: See Korucu, 2013: 406.  
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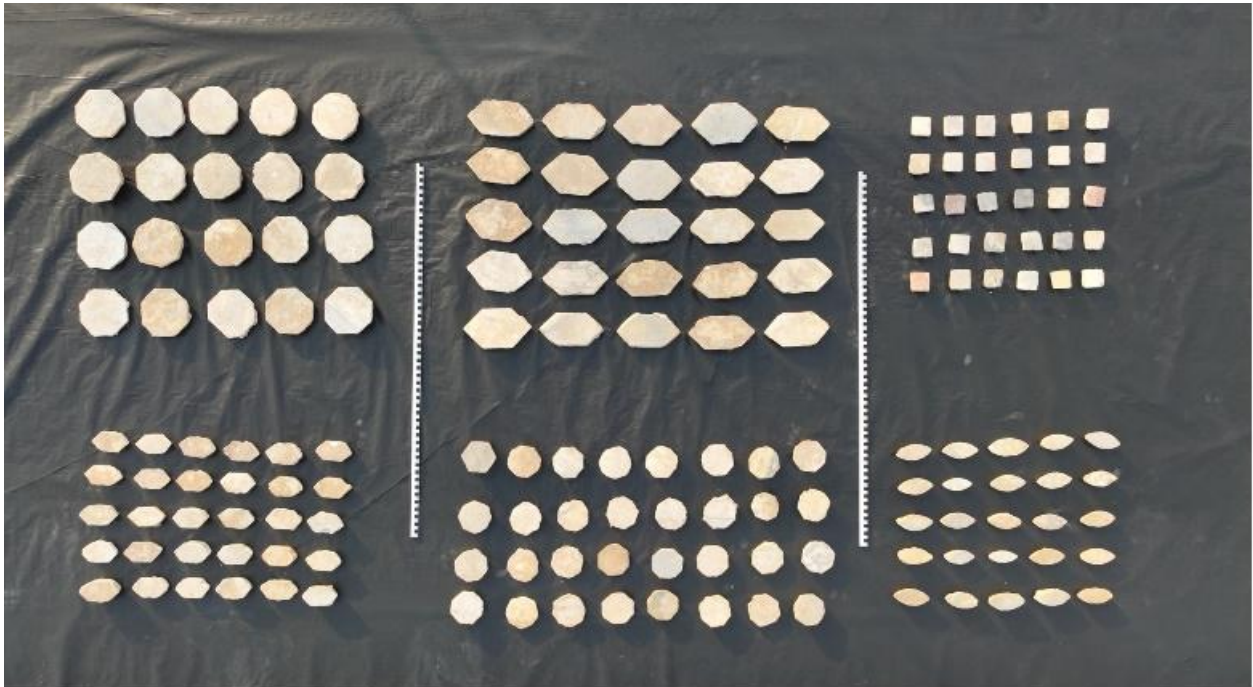
**Figure 10:** The space with the toilet in the niche (IAM archive).



**Figure 11:** Toilet in the niche (IAM archive).



**Figure 12:** Toilet in the niche (IAM archive).



**Figure 13:** Examples of opus sectile fragments (IAM archive).





**Figure 14:** Aerial view of the refectory (IAM archive).



**Figure 15:** Detail view of the refectory (IAM archive).



**Figure 16:** Fresco fragments unearthed in the refectory (IAM archive).



**Figure 17:** View of the cryptanalysis before the works (IAM archive).



**Figure 18-19:** Skeletal remains in multiple graves identified in the crypt (IAM archive).



Figure 20: Grave discovered in the central nave (IAM archive).



Figure 21-22: Finds from the grave in the middle nave (IAM archive)



Figure 23: Grave in the atrium (IAM archive).



**Figure 24:** Aerial view of the cistern structure (IAM archive).



**Figure 25:** View of the cistern (IAM archive).



**Figure 26:** Aerial view of the cistern and workshop (IAM archive).



**Figure 27:** Aerial view of the workshop (IAM archive).



**Figure 28:** Aerial view of the workshop (IAM archive).



**Figure 29:** Oven in the workshop (IAM archive).



**Figure 30:** Crushing trough in the workshop building (IAM archive).



**Figure 31:** Pot with heater<sup>37</sup> (IAM archive).

**Figure 32:** Amphora<sup>38</sup> (IAM archive).



**Figure 33:** Byzantine axe<sup>39</sup> (IAM archive).

<sup>37</sup> Similar: See Denker, 2011: 42.

<sup>38</sup> Similar: See Hayes, 1992: 76, 77 (Type 67).

<sup>39</sup> Husar & Ota, 2020.



Figure 34: Byzantine Period pit coin<sup>40</sup> (IAM archive).



Figure 35: Aerial view of the storage (IAM archive).

<sup>40</sup> Ref: Doc 3/2, p.69, n.3a.6.  
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**Figure 36:** Period repair marks on pithos number eight (IAM archive).



**Figure 37:** Remains of a dog skeleton found in the storage room (IAM archive).