

Formation of the Phrygian State: The Early Iron Age at Gordion

Author(s): Mary M. Voigt and Robert C. Henrickson

Source: *Anatolian Studies*, Vol. 50 (2000), pp. 37-54

Published by: [British Institute at Ankara](#)

Stable URL: <http://www.jstor.org/stable/3643013>

Accessed: 23/03/2011 17:32

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=biaa>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



British Institute at Ankara is collaborating with JSTOR to digitize, preserve and extend access to *Anatolian Studies*.

Formation of the Phrygian state: the Early Iron Age at Gordion*

Mary M. Voigt¹ and Robert C. Henrickson²

¹The College of William and Mary, Virginia, ²The Smithsonian Institution

A brief history of archaeological research at Gordion
Piecing together documentary sources from areas to the east and west of Anatolia, historians agree that in the eighth century BC, central Anatolia was dominated by people who spoke an Indo-European language, Phrygian (Mellink 1991: 621; Muscarella 1995: 92 with refs). From historical sources we also know the location of the Phrygians' capital, Gordion: Quintus Curtius (*Hist Alex* III.1-2) states that the city lay on the Sangarios River 'equally distant from the Pontic and Cilician Seas'. Using this description, Gustav and Augustus Körte travelled across Turkey more than a century ago looking for the physical remains of Gordion and Phrygia. They eventually focused on a mound lying adjacent to the Sangarios or modern Sakarya. The mound, now called Yassihöyük, is large relative to others in the region, and lies in the proper geographical setting for ancient Gordion; a series of artificial mounds or tumuli scattered across nearby slopes provides additional evidence of the settlement's importance.

Excavation carried out on Yassihöyük and several tumuli by the Körte brothers confirmed the existence of a major settlement of the first millennium BC and rich contemporary burials (Körte, Körte 1904). More extensive excavation by Rodney Stuart Young between 1950 and 1973 recovered inscriptions in the Phrygian language as well as a burned palace quarter. The latter, generally referred to as the 'Early Phrygian Destruction Level' came to be identified with the residence of the Phrygian king Midas in the eighth century BC (Sams 1995: with refs).¹ In 1988 excavation was resumed at

Gordion after a hiatus of 15 years following the death of Rodney Young². One of the primary goals set for the initial phase of research was the definition of a detailed stratigraphic sequence for Yassihöyük from the surface of the mound down into the Bronze Age. This goal was accomplished through the excavation of two soundings that together document a range of time that extends from Medieval to Middle Bronze Age (fig 1, table 1; see also Voigt 1994; 1997; Sams, Voigt 1990; 1991). For each phase in the resulting Yassihöyük Stratigraphic Sequence (YHSS) we obtained a sample of architecture, quantitative ceramic data, a broad range of other artefact types, and much needed samples of floral and faunal remains (Henrickson 1993; 1994; Miller in press; Zeder, Arter 1994). Using stratigraphy and ceramics, we were able to propose a new chronology for the site; excavation since 1993 has expanded our archaeological sample for YHSS phases 6B to 1 (Voigt et al 1997).

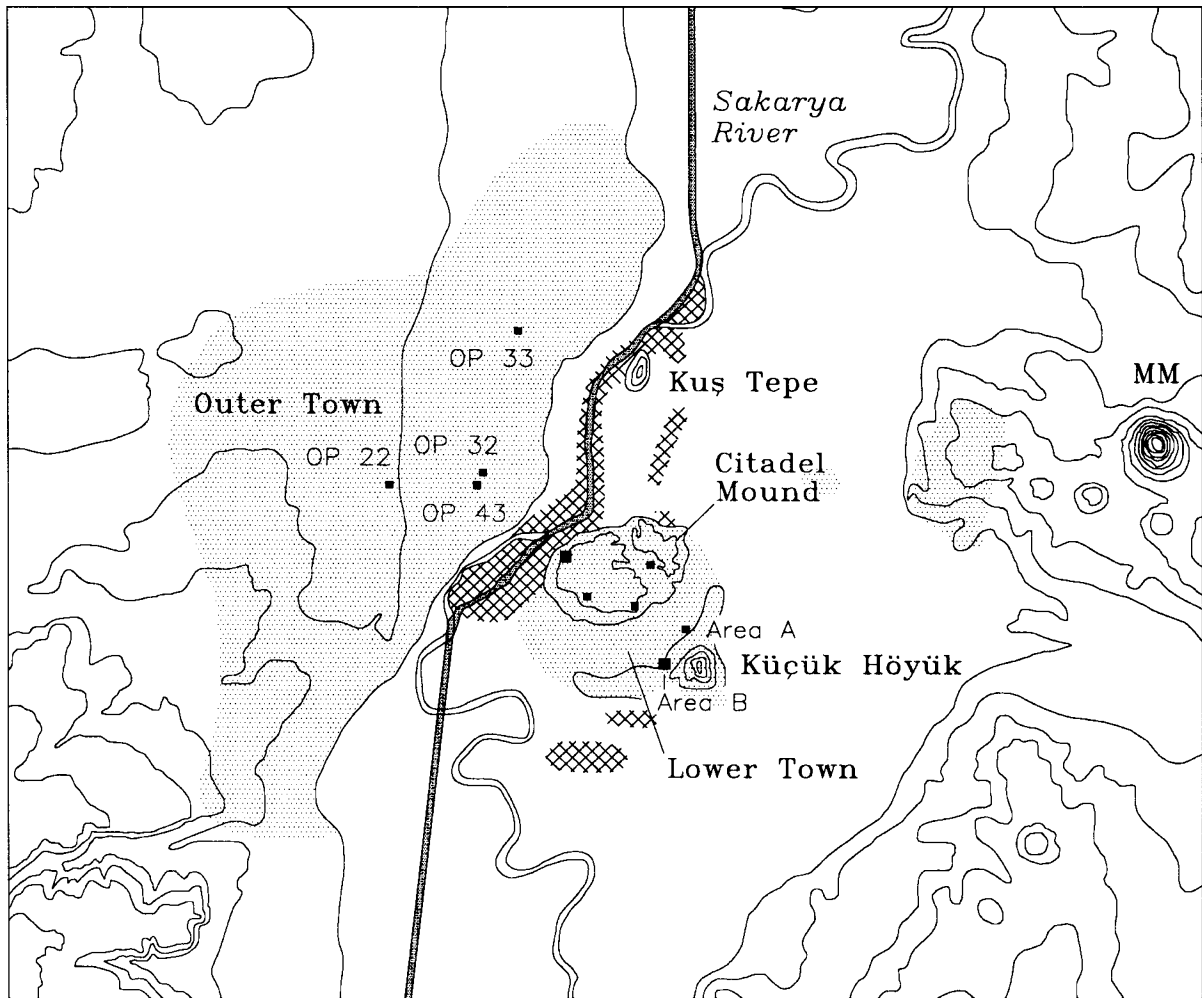
The identification of Yassihöyük as Gordion has not been seriously challenged for half a century. What has been challenged, especially during the past decade, is the way in which ancient textual sources that contain references to the site and its rulers have been used to interpret archaeological remains at the site. None of these sources comes from Gordion itself, which has produced inscribed seals and graffiti in Luwian (Güterbock 1980), numerous graffiti and some short inscriptions in Phrygian (Brixhe, Lejeune 1984: 73-214), Greek (Roller 1987) and Latin, but no long texts relevant to the site's history³. Instead, texts pertinent to the period from ca. 1200 to 600 BC, the period when a Phrygian state was formed and flourished, come from contemporary Assyrian sources and much later Greek sources (summarised by Hawkins 1991: 416-22; Körte, Körte 1904; Mellink 1991: 622-4, all with refs).

* This paper was prepared for a conference entitled 'Anatolia: Between the Near East and Europe' organised by Ian Hodder and held at the British Academy in April 1998. We would like to thank Professor Hodder for the opportunity to participate in the conference, which prompted us to refine and improve our interpretation of the excavated evidence from Gordion. Excavation from 1988-93 was funded by the National Endowment for the Humanities (a US federal agency), the National Geographic Society and generous private donors.

¹ All research carried out at Gordion since 1950 has been sponsored by the University of Pennsylvania Museum of Anthropology and Archaeology. For a recent summary of the results of Young's excavations see Sams 1995.

² In 1988 G Kenneth Sams was appointed Project Director, with primary responsibility for site conservation and the ongoing publication of Young's work. All excavation and survey since 1988 has been under the direction of M M Voigt.

³ Recently two stele have been found in the Gordion region. One, recovered from a field to the northeast of Gordion, bears an inscription in Phrygian, which has not yet been translated. The second inscription is a grave stele erected for a Roman soldier (Goldman 1997).



YASSIHÖYÜK/GORDION

-  Settlement Areas Based on Surface Remains
-  Settlement Areas Based on Cores and River Bank Cuts
-  Excavation Areas 1993–1997
-  Sakarya River Course 1950
-  Modern Dredged River Course

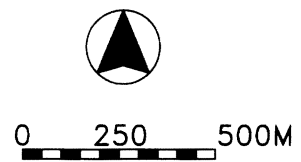


Fig 1. Map showing the location of Gordion and major topographic zones within the site

Goals, data and assumptions

In this paper we will examine three questions important for any assessment of the relationship of Phrygia to people and polities lying to the east and west. First, is there archaeological evidence to support or deny Herodotus' claim that the ancestors of the Phrygian rulers at Gordion migrated into central Anatolia from Thrace? Second, what material evidence exists for the development of a powerful elite at Gordion during the early first millennium BC? Third, who or what was responsible for the burning of the eighth-century capital and what were the political consequences of that event?

Architecture and settlement plan are obviously critical for any reconstruction of political systems. At present, a survey of the region surrounding Gordion is in its initial stages, so that we are restricted to information from a central place, Gordion itself⁴. Moreover, variation in the archaeological data available for each chronological phase significantly affects the degree of certainty with which we can answer the questions posed above. A brief summary of sample size and the nature of the excavated remains is therefore in order before proceeding to a more detailed examination of the evidence; since research goals and excavation methods have changed drastically over the past 50 years, date of excavation is indicated in this summary.

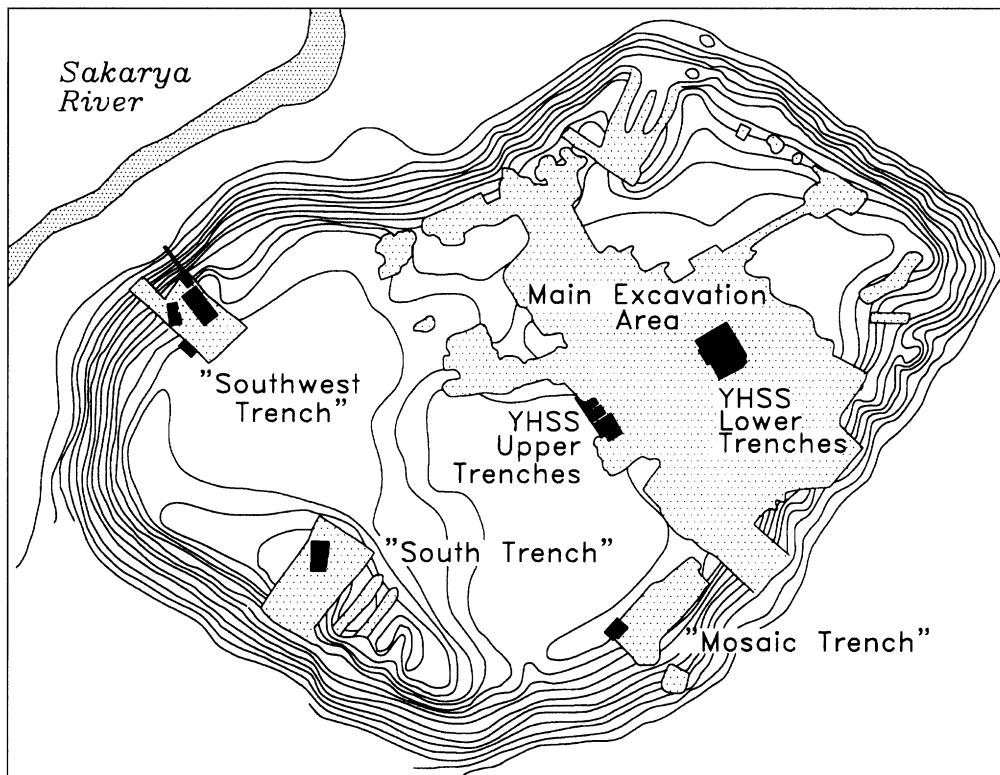
The total sample for Late Bronze Age/Phase 8 and Early Iron Age/Phase 7 is very small, obtained through limited soundings on the eastern half of the Citadel Mound by Machteld Mellink and Rodney Young, and somewhat broader areas cleared in 1988-9; all of the architecture is domestic. Information on Phase 6B comes from slightly larger exposures in the same area and consists of monumental architecture, the earliest formal buildings attributable to the Phrygian dynasts. Phase 6A, generally referred to as the 'Early Phrygian Destruction Level', is the best known period in the occupation of Gordion because of excellent preservation within the burned palace quarter, cleared over an area of ca. 2.5ha on the eastern half of the mound by Rodney Young (fig 2, Main Excavation Area). A very small but deep sounding on the western part of the Citadel carried out in 1993 (fig 2, within South Trench) indicates that this area was also occupied during Phase 6, and that our picture of this settlement is both biased and incomplete. This conclusion is reinforced by stray sherds of the distinctive painted ware that characterises the Early

Phrygian period found in recent soundings placed to the south and northwest of the Citadel Mound.

After the city's destruction it was rebuilt, and during YHSS 5 or the Middle Phrygian period Gordion reached a population peak, covering about 1km². The excavated sample for Middle Phrygian times is even larger than that for the Early Phrygian period. Within Young's Main Excavation Area the palace quarter was replicated, set on a thick layer of construction fill that had been laid over the burned Early Phrygian buildings. To the west, a second high artificial mound was built to support elite dwellings sampled by a Rodney Young test trench as well as smaller soundings since 1988 (fig 2, South Trench). (Note that the division between the two Middle Phrygian mounds is not visible at present, since in later periods the street that ran between the YHSS 5 and 4 eastern and western mounds was filled, producing the large unified Citadel Mound of today.) To the south of the Citadel was a low but heavily fortified area, the Lower Town; the fortification system was investigated by Machteld Mellink, and both large formal buildings and domestic structures within the walls have been documented since 1993 (fig 1, Areas A and B). To the north and west of the Citadel lay unfortified areas with domestic architecture: the Outer Town, known from surface survey and a small sounding carried out in 1993 (fig 1, Op 22). To the east, separated from the rest of the settlement by the ancient Sakarya river (Marsh 1997), lay tumuli and domestic structures cleared by Rodney Young.

Pending completion of the analysis of floral and faunal remains, the primary means of inferring the systems of production critical to an understanding of political systems is the large ceramic sample. Potters make pottery vessels for people to use. These vessels are not simply objects or random concatenations of independent attributes, such as rim-forms or decoration. They are the end-product of a process, a series of decisions and actions, each of which influenced or constrained all subsequent ones. The consumer society shapes the pottery assemblage and craft just as surely, if not as directly, as the potters do the pots themselves. Both the pottery assemblage and potters are embedded deep within a socio-economic and cultural network. On the level of the individual pot, function influences form and material choice and preparation, but diet and preferred methods of food preparation also affect the specific characteristics of a cooking pot. Even given specific form and fabric requirements, varied sequences of forming and finishing methods can yield the particular desired final product. Often such technological differences have cultural or socio-economic implications. The specific sequence used derives from the tradition of the potter's craft within that society — not just the raw

⁴ The Gordion Regional Survey was begun in 1988 by William Sumner, was continued by Keith Dickey and Andrew Goldman, and is now under the direction of Lisa Kealhofer of Santa Clara University.



YASSIHÖYÜK/GORDION CITADEL MOUND

- Excavated Areas 1900–1972
 Excavated Areas 1988–1997

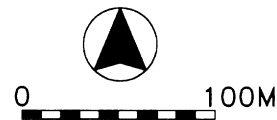


Fig 2. The Citadel Mound with excavated areas

materials or the skills available but the society's worldview and ideology constrain and affect embedded crafts and how they may change, or not (see Lemonnier 1992). Given this paradigm, pottery can be 'read' to gain a wide variety of information. A multi-dimensional approach to pottery, integrating materials and craft data with typology, can provide a wide range of cultural information: reconstruction of an ancient craft industry and its organisation; its role in the larger economy; recognition of culturally distinctive 'technologies'; use of local resources; and the nature and degree of technological transfer or acculturation between ceramic traditions inter alia (Lemonnier 1992 for an overview of this approach; van der Leeuw 1993).

Much of the technology, processes and organisation of pottery production can be inferred from careful study of residual forming and finishing traces within fabrics or on surfaces of vessels and sherds (e.g. Rye 1981). Forming and finishing sequences for individual types and sizes of vessels can be reconstructed (e.g. Henrickson 1995; in press). The paste itself provides information on material choice and preparation, and

relates the industry to the local environment. Studies of traditional potters, and replication experiments, have established correlations between residual traces and specific forming and finishing methods (Rye 1981; Vandiver 1988). The basic unit of analysis in the following discussion is the 'ware' — a recurring combination of distinctive attributes including colour, temper, forming and finishing methods, characteristic vessel forms and type of decoration. This definition is polythetic or 'fuzzy', so that not every exemplar need have every one of the defining characteristics.

The archaeological sequence

The Late Bronze Age/YHSS 8: Hittite Gordion

All architectural information for the final phase of the Late Bronze Age came from the 1988-9 sounding. Within the very small excavated area lay a complete building (the CBH Structure) made by cutting a long rectangular pit or 'footprint' and lining it with stone that varies in size and form (Voigt 1994: 266-7, fig 25.2.1, pl 25.1.2-3). Large flat stones were often set near the base of the walls, especially in areas where the matrix cut for

the house was soft or ashy. The floor of the building is itself very soft, with no evidence of cooking or heating facilities. Structural considerations suggest that this lined pit was a ‘cellar’ or underground room rather than a ‘pit house’. Postholes at the corners of the building to the north and away from the building to the south suggest a wooden superstructure as does the absence of mud construction material in the collapse (see below). Moreover, a stone superstructure can be ruled out since only a relatively small amount of loose stone lay within the collapse, and the style of masonry used would not have been strong enough for freestanding stone walls. Large cylindrical pits are typical of the Late Bronze Age/YHSS 8; layers of phytoliths or plant silica at the bottom of these pits strongly indicate that they were used for food storage.

Since the nature of the transition between the Late Bronze Age and Early Iron Age at Gordion is significant for any discussion of a possible migration after the Hittite collapse in central Anatolia, a relatively detailed consideration of the relevant stratigraphy is in order. Above the floor of the CBH Structure lay a large deposit that included ground stone tools, pottery and a fragment of a human cranium. There is evidence of burning, especially on the ground stone tools, and it is possible that this dump could have resulted from some kind of local/household disaster, but the absence of burning on the walls and floor of the CBH Structure indicates that the fire did not take place within this building. The burned deposit was thrown into the CBH Structure, presumably after the wooden superstructure had been removed, but before normal processes of building collapse had begun. A later surface with an informal

hearth and large quantities of ash and trash lay above the burned layer (Voigt 1994: pl 25.1.2); above lay stone collapse and a series of strata composed of layers of ash, silt and more stone, evidence for a slow process of decay coupled with the dumping of domestic garbage. Into this midden a small pit was cut and filled with a cache of pottery typologically related to that which accumulated inside the abandoned CBH Structure. Despite the size of the excavated sample, the stratigraphic evidence rules out an equation of the burned deposit with the abandonment of the Late Bronze Age settlement.

An overview of the basic nature of the Late Bronze Age/YHSS 9-8 pottery industry at Gordion sets the stage for the Early Iron Age/YHSS 7 and later developments. Depending on context and phase, the Late Bronze Age corpus consists predominantly of grit-tempered buff wares ranging in paste from medium (87-90% of all sherds) to fine (1-5%). Other minor wares include red-slipped buff (3-4%) and cooking (5%). Neutron activation analysis of 107 YHSS 9-8 pottery samples, together with fired samples of local clays, has shown that much of the Late Bronze pottery at Gordion was made using the calcareous clays readily available from the Sakarya river which runs by the site (Henrickson, Blackman 1996; in prep). The limited repertoire of vessel forms is simple, standardised in both shapes and sizes; each form was produced using characteristic sequences of forming and finishing methods.

The overall standardisation and simplicity of the shapes, sizes, production sequences and finishes suggest large-scale production by specialist potters who favored vessel forms and ceramic technology characteristic of Imperial Hittite sites (Voigt, Henrickson in press: figs 9-

| YHSS Phase | Period Name | Approximate Dates |
|-------------------|--------------------|---------------------------------|
| 1 | Medieval | 10-12th century AD |
| 2 | Roman | 1st century BC - 3rd century AD |
| 3 | Hellenistic | 330-150 BC |
| 4 | Late Phrygian | 550-330 BC |
| 5 | Middle Phrygian | 720?-550 BC |
| 6 | Early Phrygian | 950-720? BC |
| 7 | Early Iron Age | 1100-950 BC |
| 9-8 | Late Bronze Age | 1400-1200 BC |
| 10 | Middle Bronze Age | 1600?-1400 BC |

Table 1. The Yassıhöyük Stratigraphic Sequence (YHSS)

11; see also Henrickson 1993; 1995; Gunter 1991). Since the regional settlement system around Gordion seems to have consisted of small sites, the volume of production seems disproportionate, suggesting a regional distribution network for pottery centred at or near Gordion, and an economy based on specialisation and exchange. In addition to ceramics, metal artefacts (pins and flat, winged arrowheads), firmly link Late Bronze Age Gordion to the Hittite empire. Because the Bronze Age settlement is deeply buried and has been sampled over a very small area, we have no way of estimating its size, but we can tentatively identify it as part of a small polity in contact with the Hittites, and affiliated with them to some degree. This conclusion is supported by glyptic materials: a rim sherd from a large storage vessel impressed with a seal bearing a Hittite hieroglyphic inscription recovered from the CBH Structure (Sams, Voigt 1990: fig 19) as well as sealings recovered from contemporary levels by Rodney Young and Machteld Mellink (Güterbock 1980: 51, figs 3-4).

To summarise, Late Bronze Age Gordion was linked politically and culturally to the east, as are sites even further to the west such as Doryleion on the Eskişehir plain (pottery illustrated by excavator Muhibbe Darga at the Annual Symposium on Archaeology, Ankara). Hittite interest in Gordion and Doryleion may be related to their positions on one of the major east-west routes in Anatolia, leading from the Sea of Marmaris east along the Porsuk river which flows into the Sakarya just to the north of Gordion (Garstang 1943). The recovery of a Hittite seal at Troy (Hawkins, Easton 1996) supports this conclusion.

The Early Iron Age/YHSS 7: a possible migration

A small sounding carried out by Rodney Young penetrated living surfaces that can be assigned to the Early Iron Age based on ceramics (Gunter 1991: plans 11-12; Sams 1994b: 7-15), but as with YHSS 8, our only coherent data comes from the 1988-9 excavations. In the Lower Trench Sounding, surfaces assigned to the Early Iron Age/YHSS 7 overrode the top of the Late Bronze Age/YHSS 8 house. The stratigraphy and construction sequence within Phase 7 is extremely complex, and was not understood until 1997 when all baulks had been removed. There are still numerous uncertainties, many unavoidable because of the multitude of intercut pits that are characteristic of the Early Iron Age; nevertheless, the overall settlement plan during YHSS 7 is now clear. Domestic architecture for the most part consisted of a series of rooms sequentially built in a pattern that seems to take a spiral form around the edges of the excavated area. At about the mid-point within the YHSS 7 sequence (designated as the beginning of YHSS 7A, see

below), much of the excavated area was filled with domestic architecture (fig 3). To the northwest and southeast lay two strings of rooms bordering a courtyard. Across the courtyard, in the southern corner of the excavated area, lies a newly built structure, that differs in plan and construction techniques from the two strings of rooms. The courtyard itself had a series of hard packed surfaces, and contained both built and excavated features (i.e. pits).

Because significant changes take place within Phase 7, we have divided it into two stratigraphically defined sub-phases. The earliest, or YHSS 7B, buildings (to the north of the courtyard) were constructed by digging a shallow pit ca. 30-50cm deep which is usually roughly rectangular (Voigt 1994: 267-8, fig 25.2.2, pls 25.2, 3.1). The excavated earth was then used to plaster walls which must have been of wood or reeds, supported at their base by small stones and, in a few cases, mud bricks. The interior of the pit (and presumably the rest of the interior wall face) was coated with a layer of mud plaster; in areas where the housepit had cut into soft deposits, stone slabs were used to line the pit face. Characteristic interior features are square or horseshoe-shaped ovens, and bins constructed of stone slabs and coated with mud plaster. Storage pits vary in shape, and include large hour-glass shaped pits from early and late in the YHSS 7 sequence, as well as bell-shaped pits which predominate near the end of YHSS 7 (Voigt 1994: pl 25.3.2).

There is a clear discontinuity in architectural techniques and building plans between the latest phase of Late Bronze Age YHSS 8 and the earliest phase of YHSS 7. The same disruption can be seen in the ceramic industry: there is an abrupt appearance of a new ceramic technology at the beginning of the Early Iron Age, coupled with the disappearance of Late Bronze Age technology⁵. Characteristic of YHSS 7B is Early Iron Age handmade ware (previously referred to as 'Early Handmade'; Sams 1988; 1994b) which has a paste with abundant coarse, angular grit temper (fig 4). Surface and paste colours range from dark grey or nearly black through dark grey-brown to dark brown to tan, indicating

⁵ This abrupt ceramic change was not obvious in the Young excavations (Gunter 1991: 106), primarily the result of a sounding that was too small to permit the understanding of taphonomic processes. The large quantity of Late Bronze Age sherds in levels that also produced small numbers of Early Iron Age pottery was also characteristic of the Lower Trench Sounding, but with a larger excavated area it was apparent that the YHSS 8 sherds came from material eroded from the walls of YHSS 7 buildings. Relatively complete handmade vessels were deposited on the floors of YHSS 7 structures and in contemporary pits, but the YHSS 8 sherds from the same contexts were relatively small and never joined.

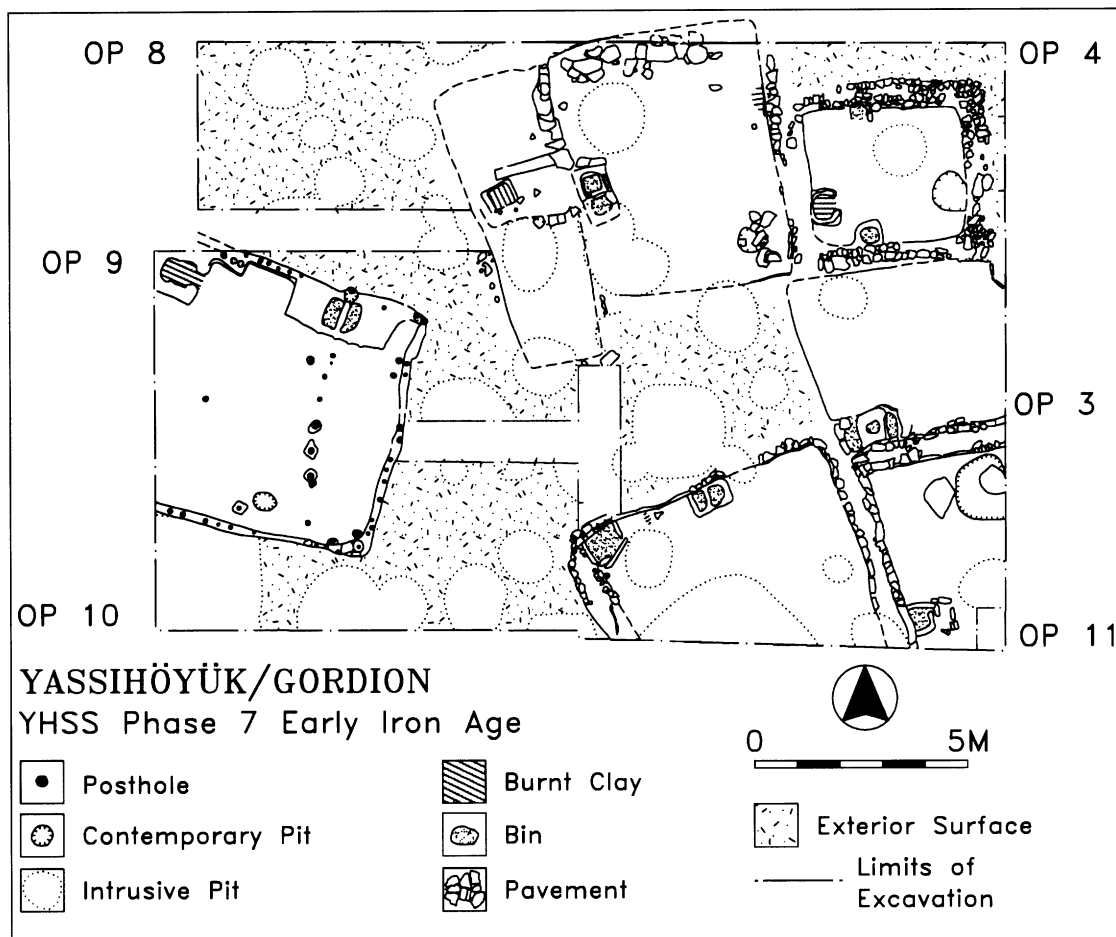


Fig 3. Plan of domestic architecture, Early Iron Age/YHSS 7

a predominantly reducing firing atmosphere. Neutron activation analysis of pastes suggests that some, but not all, of the clay was obtained locally. Primary forming involved simple hand-building techniques, such as pinching, coiling and moulding. Wall thickness, especially in the case of the larger vessels, suggests the use of beating for secondary forming. The care and degree of surface finish vary widely. Interior and exterior burnishing is characteristic, but ranges in quality from isolated strokes with little overlap, to continuous, to an occasional high gloss. Decoration, when present, usually consists of simple bands of incised lines on the carination of bowls or the shoulder of pots, ribbing on the lip of the rim, or a row of impressions along a thickened rim. More complex incised decoration is rare; a scene with a 'deer' and 'trees' is unique.

The relatively low firing temperature (<600-700°C) of Early Iron Age handmade, determined by re-firing experiments, suggests open rather than kiln firing and yielded a rather friable fabric which breaks irregularly. Basic vessel types (conical and carinated bowls, wide-mouth pots and jugs) are simple yet highly variable in shape, size, wall thickness, surface finish and decoration.

The marked variability of the vessels in all attributes, the exclusive use of hand-building methods, the relatively large amount of time expended in the forming and finishing of each vessel and open rather than kiln firing, all suggest that the Early Iron Age handmade pottery was made within individual households on an ad hoc basis (Van der Leeuw 1977; Peacock 1982: 12-51; Henrickson, Blackman in prep).

This Early Iron Age handmade ceramic assemblage is part of a widespread and diverse handmade dark ware phenomenon in late second millennium southeastern Europe and northwest Anatolia. In Anatolia, dark handmade assemblages are known from a growing number of sites including Troy VIIb, Kaman-Kalehöyük, and survey sites in Thrace discovered by Özdoğan, but parallels tend to be generic or poorly dated (Kopenhagenfer 1977; Pilides 1994). Given their diversity, the Anatolian assemblages are best regarded as a co-tradition, ultimately derived from a common origin. Nevertheless, typological parallels, such as shapes and specific details of incised or impressed decoration, are sufficient that Thracian and more distant southeastern European origins for Gordion Early Iron Age handmade ware are plausible.

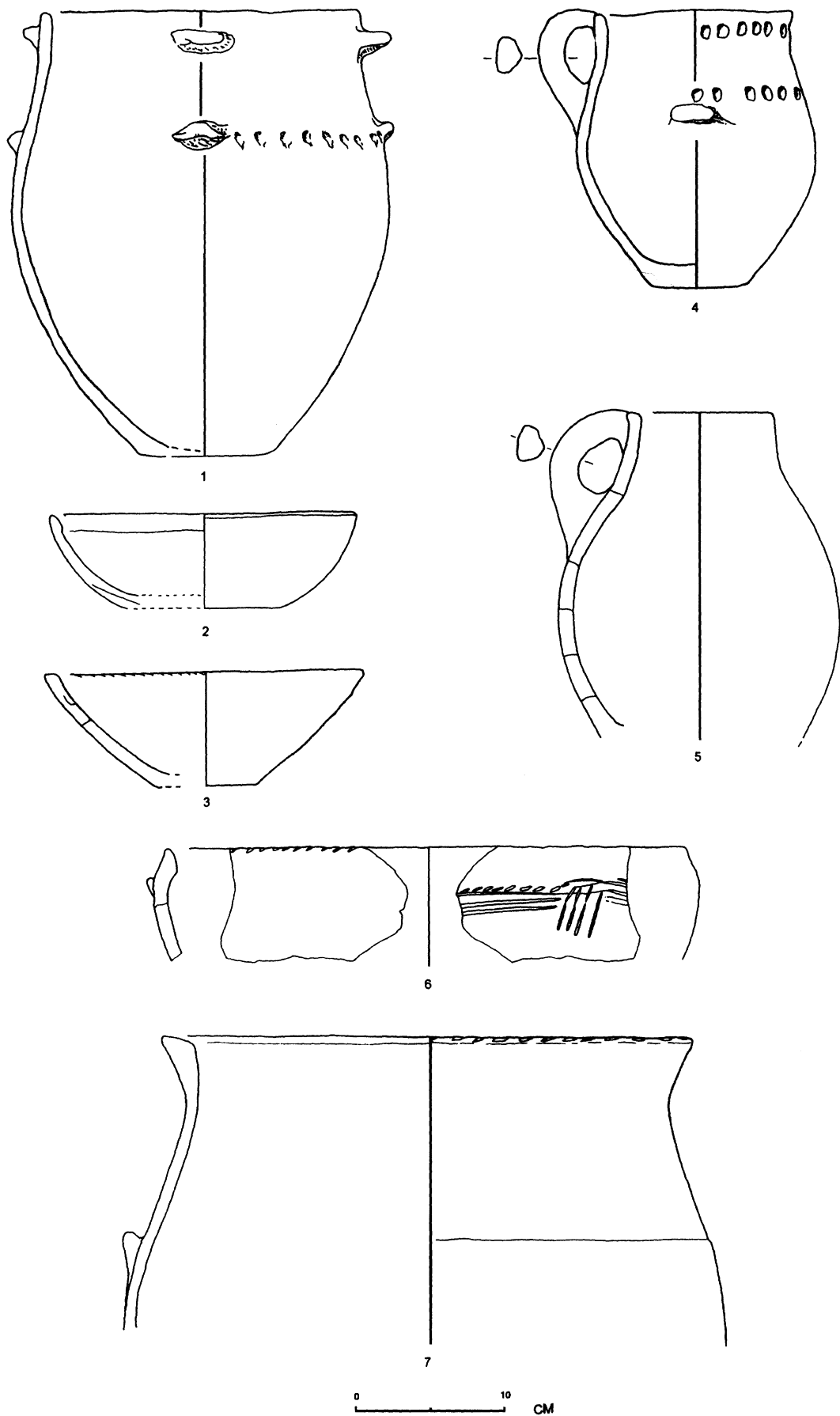


Fig 4. YHSS 7: Early Iron Age handmade ware

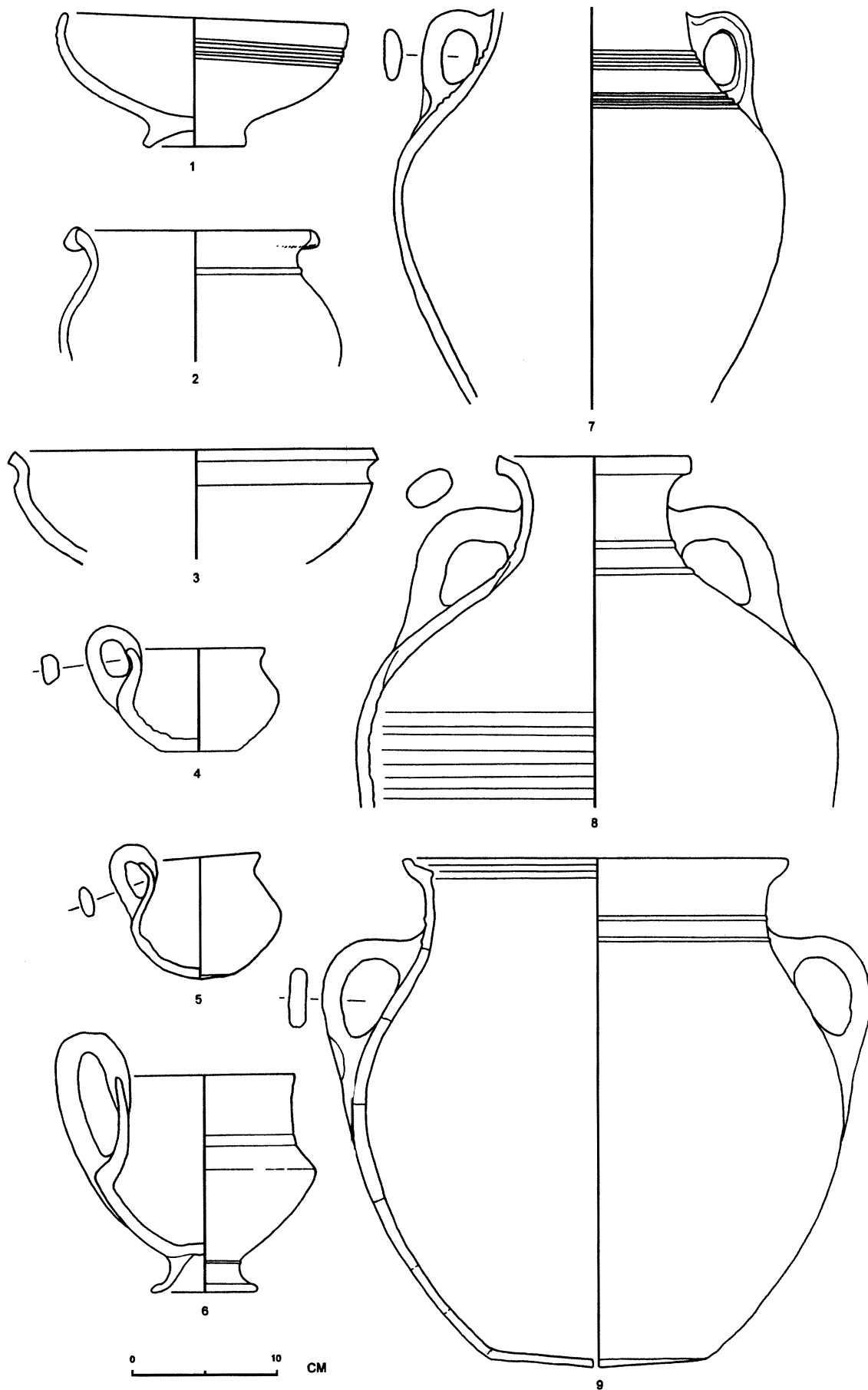


Fig 5. YHSS 7: Early Iron Age buff ware

Both the handmade pottery and pit-house construction characteristic of earliest YHSS Phase 7 continue to the end of this phase, but near the middle of this chronological unit there is a break in material culture that begins sub-phase YHSS 7A. Architecturally, the 7B/7A break is marked by the construction of an anomalous structure, the BRH ('Burned Reed House') Structure (Voigt 1994: 269-70, fig 25.3.1, pls 25.3.3-4, 25.4.1-2). Located at the western edge of the YHSS 7 court, the BRH Structure consists of a single large room with walls constructed of posts and reeds covered with a thick mud plaster and distinctive interior features including an oven with a chimney and a platform with bins (fig 3). That this building had some significance for the people at Gordion is clear. At the abandonment of other YHSS 7 houses, pits are dug and walls are robbed. After the BRH Structure was destroyed, the area above it was not reoccupied nor used in any discernable way. The structure was left intact, eventually filling in with water-laid deposits and leaving a smooth surface bordered to the north and east by houses and courtyards which continued to be occupied.

The distribution of ceramics within YHSS 7A mirrors the complex pattern observed in architecture. Found on the floor of the BRH Structure were complete pots that are the earliest vessels representing the ceramic tradition that is characteristic of the succeeding Early Phrygian or YHSS 6 chronological phase (see below). Early Iron Age buff ware, generally made with calcareous clays, has medium-grit temper and is often characterised by fine lime particles scattered throughout the fabric. Neutron activation analysis shows that much of this pottery is a local product, made from Sakarya river clays. Among the most distinctive shapes of the Early Iron Age buff ware found in the BRH are ledge-rimmed jars, globular pots with rim lugs and pedestal based cups (fig 5). Forming and finishing methods used for Early Iron Age buff ware differs from those employed for Early Iron Age handmade pottery, particularly in the use of the turntable (slow wheel) and occasionally the true potter's wheel. Oxidation firing in kilns contrasts with open reduction firing of the handmade pottery. The repertoire of forming and finishing methods, limited standardisation and probable use of kilns suggest part-time specialist potters working on a modest scale of production, perhaps in small workshops (Voigt, Henrickson in press: table 2).

The appearance of the Early Iron Age buff assemblage marks another technological and typological discontinuity in the ceramic sequence at Gordion. Like Early Iron Age handmade before, the Early Iron Age buff pottery has no known local antecedent, and, in this case, parallels with other regions are few and inconsistent. For example, a carinated goblet with pedestal base from the

BRH Structure has good parallels in Iron Age Macedonia, while a grooved bowl from the same context has some similarities to Early Iron Age pottery from southeastern Anatolia (table 2). But as with architecture, the earlier ceramic tradition is not displaced and *both* wheelmade buff and handmade dark wares are found on the floor of the latest houses and pits within YHSS 7A (Voigt, Henrickson in press: fig 14). Technological dichotomies (Voigt, Henrickson in press: table 2) and an absence of typological links indicate that the Early Iron Age handmade and buff wares were parallel, contemporary, yet separate traditions.

We can now summarise the evidence obtained from the Lower Trench sounding (YHSS Phases 8 to 7) relevant to the question of the Phrygian migration. Material culture can be used to argue that there are at least two and perhaps three groups of people with distinctive styles of material culture present at Gordion during the late second millennium BC (Voigt, Henrickson in press; Henrickson, Voigt 1998). YHSS Phases 8 and 7 differ in house form and construction techniques, storage facilities, ceramic style and technology, and subsistence systems. While we can say little about the identity or language of the Late Bronze Age/YHSS 8 population, we do know that this group was in contact with the Hittites, and that at least some members of the group used and could presumably read Luwian inscriptions written with the Hittite hieroglyphic script. That the new group represented archaeologically by YHSS 7 was 'Phrygian', and that this group moved into Anatolia from the west is, we believe, likely, based on multiple lines of evidence published elsewhere (Henrickson, Voigt 1998; Voigt, Henrickson in press). At the heart of our argument are: (1) continuities in material culture between the Early Iron Age/YHSS 7 and succeeding Early Phrygian/YHSS 6 period, where ethnicity is documented by inscribed materials (see below); and (2) parallels in Thrace for stylistic elements of both Early Iron Age and Early Phrygian pottery (see above and Sams 1994b: 20-1, 124, 176). Nevertheless, we freely admit that our sample is uncomfortably small, and based on a single site.

The Early Phrygian period/YHSS 6: formation of the Phrygian state

At present, the best evidence for increasing economic and political differentiation which should indicate state formation comes from excavations on the Citadel Mound at Gordion. At the beginning of the Early Phrygian period/YHSS Phase 6B within the Lower Trench Sounding there is a change in the use of space. The area once filled with wattle and daub houses is transformed into an open court with a packed earth surface,

| Figure | Type | Comparanda |
|---------|--|--|
| 4 | <i>Early Iron Age handmade</i> | |
| 4.6 | Carinated bowls | <u>Gordion</u> : Sams 1994: fig 1, pl 1 <u>Thrace</u> : Özdoğan 1987: fig 6.41 |
| 4.2-3 | Conical bowls | <u>Gordion</u> : Sams 1994: 23-5, fig 2, pl 2 |
| 4.1,4,7 | Wide-mouth pots: SMALL / MEDIUM / LARGE | <u>Gordion</u> : Sams 1994: 23-4, fig 3-4, pl 4-6; Sams 1994b: 25-7, fig 3.218-219, 4.34, 229, pl 5.2, 12 <u>Troy</u> : Blegen <i>et al</i> 1958: pl 75 (C851), pl 266 (37.898, 32.88, 32.16), pl 267 (32.13), pl 280.7284.1-20, 288 (32.16) <u>Thrace</u> : Özdoğan 1987: fig 9.8 |
| 4.5 | Jugs | <u>Gordion</u> : Sams 1994: 23-4, fig 3-4 <u>Pylos</u> : Popham 1991: 320 (fig 4 [Early Iron Age?]) |
| 4.3,6,7 | Incised decoration | <u>Gordion</u> : Sams 1994: pl 1-7 <u>Troy</u> : Blegen <i>et al</i> 1958: pl 280-2; Koppenhöfer 1997: abb 13-17 (Grey ware and Buckelkeramik) <u>Thrace</u> : Özdoğan 1987: fig 6, 10 |
| 4.4 | Indented ridges | <u>Gordion</u> : Sams 1994: fig 3-4, pl 4-6 <u>Troy</u> : Koppenhöfer 1997: abb 18 (Barbarische Ware) |
| 5 | <i>Early Iron Age buff</i> | |
| 5.3 | Indented profile bowls | <u>Gordion</u> : Sams 1994: fig 1.189, 399; Gunter 1991: fig 19.390, 27.577-579, 25.545, 26.569, 27.585 <u>Elazığ</u> : Sevin 1991: resim 14.4 <u>Korucutepe</u> : Winn 1980: pl 58.13-14 <u>Değirmentepe</u> : Duru 1979: pl 62.7-8 <u>Van</u> : Sevin 1994: fig 21.3.1 <u>Van-Dilkaya</u> : Çilingiroğlu 1991: fig 3.5.2-5; Çilingiroğlu, Derin 1992: resim 14.12-13, 13.9 |
| | <i>Burnt Reed House corpus</i> | |
| 5.9 | Large and medium wide-mouth pots with ledge-rims | <u>Porsuk</u> : Dupré 1983: pl 87.223-4, 88.225-230 (EIA) <u>İmikuşağı</u> : Sevin 1995: resim 18.1, 3 |
| 5.8 | Narrow-neck medium jars | <u>Troy</u> : Blegen <i>et al</i> 1958: pl 262 (37.1216) |
| 5.2 | Globular pots with everted rims and lugs | |
| 5.6 | Carinated goblets with tall handle and pedestal-base | <u>Boğazköy</u> : Fischer 1963: pl 83 <u>Porsuk</u> : Dupré 1983: 62-3, pl. 51.43-51 (LBA), pl. 81.153 (EIA) <u>Troy</u> : Blegen <i>et al</i> 1958: 165, fig 216 (Form A106); Koppenhöfer 1997: abb 14.2-4 <u>Macedonia</u> : Heurtley 1939: 235 no 484 <u>Thrace (Taslicabayı)</u> : Özdoğan 1987: fig 7-13 passim <u>Former Yugoslavia</u> : A Durman (personal communication, 1990) |
| 5.4-5 | S-profile small pots with single handle | |
| 5.7 | Grooved pots | <u>Troy</u> : Blegen <i>et al</i> 1958: pl 280.8-9 <u>Elazığ</u> : Sevin 1991: fig 2.1-2; 4.7 <u>Korucutepe</u> : Winn 1980: pl 59.62-63 <u>İmikuşağı</u> : Sevin 1995: resim 15.1 |
| 5.1 | Grooved bowl | <u>Elazığ</u> : Sevin 1991: fig 2.6-7; 5.8; 6.3 <u>Korucutepe</u> : Winn 1980: pl 58.12, 19, 21, 31 <u>İmikuşağı</u> : Sevin 1995: resim 13.1-3 <u>Değirmentepe</u> : Duru 1979: pl 61.25-26 <u>Van</u> : Sevin 1994: fig 21.5.1-9 <u>Van-Dilkaya</u> : Çilingiroğlu, Derin 1992: fig 17.27, 29 |

Table 2. Pottery comparanda

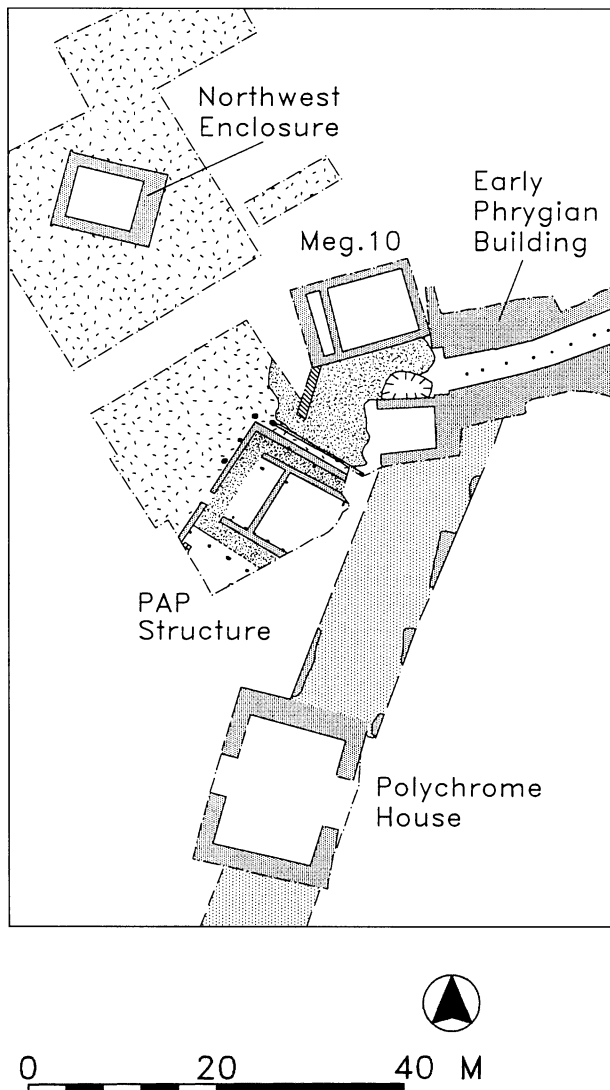


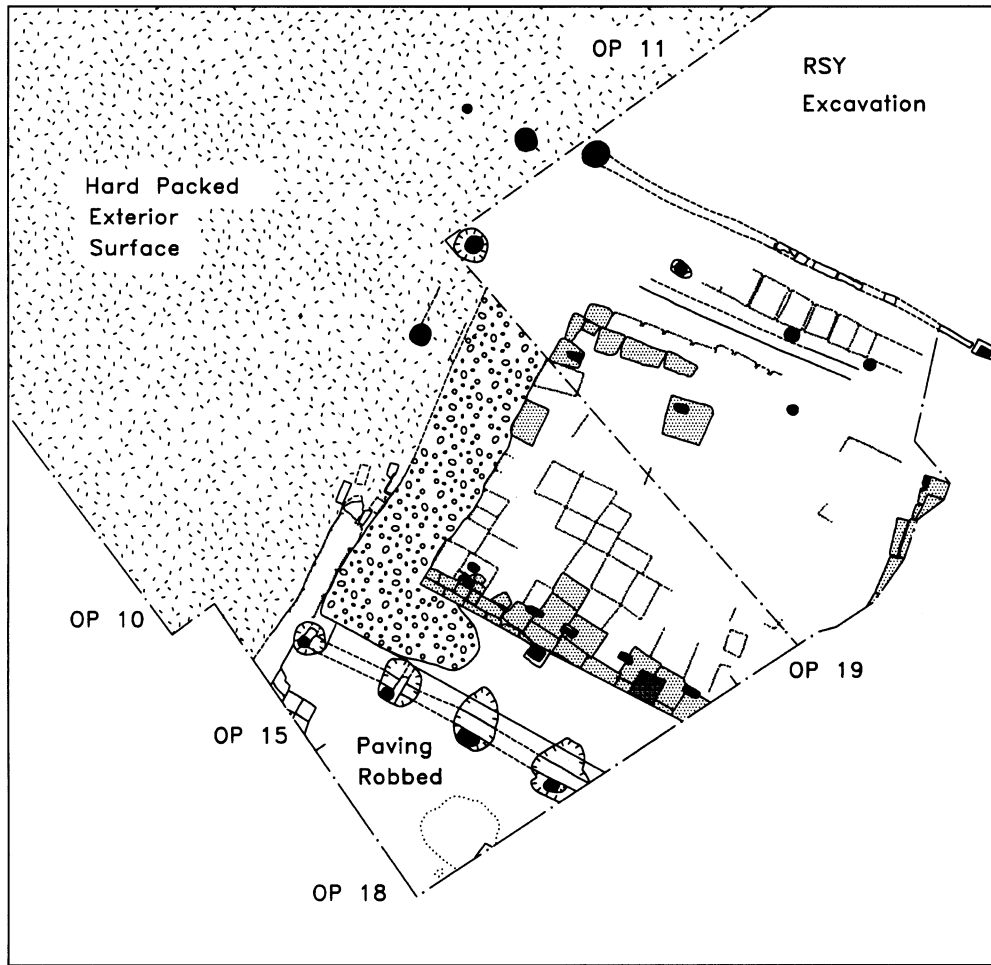
Fig 6. Plan of YHSS 6B formal court

surrounded by raised areas supporting white stone buildings protected by a fortification system (fig 6). While the relative sequence for YHSS 6 is clear, assigning absolute dates for this period is very difficult. Based on evidence discussed later in this paper we would estimate the absolute date of YHSS 6B at ca. 900-800 BC, with the ending date far more firm than the beginning.

The last of the YHSS 6B courts is the only one for which we have building plans retrieved by excavations carried out in the 1960s and in 1993 (fig 6; see also DeVries 1990: 373-4, figs 2-3; Sams 1994b: 8-14; Sams, Voigt 1995; Young 1964: 290-2, fig 32). At this time, the primary entrance into the court was from the southeast through a gatebuilding nicknamed the Polychrome House because of the red, white and yellow stones used

in its walls. This gate was oriented roughly east-west, as were contemporary buildings. Just inside the gate, to the right as one entered the court, was a stone structure with its rear wall up against, or in close proximity to, the heavy fortification wall, the PAP Structure (figs 6-7). On the east side of the PAP Structure was a cobbled surface that led down into a narrow passage, actually a remodelled building that had once been a primary gate into the fortified area (the Early Phrygian Building or EPB). During the final phase of YHSS 6B the EPB passage was still in use, but was certainly a secondary entrance based not only on form, but on the presence of a semicircular pit that was apparently used as a latrine located between the modified gate and the court proper (Sams 1994b: 9).

Three buildings bordering the court have been excavated: the PAP Structure, Megaron 10 and the Northwest Enclosure. All were constructed of a soft white to pale brown stone that has been referred to as 'porous'. Megaron 10 continued in use during the next phase of the occupation (YHSS 6A), but both the PAP Structure and the Northwest Enclosure were dismantled down to their foundations at the end of YHSS 6B; nevertheless, enough remained of the PAP structure to document basic construction techniques. The PAP Structure had only one wall block left in situ, but floor slabs, 'shadow blocks' or outlines of other blocks made up of small trimming flakes, drip lines and setting lines allow us to reconstruct the building (fig 7). The floor was paved with large, irregular slabs, and slabs of similar thickness but more regular shape were used for walls; cuts in the stone floor document the use of timber supports along the walls. The building seems to have had a megaron plan, and slightly thinner side walls at the northwest end or front of the building suggest an open porch or a very lightly built front or western wall. The roof was probably pitched, and may have had an acroterion, conclusions reached on the basis of fragments of the distinctive porous stone recovered from the foundations of a later building constructed in the same area (Sams 1994a: 212-13, pls 20.2.4, 20.3.1-2). A walkway ca. 2m wide that was paved with small rounded pebbles and bounded to the exterior by a line of stones (foundations for low walls?) surrounded the building. The area between the PAP and the gate/Polychrome House was paved with red and white stone slabs, represented by four stones that remained in situ and shadow outlines. A line of large postholes running parallel to the south wall of the PAP structure may have supported a porch attached to the building, but they might also have been one of two lines of columns supporting a roof over the checkerboard paving.



YASSIHÖYÜK/GORDION

YHSS Phase 6B: PAP Structure












- | | | | |
|---|--|---|--------------------------|
|  | Wall |  | Cobble Paving |
|  | Stone Used in Architectural Construction |  | Contemporary Pit |
|  | Block Shadows |  | Intrusive Pit |
|  | Paving Stones |  | RSY Limits of Excavation |
|  | Posthole |  | Limits of Excavation |
|  | Beam Bed | | |

Fig 7. Plan of the PAP Structure, YHSS 6B

These stone buildings, their location just inside a gate into the settlement and the formal plan all suggest that this is a public area, built by leaders able to command the labour of others. Which, if any, of these buildings was residential cannot be known based on the archaeological remains, but consistency in the use of this space for the next several centuries, and better preservation of the later

buildings, suggest that the YHSS 6B buildings were used by and perhaps housed an emerging Phrygian elite. This elite employed an intriguing mixture of eastern and western architectural elements to symbolise their power. The use of a megaron plan for buildings surrounding the courts places early Phrygian Gordion firmly in Anatolia and regions to the west where megarons were common

during the Bronze Age; but both the form of the gateway, and sculptures that decorated the gate, and/or nearby buildings, reflect contact with, and emulation of, Neo-Hittite forms (Sams 1989).

The form of the main gate — a rectangular chamber set within the fortification walls — is closely paralleled at Zincirli (Orthmann 1975: fig 133), and more generally at Carchemish (Orthmann 1975: fig 129a). Reliefs carved on the same soft white stone used for YHSS 6A buildings have been associated with the gate by Sams (1989), who points out parallels with Neo-Hittite examples, again from Zincirli and Carchemish. None of these sculpted slabs was found in situ, but in 1989, within rubble associated with the construction of the PAP Structure, we found a stone chip with a carved wing fragment identical to a wing on one of the orthostats. While these slabs may have been in use or visible throughout the Early Phrygian period based on their findspots, their date of manufacture is firmly placed within YHSS 6B. Among the elements found on the Gordion fragments are a lion with C-shaped ears, a person wearing boots with turned up toes, a seated figure and the feet of a hero in combat with a beast. Based on the Neo-Hittite parallels, Sams (1989) dates the Gordion reliefs to the end of the ninth or beginning of the eighth century BC.

Because of the change in building function between YHSS 7A and 6B within the excavated area, ceramics provide our only means of assessing the degree of continuity or change⁶. Early Iron Age buff ware from YHSS Phase 7A offers good precursors for the later Early Phrygian (YHSS 6) industry. Typological parallels between the YHSS 7A corpus and the YHSS 6 Early Phrygian assemblages include: (1) medium and large wide-mouth pots, with ledge-rims, opposed handles on shoulders with basal fingerprints and horizontal ridges at the base of the neck; (2) narrow-neck medium jars with similar attributes; (3) globular pots with everted rims and lugs on the rim or shoulder; (4) pedestal-base carinated goblets with tall handles; and (5) S-profile small pots with single handles. Thus, by the end of the Early Iron Age (YHSS 7A), many basic typological elements characteristic of the Early Phrygian assemblage were present. Just when grey rather than buff wares became predominant, as they were in the Early Phrygian period, remains uncertain⁷.

⁶ Sams (1994b: 19-35) had suggested that Early Iron Age handmade shapes may provide prototypes for some Early Phrygian/YHSS 6A vessels, but the forms are simple and parallels limited.

⁷ Most YHSS 7 contexts have heavy admixtures of upcast Late Bronze Age sherds from redeposited material, and the fire which destroyed the BRH altered the colour of its pottery. In

The early Phrygian rulers clearly used Neo-Hittite sculptures as symbols of power, reflecting contact and perhaps commerce with well-established states. While the exchange of ideas, styles and objects between Gordion and north Syria continued throughout the Early Phrygian/YHSS 6 period (Sams 1974; 1978; 1979b; 1988), the emulation of eastern architectural models was brief. At some point, probably early in the eighth century BC, the white buildings were torn apart and a new set of structures was erected. These YHSS 6A buildings had a megaron plan and again lined a court located inside a remodeled gateway; but they differ in orientation, construction techniques and, in most cases, building materials. It is, therefore, in YHSS 6A that a distinctive Phrygian style in monumental architecture as well as luxury items emerges.

Several kinds of building materials were used in the Early Phrygian Destruction Level or YHSS 6A: mud brick, granular stone slabs and soft white 'porous' stone were all combined with timber, the latter used within foundations and walls as well as for posts and beams (Sams 1995: fig 1). The Terrace Building, a long structure made up of a series of megarons that housed items associated with food storage and processing as well as textile production, provides a good example of one construction technique. Walls consisted of a rubble core faced with stone slabs; the latter, after being subjected to extreme heat and weathering after excavation, tend to crumble and spread to either side. The small number of mudbricks found inside TB2A, excavated in 1989, suggests that there were only a few brick courses on top of the stone walls, perhaps related to the securing of roof beams (Voigt 1994: 272-3). Architecture alone can be used to argue that the buildings inside the remodelled gateway represent the palace quarter of the Phrygian capital; this inference is supported by building contents, preserved when much of this area burned (DeVries 1990: fig 7; Sams 1995). Artefacts found in the burned palace quarter provide little indication of contact with the west⁸, but some evidence of exchange with the east, e.g. ivory horse ornaments paralleled at Zincirli and dated to the second half of the eighth century BC (Young 1962: 166-7, figs 24-5).

YHSS 7, grey medium grit-tempered wares typical of Early Phrygian and later levels (YHSS 6-3) first appear in some of the latest YHSS 7A contexts in low frequencies (best defined in sealed pits, where they comprise 2-5%).

⁸ Sams (1979b: 47) cites Greek ceramic imports that date to the late eighth century as evidence of contact, assuming that they are heirlooms or out of context since they were found in the rebuilt Middle Phrygian city. We follow DeVries in seeing these nearly complete vessels as being in situ, close in date to the architectural context (see below).

Early Phrygian/YHSS 6A pottery is relatively well-known, and is discussed here because it provides a means of looking at manufacturing processes and the local economy. This assemblage consisted of a number of standardised shapes and sizes (Sams 1994b; Johnston 1970), usually made using distinctive sequences of forming and finishing methods. Early Phrygian potters were specialists working in workshops (Sams 1994b: 42, 43, 187), though likely independent of direct state control (Costin 1990; Stein, Blackman 1993). Neutron activation analysis of Early Phrygian pottery has identified several distinct paste composition groups, suggesting several workshops (Henrickson, Blackman 1996). Since a single clay composition is used for varied vessel sizes and shapes, individual workshops probably made a number of different vessel types and sizes. A noteworthy pattern is the apparently limited use of the calcareous Sakarya river clays available at or near Gordion itself during the Early Phrygian period, which marks a distinct break with the Early Iron Age industries. Early Phrygian workshops, or at least their clay sources, must have lain elsewhere in the valley or beyond (Henrickson, Blackman 1996; in prep). This suggests that in the first millennium BC the royal capital economy at Gordion already drew on the region for even basic commodities like domestic common ware pottery.

The eighth century BC/YHSS 6A fire: catastrophe or opportunity?

The chronology of the Early Phrygian destruction and subsequent rebuilding of the city is critical for an understanding of the history of both Gordion and Phrygia. Most scholars have accepted a date ca. 700 BC for this event, based not on solid archaeological data, but instead on an assumption: the most spectacular remains of ancient Phrygia, i.e. the burned palace quarter and the largest tomb in the area (MM), should be associated with the most powerful Phrygian leader known from historical sources, King Midas. The demise of Midas and Phrygia is described in two texts, both dating hundreds of years after the putative event: in the first quarter of the seventh century Gordion was destroyed by invading nomads from the east and, as a consequence, Midas committed suicide by drinking bull's blood. This event occurred in 696 BC according to Eusebios and in 675 BC according to Julius Africanus⁹.

Most, if not all, archaeologists readily discounted death by bull's blood, but the Kimmerians as agents of destruction were readily accepted, and within a few years of his discovery of a burned level at Gordion roughly dated to the late eighth century BC, Rodney Young began to speculate about burning by Kimmerians (Young 1955: 16). Speculation soon turned into truth and only a few scholars privately objected, noting that there was little evidence of a battle in the Kimmerian Destruction Level (see below). For those who favored the Kimmerian hypothesis, a partial explanation for the apparently deserted state of the city soon emerged from excavated evidence. At the time of the fire, the fortification system was being remodelled, most easily seen in the presence of a large stone tank located in the middle of the gateway, part of a drainage system under construction when it was touched by flames (DeVries 1990: fig 22); the construction project also explained the fact that buildings near the gate, Megarons 1-2, were empty when they burned. Their city indefensible, the Phrygians fled in this scenario, leaving the city to the invaders.

Following the fire, Young hypothesised that the city lay in ruins for a century or more before it was rebuilt¹⁰. When it came, reconstruction was massive, involving the laying of 4 to 6m of clay over the burned structures; the new Middle Phrygian buildings which lay on this elevated platform mirrored the plan of the Destruction Level. Two arguments were used to support a gap between Early and Middle Phrygian architectural levels. First, differences in construction required time to develop, and the construction process itself must have been lengthy; second, Young believed that the fire marked the demise not only of physical but also political structures, so that only a new and vigorous ruler such as Cyrus or Alyattes could have accomplished a reconstruction project of this scale (Young 1964: 284-5).

Over the past 15 years, re-analysis of Young's excavated evidence, coupled with better stratigraphic control provided by excavation since 1988, have resulted in a new chronology for the site which significantly alters the relationship of archaeological and historical sequences. In the late 1980s Keith DeVries (director of the Gordion Project from 1973 to 1988) determined that clay fills and terracing in the area of the gate, adjacent to Middle Phrygian/YHSS 5 Building C, dated *before* the Early Phrygian destruction (1990: 387-8, fig 22); the reconstruction project that left the gate disabled was

⁹ DeVries (1997) points out other historical flaws in Eusebios and Julius Africanus, and goes on to cite historical evidence that would place the Kimmerians in central Anatolia no earlier than the 670s BC.

¹⁰ The names assigned to this level reflect changes in date. Initially Young called it the 'Persian Level', then the 'Archaic Level'. DeVries used the term 'Middle Phrygian' which has been accepted here.

clearly far more massive than had been thought. Moreover, the type of construction used in what DeVries called the 'unfinished terrace' differed from that of the rest of the Destruction Level: a massive layer of clay had been laid down and the thick multicoloured blocks used to hold it in place were nearly identical to those characteristic of many Middle Phrygian buildings. Then, in 1989 the Upper Trench Sounding cleared one room of the YHSS 6A Destruction Level (TB2A) and the stratigraphy clearly indicated that there was little or no gap between the fire and the beginning of reconstruction (Voigt 1994: 272-3, pls 25.5, 25.6.1-2). Still accepting the Kimmerians as agents, we proceeded to date the Middle Phrygian fills and buildings to the beginning of the seventh century, which posed a real historical problem. How could it be that the Phrygians, defeated in battle and ousted from their capital and presumably their lands, had managed to mobilise an army of labourers to rebuild? And if they did so, why did historical sources not mention the event?

Two years ago DeVries focused on Greek ceramics recovered from secure Middle Phrygian contexts — Early and Proto-Corinthian vessels that date 750-690 BC (DeVries 1990: fig 25; Sams 1979a: fig 3). In previous discussions, these pots had been seen as heirlooms, imported during the Early Phrygian period and somehow redeposited during Middle Phrygian times. The pots were semi-complete and were found in trash levels within Middle Phrygian/YHSS 5 structures. Put another way, vessels made in the late eighth or early seventh century were deposited in Middle Phrygian buildings that had already gone out of use; if one rejects coincidence (a specific kind of pot that just happens to be kept for nearly a century and redeposited in several different but contemporary buildings) and accepts a process in which the pots were imported and discarded within a decade or so, then it follows that the rebuilding was already well underway and perhaps completed before 700 BC. The date of the Early Phrygian destruction now became a problem. DeVries convincingly eliminated the Kimmerians as the culprits, but, still wedded to a

historical framework, he has suggested that Sargon II fired the city as part of his campaign in Anatolia ca. 710 BC (DeVries 1997). To us (and especially to Voigt who excavated numerous bodies left in the ruins of Hasanlu IVB), the lack of evidence for a battle is still troubling: within 2.5ha of burned and sometimes unburned buildings within the Palace Quarter, there were no discarded weapons or military equipment, and the only bodies were two young cows, leaving open the possibility of an accidental fire. More importantly however, we are reluctant to accept the premise that two kinds of evidence, both subject to chance elements related to preservation and discovery, necessarily coincide. That the archaeologically documented fire at Gordion is necessarily represented within the highly fragmentary historical record for central Anatolia in the eighth century BC is not impossible, but seems unlikely. And whatever the cause of the fire, it certainly did not result in the end of either Gordion or the Phrygian kingdom.

The dates provided by DeVries provide a *terminus ante quem* that places the reconstruction within the period when Midas was active in eastern Anatolia¹¹. Middle Phrygian Gordion was a large and magnificent place, a suitable capital for a king who was respected in the east and honoured to the west. Perhaps the contrasting treatment of Midas within Greek and Assyrian texts can be used to summarise the articulation of Phrygia with these areas. The Phrygians are European immigrants, whose territory stretched from western to central Anatolia in the eighth and early seventh centuries BC. Ties to the west are deep, reflecting distant but still shared traditions: Midas apparently married a Greek princess and made offerings at Delphi; by the fourth century BC Midas and Gordion were mythological figures, situated among the gods and early Greek heroes, and worthy of attention by Alexander. Areas to the east were controlled by polities that were first emulated and then engaged in conflict as Phrygian power grew. These external relationships are, however, peripheral to the distinctive Phrygian culture that formed and flourished in central Anatolia.

¹¹ A date in the last quarter of the eighth century for the destruction is supported by a reinterpretation of published evidence and arguments, but more study of field records is needed before publication of a coherent account in support of a redating of YHSS 6A.

Bibliography

- Blegen, C W, Boulter, C G, Caskey, J L, Rawson, M 1958: *Troy IV: Settlements VIIa, VIIb and VIII*. Princeton
- Brixhe, C, Lejeune, M 1984: *Corpus des inscriptions paléo-phrygiennes* (Editions Recherche sur les Civilisations Memoire 45). Paris
- Çilingiroğlu, A 1991: 'The Early Iron Age at Dilkaya' in A Çilingiroğlu, D H French (eds), *Anatolian Iron Ages*. Oxford: 29-39
- Çilingiroğlu, A, Z Derin 1992: 'Van-Dilkaya Kazısı, 1990' *Kazı Sonuçları Toplantısı* 13(1): 403-22
- Costin, C L 1990: 'Craft specialization: issues in defining, documenting and explaining the organization of production' in M B Schiffer (ed), *Archaeological Method and Theory* 3. Tucson: 1-56
- DeVries, K 1990: 'The Gordion excavation seasons of 1969-1973 and subsequent research' *American Journal of Archaeology* 94: 371-406
- 1997: 'The Assyrian destruction of Gordion?' Paper delivered at the Annual Meeting of the Archaeological Institute of America. Chicago
- Dupré, S 1983: *Porsuk I: la céramique de l'âge du bronze et de l'âge du fer*. Paris
- Duru, R 1979: *Keban Projesi Değirmen-tepe Kazısı/ Keban Project Değirmen-tepe Excavations 1973*. Ankara
- Fischer, F 1963: *Die Hethitische Keramik von Boğazköy*. Berlin
- Garstang, J 1943: 'Hittite military roads in Asia Minor: a study in imperial strategy' *American Journal of Archaeology* 47: 35-62
- Goldman, A 1997: 'A new military inscription from Gordion, Turkey' *Anadolu Medeniyetleri Müzesi Yıllığı* 1996 12: 45-58
- Gunter, A C 1991: *The Bronze Age*. Philadelphia
- Güterbock, H G 1980: 'Seals and sealings in Hittite lands' in K DeVries (ed), *From Athens to Gordion*. Philadelphia: 51-63
- Hawkins, J D 1991: 'The Neo-Hittite states in Syria and Anatolia' *The Cambridge Ancient History*: 372-441
- Hawkins, J D, Easton, D F 1996: 'A hieroglyphic seal from Troia' *Studia Troica* 6: 111-18
- Henrickson, R C 1993: 'Politics, economics and ceramic continuity at Gordion in the late second and first millennia BC' in W D Kingery (ed), *Social and Cultural Contexts of New Ceramic Technologies*. Westerville: 89-176
- 1994: 'Continuity and discontinuity in the ceramic tradition at Gordion during the Iron Age' in A Çilingiroğlu, D H French (eds), *Anatolian Iron Ages* 3. Ankara: 95-129
- 1995: 'Hittite potters and pottery: the view from Late Bronze Age Gordion' *Biblical Archaeology* 58(2): 82-90
- in press: 'The Phrygian potter's craft at Gordion' *Türk Arkeoloji Dergisi*
- Henrickson, R C, Blackman, M J 1996: 'Large-scale production of pottery at Gordion: a comparison of the Late Bronze and Early Phrygian industries' *Paléorient* 22(1): 67-87
- in prep: 'The Early Iron Age pottery industries at Gordion: a technological and compositional investigation of interrelationships'
- Henrickson, R C, Voigt, M M 1998: 'The Early Iron Age at Gordion: the evidence from the Yassıhöyük Stratigraphic Sequence' in N Tuna, Z Aktüre, M Lynch (eds), *Thracians and Phrygians: Problems of Parallelism*. Ankara: 79-107
- Heurtley, W A 1939: *Prehistoric Macedonia*. Cambridge
- Johnston, R 1970: *Pottery practices at Gordion, central Anatolia, during the 8th to 6th centuries BC: an analyzing and synthesizing study* (unpublished PhD). Pennsylvania State University
- Köppenhofer, D 1997: 'Troia VII - Versuch einer Zusammenschau Einschliesslich der Ergebnisse des Jahres 1995' *Studia Troica* 7: 295-353
- Korfmann, M 1997: 'Troia 1995 Kazıları' *Kazı Sonuçları Toplantısı* 18(1): 213-30
- Körte, G, Körte, A 1904: *Gordion: Ergebnisse der Ausgrabung in Jahre 1900* (Jahrbuch des Kaiserlich Deutschen Archäologischen Instituts, Ergänzungsheft 5). Berlin
- Lemonnier, P 1992: *Elements for an Anthropology of Technology*. Ann Arbor
- Marsh, D 1997: 'Alluvial burial of Gordion' (in Voigt et al 1997) *Anatolica* 23: 23-6
- Mellink, M J 1991: 'The native kingdoms of Anatolia' *The Cambridge Ancient History*, Vol III, Pt 2: 619-65
- Miller, N F in press: 'Long-term vegetation changes in the Near East' in C L Redman, S R James, P R Fish, J D Rogers (eds), *Human Impact on the Environment: An Archaeological Perspective*. Washington
- Muscarella, O W 1995: 'The Iron Age background to the formation of the Phrygian state' *Bulletin of the American Schools of Oriental Research* 299/300: 91-101
- Orthmann, W 1975: *Der Alte Orient*. Berlin
- Özdoğan, M 1987: 'Taşlıcabayır: a Late Bronze Age burial mound in eastern Thrace' *Anatolica* 14: 5-39
- Peacock, D P S 1982: *Pottery in the Roman World: an Ethnoarchaeological Approach*. London

- Pilides, D 1994: *Handmade Burnished Wares of the Late Bronze Age in Cyprus* (Studies in Mediterranean Archaeology CV). Jonsered
- Popham, M 1991: 'Pylos: reflections on the date of its destruction and on its Iron Age reoccupation' *Oxford Journal of Archaeology* 19: 315-24
- Roller, L E 1987: 'Hellenistic epigraphic texts from Gordion' *Anatolian Studies* 37: 103-33
- Rye, O S 1981: *Pottery Technology: Principles and Reconstruction*. Washington
- Sams, G K 1974: 'Phrygian painted animals: Anatolian orientalizing art' *Anatolian Studies* 24: 169-96
- 1978: 'Schools of painting in Early Iron Age Anatolia' in E Akurgal (ed), *Proceedings of the Xth International Congress of Classical Archaeology*. Ankara: 227-36
- 1979a: 'Imports at Gordion' *Expedition* 21(4): 6-17
- 1979b: 'Patterns of trade in first millennium BC Gordion' *Archaeological News* 8(2/3): 45-53
- 1988: 'The Early Phrygian period at Gordion: toward a cultural identity' *Source: Notes in the History of Art* 7(3/4): 9-15
- 1989: 'Sculpted orthostates at Gordion' in K Emre et al (eds), *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*. Ankara: 447-54
- 1994a: 'Aspects of Early Phrygian architecture at Gordion' in A Çilingiroğlu, D H French (eds), *Anatolian Iron Ages* 3. Ankara: 211-20
- 1994b: *The Early Phrygian Pottery*. Philadelphia
- 1995: 'Midas of Gordion and the Anatolian kingdom of Phrygia' in J Sasson (ed), *Civilizations of the Ancient Near East* Vol 2. New York: 147-59
- Sams, G K, Voigt, M M 1990: 'Work at Gordion in 1988' *Kazı Sonuçları Toplantısı* 11(2): 77-105
- 1991: 'Work at Gordion in 1989' *Kazı Sonuçları Toplantısı* 12(1): 455-70
- 1995: 'Gordion archaeological activities 1993' *Kazı Sonuçları Toplantısı* 16(1): 369-92
- Sevin, V 1991: 'The Early Iron Age in the Elazığ region and the problem of the Mushkians' *Anatolian Studies* 41: 87-97
- 1994: 'The Excavations at the Van Castle mound' in A Çilingiroğlu, D H French (eds), *Anatolian Iron Ages* 3. Ankara: 221-8
- 1995: *İmikuşağı*. Ankara
- Stein, G J, Blackman, M J 1993: 'The organizational context of specialized craft production in early Mesopotamian states' *Research in Economic Anthropology* 14: 29-59
- Van der Leeuw, S E 1977: 'Towards a study of the economics of pottery making' in B L v Beek, R W Brandt, W G-v Wateringe (eds), *Ex Horreo*. Amsterdam: 68-78
- 1993: 'Giving the potter a choice: conceptual aspects of pottery techniques' in P Lemonnier (ed), *Technological Choices: Transformation in Material Cultures since the Neolithic*. New York: 238-88
- Vandiver, P B 1988: 'Reconstructing and interpreting the technologies of ancient ceramics' in E V Sayre, P B Vandiver, J Druzik, C Stevenson (eds), *Materials Issues in Art and Archaeology* 1. Pittsburgh: 89-102
- Voigt, M M 1994: 'Excavations at Gordion 1988-89: the Yassihöyük Stratigraphic Sequence' in A Çilingiroğlu, D H French (eds), *Anatolian Iron Ages* 3. Ankara: 265-93
- 1997: 'Gordion' *The Oxford Encyclopedia of Archaeology in the Near East* Vol 2. New York: 426-31
- Voigt, M M, DeVries, K, Henrickson, R C, Lawall, M, Marsh, D, Gürsan-Salzman, A, Young, T C 1997: 'Fieldwork at Gordion: 1993-1995' *Anatolica* 23: 1-59
- Voigt, M M, Henrickson, R C in press: 'The Early Iron Age at Gordion: the evidence from the Yassihöyük Stratigraphic Sequence' in E Oren (ed), *The Sea Peoples*. Philadelphia
- Winn, M W 1980: 'The Early Iron Age pottery' in M N Van Loon (ed), *Korucutepe III*. Amsterdam: 155-76
- Young, R S 1955: 'Gordion: preliminary report - 1953' *American Journal of Archaeology* 59: 1-18
- 1962: 'The 1961 campaign at Gordion' *American Journal of Archaeology* 66: 153-68
- 1964: 'The 1963 campaign at Gordion' *American Journal of Archaeology* 68: 279-92
- Zeder, M A, Arter, S R 1994: 'Changing patterns of animal utilization at ancient Gordion' *Paléorient* 20(2): 105-18