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THE 2000 AND 2001 SEASONS AT ÇADIR HÖYÜK IN CENTRAL TURKEY: A Preliminary Report

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I. INTRODUCTION

The 2000 and 2001 seasons at Çadır Höyük represented the project's fifth and sixth seasons of work in the Kanak Su Basin (Fig. 1). We are greatly indebted to the many people and organizations whose contributions made these two seasons so successful.[1] In addition, an excellent staff and a loyal crew of workers from the villages of Peyniryemez and Yazılıtaş further facilitated an excellent season of excavation.[2]

Several goals had been determined for the 2001 season, the most important of which was the establishment of a long-term strategy for excavation and publication. The overall goal of excavation continued to be the exposure, investigation, and reconstruction of the region's environment through time and especially the role played by environment in

[1] Among those who contributed to our success were the National Science Foundation, The National Geographic Society, the Anatolian Research Foundation, Columbia Broadcasting System, Foundation for the Research and Exploration of Cultural Origins, SUNY Cortland Research Foundation, Hyundai Corporation, and various private donors.

[2] The Staff for the 2000 and 2001 seasons also included Amandina Anastassiades (Conservator), Lauren Bigelow (Northwestern University, Faunal Studies), Tamara Bower (illistrator), Scott Branting (State University of New York - Buffalo), Carlton Burr (Photographer and Computer specialist), James Carlson (Portland State University, Lithics), Gabriela Castro (State University of New York - Binghampton), Jeannette Cooper (State University of New York - Buffalo), Sarah Harris (Illustrator), Herrman Genz (German Institute of Archaeology - Istanbul), Samuel Paley (State University of New York - Buffalo, Assistant Director), Catherine Kuzucuoglu (French Institute of Archaeology in Istanbul), J. Aurelia Perry (State University of New York - Buffalo), Natasha Rakovic (Belgrade University), Jennifer Ross (Hood College), Carol Schneider (New York, House Manager), Alexia Smith (Boston University, Paleobotanical Studies), Sharon Steadman (State University of New York - Cortland), Bruce Verhaaren (University of Chicago/Argonne National Laboratory), Catherine Weitz (State University of New York - Buffalo). Ulf-Dietrich Schoop (University of Tuebingen) continued as a consultant on the Chalcolithic and Early Bronze Age periods.

the development of culture in the Kanak Su Basin. Our aim to promptly publish our results has been accomplished through the auspices of Anatolica.[3]

The first phase of the work at Çadır Höyük has focused on the definition of the mound's chronological parameters and included the completion of work in the deep sounding (See Table 1). Four primary areas of excavation have been opened to facilitate the overall goals of the project (Fig. 2). More specific excavation goals for the 2001 season included a) the exposure of Chalcolithic remains that would be sufficient for specialty studies in this area; b) better articulation of the "Gate" and enclosure wall; c) the isolation of second millennium habitation levels intimated in previous reports (Gorny *et al.* 2000: 157-58) along with the development of a corresponding Hittite ceramic corpus; d) as well as the definition and Byzantine settlement's history and development.

At present, nearly every period of Çadır's long history has been exposed, but additional seasons will be needed to define each of these periods in sufficient detail to be useful. While we are far from developing a definitive chronology for the site, we can use the following paradigm as a temporary chronology for Çadır Höyük. Please note that the numbers used in previous publications for the phases and levels have been changed to reflect the expanding complexity of settlement at Çadır Höyük.

II. The Excavations

Area 1: The Eastern Trench

The 2001 season witnessed the reopening of Area 1, the eastern step-trench. No work had been done in Area 1 since 1994 (Gorny *et al.* 1995:76), but after cleaning the baulks, remnants of the walls found in 1994 were quickly located under the wash from the slope. Wall F 6 remains especially interesting as it dates to the Old Hittite period and was found this year to have bovine horns neatly buried next to it for a purpose that remains unclear. As noted in Anatolica 21, wall F 6 had been covered by a thick layer of orange mudbrick detritus with later period room F 5 built on top of it.[4] Once excavation com-

[3] Preliminary publications resulting from the Alişar Regional Project include R. L. Gorny, The 1993 Season at Alişar Höyük. *Anatolica* 20 (1994): 191 - 202. R. L. Gorny, Greg McMahon, Sam Paley, and Lisa Kealhofer, The Alişar Regional Project: 1994 Season. *Anatolica* 21 (1995): 68-100; M. Chernoff, Preliminary Report on the Botanical Remains from Çadır Höyük (1994 Season). *Anatolica* 22 (1996): 159 - 179; R. L. Gorny, Greg McMahon, Sam Paley, Sharon Steadman and Bruce Verhaaren, The 1998 Alişar Regional Project Season. *Anatolica* 25 (1999): 68 - 100; R. L. Gorny, Greg McMahon, Sam Paley, and Sharon Steadman, The 1999 Alişar Regional Project Season. *Anatolica* 26 (2000): 153 - 171; Alison Snyder, Re-constructing the Anatolian Village: revisiting Alişar. *Anatolica* 26 (2000): 173 - 191; and Hermann Genz, Iron Age Pottery from Çadır-Höyük. *Anatolica* 27 (2001).

[4] Cf. Gorny 1995: 75-76. Note the misprint on page 75 that lists this as F 8. The feature number (5) is correct in the plan on p. 96, Fig. 16b).).

menced in 2001, we decided to come down on this debris from wall F 5 in an attempt to clarify the stratigraphy of this area.

As we began to work our way through the massive amount of orange burned material our ideas about its relationship to Wall F 6 began to change.[5] While we originally thought that the burned mudbrick had come from Classical or Iron Age walls located further up the slope, the wider exposure indicated that the burned mudbrick had fallen from F 20, another Hittite wall. This wall was situated about 3 m higher up the slope and measured 1.35 m in width. It had been constructed with large stones on both the inside and the outside while smaller stones placed in between as fill (Fig. 3). Wall F 20 is situated approximately 1 m below the small room formed by F 5. An intervening and undated oven installation lies between the two features and is cut into by the foundation trench of wall F 5. The appearance of Hittite levels in this area of the eastern trench was not unexpected as we found evidence during the 1994 season of Hittite occupation mixed in the debris associated with F 5.

F 20 was situated well above and inside of wall F 6 and maintained a similar orientation. Excavations suggest that wall F 20 dates to approximately the same time as wall F 6, a structure that we had dated to the Old Hittite Kingdom in the 1995 report. From its position on the mound, F 20 appears to have been constructed later, though this may be an example of contemporary structures climbing the slope of the mound. EB III materials (and probably EB II) were noted in the fill associated with both walls and must lie further below. A variety of stone tools were found in association with wall F 20, along with large numbers of Ferzant-style Old Hittite pottery sherds. This would seemingly date the wall to the Old Hittite or possibly even Old Assyrian Colony Age (Middle Bronze). Two calibrated radiocarbon dates from the area of F 20 support an Old Hittite - Middle Bronze scenario (calibrated 1750-1410 BC and 1910 - 1530 BC). While a picture of the Old Hittite period is now emerging for this area in terms of both pottery and architecture, the presence of Old Assyrian Colony Age sherds in the same mix also promises more definitive Middle Bronze Age remains.

Area 2: The Northeast Terrace

Work in Area 2 is part of an attempt to define the cultural parameters of the terrace and to provide a venue for the study of the site's later periods of settlement. Although we had opened a sounding on the terrace in 1994 that produced evidence of Classical occupation, we were not convinced that the terrace had been left unoccupied in earlier periods. During the 2001 season we took the opportunity to explore the terrace further in hopes of detecting earlier periods of occupation. A square was opened at a point on the terrace that was aligned with the center of the main mound's slope and in an area where large amounts of pottery and building remains could be observed. We initially cleared a 10 x 10 meter square of brush and immediately observed building foundations.

[5] This is the area in which a metal knife blade had been found in 1994 (Gorny 1995: 75, and 97, Fig. 17).

The foundations uncovered during this procedure initially appeared to be a large stone platform, but further clearing of the building revealed the foundations of sizable buildings covered by volumes of stone rubble, presumably from the fallen walls (Fig. 4). Judging from the topography of the terrace, along with areas of heavy rock tumble and intense sherd scatters, it seems that this building is just one of several situated along the crest of the terrace rising to the northeast. The exact nature of these buildings is uncertain, but judging from materials found near the ruins, they may represent an agricultural community of some sort, though we have not ruled out anything, including buildings with a public or religious purpose. A cellar found next to the building contained numerous large pithoi that could have been used for wine or grain storage in either a public or private artifice. Numerous metal artifacts found in the vicinity of the excavated building, however, included farm items such as pins, cow bells, hinges, nails, and bucket parts. A coin found outside the building dates to the reign of Constantine (Ducas) X (Fig. 5), and since this ruler reigned during the 11th Century (1059-1067), we have an apparent date for the structure. More definitive dates, however, await the efforts of another year.

Area 3: The Southern Exposure

1. Chronology: The 2001 season focused on the collection of radiocarbon samples from the horizontal exposure in Area 3. These samples indicate that Çadır Höyük was settled from the end of the sixth millennium down to the end of the Chalcolithic and into the Early Bronze Age. An ancillary goal of our team was to better define the problematic transition between the Chalcolithic period and the Early Bronze I (EB I), an issue that radiocarbon samples are beginning to address. So, while we are a long way from a definitive chronology, our radiocarbon current dates are helping us to break down the mound's complex stratigraphic into firmly attested periods of settlement. Charts illustrating these dates can be found at the end of this report (See Tables 2-3).[6]

2. Square 770.890 (Room 5): Ongoing efforts in 770.890 witnessed the exposure of several layers directly beneath the Late Classical remains. On the northern side of the trench we encountered a sealed layer of Iron Age pottery (mostly Middle Iron Age) and as this first millennium layer was removed, we encountered F 46 on the north side of the trench. The feature consisted of a hard-packed layer of soil that, in turn, sealed a lower layer of fist-sized stones (Fig. 6). The layer of soil, which appears to be deliberately laid, can still be seen in the section. The date of the feature remains uncertain, but Hittite pottery associated with the stone structure clearly differentiates the structure from the first millennium layer above it and suggests a Hittite construction. The closest parallel structures are the recently discovered grain silos on Büyükkaya at nearby Boğazköy-Hattuşa (cf. Seeher

[6] Area 3 is composed of squares 770.890, 770.900, 760.890, 760.900, 780.890, and 770.880.

1998: 224-230; 1999: 332-336). This structure is only partially intact, however, and its current appearance leaves thoughts about its function mostly to the imagination.[7]

As we attempted to further articulate this stone construction during the 2001 season, we discovered that it apparently had been dug into the Chalcolithic Level Ia1 settlement, the outlines of which could be detected in the soil. Room 5 has an entrance in the eastern half of the structure and is defined by mudbrick walls. The floor is littered with an abundance of *in situ* Chalcolithic pottery that apparently had been left on the floor as the residents fled in haste. The pottery consists of both fruitstands and ompholos-style bowls that were finely fashioned, many being made of an eggshell ware that does not appear to have been used as everyday utilitarian pottery. Radiocarbon samples established a date for the room at 3650-3490 BC (Cal BP 5600-5290).

3. Square 77.900 (The "Burned Room): In square 770.900 we noted significant amounts of ash and charcoal in past seasons. Initial excavations during the 2000 season confirmed that the eastern half of the square did, indeed, contain a thick accumulation of charred debris, especially in an enclosed space that was dubbed Room 1 or the "Burned Room". This space is part of a larger complex of buildings that is rapidly emerging across the southern slope of Çadır Höyük (Fig. 7). Work during the 2000 seasons isolated this room, as well as several others, and revealed portions of a burned thatch roof with impressions of the grillwork left in the clay. Several pieces of charred poplar uprights that once held up the thatch roof were also found. Many of the stones in the area had been turned to a yellowish-white ash by the obviously fierce fire. Although the room itself was not completely excavated in 2000, the remains of several pithoi were found sitting on an earthen surface. A continuation of work in this room during the 2001 season yielded large quantities of economic remains from of the earthen surfaces and these samples are now being analyzed by a variety of specialists. The combination of evidence from this room, at least up to that point, suggests that the room was actually an outside courtyard of some sort that had been covered with a thatched roof and possibly used for storage

Just west of Room 1 we also uncovered Room 3, a small room within which we exposed a series of smashed pots that was not unlike what we found in Room 5 of square 770.890 (above). These vessels were uncovered in five distinct findspots (Figs. 8) and apparently belong to Level Ia2 as one of the findspots consisted of pottery found immediately beneath the Level Ia1 interior wall. The ceramic repertoire in this room once again consisted of fruitstands and ompholos bowls, and although the vessels have not yet been reconstructed, there appear to be at least 10 - 15 restorable pieces in all. It should be noted that the bowl portion of one fruitstand was coated with yellow ochre, perhaps an indication of some ceremonial use.

[7]Some grain did come from floatation samples taken from the soil immediately above the rocks, but not enough to definitively say that this construction was a silo,

4. The Gate Structure and Enclosure Wall: In 2000 we began work in square 760.890. These efforts produced evidence a building that was probably part of a large construction project intersecting the enclosure wall, possibly to form a Level 1b city "gate" building (Fig. 9). The passage between the "gate's" two exterior walls is filled soil deposits and tells the history of the area after its Level Ib destruction. The current hypothesis states that this is a "gate" building, partially because both sides of the "gate" structure are buttressed by two levels of buildings with thickly layered plaster floors that we originally called "plaster basins" due to their shape and construction (Gorny *et al.* 1999: 152 and 175, Fig. 6). It now appears that the upper levels of plastering belong to the later floors of Ia towers or guardrooms, their concave basin shape being determined by the many layers of plaster lipped up against the walls of the rather small rooms.[8] What we described as Level 3 plaster floors in the same report (Gorny *et al.* 2000: 155), are now understood to represent the guardroom floors associated with an earlier Ib version of the "gate" building.

In order to better understand the Level Ia period "gate" we began to remove the flimsy walls uncovered during our 1998 work in 770.890. To our surprise, there was a rather large structure just beneath them that were designated as Level Ia2. In one case (wall F 22), the later Level Ia1 wall (F 26) had been built directly on top of the Ia1 walls, but that was the only case where we found that to be true. The Level Ia2 structure was built of large uncut fieldstones, quite different from the weak foundations of the Ia1 walls. A layer of debris lies immediately below this structure, clearly separating Level Ia from Level Ib. Little was done with this area in 2001 as we worked to clear areas that surrounded the building.

We now know that the Ia walls in 770.890 formed a room that was situated above a debris layer that intervened between it and Level Ib. Pottery inside this room, south of the wall, included a variety of sherds from large Chalcolithic pots with one vessel found still standing *in situ*.[9] Based on this vessel and the many large body sherds strewn across this area, it seems that the room had been used as some sort of storage space for large vessels, though it may be that a wide variety of sherds were haphazardly tossed into the room at some later time, perhaps during its destruction. Of note in this mass of pottery was the discovery of a low-spouted vessel shown to be associated with the beginnings of milk production (cf. Schoop 1998, Fig. 2; perhaps Duru 1996: Plate 77, nos. 2-4).[10] The solid Ia building was erected immediately above the Level Ib "gate," but further excavation is necessary to determine the full extent of the building and its relationship to the "gate" that preceded it. The *in situ* storage jar was sitting on a white plaster surface separating it from

[8] The floors had been replastered many times, but even after sieving and flotation, they produced very little in the way of cultural remains. One thing that did derive from the floors was our first nice chipped stone blade, which was found on one of the floors of the east room in 1994 (Gorny *et al.* 1995: 77). This lack of material remains was puzzling, especially if the "basins" had been used for storage, but their use as an antechambers or guardroom may explain the barrenness of these floors.

[9] On the north side of the wall, there were very few sherds.

[10] Note that if the sherds documented in Duru (1996) represent the same vessels as noted by Schoop (1998), they would have been printed upside-down.

the Level Ib burning below (i.e. above the gate). The eastern wall of the "gate" is cut almost to its foundation, evidently by work undertaken to build the upper room. This indicates that the storeroom was somewhat later than the "gate." The construction of this structure may have cut off the top of the Level Ib "gate," which we noted was also cut on its eastern side by a later intrusion (Gorny *et al.* 2000: 156).

Two burials discovered in 2000 had been set into the Period Ia "gate. The burials themselves had been placed in pots and were located very near the burials found in 1998 (Gorny 1999: 152, 176, Figs. 5 and 7). Although the two burials were in larger Black Burnished pots, they are almost certainly to be understood as contemporary with the 1998 burials, which I now believe were later than the Level Ia settlement and may well date to a "transitional period" near the beginning of the third millennium. The individuals in the burials also appear to be children, like those found in 1998, and while no grave goods were found with those earlier burials, a small copper bracelet found this year probably comes from one of the 1998 burials and is similar to those found in contemporary Alişar burials (cf. von der Osten 1937a: 38, Figs. 43 and 45, Fig. 52). Similarly, two copper pins with double-spiral heads reminiscent of Troy IIg examples were found in the same area, not far from the new burials (Fig. 10), and may have come from one of the burials. All these burials appear to belong to a period after the last known Chalcolithic building level at Çadır and are now labeled as "transitional" with the last actual Chalcolithic building level now designated Level Ia.[11] If the spiral pin has any chronological significance, then the "transitional period" probably belongs to the early third millennium and would be contemporary with Troy II. Work in this area during 2001 was confined to the western part of the square where we attempted to bring the whole area into phase by removing the balk and examining links between this area and the Mudbrick platform (below)

5. Squares 760.880 and 770.880 (The Mudbrick Platform): Square 770.880 was opened during the 2000 season just west of our original investigations on the south slope as a means of exposing more of the Chalcolithic settlement and several surprises awaited us there. In the first place, we immediately encountered two parallel mudbrick-topped wall foundations (Fig. 11) oriented diagonally through the square in the direction of Çaltepe across the valley. The two parallel walls are somehow connected to a large mudbrick platform that was evident throughout the square. It was difficult to understand the connection between walls and the mudbrick because of the intense pitting that occurred in later times on the southern side of the square, but we suspected that these two walls were part of a larger construction that included the small porch and steps noted in 1998 and 1999 (cf. Gorny *et al.* 1999: 154-55; 2000: 156). That structure was composed of flat paving stones covered with mud. Several steps proceeded from the platform up into the western baulk, presumably connected to the mudbrick structure in square 770.880. Abutting the east side

[11] We are assuming for now that the burials are Late Chalcolithic, though I have some reservations, especially with our radiocarbon dates and the fact that we do not know exactly what constitutes an Early Bronze I pottery assemblage.

of the small porch was another small mudbrick construction, perhaps an extension of the porch that displayed a thick well-laid mudbrick floor. The removal of the overlying baulk in 2001 helped clarify the eastern extend of the construction, but the larger portion remains hidden by the partially excavated northern half of the square. This area will be cleared in 2002. The function of this area seems clearly linked with structures immediately to the east, and although its function remains unclear, the numerous fruitstands found in this area over the past few seasons may hint at its use.

The terraced mudbrick structure itself is oriented directly towards Çaltepe across the Eğri Su and I suspect that it functioned as either a communication center for passing along messages or a type of high place or *bema* connected with the local cult. The date of the structure appears to be Chalcolithic Ia, but like so many other constructions on the site, it had a Ib predecessor that is separated from its successor by nearly a half meter of burned material.

6. The Hittite House: While we understood the mudbrick platform in squares 760.880 and 770.880 to be a Chalcolithic period structure, its dating is complicated by numerous remains from the Early Bronze and Hittite periods. Further examination of the mudbrick structure revealed the greater part of a room constructed with stone wall foundations and an associated plaster floor upon which sat the greater portion of a large Hittite bottle (cf. Fig. 11). Unfortunately, the southern end of the room was lost along the edge of the slope in that area and a variety of pits had been dug into the area. The northern part of the room yielded a great deal of Hittite pottery. In fact, a Hittite bottle found leaning against the rear wall of the room was nearly complete. Its rim, however, had been severed by a tumbling rock and was not recovered. Once the vessel was emptied of its content we discovered an unidentified crystalline substance attached to the inside wall of the vessel.[12] The precise date of the Hittite materials is unclear, but they are probably dated near the beginning of the Hittite Empire Period. A Middle Assyrian cylinder seal from the area shows Mitannian influences and seems to be dated around the 15th-14th centuries (Fig. 12). This would make it roughly contemporary with the Kassite period cylinder seal from Alishar (Gelb 1935, OIP 27, d 2235, PL L, no. 64; von der Osten 1937, Fig. 246, d2235; Gorny 1990: 366-369, Pl. 57, no. 64; and Gorny 1995: 165 and 179, Fig. 10).[13]

7. The Deep Sounding: The deep sounding has been the focal point of our efforts since the project's inception (Gorny *et al.* 1995; 1999, 2000). The primary intent of that project has been to gain a chronological definition of Çadır's earliest periods by means of a clear vertical sequence. In this we have continued to make progress. Wall 42 (Level 3a), for

[12] The substance was scraped from the vessel walls and will be sent to Patrick McGovern at the University of Pennsylvania MASCA labs where the contents of the vessel are to be examined for residues such as tartaric acid.

[13] Please note that this seal was inadvertently mislabled in Gorny 1995 as being from "Gelb, OIP 29, Fig. 154, d1622." That citation should have read as cited in the text of this paper (above).

instance, was found in 1999 (Gorny *et al.* 2000: Fig. 5) and provided the first evidence that Çadır's sequence stretched back into the fifth millennium.

Wall 42 was removed at the beginning of the 2000 season and approximately 10 cm under it we encountered wall 43 (Level 3b), which displayed the same northwest - southeast orientation as wall 42 (Fig. 13). This wall was of a different construction, however, in that it was really two walls built back-to-back. The more easterly of the two walls consisted of a double row of large fieldstones that were filled with soil in-between. The second wall was laid immediately west of the first and was also had a double row of stones, but these were smaller and the wall foundation much more regular in pattern than the first. Although several centimeters of soil separated the two wall foundations, its possible that wall 43 was really the lower course of wall 42 situated immediately above it. The soil above wall 43, however, was a fine brown mixture that appears to have been laid by natural causes and suggests a period of abandonment after the final destruction of that structure. We also discovered wall 44 (Level 3c) approximately 20 cm below wall 43, but in contrast to walls 42 and 43, which displayed back-to-back walls, 44 was only a single two-stone wide wall.

Walls 42 - 44 are built one on top of the other and seem to have some sort of relationship. They do not seem be separated chronologically by much time, but are not necessarily rebuildings of the same wall. The walls are apparently cross walls and do not represent any sort of outer defensive construction, though they could well be part of a casemate. All three walls belong to the Late Chalcolithic period and continue to be characterized by the same Black Burnished pottery that has been so prevalent in the levels above. A radiocarbon samples found just above wall 42 at the end of the 1999 season provided dates of 3705 to 3620 BC (Cal BP 5655 to 5570) for that excavated level. Unfortunately, there is no radiocarbon date for wall 42 itself, but a sample taken during the dismantling of wall F 43 last season yielded dates from 5220 to 4940 BC (Cal 7170 - 6890 BP) for the succeeding wall. Another sample was taken from Locus 65 that was the matrix into which wall F 44 was cut. That locus gave dates of 4720 - 4480 BC (Cal BP 6670 - 6430). Based on this evidence, therefore, it would appear that this series of walls in our deep sounding corresponds to a period of time near the beginning of the fifth millennium BC, perhaps spanning a period of 200-300 years.

A sidelight related to the excavation of the deep sounding was the discovery in the wet-sieving of materials that seems to have been part of a bead-making workshop that came from a pit found in the bottom of the sounding. Included in the assemblage was an obsidian drill, bone beads, and prepared bone. The materials from this intriguing discovery came from Locus 66, soil removed from a pit that had been dug into Locus 65, and based on the dates for Locus 65 (above), they provided the earliest evidence yet for craft production at Çadır.

Immediately below these levels, at ca. 1032.018 m. the soil began to change and we found stray sherds that were a highly burnished brown color instead of the usual Black Burnished wares. The same area also produced what appeared to be sherds from an unbaked clay vessel. Finally, we reached a layer of pebbly brown soil at 1029.848 m in which no cultural materials were found and which presumably marks virgin soil at the bottom of the

sounding. We continued through this matrix for another meter and a half and discontinued excavation at 1028.348 m or just over 8 m in depth from the original slope of the mound. Continued excavation in 2001 further strengthened the belief that this is virgin soil, though we plan to do a final coring in order to be sure.

In summary, it appears that the mudbrick platform and associated architecture in this horizontal exposure were built on the highest part of the underlying natural hill and that it consequently defined the edge of the mound in this particular area. Substantial stone and mudbrick architecture, perhaps belonging to a wall, tower, and gate marked the edge of the settlement just east of the mudbrick platform. Domestic floors associated with this edge architecture have been found in trenches 890 and 900. The deep sounding indicates that the earliest occupation occurred just prior to 5,000 B.C. Sturdy Hittite architecture of the second millennium is later cut into this Chalcolithic-Early Bronze layer and secures the edge of the mound which then evolved into a fill basin that was utilized by ill-defined post-Hittite (Iron Age and Hellenistic, and Classical) construction projects.

Area 4: The Citadel and Southern Slope

1. Squares 780.890, 790.890 and 800.890): In hopes of getting a better idea of where all the tumble observed in Squares 770.890 and 770.900 had originated from, we opened up square 780.890 immediately north of our original excavation squares in 2000 and because the slope was steeper here than where we had placed our original exposure, we began excavation by creating a series of earthen steps up the slope. This work was continued in 2001. The initial 7 m area was approximately 3 m above our previous working surfaces in 770.890 and the northernmost 3 m stretch of the square is stepped up again and is another 2 m above the initial exposure in Square 870.890. Near the top of the slope and just above 780.890, we opened Square 790.890 as part of a plan to clarify the chronology of the mound's final Byzantine settlement during the coming season Although the steep slope made excavation more difficult in this area, it was precisely because of the steeply sloping situation on the mound that we harbored hopes of encountering early walls without the heavy overburden of Late Classical tumble encountered in 770.900 and 770.890 where the debris of later periods was able to settle on the flatter areas of earlier occupation (Gorny *et al.* 1998; 1999).

To some extent, our preliminary efforts turned out even better than we could have planned, for after digging through a meter of wash on the slope, we came upon a series of wall stubs topped with mudbrick. Although their southernmost face had eroded away due to their vulnerable situation on the slope, much of the wall construction remained extant. Numerous examples of both Hittite and Iron Age pottery appeared in the materials excavated near the walls. Among these sherds was a finely executed ceramic animal head (Figs. 14a-14b) that seems to have once been attached to the side of a krater. Various pieces of metal also came from this area including what may have been from the handle of some small implement such as a mirror. All these materials, however, came from the cleaning of the slope and had neither a secure provenience nor a clear date. In the north section of the

trench, however, a large pit (F 10) was discerned cutting deep into the walls in the westernmost part of the area. A Hittite miniature votive plate, one of several from the area (Fig. 15), was removed from the edge of the pit and suggests a Hittite date, but the feature remains unexcavated and its actual date is still to be determined.

Cleaning the area around the wall stubs in square 780.890 produced some surprises. The pottery along the slope had been primarily first and second millennium in date so we expected the walls to be similar in date. As we cleared the mudbrick around these structures, however, we discovered that in the western part of the square, the lower portion of the mudbrick in this area showed evidence of burning similar to what we had found lower down the slope in Square 770.900. Pottery from this layer of mudbrick was characterized by the typical Black Burnished pottery found below. In fact, this layer of material spanned the entire 10 m trench, giving us evidence of an extensive early settlement climbing the slope of the mound. The pottery from this layer was primarily Black Burnished but included several examples of EB II and EB III pottery. The intriguing aspect of this area is that a radiocarbon date (Beta 146705) taken from this area provided a date of ca. 2880 - 2450 BC (Cal BP 4830 - 4400). This supports a sample from 770.890 taken in 1999 (Beta 134070) that also produced an early third millennium date just a few meters further west of the 2000 sample.[14]

The majority of our efforts in 2001 took place directly above these mudbrick walls. While materials found along the slope were still mixed, especially with Hittite sherds, the numerous Iron Age sherds made the prospect of a first or second millennium level also appear increasingly good. A variety of "Dark Age" sherds were also found in this area including the neck of a particularly interesting trefoil pitcher (see Genz 2000). A true architectural level associated with the Iron Age finds has yet to be revealed. The discovery of an *in situ* oven in this upper step contained charcoal and part of a cooking pot. A radiocarbon sample (Beta 146705) from this locus yielded a date of 1190 - 840 BC (Cal 3140 - 2790 BP). Pit F 10, discussed above, appears to be dug from the same level as the oven and another radiocarbon sample taken from locus 5 inside of pit F 10 produced a similar date of 1270 - 910 BC (Cal 3220 - 2860 BP). Based on these dates, this area seems to reflect the Late Bronze - Iron Age transition or possibly a "Dark Age" level. A 2001 radiocarbon

[14] The significance of the radiocarbon dates from this area is not lost on us and has focused our attention on retrieving as much data from this area as possible. As it now stands, the area may help us to illuminate and explain the problematic Chalcolithic - EB I transition. What fascinates us about this chronological scenario is that if it proves to be accurate, the pottery associated with the early third millennium in this area is nearly identical to the earlier Chalcolithic pottery. While there are almost certainly variations on the theme that ultimately will help us to differentiate the periods, its may be that the Chalcolithic culture continues longer than we assumed (perhaps into the early third millennium or the traditional EB I period) with little or no observable change in the ceramic corpus until the appearance of a new age signaled by the Red Burnished wares we commonly associate with EB II, but which may in fact be the real EB I. This would make the remains found in this area contemporary with Troy II, as suggested by the spiral-headed copper pin noted above. What this means for our ideas of cultural change are yet to be worked out, but such a scenario would provide an open window for the arrival of the Indo-Europeans into Anatolia

sample taken from the lower portion of square 780.890 produced a date of 1360-1360 (Cal BP 3310-3300). Taken together the three dates suggest an occupation near the end of the Hittite Empire period that continues into the Iron Age.

Additional squares were opened in 2001 as we continued our investigation of the mound's upper levels. In square 790.890, where a small area had been opened the year before in order to test a small tumulus, we expanded our work into a full square, while at the same time, square 800.890 was then opened on the top of the citadel mound. These squares were intended to provide a clearer picture of ,adõr's vertical sequence, and especially of the site's latest occupation. In order to accomplish this procedure, square 790.890 was fashioned as a 10 x 5 m square linking the top of the citadel mound with the horizontal excavation area below and then subdivided it into five 2 x 5 m steps from which excavation began.

Several levels of architectural units were uncovered in the subdivided steps of 790.890, but the southern face of each structure had been destroyed by activity along the sloping edge of the mound. The pottery was heavily mixed along the slope, but as the five 2 m steps were cut back and excavated, two concentrations of homogenous pottery began to distinguish themselves. The two northernmost (or highest) steps contained remnants of a wall (F 1) and a surface (F 2) that continued into square 800.890. This seems to be where the Late Iron Age pottery is coming from as attested by examples of Achaemenid and Galatian painted sherds found there (Fig. 16). The three southernmost of these steps were then taken down to a common level that exposed wall F 5 from the Hittite period. Part of this wall, including a stone door socle, had been exposed in 2000 while attempting to excavate what seemed to be a small tumulus directly below it. Excavation in the 790.890 ceased at this point as the team focused their work on square 800.890.

Square 800.890 lies on the surface of the citadel and encompasses the final period of occupation. With square 790.890 situated directly beneath it in an intermediate position connecting the citadel (800.890) to the horizontal exposure (780.890). Initial investigations in the square uncovered a Byzantine complex that ran along the edge of the citadel mound (Fig. 17). A small square structure (F 1) was found in the northern portion of the square, while the previously noted wall (F 1) and surface (F 2) from 790.800 continued into 800.890 as F 1 and F 3 respectively. The wall was composed of cut and fitted fieldstones prepared with a smooth exterior face, but displaying no mortar. The heavily plastered floor continued around the small building and into the citadel proper. Initial pottery from the slope in 790.890 was Hellenistic, but when the 800.890 was opened on top of the citadel mound, the ceramic corpus became exclusively Byzantine. The initial investigation also indicated that the plaster surface was part of a street or pavement may have encircled the citadel and that it connected perpendicularly with another street that was bounded on both sides by domestic-style buildings. A pile of animal bones littered the street between the two buildings and while no C14 dates are yet available for Byzantine ruins on the citadel, a coin found in an apparently contemporary building on the Northeast Terrace (below) is tentatively dated to the eleventh century. The pottery on the mound initially appears to be consistent with that same period and may also fall within a similar timeframe.

III. Final Observations, Analyses, and Conclusions

The 2001 season provided an abundance of new data about the increasingly complex historical developments at Çadır Höyük Not only did excavators expose new architectural levels, but specialists continued to amass large amounts of data relating to environment, climate, subsistence and the impact of human activity on the land. Together with our radiocarbon sampling, these studies are beginning to shed light on a wonderfully rich and interesting site. An upcoming interim report will detail the results of these studies and how they impact our thesis on the relationship of environment to state and empire development. In the meantime, there are some things that we can say, beginning with the Chalcolithic period.

The massive buildup of occupation at Çadır during the Late Chalcolithic period is similar to what was found at Alişar Höyük and may be typical for sites throughout the area. The period was evidently conducive to settlement and geomorphological studies indicate the existence of a moister period from 4800 - 3600 BC, which would have favored agricultural production, and in turn, the expansion of settlement across the region (cf. Todorova 1993; Kuzucuoğlu 1997; Fontugne *et al.* 1999; Yakar 2000: 17). How this played out in sociopolitical terms remains a puzzle as it is still impossible to determine any sort of political hierarchy, though sites such as Alişar and Çadır must have played critical roles in the region's political make-up. The emergence of Çadır Höyük along a route that passed by Alişar to Kültepe, as well as their similarity of the material culture shared by Alişar and Çadır, along with many other sites in the region, suggests that there was constant and intimate communication between the various nodes of settlement in this region. The presence of an enclosure wall around Levels Ia and Ib, however, along with the observable destruction of the Level Ib city, suggest that relations were not necessarily friendly throughout the region, or that there was a common enemy from without that was to be feared.

The Chalcolithic buildup at Çadır comes during the 4th millennium BC (Gorny 1995a) when we see a lingering Balkan presence in the area that may have arrived via the Black Sea coast and used the Kızıl Irmak as a means of penetrating the interior (cf. Özdoğan 1993; Makkay 1993: 123; Thissen 1993). It seems possible that this Balkan incursion had something to do with the rise of the Anatolian Late Chalcolithic culture and the emergence of large mounded sites in the region. The underlying rationale for this penetration may have involved the search for natural resources, with metals being the primary objective. If so, we could have an early antecedent to the Old Assyrian Colony Age traders trekking into Anatolia in search of metals, but with an impetus coming from the Balkans instead of Mesopotamia. While details remain to be worked out, the Neolithic period obsidian route connecting Europe to south central Anatolia could well have served as the precursor for later Chalcolithic incursions from the Balkans (cf. Dixon, Cann and Renfrew 1972; Renfrew and Dixon 1977; Tykot 1996; Balkan-Atlı *et al.* 1999).

Çadır has now produced a series of radiocarbon dates that begin just prior to 5000 BC and which continue into the first millennium. The Chalcolithic dates corresponds to the rise of favorable climatic conditions in the region (above), a time when contemporary Balkan sites give evidence of prosperous and sophisticated cultures that may have had economic and/or political motivations for extending themselves into northwest and central Anatolia. While these events may be related, we remain uncertain as to why a settlement such as Çadır existed and where such a settlement would have stood in any political hierarchy. All the indicators suggest that this was an important settlement in the framework of local politics, a settlement that was characterized by a hierarchical system of elite rulers and privileged citizenry, the presence of a class of craftsmen and specialized labor, exchange beyond the Kanak Su Basin, and an ability to move both people and resources. The regional survey indicates that there were smaller settlements in the area surrounding Çadır at this time, and these settlements must have been home to farmers and herders who supplied the material and labor resources that made the town come alive. Thus it seems clear that by the mid-fourth millennium, the settlement at Çadır had developed into a sophisticated society that boasted a multi-level hierarchical way of life. Whether Çadır was an independent settlement, as suggested by Branting (1996: 151), or existed as part of a militarily integrated network can not be known at this time, and may never be known.

As important as the Late Chalcolithic (- EB I?) period is for our understanding of the processes at work in the Kanak Su basin, however, the period represents the crest of only one wave in the historical development in central Anatolia. Within the context of regional sites like Alişar and Çadır, we observed a massive buildup of settlement during the Late Chalcolithic that appears to continue into the EB I with a strong element of continuity. Thus, it is becoming increasingly plausible, based on recent discoveries, that Çadır may soon provide important information about the relatively undocumented transition from the Chalcolithic Period to the Early Bronze I and beyond. We remain cautious in our appraisal of the situation as we continue to integrate a growing number of radiocarbon dates into our analysis. Nevertheless, if this hypothetical scenario turns out to be accurate, we may be taking a giant step towards resolving longstanding questions related to the Chalcolithic-EB I transition, as well as what happened in the region during the early part of the third millennium. The characteristic of this early third millennium period is the typical chaff-tempered red ware variously described in the past as Copper Age or Early Bronze II pottery. Elements of the Early Transcaucasian Culture are also observable in the materials of this period.

Important data subsequent to the mid-third millennium marker are also beginning to emerge at Çadır. A change in the site's material culture in the mid-third millennium is said to signal the arrival of the Indo-Europeans and the EB III wares associated with that shift point to new wave of settlement on the mound that lasts throughout the third millennium and into the second. Architectural levels of the second millennium also are being exposed in several areas of the mound, and these levels are providing us with a good corpus of Hittite pottery to work with. The ceramic assemblage itself includes most of the important Hittite ceramic forms (Fig. 22), and together with the initial remnants of architecture, they

clearly demonstrate a significant Hittite presence on the mound during the second millennium. The Hittite settlement at Çadır evidently continued into the Iron Age, though probably not without interruption. "Dark Age" pottery found at Çadır indicates continuity with the Bronze Age, but the fact that the Hittite levels apparently conclude with a destruction level in the eastern trench suggests it too succumbed to the relentless forces that helped forge the central Anatolian Iron Age community.

Settlement continued to be widespread in the region after the Iron Age, especially during the Classical era (cf. Mitchell 1993). Preliminary investigations into this period have only scratched the surface (Gorny *et al.* 1995: 76, 80), but several exposures across the site give ample attestation of a large Hellenistic presence on the mound, not to mention significant quantities of Hellenistic ceramics such as the omnipresent Galatian Ware. In both periods, the settlement expands down the mound and across a large portion of the terrace. Even more noticeable, however, is the late Roman-Byzantine sequence that is observable on the surface of the mound and across the whole terrace.

Exactly how late the settlement at Çadır Höyük continued to exist is still a matter of debate. The Constantine X (Ducas) coin (above) yields a potential eleventh century date (1059-1067 AD), but that date must still be corroborated with radiocarbon dates and further excavation. The possibility of later settlement in the surrounding valley is evidenced by the 13th century coin found in 1994 (Gorny 1999: Fig. 17).

In essence, we have established a broad outline of settlement at Çadır Höyük, a preliminary chronological timeline. A better understanding of how successive waves of settlers integrated this particular site into the wider framework of state and empire building is just beginning to emerge and many details remain to be worked out in future seasons.

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Table 1: Preliminary Çadır Höyük Chronology

Period	Phase	Dates/sublevels	Primary Areas	Comments
Islamic	X	1100 and after	Area around Mound	Pottery and a coin
Byzantine	IX	1100 AD-300 AD	Area 2 (910.920 1050.1000); Area 4 (800.890)	Ceramics, walls and Const. X (1059-1067) coin.
Roman	VIII	100 BC-300 AD	Area 2 (910.920)	pottery, architecture,
Hellenistic	VII	300-100 BC	Area 2 (910.920) Area 3 (770.890 and 770.900)	pottery and robber trench
Achaemenid	VI	500-300 BC	Area 4 (790.890)	Painted sherds.
Iron Age	Va	ca 1000-500 B.C.	Area 3 (770.890)	"Phrygian" Sherds, walls and installations.
Late Bronze/Iron Transition	Vb	ca. 1200-1000 BC	Area 4 (780.900)	"Dark Age sherds"
Late Bronze	IVa	ca 1400-1200 BC	Area 1 (800.930), Area 3 (770.880); Area 4 (790.890).	Hittite Empire Period: sherds, walls.
Late Bronze	IVb	ca. 1600-1400. BC	Area 1 (800.930)	Old Hittite Kingdom: sherds; walls.
Middle Bronze	III	Old Assyrian Colony Age ca. 2000-1700 BC	Area 1 (800.930) Area 3 760.880)	OACP Pottery sherds.
Early Bronze	IIa	ca 2300-2000 BC (EB III)	Area 1 (800.930) Area 3 (789.890)	Intermediate and Cappadocian wares.
Early Bronze	IIb	ca. 2800-2300 BC (EB II)	Area 3 (760.880)	Red chaff-tempered Pottery sherds.
Trans. EB/LC	IIc	ca. 3000-2800 BC (EB I)	Area 3 (770.890)	Graves cut into 1b.
Late Chalcolithic	Ia1	ca. 3300-3400 BC	Area 3 (770.890)	small weak wall foundations 1998 in 1998.
Late Chalcolithic	Ia2	ca. 3300-3400 BC	Area 3 (770.890 and 770.900)	stronger foundations under Ia1.
Late Chalcolithic	Ib	ca 3500-3700 BC	Area 3 (770.890 and 770.900)	Levels under Ib wall foundations separatedl by fire & destruction debris
Late Chalcolithic	Ic	ca. 4500 BC (c14)	Deep Sounding	fill layer w/ F 42
Late Chalcolithic	Id	ca. 5200 BC (c14)	Deep Sounding	F 43 wall foundation
Late Chalcolithic	Ie	ca. 5300 BC	Deep Sounding	F 44 wall foundation

Table 2
Çadır Höyük ^{14}C Dates

Sample	FCN no.	Year	^{14}C Age	Square	context	2σ max cal age (cal age intercept) min cal age
Beta 134066	2494	1999	4840 +/ 180 BP	770.900	L 53	3780 - 3505 BC (Cal BP 5730 - 5455) and 3435 - 3380 BC (Cal BP 5385 - 5330)
Beta 134069	2454	1999	4850 +/- 50 BP	770.900 DS	L 46	3705 - 3620 BC (Cal BP 5655 - 5570) and 3590 - 3525 BC (Cal BP 5540 - 5475)
Beta 134070	2582	1999	4380 +/- 130 BP	770.890	L 42	3485 - 3475 BC (Cal BP 5435 - 5423) and 3370 - 2835 BC (Cal BP 5320 - 4785) and 2830 - 2645 BC (Cal BP 4780 - 4595)
Beta 146703	3193	2000	2890 +/- 60 BP	780.890	L 5	1270 - 910 BC (Cal BP 3220 - 2860)
Beta 146704	3467	2000	2840 +/- 60 BP	780.890	F 4	1190 - 840 BC (Cal BP 3140 - 2790)
Beta 146705	3856	2000	4080 +/- 80 BP	789.890	L 11	2880 - 2450 BC (Cal BP 4830 - 4400)
Beta 146707	3130	2000	6130 +/- 40 BP	770.89 DS	F 43	5220 - 4940 BC (Cal BP 7170 - 6890)
Beta 146710	3510	2000	5740 +/- 50 BP	770.900	L 65	4520 - 4480 BC (Cal BP 6670 - 6430)
Beta 146714	3565	2000	4750 +/- 80 BP	770.900	F 56	3670 - 3360 BC (Cal BP 5620 - 5310)
Beta 159385	4400	2001	2920 +/- 70 BP	780.890	F 5	1360 - 1360 BC (Cal BP 3310 - 3300) and 1320 - 920 BC (Cal BP 3260 - 2870)
Beta 159388	4794	2001	3300 +/- 80 BP	800.930	F 23	1750 - 1410 BC (Cal BP 3700 - 3360)
Beta 159389	5360	2001	3430 +/- 70 BP	800.930	F 23	1910 - 1530 BC (Cal BP 3860 - 3480)
Beta 159391	4568	2001	4700 +/- 80 BP	770.890	L 69	3650 - 3340 BC (Cal BP 5600 - 5290)

Table 3

Çadır Höyük

Calibrated Radiocarbon Dates (BC)

Sample	*Chalcolithic*	*Early Bronze*	*MB - Old Hitt*	*Late Bronze II*	*Iron*	*Classical*
146707	5220 - 4940					
146710	4520 - 4480					
134066	3780 - 3505					
134069	3705 - 3620					
146714	3670 - 3360					
159391	3650 - 3340					
134070	3485 - 3475	2830 - 2645				
146705		2880 - 2450				
159389			1910 - 1530			
159388			1750 -1410			
159385				1360 - 1360	1320 - 920	
146703				1270 - 910		
146704					1190 - 840	

NOTE: These are maximum dates. Minimum dates recorded only when they fall in the succeeding period

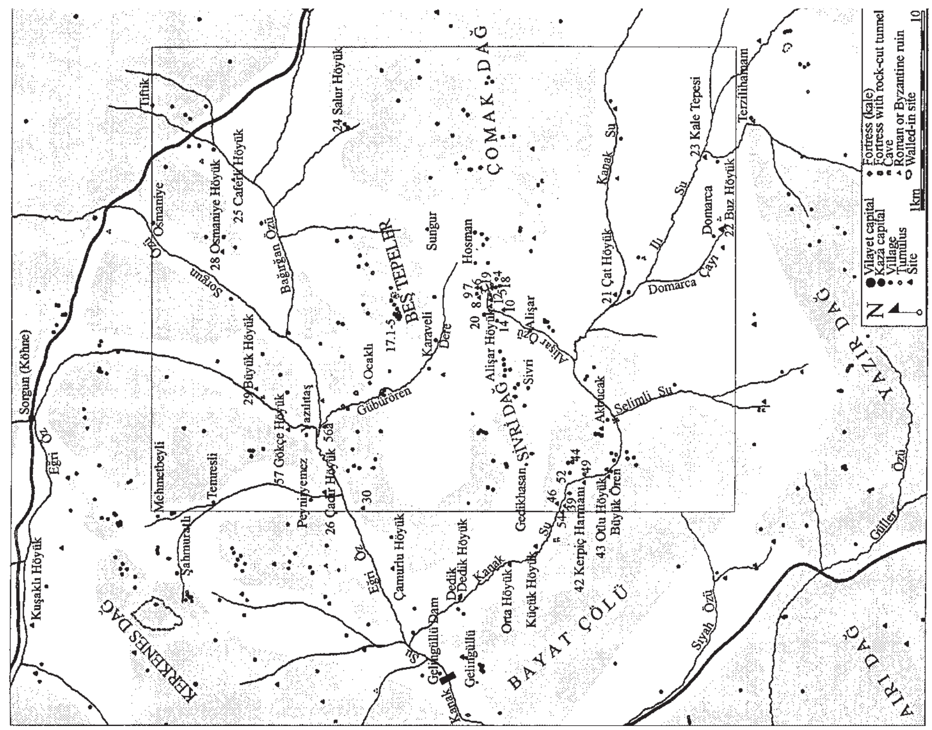

Fig. 1. The Alişar Regional Project survey area showing Alişar and Çadır Höyüks.

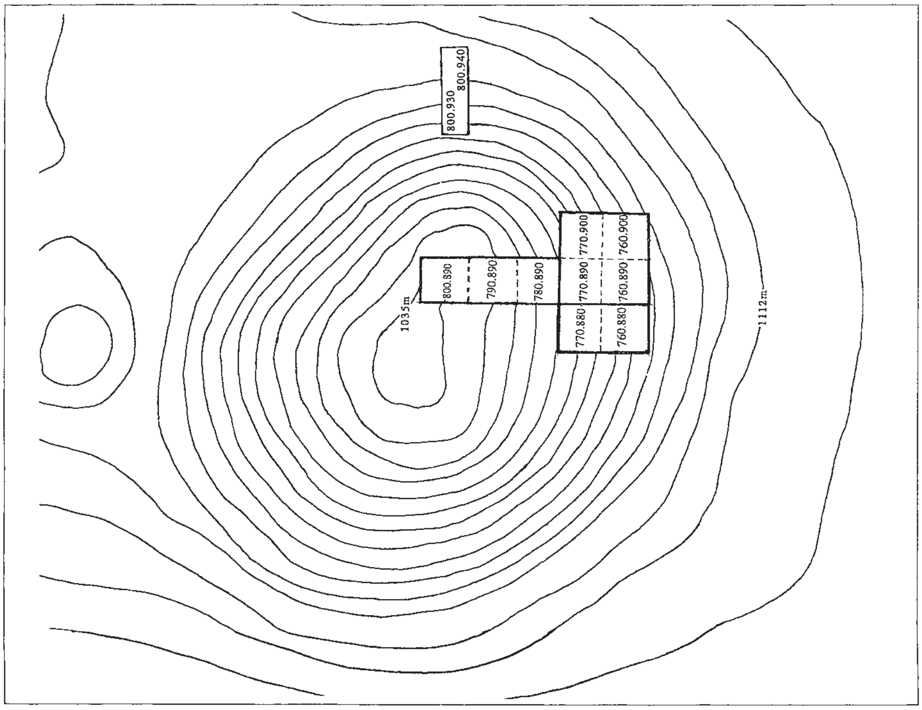

Fig. 2. Çadır Höyük Site Map, 2000-2001.

Fig. 3. Hittite Wall in 800.930.

Fig. 4. Byzantine Building on Northwest Terrace.

Fig. 5a-b. Constantine (Ducas) X coin.

Fig. 6. Silo and Platform in Squares 770.880/760.890.

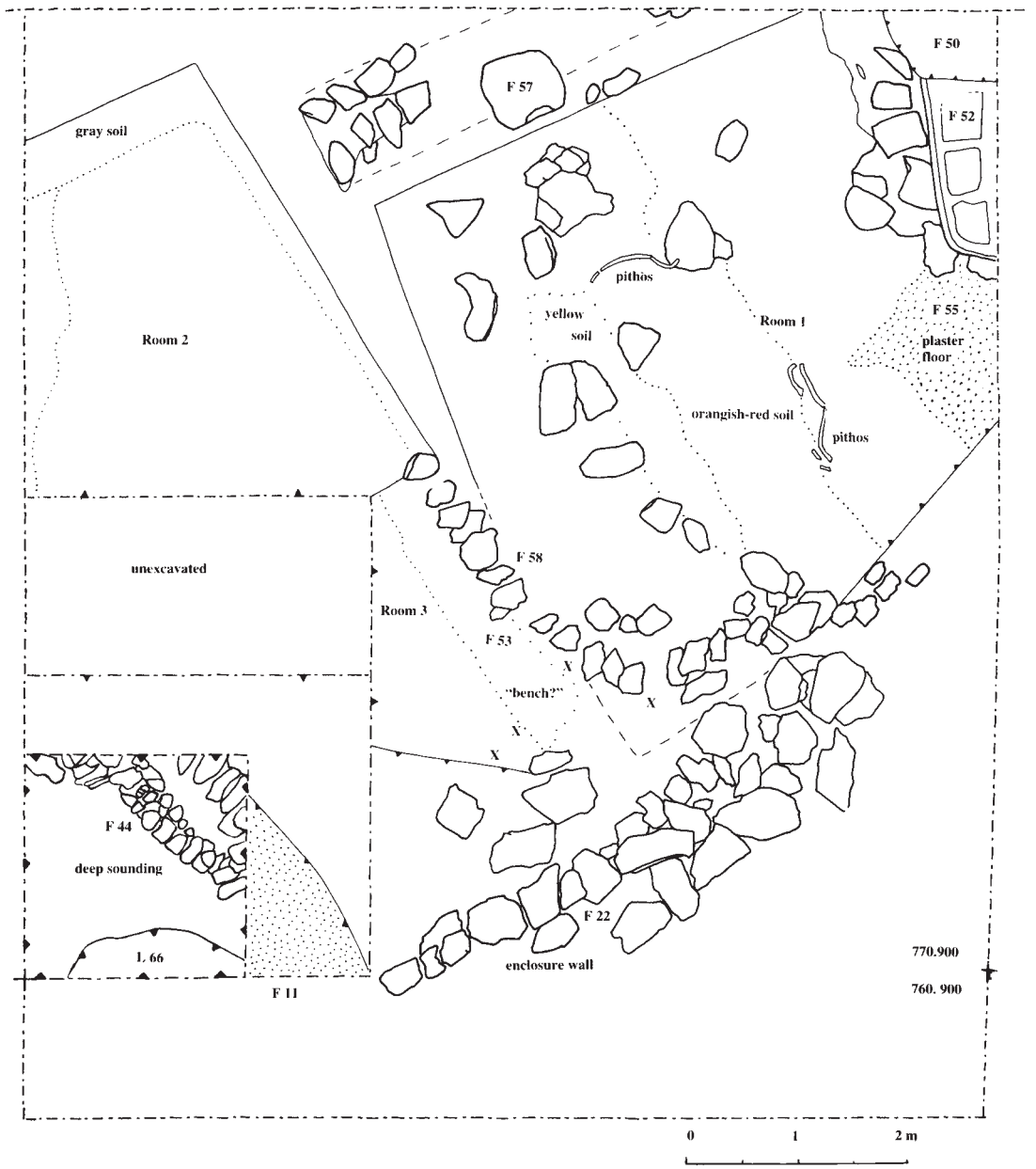

Fig. 7. Burned Room in Square 770.900.

Fig. 8. Pottery from Room 3 in 770.890.

Fig. 9. "Gate" building.

Fig. 10. Spiral pins from Early Bronze/Chalcolihtic deposit in 770.890.

Fig. 11. Platform with Hittite Room dug into it (left).

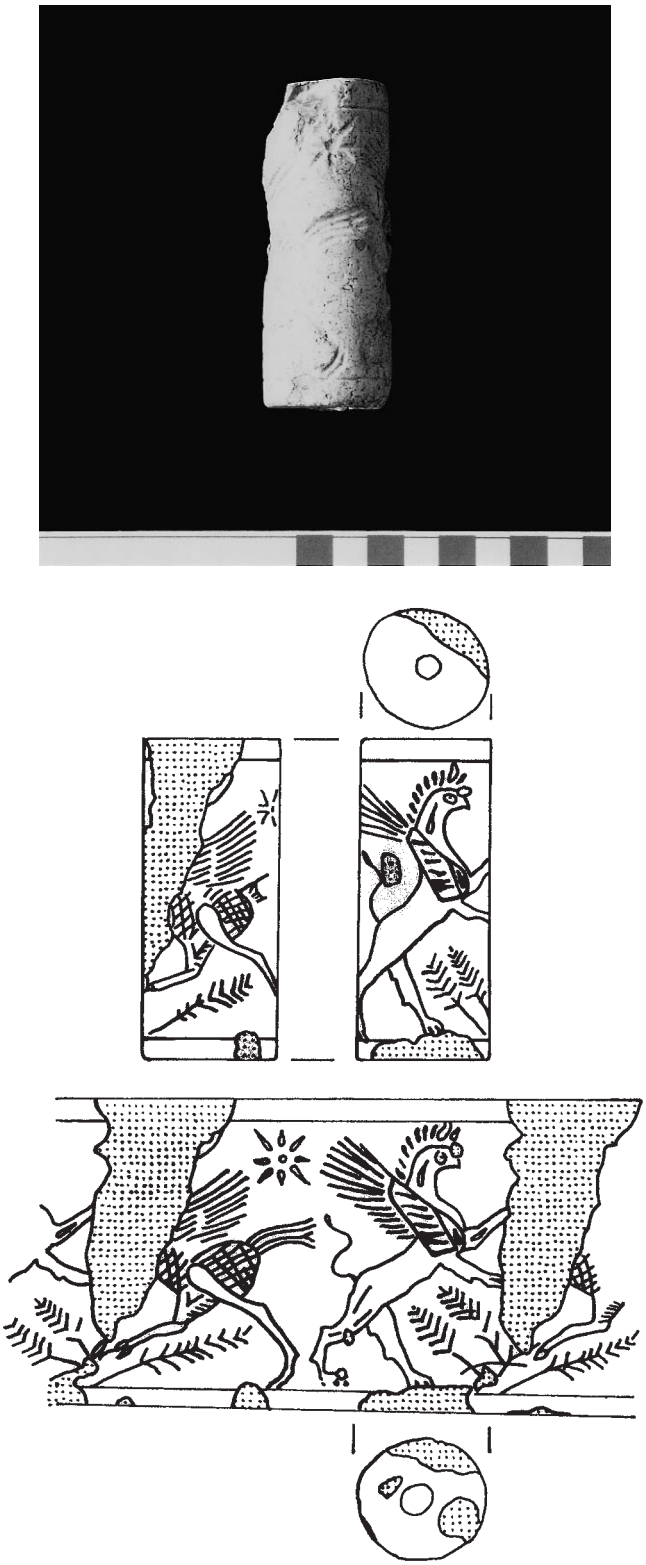

Fig. 12. "Mitannian" Cylinder Seal.

Fig. 13. Wall F 43 in Deep Sounding (ca 5200 BC).

Fig. 14a-b. Animal Head from 770.900.

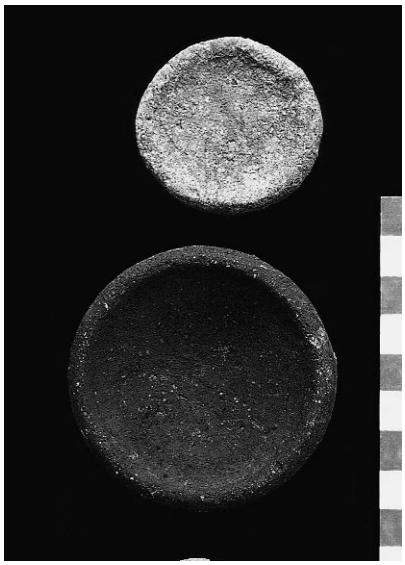

Fig. 15. Hittite Miniature Votive Plates from Area 3.

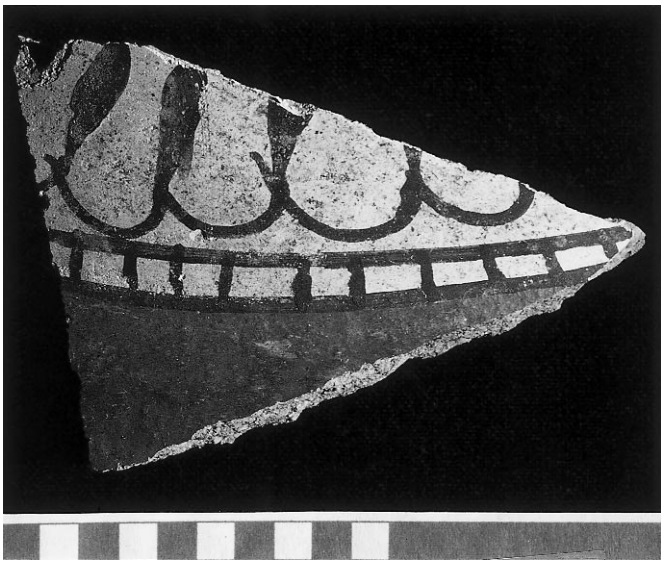

Fig. 16. "Achaemenid" painted sherd.

Fig. 17. Byzantine Complex in Square 800.890.