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Bronze Age höyüks, Iron Age hilltop forts, Roman poleis and Byzantine pilgrimage in Germia and its vicinity. 'Connectivity' and a lack of 'definite places' on the central Anatolian high plateau

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Abstract

Germia was a well-connected Byzantine polis in western-central Anatolia, famous for its healing waters and a church of St Michael. After three years of survey the site can now be reconstructed: it included several other churches and monasteries, but little space for ordinary residential buildings. This comes as a surprise, but can be explained by the discovery of two older Roman cities within walking-distance of Germia, where the ordinary people seem to have lived. One of these cities, Mantalos, was home to a local cult of the pagan god Men. This may explain why the Christian healing centre was established at Germia. Later, Mantalos shed its pagan legacy and was apparently renamed Eudoxias after a homonymous member of the Theodosian dynasty. No Roman or Byzantine settlement of the region has a history extending back beyond the Iron Age, when the population retreated to fortified hilltop settlements and many sizable Bronze Age höyüks were deserted. Settlement locations changed often and grew little in central Anatolia, and this may be blamed on the uniform landscape of the high plateau; it lacks the Mediterranean's diverse geography of 'definite places' that would favour one site above others and ensure its continuity and growth.

Özet

İç Batı Anadolu'da yer alan Germia, şifalı suları ve St Michael'a ait kilisesi ile ünlü ve iyi bağlantılara sahip bir Bizans şehridir. Üç yıl süren yüzey araştırması sonrasında yerleşim rekonstrükte edilebilmiştir. Birçok kilise ve manastırlara sahiptir; fakat olağan konutsal yapılar için az alan bulunmaktadır. Bu durum şaşırtıcı olsa da, Germia'ya yürüme mesafesinde yer alan ve olasılıkla sıradan insanların yaşamış olduğu, iki daha eski Roma şehrinin varlığıyla açıklanabilir. Bu şehirlerden biri olan Mantalos, pagan tanrısı Men'e ait yerel külte ev sahipliği yapmaktaydı. Bu durum, Hıristiyan şifa merkezinin neden Germia'da yapıldığını açıklayabilir. Sonradan, Mantalos pagan mirasından sıyrılmış ve anlaşılan Theodosius hanedanlığından bir kişiyle aynı ismi alarak Eudoxias olarak yeniden adlandırılmıştır. Bölgedeki hiçbir Roma ve Bizans yerleşiminin Demir Çağı'ndan öncesine uzanan bir geçmişi saptanamamıştır. Bunun nedeni toplumun tepe üzerinde yer alan tahkimli yerleşimlere geri çekilişiyle pek çok büyük Tunç Çağı höyüklerinin terkedilmiş olmasıdır. Orta Anadolu'da yerleşim yerleri sıklıkla değişmiştir ve çok az büyüme göstermiştir. Bu durum yüksek platonun tek düzey yüzey şekli ile açıklanabilir. Bu bölge, Akdeniz'in çeşitlilik gösteren coğrafyasında yer alan, bir yerleşimi diğerlerinden ayrıcalıklı yapan ve devamlılığı sayesinde büyümeyi sağlayan belirli özelliklere sahip 'sınırlı bölgeler'den yoksundur.

Although Germia was located in the land-locked province of Galatia on the central Anatolian high plateau, the 'polis' , as the settlement is referred to in contemporary Byzantine sources, was apparently well connected to and integrated with the Mediterranean world. For example, its healing waters were exported to the capital, Constantinople, and cured the mid fifth-century consul Studios. In return, Studios went on a pilgrimage to Germia and built a church for the archangel Michael as well as hospitals and old people's homes there, as attested in the *Miracles of St Michael* (Mango 1984: 48). A donation from the emperor Justinian and his wife Theodora (†548) is recorded by a huge column capital that bears both their monograms (Belke 1984b: 7, fig. 2, pl. 2 [Justinian]; Mango 1984: 52–53, fig. 9 [Justinian]; Niewöhner, Rheidt 2010: 138, fig. 2 [Theodora]). On a later occasion in 563, when Theodora was already dead, 'Justinian, in fulfilment of a vow, visited Myriangeloi, otherwise known as Germia, a city in Galatia' (Boor 1883: 240; Mango, Scott 1997: 353). In the later sixth century Gregory of Tours notes that the tunic of Christ was kept in the crypt of the Church of St Michael, which he locates at about 150 miles from Constantinople in Galatia (*Liber in gloriam martyrum* §7). Around the turn of the seventh century St Theodore of Sykeon came to Germia often and performed his most famous miracle there, when he dispossessed the citizens of evil spirits (Festugière 1970: §71, 100, 101, 109, 161, 167, 168). Some time around the middle of the seventh century Germia was promoted to the status of autocephalous archbishopric, became one of the highest-ranking sees of Asia Minor and finally metropolis (Belke 1984a: 167; Stiernon, Stiernon 1984: 979).

Germia's connections are best illustrated by the great variety of people that it attracted from near and far. The *Life of Theodore of Sykeon* attests a protekdikos and protopresbyter of St Sophia at Constantinople as well as several bishops from neighbouring cities as witnesses of Theodore's mass exorcism; they were part of a large crowd that included 'believers', 'heretics' and Jews (Festugière 1970: §161; cf. Mitchell 1993: 2.141). Other people are commemorated in funerary inscriptions, among them Soterichos, a high-ranking official in the administration of the empire, who 'had given himself over entirely to the Archangel' (Mango 1986: 126–27, no. 1). Phokas, *scriniarius* in an administrative office and a native of Constantinople, may have died at Germia while on pilgrimage (Mango 1986: 129–30, no. 7). A merchant from Apameia in Syria had travelled yet further, before he too was buried at Germia (Walser 2013).

In stark contrast to this impressive historical record, more recent travellers have found little to praise about Germia (Ramsay 1883: 22–23; Crowfoot 1897–1898; Strzygowski 1903: 114–15, fig. 83, 170–72, figs 134–37; Kinnier 1918: 49; cf. Vardar 2007: 460, 468; Behrwald 2010: 794–95). Carl Humann, who spent a night there in 1882, describes his quarters as some of the worst he ever had and the villagers as the dirtiest and greediest he ever met (Humann, Puchstein 1890: 32–33, fig. 3). The ruined church of the archangel seems to have been the only noticeable feature of the place. In the 1980s Cyril Mango identified at least two building phases, the first one of which he associated with Studios and the second with Justinian (Mango 1986). Is it conceivable that a metropolis and autocephalous archbishopric of world renown consisted of little more than a church?

We have become accustomed to thinking of 'connectivity' and pilgrimage as prime factors in the ancient world (Horden, Purcell 2000; McCormick 2001; Foss 2002; Wickham 2005; Chatzetryphonos 2008; Külzer 2010), and in Asia Minor Zeno's Church of St Thecla at Seleucia, Justinian's Church of St John at Ephesus and the martyrium of St Philip at Hierapolis come to mind (Hellenkemper 1995–1997; D'Andria 2011–2012). There, on or near the Mediterranean coast, the pilgrimage sites were paired with important cities. Why not also at Germia in central Anatolia?

The high plateau was of course less urbanised than the Mediterranean basin (Mitchell 1993: 1.1–10), but there were still numerous sizeable Roman cities with impressive urban monuments, most noticeably the provincial capitals of, for example, Ancyra (Görkay et al. 2011; Mitchell 2012), Aizanoi (Rheidt 2010), Iconium (Mert, Niewöhner 2010: 377–85) and Pessinus, Germia's neighbour to the west (figs 1, 2). Most famous for its Temple of Cybele that was last visited by the emperor Julian the Apostate in 362, Pessinus also had a large Sebasteion, various squares and portici, a theatre, as well as churches inside and beyond its fortifications (Claerhout, Devreker 2008). Pessinus was the capital city and metropolitan see of Galatia Salutaris, but seems to have fallen behind at about the same time that Germia became an autocephalous archbishopric and metropolis (Belke 1984a: 214–15).

In order to account for these changes of fortune and to understand better the settlement history of central Anatolia, a multidisciplinary and international team under the umbrella of the German Archaeological Institute Istanbul conducted three survey campaigns in Germia and its vicinity in 2009–2011 (Niewöhner, Rheidt 2010; Niewöhner 2010; 2011c). Due to the mountainous terrain and plentiful vegetation, locating antiquities would have been next to impossible without the help of knowledgeable locals. Meeting and befriending them was the main and most successful strategy. This worked

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best in the more traditional villages, where the residents are still part of a closely-knit social network, care for each other and, in extension, also for the stranger. Traditions of ownership also help to preserve the antiquities and knowledge of them. Our surveys normally started in a Turkish village with the ancient cut stones kept and reused therein. This was often followed by excursions into the countryside, to the find-spots of the cut stones and the sites of ancient settlements, tumuli, rock-cut graves, caves, quarries and thermal springs. Pottery was collected in order to determine the chronology of the settlements.

Only at Germia are Byzantine ruins still standing above ground, and these were submitted to a detailed architectural survey. In addition, the size and sophistication of Germia's urban architecture allowed for successful geophysical survey of three vanished buildings. The results, insofar as they pertain to the settlement-historical argument of this article, are presented below in a number of distinct sections. Each section details the different methodologies applied to different categories of finds, and they are arranged in chronological as well as topographical order, starting with the Bronze Age countryside and ending with Byzantine Germia.

The broad topographical as well as chronological overview leads to the conclusion that disruption and change were the rule rather than the exception on the central Anatolian high plateau. This may account for the relatively short lifespan and small size of Germia and other, equally well-connected cities in central Anatolia. Apart from 'connectivity', a continuous tradition seems to have been just as important for urban development. This may be taken for granted in most Mediterranean cities, but was less frequent on the high plateau, possibly due to a lack of 'definite places', as shall be argued at the end of this article.

That a relatively small survey should allow for such far-reaching conclusions is, on the one hand, owed to an exceptionally detailed historical record, which is made up of epigraphic and literary sources as well as archaeological evidence. Ultimately, this is due to the extraordinary natural resources of Germia and its vicinity. On the other hand, the volatile settlement history of the area has led to there being a large number of sites with only one period of occupation, all of which could be studied similarly well. This facilitated a more balanced chronological overview than at the neighbouring excavation sites, each of which represents predominantly one period in time, for example Gordion and the Phrygian kingdom (Darbyshire, Rose 2011), Pessinus and the Roman imperial period (Claerhout, Devreker 2008) and Amorium and the Byzantine era (Lightfoot 2007).

Historical topography

Germia lies in western Galatia roughly 100km southwest of Ancyra/Ankara, the provincial capital. The Byzantine city had become a Turkish village and was called Yürme until 1984, when it was made a *belediye* or town and renamed Gümüşkonak (English: silver inn). At that time Germia/Yürme/Gümüşkonak had more than 5,000 inhabitants and further growth was anticipated. As a consequence, large areas were marked out for residential expansion. The projected development did not, however, take place. Instead, the population decreased drastically. At the time of writing, Gümüşkonak has lost two-thirds of its former population and the shrinkage is continuing.

The old village quarters that are clustered around the mosque and the Church of St Michael are becoming largely deserted and have started to decay. They contain stone houses that were mostly built with reused Byzantine spolia (fig. 3; for plans and elevations, see Niewöhner 2011c: figs 15, 16). The layout follows the Byzantine ruins (cf. fig. 49), even though the Turkish houses were all built or rebuilt during the 20th century.

The countryside around Germia is dominated by Mount Dindymon/Arayit Dağı (fig. 1) that rises to the west and forms a natural border towards Pessinus (fig. 2; Belke 1984a: 158–59). The pass through the mountain towards Pessinus is marked by a rock-cut relief of a temple façade with a standing cult image, now badly damaged by treasure hunters (fig. 4; Claerhout, Devreker 2008: 150–51). Owing to the mountain's great altitude of some 2,000m, Germia and the surrounding countryside are unusually green and fertile and distinguished from the otherwise arid high plateau by the presence of many springs. The abundant water supply has resulted in a comparatively dense network of two dozen towns, villages and hamlets in an area of roughly 200km^2 (fig. 2).

Germia's southern neighbour Kayakent (English: rocky town) used to be called Holanta until 1984 and can be identified with the Byzantine polis of Goeleon (Belke 1984a: 170). Other Byzantine settlements called Aligete, Bekousai, Eudoxias and Musge were also located in the vicinity of Germia and visited by Theodore of Sykeon (Festugière 1970: §71, 100, 101, 161), but have not so far been identified with any modern settlement (Belke 1984a: 163, 167, 208; Stiernon, Stiernon 1984: 977). The Turkish villages of Gecek and Hamamkarahisar to the north of Germia are both outstanding for old mosques from the 12th and 13th centuries respectively (İlter 1975–1976: 27–39; Altınsapan, Parla 2004: 56–67). At Hamamkarahisar the mosque is situated next to thermal springs and old bath buildings of uncertain date, but possibly from the Byzantine period (İlter 1975–1976: 39–40; Altınsapan, Parla 2004: 67–68).

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The Turkish villages furthest to the east and closest to the Sangarius/Sakarya river have grown in recent years at the expense of the mountain villages to the west, since the formerly arid plain is now irrigated with pumps which allows for more profitable motorised agriculture on a larger scale than is possible in the mountains. Prior to motorisation, the eastern plain does not seem to have contained any sizable settlement and the antiquities of the region cluster around the mountains and the springs.

Bronze Age höyüks and Iron Age pottery

By Deniz Sarı

The vicinity of Germia contains a dense network of settlement mounds, and five of them will be considered here. Two of them, at Hamamkarahisar and Köstütepesi, were already known (Efe 1996: 216), the other three at Ayvalı, Atlas and Aktepe being new discoveries (figs 2, 5). Hamamkarahisar Höyük to the southwest of the homonymous village yielded finds from the Early Bronze Age II (EBA II) and the Middle or Late Bronze Age (MBA/LBA). Köstütepesi Höyük is located approximately 1km to the southeast of Günyüzü and dates from the EBA II, III and LBA. Atlas Höyük lies about 700m north of the homonymous village and yielded only EBA II material. The mound ca 1.5km south of Ayvalı dates from the MBA/LBA. Finally, a fortified hilltop settlement on Aktepe (English: white hill) about 1km to the northeast of Günyüzü was only occupied during the Early Iron Age.

The third millennium BC: the Early Bronze Age II–III

Anatolia in the third millennium BC can be subdivided into 'cultural regions' according to different pottery traditions, and each region is in turn subdivided into 'local pottery groups' (Bittel 1942: 186; 1945; Lloyd, Mellaart 1962: 138, map 4; French 1969: 19, fig. 30a; Efe 2003: 89; Efe, Ay-Efe 2007: 251–68). One such EBA II local pottery group is known as the Polatlı group (French 1969: fig. 46) and represents a buffer zone between the 'Phrygian' and the 'central Anatolian' cultural regions (fig. 5). The pottery from Hamamkarahisar, Köstütepesi and Atlas Höyük shares the characteristics of the Polatlı group. This type of pottery occurs from the Sivrihisar mountain range in the west up to the Haymana plateau in the east.

All the pottery is handmade and much of it is red slipped and burnished. The fabric is often buff or rarely buff with core, usually with fine organic tempering and occasionally with stone inclusions. The surface is coloured in various shades of red and normally well burnished, with distinctive burnishing marks, as is common also at Gordion (Gunter 1991: 8). Red-on-buff painted decoration takes the form of bands, chevrons and multiple crosses and compares to examples from Gordion (Gunter 1991: figs 33, 52, 63, 65, 97, 99) and Polatlı (Lloyd, Gökçe 1951: figs 13, 14, 17, 18). A fragmented bowl with multiple red crosses from Hamamkarahisar (fig. 6.6) has parallels from EBA I and early EBA II levels at Demircihöyük (Seeher 1987: pls 34.10–11, 43.23, 45.22, 52.17–19, 57.8–9; Efe 1998: pl. 5.2) and Küllüoba (Efe, Ay 2000: pls 16.8–11, 18.5–6).

At Atlas Höyük most of the pottery is brown-slipped ware with forms that date from the late EBA II (fig. 6.1–5). The fabric is generally fine, often with small white stone inclusions, and occasionally micaceous. The surface comes in various shades of brown, is normally burnished or wet-smoothed and matt. Cream-coloured burnished ware has a fine buff fabric and sometimes self-slip. Cooking ware consists mostly of fragments of large pots, with slipped or unslipped surfaces.

At Köstütepesi, a group of bowls and jars dates from the EBA III (fig. 6.17–18). It includes a type of red-coated ware that was named 'local ware' by Seton Lloyd after the Polatlı excavations (Lloyd, Gökçe 1951: 44–45, fig. 9, group 13), but has since been identifed also at Asarcık/Ilıca (Orthmann 1966: 27) and Gordion (Gunter 1991: 9). The predecessor of this ware, proto red-coated ware, has been excavated further west at Küllüoba, where it became part of the upper Sakarya local pottery group from the late EBA II onwards (Sarı 2009: 92). At the beginning of the EBA III, red-coated ware developed its characteristic features and started to spread from the Afyon plain in the west to the Kızılırmak bend in the east. Its distribution area concurs with the Phrygian cultural region, and the Polatlı local pottery group gradually acquired some of the characteristics of the Phrygian cultural region.

The second millennium BC

As elsewhere in central Anatolia (Gunter 1991: 27), the earliest wheel-made pottery in the vicinity of Germia dates from the second millennium BC. Most common are wheel-made buff and orange wares as well as red-slipped and burnished wares. These are Hittite wares that are well known from the excavations at Gordion (Gunter 1991: 28) and Boğazköy (Fischer 1963: 30). In fact, the second-millennium pottery of Hamamkarahisar and Ayvalı Höyük (figs 7, 8) is similar to Hittite pottery found at Gordion (Gunter 1991: figs 7.118, 129, 8.140, 146, 9.163–65, 11.213, 215, 12.218, 15.291, 295, 20.427–28, 22.452), Polatlı (Lloyd, Gökçe 1951: group 42/14–15, 21, fig. 6[c], group 4/1, fig. 6[b], groups 2, 3, 17, fig. 196[c]), Boğazköy (Fischer 1963: pls 60.545–46, 61.557, 88.755, 762–64, 89.773, 92.830, 93.840, 95, 112.980, 982), Alacahöyük (Koşay 1938: 53, pls 38–39), Alişar (von der Osten 1937: fig. 432.10, 24, 51) and Kaman Kale Höyük (Omura 1992: fig. 10.1–2). A terracotta bull's head from Ayvalı Höyük (fig. 9) is paralleled at Kültepe, Boğazköy

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and Alacahöyük (Koşay 1938: pl. 44, AL/A 78, 79, pl. 45, AL/A 74; Özgüç 1999: fig. 13.112). These comparisons imply that the survey area was dominated by the influence of the Hittite empire. This domination may be described as a continuation of the Phrygian cultural region that had established itself in the area at the end of the third millennium (Mellaart 1968: fig. 2).

The first millennium BC: the Early Iron Age

Early Iron Age pottery occurs mainly at the fortified hilltop settlement on Aktepe (figs 10–12). Most of it is grey ware, such as that found by T. Sivas during her survey in the highlands of Phrygia (Grave et al. 2012). The formal repertoire is similar to what has been excavated at Gordion 7–6A, B in Early Iron Age to Early Phrygian layers, at Kaman Kale Höyük II c–d in Early Iron Age layers, at Alişar in the post-Hittite to Phrygian layer 4, at Alacahöyük in level I and at Boğazköy (fig. 10; Gunter 1991: figs 23.482, 25.541–42; von der Osten 1937: figs 66.2, 432.10, 24, 51, 451.6, 26, 27, 446.47; Fischer 1963: pls 68.620, 69.633).

The Iron Age pottery from Aktepe is different from the Late Bronze Age wares that were encountered in the vicinity of Germia, but at Gordion the grey ware and some of the forms that were found on Aktepe (fig. 10.1), as well as at Hamamkarahisar and Ayvalı, started to appear at the end of the Late Bronze Age and became more common in the Early Iron Age and the Early Phrygian period (Gunter 1991: 30, fig. 27.585, 588–91). This is indicative of cultural continuity between the Late Bronze Age and the Early Iron Age (Darbyshire, Rose 2011), and is confirmed by recent finds from Kaman Kale Höyük (Omura 1992: 324).

Iron Age hilltop fortifications

The Anatolian Iron Age has been called a 'Dark Age', as occupation ceased at the Bronze Age settlement mounds. In the Early Iron Age the höyüks in the vicinity of Germia were apparently replaced as settlement sites by the defensive hilltop settlement on Aktepe near Günyüzü. As the ceramic finds indicate a continuous development from the Late Bronze Age to the Early Iron Age, the population will hot have changed, but, instead, the existing population moved from the plain on to Aktepe.

Aktepe (English: white hill) to the north of Günyüzü (fig. 2) is a natural elevation below 50m in height. It forms a flat plateau of less than 10ha and has steep slopes, particularly on the southern side (fig. 13), but less so to the north. The westernmost 2ha of the plateau are fortified by a rampart that cuts across the plateau and continues along the northwest slope, but not along the steep southwest slope (fig. 14). The rampart is today up to 10m wide and 5m high (fig. 15). The section across the plateau is flanked by a shallow moat on its outer eastern side, from where the building material seems to have been quarried. In addition, an undocumented excavation on the western flank of the rampart has revealed a significant amount of cut limestone, suggesting a mantel of stones with a core of earth (cf. the fortifications of Gordion: Kealhofer 2005). The ceramic finds were more plentiful on the undefended eastern part of the plateau that seems to have also been settled.

Other such defensive Iron Age sites may exist, but are less likely to be discovered since defensive locations are seldom farmed and are mostly covered by overgrowth, which means that any ceramics are unlikely to be noticed by chance, and a systematic search holds little promise among the dendritic foothills of Mount Dindymon that provide countless potential hilltop sites. Historically, the abandonment of the höyüks and the move to fortified sites may have been related to the fall of the Phrygian kingdom and the invasions of the Cimmerians, Lydians, Persians, Greeks, Galatians and Romans, but a precise chronology has not yet been established (Darbyshire, Rose 2011).

A watchtower above the Sangarius/Sakarya

By Ali Vardar

A treeless and barren promontory east of Ayvalı is crowned by a small fortification of no more than 400m^2. The southern part has been dug away, apparently with a bulldozer, but the northeastern corner is still extant. It consists of an enclosure wall and a central room (fig. 16). The southern limit of the room has been bulldozed, and its other walls are mostly buried in debris that was apparently piled up when the interior was excavated, but the inner edge of a straight north wall is visible for 1.5m and the room seems to be about 6m wide. The enclosure wall is also mostly buried and only visible from the outside, where it is built with large square and polygonal stones and no mortar (fig. 17).

The promontory faces northeast and has a panoramic view of 250° from the northern foothills of Mount Dindymon/Arayit Dağı in the west across all the settlements north of Germia to the Sangarius/Sakarya river in the east and upstream to the southeast up to the point where a similar fortification is located at a distance of about 15km at Türktaciri above the southern bank of the river (fig. 2; Vardar 2002: 207, 214, drawing 7). This suggests that both fortifications served as watchtowers and were related to each other. No diagnostic sherds were found, but the building technique indicates the Iron Age and therefore possibly a Galatian origin (cf. Darbyshire et al. 2000: 91–93), before fortifications became redundant during the *Pax Romana*. A later, Byzantine date that Strobel assigns to all such simple fortifications with dry walls (Strobel 2007: 374, n.85) seems higly unlikely, to

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judge by comparison with the known Byzantine fortifications in the region at Pessinus (Devreker et al. 2003), Sivrihisar/Spaleia (Belke 1984a: 227, figs 22, 23) and Amorium (Lightfoot 2007), all of which are more carefully built and always employ lime mortar.

Roman and early Byzantine settlements

From the Roman period onwards finds become plentiful again and the plain was resettled. The new settlements are often located close to but never on top of Bronze Age höyüks, confirming that the settlement tradition had previously been disrupted during the Iron Age. Later, the Roman sites continued to be occupied during the Byzantine period, some of them then became Turkish villages and Germia as well as Goeleon even preserved their ancient names. Such continuity was not common in central Anatolia and may partly be due to the exceptional water resources east of Mount Dindymon. It also indicates a swift Turkish conquest without the prolonged fighting that apparently led to the depopulation of other regions (Vryonis 1986: 103–30). Most Turkish villages lie at or close to a Roman and early Byzantine site, and the ancient settlement pattern seems to have been similar to today's.

Cut stone

Cut stone is the most conspicuous indicator of Roman and Byzantine settlements in the vicinity of Germia. Most sites yield some Roman gravestones and votives (cf. figs 37–39). Among the grave monuments, doorstone are most common, followed by gabled stelae and lion sculptures (fig. 18). Remains of monumental architecture from the Roman period are scarce, but at Ayvalı several parts of a small *monopteros* or *tholos* with a round marble pedestal and entablature (fig. 19) as well as a marble imitation of a tiled coniform roof (fig. 20) have been found.

Early Byzantine cut stone is even more common than Roman finds, but had different purposes. Byzantine grave monuments are the exception rather than the rule

Inv.	*Find-spot and description*	*d18O*	*d13C*
GE10/18	Günyüzü, Roman grave stele of Zoe, now in Pessinus (Niewöhner 2011c: fig. 9)	-4.23	1.81
GE10/20	Günyüzü, Roman grave stele with wreath, now in Pessinus (Niewöhner 2011c: fig. 10)	-4.68	1.08
GE11/11	Dutlu, Roman libation altar	-6.38	-0.62
GE10/23	Gecek, Tekke, Roman architrave	-4.20	1.97
GE10/22	Gecek, Tekke, Roman frieze	-5.28	1.22
GE11/01	Eski Yazır, box	-5.33	0.72
GE10/33	Germia, round church, thin slab	-5.79	0.18
GE10/35	Germia, round chruch, thin slab	-4.25	1.72
GE10/36	Germia, round church, 6.5cm-thick slab	-5.51	-0.95
GE10/37	Germia, round church, thin slab	-5.09	-0.05
GE10/34	Germia, round church, revetment profile	-4.29	0.65
GE11/02	Sümer Mahallesi, revetment profile	-4.61	2.06
GE09/01	Germia, early Byzantine fine-toothed acanthus (Niewöhner, Rheidt 2010: 146, fig. 13)	-4.27	0.86
GE09/07	Germia, Theodosian capital	-5.04	0.16
GE10/30	Germia, old mosque, early Byzantine windblown capital	-4.86	2.24
GE09/09	Germia, monogram capital of Justinian and Theodora (Belke 1984b: 7, fig. 2, pl. 2; Mango 1984: 52–53, fig. 9; Niewöhner, Rheidt 2010: 138, fig. 2)	-5.63	0.76
GE10/29	Germia, old mosque, early Byzantine impost capital	-4.12	1.33
GE10/40	Kavacık, Tekke, early Byzantine ambon post (Niewöhner, Rheidt 2010: 155, fig. 25)	-6.81	1.89

Table 1. Analytical data for marble artefacts from the quarry at Gecek

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and occur almost exclusively at Germia, where they seem to reflect the newly acquired urban and religious status of the settlement (fig. 21). Elsewhere in the survey area Byzantine cut stone consists mostly of architectural sculpture (fig. 22) as well as liturgical furniture (fig. 23), and this combination points to the existence of rural churches. Most of these buildings were probably made of mud-brick, as was common in central Anatolia (cf. Mitchell 1996: 203–05; Vanhaverbeke, Waelkens 2003: 305; Belke 2005: 426, 429; also Strube 2003: 89 for the use of cut stone in mud-brick buildings), and have vanished. However, their marble carvings compare to those from Germia and other cities, and they introduced elements of monumental architecture into the countryside (cf. Niewöhner 2007a).

Marble quarries and workshops

By Philipp Niewöhner and Walter Prochaska

In order to distinguish individual quarries and workshops, a wide spectrum of Roman and early Byzantine marble artefacts was sampled and archaeometrically analysed (tables 1, 2; for the analytical methodology, see Grillo, Prochaska 2010). The result is exceptionally clear cut (fig. 24). All marbles fall into two distinct and well-defined groups that must represent two local quarries. An import from Proconnesus, as Cyril Mango (1986: 125) previously assumed, can be ruled out. A modern quarry on the western slope of Mount Dindymon/Sivrihisar Dağı produces dolomitic marble and has no equivalent in the sampled artefacts (Niewöhner, Rheidt 2010: 151, fig. 20, Germia 2).

Inv.	*Find-spot and description*	*d18O*	*d13C*
GE11/10	Dutlu, Flavian honorary inscription (fig. 26)	-1.31	2.69
GE09/04	Günyüzü, Roman gravestone of Eglatouna (Niewöhner, Rheidt 2010: 157, fig. 30)	-1.59	2.71
GE10/19	Günyüzü, Roman gravestone of Aelia, now in Pessinus (Niewöhner 2011c: fig. 8)	-0.98	2.52
GE11/03	Kadıncık, Roman gravestone (Mitchell 1982: cat. 118)	-1.30	3.05
GE10/24	Goeleon, Roman gravestone (Mitchell 1982: cat. 139)	-0.86	2.65
GE10/25	Goeleon, Roman doorstone (Niewöhner, Rheidt 2010: 155, fig. 26)	-1.11	2.39
GE11/12	Dutlu, Roman doorstone	-0.99	2.84
GE10/21	Gecek, Ionic capital, formerly a Roman doorstone	-0.94	2.29
GE10/49	Ayvalı, Roman *monopteros* or *tholos* (fig. 19)	-1.08	2.74
GE10/42	Günyüzü, Roman fluted column shaft	-0.59	2.78
GE10/44	Günyüzü, first Attic base with pedestal	-1.04	2.87
GE10/45	Günyüzü, second Attic base with pedestal	-2.00	2.96
GE10/43	Günyüzü, column shaft with cross monogram	-1.47	2.70
GE11/09	Dutlu, entablature	-0.88	2.74
GE09/11	Germia, St Michael, entablature	-0.86	1.89
GE09/10	Germia, St Michael, mullion	-1.95	2.66
GE10/31	Germia, old mosque, early Byzantine Ionic impost capital	-0.96	2.79
GE09/08	Germia, early Byzantine Ionic impost capital	-0.80	2.51
GE10/28	Goeleon, early Byzantine Ionic impost capital (fig. 22)	-0.89	2.65
GE10/27	Goeleon, early Byzantine impost capital	-0.75	2.75
GE10/26	Goeleon, early Byzantine ambon slab (fig. 23)	-0.92	2.32
GE09/12	Germia, early Byzantine templon post	-0.42	2.81
GE10/41	Kavacık, Tekke, early Byzantine templon capital	-0.66	2.27
GE10/32	Sögütlü Yaylası, early Byzantine boundary stone	-0.83	2.74

Table 2. Analytical data for marble artefacts from the second, unidentified quarry

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The ancient quarry that produced one of these two groups of artefacts has been identified above Gecek on the eastern slope of the Dindymon mountain range, where a pre-modern quarry area of approximately 1ha has survived in spite of renewed exploitation in the 20th century (fig. 25). Gecek marble is of a high quality, fine grained and white, and was consistently carved to a high standard throughout the Roman and Byzantine periods: Roman Gecek produced refined gravestones and entablatures; Byzantine Gecek produced complex column capitals as well as fine slabs and profiles for wall revetment. Gecek is not known to have produced doorstones, and indeed a doorstone at Gecek consists of marble from the other group.

The marble of the other group of artefacts is of a lesser quality. It is coarser grained and the surface will eventually corrode and crumble, if exposed to air. The location of the quarry is not known, but was surely local, as the inferior quality of the marble corresponds to the inferior workmanship of the artefacts. This secondary marble was generally used for large and heavy parts of lesser sophistication: the Roman *monopteros* or *tholos* at Ayvalı (fig. 19), bases (fig. 26), pedestals and column shafts, simpler grave and boundary stones, and the bulkier types of Byzantine capitals (fig. 22), entablatures and furnishings (fig. 23). These were surely not imported, as superior products were available from Gecek.

The differences indicate two distinct workshops: a better one at Gecek with less accomplished stonemasons located at the other quarry. Each workshop was apparently tied to a quarry rather than based in a city, where a variety of marbles might have been available. The continuity of this situation and the distinctive difference in quality from the Roman into the Byzantine period may point to uninterrupted exploitation and productivity of both quarries and workshops.

A Roman settlement near Dutlu and the city territories of Pessinus and Germa

By Andreas Victor Walser

In the village of Dutlu on the northeastern slope of the Dindymon mountain range/Sivrihisar Dağları (fig. 2), a statue base has been reused as a corner stone of a hen house. The statue base and a dozen other antiquities in the village probably originate from a Roman settlement that has been discovered nearby (see below). The base is damaged, but preserves a long inscription that records honours offered by the council and people of the *Sebastenoi Tolistobogioi* to a Roman *centurio* who had served under the emperor Vespasian (fig. 26; Walser 2013).

The *Tolistobogioi* is one of three Galatian tribes that the emperor Augustus reconstructed as a polis after the annexation of Galatia ca 25 BC (cf. Mitchell 1993: 1.86–91; Vitale 2012: 93–115). The urban centre of this community was Pessinus to the west of Mount Dindymon, as is implied by the official titulature of the *Sebastenoi Tolistobogioi Pessinuntioi*. In contrast, the eastern slope of Mount Dindymon has generally been considered the territory of the Augustan *Colonia Germa*, the urban centre of which has been identified with the site of Babadat east of Sivirhisar (fig. 2; cf. Mitchell 1993: 1.87–88; Waelkens 1986: 280–82).

It is, therefore, somewhat surprising to find the inscription of the *Sebastenoi Tolistobogioi* at Dutlu, as this appears to imply that the *Sebastenoi Tolistobogioi* placed an honorary dedication in the territory of a neighbouring city. Although this is not impossible, it seems equally likely that Dutlu belonged to the territory of the *Sebastenoi Tolistobogioi*. The conventional attribution to the Roman colony of Germa should be reconsidered. The latter may have been no more than a small enclave in the big Galatian population.

Pottery from the Roman settlement near Dutlu and a Byzantine monastery at Yeni Pınar

By Alice Waldner

A dozen Roman and Byzantine antiquities at Dutlu are said to have been recovered from an ancient settlement in the fields to the northeast of the Turkish village (fig. 2). The site occupies a low promontory next to a stream, and two fields were surveyed here, as they happened to be ploughed. They are located on a slope of about 15– 20%, terraced and bordered by large piles of stones, such as are not commonly encountered in the area, but regularly turn up at ancient sites, where they were probably used in the foundations of mud-brick buildings.

In total, 96 finds were collected from a survey area of about 30m by 40m: one fragment of a glass bracelet, one fragment of waste and 94 potsherds. Although this sample represents only a fraction of the settlement, it does provide some evidence for Roman and early Byzantine habitation. Some beakers or bowls with a dark-red to orange stained slip are commonly referred to as Pontic sigillata and were probably imported from the Black Sea region (figs 27, 28). Similar vessels have been found in the Crimea in contexts from the first and second centuries (Zhuravlev 2002: fig. 12, 12–14; Kühnelt 2008: forms B-2d, B-3b, S-1c). They confirm that the site near Dutlu dates back to the Roman imperial period. The early Byzantine period is also attested, for example by a considerable quantity of red-slip ware vessels (figs 29–31). Most of these are covered with a red to brownish, partly applied slip, but some specimens are produced in coarse ware without any slip. The forms seem to be inspired by late Roman C (cf. fig. 31.1–2 with LRC Hayes 3, fig. 31.1 in

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particular with Hayes 3B and Hayes 3C: Hayes 1972: 329–38) and African red-slip wares (cf. fig. 31.3 with ARS Hayes 61B: Hayes 1972: 104), which points to a fifth-century date.

More early Byzantine pottery was found at Yeni Pınar to the southeast of Germia, which, following geophysical survey, was identified as the site of a monastery (see below). The collection again took place across two ploughed and sloping fields that cover ca 50m by 50m of the western courtyard below the basilica (cf. fig. 34 and fig. 36). The finds were more numerous than at Dutlu and were most dense where the courtyard is flanked by rooms, in areas that today form the terraces and boundaries of the fields. In total 156 objects were collected, mostly potsherds, but also some fragments of late Roman or early Byzantine glass vessels and a number of glass mosaic tesserae. The late Roman and early Byzantine glass goblets or lamps with hollow stems from Yeni Pınar have close parallels at Amorium (Gill 2002: 170, 171, fig. 2.3–5) and are widespread throughout the eastern Mediterranean (Çakmakçi 2009: pls 1–3).

The bulk of the finds dates from the early Byzantine period, for example early Byzantine ampullae that are better known as 'late Roman unguentaria' (Hayes 1968; 1971). According to mineralogical-petrographical analysis, these massive, thick-walled vessels were produced in northern Syria, Cilicia, Rhodes and on Cyprus. From the fifth to the middle of the seventh century AD they were widely exported throughout the Mediterranean (Metaxas 2005: 92–95, 100, 102–03; Sauer, Ladstätter 2005: 133; Lafli 2012).

As at Dutlu, a group of red-slip wares is evidently inspired by contemporary late Roman C (LRC) and African red-slip (ARS) wares (figs 32, 33). The surfaces of the red-slip ware vessels from Yeni Pınar are covered by a dull to slightly shining, red to orange-red slip; the fabric is middle porous and contains some mica, quartz and white limestone inclusions. The shape of one bowl (fig. 33.1) compares to the LRC form Hayes 1A (Hayes 1972: 325) and that of a plate (fig. 33.2) compares to the LRC form Hayes 3B (Hayes 1972: 326–27). Numerous hemispherical bowls and plates (such as fig. 33.3–4) are similar to the ARS forms Hayes 61B (Hayes 1972: 100–07, in particular 104) and Hayes 99 with hooked rim (Hayes 1972: 152–55). The morphological characteristics of one vessel base (fig. 33.5) are reminiscent of the LRC forms Hayes 1A and B (Hayes 1972: 325) as well as the ARS form Hayes 99A (Hayes 1972: 154–55). These vessels probably represent the local or regional table ware and can be compared to the late Roman light-coloured ware of the Aegean region (Hayes 1972: 408–10; 1992: 7–8).

Graves on the so-called acropolis of Pessinus contained a similar ware, but the burials are supposedly Roman and the vessels intruded later, when a Byzantine fortification was built above the cemetery (Niewöhner [2007b: 131–33] suggests that some burials may actually date from the early Byzantine period and that the fortification was built later). The bowls and dishes are of similar shape and fabric to those from Dutlu and Yeni Pınar, and are understood to represent the local fine ware of the fourth and fifth centuries (Devreker et al. 2003: grave 1.1.37, 4, grave 2.63, 7, grave 7.49b, 1). Some earlier examples are dated to the third century (Devreker et al. 2003: grave 2.8, 16–18) and one bowl with hanging rim to the second half of the sixth or the seventh century (Devreker et al. 2003: grave 1.33a, 5).

Close parallels can also be found in four bowl forms of a local red-slipped ware from Hadrianopolis in south-western Paphlagonia that share the same morphological characteristics and date from the fourth to the early sixth century (Kan Şahin, Lafli 2012: 53, 75–80, pls 13–21). Late Roman to early Byzantine contexts at Aizanoi in Phrygia, further west on the high plateau, also yielded comparable vessels of a local red fine ware (Ateş 2003: pls 37–38, Schale 58, 57, Schüssel 23). Apparently, the whole region of western-central Anatolia adhered to a similar kind of local or regional table ware during the late Roman to early Byzantine period, and this seems to have been fashioned after LRC and ARS models. However, original Phocaean (LRC) or African (ARS) fine ware imports are nowhere to be found, neither at Dutlu nor at Yeni Pınar.

The early Byzantine site at Yeni Pınar: the Monastery of Aligete?

By Ercan Erkul, Philipp Niewöhner and Harald Stümpel

In addition to early Byzantine pottery, the site at Yeni Pınar also yielded cut limestone, bricks, mortar, carved marble slabs and an acanthus leaf, as well as glass mosaic tesserae, all of which indicate elaborate architecture. This has been confirmed by geophysical survey (figs 34–36): the elevated eastern part of the plot contains a three-aisled basilica. A broad central nave terminates in an apse to the east. Narrower and shorter side aisles end in square compartments; they adjoin the sanctuary that will have been located in front of the apse. The southern wall seems to have contained a central door and the western narthex is wider than the basilica. Both these features were common in the region (southern door: Bell, Ramsay 1909: figs 2, 18, 24, 30, 46, 80, 130; Restle 1966: 698; Eyice 1971; wide narthex: Bell, Ramsay 1909: figs 130, 164; Morganstern 1983; Ivantchik et al. 2010: 128–31).

To the west, on a lower level than the church, a large rectangular open space occupies the left part of the plot. It appears to be enclosed on all sides by rows of rooms.

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The row along the western side is interrupted by a central passage that lies on the middle axis of the open space, exactly opposite the main west door of the church, and this would have formed the main entrance to the whole complex. All the buildings to the south of this passage and the middle axis have a slightly different orientation from those to the north and from the church; this is most likely unintentional – a mistake caused by unsound measuring when the complex was first set out on the ground. The otherwise symmetrical layout indicates that the entire ensemble of buildings was planned as a whole, and its plan compares to monasteries at Binbirkilise in the neighbouring province of Lycaonia as well as elsewhere in the Byzantine empire (cf. Bell, Ramsay 1909: 199–209, fig. 164; Orlandos 1958: 13–16; Ćurčić 2010: 295; Grossmann 2012).

The building complex at Yeni Pınar may possibly be identified with the Monastery of St Mary the Mother of God, the so-called Monastery of Aligete, where Theodore of Sykeon was once accommodated during a visit to Germia (Festugière 1970: §100). 'Aligete' may refer to the plot or estate on which the monastery was built, and the former owner may have been called Aligete, as was the case with similar epithets elsewhere, for example the Monastery of St John of Studios, which the above-mentioned consul founded at Constantinople (Mango 1978). If so, it would have been fitting for Aligete to dedicate her foundation to Mary, and many other examples of comparable female Christian piety are known (for example the female Tituli at Rome: Brandenburg 2005).

The Monastery of Aligete must have been close to but separate from Germia, because representatives from Pessinus went straight to the monastery, and apparently not to Germia, when they came to ask Theodore for help with a drought (Festugière 1970: §101). If they did not cross Mount Dindymon, but went around its southern flank, as is commonly done today, they would have reached Yeni Pınar without passing Germia (fig. 2).

Three votive stelae for Men Mantalenos and the localisation of the homonymous polis at Ayvalı

By Andreas Victor Walser

The Turkish village of Ayvalı is the northern neighbour of Germia (fig. 2) and was previously known only for a fragmentary inscription, but it now emerges as the pagan counterpart, as it were, of Christian Germia. Of special interest are three small votive stelae dedicated to the god Men Mantalenos. This section begins with the presentation of the three inscriptions, reserving the discussion of the cult for the general remarks that follow. The date ranges that are given below are based solely on the letter forms and are no more than tentative suggestions.

Dedication to Men Mantalenos by a θρεπτή. Lower part of a small grey-white marble stele, probably of naiskos type, chipped and damaged below; left and right pilasters on bases.

Date: second half of the second century (rectangular epsilon; cursive omega).

Ayvalı, at the elementary school, where it was reportedly brought by school-children. Dimensions: height 27cm; width 21cm; thickness 12cm; letters 1.5cm (fig. 37).

[--- Δε]-
ιετάρου
θρεπτ-
ὴ Μηνὶ
4 Μαντα-
ληνῷ ε-
ὐχήν.

---, foster-daughter of Deietaros, to Men Mantalenos, in fulfilment of a vow.

The inscription identifies the dedicator, a woman whose name is lost, as the foster-child of a man called Deietaros. Foster-children (θρεπτοί) appear frequently in inscriptions from Roman Asia Minor, especially those from Lydia and Phrygia (most recently, Ricl 2009), with fewer cases from Galatia (Mitchell 1982: nos 313, 325; Niewöhner 2011c: fig. 8). The foster-father's name is Celtic and, in various spellings, quite common in the region. Its popularity is certainly owed to the prominent namesake Deiotaros I, who was of Tolistobogian origin, tetrarch of the *Tolistobogioi* and ruled as king of Galatia in the first century BC (Strubbe 1978–1979: 140, n.134; 2005: no. 18).

Dedication to Men Mantalenos by Sousos. Small grey-white marble stele: moulded base, nearly square shaft, triangular pediment including a central boss with incised cross – obviously not the Christian symbol (pace Levick, Mitchell 1993: xxxviii, 122–23) – acroteria, low relief.

Date: second to third century (lunar sigma and epsilon; upsilon as V in l. 1; non-cursive omega).

Ayvalı, at the elementary school, where it was reportedly brought by school-children. Dimensions: height 43cm; width 21cm; thickness 9.5cm; letters 2cm (fig. 38).

Cf. Walser in Niewöhner, Rheidt 2010: 156, fig. 29.

Σουσος Μ-
ηνὶ Μαντ-
αληνῷ εὐ-
4 vac. χήν. vac.

Sousos to Men Mantalenos in fulfilment of a vow.

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Σουσος is a rare male name and otherwise attested only in Akköprü and Yalmak in northern Galatia (Mitchell 1982: no. 13, 253, 255; cf. Brixhe 1987: 74–75, 78–79). It must be distinguished from the indeclinable name Σουσου and the derivative Σουσους that were commonly used both for men and women in Phrygia and Galatia (Zgusta 1964: §1463).

Dedication to Men Mantalenos by Klados. Lower part of a small grey-white marble stele: moulded base with inscription, shaft with a bust of Men in high relief, broken above the neckline, but identified by the upturned points of the crescent above the shoulders. The first line of the inscription seems to be written in a different hand than the second and third lines.

Date: second to third century (lunar und cursive letter forms).

Ayvalı, at the elementary school, where it was reportedly brought by school-children. Dimensions: height 19cm; width 19cm; thickness 9.5cm; letters 2cm (fig. 39).

Κλάδος [hedra]
Μηνὶ Μανταλ-
ηνῷ εὐχήν. [hedra]

Klados to Men Mantalenos in fulfilment of a vow.

Κλάδος means ‘branch’ or ‘shoot’ and is a Greek name that occurs widely but infrequently throughout the Greek world (cf. Robert 1963: 271–73).

All three votives address the Anatolian god Men, who was worshipped virtually everywhere on the high plateau (Mitchell 1993: 2.24–25; Labarre 2010). Epigraphic evidence for the cult of Men from Galatia is scarce compared with regions like Lydia or Pisidia. The numismatic evidence, however, demonstrates the eminent importance of Men in Galatia. In the mid first century BC, Deiotaros issued coins displaying the god. Men features again on coins of the Galatian *koinon* minted under Galba, Titus, Nerva and Trajan. In the second century AD, Men appears on the civic coinage of Ancyra as the tutelary god of that city, and it was probably his sanctuary that was designated as Ancyra’s second *neokoros* temple in the third century (Mitchell 2012: 1.34–35, no. 118).

In the three new votive inscriptions form Ayvalı, Men is given the epithet Μανταληνός, which is not otherwise attested. It obviously belongs to the adjectival category of Men’s epithets, the majority of which are geographical or pseudo-geographical (cf. Lane 1971–1978: 3.72–80; Labarre 2010: 36–40). Μανταληνός may therefore be explained as an *ethnicon* and derived from the place-name Μάνταλος. The toponym is attested in the *Ethnica* of Stephanus Byzantius (431, 7–8: Meineke 1849): Μάνταλος· πόλις Φρυγίας, ὡς ὁ πολυίστωρ Ἀλέξανδρος, ἀπὸ Μανταλοῦ κτιστοῦ αὐτῆς. τὸ ἐθνικὸν Μανταληνός.

As to the localisation of the πόλις Μάνταλος, several suggestions have been made. Firstly, W.M. Ramsay proposes a connection with two other inscriptions that he found on two columns at an old cemetery between Doğançaır and Kaymaz (Troknada) in northeastern Phrygia (Ramsay 1890: 150; Ruge 1928). He transcribes the inscriptions as ΑΔΙΑΜ|ΟΛ and ΔΙΑΜ|ΟΛΑ respectively and reads them, from right to left, as Μανδαλο, but explains neither their peculiar forms, supposedly derived from the name of the polis, nor their function or why both columns carry identical Christian inscriptions on the opposite sides. Secondly, the name Μαντα[λ---] has been tentatively identified in another fragmentary inscription from Nakoleia/Seyitgazi in Phrygia (Cameron, Cox 1937: 296), but this interpretation of the isolated letters ---MANTA--- is arbitrary, as the editors themselves note, and highly unlikely.

Thirdly, yet a different localisation is proposed by T. Drew-Bear (in Talbert 2000: Map-by-Map Directory II 961, 972) with reference to a previously ‘misread’ Byzantine inscription in an old cemetery at Şeyhali about 30km east of Aizanoi, also in Phrygia. The monument in question is a rude block of marble with inscriptions on the front and back (Levick, Mitchell 1993: 253). According to the first editors, it is a ‘boundary stone between two Byzantine estates … The front side perhaps should be read as [ὅ]ρ(ος) [Πα]τρικίου; on the back side as ὅρ(ος) .Μανταλίου (?)’. Drew-Bear apparently interprets the stone as a boundary marker of the πόλις Μάνταλος, and judging from the published drawing, a reading ὅρ(ος) Μαντάλου seems indeed well possible and less problematic than the earlier reading of an otherwise not attested personal name Μαντάλιος. Against Drew-Bear’s interpretation, I am concerned that the status of Μάνταλος as a πόλις or the genitive of the *ethnicon* should also be indicated, but there are admittedly not enough parallels to establish a decisive argument.

More importantly, the three new stelae from Ayvalı will hardly be referring to an obscure cult centre and polis at Şeyhali more than 150km away. On the contrary, the worship of Men varied greatly from region to region, as was typical for indigenous Anatolian cults, with the gods appearing in many local guises. Usually, Men’s numerous epithets are the only distinguishing feature of the various local cults that are attested in inscriptions, but cult practice and sacred traditions will surely have differed, too (cf. Mitchell 1993: 2.19). Other scenarios are possible, but the three votives at Ayvalı are best

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explained by yet another local cult centre, especially as they do not seem to be exactly contemporary and therefore indicate veneration over a period of time.

But is Ayvalı to be identified with Μάνταλος, the πόλις Φρυγίας mentioned by Stephanus Byzantius? As far as the Roman province of Phrygia is concerned, Mount Dindymon was never part of it, but always belonged to the province of Galatia. As a geographical and cultural entity, however, Phrygia was less exclusively defined (Mitchell 1993: 1.151–63; Vitale 2012: 65–67). Stephanus' entry on Mantalos is based on the work of the Greek polymath and ethnographer Alexander Polyhistor, who died in the 40s or 30s of the first century BC (Jacoby 1940: 248–313), before the creation of the Roman province of Galatia. Even if Stephanus does not say so explicitly, the information on Mantalos must come from Alexander's work *On Phrygia*, περὶ Φρυγίας or Συναγωγὴ τῶν περὶ Φρυγίας. Stephanus also cites Alexander for a variant of the myth of Gallos and Attis, which is obviously connected with Pessinus in Galatia and relatively close to Ayvalı. Therefore, Alexander may have included remarks about Mantalos in his work on Phrygia, prompting Stephanus to misplace the polis in this region.

All things considered, the three votives for Men Mantalenos at Ayvalı make an identification with the polis Mantalos most likely, although the evidence is circumstantial and earlier hypotheses cannot be disproved. Apart from the three dedications to Men Mantalenos, numerous other ancient cut stones confirm that Mantalos/Ayvalı was a place of some substance: a funerary inscription from the Roman imperial period, two doorstones, two grave lions and half a dozen parts of a small *monopteros* or *tholos* (figs 19, 20). Roman Mantalos/Ayvalı may have had about the same standing as the polis of Goeleon/Holanta/Kayakent, where a similar spectrum of Roman cut stones has been found. Furthermore, a dedication to Asclepius and Hygeia suggests that some water therapy may have been practised there (Walser 2013).

Thermal springs and miraculous healing at Mantalos/Ayvalı and Germia

By Heiko Woith

The region of Mantalos/Ayvalı and Germia is notable for its thermal and mineral springs, and the healing effects of these waters are described as follows.

> For he who is ill descends with fervent faith and admission of his sins into those miraculous waters of Germia and, submerging himself up to his beard, stands there wholly entreating almighty God and His holy archangel Michael; and forthwith by God's command the fishes in the waters there come together and lick all round the entire body of him who is ill; and straightway he comes up healthy in soul and body, cured of chronic and recent diseases, both hidden and obvious, glorifying God and His commander Michael. For many lepers and sufferers of elephantiasis have been cleansed, and those with withered hands and feet healed, and a great many other illnesses of all sorts cured contrary to expectation (*Miracles of St Michael*, BHG 1288e: Mango 1984: 47, translated by M. Featherstone).

The fish referred to in this passage were probably the tiny doctor fish (*Cyprinion macrostomus* and Garra rufa) that thrive in thermal waters and nibble old and diseased skin off any bather, because it is softer and more easily edible than new and healthy skin. The fish are also called Kangal fish after Kangal near Sivas further east on the high plateau, where skin diseases are still today treated by submersion in thermal water containing doctor fish for up to eight hours per day (Ozçelik et al. 2000). The removal of old skin by the fish is not only salutary in itself, but also enhances the beneficial effect of UV radiation, and, as fishponds are typically open to the sky and the UV radiation is stronger on the high plateau than in the Mediterranean, this adds to the healing effects of long bathing sessions in this region.

Most thermal springs at Mantalos/Ayvalı and Germia are characterised by temperatures between 22°C and 31°C (fig. 40, type = red). The specific electrical conductivity is low, around 700µS/cm. This is only slightly above the conductivity of the cold, shallow groundwater of the region (fig. 40, type = blue). Most cold and shallow groundwater has high oxygen content, for example roughly 8mg/l at the neighbouring village of Goeleon/Kayakent (fig. 40, Esk03). With regard to hydro-geochemistry, most groundwater is of the Ca-Mg-HCO_3 type which is common in dolomite limestone aquifers of the survey area (Yuce et al. 2009; Demiroğlu et al. 2011). Two artesian boreholes emit water of the Na-SO_4 type with extreme Na and SO_4 concentrations exceeding the World Health Organisation (WHO) drinking water recommendations (fig. 41, TR372 and TR374). Furthermore, one of the boreholes is characterised by high Cl, Fe and As values (TR372).

A spring at Kurtluca Mevkii, half-way between Germia and Mantalos/Ayvalı (fig. 2), is called Kükürten Gen (English: sulphuric place with wolves or worms – perhaps the fish of the *Miracles of St Michael*?) and of the Ca-Mg-SO_4 type (TR367). An old spring south of Mantalos/Ayvalı is characterised by a mixture of the aforementioned types (TR378). The springs at Kurtluca and Mantalos/Ayvalı are classified as mineral waters with reduced temperatures of 14°C and 17°C, but with

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increased specific electrical conductivity of around 3,400µS/cm and 1,600µS/cm respectively. Both springs are situated at the eastern margin of the geothermal field and characterised by a high concentration of SO_4, As and F, exceeding the WHO limits for drinking water.

Overall, the thermal waters at Mantalos/Ayvalı and Germia are comparable to those at other geothermal areas in Turkey, but the springs at Kurtluca and Mantalos/Ayvalı have unique hydrogen sulphide (HS^-) concentrations of 40ppm and 20ppm. These are extremely high values. Investigations of more than 300 thermal and mineral springs in Turkey show that about one-third (n=112) of the thermo-mineral waters contain HS^- in detectable amounts. The average value of these 112 waters is 1.6ppm HS^- with a standard deviation of 4.7ppm. These statistics indicate that HS^- concentrations above 10ppm are rare in Turkey.

Waters rich in hydrogen sulphide are of balneological interest and known for their therapeutic qualities against skin disease and arthropathy. H_2S gas easily diffuses through the skin and can be ingested by bathing in water that is rich in hydrogen sulphides. Recent research suggests that the gasotransmitter H_2S may also be beneficial in the treatment of cardiac infarction, apoplectic stroke and – since the gas acts as a vasodilator – erectile dysfunction (d'Emmanuele di Villa Bianca et al. 2009; Wang 2011).

The spring at Kurtluca has a temperature of 14°C, which seems rather cold for therapeutic bathing, but the underground reservoir feeding the spring is much warmer. Analyses of chemical geothermometers such as SiO_2 indicate about 130°C. This is the highest temperature of any thermal water in the area. Formerly, the spring at Kurtluca might have been warmer, if the water rose with more velocity through wider crevices that may since have closed. Such closure could have come about either slowly through the precipitation of minerals over a long period of time or suddenly due to an earthquake (Brodsky et al. 2003). If the water formerly rose faster through more permeable ground, it would have retained more of its original heat at reservoir level when it arrived at the spring.

From Mantalos to Germia and Eudoxias

The mineral spring at Kurtluca as well as some of the thermal springs are closer to Mantalos/Ayvalı than they are to Germia (fig. 2), and one may ask why the Byzantine healing centre and pilgrimage site was not established at Mantalos/Ayvalı. Germia has yielded no Roman finds, and this is a strong argument *ex silentio*, because Germia has received much more attention both by earlier travellers and during the recent fieldwork than any other location in the survey area.

Thus, according to the archaeological evidence, Germia was, apparently, a late foundation, and this is supported by the interpretation of the written sources, according to which Germia was focused on and presumably came about as a Christian healing centre and pilgrimage site. As Germia was already famous by the fifth century, when the consul Studios made his donation, the cult must have been established earlier, and this may explain the greenfield strategy: the Christians may have founded their healing centre at a distance from Mantalos/Ayvalı because that place was still occupied by Men. Similarly, at Sura in Lycia, for example, a sulphur spring is flanked by well-preserved pagan sanctuaries, on the one hand, and a Christian church, on the other (Borchhardt 1975: 77, 79; Hellenkemper, Hild 2004: 2.865). At Hierapolis in Phrygia thermal springs and healing baths had always played an important role and the ancient city was centred on a steaming cave, the Plutonium, to which a Sanctuary of Apollo was also added (D'Andria 2007: 14–29). In the fourth century, when the ancient cults in the city centre were still going strong, a Christian martyrium was built next to the grave of St Philip in the necropolis outside and above the city; the complex included rooms that may have been used for incubation as well as a bath, and offered Christians an alternative to the pagan cures inside the city below (D'Andria 2012: 47–50).

At Germia, the veneration of the archangel Michael may have been inspired by analogies to Men. Before the discovery of the three dedications to Men Mantalenos at Ayvalı, Cyril Mango (1984) had already suggested that the cult of St Michael at Germia might be rooted in the veneration of Attis, who seems occasionally to have been identified with Men (Lane 1971–1978: 3.92–94). Both Men and St Michael were sometimes depicted as young men with long curly hair, a long staff with a knob in one hand and a round *patera* or *sphaira* in the other (for example Lane 1971–1978: 1.cat. 6, 102, 158, pls 4, 45, 68, 3.104; Weitzmann 1976: 18–21, cat. B3, pls 4, 6a, b; 1979: 536–37, cat. 481; Buckton 1994: 73–74, cat. 64; Vassilaki 2000: 262–63, cat. 1); furthermore, the crescent moon behind Men is reminiscent of the wings of the archangel, and – due to the association with the female moon – Men's gender was ambivalent, too (Lane 1971–1978: 3.86–88). In addition, some Anatolian inscriptions refer to an angel that acted as an intermediary on Men's behalf (Cline 2011: 60–65).

Elsewhere too, the veneration of St Michael emanated from ancient Anatolian cults (Hill 1916; Hasluck 1926: 84–86; Trombley 1993–1994: 149, 153–56, 159, n.270; Arnold 1995) and his popularity in the region probably goes back to a pre-Christian tradition of angel-worship. Anatolian ἄγγελοι were already

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venerated during the imperial period, either by themselves or together with other gods (Hirschmann 2007; Cline 2011), and they seem to have been popular among Christians, too: already the apostle Paul admonished the Colossians for angel worship (Ep. Col. 2.18) and the church council that took place at neighbouring Laodicea in 363/364 still considered it necessary to legislate against it (canon 35: *Patrologia Graeca* 137: 1384C–85A; cf. Cline 2011: 137, 143–46). At Colossae/Chonae in Phrygia, the veneration of the archangel Michael at a healing spring may go back to an earlier pagan angel cult at the same site (Cline 2011: 131–33; Thonemann 2011: 75–87). At Germia, some such tradition may also explain, why 'all the land calls Germia "the Archangels"' in the plural, as the *Life of Theodore of Sykeon* observes (Festugière 1970: §167), although 'the church of the archangel' is referred to in the singular and no other archangel is mentioned at Germia.

Once Christianity was fully established in the Theodosian era, the old pagan healing tradition at Mantalos/Ayvalı and its association with Men would have become an embarrassing legacy, and this may have prompted a change of name for the settlement. Thus, Mantalos/Ayvalı may have been renamed Eudoxias after one of the synonymous members of the Theodosian dynasty (cf. Janin 1963). According to the *Life of Theodore of Sykeon*, Eudoxias was within walking-distance of Germia (Festugière 1970: §71) and a boundary stone of Eudoxias has been located at Goeleon/Kayakent (MacPherson 1972: 223, cat. 6; Waelkens 1979: 460; Mitchell 1982: cat. 137). Previously, Eudoxias had tentatively been identified with Hamamkarahisar, because this northernmost site in the area is more distant from Goeleon and Germia, and such a greater distance is more common among neighbouring poleis and bishoprics (Belke 1984b: 10). However, the foundation of Germia as a third polis so close by and halfway between Mantalos/Eudoxias/Ayvalı and Goeleon/Kayakent may be explained by the overriding importance of the pilgrimage site that was probably not endowed with a large territory.

Territorially, the newly-founded polis of Germia may have been restricted to a small island around the pilgrimage site, whilst most of the surrounding countryside remained part of the two older poleis of Mantalos/Eudoxias/Ayvalı to the north and Goeleon/Kayakent to the south. This would also explain why the archbishopric of Germia was made autocephalous, i.e. placed outside the hierarchy of the diocese and subordinated directly to the patriarchate at Constantinople. The seat of Germia was extraordinary, and the diocese will have had no place for its archbishop.

Byzantine Germia

The results of the survey detailed above go a long way in explaining why the Byzantine city of Germia seems to have consisted of little more than the pilgrimage church and associated structures. It apparently came about as just that, a Christian healing centre, hence its Indo-European name, which simply refers to thermal water and was sometimes translated as Therma or Thermia in the Byzantine sources (Honigmann 1936). Considering the great number of hot springs in the area, it is conceivable that more than one was used for therapeutic purposes and that other bathing went on at Germia besides that at the hydrogen-sulphide baths at Kurtluca. For example, the fishpond where the healings by immersion took place as described in the *Miracles of St Michael* (see quote above) will have been separate from the foul-smelling hydrogen-sulphide baths and may well have been located at Germia.

Hospitals and old people's homes were built by the Constantinopolitan consul Studios (Mango 1984: 48) and hospices are mentioned in connection with the miracle of Theodore of Sykeon (Festugière 1970: §161). In addition, the religious component of Germia seems to have led to the foundation of monasteries: the Monastery of St Mary the Mother of God, the so-called Monastery of Aligete, has already been discussed. Another monastery, dedicated to St Constantine, is mentioned on an early Byzantine gravestone from Germia (Walser 2013). Most attestations for the veneration of St Constantine date from the middle Byzantine period onwards (Peschlow, Schmalzbauer 2007; Grünbart 2012), but a number of other early dedications confirm that the cult was established in the early Byzantine period (Winkelmann 1987; Luzzi 1993: 585–90; Mundell Mango 1994: 135–37, fig. 15; Witte Orr 2010: 78–84; Fourlas forthcoming). The gravestone from Germia was found next to a necropolis church, which is described below and which does not seem to have been part of a monastery, but was perhaps dedicated to St Sergius, as a priest of St Sergius at Germia participated in the second Council of Nicaea in 787 (Janin 1975: 437, nos 85–86; Belke 1984a: 167).

Otherwise, Germia did not necessarily contain much housing, and in fact does not seem to have been larger than the old Turkish village, because when the latter was enlarged in the 1980s and new quarters were laid out towards the southwest, this area turned out to contain many graves. Germia was apparently surrounded by a belt of necropoleis that got in the way already around AD 600, when Bishop John started to build a cistern in the western part of the city. He had to abandon the project, because the excavation disturbed many graves, which in turn released evil spirits that possessed the people and had to be driven out by Theodore of Sykeon (Festugière 1970: §161).

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Fig. 1. 180°-panorama looking west from Yeni Pınar. Top: left or southern half; bottom: right or northern half

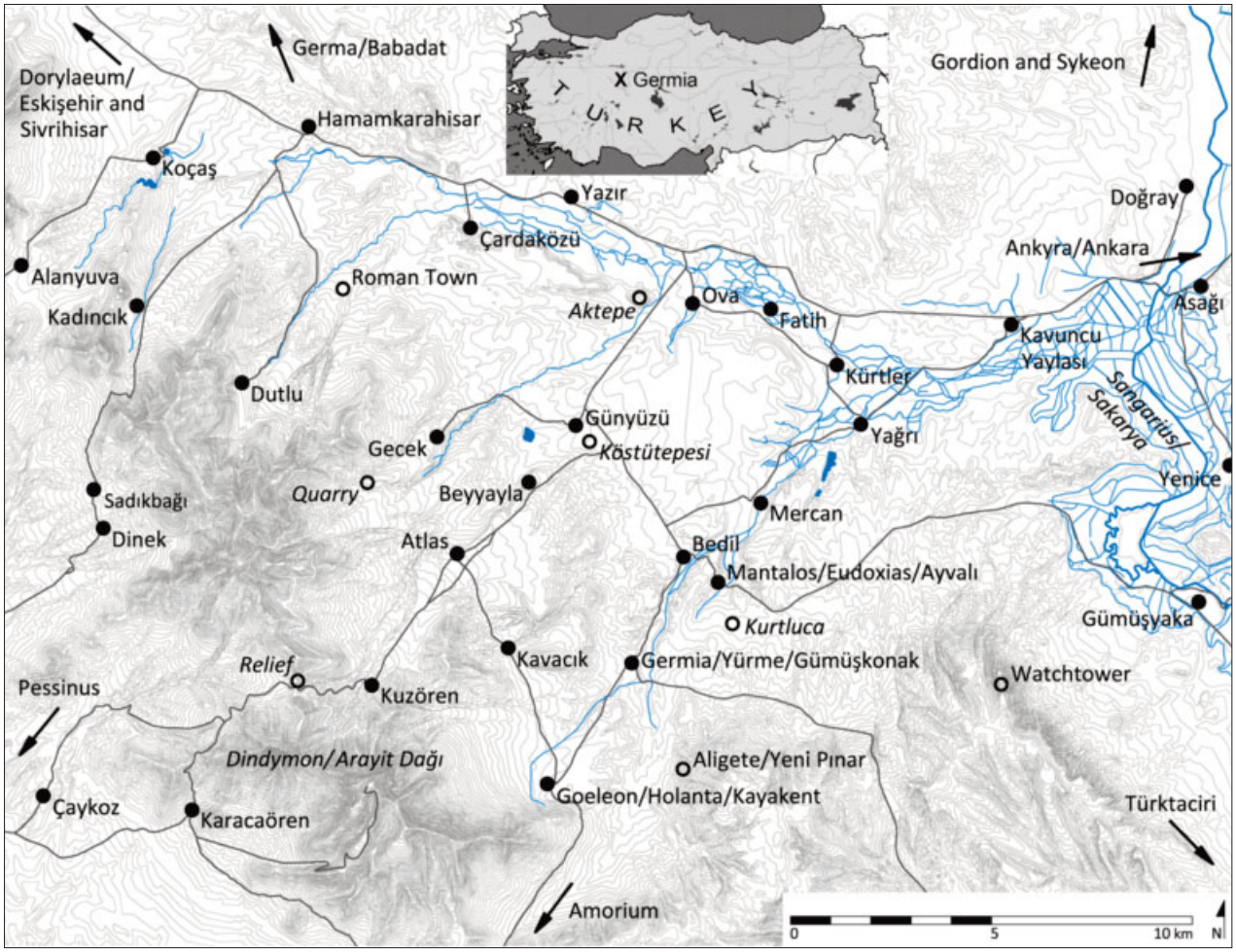

Fig. 2. Map of the survey area

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Fig. 3. Germia/Yürme/Gümüşkonak: mid 20th-century house built with reused Byzantine cut stones

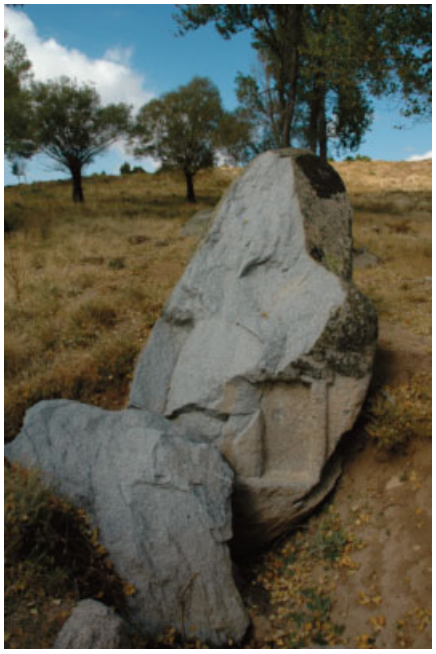

Fig. 4. Below the pass through the mountain from Germia to Pessinus: partly destroyed rock-cut relief of a temple façade with cult image

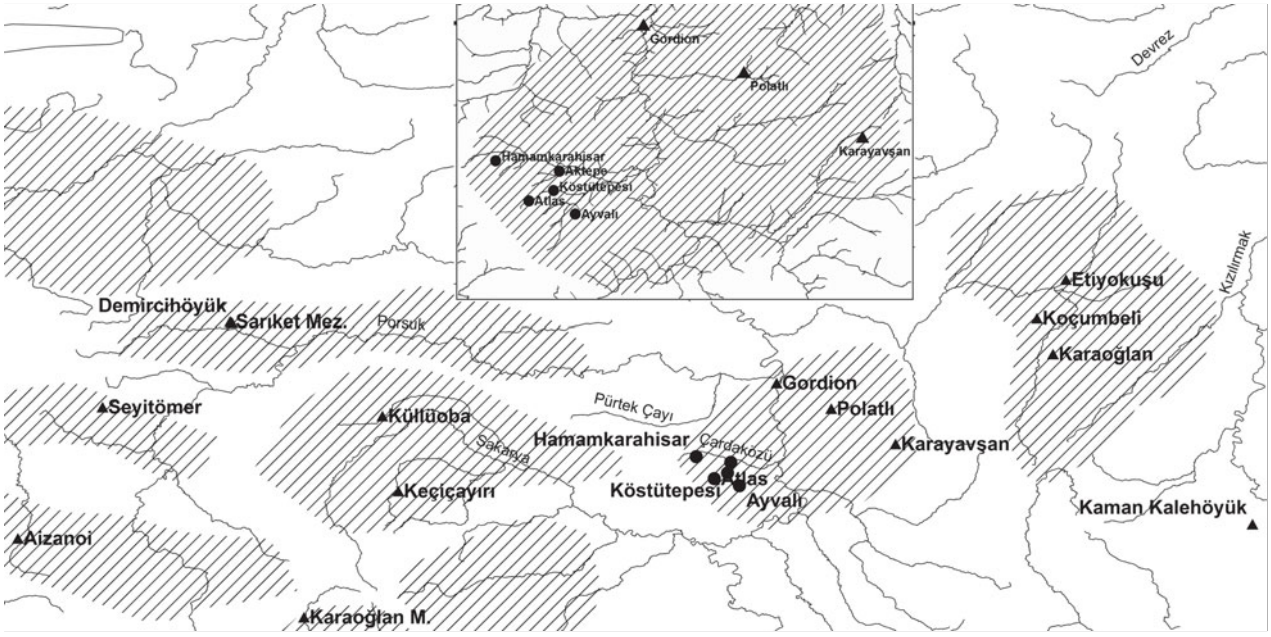

Fig. 5. EBA II pottery groups in western-central Anatolia. The Polatlı group (centre and window) separates those of the Phrygian cultural region (left) from those of the central Anatolian cultural region (right)

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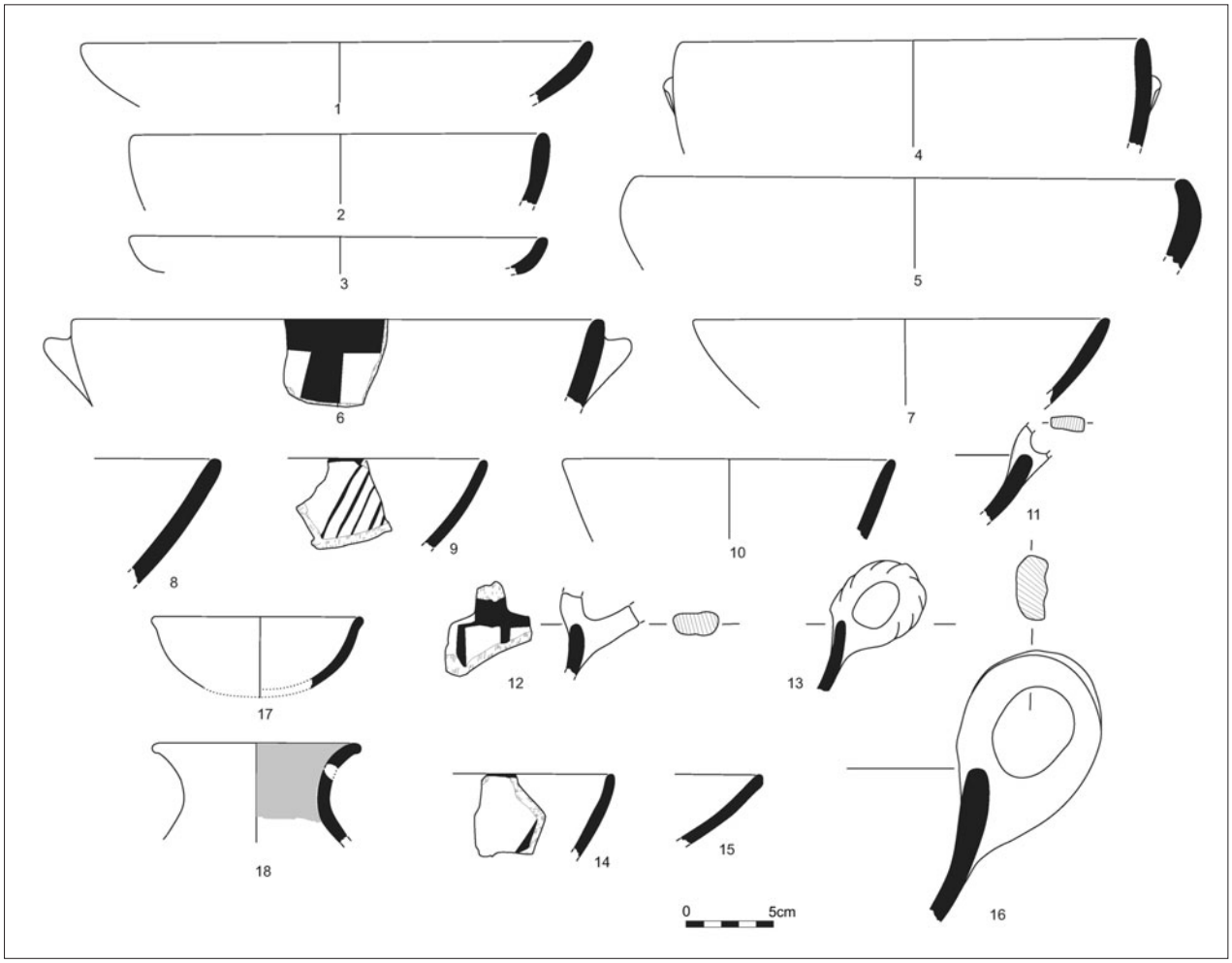

Fig. 6. EBA II and III pottery. 1–5: Atlas Höyük, EBA II. 6–16: Hamamkarahisar, EBA II. 17 and 18: Köstütepesi, EBA III

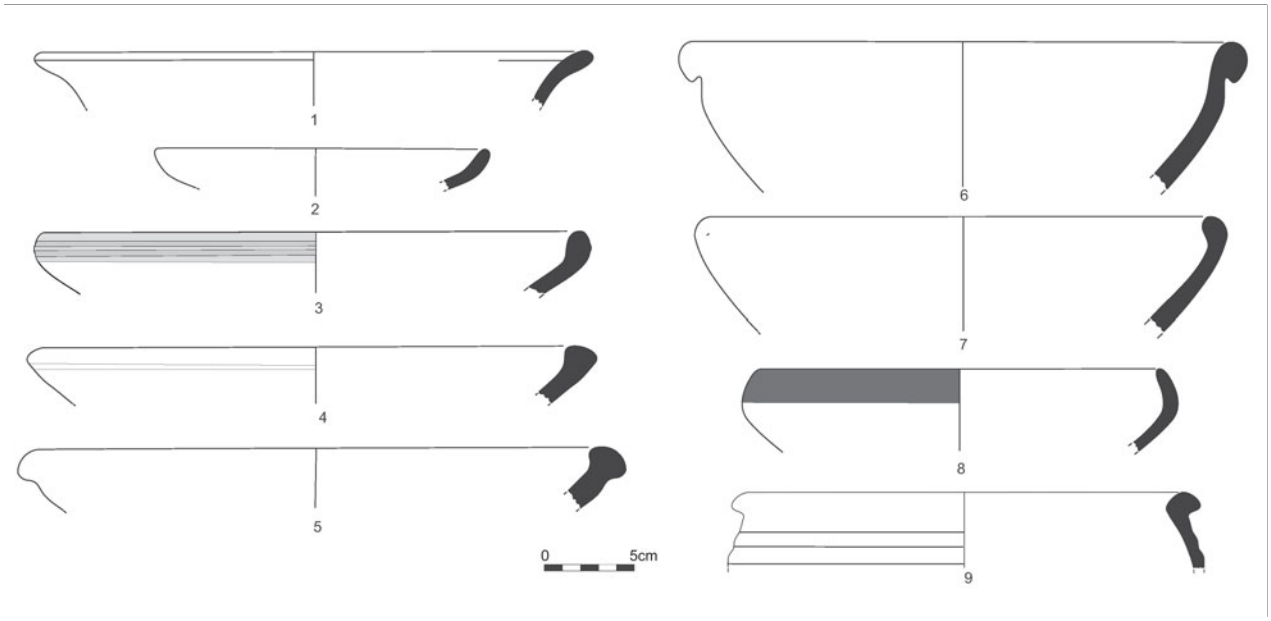

Fig. 7. MBA and LBA pottery. 1–3: Ayvalı Höyük, MBA. 4: Ayvalı Höyük, LBA/Early Iron Age. 5: Ayvalı Höyük, MBA/LBA. 6: Hamamkarahisar, MBA. 7 and 8: Hamamkarahisar, MBA/LBA. 9: Hamamkarahisar, LBA

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Fig. 8. Hamamkarahisar: MBA and LBA bowls and pot = fig. 7.6–9

Fig. 9. Ayvalı Höyük: terracotta bull's head

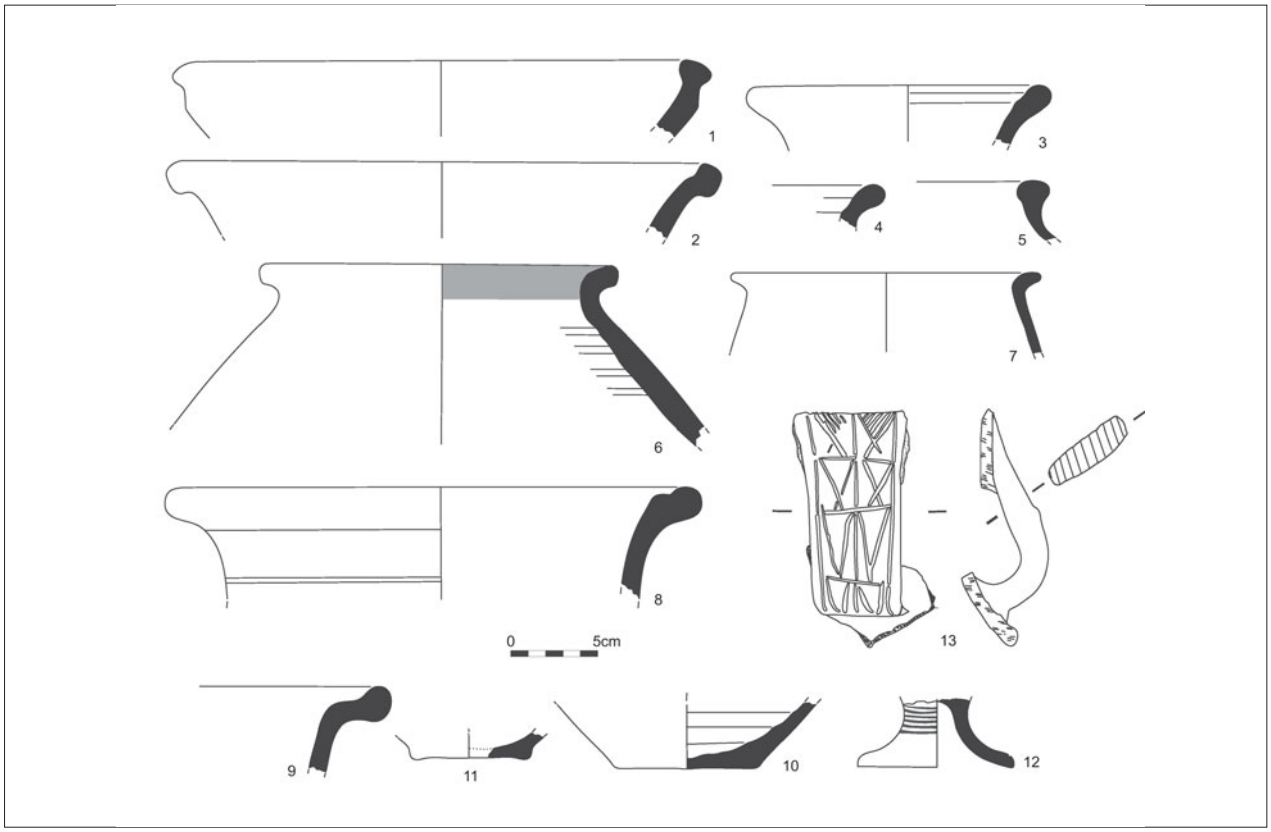

Fig. 10. Aktepe: Early Iron Age pottery

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Fig. 11. Aktepe: Early Iron Age pedestal = fig. 10.12. Orange-brown fine paste, orange slipped and matt burnished surfaces, dark-brown painted decoration on exterior, 2.5YR 5–8 Munsell

Fig. 12. Aktepe: Early Iron Age strap handle with incised decoration = fig. 10.13. Dark-grey paste with small stone inclusions, unslipped surface, burnished

Fig. 13. Aktepe: southern elevation, the Iron Age rampart is visible on top

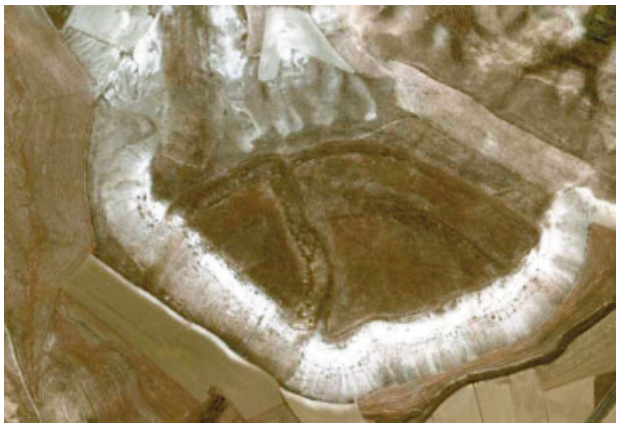

Fig. 14. Aktepe: satellite photograph, north at top

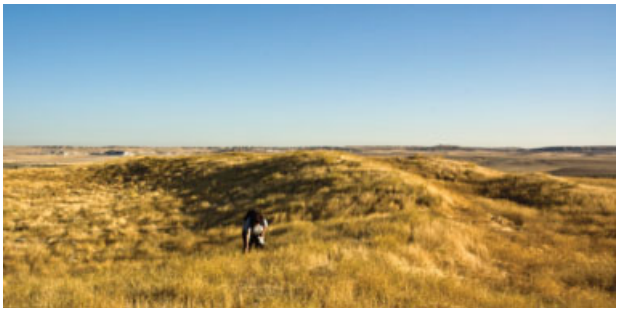

Fig. 15. Aktepe: Iron Age rampart looking north

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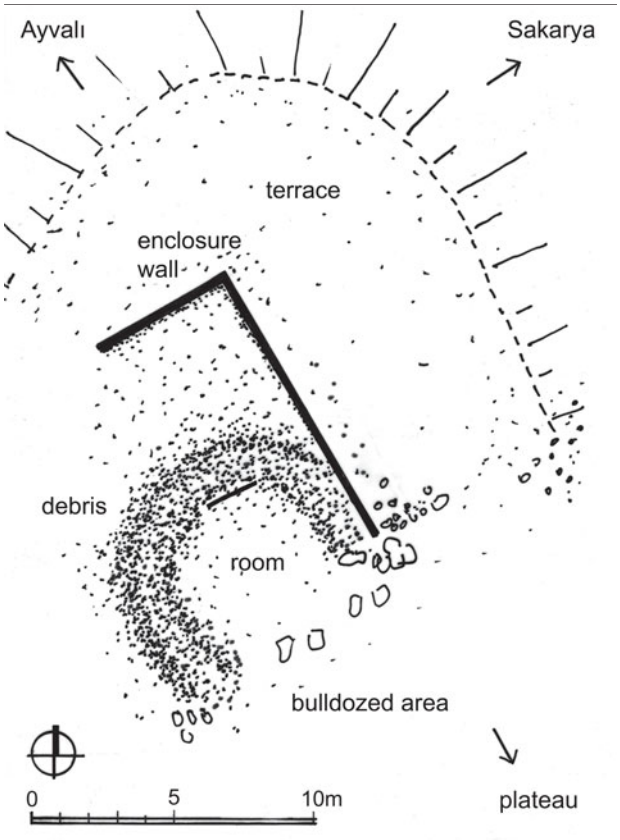

Fig. 16. Watchtower east of Ayvalı: plan

Fig. 17. Watchtower east of Ayvalı: enclosure wall, north elevation

Fig. 18. Hamamkarahisar: Roman grave lion hunting a bull (Eskişehir Museum)

Fig. 19. Ayvalı: rounded entablature block of a Roman monopteros *or* tholos

Fig. 20. Ayvalı: imitation of a tiled coniform roof from a Roman monopteros *or* tholos

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Fig. 21. Germia: early Byzantine gravestone of Ianis and Anastasia

Fig. 22. Goeleon/Kayakent: early Byzantine Ionic impost capital

Fig. 23. Goeleon/Kayakent: early Byzantine ambon slab

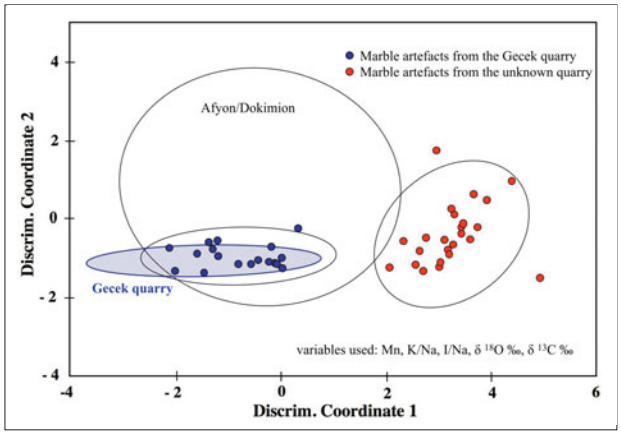

Fig. 24. Result of a multivariate statistical evaluation of the marble artefacts and the quarry at Gecek

Fig. 25. Gecek: trace of pre-modern quarrying

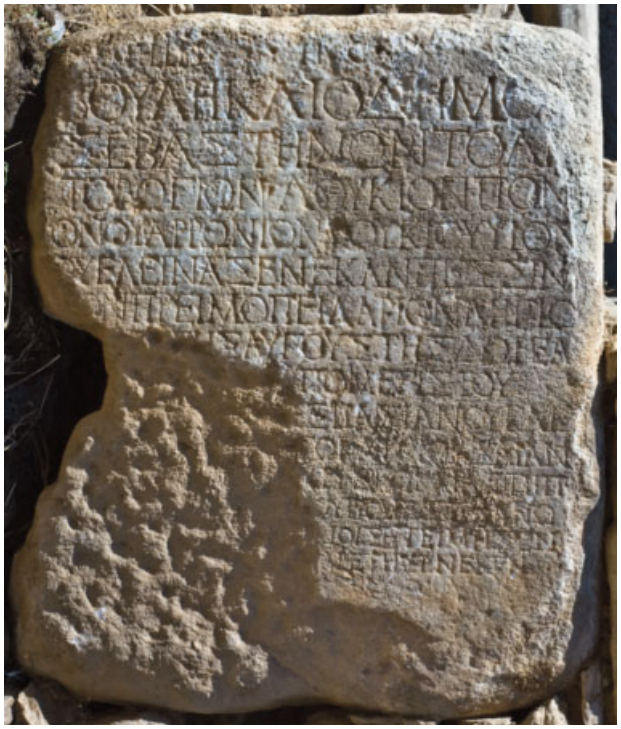

Fig. 26. Dutlu: Flavian honorary inscription

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Fig. 27. Dutlu: Pontic sigillata = fig. 28

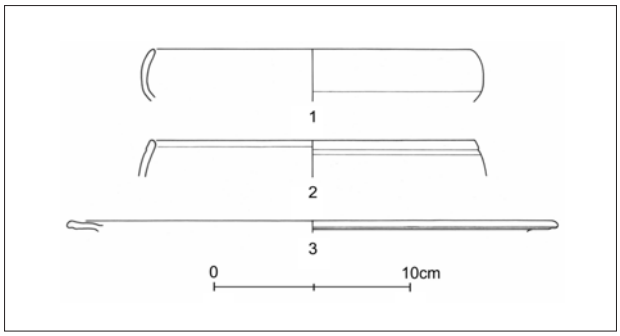

Fig. 28. Dutlu: Pontic sigillata = fig. 27

Fig. 29. Dutlu: red-slip ware = fig. 31

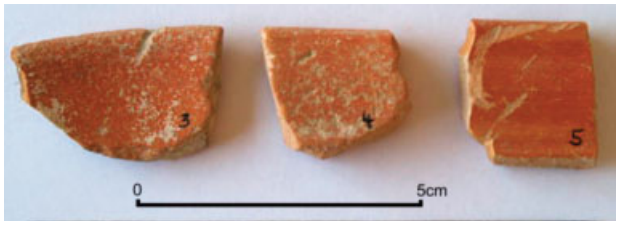

Fig. 30. Dutlu: red-slip ware = fig. 31

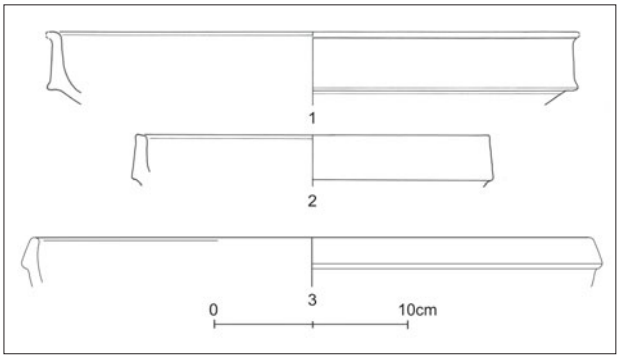

Fig. 31. Dutlu: red-slip ware = figs 29, 30

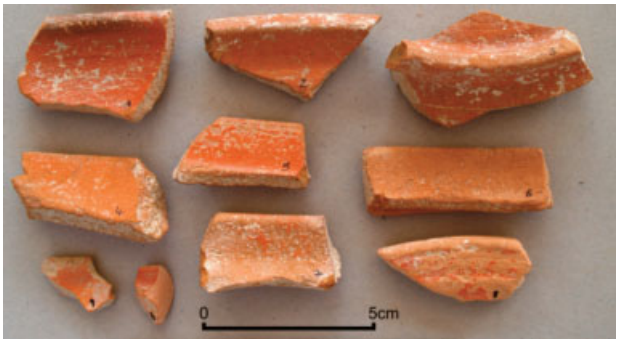

Fig. 32. Yeni Pınar: red-slip ware = fig. 33

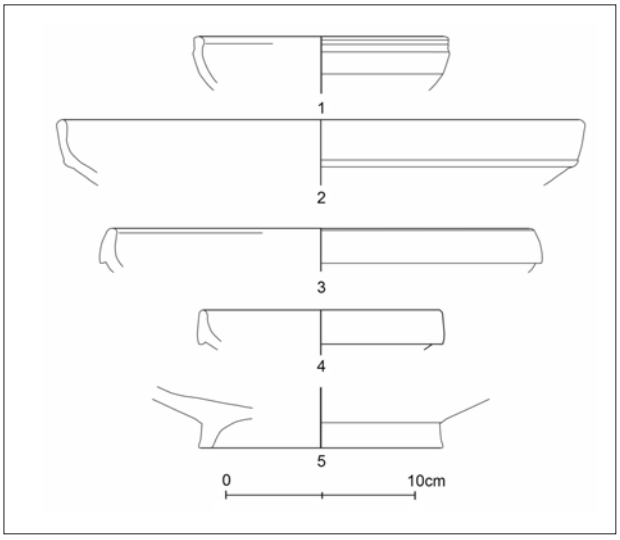

Fig. 33. Yeni Pınar: red-slip ware = fig. 32

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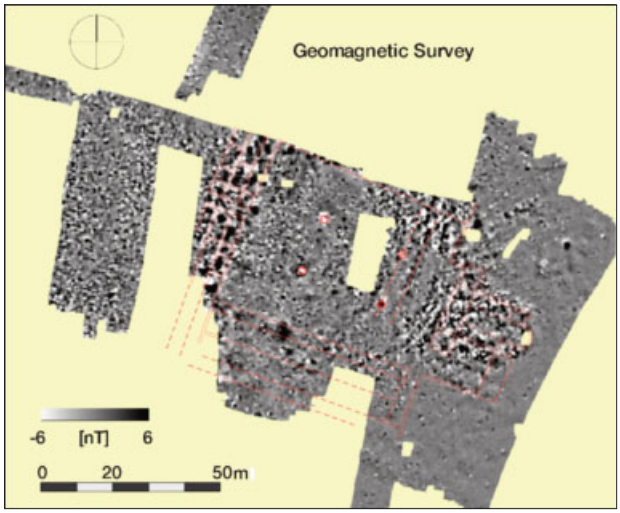

Fig. 34. Yeni Pınar: geomagentic survey of the basilica

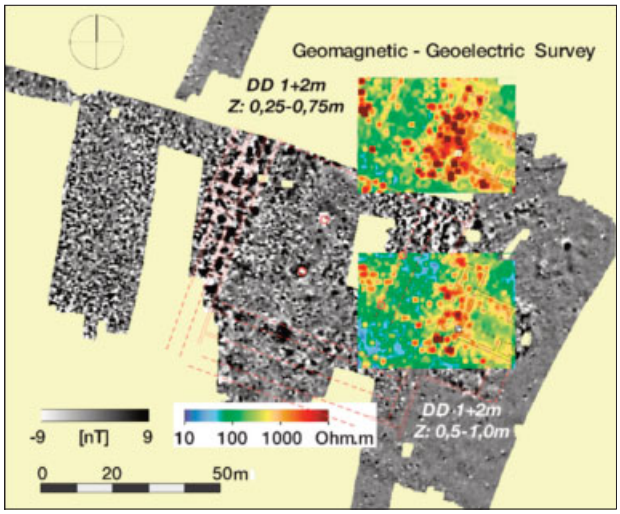

Fig. 35. Yeni Pınar: geoelectric survey of the basilica, inserted into the geomagnetic plot (fig. 34)

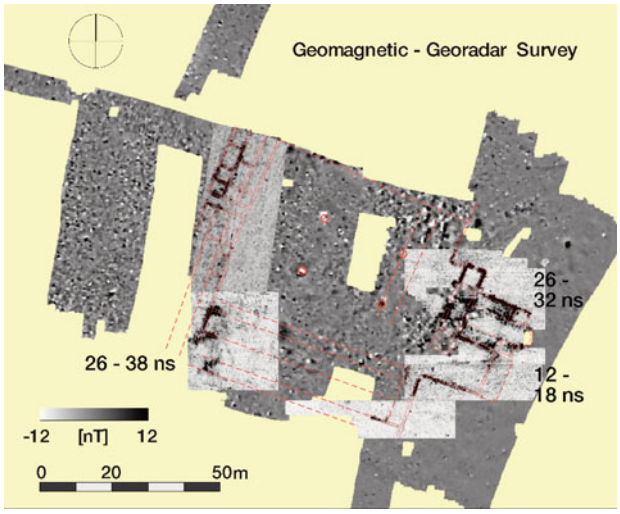

Fig. 36. Yeni Pınar: georadar survey of the basilica, inserted into the geomagnetic plot (fig. 34)

Fig. 37. Mantalos/Eudoxias/Ayvalı: dedication to Men Mantalenos by a θρεπτή

Fig. 38. Mantalos/Eudoxias/Ayvalı: dedication to Men Mantalenos by Sousos

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Fig. 39. Mantalos/Eudoxias/Ayvalı: dedication to Men Mantalenos by Klados

Site ID	*Type*	*Location*	*lon°*	*lat°*	*m a.s.l.*	*wT °C*	*EC µS/cm*	*pH*	*EH mV*	*oxy mg/l*	*wQ l/min*
Esk01		Germia, creek next to pump house	31.83050	39.32208	908	13.4	651	7.36	413	3.8	20
Esk02		Germia, pump house	31.83073	39.32216	903	16.8	608	7.35	437	4.4	
Esk03		Kayakent, central spring	31.80226	39.30217	994	14.3	446	7.41	430	7.9	74
Esk04		Yeni Pınar	31.83924	39.30642	988	12.2	623	7.48	417	2.7	
TR367		Kurtluca Mevkii, Kükürten Gen	31.85654	39.33396	891	14.0	3,360	6.95	-55	0.2	9
TR368		Germia, pond near hamam	31.83035	39.32337	911	24.1	722	7.31	284	5.9	
TR369		Germia, artesian well near hamam	31.83046	39.32208	908	30.8	695	7.16	398	5.9	
TR370		Germia, hamam	31.83046	39.32439	902	30.3	695	7.04	429	5.2	120
TR371		Germia, ilica ve picknick yeri	31.83173	39.33190	900	25.5	714	7.08	434	5.2	83
TR372		MTA borehole east of Germia	31.83367	39.32408	913	26.3	7,280	7.75	32	0.3	1
TR374		Borehole northeast of Germia	31.84596	39.33636	889	22.2	9,700	7.98	-108	0.1	3
TR375		Gavur Hamamı northeast of Germia	31.84695	39.33957	876	24.2	707	7.18	284	5.3	600
TR376		Germia, spring behind hamam	31.83052	39.32473	902	28.9	697	6.99	357	4.4	60
TR377		Pond east of Germia	31.84690	39.33384	907	23.5	696	7.24	460	4.6	
TR378		Spring south of Ayvalı	31.85506	39.34334	857	17.0	1,657	7.18	434	5.2	43
TR379		Hamamkarahisar, Çardak Hamamı	31.72232	39.44235	818	35.2	742	7.00	265	2.0	1,500

Fig. 40. Germia and vicinity: springs and wells. Physico-chemical key parameters measured in situ. wT: water temperature. EC: specific electrical conductivity. EH: redox potential. oxy: dissolved oxygen. wQ: estimated water discharge. See fig. 41 for water types

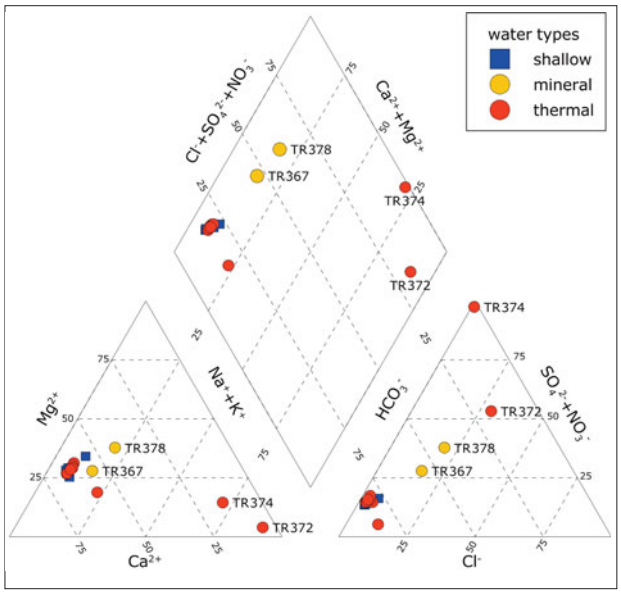

Fig. 41. Germia and vicinity: PIPER-diagram of groundwaters (cf. fig. 40)

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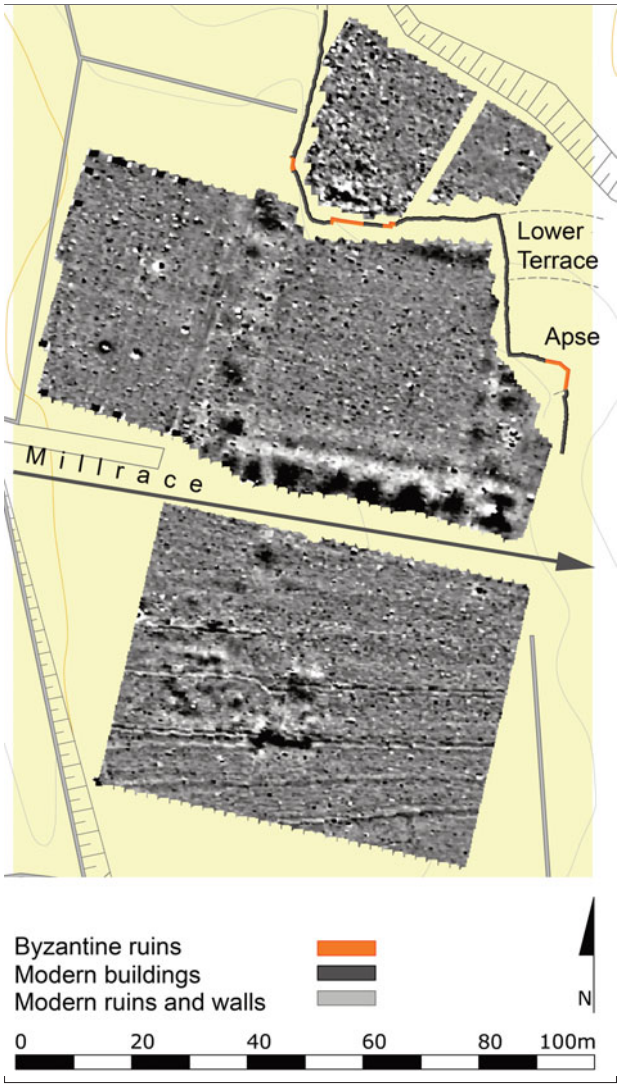

Fig. 42. Germia, palace or fishpond: geomagnetic survey

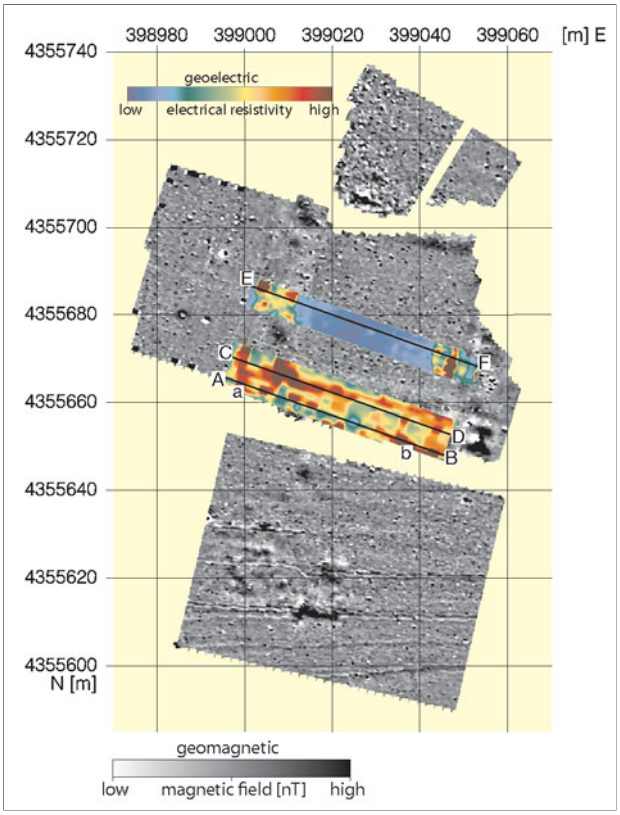

Fig. 43. Germia, palace or fishpond: geoelectric survey 1.5m below current ground level, inserted into the geomagnetic plot (fig. 42)

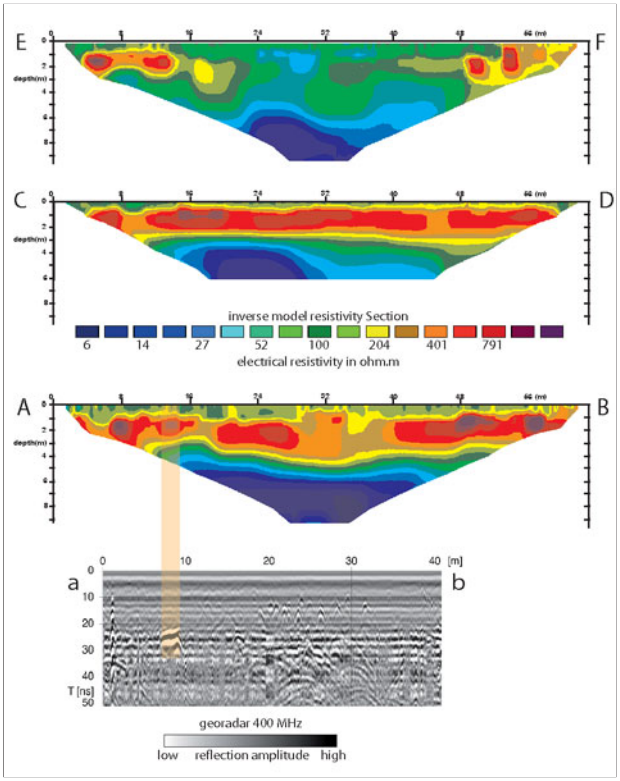

Fig. 44. Germia, palace or fishpond: geoelectrical and georadar sections (see fig. 43 for their locations). Section E–F cuts the empty square and a double line of foundations (a portico?) on the west and on the east side. Section C–D slices longitudinaly through the outer line of foundations on the south side. Section A—B and the corresponding radar section a–b cut through the outer row of rooms that abuts the southern portico(?)

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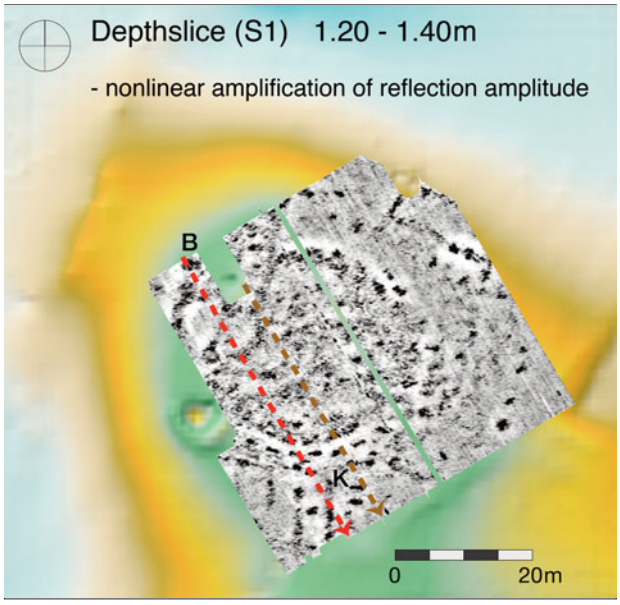

Fig. 45. Germia, domed church: georadar survey of ground level. Cf. fig. 48

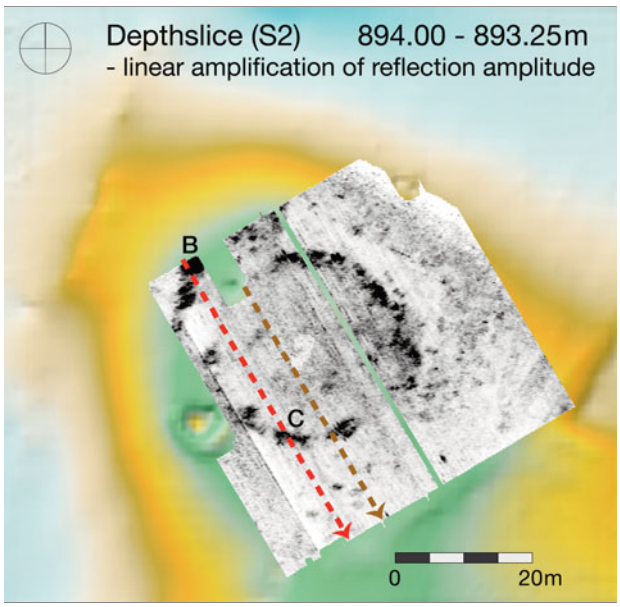

Fig. 46. Germia, domed church: georadar survey of foundations. Cf. fig. 48

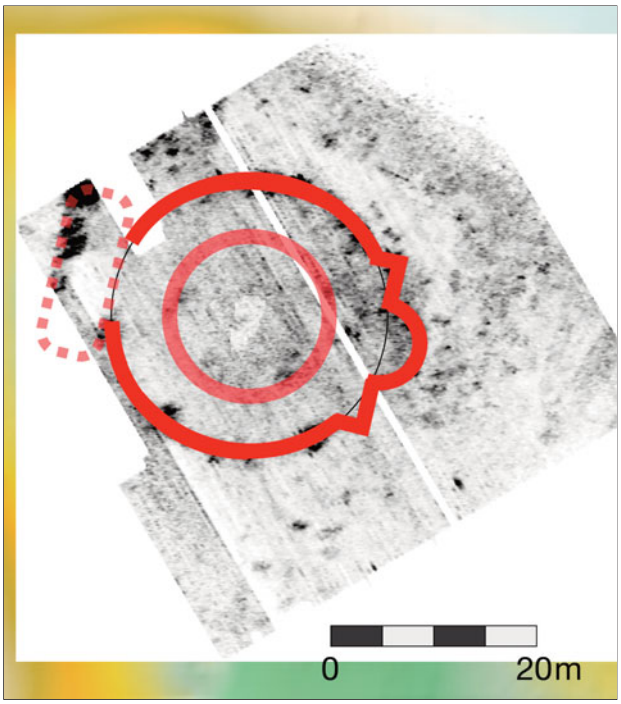

Fig. 47. Germia, domed church: reconstructed plan

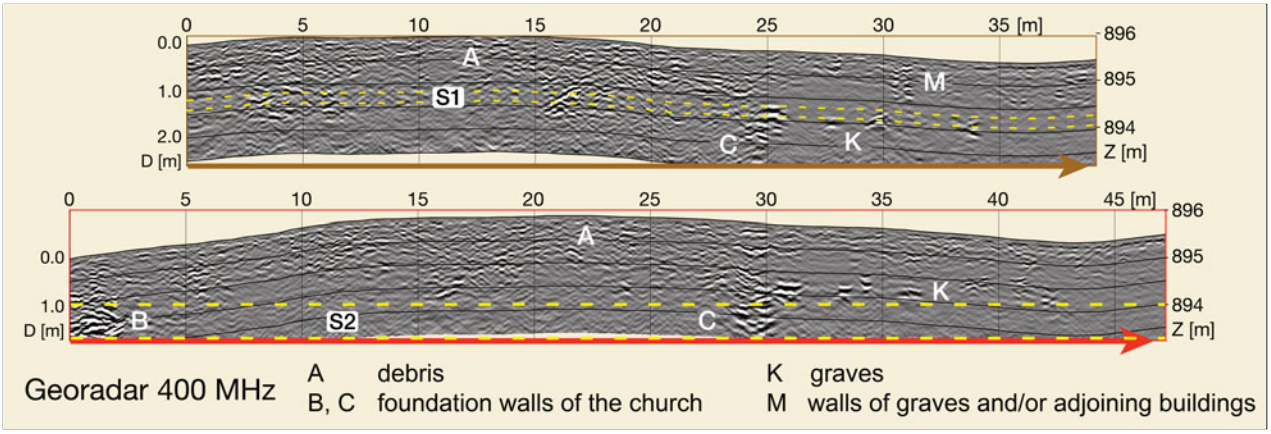

Fig. 48. Germia, domed church: georadar survey. Brown and red profiles as indicated in figs 45, 46

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Fig. 49. Germia, Church of St Michael and surrounding structures

Fig. 50. Germia, Church of St Michael: southern bays of the narthex, west elevation

Fig. 51. Germia, Church of St Michael: northern aisle, second bay from west, looking east

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Fig. 52. Germia, Church of St Michael: northern aisle, second bay from east, looking north

Fig. 53. Germia, Church of St Michael: northern aisle, central bay, looking north

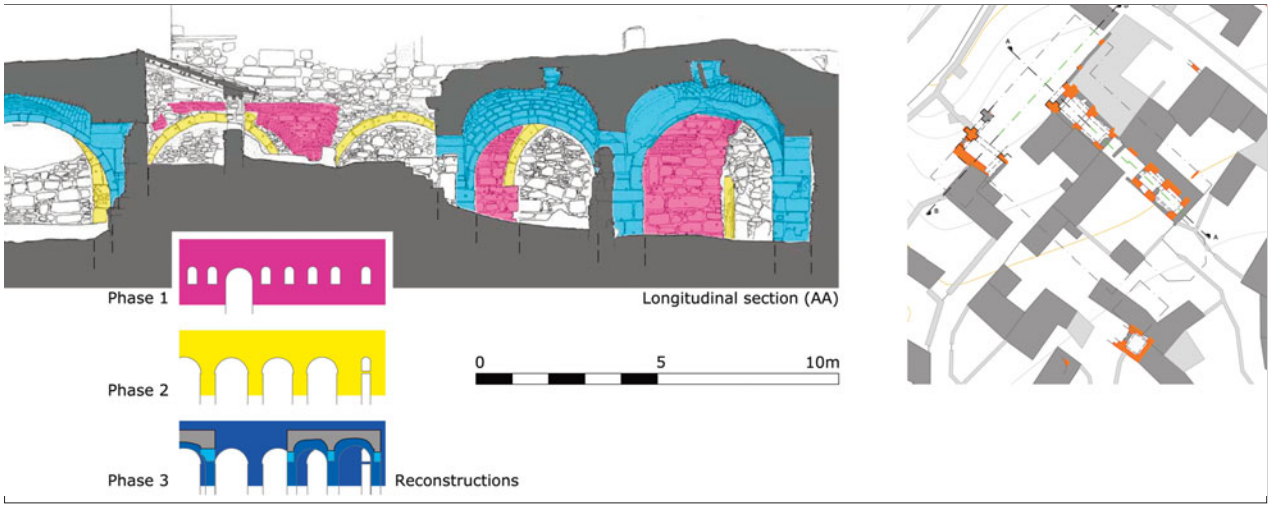

Fig. 54. Germia, Church of St Michael: northern aisle, longitudinal section looking north and partial reconstructions

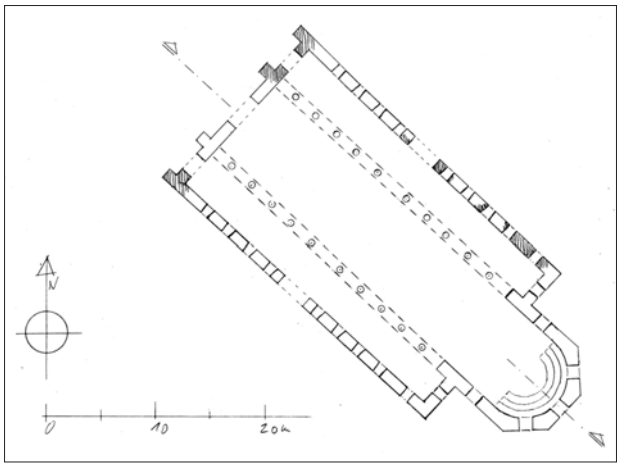

Fig. 55. Germia, Church of St Michael: reconstructed plan of the early Byzantine phase one

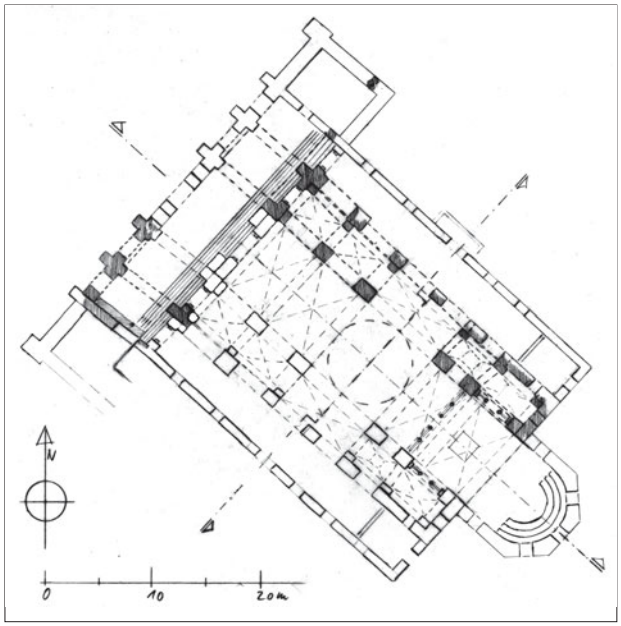

Fig. 56. Germia, Church of St Michael: reconstructed plan of the middle Byzantine phase three

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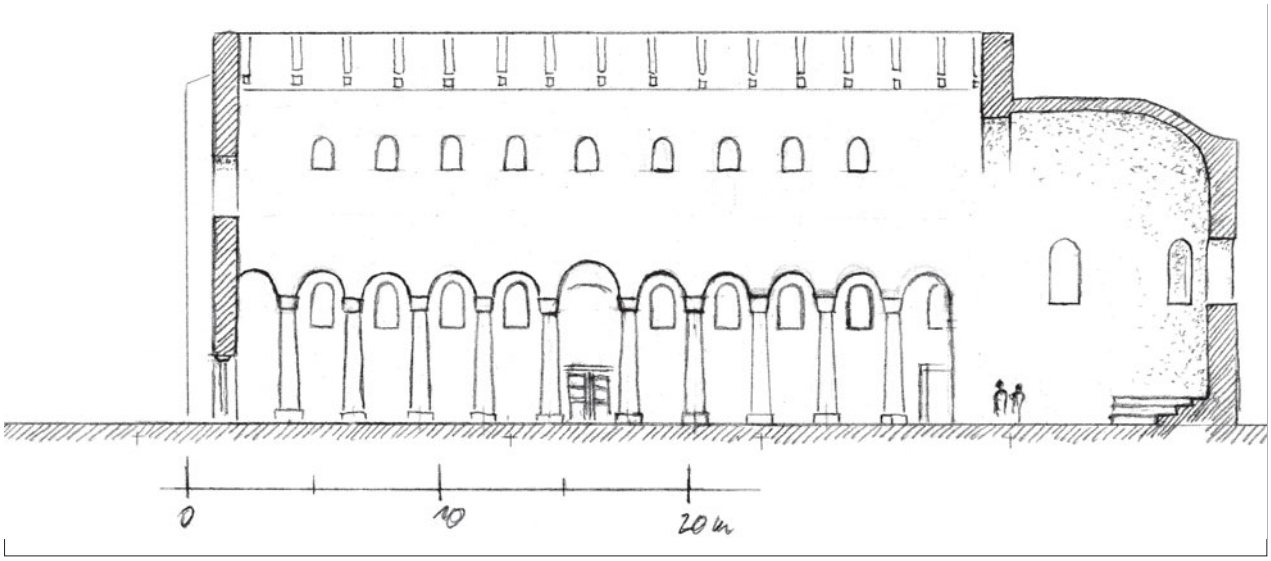

Fig. 57. Germia, Church of St Michael: phase one, reconstructed longitudinal section looking north. Cf. fig. 55

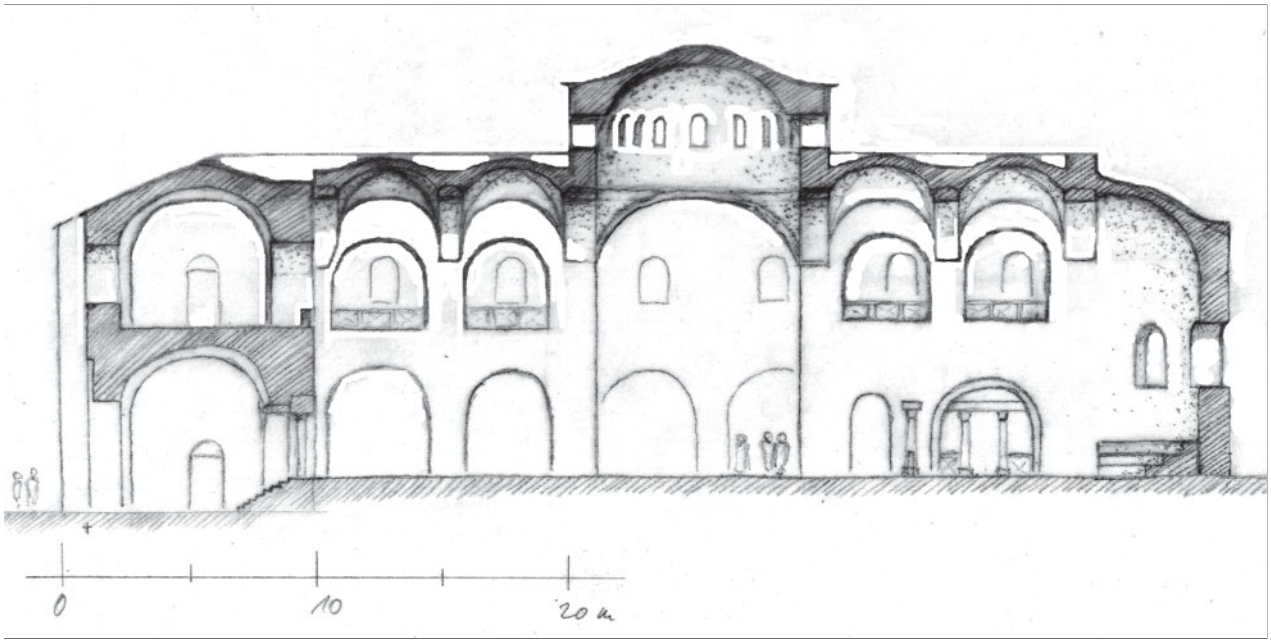

Fig. 58. Germia, Church of St Michael: phase three, reconstructed longitudinal section looking north. Cf. fig. 56

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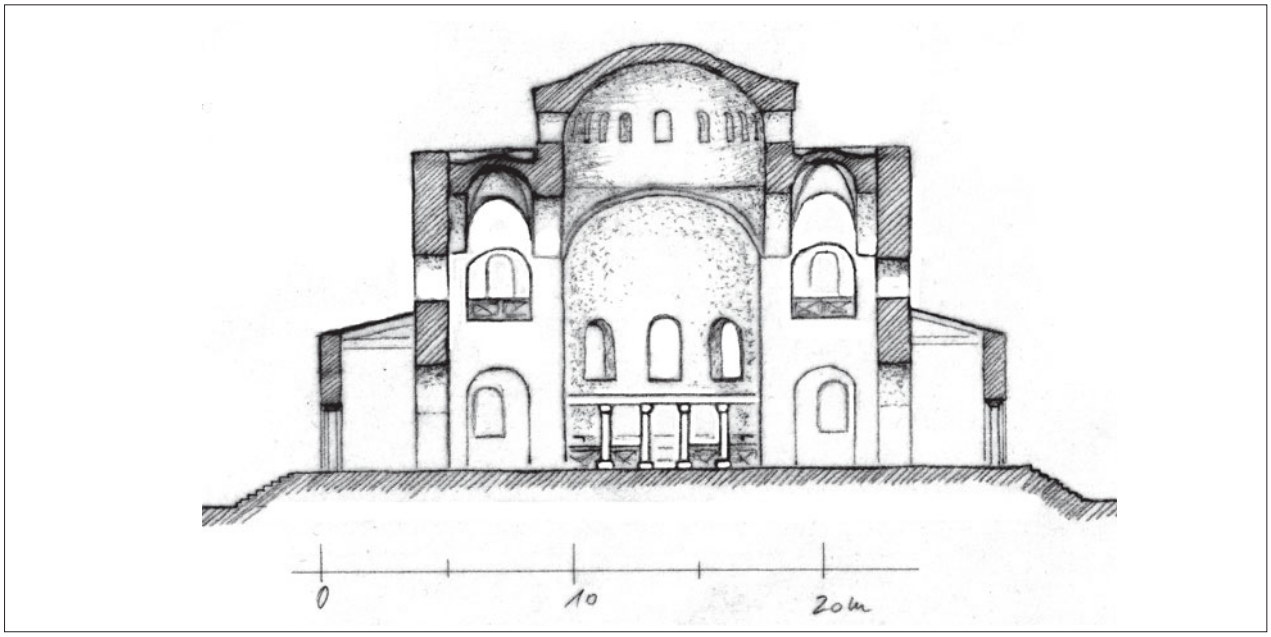

Fig. 59. Germia, Church of St Michael: phase three, reconstructed transversal section looking east. Cf. fig. 56

Fig. 60. Germia, Church of St Michael: original middle Byzantine vault mosaic in the east bay of the north aisle

Fig. 61. Germia, Church of St Michael: secondary middle Byzantine vault mosaic in the east bay of the north aisle

Fig. 62. Germia: solidus showing Constantius IV with Heraclius and Tiberius, AD 667/668

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The large necropoleis are well attested by many sarcophagi and Christian gravestones, such as do not occur elsewhere in the survey area (fig. 21). They indicate that the necropoleis at Germia were special and that it was desirable to be buried at the pilgrimage site. It is therefore likely that many of the graves belong to people from the wider vicinity, who did not live at Germia but went there for their salvation, for example from Goeleon/Kayakent. The *Life of Theodore of Sykeon* mentions as a matter of course that the citizens of Germia and those of the neighbouring city of Goeleon assembled in the Church of St Michael (Festugière 1970: §161) and the miraculous healing of the consul Studios, who in return built the Church of St Michael, was effected by somebody from Goeleon (Mango 1984: 48).

A palatial residence or the 'miraculous' fishpond?
By Ercan Erkul, Philipp Niewöhner and Harald Stümpel
To the east Germia is flanked by a ravine that contains a stream and terraced gardens (fig. 2). Several terrace walls incorporate ancient masonry of a high quality with well-cut blocks that would be wasted on field walls and indicate architecture of a higher order. In one area geomagnetic survey on the terrace above the ancient wall has revealed the plan of a large enclosure (figs 42–44; the ancient wall is marked in orange on fig. 42 and forms the northern edge of the terrace as well as the northern border of the enclosure). This is made up of a central square and a surrounding band of buildings. The square is empty and measures ca 35m by 35m. The surrounding buildings are roughly 10m deep and consist of a lighter inner structure, possibly a portico, and an outer row of rooms.

To the east of the enclosure the polygonal outer wall of an apse is visible at a corner of another terrace wall (fig. 42). The polygonal form indicates a Byzantine date (Delvoye 1966), and this may be transferred from the apse onto the whole complex, because the masonry is the same and the apse is aligned along the axis of the square. The apse may possibly belong to a dining and/or reception hall; similarly symmetrical combinations of apsed halls and porticoed squares were a common feature of early Byzantine palatial residences (Baldini Lippolis 2001: 58–60). Furthermore, an undocumented excavation at the northern flank of the apse has brought to light parts of an *opus sectile* floor, another typical element of Byzantine palatial architecture (cf. Guiglia Guidobaldi 1982; Peschlow 1983; Ötüken 1999; Demiriz 2002).

A palatial residence would make sense at Germia; it could have served the bishop, and Justinian as well as other high-ranking pilgrims might have stayed there. Strangely, no such residence figures in the *Life of Theodore of Sykeon*; rather, the bishop accommodates the saint at the Monastery of Aligete and on another occasion Theodore stays in the *catechumenion* of St Michael (Festugière 1970: §100, 101 [Aligete], 161 [*catechumenion*]). Also, the site itself is not condusive to a residence since the location in the ravine does not afford a view and it is close to the stream, which brings about humidity and mosquitoes.

The dilemma may be solved by an alternative interpretation: that this is the location of the healing fishpond that is mentioned in the description of the 'miraculous water of Germia' quoted above from the *Miracles of St Michael*. The pond would need to be located where the water was, which would explain the location in the ravine. A thermal spring further upstream today feeds a large Turkish bath with swimming pools, and the same water could conceivably have been channelled to the monument under consideration. In fact, an old Turkish millrace flanks the Byzantine structure on the south and testifies that water used to be channelled there. The complex compares closely to swimming pools of large Roman *thermae* that were also surrounded by porticoes and may have inspired the architecture at Germia, for example the *natatio* at the baths of Trajan, Caracalla and Diocletian at Rome, the Capito baths at Miletus and the bath-gymnasium at Aphrodisias in Caria (Yegül 1992: 142–69; Nielsen 1993: cat. C.4, 8, 11, 293, 304).

A domed necropolis church: the Church of St Sergius?
By Ercan Erkul, Philipp Niewöhner and Harald Stümpel
On the other, northeastern side of the ravine outside the Turkish village and on the way to the hydrogen-sulphide spring at Kurtluca (fig. 2) lies a round church within a necropolis. The church occupies the top of a flat hill that is strewn with slabs of white and coloured marbles, the former from Gecek, the latter imported from Docimium (*pavonazzetto*; Fant 1989), indicative of sumptuous wall revetment.

Geophysical survey has revealed a circular plan with a straight east wall and a large semicircular apse (figs 45–48). The west side was apparently flanked by an elongated narthex. The central circle is more than 25m in diameter, which would appear to be too large for a freestanding dome. The outer walls therefore probably contained an inner ring of supports that would have carried a smaller central dome and been surrounded by a circular aisle (fig. 47). A large number of glass tesserae indicates that the dome was clad with mosaics. On the outside, the church is surrounded by graves that are arranged parallel to the perimeter wall and show up as oblong black spots on the geophysical chart (fig. 45).

Identification with the Church of St Sergius, as proposed above, is supported by the central plan, because other churches of St Sergius had a central plan too, for example the Justinianic foundation at Constantinople (Ćurčić 2010: 199; for other examples, see Strzy-

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gowski 1918: 1.104; Mango 1974: 336). The tradition may have been established by the example of the centrally-planned martyrium at Resafa/Sergiupolis, probably the most famous shrine of that dedication and home of the most important relics of the martyr (Brands 2002: 174–76).

The Church of St Michael

By Stefan Giese

The church of the archangel is identified by its central location within the ring of necropoleis and the Turkish village, by its great size and because it is the only building that is known to have been maintained throughout the Byzantine and into the Turkish period. It is surrounded by half a dozen other ancient ruins, all of them with the same orientation and some with apses (fig. 49), which suggests that St Michael commanded a larger complex of buildings that may all have been related to the religious centre. Today, they are incorporated in and divided among dozens of separate Turkish houses and plots, and their relation becomes apparent only on a map.

The Church of St Michael survives in a much-reduced and fragmented state. The best-preserved parts include the southern bay of the narthex (fig. 50), the northern aisle (figs 51–54) and an ancillary bay at the southeast corner (Niewöhner, Rheidt 2010: 140, figs 3–5, 7, 8). At least three major building phases can be differentiated. At first, the church had the form of a three-aisled basilica (figs 55, 57); during the second phase two more aisles and a narthex were added; finally, the basilica was converted into a domed cross-church (figs 56, 58, 59). The first and the third phases were Constantinopolitan in character, the second had provincial traits.

The original, three-aisled basilica was constructed with alternating layers of limestone and bricks as well as with brick arches, as may be seen in the surviving parts of its northern wall (fig. 53). Most of the brick arches were less than 2m wide and will have contained windows, but a single arch is wider and may have marked a northern portal (fig. 54). Few Byzantine churches, and certainly nothing comparable, are known from Galatia (cf. de Jerphanion 1928: 113–43; Ballance 1971: 614), but in the neighbouring province of Lycaonia a great number of ruins have been preserved, several with sumptuous northern portals that seem to have been of some importance (Bell, Ramsay 1909: fig. 2, 46, no. 1, fig. 24, 65, no. 5, fig. 30, 74, no. 6, fig. 80, 121, no. 21, fig. 92, 133, no. 15; Restle 1966; Eyice 1971). At Germia, alternating layers of limestone and bricks as well as brick arches stand out from the local building traditions in central Anatolia and point to external influence, most probably from Constantinople. There, the consul Studios had built the Church of John the Baptist as a three-aisled basilica with alternating layers of limestone and bricks, brick arches and so-called Theodosian column capitals that are also found at Germia (Mango 1978; Ćurčić 2010: 98). The analogies suggest that the original Church of St Michael is the one built by Studios sometime around the middle of the fifth century.

A second building campaign transformed the former northern wall into an arcade that opened into an additional outer aisle (fig. 54). The brick window arches were replaced by a wide stone arcade that rested on rectangular pillars (fig. 53). The same must have happened on the southern side, and towards the west the church was also enlarged by the addition of a two-storeyed narthex with wide stone arches and barrel vaults (fig. 50) as well as flanking staircases. Similarly wide stone arcades on pillars, double-storeyed nartheces and barrel vaults are known from Lycaonia, where they are also associated with later repairs and, more generally, with a second stage in church building (Bell, Ramsay 1909: 41–50; Restle 1966; Eyice 1971). The Lycaonian parallels suggest that the second building phase was a local affair and turned the character of St Michael from Constantinopolitan to Anatolian. This is not to suggest a regression from metropolitan importance to provincial obscurity. As the style and appearance of the church changed, its function was enhanced. The church was hugely enlarged, which suggests prosperity and a large number of pilgrims in accordance with the steadily growing importance of Germia as attested in the written sources.

The second phase may arguably date from the sixth century, because Theodore of Sykeon stayed overnight in the *catechumenion* of the church (Festugière 1970: §161) and this term may refer to the narthex gallery. At Constantinople and elsewhere the galleries were called *catechumenia* in the plural from the seventh century onwards (Strube 1973: 92–95), but at early Byzantine Germia the only attested gallery was above the narthex, which may explain the use of the singular. The original three-aisled basilica of consul Studios seems to have had neither a narthex nor galleries.

Galleries were commonly used for a wide variety of purposes (Delvoye 1971) and could be closely associated with the residence of the bishop. At Constantinople, for example, the patriarchate became attached to the galleries of St Sophia in the sixth century (Mango 1959: 52; Cormack, Hawkins 1977). In 680/681 the Ecumenical Council at Constantinople ruled that neither priests nor laymen were allowed to live in the galleries with their wives (canon 97) and this ban was repeated by Leo VI (886–912; novel 73).

At Germia, the Church of St Michael was turned into a domed cruciform church during a third building campaign (figs 56, 58, 59). In the northern aisle the

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vaulting is confined to four bays, two to the west and two to the east of a central crossing as wide as the main aisle (fig. 54). As a consequence, the two eastern bays diverge from the corresponding wide arcades of the second phase and partly overlap, but this was necessary in order to accommodate a central dome above the crossing. The overall result was an unusually large church. Other domed cruciform churches normally had only three aisles and one bay on each side of the crossing, such as the cathedral of Amorium, the southern neighbour of Germia (Ivison 2005). The domed cruciform church at Dere Ağzı in Lycia, with two bays to the east of the crossing, is considered the largest church building of the middle Byzantine period (Morganstern 1983), but the Church of St Michael was still larger.

The third building phase surely dates to the middle Byzantine period. This is indicated by the domed crossing that interrupts the inner aisles and galleries without being bridged as in domed basilicas (fig. 58; Crowfoot 1897–1898: 89). Domed cruciform churches with a free, uninterrupted crossing seem to have been built only after the end of the early Byzantine period (Krautheimer 1986: 290–95; Ćurčić 2010: 191). The erection of the dome at the Church of St Michael may have been connected with Germia's elevation to the status of metropolis, which occurred some time around the middle of the 11th century (Belke 1984a: 167).

Middle Byzantine vault mosaics

By Gülseren Dikilitaş

The middle Byzantine vaults of the Church of St Michael were clad in mosaics. Most of these have fallen off, but the eastern bay of the northern aisle retains some remains. The northern arch has an ornamental border (fig. 60). The southern arch was later strengthened with an additional second arch and on that occasion decorated with a floral border (fig. 61). The western and eastern arches and the central vault retain a three-layered plaster bedding with the imprint of tessellation and traces of preparatory drawings. Some gaps were later repaired with simple plaster.

The tesserae consist of stone, marble and glass. The black tesserae surrounding the ornamental border on the northern arch are made of marble and were originally white, until they were not only blackened but thoroughly burnt by what must have been a very hot fire (fig. 60). All the tesserae of this original mosaic are rather irregular in shape and size, with approximately 125 tesserae per 10cm^2. Only the lower half of each tessera is embedded in the plaster. This helps to hide the mortar joints and makes for a more coherent appearance, but apparently not for a firm grip, since many tesserae are lost, although the mortar bed is still preserved and retains the imprints.

The later floral border on the secondary southern arch uses different materials and no gold (fig. 61). Here the tesserae are more regular in shape and size, with approximately 130 per 10cm^2. Moreover, each tessera is fully embedded in the plaster. This has the disadvantage of visible mortar joints that form a web of white lines, separating the tesserae and interrupting the pattern, but seems to have made for more stability, because wherever the bedding has survived the tesserae are also still *in situ*.

A hoard of seventh-century gold coins

By Joachim Gorecki and Philipp Niewöhner

The middle Byzantine third building phase of the Church of St Michael prompts the question as to how Germia survived the Arab raids of the seventh to ninth century, when its southern neighbour Amorium was attacked at least five times and conquered twice, in 668 and 838, despite its strong city walls and a substantial garrison (Belke 1984a: 122–25; Lightfoot 2007). Without any fortifications and far removed from the next military stronghold – possibly the Byzantine fort at Pessinus on the other side of Mount Dindymon (Devreker et al. 2003) – Germia and its vicinity should have been an easy and attractive target and, in addition, would have provided ample water and grazing for the Arab cavalry.

Apparently, the Arabs took Germia at least once in 668 or soon thereafter, when a hoard of 47 gold coins was buried in the centre of the pilgrimage site. The hoard consists exclusively of fresh coinage from the reign of Constans II (641–668), with one possible exception that was attributed to Heraclius (610–641) in 1972, when the coins were recovered and inventoried at the archaeological museum in Eskişehir, but has since been lost. The latest solidus of the hoard shows Constantius IV with Heraclius and Tiberius and was struck in 667 or 668 (fig. 62).

Two similar gold hoards from the reign of Constans II were found at Cücük near Çubuk 30km northeast of Ankara and at Çavuş near Seydişehir more than 50km southwest of Konya (Kurum 1973; Morrisson et al. 2006: 380, cat. 311, 399, cat. 336; cf. Schulze-Dörrlamm 1994: 658, fig. 97 for a fourth gold hoard from the same period that is also attributed to Anatolia); they end with coinage from 663/668 and 659/661 respectively. All three hoards were most likely buried in connection with a wide-ranging Arab invasion and conquest of central Anatolia in 668 (Jankowiak 2013). The coins will have been brought in from the capital rather than accumulated locally, for example in the treasury of the Church of St Michael, because the hoards consist exclusively of fresh gold coins, whilst local collections are usually more diverse and church treasures included various other objects in addition to coins (Boyd, Mango Mundell 1992). The context of 668 seems to point to army detachments that

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were to fight the Arab invasion and may have buried the coins before going into combat. This would at least prevent the gold from falling into enemy hands.

The failure to recover the hoards strongly suggests that the Arabs annihilated the Byzantine forces and most likely also forayed against the various settlements. As to Germia and its vicinity, no more is known, but the later Byzantine and Turkish continuity of settlement shows that the Arab invasions did not permanently disrupt the settlement tradition.

Conclusions

The settlement continuity throughout both the Arab invasions and the Turkish conquest is remarkable in comparison to other parts of Anatolia, where settlement traditions were disrupted (Vryonis 1986: 103–30), but hardly surprising in the face of the ample natural resources of the survey area. Earlier developments were however less continuous. Germia was newly founded and replaced first Mantalos/Eudoxias/Ayvalı as local town and then Pessinus as regional city. Even earlier, the survey area was apparently resettled from scratch during the *Pax Romana*, with the Bronze Age höyüks disregarded as settlement locations.

Discontinuity appears as a recurrent pattern of ancient central Anatolia, both during the crises of the Iron Age and during the prosperous Roman and Byzantine periods. In the Germia region, the settlement hierarchy seems to have been flexible and was reconfigured when religious preferences changed from pagan Men to Christian Michael. Similar discontinuities can be observed elsewhere on the high plateau. For example, the great Hittite and Phrygian capital cities Hattusa and Gordion fell into oblivion after the end of the respective empires (Darbyshire, Rose 2011; Schachner 2011) and Roman Aizanoi in Phrygia, owing to the wealth and political ambitions of its citizens who pursued careers with the emperor at Rome, rose from unprepossessing beginnings to urban grandeur (Rheidt 2010) but collapsed rapidly when city politics ceased to be of importance during the early Byzantine period (Niewöhner 2006; 2011b: 164–83). Similarly, Roman Pessinus derived its prominence mainly from the Temple of Cybele and eventually lost out to Germia and Amorium, after the old cults had been replaced by Christianity (Claerhout, Devreker 2008). Amorium, on the other hand, had its heyday during the Byzantine-Arab wars, when it served as capital of the Anatolic theme, housed the most important headquarters and bred an imperial dynasty, but was eventually crushed by the enemy (Lightfoot 2007).

The volatile settlement history may explain why the central Anatolian high plateau, after having been at the forefront of cultural development during the Neolithic and the Bronze Age (McMahon, Steadman 2011), fell behind in Greek and Roman antiquity (Mitchell 1993: 1.1–10). At that time, Mediterranean cities took over, and one of their outstanding qualities in comparison with central Anatolia was settlement continuity and tradition in spite of political and religious changes. Miletus in Caria on the west coast of Asia Minor is a prime example. After the city had been thoroughly destroyed by the Persians in 494 BC, it was painstakingly reconstructed on the same site, although this literally required the removal of a mountain of debris that was piled up on an extra-urban hill (von Graeve 2005: 171; 2006: 244–46). Afterwards, Miletus continued to prosper as the regional centre throughout the Hellenistic, Roman and Byzantine periods, until it was annihilated for a second time during the long-lasting Byzantine-Arab wars (Dally, Maischberger 2009; Kayhan Elbirlik, Tanman 2011; Niewöhner 2011a). Yet again, after the Turkish conquest Miletus was revived under the new name of Balat and became once more the regional centre.

This continuity may be explained by Miletus' prime location on a well-defended peninsula at the mouth of the Maeander river that served as harbour and trading centre for the entire Maeander valley as well as parts of western-central Anatolia (Thonemann 2011; Brückner et al. forthcoming). Miletus' situation was a common one among Mediterranean cities; they benefitted from a diverse topography of 'definite places' (Horden, Purcell 2000: 51–172) that favoured them above neighbouring settlements and ensured continuity. In contrast, the more uniform landscape of central Anatolia allowed for greater equality between settlements and more flexibility, but reduced concentration and continuity.

The lack of 'definite places' worked to Germia's advantage, when, during the Christian era, its healing waters with the ensuing pilgrimage were sufficient to promote it over neighbouring sites and to worldwide fame, but it deprived the area of a more long-lasting centre that could accumulate the benefits of a larger population, wider trade relations and a stronger defensive position. Similarly, the cult of Cybele at Pessinus or the strategic importance of Amorium during the Byzantine-Arab wars secured each city only one advantage, which – under the uniform conditions of the high plateau – was enough to single them out, but only for the duration of a particular religious or political scenario. The same was clearly true also for Hattusa and Gordion as capital cities of their respective empires or for Aizanoi as a Roman polis.

The rise and fall of all these central Anatolian cities was related to wider economical, political and/or religious networks. Such networks were a logistical precondition for the upkeep of any metropolis, not only under the often difficult living conditions of the arid high plateau (Schachner 2009), but also along the more hospitable shores of the Mediterranean. Turkish

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Miletus/Balat finally all but disappeared from the map after the Ottoman conquest, because that empire had already established an alternative trade route. All cities depended on networks, and 'definite places' like Miletus and many other Mediterranean sites retained nodal positions in varying networks over long and vicissitudinous periods of antiquity. In contrast, central Anatolian cities seldom outlasted change, apparently because the uniform terrain did not normally lend any one place long-lasting distinction, and pre-eminence depended mainly on relatively short-lived circumstances.

This scenario is confirmed by the few central Anatolian cities that can claim a more long-lasting period of success. Ancyra/Ankara (Görkay et al. 2011; Mitchell 2012) and Iconium/Konya (Belke 1984a: 176–78; Mert, Niewöhner 2010) may be the most prominent examples. Both cities are surrounded by exceptionally large and thinly-inhabited territories, and the lack of alternative settlements may have contributed as much to their continuity as their own particular advantages. The latter are not as obvious as in the cases of the above-mentioned central Anatolian neighbours, and the simple ability to support an urban population in inhospitable surroundings may have been key to the continuous prosperity of Ancyra and Iconium. They occupied 'definite places' similar to that of Miletus and many other Mediterranean cities and over time profited from the accumulation of various economical, political, religious and strategic functions.

Where the high plateau was more uniform, these vital functions were less likely to be centralised and their organisation changed more easily over time. Germia owed both its meteoric rise to worldwide fame as well as its insignificance in comparison with many older Mediterranean cities to its location in such an area. The evolving scenario confirms the importance of the terrain for pre-modern societies and justifies topographical approaches to history.

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