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# ANATOLIA ANTIQUA

ESKİ ANADOLU

INSTITUT FRANÇAIS D'ÉTUDES ANATOLIENNES  
GEORGES-DUMÉZIL - ISTANBUL



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**ESKİ ANADOLU**  
**XXXIII**

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**CHRONIQUES DES TRAVAUX ARCHÉOLOGIQUES  
EN TURQUIE  
2024**



# Preliminary Report on the 2024 Fieldwork at Phoenix

Asil YAMAN, Koray KONUK, Anna M. SITZ, İlayda ALİKAYA, Taylan DOĞAN,  
Erkan DÜNDAR, M. Rumeysa ÇAKAN, Aslıhan GÜÇLÜ, Ayşe ÖZAYDIN,  
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Elif SOKULLU, Hilal DEMİRHAN, M. Serhat AYDEMİR\*

## Abstract

The fourth season of the Phoenix Archaeological Project (PAP), conducted in 2024, focused on the northern and eastern chora of Phoenix on the Bozburun Peninsula in south-western Turkey. Intensive survey and documentation were carried out across c. 600 hectares, integrating archaeological, geomorphological, epigraphic, and biodiversity studies, as well as oral history interviews and contemporary art initiatives. At Gökçalca, a terraced hillside settlement with at least 53 dry-stone structures and polygonal walls was recorded, indicating a planned Archaic community. On the summit of Somakkaya, an open-air peak sanctuary with a stepped altar, libation basins, and terraces showed strong parallels with Phrygian cult landscapes. At Kaledağ, a fortified acropolis and lower enclosed settlement with agricultural features highlighted its long-term strategic role. In the rural zone, farmsteads and olive oil workshops at Dağ Yeri, Bedelence, and Tülü Tepe, together with terraces, cisterns, presses, and a basilical church, demonstrated intensive agricultural organisation from the 4<sup>th</sup> century BCE to the Byzantine period. In the *chora*, Kapakdibi and Mazıkısığı yielded further complexes of farms, necropoleis with stepped pyramidal tombs, and olive oil installations. At the same time, the Ottoman-period village of Büğüş and nearby windmills illustrate cultural continuity into the modern era. These results shed new light on the long-term socio-economic, religious, and cultural landscapes of Phoenix within the Carian Chersonese and the Rhodian *Peraea*, correcting earlier misinterpretations and assumptions based on insufficient or weak data.

**Keywords:** Caria, Phoenix, Tlos, Bozburun, Carian Chersonese, Rhodian *Peraea*

## Résumé

La quatrième saison du Projet Archéologique de Phoenix (PAP), menée en 2024, s'est concentrée sur la *chôra* nord et est de Phoenix, sur la péninsule de Bozburun, dans le sud-ouest de la Turquie. Une prospection intensive et une documentation ont été réalisées

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\* Dr. Asil Yaman, Izmir University of Economics, Department of Architectural Restoration; Assoc. Prof. Koray KONUK (Deputy Director). Université Bordeaux-Montaigne, Institut Ausonius, CNRS; Dr. Anna M. SITZ, Universität Tübingen; İlayda ALİKAYA, expert archaeologist; Assoc. Prof. Taylan DOĞAN, Muğla Sıtkı Koçman University; Assoc. Prof. Erkan DÜNDAR, Akdeniz University; Münire Rumeysa ÇAKAN, architect, lecturer, Alanya Alaaddin Keykubat University; Aslıhan GÜÇLÜ, expert archaeologist; Dr. Ayşe ÖZAYDIN, photographer; Kübra GÜNBEY, landscape architect; Bahar Cansel İTEZ, urban planner; Güneş ANLIAK, geologist; Şeyda SAYIN, archaeologist; Aleyna UYANIK, student; Elif SOKULLU, student intern; Hilal DEMİRHAN, student intern; Mehmet Serhat AYDEMİR, mapping engineer, MESA.

sur environ 600 hectares, intégrant des études archéologiques, géomorphologiques, épigraphiques et de biodiversité, ainsi que des entretiens d’histoire orale et des initiatives artistiques contemporaines. À Gökçalca, un habitat en terrasses comprenant au moins 53 structures en pierre sèche et des murs polygonaux a été recensé, révélant une communauté archaïque planifiée. Au sommet de Somakkaya, un sanctuaire sommital en plein air avec un autel à gradins, des bassins de libation et des terrasses a montré de fortes analogies avec les paysages cultuels phrygiens. À Kaledağ, une acropole fortifiée et une agglomération basse close avec des aménagements agricoles ont révélé son rôle stratégique à long terme. Dans la zone rurale, des fermes et ateliers d’huile d’olive à Dağ Yeri, Bedelence et Tülü Tepe, accompagnés de terrasses, citernes, pressoirs et d’une église basilicale, ont mis en évidence une organisation agricole intensive du IV<sup>e</sup> siècle av. J.-C. jusqu’à l’époque byzantine. Dans la *chôra*, Kapakdibi et Mazıkısığı ont livré d’autres ensembles de fermes, de nécropoles avec des tombes pyramidales à degrés et d’installations oléicoles, tandis que le village ottoman de Büğüş et les moulins à vent voisins illustrent la continuité culturelle jusqu’à l’époque moderne. Ces résultats apportent un nouvel éclairage sur les paysages socio-économiques, religieux et culturels de Phoenix dans la Chersonèse carienne et la Pérée rhodienne, et corrigent des interprétations et hypothèses antérieures qui reposaient sur des données insuffisantes ou fragiles.

**Mots clés :** Carie, Phoenix, Tlos, Bozburun, Chersonèse de Carie, Pérée rhodienne

## Introduction

Phoenix/Phoinix (Φοῖνιξ)<sup>1</sup> is located today within the boundaries of Taşlıca in the district of Marmaris, Muğla Province, on the southwestern edge of the Bozburun Peninsula. From the Archaic period, the settlement played an important political, economic, and religious role within the *Carian Chersonese*,<sup>2</sup> and from the Hellenistic period onwards, it became part of the Rhodian *Peraea*.<sup>3</sup> Since 2021, systematic and intensive surveys have been carried out in the rural districts of Taşlıca and Söğüt.<sup>4</sup> These surveys and salvage excavations at the Apollo sanctuary aim to

<sup>1</sup> The toponym Phoinikoudi, meaning “Place of Date Palms,” is etymologically a successor of Phoinix/Phoenix. In travellers’ notes and maps, the name also appears in variants such as Phenikeh, Phineket, Phiniketi, or Phiniki, while the modern form Fenaket represents the final stage of this linguistic evolution. A similar transformation is observed in the case of Tracheia, the Greek term for “stony,” which developed into Darrahiya/Tarahya and eventually Taşlıca.

<sup>2</sup> Research indicates that Phoenix developed as a semi-autonomous community under political, economic, and religious unity during the Archaic and Classical periods. The fact that the settlements of the Chersonesos (Χερσόνησος) appear as a single unit in the Athenian tribute lists, and evidence for joint coinage, clearly demonstrates that the local demes maintained equal relationships and sustained their political, religious, and economic cohesion within a confederative framework between c. 530 and 450 BCE. See Badoud, 2011, 543; ATL I, 440–441; Cahn, 1970, 200. However, the existence of the *Ktoinai* system in the region suggests that Phoenix, along with its close neighbours Tymnos, Thysannous, and Tlos, had established an earlier political connection with Camirus on Rhodes. For *Ktoinai*, see Fraser and Bean, 1954, 95.

<sup>3</sup> It has been suggested that during this period the principal city administering Phoenix was Camirus, see Fraser and Bean, 1954, 80.

<sup>4</sup> For the results of the first systematic investigations, including surveys and salvage excavations carried out in the Phoenix and Casara micro-region since 2021, see Yaman and Konuk et al., 2022, 185–202; Yaman and Konuk et al., 2023, 277–297; Yaman and Konuk et al., 2024, 381–396; Yaman and Günyaşar, 2024, 50–58. For earlier interpretations based mainly on spatial analysis and lacking datable archaeological material, see Oğuz, 2013; Demirciler, 2014. Although the studies by D. Oğuz-Kırca, and V. Demirciler proposed ambitious hypotheses, these were necessarily based on limited and, sometimes, misinterpreted evidence. Building far-reaching interpretations on such a restricted evidentiary basis underscores the importance of the first systematic and reliable investigations conducted since 2021 by the Phoenix Archaeological Project (PAP). These ongoing, systematic, data-driven, and holistic studies are conducted by a broad team of specialists, including experts in

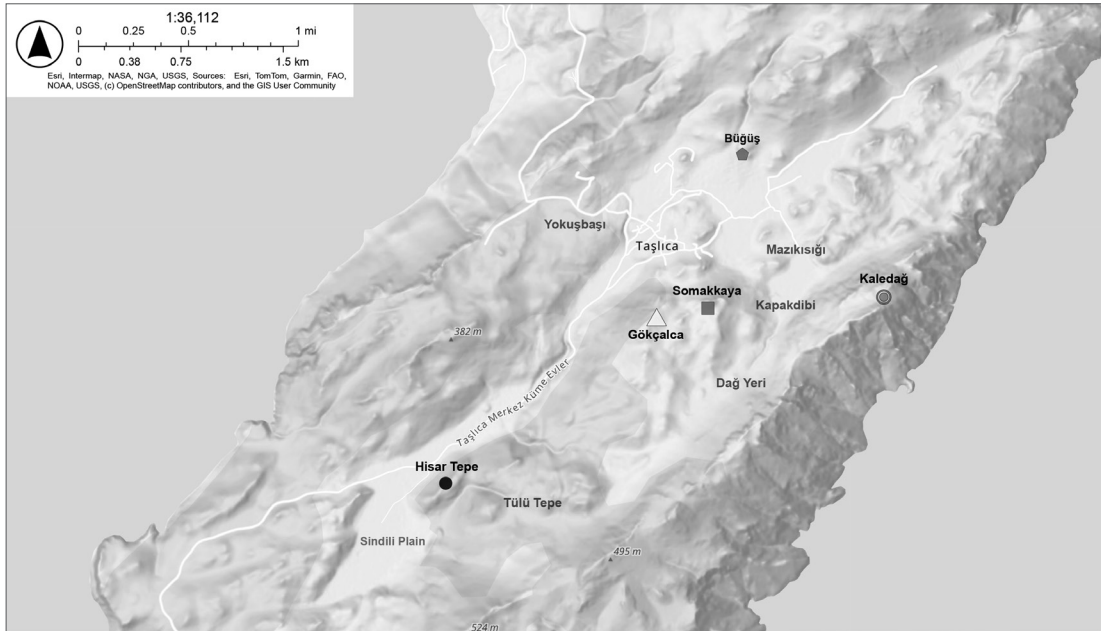


Fig. 1 Map of the areas surveyed in 2024 and referenced in the text (PAP Archive).

contribute to the archaeology of the peninsula, address key research questions, and support the protection of cultural heritage. The project represents a multi-layered study of the cultural landscape, approached through the theoretical framework of archaeological entanglement.<sup>5</sup>

In its fourth season, the intensive and multidisciplinary survey at Phoenix focused on the rural areas near Taşlıca village (Fig. 1). Fieldwork covered a total of 600 hectares (3 x 2 km) along the Dağ Yeri–Bedelence–Tülü Tepe line, encompassing an east-west oriented depression plain and its surrounding slopes.<sup>6</sup> The investigations were supported by various sub-programmes, including archaeological documentation, geomorphological studies, flora and fauna research<sup>7</sup>, oral history interviews, documentation of rural architecture,<sup>8</sup> a contemporary art

---

epigraphy, history, landscape archaeology, cultic practices, ceramics, stamped amphora handles, numismatics, Byzantine studies, and rural architecture. They are generating substantial new datasets while correcting and revising earlier interpretations. For this reason, the earlier publications of Oğuz-Kırca and Demirciler are cited here solely as part of the historiography of research in the region, rather than as reliable, evidence-based studies.

<sup>5</sup> For the theory of entanglement in archaeology, see Hodder, 2012.

<sup>6</sup> We would like to express our gratitude to the Turkish Ministry of Culture and Tourism, Directorate General of Cultural Heritage and Museums, Department of Excavations and Research, whose permission and support made the multi-disciplinary investigations of the Phoenix Archaeological Project (PAP) possible. We are especially thankful to Mr. Mehmet Selim Aydın, specialist of the Ankara 15 July Democracy Museum, who participated in the fieldwork as the Ministry Representative and contributed valuable insights and recommendations. Our thanks also go to the Penn Museum, Bordeaux Montaigne University, the Ausonius Institute, CNRS, and the American Society of Overseas Research (ASOR) for their academic and technical support of the 2024 campaign. We gratefully acknowledge Söktaş A.Ş. and the Kayhan Family for their generous financial support and invaluable contributions to the documentation and preservation of the region's cultural heritage. We also extend our appreciation to the Marmaris Chamber of Commerce, the Historic Phoenix Archaeology Association, and the Friends of Phoenix for their continuing support of our work for the benefit of the local community.

<sup>7</sup> The flora studies are being conducted by landscape architect Kübra Günbey.

<sup>8</sup> The Taşlıca Rural Architecture Research and Documentation Programme is led by Lecturer M. Rumeysa Çakan of Alanya Alaaddin Keykubat University and is conducted as part of her doctoral dissertation entitled *Continuity and Preservation of Rural Settlements in Archaeological Contexts: The Ancient City of Phoenix and the Village of Taşlıca*.

programme,<sup>9</sup> and epigraphic recording.<sup>10</sup> The resulting data were cross-analysed and evaluated holistically within their contextual framework.<sup>11</sup>

## Gökçalca Settlement

The first stage of the 2024 archaeological survey was carried out at Gökçalca. Situated on an east-facing slope to the southwest of Somakkaya Hill, southeast of the village of Taşlıca, and west of Akalan, Gökçalca is an extensive settlement consisting of rectangular-plan structures (Fig. 2-3).<sup>12</sup>

Through intensive surface survey, at least 53 structures were identified along the slope, extending from the lower levels in the south to the higher terraces in the north. These single- and



**Fig. 2** General aerial view of Gökçalca (PAP Archive).

<sup>9</sup> The 2024 Contemporary Art Programme was carried out by Doctoral Researcher Aslıhan Güçlü and Dr. Ayşe Özaydın.

<sup>10</sup> The epigraphic research is conducted by Assoc. Prof. Koray Konuk and Dr. Anna Marie Sitz.

<sup>11</sup> As part of the digital documentation programme, georeferenced orthophotos at resolutions of 30 cm/px and 4 cm/px were produced within the 2024 research area, together with 1:1000 scale and three-dimensional maps, and structural lidar scans supported by Digital Elevation Models (DEM). All cultural assets identified in the field were georeferenced using a Spectra SP60 GNSS device and recorded in a QGIS digital database. We would like to thank Mapping Engineer Mehmet Serhat Aydemir for carrying out this work and Urban Planner Bahar Cansel İtez for managing the digital database studies.

<sup>12</sup> For further references on the findings at Gökçalca, see Oğuz, 2013, 271, 280, 333-334, 497-498, Pl. 2.1.27.

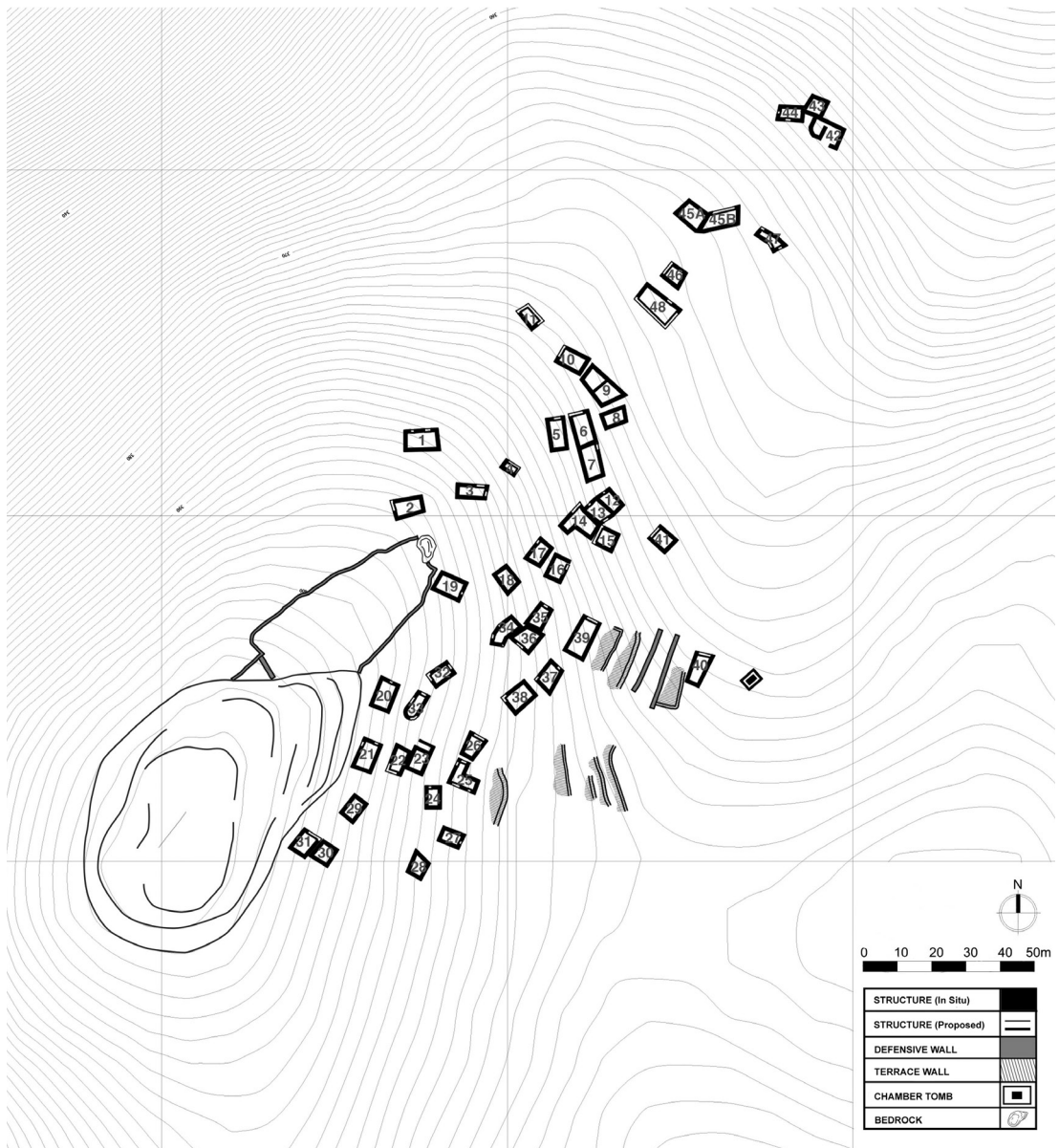
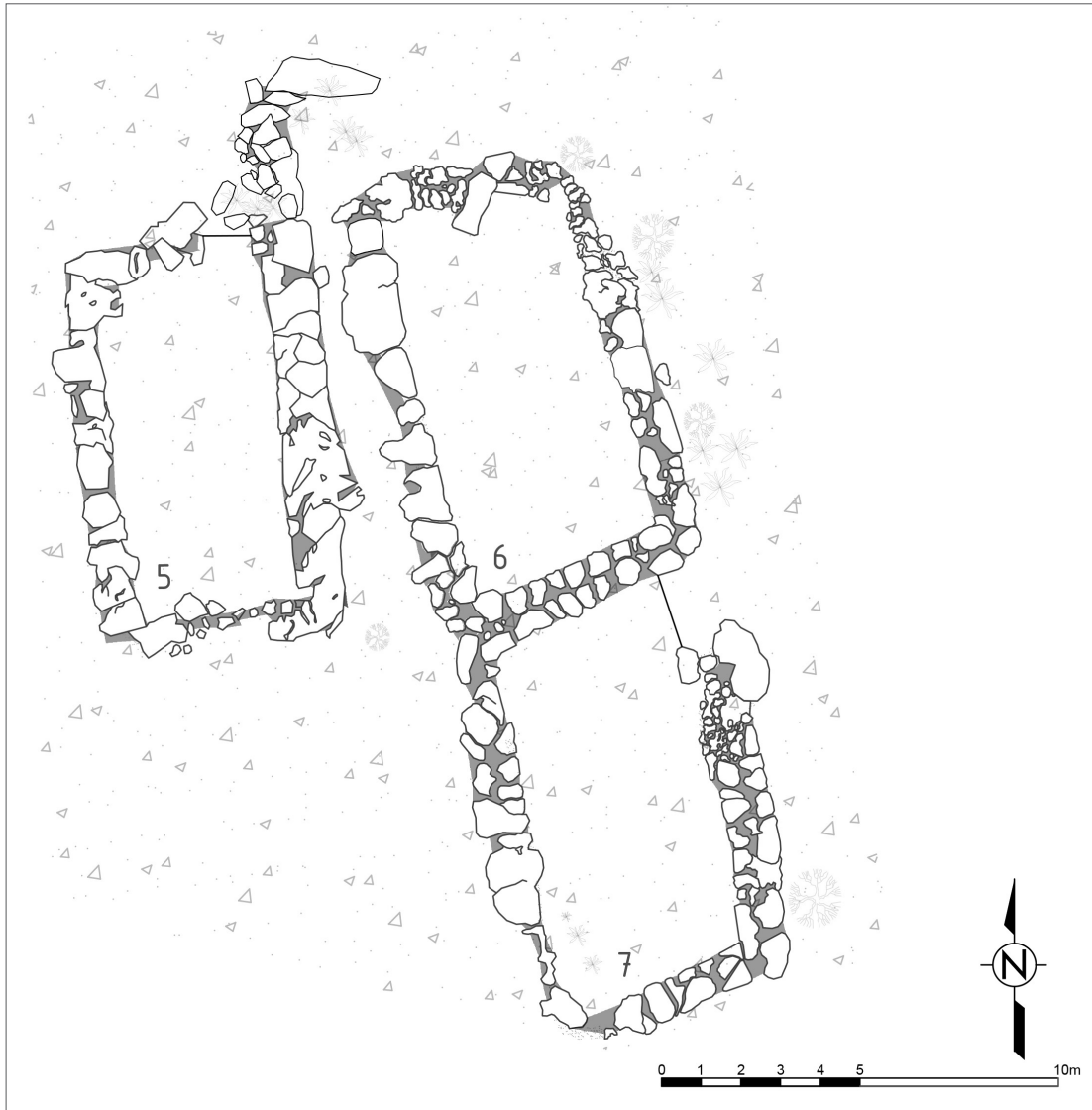


Fig. 3 Settlement plan of Gökçalca (PAP Archive).

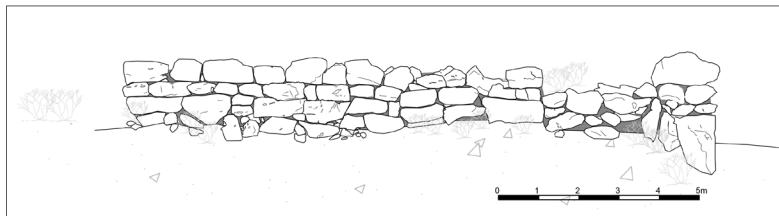
multi-room units were constructed using dry-stone techniques, most with polygonal walls built from local limestone, with some stones worked and others left rough.<sup>13</sup> The architectural organisation demonstrates a deliberate use of terracing on the slope together with the systematic use of corridor-type entrances.

Within the numerically recorded units, several, such as Structures 5–7, and Structures 34–36 formed more complex residential groups, either arranged in adjoining rows or organically connected through corridors (Fig. 4a–4b). Structure 39, together with its two-phase surrounding wall, by virtue of its architectural dimensions and position, appears to represent a potential

<sup>13</sup> For the typology of polygonal walls, see Scranton, 1941, 45–98.



**Fig. 4a**  
Plan of Structure 5-7  
(PAP Archive).



**Fig. 4b**  
Elevation of Structure 5  
(PAP Archive).

communal or administrative focal point within the settlement. Similarly, the size and wall thickness of Structure 43 suggest a function as an assembly space. In addition, surrounding walls, terrace walls, and agricultural installations constructed of polygonal masonry were also documented.

In addition to the domestic architectural fabric, a single rock-cut chamber tomb was identified on the lower eastern slopes of the settlement.

Based on its dimensions and location, this tomb is believed to have belonged to an individual of elevated status within the community. In general, Gökçalca presents a multi-functional rural settlement, combining domestic architecture with defensive and agricultural infrastructure. Its planned terracing system, shared-wall building complexes, corridor-type entrances, and strategically placed communal structures provide important evidence for understanding social organisation and spatial planning in the region. No datable material from the Hellenistic or Roman Imperial periods was recovered at Gökçalca or in its surroundings. However, decorated terracotta fragments and pear-shaped press stones associated with olive oil production were documented. Taken together, these finds indicate that Gökçalca functioned as a hillside settlement whose final occupation phase can be assigned to the Archaic period, specifically the 6th century BCE.<sup>14</sup>

### Somakkaya Open-Air Peak Sanctuary

Somakkaya Hill lies to the east of Taşlıca village and Gökçalca, occupying a strategic position surrounded by rocky slopes with further evidence of occupation extending from Gökçalca. Access to the hill is difficult from the east, west, and north due to steep inclines, while the southern slope offers relatively easier entry. Archaeological investigations have revealed a concentration of architectural blocks and building foundations along the southern line, beginning from the lower levels. Extending from the base towards the summit, this southern axis yielded a cultic arrangement consisting of an east-west-oriented terrace, two structures on the upper levels of the terrace, and, at the summit, a stepped altar accompanied by a rock-cut basin.<sup>15</sup> Within this arrangement, the areas designated as the Terrace and Structure 1 are situated on the lower section of the southern slope, Structure 2 lies at the mid-levels, and the altar, together with the rock basin, occupies the summit (Figs. 5-6).

The terrace, situated to the southeast of Structure 1, is a 7 x 2 m platform built on bedrock with roughly worked blocks. Technical similarities in the masonry indicate that the terrace was contemporaneous with Structures 1 and 2. Structure 1, measuring 13 x 4.5 m, is a large building. The lower parts of its north and west walls are cut directly from bedrock, while the upper courses consist of polygonal and rectangular blocks. Particularly notable are the profiled blocks preserved *in situ* in the south wall: their lower sections are roughly worked, while their upper surfaces are smoothly finished. These elements resemble *euthyneria*<sup>16</sup> blocks and display *anathyrosis*<sup>17</sup> cuttings, indicating that a second course of blocks once rested upon them. The topography, block arrangement, and passage openings suggest that the structure had a main entrance on the southwest and a secondary passage connecting to Structure 2 on the north. Its location

<sup>14</sup> A comparable example is the settlement at Avşar Tepesi in Lycia, and the proposed interpretation of its deep chronology is expected to be clarified through forthcoming systematic excavations. For Avşar Tepesi (Zagaba), see also Kolb and Tietz, 2001, 347-416; Thomsen, 2022; Erdoğan, 2022, 2517-2536. For M. Nöth's observations and proposals concerning Gökçalca, see Nöth, 2023, 109.

<sup>15</sup> Epigraphic evidence also confirms the presence of sanctuaries dedicated to Zeus Polieus, Athena, Apollo, Ilithyia, Aphrodite, Sarapis, and Dionysos in Phoenix and its surroundings. For the relevant inscriptions, see Bresson, 1991; Blümel, 1991.

<sup>16</sup> εὐθυνήρια is a term used in temple and monumental architecture to denote the uppermost course of the foundation, visible at ground level. See Robertson, 1943, 41.

<sup>17</sup> ἀναθύρωσις is a term used to describe the special preparation of the joint surface between two stone blocks. See Tucci, 2014, 13; Robertson, 1943, 42.

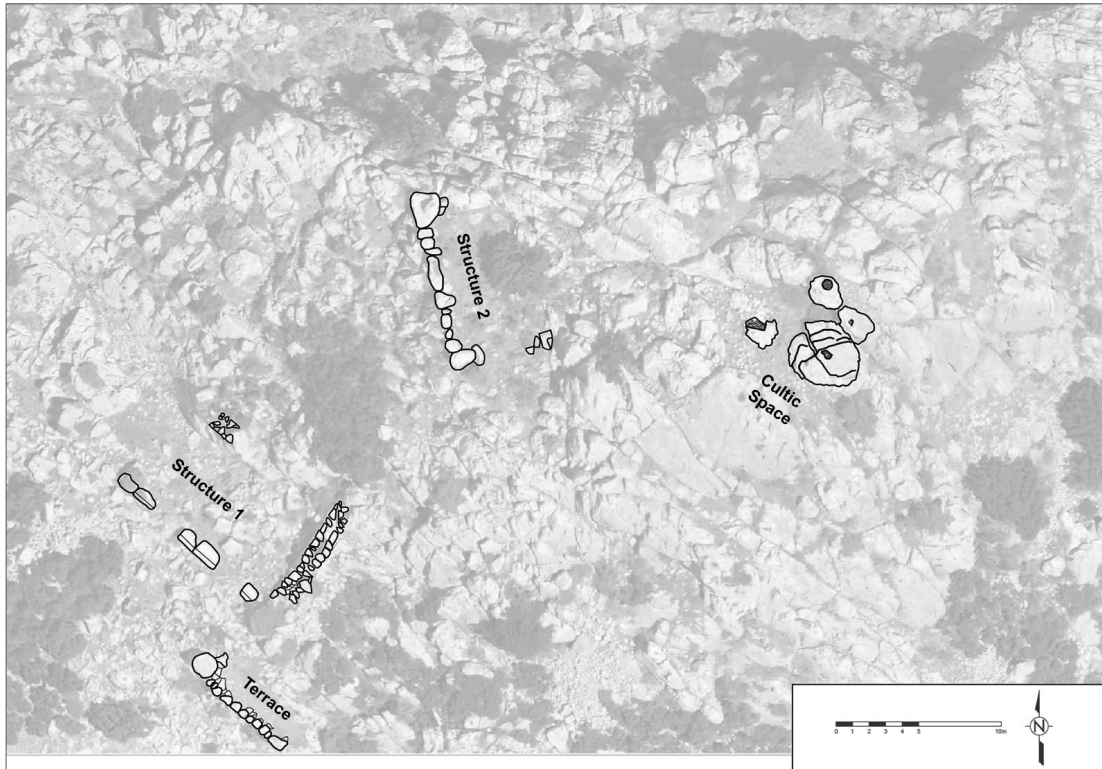


Fig. 5 Architectural Plan of the Somakkaya Open-Air Peak Sanctuary (PAP Archive).

and architectural configuration suggest that it may have served as a reception space for ritual processions. Structure 2 is situated between Structure 1 and the cult area at the summit, most likely along the processional route. Measuring 10 x 6 m, its walls are built mainly from bedrock, while the south wall uses massive, roughly worked blocks. The eastern entrance has been destroyed. The masonry techniques closely parallel those of Structure 1 and the terrace, suggesting that all three belong to the same construction phase.

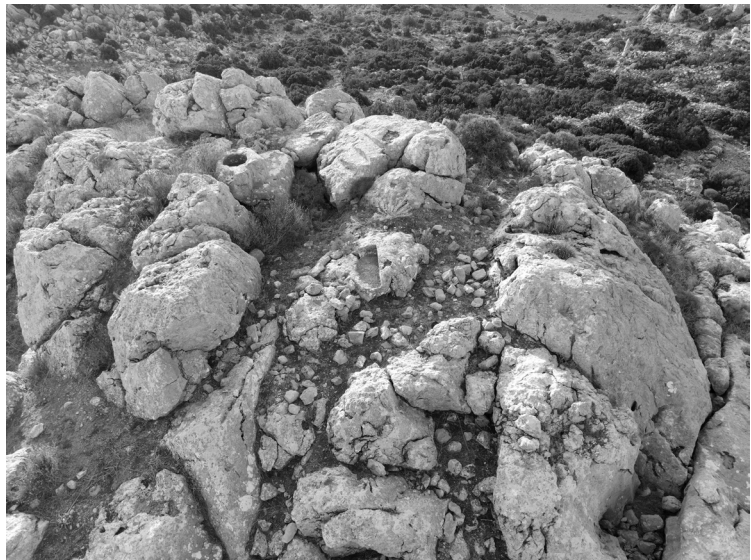


Fig. 6 Somakkaya Open-Air Peak Sanctuary, Cultic Space (PAP Archive).

The cult area, situated at the summit in a prominent position and oriented eastwards, consists of a stepped altar, an associated libation basin, and a second rock-cut basin. This eastward orientation reflects the tradition observed in many Phrygian stepped monuments, which favour a northeast–southeast axis. The investigations suggest that this orientation was intentional and

held symbolic significance related to the rising sun, probably associated with the cult of Matar/Cybele. In this context, it is likely that a cult image or stele originally stood in front of the Somakkaya altar, while the adjacent libation pit would have been used for offerings during rituals dedicated to that image.

The stepped altar, carved into a rock mass measuring 4.35 x 3.75 m, consists of three steps topped by a basin. The steps and basin form an integrated whole. In the literature, a wide range of terms has been applied to such monuments, including altar, stepped altar, rock throne, throne altar, and idol altar.<sup>18</sup> The steps vary in depth from 25 to 53 cm and are 12 cm high, dimensions that indicate they were not intended for functional use. In this respect, the altar closely parallels examples at Midas City and Fındık in Phrygia.<sup>19</sup> Its eastward orientation, consistent with Phrygian tradition, can be associated with the rising sun.<sup>20</sup> Above the steps, on the upper surface of the altar, is an offering basin of irregular shape, somewhere between elliptical and rectangular. Measuring 60 x 40 cm and preserved to a depth of 6 cm, the basin was most likely used for libation offerings.<sup>21</sup>

The second rock-cut basin, located northwest of the altar, was hewn into a rock mass measuring 3.27 x 1.96 m. Its form resembles an urn, and the presence of a lid-setting surface along the rim suggests it was originally covered. This basin was probably not used for libation but may have served as a storage feature associated with cult practice, or as an *osteothek*.<sup>22</sup>

Rock-cut cavities observed within the area and along the floor surface can, in some cases, be associated with the construction techniques of the floor level, while in other instances they appear to have functioned as sockets for the installation of shelves or platforms.<sup>23</sup> Such cuttings may plausibly be interpreted as housing wooden shelving systems intended for the placement of votive offerings or other cultic equipment.

In light of this evidence, the Somakkaya cult area, with its east-west oriented steps, libation basins, and elevated location, can be closely compared to the open-air sanctuaries dedicated to Cybele in Phrygia and to cultic sites associated with Cybele at nearby Loryma, particularly a stepped altar.<sup>24</sup> The cult of Cybele is known to have been practised not only in Central Anatolia during the Early Iron Age but also throughout the Roman Imperial and Late Antique periods.

The Somakkaya sanctuary, situated on a high and commanding hilltop with an eastward orientation and difficult accessibility, represents a local adaptation of this broader tradition, both architecturally and topographically. Although the masonry techniques and ritual installations do not provide an absolute chronology, comparative material suggests a date between the 6<sup>th</sup> and

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<sup>18</sup> Berndt-Ersöz, 2006, 22.

<sup>19</sup> Berndt-Ersöz, 2006, 173.

<sup>20</sup> Berndt-Ersöz, 2006, 15-17.

<sup>21</sup> For libation basins, see Berndt-Ersöz, 2006, 145, 149, 181, 183-184, 190. For other examples in Anatolia, see Kızıl, 2015, 276; Kızıl and Doğan, 2022, 111; Berndt-Ersöz, 2006, 183; Berndt-Ersöz, 2006, 4-16; Baldıran and Söğüt, 2002, 50; Gönültaş, 2003, 90; Kızıl, 2015, 277.

<sup>22</sup> For rock-cut basins and examples with different functions, see Kızıl, 2015, 276; Kızıl and Doğan, 2022, 111; Berndt-Ersöz, 2006, 183, 175, 62, 193; Gönültaş, 2003, 76-84, 90; Diler and Adıgüzel, 2015, 91-92; İren, 2008, figs. 256-257, 9-11; Çevik, 1998, 131; Baldıran and Söğüt, 2002, 49-50; Büyüközer, 2015, 434.

<sup>23</sup> For comparable examples, see Berndt-Ersöz, 2006, 60, 144, 183.

<sup>24</sup> Berndt-Ersöz, 2006, 41-48. See also Held, 2010, 375-377.

2<sup>nd</sup> centuries BCE. However, the absence of material datable later than the late 6<sup>th</sup> century BCE establishes a *terminus ante quem*. When considered contextually and holistically alongside the evidence from Gökçalca and the lower settlement at Kaledağ, this absence supports the possibility that the site fell out of use after the Archaic period.<sup>25</sup>

### Kaledağ: Acropolis and the lower settlement

Kaledağ is located on a commanding hilltop at an elevation of 451 m, east of Taşlıca. Archaeological investigations have revealed a fortified settlement covering approximately five hectares, consisting of a two-tiered defensive system.<sup>26</sup> The site includes an acropolis enclosed by fortification walls and a lower settlement area, also protected by surrounding walls, situated on the terraces below the acropolis. The fortification circuit, particularly well preserved on the western, northern, and southern sides, is reinforced with large polygonal blocks, suggesting that the acropolis served as both a defensive stronghold and an administrative centre (Fig. 7-8).<sup>27</sup>

The designation of the fortified summit at Kaledağ as an acropolis requires brief clarification.<sup>28</sup> In its earliest phases, the upper settlement clearly served as more than a defensive outpost: alongside fortification walls, the presence of civic and possibly sacred spaces – later perhaps overbuilt by a basilica – as well as a large public cistern supplying the community, supports the use of the term acropolis in its original sense of a fortified upper town with administrative, religious, and communal significance. Moreover, the possible association with the Tlos deme further reinforces Kaledağ's candidacy as an acropolis, as deme-level ties suggest a recognised civic identity within the Rhodian *Peraea*. Especially in the Archaic and Classical periods, the fortified acropolis should be understood as functioning within an integrated settlement system together with the inhabited areas and sanctuaries at Gökçalca and Somakkaya, rather than as a stand-alone fortress. Nevertheless, it must be noted that in the Carian Chersonese, including Phoenix and its neighbouring communities, urbanism remained small-scale, and the so-called acropoleis were correspondingly limited in size. For this reason, some scholars have preferred the term *phrourion* to emphasise their character as fortified strongholds, particularly in the later Roman and Byzantine phases when military functions predominated. In this context, it is plausible that Kaledağ's acropolis, while originally serving civic and religious purposes, was gradually redefined in later periods as what might more appropriately be described as a *phrourion*, a fortress whose primary role was defensive and strategic.<sup>29</sup>

<sup>25</sup> Architectural investigations of sanctuaries and cultic spaces at Phoenix, Casara, and Thysannous are being carried out by Assoc. Prof. Taylan Doğan, with publication preparations in progress.

<sup>26</sup> Scholarly debate has proposed that Kaledağ may be identified with the deme of Tlos in the Rhodian *Peraea* or with Mount Phoenix and its fortress, as mentioned by Strabo (14.2.4); Gärtringen, 1902, 143–146; Fraser and Bean, 1954, 58, 80, 124ff.; Blümel, 1991, 34; Bresson, 1991, 142–144; Held, 2009, 126.

<sup>27</sup> For further observations, comparative analysis, and dating proposals regarding the fortification walls of Kaledağ, see Nöth, 2023, 109–110, 321–323, Abb. 496–502.

<sup>28</sup> For the definition of the term Acropolis, see Nossov, 2009, 12. Kaledağ differs from the isolated *phrourion*-type minor fortresses documented in Caria, like Teke Kale, At Yaylası, Kurun Dere, Bağacık, Ören, and Altıntaş. For isolated minor fortress examples in Caria, see McNicoll, 1997, 41–45.

<sup>29</sup> The site has also been interpreted as a *phrourion*-type military garrison, a fortified outpost serving strategic purposes within the defensive and administrative network of the *Peraea*, see Oğuz, 2013, 496–498, 550, Pl. 2.1.15. For the definition and typology of *phrourion/phrouria*, see also Pimouget-Pedarras, 2001, 113.



Fig. 7 Aerial view and settlement plan of the Kaledağ Acropolis and the lower settlement (PAP Archive).



Fig. 8 Plan of the Kaledağ Acropolis (PAP Archive).

The acropolis walls are approximately 1.6 meters thick, with most blocks cut into nearly rectangular shapes, some featuring slightly curved faces. The fortification line is partially adapted to the natural topography (Fig. 10). Breaks observed along the western and eastern stretches of the wall indicate at least one phase of expansion or repair. On the southern slope, the terrain is particularly steep, making extensive fortifications unnecessary. Architectural profiles and surface analyses show that the walls are preserved to a maximum height of about 4.00 m on the south-eastern side and about 3.40 m on the northern side. Later construction phases include repairs and reinforcements using mortar and smaller stones, attributable to the Byzantine period.



**Fig. 9**  
Main entrance  
of the Acropolis  
(PAP Archive).



**Fig. 10**  
Detail from the  
fortification walls  
of the Kaledağ  
Acropolis  
(PAP Archive).

The main entrance gate of the acropolis was identified on the north-western side (Fig. 9).<sup>30</sup> Constructed with isodomic masonry and measuring 1.00 m in width, the gate is flanked on its eastern side by square-plan rooms introduced for security purposes. Inside the acropolis, walls of polygonal dry-stone construction were documented and are probably associated with a *megaroid* structure of rectangular plan, as well as with administrative or military units.<sup>31</sup> Ceramic evidence indicates that the acropolis became a *phrourion* and remained in continuous use during the Hellenistic, Roman imperial, and Byzantine periods.

<sup>30</sup> For additional observations regarding the gate structure, see Nöth, 2023, 110. For the gates also see Winter, 1971, 205-233.

<sup>31</sup> The term *megaroid* is a modern descriptive label for a rectangular, hall-like building whose ground plan, function or architectural details cannot be securely identified.

At the highest point of the acropolis, a three-aisled basilica was identified on the northern side. The main entrance of the structure is located on the west and measures 1.00 m in width. The eastern jamb of the doorway incorporates *spolia*, specifically a block from a stepped base.<sup>32</sup> To the east, the apse measures 4.10 x 1.60 m. The use of mortar in the walls suggests the interior was plastered, while the numerous roof tiles observed in the foundations provide evidence for a tiled superstructure. Near the apse, a circular installation measuring 62 x 40 cm, coated with mortar, has been interpreted as a cistern. Similarly, on the southern side, a second installation measuring 160 x 125 cm with thick plaster was also identified.

To the west of the basilica complex, an apsidal chapel was identified, immediately adjacent to a large, rock-cut public cistern. This cistern, which supplied the acropolis with water, measures 2.00 x 1.50 m at its opening and reaches a depth of 10 m. Further west, a large rectangular building measuring 13.50 x 5.10 m was documented. It features a doorway 80 cm wide, preserved wall heights of 90 cm, and a wall thickness of 105 cm. Constructed in dry-stone masonry without mortar, this structure likely belongs to the earlier phase of the acropolis and may have served as the residence of a ruling authority. The defensive layout of the acropolis, which strategically exploits the natural topography, combined with the Byzantine-period repairs, strongly suggests that Kaledağ functioned as a long-lived strategic centre from the Archaic period onward.

Approximately 100 m below the acropolis of Kaledağ, a lower settlement enclosed by fortification walls has been identified. Documentation reveals that the fortification extends for c. 170 m on the west and c. 200 m on the east. The internal layout of the settlement was arranged on a terraced landscape oriented along an east-west axis. The terrace walls were constructed of local limestone, using a dry-stone technique with large, polygonal blocks.<sup>33</sup>

The overall layout of the terraces suggests they were used mainly for agricultural purposes rather than as structural or funerary terraces. The near absence of finds such as pottery, roof tiles, or tomb blocks further supports this production-oriented function. Associated elements of agricultural infrastructure, including workshops and water management facilities, indicate that the settlement within the fortifications functioned as a self-sufficient agro-economic micro-ecosystem.

The discovery of three pear-shaped press stones indicates the presence of olive oil workshops located near the agricultural terrace areas within the fortified lower settlement (Fig. 11).<sup>34</sup> In the western sector of the settlement, a circular water reservoir measuring 13 x 11 m was identified. This feature confirms that water for both agricultural production and daily consumption was supplied from a communal source.

Within the enclosed area, particularly on the upper terraces near the slope leading to the acropolis, seven building foundations oriented along an east-west axis were documented. Although their plans cannot be fully reconstructed due to dense rubble and vegetation, roof tiles and household ceramics were observed within their remains. These findings indicate that the

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<sup>32</sup> Expert archaeologist İlayda Alikaya is currently preparing a study on the stepped-bases found in the territories of Phoenix, Casara, and Thyssanosus.

<sup>33</sup> M. Nöth defines the lower settlement of Kaledağ, which covers an enclosed area of approximately 5 hectares, as part of a two-tiered defensive scheme associated with the acropolis, and emphasises its typological parallels with Idyma in Caria, see Nöth, 2023, 109.

<sup>34</sup> Comparable Early Iron Age examples in Caria have been documented at Kızılağaç-Kabakulak Tepesi and Belentepe, see Diler, 2010, 141, 161, Fig. 8; Sögüt and Gider, 2010, 243, 255, Fig. 2.



Fig. 11 Pear-shaped press stones from Kaledağ lower settlement (PAP Archive).

structures were primarily used as domestic units and suggest a modest yet systematically arranged settlement pattern-oriented north. On this basis, it can be inferred that the lower terraces and flat areas within the fortification were used for productive activities, while the upper terraces served residential purposes.

Chronologically, M. Nöth has dated the fortification walls of the lower settlement to the Archaic period at the latest, based on their rough polygonal masonry and broad joints.<sup>35</sup> The available evidence suggests that the Kaledağ lower settlement was in use from the Early Iron Age through the Archaic and Classical periods. Subsequently, the settlement's focal point appears to have shifted, likely for reasons of security and strategic relocation, to the Hisar Tepe Acropolis and its surroundings in the Sindili plain.

### Rural Landscape in the Eastern *Chora*: Farmsteads and Workshops at Dağ Yeri

To the west of Taşlıca village, in the locality of Dağ Yeri, field surveys conducted on a narrow northeast–southwest–oriented plateau and its surroundings identified a total of eleven farmsteads and olive oil workshops, most of them situated along the western slopes. One of the best-preserved examples of these complexes is at Bedelence (Fig. 12-14).<sup>36</sup> Within the farmstead and olive oil workshop complex, which measures 30.58 x 32.90 m, a well-preserved installation consisting of two *in situ* press stones and a liquid-collecting basin was documented. Immediately outside the complex, a total of three rock-cut cisterns, each reaching depths of up to 20 m, were recorded.<sup>37</sup>

These installations closely resemble the examples documented between 2021 and 2023 in the southern hinterland of Phoenix and at Casara.<sup>38</sup> Their commanding positions in the landscape

<sup>35</sup> Nöth, 2023, 110.

<sup>36</sup> For previous studies on the farmsteads in the Bozburun Peninsula, see Demirciler, 2014.

<sup>37</sup> In the region, more than seventy rock-cut cisterns reflect the water management system established within the rural settlement of Phoenix to support both agricultural production and daily needs. The cisterns, typically located next to farmsteads and olive oil workshops, are pear-shaped in form and range in depth from 10 to 15 m. The tradition of rainwater harvesting continues to be practiced today in the village of Taşlıca. At the site known as Kırkkuyular, also called 'Forty Wells' by the villagers, forty-five rock-cut cisterns remain in active use for watering livestock. Yaman and Konuk et al., 2023, 294.

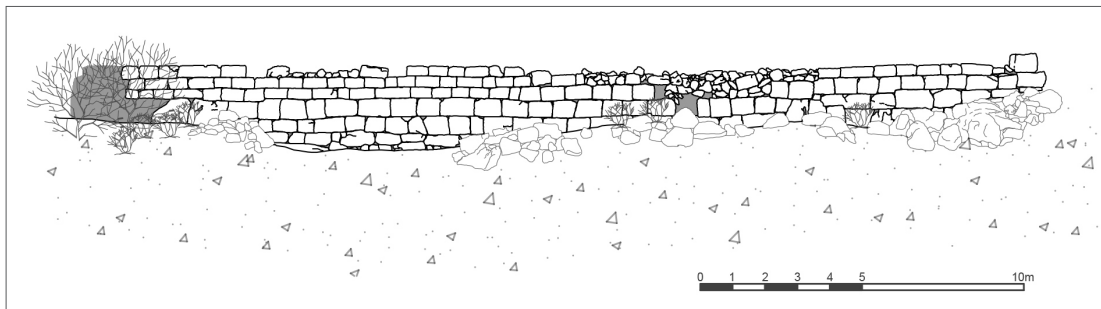
<sup>38</sup> For farmsteads, olive oil presses, and wine production facilities identified between 2021 and 2023, see Yaman and Konuk et al., 2022, 185-202; Yaman and Konuk et al., 2023, 277-297; Yaman and Konuk et al., 2024, 381-396.



**Fig. 12**  
General view of the farmstead with adjoining  
olive oil workshop complex at Bedelence  
(PAP Archive).



**Fig. 13**  
Olive oil workshop, *in situ* press stones  
and pit (PAP Archive).



**Fig. 14** Western elevation of the farmstead and olive oil workshop complex at Bedelence (PAP Archive).

and immediate proximity to ancient pathways suggest that these farmsteads operated within a decentralized agricultural organisation. The products cultivated and processed here were transported along the east-west oriented paths within the Phoenix territory and exported to Serçe Liman, Gedik, Yeşilgelme and Arap Ada Bay, as well as to Rhodes and other regional centres.

The farmsteads and olive oil press complexes identified in 2024 were also situated in strategically dominant locations, as in previous years. This spatial pattern suggests that, in addition to production activities, farm owners also considered micro-scale security concerns.

As of 2024, a total of sixteen farmstead and press complexes have been documented in the eastern and northern *chora*, including the Dağ Yeri area. As with examples previously recorded in the territories of Phoenix and Casara, terrace tombs and stepped pyramidal grave markers, likely belonging to the farm owners or their families, were also identified near these complexes and along the adjacent ancient pathways.<sup>39</sup>

Ceramological evidence indicates that, as with the material recovered between 2021 and 2023, these complexes began production in the early 4<sup>th</sup> century BCE and remained in intensive use throughout the Hellenistic period until the 1<sup>st</sup> century BCE. The variety and density of mushroom-type amphorae provide particularly compelling ceramic evidence supporting this chronology. The finds also reveal, as in other settlements across the peninsula, that production declined sharply during the Roman Imperial period, likely due to ecological, economic, or political factors that remain insufficiently understood. In contrast, the decentralized farmstead organisation appears to have partially resumed activity in the first half of the 5<sup>th</sup> century CE and continued into the mid-7<sup>th</sup> century. The density of Late Roman C (LRC) Hayes Form 3 and Late Roman D (LRD) Hayes Form 9 wares, together with African Red Slip (ARS) Hayes Form 67, and LR1 and LR4 amphorae, substantiates this chronological framework.<sup>40</sup> Notably, many of the identified farmsteads are still reused today by the inhabitants of Taşlıca village as animal pens, although for a different purpose.

While the western slopes of Dağ Yeri are characterised by a dense concentration of farmsteads and olive oil installations, the eastern slopes preserve a series of agricultural terraces extending in an east-west orientation, in places reaching up to 5 m in width (Fig. 17a). These terraces, although difficult to date, represent exceptionally well-preserved examples of spatial organisation, separating areas of agricultural production from the settlement layout.

### **Byzantine Horizons at Tülü Tepe: Tracing Rural Transformations in Phoenix**

The 2024 season significantly enhanced our understanding of Byzantine-period settlement, architecture, and ecclesiastical organisation across the region. Archaeological survey in the eastern *chora* documented multiphase terrace walls and room units constructed of fieldstones and lime mortar, revealing successive modifications extending into the Byzantine period. Ceramic assemblages, including transport amphorae, red-slipped wares, and cooking vessels, demonstrate the continuity of domestic and economic activities, while also placing the settlement within broader exchange systems.

At Casara, defensive features such as a circuit wall with towers were recorded, originally established in Late Antiquity but reused and maintained during the Byzantine era. Associated ceramic

<sup>39</sup> For stepped pyramidal tombs, see Carter, 1982, 176-195; Held, 2014, 250-267. For examples identified at Phoenix and Casara, see Yaman and Konuk et al., 2022, 197-199; Yaman and Konuk et al., 2024, 388-389.

<sup>40</sup> Comparable examples of Late Roman, red-slipped wares have been published by Hayes, 1972; 2008.



Fig. 15 Aerial view of the first-phase apse and smaller chapel apse of the Tülütepe Church (PAP Archive)

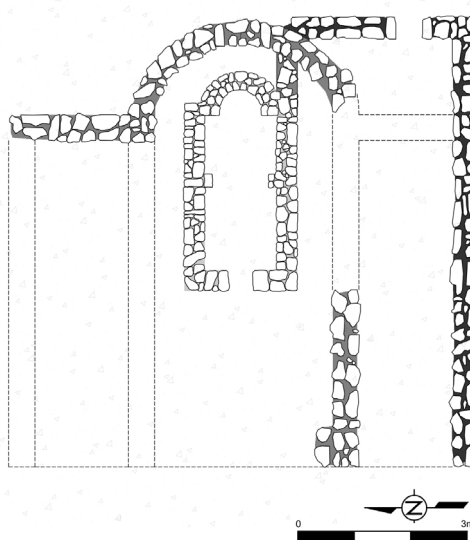


Fig. 16 Plan of the Tülütepe basilica and chapel (PAP Archive).

finds, notably glazed wares and regional imitations, corroborate evidence for Byzantine-period habitation and highlight Casara's role in the defensive and settlement network of the *Peraea*.

Survey of the coastal sites identified cisterns, storage basins, and rock-cut installations that remained in use throughout the Byzantine centuries, demonstrating Phoenix's maritime significance and its integration into trade routes connecting Rhodes with the Carian coast.

Particularly important for reconstructing the region's ecclesiastical landscape was the investigation of the Tülü Tepe Church in 2024. Fieldwork on the eastern slope of Tülü Tepe, in the eastern hinterland of Phoenix, documented a three-aisled basilical church situated immediately west of an ancient north-south oriented road (Fig. 15-16). In its initial phase, the structure measured 12.70 x 11.20 m, with an apse at the eastern end. Although the basilical plan is consistent with Late Antique churches in the region such as the Kızlan Deresi basilica, the masonry type at Tülü Tepe consists of smaller stones, brick fragments, and abundant mortar, features associated with later constructions. In a subsequent phase, a small chapel was added in the central nave of the first church.<sup>41</sup> The evidence indicates two building phases, potentially dating to the Transitional Phase (7<sup>th</sup>-9<sup>th</sup> centuries) and to the Middle Byzantine period (9<sup>th</sup>-13<sup>th</sup> centuries). Architectural analysis further shows that the masonry blocks used in the church walls were *spolia*, reused from a nearby Hellenistic farmstead to the north.

Between 2021 and 2023, a systematic survey at Gökseriç and its environs documented the Kızlan Church, Aşağı Fenaket Church, Bağçekise Chapel, Hisardibi Church, Kaynarlık Tepe Chapel, and a series of basilical churches and chapels near Serçe Liman. Taken together, these structures indicate that the establishment of a rural ecclesiastical network in the region began

<sup>41</sup> The apse of the first phase measures 3.50 x 1.50 m, with a window opening in its wall at a height of 0.95 m and a width of 1.25 m. The apse and surrounding walls of this initial phase are 0.90 m thick. In the second phase, the chapel walls are 0.70 m thick, with the apse reduced to 1.60 x 0.90 m. The templon zone is defined to the west by two projecting walls, each 0.25 m wide and 0.50 m thick, leaving a central opening of 1.90 m. The templon area measures 2.00 x 2.15 m, while the naos/narthex space to the west measures 2.47 x 2.84 m.

in the first half of the 5<sup>th</sup> century CE.<sup>42</sup> The evidence also suggests a disruption in this activity by the mid-7<sup>th</sup> century, plausibly linked to the Arab incursions, during which several churches appear to have been abandoned.<sup>43</sup> However, buildings in more inaccessible locations remained in use throughout the Middle Byzantine period. The basilical church identified on the eastern slope of Tülü Tepe, which may have been constructed in this remote inland area during or after the 7<sup>th</sup> century, extends this architectural horizon and constitutes an additional node within the local ecclesiastical landscape. Datable material recovered from adjacent farmsteads and production complexes supports this interpretation, indicating that the decentralized, production-oriented rural settlement of Phoenix persisted into the medieval period, in part articulated through and sustained by ecclesiastical infrastructure.

Although the basilical church at Tülütepe demonstrates the spread of ecclesiastical architecture into the rural hinterland of Phoenix, research confirms that no bishopric was established on the Bozburun Peninsula in Late Antiquity or the Byzantine period.<sup>44</sup> Instead, the churches here, including Tülütepe, were most likely under the authority of the bishop of Cnidus, metropolitan of Aphrodisias.<sup>45</sup> This absence of an independent bishopric reflects the rural, non-urban character of Phoenix and its hinterland, where ecclesiastical identity was expressed through dispersed farmstead-based churches rather than urban centres.

### Northern Chora: Kapakdibi and Mazıkısığı

Within the territory of Phoenix, the Kapakdibi area, located north of Taşlıca village and the Dağ Yeri locality, consists of an agriculturally fertile depression bordered by sloping hillsides (Fig. 17a). Intensive archaeological surface survey in this area documented farmsteads and olive oil installations whose morphological, architectural, and landscape features closely resemble those found in the southern and eastern hinterland of the territory. These agricultural units, dated to the Hellenistic period, are located next to a well-preserved ancient pathway, 1.10 m wide, which is still used today by local inhabitants and extends from the south towards Taşlıca village in the north.

Immediately above this ancient path, a 9 m-long rusticated terrace wall, oriented east–west, was identified, upon which stepped pyramidal funerary blocks with single mouldings are preserved *in situ*. Based on parallels with previously documented examples, the available evidence suggests that this tomb, also dated to the Hellenistic period, likely belonged either to the owner of one of the nearby farmsteads or to a member of their household.

In the northern hinterland of Phoenix, a survey at Mazıkısığı, located between Kapakdibi and the Būğüş plain, revealed independent olive oil installations. In addition to these agricultural

<sup>42</sup> On the Kızlan Church, see Yaman and Konuk et al., 2022, 192-195; for the Aşağı Fenaket Church, see Yaman and Konuk et al., 2023, 286-288; and for the basilical churches and chapels at Hisardibi, Kaynarlık Tepe, and Serçe Liman, see Yaman and Konuk et al., 2024, 385-387, 389-393.

<sup>43</sup> Excavations conducted in 2022 at the Apollo and Ilithyia Sanctuary/Kızlan Church revealed evidence of a seventh-century CE episode of destruction at the church. Three tile-covered inhumations constructed immediately adjacent to the north exterior wall, along with the abandonment of the interior spaces into which these burials were inserted, indicate a post-destruction phase and provide a secure chronological anchor for the sequence. For the excavations and associated data, see Yaman and Konuk et al., 2023, 279-286, figs. 9-12.

<sup>44</sup> Notitiae episcopatum 4, 10; Fedalto, 1988.

<sup>45</sup> Fedalto 1988.



Fig. 17a Ancient agricultural terraces in Dağ Yeri and Kapakdibi (PAP Archive).

units, at least seven north–south oriented terrace walls were recorded, with various types of funerary blocks preserved *in situ* atop the terraces (Fig. 17b). In total, sixteen stepped pyramidal tomb blocks, a Rhodian-type funerary altar, and an *osteothek* were documented within this area. This necropolis known as the “Mazıkısığı Necropolis,” dates to the Hellenistic period. Diagnostic ceramic finds, including mushroom-rim amphorae, Rhodian amphorae, and Cnidian amphora bases, indicate that the necropolis was in use from the 4<sup>th</sup> to the 1<sup>st</sup> century BCE.



Fig. 17b Stepped-base tomb markers and related grave terraces within the Mazıkısığı Necropolis (PAP Archive).

Studies indicate that the Mazıkısığı necropolis exhibits features similar to the family necropoleis previously identified at Gedik and Bahçekise. In addition to terrace-based grave blocks, a single chamber tomb was documented in the area. The superstructure of this chamber tomb

was constructed with stepped pyramidal grave blocks, closely resembling the example recorded at Badrik in the southern countryside of Phoenix in 2022. This evidence suggests that stepped pyramidal grave blocks served not only as grave markers for terraces containing inhumation burials, but also as architectural elements defining chamber tombs. The absence of material datable to the Roman Imperial period further suggests that these blocks may have been reused as *spolia* during the late Hellenistic period.

## Rural Architecture Studies on Ottoman Heritage: Būğüş Village

The 2024 survey season identified a significant settlement in the northern chora of Phoenix, located immediately north of Taşlıca village in the Būğüş depression plain. Investigations revealed, on the northern slope of this plain, a compact village layout comprising 18 houses reflecting traditional Ottoman rural architecture (Fig. 18). Within this settlement, locally known as “Būğüş,” gravestones dating to the period of the Turkish



Fig. 18 Axonometric view of a house at Būğüş village (PAP Archive).

War of Independence were also documented. This evidence indicates that the village remained inhabited until at least the first quarter of the 20<sup>th</sup> century.

Architecturally, perspective, the domestic structures at Būğüş show clear parallels with the houses of Aşağı and Yukarı Fenaket documented during the 2022 and 2023 seasons, particularly in plan typology, use of local stone, timber beams, and tiled roofs.<sup>46</sup> The data strongly suggest that Būğüş was abandoned following the 1923 population exchange. Thus, the site provides valuable insights into settlement continuity, demographic mobility, and the transformation of the cultural landscape in rural Phoenix. It also illustrates the impact of socio-economic changes during the transition from the Ottoman Empire to the Turkish Republic on patterns of habitation.

In addition to the villages of Fenaket and Būğüş, two well-preserved windmills were identified, one at Yokuşbaşı locality and another within Taşlıca village. Archival evidence indicates that these windmills remained standing until the 1950s.<sup>47</sup> They are tangible examples of a production-based cultural landscape that persisted into the modern era.

<sup>46</sup> See Yaman and Konuk et al., 2023, 286–288. Also see Özberk, 2004.

<sup>47</sup> A photograph taken in front of the windmill during George E. Bean’s visit to Fenaket (B19.6) documents the site between 1946 and 1956. See <https://www.classics.cam.ac.uk/museum/collections/collection-videos-1/the-bean-archive-1/george-e-bean/life-and-times>

## Epigraphic Report: Phoenix and the Question of *Tlos*

The 2024 season significantly expanded the corpus of epigraphic and contextual evidence in the northern and eastern chora. Newly documented architectural complexes at Gökçalca and Somakkaya, together with ongoing study of inscriptions from Fenaket and Kızlan Deresi, offer new perspectives for reassessing Phoenix's position within the Rhodian *Peraea*. These findings are especially relevant to the long-standing scholarly debate over whether Phoenix was also known as the deme of *Tlos*. Inscriptions from Rhodes, particularly Camirus, attest to individuals identified with the *demotikon* Τλω(ι)ος (*Tloios*), but the location of this deme has been disputed for more than a century. The Phoenix fieldwork provides new data to reconsider this issue in light of both archaeological and epigraphic evidence.

While a city named *Tlos* is well known in Lycia, the Rhodian inscriptions clearly refer to a different entity, plausibly a deme located either within Camirian territory on Rhodes, on one of the incorporated islands, or on the mainland *Peraea*. F. Hiller von Gärtringen, following van Gelder, was the first to propose that Phoenix should be identified with the deme *Tlos*.<sup>48</sup> His reasoning focused on onomastic overlaps between the donor list carved into the bedrock on the Phoenix acropolis, the fragmentary donor list from Syme<sup>49</sup> and the list of priests from the Yazıtlı Ev at Fenaket. The key piece of evidence comes from Blümel no. 102, where most names are recorded without *demotika*, except for one individual designated as a *Kasareus*. Von Gärtringen argued that this suggests the other individuals all belonged to a single deme, most plausibly *Tlos*.

His case is strengthened by the name “Charmokles, son of Eratokleus”<sup>50</sup> which also appears on a Rhodian grave stele where the *demotikon* Τλω(ι)ος (*Tloios*) is explicitly given. Although the possibility of homonymy exists, the relative rarity of the name makes the identification persuasive. By extension, if Charmokles was a *Tloios*, then the Syme donor list, and by implication the Phoenix acropolis list, may also reflect citizens of the deme *Tlos*. A further comparative case is instructive. Only one inscription from the Bozburun peninsula explicitly mentions *Tlos* or the *Tloioi*: at Loryma, a dedication to Artemis was made by Hagetor, son of Hagesianax, identified as a *Tloios*.<sup>51</sup> This inscription does not imply that Loryma itself was *Tlos*, but rather illustrates how individuals frequently used their *demotikon* when away from their home territory. The Loryma evidence therefore reinforces both the plausibility of locating the deme of *Tlos* in the *Peraea* and the methodological caution needed when linking *demotika* to specific sites.

R. Oreshko, however, criticised this identification as “arbitrary,” instead suggesting that *Tlos* should be located in northern Rhodes and associated with Lycian linguistic influence.<sup>52</sup> Yet his argument does not substantially engage with von Gärtringen's epigraphic evidence.

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<sup>48</sup> Gärtringen, 1902, 143-146.

<sup>49</sup> Blümel, 1991, no. 102.

<sup>50</sup> Blümel, 1991, no. 102, ln. 31: Χαρμοκλῆς Ἐρατ[οκλεῦ]ς.

<sup>51</sup> Held, 2003, 55-86, no. 3. W. Held has instead proposed that Loryma and Casara were both associated with the *demotikon* *Kasareus*, though the gods worshipped at Loryma often overlap with those of Lindos. See Held, 2009, 126 n. 15.

<sup>52</sup> Oreshko, 2020, 13-40.

Further support for the Phoenix = Tlos hypothesis comes from comparisons between the Fenaket priest list<sup>53</sup> and an inscription from Camirus (Tit. Cam. 157). In both, a Teisagoras son of Aristombrotos appears, identified at Camirus as a Tloios. Although N. Badoud dates the Camiran inscription to ca. 125 BCE,<sup>54</sup> which is too late for the same individual, the recurrence of the name may indicate a family continuity linking Phoenix with the deme of Tlos.

More broadly, it is clear that Phoenix must have been attached to a Rhodian deme, as local epigraphy reveals wealthy individuals with Rhodian names, though none explicitly record their deme affiliation. The Anatolian origin of the name Tlos, Lycian Tlawā, further suggests that the deme should be sought in the mainland territories rather than on Rhodes itself.

The 2024 survey in and around Gökçalca adds significant archaeological context to the epigraphic debate.<sup>55</sup> The architectural features of this pre-Hellenistic settlement resemble those found in Anatolia.

Several issues remain unresolved. The provenance of Blümel no. 102, found on Syme, must be reconsidered: if the plaque originated at Phoenix, the case for Phoenix = Tlos is considerably strengthened, but even if it did not, the evidence suggests that both Syme and Phoenix may have belonged to the deme.<sup>56</sup> Furthermore, the precise organisation of Rhodian demes remains poorly understood. It is unclear whether demes exercised local autonomy or functioned primarily as voting units tied to Camirus. The honorific base at Phoenix for a prytanis named Rhodippos raises the question of whether such officials acted locally within the deme or at Rhodes proper.

Finally, the evidence for cult practice requires careful reassessment. The priest list from Fenaket<sup>57</sup> includes deities such as Athena Polias, Zeus Polieus, Aphrodite, Asklapios, and Sarapis, all of whom are also attested at Camirus. These may therefore reflect Camiran cult activity rather than local Phoenix worship.

The hypothesis that Phoenix was also known as Tlos remains the most compelling explanation of the current evidence. Onomastic overlaps, Anatolian linguistic connections, and now the architectural evidence from Gökçalca together support this association. However, unresolved questions of provenance, prosopography, and deme organisation caution against definitive conclusions. Future research will focus on the new inscriptions from Kızlan Deresi and Fenaket, re-examination of older squeezes, and a comprehensive prosopographical study of Phoenix epigraphy. Only such integrated analysis can ultimately confirm or refute the Phoenix = Tlos hypothesis.

## Flora studies

The 2024 field season of the Phoenix Archaeological Project featured a comprehensive of flora study programme that integrated botanical and ethnobotanical perspectives. In this context,

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<sup>53</sup> Blümel, 1991, no 103, dated to the mid-3<sup>rd</sup> century BCE.

<sup>54</sup> Badoud, 2015.

<sup>55</sup> Held, 2009, 126, fn. 15.

<sup>56</sup> The status of Syme in the Rhodian state is unclear; it is not certain whether it was part of a deme. See Thomsen, 2020, 139, Nr. 36.

<sup>57</sup> Blümel, 1991, 33, no. 103.

landscape is understood as a holistic entity formed by the interweaving of natural and cultural elements, each shaped by environmental conditions and human interaction. Vegetation was used as a primary reference point for understanding ancient landscapes and human–environment relationships. Field research was carried out in seven distinct zones, combining systematic vegetation surveys, intensive fig variety research across Taşlıca village, and oral history interviews with local residents. In total, 59 species were documented, including 26 fig varieties<sup>58</sup> and 13 species identified for the first time in 2024.

Taxonomic classification was based on the Flora of Turkey and the East Aegean Islands, which served as the principal reference for morphological identification.<sup>59</sup> Plants were examined by their root, stem, leaf, and floral structures to determine family, genus, and species-level taxonomy. Field identifications included *Cressa truxillensis*, *Papaver purpureomarginatum*, *Arum dioscoridis*, *Rosularia serrata*, and *Origanum onites*, as well as widespread Mediterranean taxa such as *Asplenium ceterach*. All findings were georeferenced and integrated into GIS-based mapping to document vegetation density, species distribution, and areas of ecological vulnerability. These maps revealed patches of kermes oak *Quercus coccifera*, wild pear *Pyrus amygdaliformis*, hawthorn *Crataegus orientalis*, and long-lived olive trees *Olea europaea*, some with trunk diameters indicating ages between 500 and 700 years.

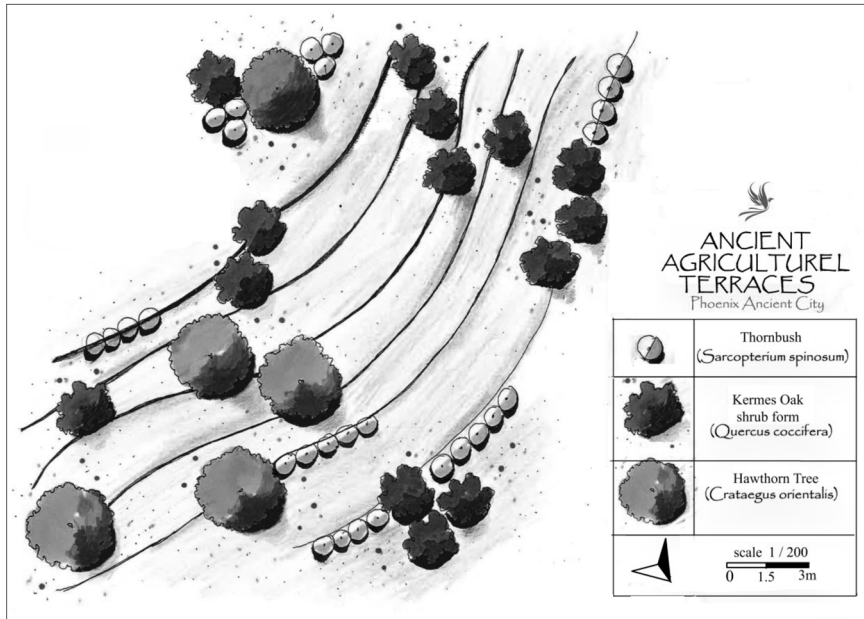
A significant part of the 2024 season focused on fig research, reflecting the enduring role of the *figus carica* in the Carian cultural landscape. Morphological studies recorded varietal differences in fruit skin thickness, colouration, pulp pigmentation, and ripening sequences, extending local fig consumption into November. Oral histories revealed a taxonomy of vernacular names, including “Ali Kaptan,” “Bird,” “Moon,” and “Well” figs, which continue to shape community identity and trade. These findings highlight the continuity of fig cultivation from antiquity to the present, supported by evidence of large-trunked trees that attest to centuries of human management and the persistence of fig trade in modern Taşlıca. Ethnobotanical interviews further highlighted the cultural significance of local flora. Local narratives describe the “Big Tree,” a monumental oak *Quercus* sp. with a trunk circumference of 4–5 m, a height of 15–20 m, and canopy span exceeding 20 m, estimated to be over a thousand years old. This tree, located north of Kale Tepe, is considered sacred and taboo; villagers believe that cutting or using its wood brings misfortune or death. Other accounts emphasise the subsistence use of acorns (pelit) during times of famine and the central role of oak wood (pınar) in traditional architecture. Such oral traditions attest not only to the ecological longevity of these species but also to the deep cultural connections between vegetation, belief, and identity.

Beyond fig and oak, current economic practices in Taşlıca continue to focus on almonds *Prunus dulcis*, thyme *Origanum onites*, and sage *Salvia* sp., reflecting the long-standing plant economies of the Phoenix hinterland. These findings underscore that vegetation remains a key structuring element in local food culture, ritual life, and commerce. Moreover, the surveys indicated that vegetation distribution varies significantly by altitude, aspect, and soil composition, with denser ground cover species in transitional zones and alpine species (lichens, cushion plants, perennial grasses) dominating higher elevations. The absence of olive and terebinth trees near press stones in the 2024 survey area has led to the hypothesis that wine production, rather

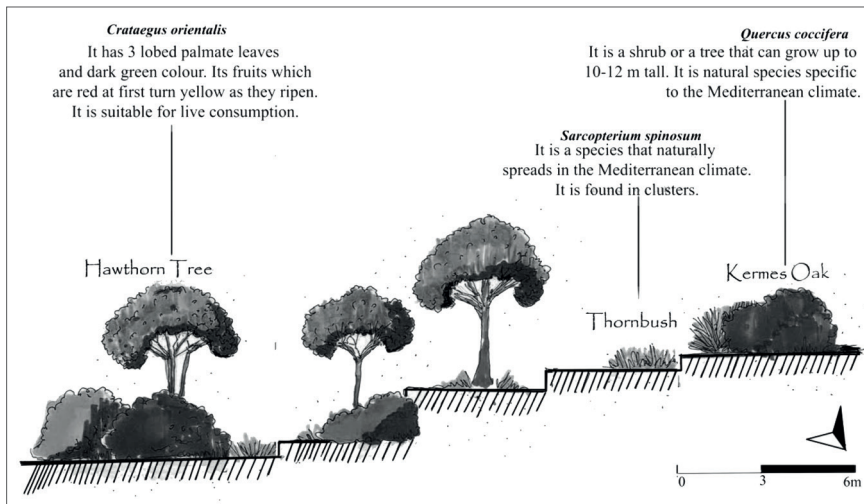
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<sup>58</sup> *Ficus carica*.

<sup>59</sup> Davis, 1965; 1966; 1970; 1972; 1975; 1978; 1982; 1985; 1988; Davis et al., 1988.



**Fig. 19**  
Drawing of the agricultural terraces with habitation (PAP Archive).



**Fig. 20**  
Section of the agricultural terraces with habitation (PAP Archive).

than olive oil pressing, predominated in this sector, an interpretation that awaits confirmation through archaeobotanical analysis.

Finally, flora studies were also extended to sacred and agricultural landscapes, where vegetation was systematically recorded around altars, terraces, and sanctuary areas such as the Cybele precinct. Species identified in these contexts include *Inula heterolepis*, *Pseudodictamnus mediterraneus* (silvery ballota), *Phlomis lycia*, *Smyrniium creticum*, and *Ruscus* sp. Their association with sacred blocks, staircases, and offering installations suggests that vegetation was integral to both the ritual and symbolic aspects of ancient landscape design. These data now inform the development of archaeologically grounded landscape plans and 3D reconstructions of ancient garden culture. By situating flora within both ecological and cultural frameworks, the 2024 studies demonstrate the continuity, transformation, and resilience of plant-human relationships from the Archaic through Byzantine periods to the present (Fig. 19-20).

## Fauna Studies

Faunal investigations began in 2024, focusing on avian species in the Sindili Plain and the wider Taşlıca area. Field surveys during this season documented eight bird species: the Blackbird (Karataşuk, *Turdus merula*), House Sparrow (*Passer domesticus*), Magpie (*Pica pica*), Eurasian Collared Dove (*Streptopelia decaocto*), Syrian Woodpecker (*Dendrocopos syriacus*), Middle Spotted Woodpecker (*Dendrocoptes medius*), Eurasian Jay (*Garrulus glandarius*), and Chukar Partridge (*Alectoris chukar*). Later in the season, further observations added the Barn Swallow (*Hirundo rustica*) to the list, recorded in September 2024.

In total, nine avian taxa were documented in 2024. These findings highlight the ecological richness of the Phoenix cultural landscape, where agricultural fields, woodlands, and open terrain provide habitat for resident and migratory species. This initial stage of systematic faunal documentation establishes a foundation for ongoing biodiversity monitoring and conservation planning within the project framework.

In addition to avifauna, observations recorded the presence of the Marmaris salamander (*Lyciasalamandra flavimembris*), a locally endemic and endangered species. The identification of such taxa, particularly the Marmaris salamander, underscores the ecological significance of the Phoenix cultural landscape. The results also highlight the vulnerability of regional biodiversity to climate change and human impact. These initial studies mark the start of systematic faunal documentation within the project framework. Future research will expand monitoring efforts with the aim to establish conservation strategies for sustaining the rich biodiversity of the Taşlıca environment.

## Stamped Amphora Handles from Phoenix: Epigraphic and Archaeological Evidence

The stamped amphora handles discovered during the 2024 season at Phoenix provide valuable epigraphic and chronological data for reconstructing patterns of trade and regional connectivity in the Rhodian *Peraea*. A total of thirty-two handles bearing stamps were documented, many of which are fragmentary but still legible. Most belong to the well-attested Rhodian series, characterised by the presence of eponym and fabricant names, often accompanied by a symbol. The occurrence of such stamps at Phoenix is consistent with the broader corpus of Rhodian amphorae known from the eastern Mediterranean, where they are frequently used as chronological markers due to their well-established typology and association with annual eponym lists. Within the Phoenix assemblage, several stamps preserve names that can be identified with eponyms documented in the existing chronological frameworks, such as those published in the standard corpora<sup>60</sup>.

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<sup>60</sup> Grace, 1979; Finkielsztein, 2001.

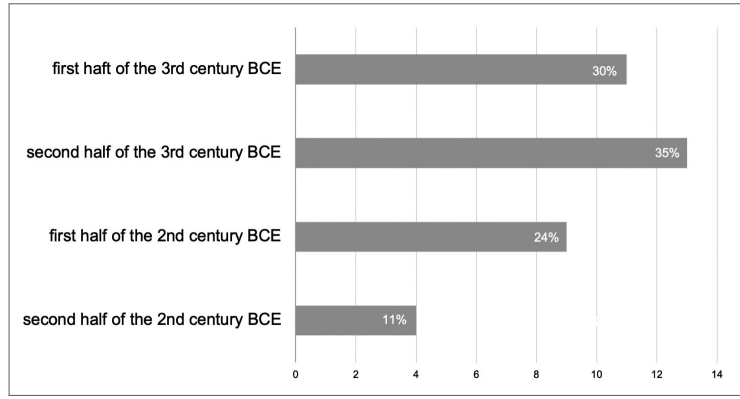


Fig. 21 Distribution of stamped handles by century (PAP Archive).

|                          |   |                                    |                                 |
|--------------------------|---|------------------------------------|---------------------------------|
| <b>Korpus No:</b>        | PHX.35  | <b>Buluntu Yeri ve Seviyesi:</b>   | Yüzey                           |
| <b>Env. No:</b>          | PHX.22.YFN.38.1   | <b>Yazıt: 1.</b>                   | ΕΠΙ ΙΕΡΕΩΣ<br>ΘΕΥΦΑΝΕΥΣ         |
| <b>Buluntu Alanı:</b>    | Yukarı Fenaket  | <b>Yazıt: 2.</b>                   | -                               |
| <b>Mühür ölçüleri:</b>   | 5 x 1,4 cm  | <b>Yazıtın biçimi:</b>             | Normal                          |
| <b>Mühür formu:</b>      | Dikdörtgen  | <b>Satır sayısı ve satır yönü:</b> | 2 - Yatay                       |
| <b>Eponym:</b>           | Theuphanes II   | <b>Kalıp:</b>                      | RE-ΘΕΥΦΑΝΗΣ 02-021? Yeni Kalıp! |
| <b>Merchant:</b>         | -   |                                    |                                 |
| <b>Ay adı:</b>           | -   |                                    |                                 |
| <b>Sembol:</b>           | Çizgi   | <b>Sembolün yeri:</b>              | Ortada                          |
| <b>Kil rengi:</b>        | 5 YR 6/6 reddish yellow                                     |                                    |                                 |
| <b>Astar rengi:</b>      | 5 YR 5/6 reddish yellow                                     |                                    |                                 |
| <b>Hamur Tanımı:</b>     | İyi pişmiş, sert dokulu, ince kum ve kireç tanecikli hamur. |                                    |                                 |
| <b>Mühürün fotoğrafı</b> | <b>Frottis</b>  | <b>Mühürlü kulp çizim</b>          |                                 |
|                          |   |                                    |                                 |
| <b>Açıklama:</b>         |   |                                    |                                 |
| <b>Köken:</b>            | Rhodos - Period IIc   |                                    |                                 |
| <b>Tarih:</b>            | MÖ ca. 203-199  |                                    |                                 |

Fig. 22 Example of the stamp corpus file.

The Phoenix material is particularly significant as it provides secure archaeological contexts for Rhodian stamped handles in the Carian Chersonese. Many pieces were found in association with domestic or storage-related structures, suggesting local consumption of Rhodian products and integration into distribution networks originating from Rhodes. A subset of the handles preserves symbols such as the rose and various astral motifs, all emblematic of Rhodian civic and religious identity. The inscriptions display the familiar formula of eponym plus fabricant, occasionally accompanied by abbreviated marks whose interpretation remains debated. Although the fragmentary state of preservation prevents the complete reading of all names, at least six eponyms can be securely identified, allowing for a tentative placement of the material within the later 3rd to early 2nd centuries BCE, a period when Rhodian influence in the *Peraea* was at its height.

The epigraphic evidence from Phoenix is therefore consistent with interpreting the settlement as an integrated part of the Rhodian colonial and economic sphere. The amphorae not only indicate the importation of Rhodian wine but also serve as material testimony to the institutional mechanisms of control and taxation exercised by Rhodes over its territories. The frequency of stamped handles relative to unstamped examples is noteworthy and matches patterns observed at comparable sites in the region, such as Loryma and Casara. This may suggest a regulated influx of Rhodian goods into Phoenix, possibly linked to the administrative structures implied by the fortified acropolis and rural installations documented during the survey.

Taken as a whole, the amphora stamps from Phoenix enrich the corpus of Rhodian epigraphy from the Carian Chersonese, complementing earlier finds.<sup>61</sup> They confirm that Phoenix participated fully in the Rhodian system of amphora stamping, which functioned both as a chronological device and as a mechanism of civic and economic identity. The inscriptions, although fragmentary, provide rare written evidence from the site and help refine the historical and archaeological narrative of Rhodian Peraean integration during the Hellenistic period (Fig. 21-22).

## Geomorphology Report

The geomorphological framework of the Phoenix territory is a key component of the broader 2024 fieldwork report, complementing the archaeological, architectural, environmental, and oral history studies conducted during the season. Understanding the region's landforms, lithological diversity, and active geomorphological processes provides essential context for interpreting patterns of settlement, agricultural organisation, and cultural landscape use across the Rhodian *Peraea*. By integrating geomorphological observations with archaeological documentation, the project demonstrates how natural features both constrained and facilitated human activity, shaping the spatial organisation of necropoleis, rural habitation sites, and production areas. The geomorphological study therefore not only situates the Phoenix region within its broader physical environment but also contributes to ongoing discussions on human–environment interaction, sustainability, and long-term landscape transformation in southwest Anatolia.

The geomorphological setting of the Phoenix area is defined by a rugged karstic landscape that strongly influences both natural processes and human settlement patterns. The region features

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<sup>61</sup> See Spratt, 1865; Bent, 1888, 234-246; Fraser and Bean, 1954.

steep limestone ridges, deeply incised valleys, and an extensive system of solutional depressions and dolines formed through prolonged karstification processes. These geomorphological formations are closely linked to tectonic activity along the southwestern Anatolian margin, where interaction between the Hellenic subduction zone and the Anatolian plate has produced both uplift and localised subsidence. Consequently, the Phoenix territory presents a mosaic of elevated limestone plateaux and structurally controlled depressions, which have historically shaped patterns of land use and water management.

The field survey revealed numerous anthropogenic modifications to the natural topography, particularly related to ancient agricultural and hydraulic practices. Terracing, observed extensively on slopes with gradients over 20%, demonstrates a deliberate adaptation to the steep terrain, facilitating both cultivation and erosion control. These terraces often coincide with the distribution of dolines and rock-cut cisterns, suggesting an integrated strategy of soil retention and water harvesting. The concentration of cisterns and basins carved into the bedrock further underscores the close relationship between geomorphology and human adaptation, as natural depressions were enhanced and expanded to maximise water storage capacity.

The lithological structure, dominated by Mesozoic limestones, includes local outcrops of ophiolitic material, which influence soil composition and vegetation patterns. These contrasting substrates create micro-environmental niches evident in the modern flora distribution and would have affected ancient agricultural practices. Geomorphological evidence indicates that human settlement was preferentially located on more stable colluvial deposits near valley margins, where access to arable land, water resources, and natural communication routes converged. Erosion profiles visible in several valleys also provide evidence of episodic alluvial deposition, suggesting that seasonal flood events periodically reshaped valley-bottom geomorphology.

Another significant geomorphological feature is the coastal configuration of the Phoenix region, where narrow embayments and promontories are shaped by tectonic movements and marine erosion. These coastal morphologies not only influenced maritime accessibility in antiquity but also affected sediment transport and deltaic accumulation. The juxtaposition of steep hinterlands with narrow coastal plains created conditions for localised harbours and ship sheds, such as those documented along the Loryma Peninsula, reinforcing the geomorphological control over maritime infrastructure.

Taken together, the geomorphological evidence highlights the interplay between natural processes and cultural adaptations in the Phoenix landscape. The karstic substratum presented both challenges and opportunities, encouraging the development of sophisticated systems of terracing, water management, and settlement planning. These observations underscore the necessity of integrating geomorphological analysis into broader archaeological interpretations, as landscape formation and human agency are inextricably linked in the long-term history of Phoenix.<sup>62</sup>

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<sup>62</sup> For more information on the geomorphology and archaeoseismology of Phoenix and Taşlıca, see Anlıak, 2025.

## Digital Archaeology and Geospatial Documentation of Phoenix

Digital documentation was a cornerstone of the 2024 Phoenix Project, with extensive use of photogrammetry, GNSS surveying, and 3D modelling to produce high-resolution spatial datasets of the ancient city and its hinterland (Fig. 23). The work included the creation of orthophotos, dense point clouds, and three-dimensional models for a total area of 235 hectares, supplemented by targeted high-resolution surveys of Kaledağ and the windmill complex. A 30 cm resolution orthophoto was produced for the entire project area, together with a low-resolution topographic map that provides a comprehensive baseline for both archaeological interpretation and heritage management.

The mapping workflow adhered to the Large-Scale Map and Spatial Data Production Regulation as the operational standard. Survey design began with delimiting the 235-ha project area and establishing 11 ground control points (GCPs). These were marked in the field with non-invasive markers and measured using Spectra SP80 GNSS receivers, operating in Network-RTK mode within the ITRF96 DOM 27–3° coordinate system. The completed measurements ensured sub-centimetre accuracy and provided the control framework for all aerial photogrammetric products.

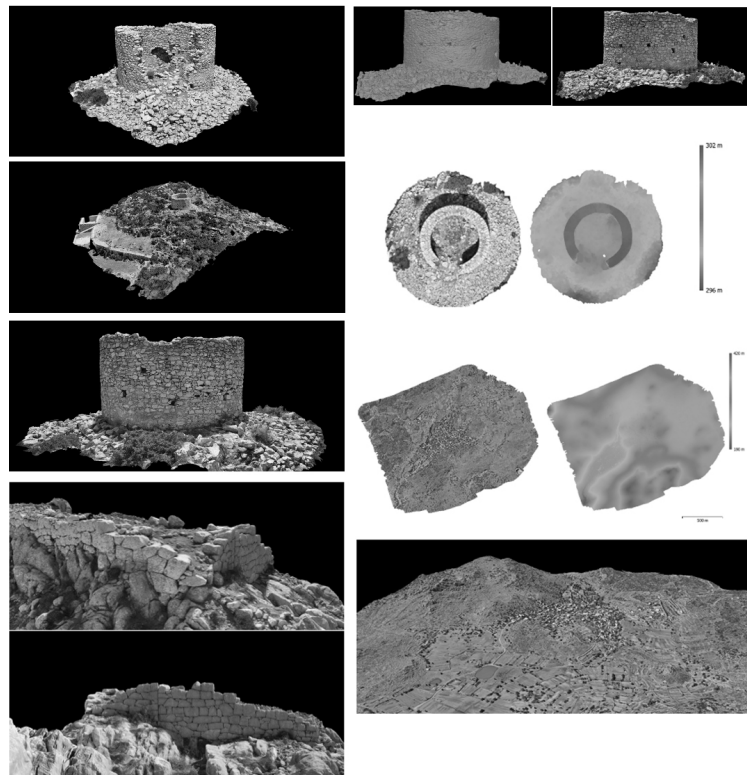


Fig. 23 3D and Digital Elevation Models (DEM) Models of the Yokuşbaşı windmill, orthophotos and lidar scanning of Kaledağ (PAP Archive).

Aerial surveys were conducted using a DJI Mavic 3 Enterprise drone. The Taşlıca flight covered approximately 295 ha, with a vertical extent of 1,500 m and a horizontal extent of 2,000 m. Flight planning used 80% forward overlap and 70% side overlap, at an altitude of 115 m, resulting in a ground sampling distance (GSD) of 3.12 cm/px. A total of 1,934 images were collected during this mission. The Kaledağ survey produced 1,700 photographs over a 20-ha area using a combination of vertical, oblique, and manual flights, generating both orthophotos and high-resolution 3D models. For the windmill complex, two flights were carried out – wide-angle and close-range – resulting in 440 images and an exceptionally detailed model with an average GSD of 0.5 cm/px.

Data processing used Agisoft Metashape and DJI Terra, following a standard pipeline of photo calibration, aerial triangulation, bundle adjustment, and the production of dense point clouds and mesh models. The Taşlıca dataset alone produced a dense point cloud of 942 million points,

which was then converted into a digital elevation model (DEM) and a georeferenced orthophoto. Similar workflows were applied to Kaledağ and the windmill complex, ensuring spatial comparability across different parts of the survey area.

All coordinate data acquired through RTK drone surveys and Spectra SP60 GNSS units, together with outputs from the 2021–2024 field campaigns, were integrated into the project's QGIS-based digital database. This comprehensive GIS environment now consolidates orthophotos, DEMs, vector data, architectural plans, and survey records, ensuring long-term accessibility and facilitating multi-scalar analysis of settlement organisation, environmental context, and cultural landscape development.

The technical products, particularly the ultra-high-resolution orthophotos and 3D models, now provide a robust foundation for archaeological interpretation, conservation planning, and public presentation. They also enable advanced analyses, such as slope modelling, hydrological simulation, and viewshed analysis, linking digital archaeology with broader questions of settlement strategy, geomorphological adaptation, and cultural heritage management in the Phoenix region.

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