NEMEA VALLEY ARCHAEOLOGICAL PROJECT

VOLUME I

THE EARLY BRONZE AGE VILLAGE ON TSOUNGIZA HILL

BY

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With contributions by

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PREFACE

The Nemea Valley Archaeological Project (NVAP) was initiated in 1981 to "document and explain changes in patterns of settlement and land use at all times in the past" in the Nemea Valley.[1] Four major components of research were planned and carried out from 1984 through 1986, with additional years of study: a surface survey, geomorphological investigations of the region, an anthropological study of land use and settlement, and excavation and reinvestigation of the prehistoric settlement on Tsoungiza Hill.[2] NVAP builds upon, and complements, other work in the Nemea Valley, beginning with work in the 1920s by Carl W. Blegen and James P. Harland and continuing with the University of California-Berkeley excavations at the Sanctuary of Zeus.

American interest in the Nemea Valley began in 1924 when Bert Hodge Hill, then Director of the American School of Classical Studies at Athens, organized a school-sponsored project to excavate the Sanctuary of Zeus. At that time Carl Blegen, Assistant Director of the School, was interested in defining the Bronze Age occupation of the mainland of Greece and had already explored several sites on the coastal plains around the eastern end of the Gulf of Corinth and the settlement at Zygouries in the Longopotamos Valley east of Nemea.[3] Blegen's interest was drawn to the hill of Tsoungiza, about 1 km west of the Sanctuary of Zeus, after villagers told him of pottery strewn over its surface. Accordingly Blegen organized a team of workmen to explore the hill in 1925.[4] The trial trenches uncovered plentiful remains of walls, floors, storage jars in situ, and pottery dating from the Neolithic through Late Bronze Age. Blegen was particularly attracted to a series of deep pits at the southern end of the ridge, which disclosed deep and extensive remains of Early and Middle Neolithic habitation that was explored in 1925–1926. This work was published posthumously in 1975.[5] The excavation of the Bronze Age settlement, however, Blegen did not pursue. Instead he turned the work over to James Penrose Harland, a young colleague whom Blegen had taken on his excavations at Zygouries in 1921, when Harland was a graduate student at Princeton residing in Greece to complete a dissertation on the Greek Bronze Age.[6] Subsequently Harland held a position in the Department of Classics at the University of Cincinnati and in 1926 was awarded a Guggenheim Grant to pursue Bronze Age studies. At that time Blegen invited him to take up the work at Tsoungiza. He carried out excavations in a series of campaigns between the fall of 1926 and the summer of 1927.[7]

1. Wright et al. 1990, p. 583.
2. Wright et al. 1990, p. 584.
3. Blegen 1928.
4. See notebooks in the Nemea Museum: Nemea notebook no. 2, 1925–1926, of Carl W. Blegen; Nemea notebook no. 5, 1925, of John Day; reports in Blegen 1925, 1926, 1927.
5. Blegen 1975.
6. Harland 1925.
7. Harland 1928. Participants were, aside from Harland, his wife, Agnes Westerlund Harland, Dorothy Cox (American School of Classical Studies, architect), Vassilis Yiannikos (vase mender), Dimitris Zoes, Mr. Petritsis (the official photographer in the National Archaeological Museum in Athens), George Kachros, and Nikos Neroutso (cook). Other men from the village were hired as excavators, but unfortunately there is no list with their names.

Harland's work was financed by the American School, and the plan was that he would prepare a publication separate from the one envisaged for the work in the sanctuary, either in a series of articles or as a single monograph. By the end of the 1927 season, Harland, working with his wife, and then with the assistance of Dorothy Cox, had processed and recorded the finds and made detailed drawings of the architecture. With the assistance of Vassilis Giannikos of Mycenae, a vase mender, he was able to restore many objects, and these along with other notable finds were boxed and sent for safekeeping to the National Archaeological Museum in Athens. Other finds (mostly sherds and chipped stone) were taken to the storeroom of the excavations at Ancient Corinth, where they remained until 1985 when they were returned to Nemea, sorted, and stored in the museum there. Harland took up teaching at the University of Cincinnati in 1927, and then at the University of North Carolina at Chapel Hill in 1928, and began work on his manuscript. A draft of the publication was sent to Blegen in August 1934. Apparently work on finishing the publication of the entire Nemea enterprise was proceeding, as Blegen wrote Harland from the Lake Placid Club on August 25, 1934, that " . . . Marion Rawson has practically finished her magnum on the Corinthian pottery, Alfred Bellinger has handed in his chapter on the coins, Allen West has almost done his on the inscriptions, Dinsmoor has one ready on the metrology of the temple, and I have drafted out my chapter on the neolithic pottery from the 'cave.'"[8] Only Hill's work on the temple languished. By January 1935 Blegen had read Harland's typescript and wrote Harland as follows:

> I have read the carbon copy of your mss. on Tsoungiza that you left in my office. You have got together some good and interesting material; but I think you can improve the presentation vastly by revising it, eliminating many repetitions, and reducing the bulk of it considerably. If you like I shall be glad to go over it with you sometime and to make specific suggestions. I hope you will get the grant [from the American Council of Learned Societies] so that you can finish putting your material together this summer.[9]

Apparently Harland dropped the project altogether at that point. There is no indication in the extensive archival material he left behind of any further work. A few letters between Harland and Blegen in the 1950s and 1960s exist in the archives of the American School, but they make no reference to the Tsoungiza work.

After Harland's death in 1973, manuscript materials in his possession were given, apparently as stipulated in his will, to George E. Mylonas. Mylonas handed them over to James Wright in 1983, after Wright had accepted the offer extended by Stephen G. Miller, then Director of the University of California at Berkeley Excavations at the Sanctuary of Zeus at Nemea, to excavate again the settlement on Tsoungiza. Mylonas asked that Harland's work be incorporated into the reports that would come out of this new project. The present volume by Daniel J. Pullen is the first of two planned volumes, one on the Early Bronze Age habitation, the other on the late Middle Bronze Age and Late Bronze Age remains. Pullen succeeds admirably in presenting and using the original material, in part by including a plan that plots to the extent possible the locations of the many trenches Harland excavated on the hillside and their relationship to the excavations of the Nemea Valley Archaeological Project (see Fig. 1.5).

Harland left behind an extensive archive of records, drawings, and photographs. Some of these were later discovered in the Department of Classics at the University of North Carolina at Chapel Hill and sent to Wright by G. Kenneth Sams. All of the archival material directly

8. Letter from Blegen to Harland, August 25, 1934, NVAP Archives, Bryn Mawr College.

9. Letter from Blegen to Harland, January 19, 1935, NVAP Archives, Bryn Mawr College.

relevant to the Tsoungiza excavations is available at Bryn Mawr College. It has also all been digitized, and a table of contents is posted at http://www.brynmawr.edu/archaeology/nvap-archives.

This first volume, of a projected two detailing the results of NVAP's work, presents the results of the excavations of the Early Bronze Age levels on Tsoungiza Hill (a second volume will present the Early and Late Mycenaean remains on Tsoungiza Hill). The earlier work of Harland, who uncovered architecture and associated deposits dating to the Early Bronze Age, is integrated into this presentation. In addition, work conducted under the auspices of the University of California-Berkeley on Tsoungiza Hill in 1981 and 1982 is included.

The Nemea Valley Archaeological Project is sponsored by Bryn Mawr College and has worked under the auspices of the American School of Classical Studies at Athens with permission from the Hellenic Ministry of Culture and Sciences. NVAP is directed by James C. Wright, who also directed the excavations on Tsoungiza Hill, John F. Cherry, Jack L. Davis, and Eleni Mantzourani, who directed the survey. The project has received major funding from the National Endowment for the Humanities, the Institute for Aegean Prehistory, and the National Geographic Society.

James C. Wright and Daniel J. Pullen

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My participation in this project began with the 1982 rescue excavations on the slopes of Tsoungiza Hill, sponsored by the University of California at Berkeley, under the direction of Stephen G. Miller. In 1984 James C. Wright asked me to join NVAP and undertake the Early Bronze Age excavations and their eventual publication. Following the end of excavations in 1986, study of the material in the Archaeological Museum of Nemea continued until 1991. The author's participation in the project has been funded in part by Harvard University and The Florida State University.

Many people must be thanked for their assistance and participation in the project. First of all I would like to thank Jim Wright for entrusting me with the Early Bronze Age excavations and materials, and for his continued advice and support. The study of the EBA material could not have been accomplished without the help of Mary Dabney and Jeremy Rutter. Kathleen Krattenmaker was of invaluable assistance in the field as supervisor of the excavations. Others on the NVAP staff who provided me with greatly appreciated help include Julia E. Pfaff, Lyla Pinch Brock, and Julie Perlmutter (object drawing); Taylor Dabney (photography); Aileen Ajootian, Anna Burchard, Maria Georgopoulou, Eleni Gerondaki, Kevin Glowacki, Sophia Goodman, Selima Ikram, Nancy Leinwand, Aphrodite Papadopoulou, Susan Petrakis, and Michael Toumazou (field personnel); Bradley Ault and Ada Kalogirou (study seasons); and Alexandra Trone and John Maseman (conservation).

I especially would like to thank both Martha Wiencke and Jeremy Rutter for their advice, help, and friendship. Wiencke provided me with much of her manuscript on Early Helladic II Lerna before its publication (*Lerna* IV), as Rutter did with significant portions of his Early Helladic III Lerna manuscript before it was published (*Lerna* III). Both have continued to be of invaluable assistance, including reading significant portions of the manuscript. The reader will quickly see my debt to these two individuals in the following pages.

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The manuscript was submitted in final form in July of 2006. Only a limited amount of updating has been possible. In particular, I have not been able to incorporate important new studies such as those of Joan Aruz (2008), Olympia Peperaki (2010), and Erika Weiberg (2007). I would like to thank the staff of the Publications Office of the American School of Classical Studies at Athens for their diligence in seeing this publication to print.

Daniel J. Pullen

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ABBREVIATIONS OF PERIODICALS AND SERIES

AA = Archäologischer Anzeiger
AAA = Ἀρχαιολογικὰ ἀνάλεκτα ἐξ Ἀθηνῶν
AbhMünch = Bayerische Akademi der Wissenschaften, München, Philosophisch-historische Klasse. Abhandlungen
AJA = American Journal of Archaeology
AM = Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung
AmerAnt = American Antiquity
AnatSt = Anatolian Studies. Journal of the British Institute of Archaeology at Ankara
AntK = Antike Kunst
ArchDelt = Αρχαιολογικόν Δελτίον
ArchEph = Ἀρχαιολογικὴ Ἐφημερίς
BalkSt = Balkan Studies
BAR = British Archaeological Reports
BAR-BS = British Archaeological Reports, British Series
BAR-IS = British Archaeological Reports, International Series
BCH = Bulletin de correspondance hellénique
BICS = Bulletin of the Institute of Classical Studies of the University of London
BMOP = British Museum Occasional Paper
BSA = Annual of the British School at Athens
CMS = Corpus der minoischen und mykenischen Siegel
JAOS = Journal of the American Oriental Society
JAS = Journal of Archaeological Science
JdI = Jahrbuch des Deutschen Archäologischen Instituts
JFA = Journal of Field Archaeology
JHS = Journal of Hellenic Studies
JMA = Journal of Mediterranean Archaeology
JRGZM = Jahrbuch des Römisch-germanischen Zentralmuseums, Mainz
MASCAJ = MASCA Journal. Applied Science Center for Archaeology, University Museum, University of Pennsylvania
MeditArch = Mediterranean Archaeology. Australian and New Zealand Journal for the Archaeology of the Mediterranean World
MMS = Metropolitan Museum Studies
OJA = Oxford Journal of Archaeology
ÖJh = Jahreshefte des Österreichischen archäologischen Instituts in Wien
PPS = Proceeding of the Prehistoric Society
Prakt = Πρακτικὰ τῆς ἐν Ἀθήναις Ἀρχαιολογικῆς Ἑταιρείας
PZ = Prähistorische Zeitschrift
RÉG = Revue des études grecques
SIMA = Studies in Mediterranean Archaeology and Literature
SIMA-PB = Studies in Mediterranean Archaeology and Literature. Pocketbook
SkrAth = Skrifter utgivna av Svenska Institutet i Athen
SkrRom = Skrifter utgivna av Svenska Institutet i Rom
TUAS = Temple University Aegean Symposium
UCLAMon = University of California at Los Angeles, Institute of Archaeology, Monograph
UCLAPap = University of California at Los Angeles, Institute of Archaeology, Occasional Paper
WorldArch = World Archaeology

CONVENTIONS AND ABBREVIATIONS

All catalogue numbers are in boldface type. Items catalogued in Chapters 2 through 10 have numbers with no prefix, in one continuous sequence. Catalogue numbers for chipped stone items, catalogued in Chapter 11, and for ground stone items, catalogued in Chapter 12, are prefaced by **CS** and **GS**, respectively. Ceramic items catalogued by John Harland have been given numbers preceded by **HV**, and "Harland MS" denotes reference to his unpublished manuscript.

NVAP	Nemea Valley Archaeological Project
UCB	University of California at Berkeley
EU	Excavation Unit (i.e., trench)
SU	Stratigraphic Unit
SMU	Square Meter Unit (i.e., grid square)
EU 82	1982 UCB Excavation Area
HV	Harland Vase (object catalogued by Harland)
EN	Early Neolithic
MN	Middle Neolithic
LN	Late Neolithic
FN	Final Neolithic
EBA	Early Bronze Age
MBA	Middle Bronze Age
LBA	Late Bronze Age
EC	Early Cycladic
EH	Early Helladic
MH	Middle Helladic
LH	Late Helladic
EM	Early Minoan
MM	Middle Minoan
LM	Late Minoan
masl	meters above sea level
+	elevation in masl
H.	height
W.	width
L.	length
Th.	thickness
Wt.	weight
Diam.	diameter
perf.	perforation
ped.	pedestal
max.	maximum
min.	minimum
p.	preserved
est.	estimated
dim.	dimension (orientation not certain)
int.	interior
ext.	exterior

1

INTRODUCTION

Explorations on the low ridge of Tsoungiza, rising to the west of the classical Sanctuary of Zeus at Nemea and the modern village of Ancient Nemea (Iraklion), have revealed prehistoric occupation and activity from the Early Neolithic period through the Late Bronze Age. Major excavations of the prehistoric settlement have been undertaken by the American School of Classical Studies at Athens under the direction of Carl W. Blegen and James P. Harland, the University of California at Berkeley (UCB) under the direction of Stephen G. Miller, the Greek Archaeological Service, and most recently by the Nemea Valley Archaeological Project (NVAP) under the direction of James C. Wright. Here will be presented the results from all the explorations and excavations that shed light on the Final Neolithic and Early Helladic periods, the subject of the present volume. This focus on the Final Neolithic and Early Helladic periods is logical, given the very scanty evidence for activity in the period immediately prior to the FN and the abandonment of Tsoungiza at the end of the EH III period.

THE ENVIRONMENTAL SETTING OF TSOUNGIZA HILL

The environmental setting of Tsoungiza Hill and the Nemea Valley has been presented elsewhere,[1] but some pertinent details are called for here. The Nemea Valley (Figs. 1.1, 1.2) is a small interior basin in the southwestern Corinthia. Hills ring the valley on the south, while higher hills such as Mt. Phoukas (ancient Mt. Apesas) and Mt. Prophitis Ilias (ancient Mt. Trikaranon) rise to the northeast and west, respectively. These hills are crossed by passes connecting the Nemea Valley to the Longopotamos Valley to the east, where are found the ancient site of Kleonai and the prehistoric site of Zygouries, and the Phliasian Plain to the west, where are found the ancient and prehistoric site of Phlius and the modern town of New Nemea, as well as connections to the region of Aidonia and the Stymphalos basin in the central Peloponnese. Access to the Corinthian Gulf to the north is difficult through the several narrow river channels. Just to the southeast of the Nemea Valley is the Tretos Pass, one of the major routes leading to the Argive Plain (the route of the old National Highway and railroad from Corinth to Argos), and the new Corinth–Tripolis expressway skirts the hills to the southeast of the Nemea Valley, again emphasizing the location of the valley, adjacent to several major routes of communication. The hill of Tsoungiza is well situated at the southern end of the Nemea Valley to take advantage of these routes of communication.

1. Wright 1982, pp. 377–379; Wright et al. 1990, pp. 585–593. See also the introduction in Wright et. al., in prep.

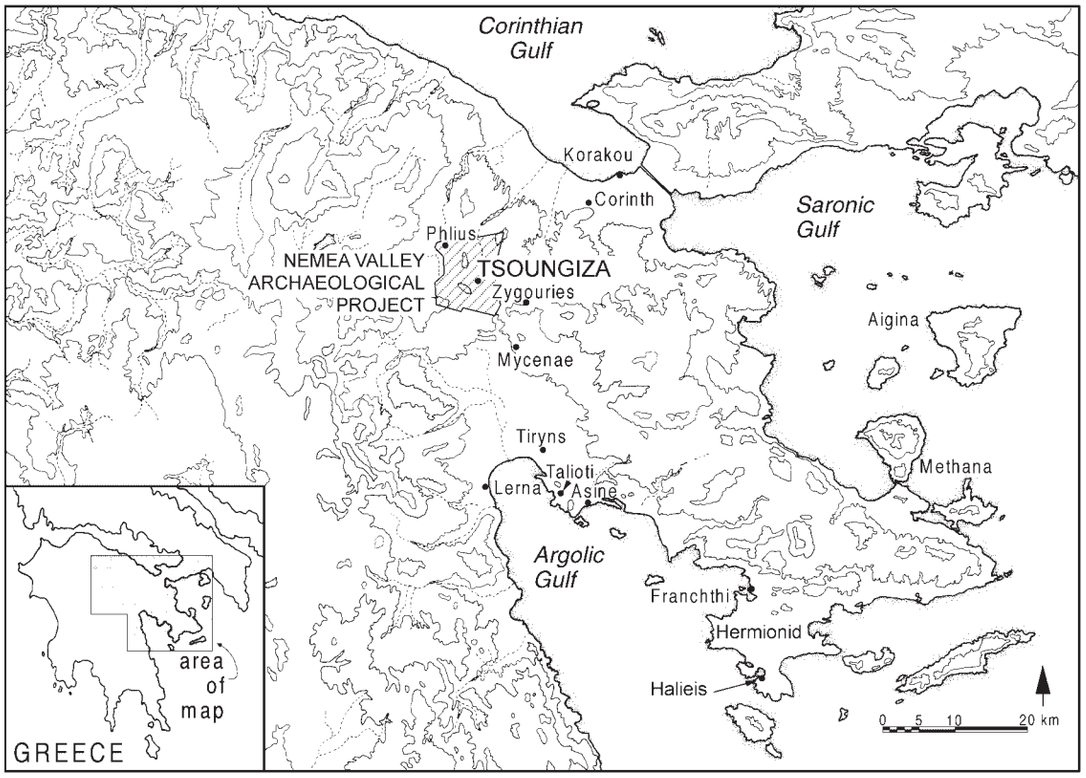

FIGURE 1.1. Map of the northeast Peloponnese with the Nemea Valley Archaeological Project and Tsoungiza indicated. *J. E. Pfaff, after Wright et al. 1990, fig. 1*

Tsoungiza[2] is a low ridge running north–south near the center of the southern end of the valley (Figs. 1.3, 1.4). At the southern end of the ridge is a knoll at ca. +375 masl that provided the focus for the prehistoric settlement (Fig. 1.5). The slopes to the south, east, and north of the knoll were occupied at different periods. Geomorphological work on the knoll has shown that originally a deep ravine to its south separated it from another, lower knoll to the south.[3] A second ravine was found to the north of the crown of the hill. These ravines were exposed during the Neolithic and Early Helladic periods. Fill was placed into the ravines in the EH II and III periods and subsequently in the late Middle Helladic and Late Helladic periods, probably as the result of dumping activities of the site inhabitants. Once filled, these ravines provided a base for structures of the late MH/early LH and LH periods.

The marl bedrock of Tsoungiza Hill is relatively soft and prone to erosion. On the slopes of the hill, especially to the south, are cavities and depressions in the bedrock. One particularly large example was excavated by Blegen as a "cave," filled with extensive EN deposits.[4] The cavity was determined to be natural, and the contents not the result of in situ habitation. Additional depressions and cavities have been found in the vicinity of Blegen's cave, as well as farther up the hill in Excavation Unit (EU) 11 and to the east in the area of the UCB salvage excavations of 1982. Many of these depressions are filled with EN material.

Two deep shafts cut into the marl bedrock on the crown of the hill, one found by Harland and filled with material dating to the EH III period, the other found by NVAP and dating to the EH I period, are most likely cisterns, not wells. The aquifer supplying water to Tsoungiza is more than 30 m below the surface. The two cisterns were excavated to depths of 12 and 5 m, respectively, below the surface without reaching bottom.

2. Τσούγκιζα means "small hill," a diminutive derived from the Albanian *çukë,* "mountain top" (Blegen 1975, p. 251, n. 2).

3. Wright et al. 1990, pp. 623–624.

4. Blegen 1926, pp. 133–134; 1927, pp. 437–439; 1975.

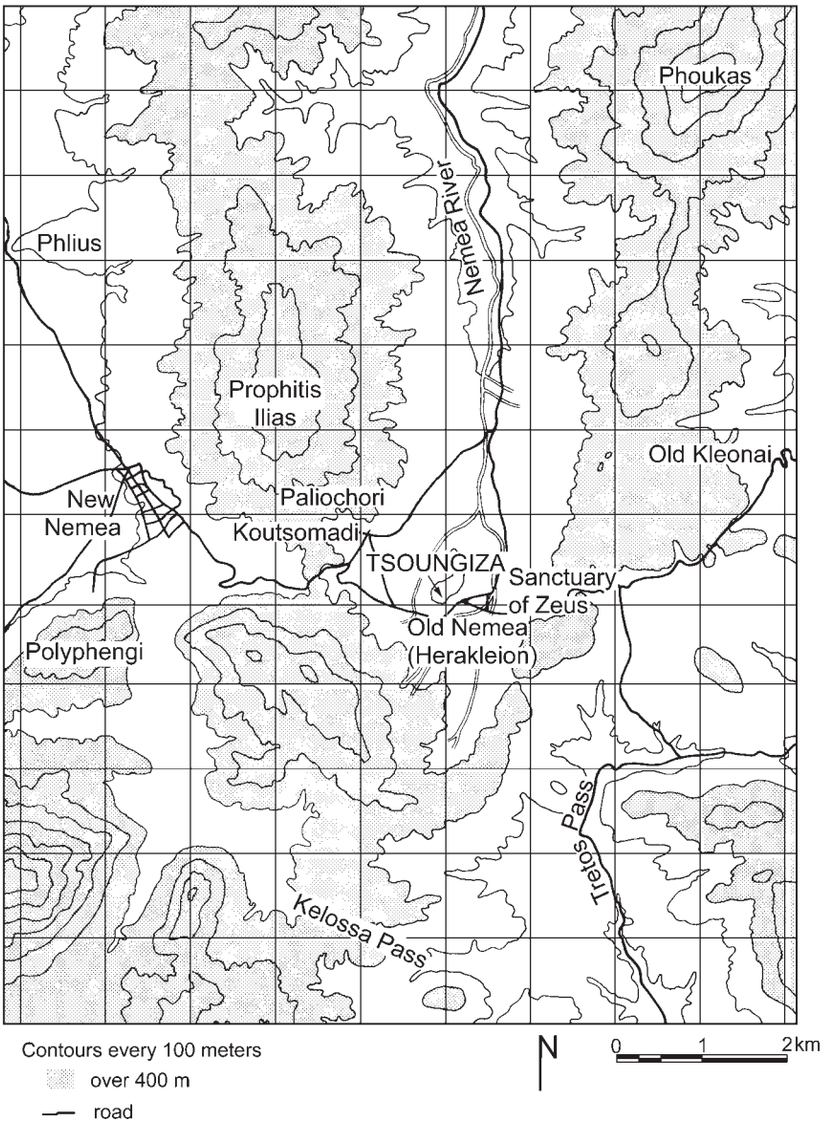

FIGURE 1.2. Map of the Nemea Valley and surrounding region. *J. E. Pfaff, after Wright et al. 1990, fig. 2*

HISTORY OF EXCAVATIONS OF THE EARLY BRONZE AGE ON TSOUNGIZA

In 1924 Bert Hodge Hill and Carl Blegen began a project to reexamine the Sanctuary of Zeus at Nemea, one of the four pan-Hellenic sanctuaries that celebrated periodic athletic festivals. Reports of antiquities and surface reconnaissance suggested to Blegen that a prehistoric site was to be found on Tsoungiza Hill to the west. Three trenches were dug on Tsoungiza on May 24 to explore this possibility (Fig. 1.6 left).[5] Trench A, 2.15 m east–west by 20.00 m north–south, was laid "right across [the] middle of [the] mound." Some Mycenaean (Late Helladic) sherds were found in the upper levels, but much of the trench revealed Early Helladic remains including walls. Trench B, 1.50 × 9.00 m, was laid out running northwest–southeast on the east slope of the hill; marl bedrock was found at 0.10 m below the surface. Trench C, 1.75 × 11.00 m, ran east–west down the steep western slope of the hill. The bottoms of three large storage jars (pithoi) were found in a row. Harland later suggested these were his Area R Pithoi 9, 10, and 13.

5. Blegen 1925, pp. 183–184; NVAP archives.

Figure 1.3. View of the Nemea Valley from the east. Tsoungiza Hill is the low ridge at center, Sanctuary of Zeus below it and to the right.

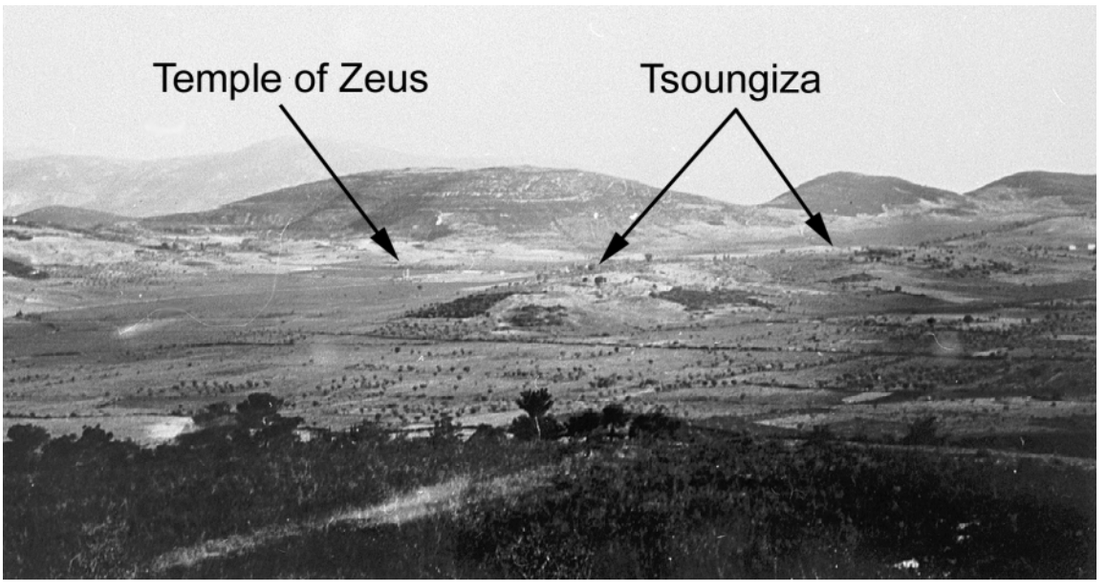

Figure 1.4. View of the Nemea Valley from the northwest in 1926. Tsoungiza Hill at center, Temple of Zeus to left. *J. P. Harland photograph I.6*

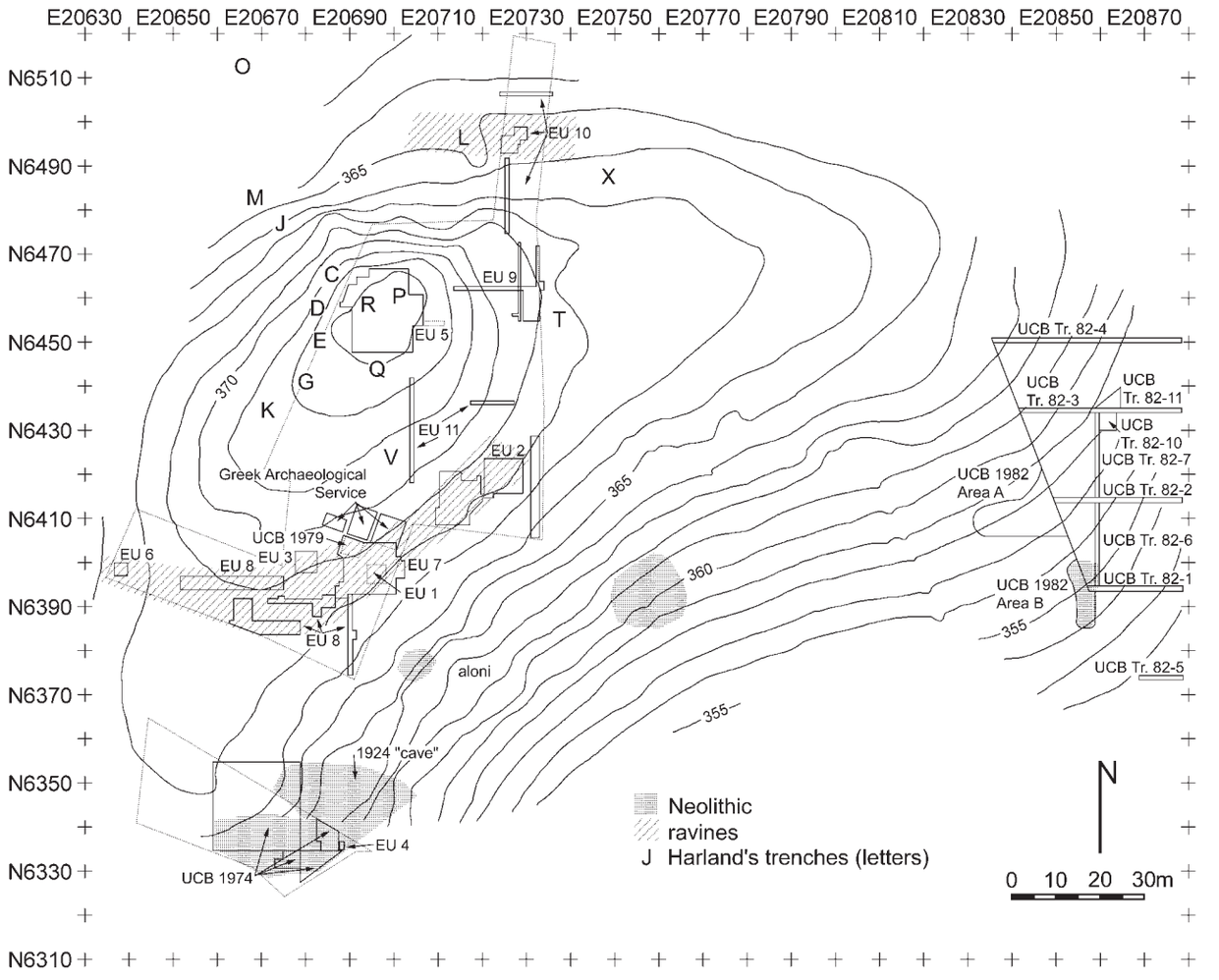

FIGURE 1.5. Map of Tsoungiza Hill with locations of ravines and Neolithic deposits. *After Wright et al. 1990, fig. 13*

In the following year, 1925, a short campaign explored the Neolithic cave referred to above.[6] The 1926 campaign saw the completion of excavations in the cave.[7] Only after Blegen's death in 1970 was the material from the Neolithic deposits published through the efforts of John L. Caskey and Elizabeth C. Banks.[8] Additional Neolithic material has been found in the vicinity by the University of California at Berkeley, the Greek Archaeological Service, and NVAP (Fig. 1.5). Restudy of the Neolithic material has shown that, in addition to that of the EN, there is more from the Middle Neolithic than Blegen recognized.[9] In this volume only material of the Final Neolithic period is presented; material of the earlier Neolithic will be presented elsewhere.

In 1926 James Penrose Harland undertook further exploration of the Bronze Age levels on the crown of Tsoungiza. In three campaigns, November 10, 1926–January 10, 1927, April 6–20, 1927, and June 13–25, 1927, Harland greatly expanded Blegen's three trial trenches to large excavation areas on the hilltop and on the terraces to the north, east, and south (Fig. 1.6, right).[10] He uncovered extensive MH and LH structures and deposits to the north of the crown of the hill (his Area L). The EH was represented here only by pottery. On the crown of the hill (his Areas R and P) Harland uncovered several phases of EH structures.

6. Blegen 1926, pp. 133–134.
7. Blegen 1927, pp. 437–439.
8. Blegen 1975.
9. Wright et al. 1990, p. 625.
10. Blegen 1927, pp. 436–439; Harland 1928.

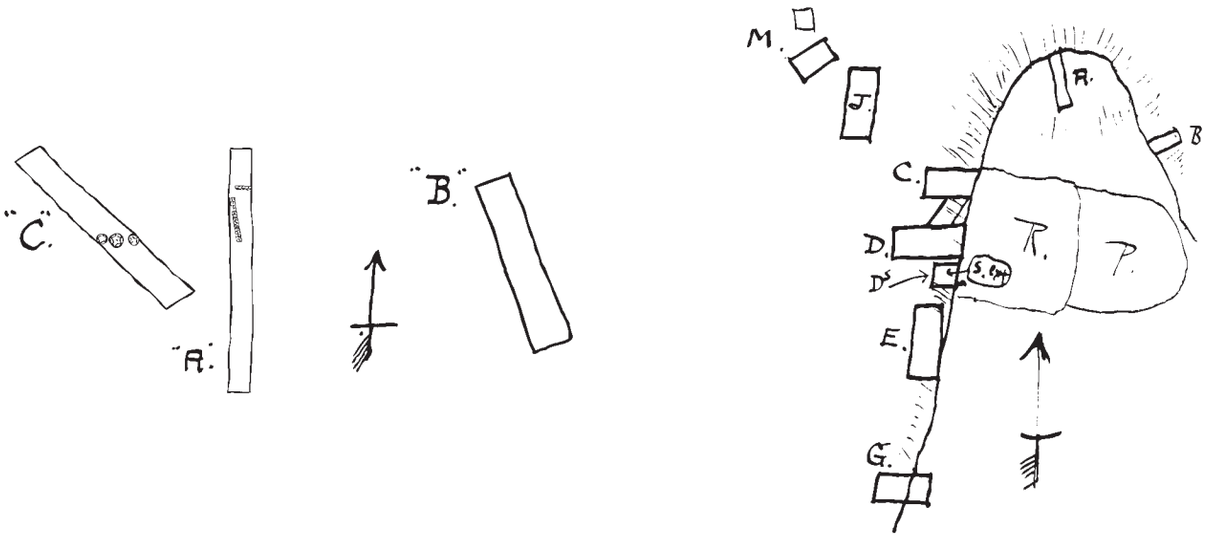

Figure 1.6. Plan of Blegen's 1924 trial trenches A–C, with approximate orientation and relative size indicated *(left)*, and Harland's 1926–1927 excavation trenches *(right)*. NVAP EU 5 corresponds approximately to the area of Harland's Areas R and P. *J. P. Harland sketches*

Other than the excavations by NVAP, the work by Harland is the most extensive exploration of the Early Helladic levels on Tsoungiza. He uncovered pits and structures of the Early Helladic I, II, and III periods with their accompanying deposits of ceramics and other finds. Unfortunately the passage of time has not been kind to Harland's work. The finds from his excavations for the most part have disappeared. We cannot be certain of the history of the storage of the Tsoungiza material, nor can we always be certain that all the material currently housed in the Archaeological Museum of Nemea actually came from Tsoungiza. Harland's excavation material apparently was sent to the Archaeological Museum of Ancient Corinth, with the restored and whole vessels going to the National Archaeological Museum in Athens. Unfortunately the material sent to the National Museum has not been found, probably because it disappeared during World War II.[11] That material identified as coming from Nemea was returned from Corinth in the 1970s. While many sherds bear penciled trench and level notations, usually in Harland's highly distinctive handwriting, others do not. At one time the Tsoungiza material was stored at Corinth in proximity to material from the numerous prehistoric excavations of Blegen (e.g., Zygouries, Korakou, Yiriza, and Gonia). Some annotations on sherds appear to use systems of trench and level notations other than what Harland used; indeed one group of rather unusual Neolithic sherds in a bag clearly labeled "Nemea-Tsoungiza 1926" turned out to be from the British excavations at Vardaroftsa, Macedonia.[12] Those sherds that we can securely identify by Harland's handwriting and notation system as coming from Tsoungiza do not seem to be bagged in any consistent manner, with sherds from the same location found in different bags, and found with unmarked sherds. A few additional sherds, primarily pattern-painted examples, could be identified by means of Harland's photographs, and those were catalogued. Today there exists in the Nemea Museum a limited quantity of sherd material, primarily EH III pattern-painted sherds, EH II black painted sauceboats, and the contents of his Area P Bothros 5 (NVAP EU 5 Pit 18). Other than a few clearly marked sherds that present good or unusual examples of certain patterns and that were catalogued for drawing by me, I have not made use of "Harland's" sherd material. Most of the small finds from Harland's excavations,

11. We would like to thank Katie Demakopoulou, former director of the National Archaeological Museum in Athens, for the efforts made by her and her staff to locate this material.

12. Published in Heurtley and Hutchinson 1925–1926.

however, seem to be preserved; these include spindle whorls and other ceramic objects, metal finds, and some botanical material, though these items are not always well labeled.

Though the actual finds from Harland's work are not well preserved, we are fortunate that nearly all of Harland's documentation seems to be preserved. This includes his logbooks, catalogues of vessels and finds, an uncompleted manuscript, and photographs of fieldwork and finds.[13] The only documentation we lack, that we can determine, is a large-scale plan made by Dorothy Cox. We do, however, have numerous sketch plans, some of which are at a scale of 1:100. Yet the absence of a site plan, of a grid or other consistent scheme for identifying locations, and of a single standard against which to measure elevations and depths, make the interpretation of the stratigraphy particularly difficult. Harland's uncompleted manuscript does, however, synthesize his interpretation of the stratigraphy and architecture of all periods of the Bronze Age represented on Tsoungiza. He also prepared chapters on the EH III cistern (EU 5 Cistern 1) and the Cist Grave (EU 5 Grave 1). The chapter on the pottery was not completed: it breaks off in the middle of the section on EH III ceramics. The projected chapters on the pits (bothroi), on the miscellaneous objects, and conclusions were apparently never written.

One of the original goals of the Nemea Valley Archaeological Project was to publish Harland's material.[14] In the course of reexamining his excavations in order to reach that goal, NVAP uncovered further EH deposits. This led to the author's involvement in the project. In the present volume we integrate the results on the Early Bronze Age levels from Harland's work with those of NVAP's work. Harland's work on the Middle and Late Bronze Ages will be presented elsewhere.

Of particular value to the integration of Harland's work with that of NVAP are his logbooks and stratigraphic sketches. Harland kept a running daybook of the excavations, but incorporated all areas in a continuous sequence. At a later date he prepared a separate typed logbook for each area of excavation that includes sketches and cross-references to other logbooks, catalogued objects, etc. In addition, he made numerous summaries of finds, stratigraphic observations, and architecture. These summaries are often accompanied by detailed sketches that are packed with information. The greatest difficulty has been that Harland excavated the crown of the hill in two sections, Area R to the west and Area P to the east.[15] Within the first of Harland's seasons the two areas were joined into one larger area, but he continued to keep the records for the two areas separate. There is very little overlap in the documentation, so it is difficult to tie the two areas together. Nevertheless, our excavations and interpretation of his documentation have allowed us to correlate Harland's work with that of NVAP. For some periods, such as EH III, we must rely almost exclusively on Harland's documentation, as much of the architecture of that period has disappeared. For other periods, such as early EH II, our excavations below Harland's levels provide the majority of the evidence.

Between the end of Harland's excavations in 1927 and the beginning of NVAP's major campaign of excavations of 1984–1986, several seasons of essentially rescue excavations on Tsoungiza were conducted by the University of California at Berkeley and the Greek Archaeological Service. Salvage excavations by UCB were conducted in 1974 and 1975 south of Blegen's cave; shallow mixed fill with much LH pottery and pits with EN material were found (see Fig. 1.5 for locations).[16] Deep plowing on the crown of the hill in 1975 led to the

13. At Harland's death in 1973 the uncompleted manuscript and some of the notes went to George E. Mylonas, who subsequently turned it over to Wright. The remainder of the documentation was housed at the University of North Carolina at Chapel Hill, and G. Kenneth Sams turned this material over to NVAP. All the original documentation now resides in the NVAP archives at Bryn Mawr College. Copies are to be found in the Archaeological Museum of Nemea.

14. Wright et al. 1990, p. 618.

15. The division seems to have been around the E20698 line.

16. Miller 1975, pp. 150–152; 1976, pp. 174–177.

creation of a protected archaeological zone. A salvage excavation conducted in 1979 by the Greek Archaeological Service was continued that same year by UCB.[17] Walls dating to the Late Helladic were uncovered, and proved to be part of the building complex explored later by NVAP in 1984–1986 (EU 7). In 1981 Wright excavated to the south of the 1979 areas and found late MH/early LH remains.[18] This excavation (designated EU 1) also tested a number of procedures that later were implemented in the excavations conducted by NVAP. In none of the excavations conducted between 1974 and 1981 did remains of the Early Helladic period appear in any significant quantity.

Deep plowing on the slopes of Tsoungiza well to the east of all previous excavations uncovered deposits of EN and EH material.[19] In the western portion of the field, that portion damaged by the deep plowing,[20] two small areas and one large area of material were isolated. The larger area, Area A seemed to contain the remains of a structure.[21] Subsequent excavation in September 1982[22] confirmed the existence of a small building dating to the earlier phases of the Early Helladic II period.[23] This building (1982 House A) and its contents are discussed fully in Chapter 4, on the Early Helladic II Initial period. Excavations of the southern of the two small areas of disturbed material found in 1981 uncovered part of a large depression or pit filled with material of EN date (labeled UCB 1982 Area B in Fig. 1.5, ca. E20860/N6390), similar to those on the slopes to the southwest. Tests of the undamaged eastern portion of the field were conducted by excavating a series of long strip trenches 1 m wide (UCB Tr. 82-1, 82-2, etc., in Fig. 1.5). A few depressions with EN or EH material were found, including the edge of a large one at the eastern end of UCB Trench 82-5 with EN material. Along the same contour of the hill as, and some 25 m northeast of 1982 House A, a wide cut into the bedrock filled with EH II material was found (UCB Trenches 82-3, 82-7, 82-10, 82-11). The cut ran southwest–northeast, along the contour, and measured approximately 3 m in width. Along the northwest (upper) edge the cut was over 1 m deep, where a few stones in a line suggested a wall. Adjacent to this possible wall was a platform of soil 1.00×0.50 m, on top of which were a number of stones placed close together. No other structural features could be recognized. A very large quantity of pottery was recovered from this feature, especially in the northern portion (UCB Trench 82-11), all of which was EH II. Perhaps this area was another small building in a shallow cutting like the 1982 House A to the southwest.

In 1983 a short season of work was undertaken in preparation for the commencement of the NVAP excavations in 1984. On the crown of the hill, in an attempt to relocate features Harland had uncovered, three trenches 1 m in width were excavated. 1983 Trench A, located at E20698.39–20699.39, extended south from the N6461 line to N6451. 1983 Trench B, positioned at N6454.00–N6455.00, reached east from Trench A to E20711.23, and 1983 Trench G, at N4658.25–N4659.20, ran west from Trench A to E20687.00. These three trenches revealed Harland's Cistern 1, Area R Pithos 5, and part of the walls of his House A. We were thus able to orient Harland's sketches for large-scale excavations the following year.

In 1984 the Nemea Valley Archaeological Project (NVAP) commenced, a project combining surface survey, geomorphological investigations, anthropological studies, and further excavations of the prehistoric site of Tsoungiza. Its primary goal is to "document and explain changes in patterns of settlement and land use at all times in the past."[24] As part of the excavations of Tsoungiza, a goal for the 1984 season was to uncover the Early Bronze Age

17. Miller 1980, pp. 203–205.
18. Miller 1982, p. 37; Wright 1982, esp. p. 380, fig. 2.
19. Miller 1982, pp. 37–40.
20. Miller 1982, p. 38, fig. 7.
21. Miller 1982, pl. 18:b.
22. Robert Bridges and I conducted the 1982 excavations for the UCB excavations, under the direction of Stephen G. Miller, whom I would like to thank for giving me permission to publish this material and for providing copies of the documentation.
23. First reported in Touchais 1983, p. 758.
24. Wright et al. 1990, p. 583.

excavations of Harland in his Areas R and P, study the architecture, and produce a plan to accompany the publication of his manuscript. It became apparent during the course of that first summer's excavation that much of the upper levels that Harland uncovered had disappeared and that areas below his excavation levels were now freed for excavation. Thus the loss of the EH III village uncovered by Harland was balanced by the opportunity to explore earlier periods of the Early Bronze Age site.

Two additional seasons of excavations (1985 and 1986) were conducted in EU 5 (Harland's Areas R and P) in order to explore areas and levels not touched by Harland.[25] The principal areas of EU 5 in which NVAP was able to explore beneath Harland's levels were the Southeast Sector (E20697–20704/N6448–6454) and the northern sectors (E20694–20703/N6461–6467). In these areas numerous walls, pits, a second cistern, and untouched fills were discovered, many of these of earlier phases of the Early Bronze Age (EH I and EH II Initial). By the end of the 1986 season we had reached bedrock in over 50% of the area of EU 5.

Elsewhere on Tsoungiza Hill excavations by NVAP revealed scattered evidence for the Early Bronze Age (Fig. 1.5). In EU 10 to the north of the crown of the hill, deep fills included EH II and EH III levels, but most of this was probably washed down from the top of the hill. In Harland's Area L to the west of EU 10 he had found "EH" below the MH and LH walls, but no architecture he could directly associate with this material. Reanalysis suggests that Harland's Building J of Area L is probably EH III in date.[26] To the east of EU 5 some EBA material was found in EU 9 in later Bronze Age levels, but this trench did not reach bedrock. To the south, soundings in EU 2, EU 7, and EU 8 revealed walls and pits associated with EH deposits. In EU 3, EH material was found in mixed fills, though there might have been uncontaminated EH II Initial levels at the bottom of a sondage. Immediately south of EU 5, in the area of Harland's Trench Q, EU 11 yielded mixed EN, FN, FN–EH I, and LH deposits.

In conjunction with NVAP's archaeological survey, we can now place Tsoungiza in a broad regional and historical context. The results of the several explorations on Tsoungiza are especially important for the poorly known periods of Early Helladic I and the earlier phases of Early Helladic II.

Isolating the limits of Harland's excavations, both vertically and horizontally, was difficult in many places. Harland was not always clear about how deeply he dug in any one place. As was often the case in excavations in the earlier part of the 20th century, many walls were left pedestaled; yet in other areas only the tops of walls were revealed. Thus a wall drawn by Harland as irregular and curving turns out to be a quite regular, well-built herringbone wall (NVAP Wall 10) that had slumped in one portion because of an underlying pit (Pit 17) (see Fig. 5.7). For the central area we can get a good idea of the extent of his excavations by examining his photographs and stratigraphic sketches, but for the areas peripheral to his excavations, and hence of greatest potential for our excavations, the evidence was not clear. The lack of an accurate plan of Areas R and P and nearby trenches is especially unfortunate. For instance, an area of disturbance along the N6448 line around E20698–20700 seems to have been outside his Areas R and P. His Trench Q was located somewhere to the south, but nowhere in his notes have we been able to determine its exact location.

Adding to the difficulties of determining what had been dug by Harland was the post-Harland excavation history of the site. Apparently Harland's well (Cistern 1) was not completely refilled by him, and during the German occupation of World War II the owner of the field was made to fill the cavity with dirt from the hill. Comparison of the state of the massive walls

25. For preliminary reports see Pullen 1986a, 1990; Wright et al. 1990, pp. 625–629.

26. Wright et al. 1990, p. 629; see also Chap. 6, below, on the EH III period.

of House A as documented in photographs taken by Harland (see, e.g.,Fig. 5.26) with their state today (see Fig. 5.27) shows that several courses of stones have been removed, and we know that the hill was deep plowed at least once in the 1970s. Measurements of the elevation of the ground surface at the time Harland began excavating compared to that in 1984 show that up to one meter of fill was removed between the close of Harland's work in 1927 and the beginning of NVAP's 1984 season.

PROCEDURES AND METHODOLOGY EMPLOYED BY THE NEMEA VALLEY ARCHAEOLOGICAL PROJECT

Field Methods

The normal excavation procedure adopted by NVAP was excavation in Stratigraphic Units (SUs) and Square Meter Units (SMUs). An SU was "any discrete unit of excavation determined either arbitrarily or on the basis of observable stratigraphy," similar to a lot, locus, or basket in other terminology.[27] Each of the Excavation Units (EU = a trench elsewhere) was divided into 1-m grids. When an SU extended into more than one grid square, it was divided into SMUs for the purpose of horizontal control. Recording and collecting of data was done by SMU.

All soil was dry-sieved. Selected deposits, especially pits, ashy, and burnt deposits, were water-sieved. Those deposits selected for water-sieving were sampled by means of a geological sample splitter measured for volume. Samples of 25%, 50%, and occasionally 100% were then water-sieved. Details of this procedure and the results of the study of the botanical remains from the water-sieving can be found in Chapter 14 by Julie M. Hansen and Susan E. Allen.

For EU 5 the procedures began differently. Because at the beginning of the 1984 season we thought that essentially we would be removing Harland's backfill, we initially did not employ the SMU grid system in recording. Once we had reached deposits we thought might be untouched by Harland, however, we adopted the SMU system. This proved to be a very valuable method of spatial control when intrusive features or other contamination (such as Harland's excavations) were not immediately apparent at the time of excavation. By recording data and collecting artifacts according to SMUs we were able to isolate in the lab or on paper these areas of contamination and eliminate them from consideration when necessary.

Processing Methods

Data collection in both the field and the lab was assisted from the beginning by a computer-based recording system.[28] The SMU system lends itself well to management with a database. All features within each EU were numbered sequentially by type, e.g., Walls 1, 2, 3, Pits 12, 13, Grave 1. Stratigraphic relationships of the features to the SMUs were recorded so that one can immediately retrieve information such as the presence of a wall that might have disturbed underlying deposits when the wall was constructed.

All finds were collected and recorded by SMU within each SU. When the situation warranted, objects were plotted in three dimensions, such as the floor deposit of the Burnt Room.[29] Thus we can usually place any object within one square meter on the site.

27. Wright et al. 1990, p. 621.

28. Dabney 1988. The NVAP lab, database, and records were supervised by Mary K. Dabney. She developed much of the recording system and databases. Jeremy B. Rutter was responsible for the pottery processing. I owe a great deal of thanks to both of them for all of their help during the field seasons and in the years of study thereafter.

29. See Chap. 5, on the EH II Developed period.

Separation of nonpottery objects from the pottery was done in the field whenever possible. Objects recovered by dry-sieving the soil were combined with those discovered in excavation. Objects found by water-sieving were kept separate, largely because the water-sieving occurred at a later time. The pottery was washed in a diluted solution of hydrochloric acid and rinsed to remove salts and remnants of the acid.

In the lab the pottery was sorted, counted, weighed, and recorded by SMU. The systematic approach to ceramic classification developed by Rutter at Lerna was employed by NVAP in this sorting.[30] The system was designed to handle pottery from all periods of prehistory as well as historical periods. Pottery was sorted as painted or not painted, with the former subdivided into pattern-painted, linear- or band-painted, and solidly painted, and the nonpainted into fine, medium, and coarse. Small fragments of ceramics were also counted and weighed. In each of these categories the number of rims, handles, bases, spouts, legs, and body sherds was recorded. Decoration such as plastic, impressed, and stamped varieties was also recorded for each of these categories. These data allow a good characterization of the ceramics for each SMU.

Additional information was recorded for each SMU such as the earliest and latest dates of material, an overall assessment of the chronological homogeneity of the material in the SMU, the condition of the material (whether fresh breaks were visible, whether the material seemed small and eroded), and the presence of building material such as tile. These qualitative measures were also entered into the Pottery Notes database.

Significant objects worthy of being inventoried were selected during the pottery processing stage. Objects were considered significant if they provided chronological or functional information for a unit, were relatively complete examples of a particular form, or were unusual in some respect. All nonvessel ceramics (e.g., spindle whorls) and all (worked) objects of bone, stone, metal, and shell were inventoried.

Study Methods

In the study of the evidence for the Early Bronze Age we have attempted to integrate all the information collected over the course of more than 60 years of archaeological work on Tsoungiza. The quality of data is not consistent from one project to another, but to ignore one set of data would not be satisfactory. For some periods we can rely exclusively on evidence collected by NVAP, but for other periods we must rely primarily on Harland's documentation.

The study of the NVAP material involved attempting to provide more precise chronological and spatial control of features in EU 5 and to describe activities and behaviors of the prehistoric inhabitants.[31] One goal was to link horizontally features such as walls and pits that were contemporary to one another, but that may have been separated by the intervening penetration of Harland's trenches. All ceramic material was laid out by SMU in order to look for joins, similarities, and disturbances. At the same time the physical nature of the SMUs (e.g., soil color and type, evidence of burning) was reexamined. From this procedure a number of deposits and strata were identified and given the designation of Fill. Some of these fills help tie together various features in EU 5. Few floors or other discretely bounded areas of activities were identified. We do, though, have the numerous pits and cisterns that provide some information about past behavior.

The 1982 UCB data was integrated into the NVAP recording system as much as possible, given that the 1982 House A had been excavated on a grid not oriented to the cardinal

30. *Lerna* III.

31. The study of the EBA material by the author was greatly aided in the field by Kathleen Krattenmaker; in the lab by Brad Ault, Ada Kalogirou, and Laurie Roberts; in the conservation lab by John Maseman and Alexandra Trone; in object drawing by Julia E. Pfaff with the assistance of Lyla Pinch Brock and Julie Perlmutter; and in photography by Taylor Dabney.

TABLE 1.1. NVAP STRATIGRAPHIC UNIT NUMBERS ASSIGNED TO PREVIOUS EXCAVATION WORK ON TSOUNGIZA

NVAP SU	*Previous Excavation Designation*
1–19	1981 trench EU 1 (SU = UCB notebook bucket)
25–27	1983 surface collection (SU = UCB notebook lot)
28–45	1974–1975 UCB trenches in Neolithic area (SU = UCB notebook lot)
46–49	1974–1975, 1979 UCB trenches in Mycenaean areas (SU = UCB notebook lot)
50–66	1979 Greek Archaeological Service trenches (SU = trench and layer)
75–84	Blegen's cave (SU = level)
91	1924–1927 Harland's Area P
92	1924–1927 Harland's Area R
93	1924–1927 Harland's Area L
94	1924–1927 Harland's other trenches
100	1924–1927 Harland's Area P Bothros 5/Bothros XI (NVAP Pit 18)
2122, 2123	surface collection of ground stone around EU 5
2150	1981 UCB salvage excavations
2151–2184	1982 UCB Area A (UCB TS lot 66; one SU for each lot subnumber 1–34)
2185	1982 UCB trenches 82-1 through 82-11 (UCB TS lots 56–65)

points. Still, the ceramics and other finds were processed and inventoried using the NVAP system and the data integrated into the NVAP databases.[32]

Because enough of Harland's features were recovered, we could apply the NVAP grid to Harland's Areas R and P when there existed measured drawings. Unfortunately this was not possible for Harland areas outside of Areas R and P. The only body of material excavated by Harland and securely identified by us to its context was that from Harland's Area P Bothros 5. The feature was designated NVAP Pit 18 and the contents numbered as SU 100. Other material from Harland's work (when preserved) that was selected for study was also inventoried and added to the NVAP database.

Table 1.1 gives the NVAP SU numbers assigned in the NVAP database to material from the work done prior to that of NVAP.

PRESENTATION OF RESULTS

Unlike so many large-scale excavations, we have brought together in one publication the results of studying all material relevant to the Early Bronze Age at Tsoungiza. The first portion of this volume is organized chronologically. Within each chapter devoted to a major period (Chaps. 2 through 6 on the Final Neolithic, Early Helladic I, Early Helladic II Initial, Early Helladic II Developed, and Early Helladic III, respectively), the stratigraphy and any features or architecture are discussed, followed by discussions of the ceramics. Material from EU 5/Harland's Areas R and P forms the major body of data, due to its large quantity, but evidence from elsewhere on Tsoungiza Hill is included whenever appropriate. Nonceramic vessel finds are discussed in three chapters, Chapter 7 on figurines and ornaments, Chapter 8 on

32. The UCB excavations utilized the "lot" system for designating material from particular units; those lot numbers containing material excavated on Tsoungiza are prefixed with TS. While NVAP numbers were assigned to the UCB lots for use in the database, the material is stored by its original lot numbers. Whenever appropriate, the TS lot number is provided.

evidence for textiles, and Chapter 9 on crafts and tools. Chapters 1 through 9 are by Pullen. Additional chapters under separate authorship include Chapter 10 on chemical and lead isotope analyses of metal objects, by Maria Kayafa, Zofia Stos-Gale, and Noel Gale; Chapter 11 on chipped stone, by Anna Karabatsoli; Chapter 12 on ground stone tools, by Kathleen Krattenmaker; Chapter 13 on the faunal remains, by Paul Halstead; and Chapter 14 on the botanical remains, by Julie M. Hansen and Susan E. Allen. The concluding chapter, Chapter 15, is by Pullen. The problematic cist grave of Harland is discussed in Appendix 1.

For each of the chapters that deals with a chronological period (Chaps. 2 through 6), the stratigraphy, architecture, and deposits are discussed first, followed by a discussion of the pottery. Accompanying each of these chapters is a catalogue of the pottery, arranged by deposit (closed deposits such as pits first, followed by fills and other general deposits). A tabular summary of the ceramic material for all deposits is found in Appendix 2. The contents of each deposit discussed in the text are presented in Appendix 3, where a list of all inventoried objects (whether published here or not) is included, along with statistical data compiled from the nonpottery material from the deposit.

Detailed explanations of the catalogues and lists in the appendixes are to be found at the beginning of those sections. Concordances of deposits and EUs, SUs, coordinates, and dating, as well as of NVAP inventory and Nemea Museum inventory numbers, follow the appendixes.

TERMINOLOGY AND CONVENTIONS

Some of the NVAP terminology (EU, SU, SMU) has been explained above. Unless otherwise specified, all features, deposits, and material are from NVAP EU 5. References to specific grid squares are given by the appropriate SMU. All grid measurements are taken from the southwest corner. Thus SMU E20698/N6451 refers to the grid square E20698.00–20699.00/N6451.00–6452.00. All elevations are given in meters above sea level (masl), using the convention +372.45 to indicate an elevation of 372.45 meters above sea level. All dimensions and measurements are given in meters unless otherwise specified with the appropriate abbreviation (e.g., cm, mm), with weights in grams.

Objects that are catalogued, illustrated, or described are given publication numbers here. Those not treated fully but mentioned in the text as comparanda or for other reasons are referred to by their NVAP inventory number.[33] All inventoried artifacts from NVAP, and those from previous excavations (including those of Harland) given NVAP SU numbers (Table 1.1), were assigned an inventory number consisting of the SU, a material code (1 = bone and ivory, 2 = clay, 3 = glass and faience, 4 = shell, 5 = metal, 6 = organic (charcoal, wood, and seeds), 7 = plaster, 8 = stone, 9 = miscellaneous and mixed media), and a sequence number for that material within each SU. Thus object 1940-2-3 indicates the third ceramic object in SU 1940, and object 2016-5-1 indicates the first metal object in SU 2016.

Items that Harland catalogued and photographed, but that are for the most part no longer to be located, are referred to by the designation **HV**, for Harland Vase, and employ the arbitrary running number assigned by him in his documentation. They are included where appropriate in discussions of shapes in the various period chapters. Very rarely will an object have both an **HV** and an NVAP number.

33. The chipped stone presented in Chap. 11 was not fully inventoried in the NVAP system described here. All chipped stone items were assigned identification numbers by Karabatsoli as part of her larger study of EBA lithic industries (Karabatsoli 1997), and those numbers are included in the catalogue for Chap. 11 in addition to any NVAP inventory numbers. Chipped stone items have also been given publication numbers (preceded by **CS**).

Color designations follow the Munsell Soil Color system (1975 edition). The color of the outer portion of the fabric is given first, that of the inner portion second; when the firing is uneven with a distinct color break, the designation "core" is appended to the second color.

In the illustrations of objects, drawings are generally reproduced at a scale of 1:3. Wherever practical, the drawing includes on the left an exterior view and on the right the profile (solid black) and interior view. Outlines indicate elements that may not extend completely around a vessel or that are added onto the vessel, such as plastic bands, lugs, and handles. Thus vertical handles such as those from askoi or jugs are shown with an exterior view on the left; a hollow outline on the right indicates the vertical section (whether the body is preserved or not); and a solid cross section of the handle section is adjacent to the right. Features and decoration on the underside of a vessel are found below the drawing, while those features and decoration on the rim or upper portion are to be found drawn above the profile. Paint on the exterior is indicated by a solid dark tone; paint on the interior is indicated by a shaded, lighter tone. Those objects with special surface treatments such as incision, plastic additions, slips, or paints are generally left plain, and the word "solid" is written to indicate the paint.

The word "plain," when used to describe pottery, means an absence of surface treatment, that is, a lack of paint, burnishing, or other modification.

Photographs of objects are reproduced at varying scales that are usually indicated in the caption, but sometimes, in older photographs, a scale is included.

CHRONOLOGY OF TSOUNGIZA

The material from Tsoungiza presented in this volume is divided into five periods of undoubtedly varying lengths of time: the Final Neolithic, Early Helladic I, Early Helladic II Initial, Early Helladic II Developed, and Early Helladic III. One of the greatest contributions of our work at Tsoungiza is a fuller understanding of the earlier phases of the Early Helladic period. Because of the quantity of data recovered by NVAP and the importance of the material from these phases, we devote considerable space to them in this report.

No chronological terminology is completely acceptable. Work in the Aegean over the last few decades has shown that we can divide the EH II period into phases, but that not every site or region follows the same trajectory. The situation at Tsoungiza is no different. Since at Tsoungiza we can document the EH I period, the transition from EH I to EH II, and the earlier phases of EH II (unlike the situation at other sites, such as Lerna, that generally lack much evidence for these periods), we employ chronological terms to reflect this. This terminology is not meant to be applied to sites other than Tsoungiza. The term Early Helladic II Initial refers to the earliest phases of the EH II period as represented at Tsoungiza; this phase is equivalent to the poorly documented Lerna III phase early A.[34] The term Early Helladic II Developed refers to the remaining phases of the EH II period at Tsoungiza. The EH II Developed period at Tsoungiza, divided into Phases 1 through 3 and reflecting major architectural changes, is equivalent to Lerna III phase late A through phase B and perhaps into phase early C. Thus the EH II period (Initial and Developed) at Tsoungiza roughly corresponds to "EH IIA" or to "EH II: Early" when contrasted to "EH IIB" or "EH II: Late."[35] A chart of synchronisms (Table 1.2) illustrates the chronological

34. *Lerna* IV, pp. 633, 641.

35. The EH IIB or EH II Late phase is when most scholars suggest the Kastri/Lefkandi I group of ceramics makes its appearance in the Aegean. Because the EBA sequence at Tsoungiza ends well before the appearance of that material, our data cannot contribute to the issue of its chronological position. Wiencke 1989 discusses a number of the differences between the earlier and later parts of the EH II period, especially as it relates to the Peloponnese. Manning 1995 provides the most detailed look at the chronology of the Early Bronze Age in the Aegean.

TABLE 1.2. RELATIVE AND ABSOLUTE DATES FOR THE EARLY BRONZE AGE AT TSOUNGIZA AND LERNA

Tsoungiza Phases	*Lerna Phases*	*Absolute Dates* (Lerna *IV*)	*Argolid/Corinthia, General Phases and Major Sites*	*Absolute Dates* B.C. *(Rutter 1993b [2000]; Manning 1995)*
FN	traces?		FN ("LN II") Halieis (Pullen 2000)	–3100/3000
EH I	few unstratified sherds	3100/3000–2750/2700	Talioti/EH I (Weisshaar 1990)	3100/3000–2650
EH II Initial	III phase early A	2750/2700–2500/2450	EH IIA (EH II: Early)	2650–2450/2350
EH II Developed	III phases late A–early C			
Phase 1	III phase late A–early B			
Phase 2	III phase late B			
Phase 3	III phase late B–early C			
Abandonment	III phases C–D	2500/2450–2300/2200	EH IIB (EH II: Late) Tiryns, Zygouries	2450/2350–2200/2150
EH III	IV	2300/2200–2050/2000	EH III	2200/2150–2050/2000
Abandonment	V	2050/2000–	MH	2050/2000–1680

relationship of Tsoungiza to Lerna and the Argolid/Corinthia in general, and presents the absolute dates in general use in the literature.[36]

Only five radiocarbon assays from EH levels at Tsoungiza were completed, and unfortunately just three provided reliable dates.[37] In Figure 1.7, the length and height of each rectangle represent the probability distribution of calculated intercept ranges at 1-sigma (standard deviation) of the calibrated date. The length represents the intercept range and the height represents the relative probability that the intercept range is correct; the shorter the length the smaller the intercept range, and the greater the height the greater the probability for that intercept range. Thus for radiocarbon assay AA-10822, the intercept range of 2836–2813 calibrated B.C. has a probability of 0.07, the range of 2689–2649 calibrated B.C. has a probability of 0.12, and the range of 2639–2457 calibrated B.C. has a probability of 0.81.

From the EH I cistern or well (Cistern 2; see Chap. 3) we were able to obtain two charcoal samples for assay. The results, however, do not appear to be valid. AA-10826 yielded an age of 3478 ± 52 B.P., and AA-10827, 4499 ± 53 B.P. Calibration of 3478 B.P. yields three intercepts from 1767 to 1742 B.C., while 4499 B.P. can be calibrated to no less than 11 intercepts from 3326 to 3102 B.C. The probability distributions of the intercept ranges also show great divergence. While the latter determination could *conceivably* be in the acceptable range for EH I, the former is obviously at least a millennium too young. Given the problems of internal collapse upon discovery, unusual soil conditions, and possible contamination, these two dates for the samples from the cistern cannot be relied upon.

Much more reliable are the three dates obtained from materials from the Burnt Room, a structure whose contents of a drinking assemblage of over a dozen small bowls and a jug can be dated to EH II Developed Phase 2, equivalent to late Lerna III phase B or early in Lerna III

36. Rutter [1993b] 2000, p. 106, table 2, based on Manning 1995. The absolute dates proposed by Wiencke (*Lerna* IV, p. 656) are included, though the absolute dates employed by Rutter and Manning are preferred.

37. The assays were performed at the University of Arizona's NSF-Arizona Accelerator Mass Spectrometry Facility in 1993.

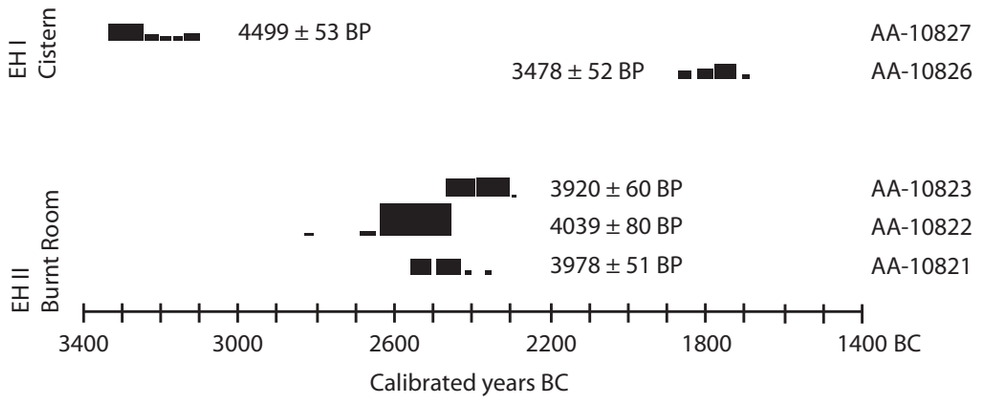

Figure 1.7. EBA radiocarbon dates from Tsoungiza

phase C. Sample AA-10821 yielded an age of 3978 ± 51 B.P., AA-10822, 4039 ± 80 B.P., and AA-10823, 3920 ± 60 B.P. Calibrated, the dates of these three samples fall between 2566 and 2364 B.C., that is, within the EH IIA period of the EBA mainland. The Tsoungiza dates also correspond with those from Lerna.[38]

The radiocarbon dates from Tsoungiza, then, help to date the EH II Developed phase, but not the critical EH I–II transition. Further discussion of chronology and synchronisms is to be found in Chapters 2 through 6 and in the concluding Chapter 15.

38. See Manning 1995, p. 186; *Lerna* IV, pp. 656.

2

THE NEOLITHIC PERIOD

The first archaeological explorations on Tsoungiza Hill found evidence of Neolithic activity. Blegen discovered Neolithic material on the south slopes of the hill in his trial trenches and subsequent excavations.[1] The Greek Archaeological Service and the University of California at Berkeley likewise recovered evidence of the Neolithic period in areas adjacent to Blegen's original excavations, and UCB work revealed pits of the Early Neolithic period in exploratory trenches on the southeast slopes of the hill in 1981–1982 (see Fig. 1.5 for locations of the EN–MN deposits). NVAP has found material of nearly all phases of the Neolithic on Tsoungiza Hill, but by no means in a continuous sequence.[2] Only the Late and Final Neolithic material from Tsoungiza is presented here (Fig. 2.1 is a plot only of FN material).[3]

THE EN, MN, AND LN PERIODS

In nearly every stratigraphic unit in EU 5 (as in almost all other trenches) small numbers of EN sherds were found, probably as a result of mudbrick disintegration or building activities such as digging foundations or constructing pits. Other pre–FN materials were not common. A marble labret, "ear stud," or "ear plug" (**751**; see Fig. 7.17) of a type dated to EN was found in EU 5 Pit 40, but why it was in a pit of the EH II Developed period is uncertain.[4]

Occasional pieces of later Neolithic date were encountered in deposits in EU 5, such as one LN Gonia polychrome sherd (**1**)[5] and the unusual black-burnished base fragment (**2**) from the EU 5 EH I cistern or well, Cistern 2 (see Chap. 3 for this feature). **2**, part of a flat bottom of the same thickness as the wall to which it is joined at a sharp curving angle, is highly burnished on the exterior and interior. The shape is not immediately recognizable but the black burnish suggests it dates to the Late Neolithic period. It may be a portion of a four-legged "ritual vessel," well known from LN Corinth;[6] less likely is it a forerunner of a

1. Blegen 1926, 1927, 1975.

2. See Wright et al. 1990, pp. 624–625, for a reassessment of Blegen's "Early Neolithic," which also includes Middle Neolithic ceramics; see also Blegen 1975, p. 259, n. 18.

3. NVAP explored the area of Blegen's cave and other EN deposits in EU 4 (Fig. 1.5). Material of the Early and Middle Neolithic periods, as well as Late Neolithic material not from EU 5, has not been studied as part of this project, but will be presented elsewhere.

4. The labret (or ear stud or ear plug, **751**) was encountered in EU 5 Pit 40 along with two tiny unidentifiable sherds. Stone labrets or ear studs/ear plugs are known from a number of Aceramic and Early Neolithic sites in northern Greece, such as Nea Nikomedeia (Rodden 1962, p. 285, and p. 285, fig. 11; 1964, p. 114, and pl. 4:B), Souphli Magoula (Theochares 1958; Gallis 1982, p. 53, and pl. 2:c, right), Sesklo (Tsountas 1908, p. 337, and pl. 43:11–21; Theochares 1973, fig. 270, bottom row), and Achilleion (Gimbutas, Winn, and Shimabuku 1989, pp. 251–252, and p. 251, fig. 8.1), as well as Franchthi Cave in the Peloponnese (Jacobsen 1976, pp. 82–83). The labret or ear stud **751** is considered further in the section on stone ornaments in Chap. 7. EU 5 Pit 40 was an irregular cutting in the bedrock at E20699.26–20700.00/N6457.20–6457.70, level top at +372.88, level bottom at +372.67. Stratigraphically, this pit belongs to the EH II Developed period, so it is not considered further here; see p. 260, below.

5. For Gonia polychrome, see Blegen 1930, p. 69.

6. Lavezzi 1978, pp. 420–421, and pls. 108, 109.

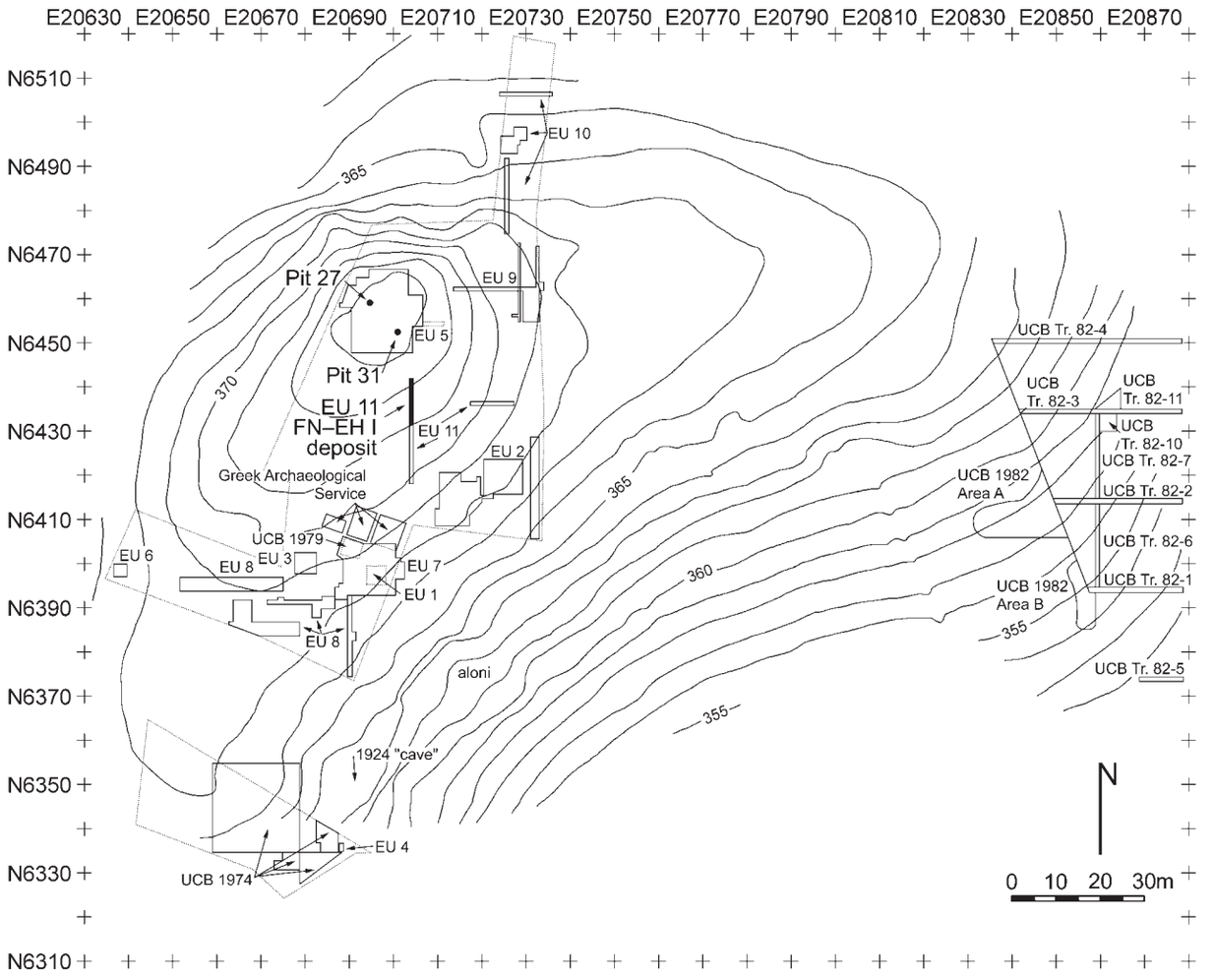

FIGURE 2.1. Tsoungiza Hill, locations of FN material

frying pan. The find of a marble figurine of Thessalian type on the surface near EU 7 has been published elsewhere.[7] It is so far unique in southern Greece, but indicates far-flung connections. These three pieces are suggestive of an LN phase at Tsoungiza, however tenuous.[8]

THE FN PERIOD

The first readily identifiable Neolithic activity, as opposed to chance finds, on the crown of the hill is from the Final Neolithic period. Two deposits of FN material were recognized in EU 5 (Fig. 2.2). One pit, Pit 31, had large fragments of some FN vessels, including a nearly complete bowl (**5**). Pit 27, discovered below Harland's EH III Pithos 5, had a small quantity of mostly FN pottery. The EH I contamination of this deposit may be due to the overlapping Pit 14, excavated by Harland. Elsewhere in EU 5 some FN material was identified from otherwise EH I or EH II Initial deposits, such as Pit 55 or Cistern 2.

In EU 11, downslope to the south of EU 5, a deposit ranging in date from FN to EH I included several pieces identified as FN, EH I, and FN–EH I. Nearby was Harland's Trench Q, and among the few objects preserved from that trial trench was a handle fragment from a Final Neolithic scoop (**16**). In no single deposit is the quantity of FN material large enough

7. Wright 1999.

8. The NVAP Survey also has found little evidence for the later Neolithic periods; see Cherry et al. 1988, pp. 172–176.

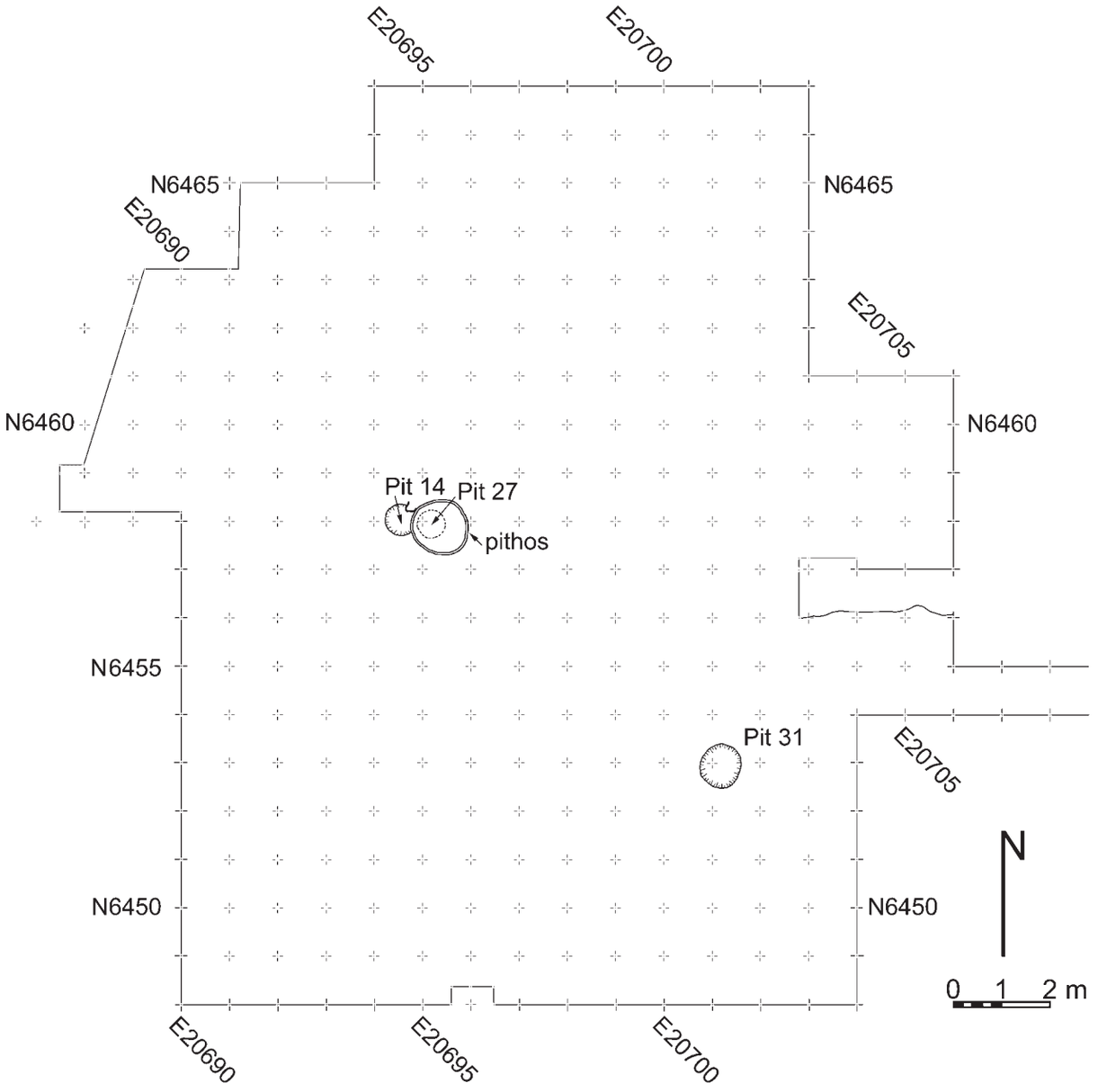

Figure 2.2. EU 5, FN deposits

to describe an FN assemblage, but the combined quantity of material from the several deposits does indicate definite FN activity.

The Final Neolithic period is probably one of the most poorly understood periods in Aegean prehistory,[9] even though it has been widely recognized throughout Greece since its definition by Renfrew[10] and has been the subject of two studies, by Phelps and Zachos.[11]

9. There is a continuing debate over terminology concerning this period. C. Renfrew (1972, pp. 68–80), Jacobsen (1976), Phelps (1975, 2004), and others have used the term FN to designate this long period between the already defined Late Neolithic and Early Helladic I periods, which is characterized by regional diversity and extensive cave use in the Peloponnese. Others, especially Coleman (1992), Lavezzi (1983), and Zachos (1987, 2008), use the term "Late Neolithic II." Coleman (1992, pp. 252, 259) argues for consistency of a "numerical system of phases" and notes the inappropriateness of the term "Final" for a period of "about 600 years," yet I think it is no less inappropriate to use "LN II" for such a long period of time. Coleman would use "LN" for a period spanning nearly two millennia, apparently with the desire to retain the arbitrary tripartite chronological terminology originally devised by Evans (1906) and based on 19th-century notions of social evolution. Recently, Lavezzi (2003) has proposed dividing his "LN" (Late Neolithic and Final Neolithic as used here) into four phases. I do not wish to belabor the point, but I prefer the term FN.

10. Renfrew 1972, pp. 68–80.

11. Phelps 1975, 2004; Zachos 1987, 2008.

Zachos lists 50 sites from the Peloponnese with FN material,[12] to which should be added Tsoungiza and the sites from the Southern Argolid, Berbati, and NVAP surveys,[13] yet little material from these or sites elsewhere in Greece has been published. We still lack an understanding of the development of ceramics in this period; this is especially critical if, as some scholars suggest, the period extended for nearly a millennium.[14] In addition to a lack of chronological control within the Final Neolithic period, the relationship of FN ceramics to those of the following Early Helladic I period is not well understood.[15] Zachos, like Phelps, notes the difficulty in distinguishing different stages within the Final Neolithic period. Nevertheless, both do attempt to define early and late stages of FN pottery, but they disagree on details. Both define the beginning of the Final Neolithic period by the disappearance of the painted wares characteristic of LN. Pattern burnish, crusted, and plastic decoration mark the early stages. The later stage continues the crusted and pattern burnished decoration, but adds a heavy slip-and-burnish ware and the rolled-rim bowl.

Zachos and Phelps both accept Eutresis Group III as defining the beginning of EH I, in which red slip and burnish replaces most wares, though the dark heavy slip and burnish does continue sporadically. Eutresis Group III is not a closely stratified deposit (nor for that matter is Eutresis Group II), and the original excavators[16] as well as later workers[17] have warned of possible mixing in both the FN Group II and the EH I Group III. Eutresis does, however, remain one of the few stratified sites with both FN and EH I, and so it will continue to be a "type site." The early Early Helladic I period is not well known, although recent work on the Talioti assemblage in the Argive Plain, as well as our excavations at Tsoungiza, have helped to define that period (see the discussion of the Early Helladic I period in Chap. 3). At Tsoungiza we have identified a number of vessels as "FN–EH I" when those vessels have characteristics not exactly comparable to vessels of FN or EH I. This is especially true of vessels from the EU 11 mixed FN–EH I deposit. Thus the possibility remains that what has been identified at Tsoungiza as FN may indeed belong to the earliest Early Helladic I period.

The material of the Final Neolithic period at Tsoungiza is not plentiful and, other than the few pits in which it is found, evidence for FN activity is difficult to identify. From the location of this material in the pits on the crown and upper margins of the hill, most likely any FN settlement was to be found there, but all traces of architecture and other features appear to have been obliterated by the succeeding Early Bronze Age inhabitants.

DEPOSITS OF THE FN PERIOD

Three deposits have been identified as having primarily Final Neolithic materials: EU 5 Pit 31, EU 5 Pit 27, and EU 11 (Fig. 2.1).

12. Zachos 1987, pp. 5–10; 2008, pp. 3–5.

13. Three sites discovered by the Argolid Exploration Project, the Kotena cave (G9) and two open-air sites near Franchthi Cave (C15, C29), had more than five sherds identified as FN. In addition, 33 sites had five or fewer sherds identified as FN. Only two of these sites had no identifiable EH I material, but the large quantity of FN material from Kotena Cave as well as comparative material of FN date from the excavations at Franchthi Cave and Halieis allowed for the effective isolation of the FN material. See Pullen 1995, pp. 6–10 for details. Johnson (1996a) reports 19 findspots in the Berbati survey with evidence of FN, nine of which had "no or very little" evidence of EH. Only one site from the NVAP survey, site 702, produced FN material (Cherry et al. 1988).

14. Coleman (1992, p. 259, p. 206, fig. 4, and p. 204, fig. 2) suggests 600 years, ca. 4300–3700/3500 B.C. (i.e., 600–800 years), and ca. 4300–3300 B.C. (i.e., 1,000 years). Renfrew (1972, p. 76, table 5.I) suggests ca. 4100–3200 B.C., about 900 years. Manning (1995, pp. 168–170) tentatively suggests that the FN period might extend from the end of the 5th millennium to the end of the 4th, or nearly 1,000 years.

15. Phelps (1975, p. 297; 2004, p. 104), in reference to the pottery of the North Slope of the Athenian Acropolis, usually considered one of the latest FN ceramic groups, says, "I have used this material to define the end of the Neolithic because, although there are features suggestive of EH I, and which in another context might pass as EH I, none of the criteria is *(sic)* present which seem to me to characterize this period [i.e., EH I]."

16. Caskey and Caskey 1960, p. 162.

17. Phelps 1975, p. 356.

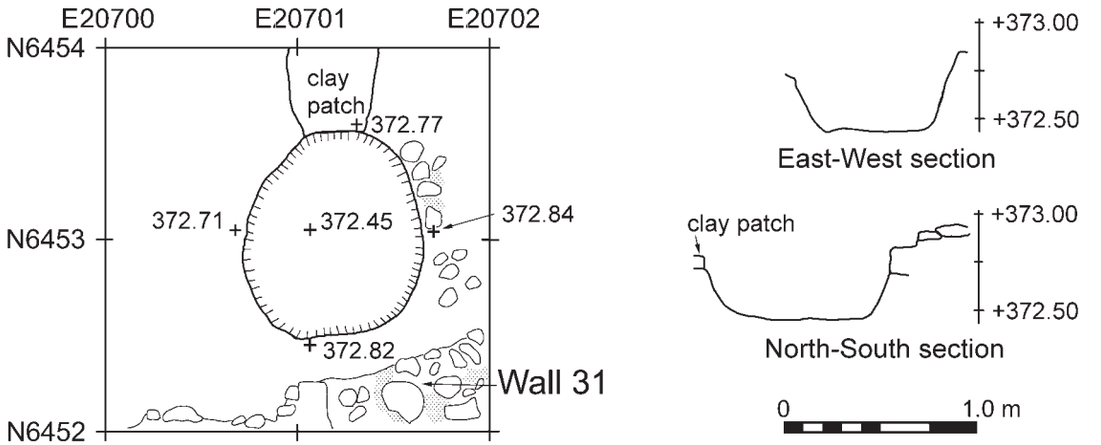

Figure 2.3. EU 5 Pit 31, plan and sections

EU 5 Pit 31

Location: E20700.72–20701.65/N6452.50–6453.60
Level top: +372.84 (east), +372.71 (west); level bottom: +372.45; maximum preserved depth: 0.39 m.
Excavated as SUs 891 (definition of pit), 892, 893, 894; contents water-sieved.

In the area east of Wall 15 a pit was discovered cut into the sloping bedrock and perhaps into the bottom layer of fill, just north of Wall 31. Pit 31 was at a lower level than Wall 31, and not related to it (Fig. 2.3). The east edge of the pit was higher than that of the west. The contents of Pit 31 appear to be exclusively of the FN period (**3–6**). Apparently any deposits of FN date outside of the pit had been removed by the activities of occupation during the Early Helladic II period, as the pottery from SU 891 suggests. Botanical remains from the pit (see Chap. 14) included several species of legumes and three cereal crops (emmer, einkorn, and barley), suggestive of multiple cropping at this time. This pit was probably not used for agricultural storage, given the presence of fruit seeds and weed seeds, but the botanical material was certainly the result of agricultural production. The finds from Pit 31 are summarized in Appendix 3.1.

EU 5 Pit 27

Location: E20695.00–20695.60/N6457.70–6458.30
Level top: +372.46; level bottom: +372.11; maximum preserved depth: 0.35 m.
Excavated as SUs 859, 860; contents of SU 860 water-sieved (50% sample).

Underneath Harland's large EH III Area R Pithos 5 (removed as SU 845), a smaller pit was discovered (Fig. 2.2). Only that part of Pit 27 cut into bedrock was preserved, and Pit 14 (Harland's House A Bothros 3) cut into it slightly. Harland, despite his excavation of the overlapping Pit 14, did not disturb Pit 27. The upper fill (a loose, yellow-brown soil with many stones but few sherds) was removed in SU 859 to +372.27. The remaining fill (more compact, red-brown soil with some charcoal but no sherds or stones) was removed in SU 860. Half of the soil in SU 860 was water-sieved due to the presence of the charcoal, but virtually no botanical material was recovered (see Chap. 14). The red-brown soil of SU 860 had a lining like that found in other EU 5 pits.

The contents of Pit 27 (summarized in App. 3.1; see also Fig. 2.10:**7**) are FN in date, except for at least one possible EH I sherd (uncatalogued) that may be attributable to Harland's excavation and subsequent backfilling of Pit 14.

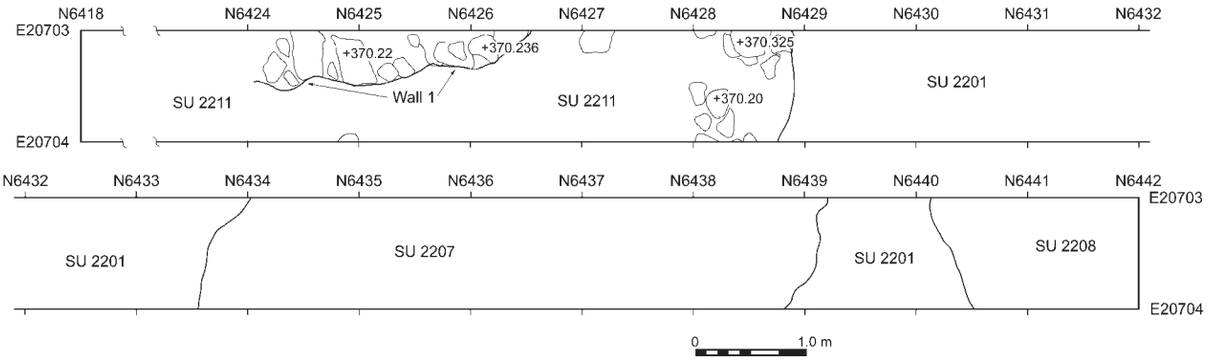

Figure 2.4. EU 11, plan of trench at end of excavation

EU 11

Located just to the south of EU 5 at E20703–20704/N6418–6442, EU 11 was a 1 m wide strip trench 23 m long north–south; it spanned the area from Harland's Trench Q (south of EU 5) to the EU 2 and EU 7 area. EU 11 also included an east–west strip trench 1 m wide and 10 m long, at E20717–20727/N6436–6437, dug as SU 2251. A shallow deposit above the bedrock, this east–west strip was essentially only plow zone. The main purposes of excavating EU 11 were to detect any deposits between the EH settlement on the crown of the hill and areas to the south, and to determine the slope of the bedrock of the hill.

EU 11 was excavated quickly in August 1986, at the end of the last field season. The plow zone was designated as SU 2201 for the whole trench; below SU 2201 all areas were dug in SMUs (Figs. 2.4–2.7). Soil from SU 2201 through SU 2205 was dry-sieved, but soil from subsequent SUs was not. No soil was water-sieved. Bedrock was definitely reached in SMUs E20703/N6433–6442, but in the remainder of the trench its identification was uncertain.

Near the south end of the trench, at roughly N6424–6429, stones were found that suggest at least one wall, EU 11 Wall 1 (Fig. 2.4), and perhaps up to two more that would be associated with Wall 1 by their proximity and elevations (top elevation of Wall 1: +370.28, bottom elevation: +369.69). Only one row of stones of Wall 1 was found, one course high, running approximately north–south from N6424.00 to N6426.50. Some stones were large, up to 0.50 m long, with other smaller, fist-size stones used between them. The pottery from the earth covering the wall, SUs 2209–2211, is mixed EN, EH, and LH in all SMUs, and therefore does not help provide a date for the wall.

In the north end of the trench are two deep pockets filled with EN deposits overlain by FN–EH I deposits (Figs. 2.5, 2.6, 2.8). These pockets are bounded by rises in the marl and resemble the pockets of EN material found elsewhere on the site (e.g., during the 1982 UCB excavations to the southeast and in excavations of EN material at the south end of the hill). The south pocket, whose south and north boundaries are at approximately N6433–6433.50 and N6439–6439.50, respectively, was deepest at its north end, ca. 1.25 m (+370.70), and only ca. 0.25 m (+370.80) at its south end. The lowest elevation of the pocket was at +370.60. We uncovered only the south end of the north pocket, at approximately N6440–6440.50; it was 0.75 m deep at the north edge of the trench (+370.40). Anne Demitrack, NVAP geoarchaeologist in 1986, remarked on the artificial appearance of the bedrock and marl surfaces, and we found that the south pocket had been created by cutting into the natural slope of the hill to form a roughly level (+370.60–370.80) floored area about 5 m long.

The fill in the north pocket was excavated as SU 2203 above SU 2208 (see Fig. 2.7 for schematic diagram of the SUs). The pottery from both SUs was primarily FN and EH I, but it was often difficult to distinguish between the two periods when dealing with body sherds.

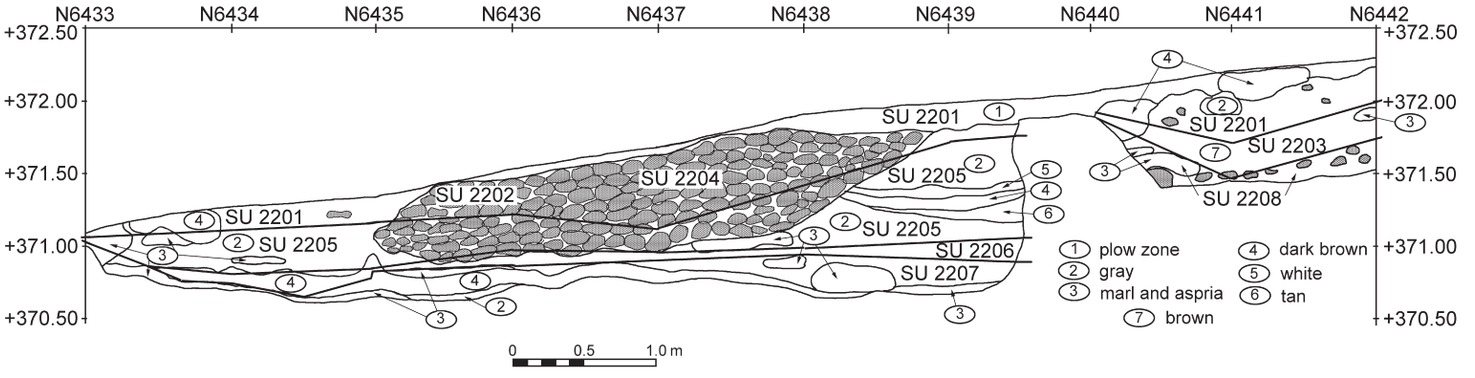

FIGURE 2.5. EU 11, west face (E20703) from N6433 to N6442

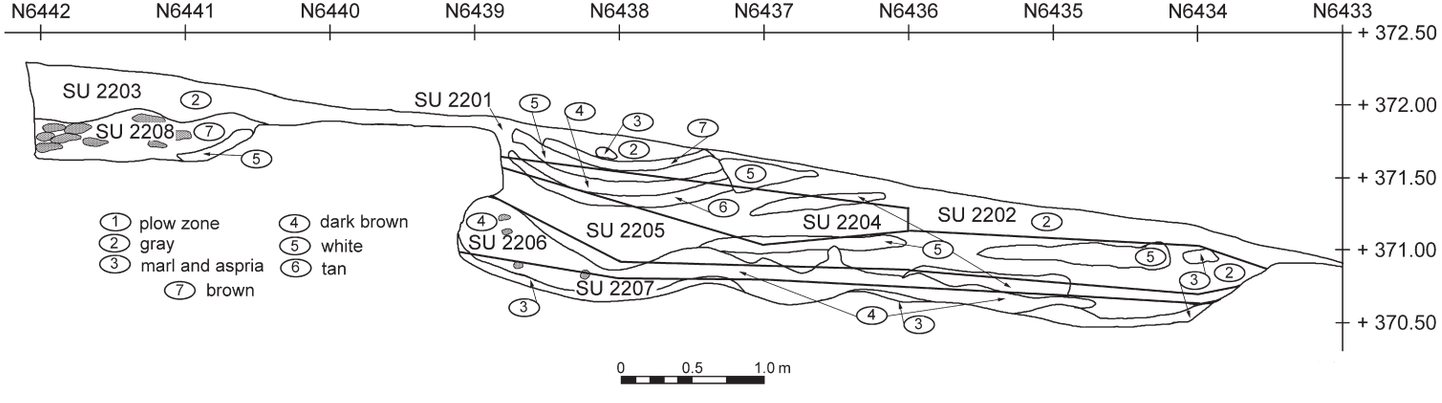

FIGURE 2.6. EU 11, east face (E20704) from N6442 to N6433

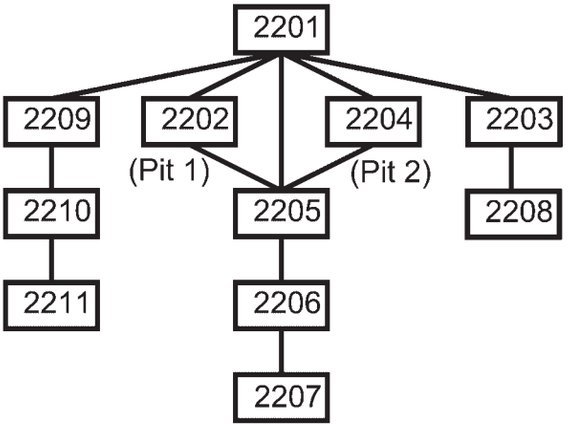

Figure 2.7. EU 11, schematic diagram of Stratigraphic Units (Harris matrix)

The lower levels of the fill of the south pocket were excavated in SUs 2205–2207. The contents of SU 2206 and SU 2207 were pure EN, and those of SU 2205 were mostly EN, though with a few FN–EH I pieces, most likely from cross-cutting strata during excavations (see Fig. 2.5 for lack of correspondence between natural stratigraphy and SUs as excavated). A soil sample from SU 2207 was submitted in 2009 for phytolith analysis by Georgia Tsartsidou. She concludes that the soil contained dung, probably from domesticated grazing animals such as sheep or cattle that were fed a combination of cereals and cereal stems, most likely the by-product of agricultural processing.

Above this EN fill there was a deposit of mostly rocks, with few sherds or other materials that, according to the excavator, formed Pit 2. The pottery from this "pit," excavated as SU 2204, was mostly FN–EH I (see Fig. 2.11, below), but there were fragments from EN, EH II, and even one of LH date. There were at most six EH II sherds. The one LH sherd (a Mycenaean kylix foot) came from SMU E20703/N6439, which is partly on top of the marl outcrop forming the north edge of the pocket. As SU 2204 lay directly beneath the plow zone excavated as SU 2201, it is not surprising to find later material (e.g., a sherd from SU 2204 SMU E20703/N6437 that joins with **23**). Near the south end of the south pocket another "pit," Pit 1, was detected and excavated as SU 2202; the pottery was primarily EN with four sherds of EH II date and perhaps some FN. On the whole there were very few sherds in SU 2202. The relationship of Pit 1 to Pit 2 is puzzling, as Pit 1 seems to lie above Pit 2, yet this would not be possible chronologically. Perhaps EU 11 contains Harland's backfill from Trench Q, which might explain the confused nature of SUs 2202 and 2204. The plow zone, excavated as SU 2201, yielded EN, FN, EH I, EH II, EH III, late MH, and LH material, which could indicate either Harland backfill or actual plow zone. The pottery found in SU 2204 (Pit 2), however, is similar in its range of dates (FN–EH I, with occasional EN and EH II) to that of SUs 2203 and 2208, which were not rock-filled deposits like SU 2204.

EU 11 represents the only deposits, perhaps in situ, of FN–EH I date found outside of EU 5, as well as the area of EN deposits located highest on the hill. The earlier Neolithic occupation of Tsoungiza hill must have been widespread, as indicated in Fig. 1.5, although not necessarily continuous or contemporaneous. The identification of dung in association with the artificially cut bedrock indicates the construction of pens for domesticated animals fed on the by-products of cereal production.

The finds associated with both the EN and the FN–EH I deposits in EU 11 are summarized in Appendix 3.1. The counts and percentages of the EU 11 material as presented in Appendix 2 should be used with caution, given the different recovery methods utilized in EU 11, as they are not directly comparable to the counts made in other units.

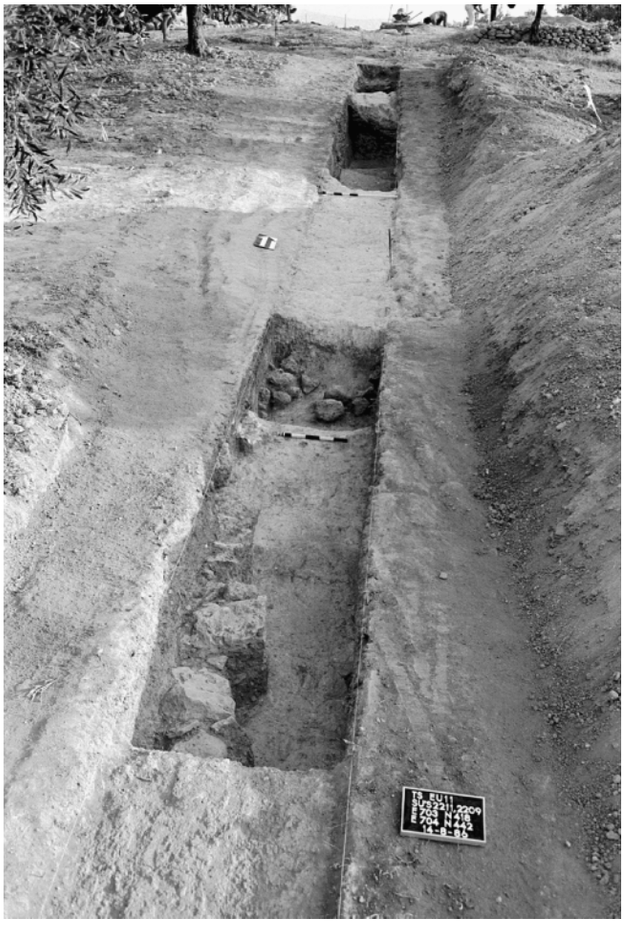

FIGURE 2.8. EU 11, northern half, view from the south (EU 5 at top of hill)

THE FN POTTERY

The FN assemblage on Tsoungiza Hill consists for the most part of small scoops with a characteristic wishbone-shaped handle; coarse bowls with irregular, compacted surfaces and sometimes with plastic or incised decoration; and pedestals. Examples of finer, painted or burnished wares such as crusted ware or pattern burnished ware characteristic of assemblages from other sites are missing at Tsoungiza. This absence of finer wares characteristic of FN elsewhere could be the result of preservation or failure to identify these wares, but more likely it indicates a chronological difference. Only the material from EU 5 Pit 31 and EU 5 Pit 27 is from primary deposits; all other material is from secondary deposits. The necessity of rapid excavation of EU 11 and the resulting lack of sieving of several units adds to the uncertainty of whether we have a representative sample of FN ceramics at Tsoungiza.

In addition to shapes such as the scoop, fabrics and surface finishes have been used to identify FN pottery. Because of the small corpus of material, however, we have not devised a system of ceramic classes and forms for the Final Neolithic period as has been done for the ceramics of the succeeding periods. Yet in order to facilitate comparison with ceramics of the Early Helladic I period, where appropriate, EH I ceramic classes and forms have been utilized here in the discussion and catalogue. The EH I classes and forms are described in detail in Chapter 3.

The most common FN shape from Tsoungiza is the small scoop, related to Shape 14 of the EH I period; at least eight examples were found. Four come from EU 11 (**8**, **9**, **14**, **15**);

two from EU 5 Pit 31 (**3**, **4**); one from the EH I EU 5 Pit 55 (**13**); and one from Harland's Trench Q, which was in the vicinity of our EU 11 (**16**). The best-preserved example, **13**, illustrates the shape: an asymmetrical cup, rather flat on one side, and with a vertical handle attached on the opposite, rounded side at the rim and side. The handle is basically round in section, although it can be ovoid, and rises to a knob at the maximum height, giving it the characteristic wishbone shape. **13** and **9** have rounded bottoms, but **4** and **14** have flattened bottoms, which suggests the orientation of a relatively horizontal rim. On the basis of comparisons with scoops from other sites, however, the rim is probably oblique, sloping down to the handle. The Tsoungiza examples are small and might be called "askoid cups." The similarity to the later askos shape is readily apparent in our examples, and there probably is a development of shape from the FN scoop to the EH I askos.

The scoop is a shape widely known in the Final Neolithic period, generally in Attica, Kephala, and farther north, but it manifests itself in a wide range of variability. The Tsoungiza scoops are more closely connected with those of Asea or even Eutresis than with the elaborate basket-handled examples from Kephala, Athens, or Sesklo. Two scoops from Asea[18] have flat bottoms and oblique rims that descend from the flatter pouring sides to the more rounded sides where the handles are attached, but these date to EH I. The handles on the Asea examples are flat loops, rising above the rim, attached at the rim and body. The surfaces (only on the back half of the vessels) are covered with incised horizontal lines or incised vertical zigzag. A related example from Eutresis is deeper and lacks the flat bottom, but it has the same kind of handle;[19] this example evidently rests naturally on the flatter pouring side, forming a more horizontal shape (L. 0.213 m) than the Asea versions, but with the oblique mouth. Unlike the Asea examples, the Eutresis scoop is plain, with surfaces lightly burnished; Caskey and Caskey report that the interior is burnt. Rather different from the Asea and Eutresis examples are the scoops from Lerna,[20] with its strap handle and struts, and Aria (near Nauplion),[21] with its raised, flat base, wide strap handle with supporting strut, and painted interior. Farther afield, the scoops from Kephala[22] have the horizontal orientation of the Eutresis example but rest on raised, hollow bases and have a wide handle that rises from the rear and splits at the top into two sections that are attached to the sides. The examples from Sesklo[23] as well as those from Athens[24] are similar in shape to the Kephala ones, although there are differences in details and decoration; the Kephala, Athens, and Sesklo scoops are usually decorated with incised patterns. Phelps notes the relative scarcity of the scoop shape in the Peloponnese,[25] identifying them at only Corinth[26] and Halieis.[27] He places the shape into his early group (as opposed to his late group or group of the entire period) along with the other finds from Kephala. Douzougli dates the Aria scoop to the "Chalcolithic," her term for FN, and associates it and the Lerna scoop with the Attic-Kephala phase of the earlier FN.[28] The wishbone handle appears at Ayios Dimitrios[29] and handles with pronounced knobs appear at other FN sites in the Peloponnese.[30] The wishbone handles of the Tsoungiza scoops obviously derive from the more elaborate versions of handles such as those from Aria, Lerna, and Kephala. Overall, though the Tsoungiza scoops are closer to the later, EH I scoops or askoid cups of Asea and Eutresis, they form a typological link between the earlier FN scoops of Aria, Corinth, Kephala, Athens, and Sesklo, and the later ones.

18. See Holmberg 1944, p. 83, fig. 84a, b, where they are identified as cups.

19. Caskey and Caskey 1960, p. 135, and pl. 47:II.43.

20. Caskey 1959, pl. 41:b, no. L.1610; *Lerna* V, p. 124, fig. 85:f, CD photo 66.

21. Douzougli 1998, pls. 5, 18, and p. 52, no. 194.

22. *Keos* I, shape C1, pl. 36.

23. Tsountas 1908, pl. 16:3; *Agora* XIII, pl. 8.

24. *Agora* XIII, p. 12, and pl. 8.

25. Phelps 1975, p. 326; 2004, p. 114.

26. Lavezzi 1978, pp. 420–421.

27. Pullen 2000, pp. 152–153, no. 32.

28. Douzougli 1998, pp. 127–139.

29. Zachos 1987, fig. 21, no. B138; 2008, fig. 20, no. B138.

30. E.g., Klenia Cave and Corinth: Phelps 1975, fig. 51, nos. 6, 7, 16, 20; 2004, fig. 51, nos. 6, 7, 16, 20.

The fabrics of the scoops and other shapes tend to be medium in the range of coarseness despite having mostly tiny and small inclusions, along with tiny vacuoles. The fabrics are usually unevenly fired yellowish red, light brown, or reddish brown (5YR 6/4, 5YR 5/4, 7.5YR 6/4) on the surface to a gray core (N 5/0). Often the surface is lightly burnished; though not glossy, the burnishing strokes are readily apparent. The surfaces are compacted from pressure applied during the burnishing, often appearing cracked as if by expansion beneath the surface. No paint or slip was detected on any surface, except in the case of **11**, a large jar. The interior of this piece appears to be painted black, though the pot is fired to N 3/0 (very dark gray) on the interior. The fabrics used to make the scoops are remarkably consistent upon examination, and it can be difficult to determine whether two pieces come from the same vessel (e.g., **8** and **9**, or **3** and **4**). The fabric of the two-handled bowl, **5**, likewise is very similar to that of scoops **4** and **13**.

The other shapes are not as plentiful as the scoops, and there is little resemblance from one to another. A nearly complete bowl (**5**) has a raised, flat base, irregular spreading sides, and an undulating flat lip. One flat horizontal handle (of a presumed pair) rises above the lip. This is a very unusual handle, though it appears on EH I fruitstands at Tsoungiza (see, e.g., **92**, Fig. 3.24) and elsewhere, such as Makrovouni and Talioti.[31] This handle does not appear at Argos, though there is a larger two-handled bowl of similar shape and painted,[32] not plain like our example. Two-handled bowls appear at Ayios Dimitrios,[33] but none with a handle like that on the Tsoungiza bowl; likewise, Phelps does not publish any examples like the Tsoungiza bowl.[34] Other bowl forms are either hemispherical to deep with walls slightly tapering (**19**) or flaring (**17**), or are shallower with straight sides (**6**, **20**). One small lug with two projections arranged diagonally is preserved below the rim of **19**. From EU 5 EH I Cistern 2 comes a similar double-horned lug (**18**), probably to be dated to the Final Neolithic period. A shallow, straight-sided bowl (**24**), also FN but kicked up into Cistern 2, may be a baking pan because of its rim rising to a short tab, its thick wall, and its highly burnished interior contrasting with the rough exterior. The fabric, with its highly compacted surface, suggests FN, but the piece would perhaps not be out of place in EH I.

Portions of three pedestals were recovered from EU 11: **22**, heavily burnished with concave sides; **10**, probably short; and **21**, into which a pair of circular holes (0.015 m in diameter) were cut below the level of minimum diameter, with another pair located on the opposite side. Pedestals are relatively common at some sites, such as Kephala,[35] though these tend to be rather straight-sided like **21**. Concave-sided pedestals like **10** and **22** are common in the Peloponnese, as Phelps notes,[36] though Zachos found only three at Ayios Dimitrios.[37] Holes and cutouts, single or paired, are often found on the pedestals. The pedestal occurs in LN and EH I, as well as in FN. The three Tsoungiza pedestals are from the FN–EH I levels in EU 11 (**21**, **10**) or in the unstratified surface unit (**22**). A raised, hollow base (**7**), almost like a proto-ring base, and the fragment of a large flat base with mat impression (**12**), illustrate other types of bases.

Two jars from EU 11 are included here, though again the caveats expressed above regarding dating to FN versus EH I apply. A large holemouth jar, **23**, of a rather rounded or globular shape, has at least two rows of irregular taenia with finger impressions on the shoulder. The other jar, **11**, may be associated with the large flat base with mat-impressed bottom, **12**, by both the fabric and the burning or dark firing.

31. Makrovouni: Dousougli 1987, p. 184, fig. 12, nos. 42, 43; Talioti: Weisshaar 1990, pls. 2:10, 3:9.
32. Touchais 1980, p. 18, fig. 7, no. 37.
33. Zachos 1987, fig. 21; 2008, fig. 20.
34. Phelps 1975, 2004.
35. *Keos* I, pl. 30.
36. Phelps 1975, p. 331, and fig. 55, nos. 23–25; 2004, p. 116, and fig. 55, nos. 23–25, from Alepotrypa.
37. Zachos 1987, p. 79; 2008, p. 26.

From the sondage in EU 2, in mixed EH II–III levels, comes a small open shape (**25**), perhaps a spoon or scoop, with a horizontal tab handle that ends in a rounded blunt point. The fabric and shape are unusual and it was difficult to assign the piece to a specific period, but it probably dates to EN or FN.

The Final Neolithic material from Tsoungiza is not by any means large in quantity or great in variety, nor from secure deposits other than a few pits. The scoop is undoubtedly a common form, and probably played an important role in domestic contexts. Most likely a scoop was used by an individual, given its small size and the shape of the single handle. It is tempting to associate the scoop **4** and the two-handled bowl **5**, of similar fabrics, as they were found together in Pit 31. The development of the scoop outlined above would place Tsoungiza in the later part of the Final Neolithic period, and the absence of decorative treatments usually associated with FN ceramics likewise indicates a date in the later part of the Final Neolithic period. Given the lack of sufficient stratigraphic deposits, we cannot determine how much continuity there is with the succeeding Early Helladic I period.

CATALOGUE OF POTTERY OF THE LN AND FN PERIODS

Catalogue entries for the pottery of the Final Neolithic period, items **3** through **25**, are arranged by context. The contexts are arranged with closed deposits such as pits appearing first; open, less secure deposits such as fills appear second; and miscellaneous deposits or items in a noncontemporary context appear last.

Each catalogue entry is organized in the following manner:

Catalogue number (in boldface), item name, and figure number(s) if any.

NVAP inventory number (in parentheses), followed by the context and coordinates.

Portion preserved and dimensions, in meters.

Fabric description, organized first by ceramic class number, then overall characterization and colors (utilizing the Munsell Soil Color Charts, 1975 edition). The color of the outer portion of the fabric is given first, that of the inner portion second; when the firing is uneven with a distinct color break, the designation "core" is appended to the second color. Details of inclusions and appearance follow.

Shape, with the form number first and then a more detailed description; details of decoration.

Comments, including parallels at Tsoungiza and elsewhere.

Dating of the object.

THE LN PERIOD

1 Bowl Fig. 2.9

(2013-2-1) EU 5 Pit 32, E20699.20–20700.02/ N6452.77–6453.55

Handle and body fragment. Max. p.W. 0.042; min. p.Diam. 0.22.

Fabric not described.

Bowl with vertical handle. Gonia polychrome (for this ware see Blegen 1930, p. 69): red, white, orange, and black paint.

Late Neolithic

2 Ritual vessel? Fig. 2.9

(2115-2-5) EU 5 Cistern 2, E20696.00–20697.05/ N6461.85–6462.80

Base fragment mended from two sherds. Th. 0.008; Diam. base 0.14.

Class 8. Coarse uneven 5YR 6/6–N 5/0 core. Irregular breaks; many small angular light inclusions.

Shape 22. Flat base with insloping sides. Shape is perhaps portion of Late Neolithic "ritual vessel," or perhaps forerunner of frying pan. Highly burnished interior and exterior (black-burnished).

Late Neolithic? (–Final Neolithic?)

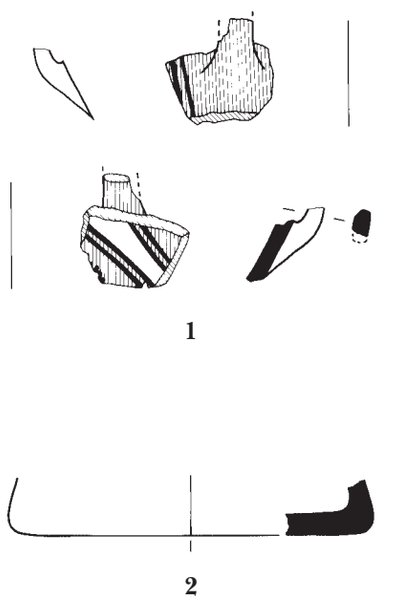

FIGURE 2.9. LN pottery (**1**, **2**). *Scale 1:3*

THE FN PERIOD

EU 5 PIT 31

3 Scoop Fig. 2.10

(891-2-1) EU 5 Pit 31, E20700.72–20701.65/ N6452.50–6453.60

Handle fragment. Max. p.L. 0.038; Diam. handle 0.017.

Class 8. Medium even 7.5YR 5/4. Tiny rounded and irregular black and light (crystalline) inclusions; some vacuoles.

Shape 14. Handle, round in section to scoop. Burnished surfaces.

Same vessel as **4**? Burnished surfaces look the same (and cf. **13**).

Final Neolithic

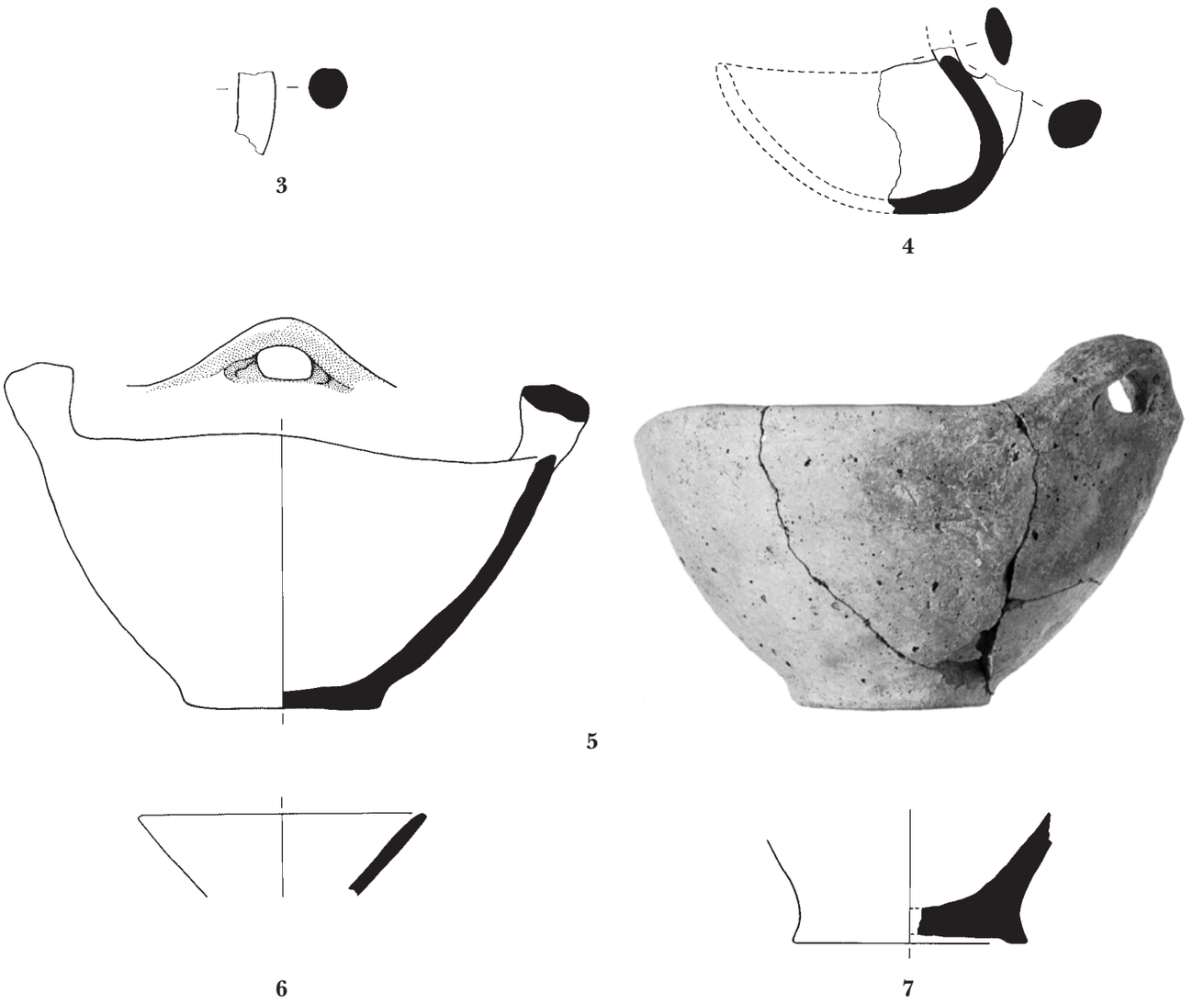

Figure 2.10. FN pottery from EU 5 Pit 31 (**3–6**) and Pit 27 (**7**). *Scale 1:3*

4 Scoop Fig. 2.10
(894-2-1) EU 5 Pit 31, E20700.72–20701.65/ N6452.50–6453.60

Rim and handle fragment. H. 0.064; Diam. base 0.03.

Class 8. Medium mottled 5YR 4/4 to 2.5YR 4/8. Tiny rounded and irregular light and dark inclusions; some vacuoles; no crystalline inclusions visible as in handle **3**.

Shape 14. Scoop, askoid body, high vertical handle (loop on body, strap at rim), flat base. Plain, burnished on upper part, around handle attachment, and at top part of wall.

Contents water-sieved. Handle catalogued as **3**?

Final Neolithic

5 Two-handled bowl Fig. 2.10
(893-2-1) EU 5 Pit 31, E20700.72–20701.65/ N6453.50–6453.60

Complete profile, mended from five sherds. H. 0.12; Diam. rim 0.23, base 0.09.

Class 9. Medium uneven 5YR 6/1–5/4. Similar to Class 3 and Class 30 (finish); laminated; small, medium, few large irregular white, tiny and small irregular light and dark inclusions; vacuoles.

Bowl, two-handled, flat raised base, flat lip, flat horizontal handle on top of lip. Plain.

Mottling of surfaces due to heat. Fabric similar to **4**, **13**.

Final Neolithic

6 Spreading bowl Fig. 2.10
(893-2-2) EU 5 Pit 31, E20700.72–20701.65/ N6452.50–6453.60

Rim fragment. Diam. rim ca. 0.13.

Class 9. Medium uneven 5YR 2.5/1. Encrusted.

Bowl, spreading, irregular lip beveled to interior. Plain.

Final Neolithic

EU 5 Pit 27

7 Base Fig. 2.10
(859-2-1) EU 5 Pit 27, E20695.00–20695.60/ N6457.70–6458.30

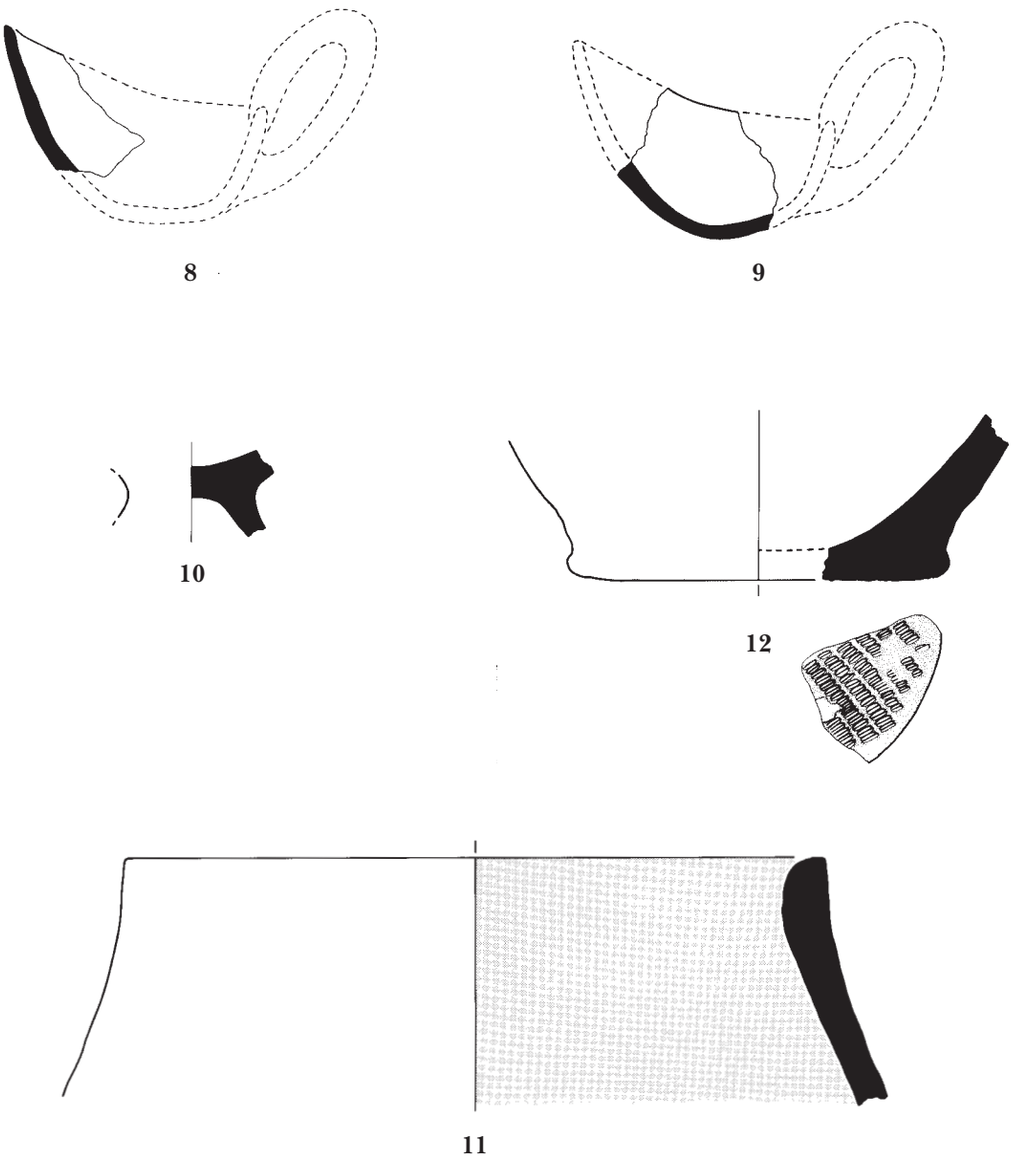

Figure 2.11. FN pottery from EU 11 Pit 2 (**8–12**). *Scale 1:3*

Base and wall fragment. Max. p.H. 0.055; Diam. base 0.105.

Class 10. Coarse uneven 2.5YR 5/6–5YR 4/2 core. Medium, some large, few very large (calcite?) inclusions.

Raised, hollow base.

Fabric and finish seem to be FN, though shape seems EH.

Final Neolithic–Early Helladic I

EU 11 Pit 2

8 Scoop Fig. 2.11

(2204-2-6) EU 11 Pit 2, E20703.00–20704.00/ N6436.00–6437.00

Rim fragment. Diam. rim ca. 0.12.

Medium uneven 7.5YR 6/4 to N 2/0 mottled. Fabric similar to Fruitstand Class 1; small (occasional medium) irregular gray, angular white and dark inclusions.

Shape 14. Scoop (front end). Right (from exterior) edge curves back more sharply. Irregular burnish.

Same vessel as **9**?

Final Neolithic

9 Scoop Fig. 2.11

(2204-2-7) EU 11 Pit 2, E20703.00–20704.00/ N6436.00–6437.00

Rim fragment. Max. p.H. 0.07.

Class 1. Medium uneven 5YR 6/4 to 5YR 3/1 mottled. Fabric similar to Fruitstand Class 1; firing clouds? or secondary burning?

Shape 14. Scoop (rear). One edge curves back very sharply toward base of handle attachment. Irregular burnish.

Same vessel as **8**?

Final Neolithic

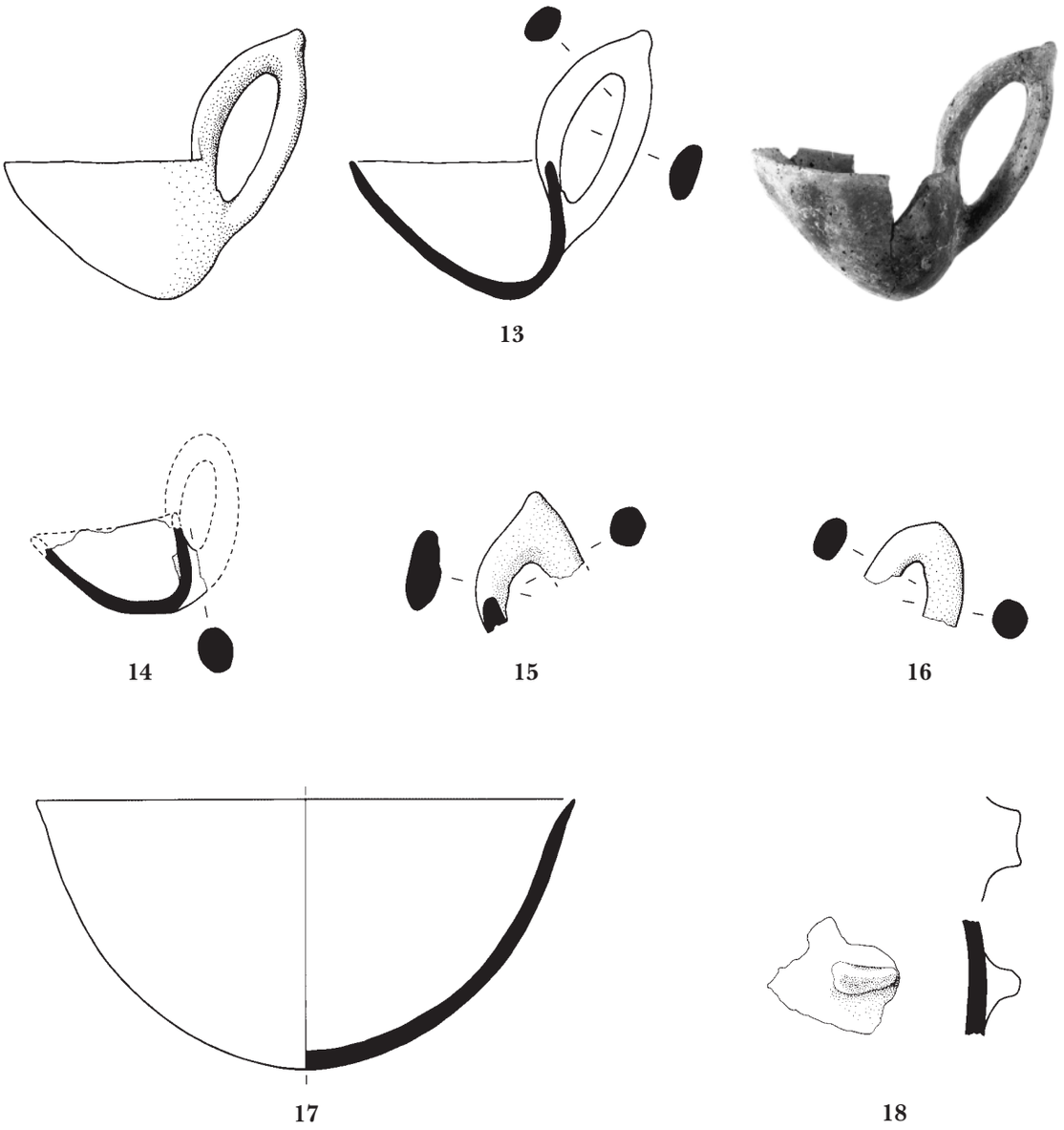

FIGURE 2.12. FN–EH I pottery from various deposits (**13–18**). *Scale 1:3*

10 Pedestal Fig. 2.11
(2204-2-5) EU 11 Pit 2, E20703.00–20704.00/ N6437.00–6438.00
Base fragment. Min. p.Diam. 0.055.
Medium even 10YR 6/3. Small irregular gray/dark inclusions; tiny vacuoles.
Pedestal. Burnished exterior.
Secondary burning. Cf. **22**.
Final Neolithic–Early Helladic I

11 Jar? Fig. 2.11
(2204-2-4) EU 11 Pit 2, E20703.00–20704.00/ N6437.00–6438.00
Rim fragment mended from two sherds. Diam. rim 0.29.
Medium uneven 2.5YR 4/8–N 3/0. Small irregular dark, some medium and large irregular–rounded gray and red inclusions.
Jar? Sloping shoulder to holemouth? Interior painted black, exterior plain. Interior paint (not indicated in illustration) looks like EH II urfirnis.
Final Neolithic–Early Helladic I

12 Flat base Figs. 2.11, 8.7
(2204-2-1) EU 11 Pit 2, E20703.00–20704.00/ N6437.00–6438.00
Base fragment. Diam. base ca. 0.16.
Medium, interior burnt. Tiny and small irregular dark and light, few large irregular gray inclusions; many tiny–small vacuoles.
Base, flat. Fine mat impression on underside: simple plaited mat (see Chap. 8 for details).
Interior severely burnt to depth of 0.01; no burning on exterior. Beloyianni 1995, no. 21 (mat impression).
Final Neolithic–Early Helladic I

OBJECTS FROM MISCELLANEOUS DEPOSITS

13 Scoop Fig. 2.12

(1940-2-1) EU 5 Pit 55, E20698.63–20699.45/ N6449.11–6449.87

Complete profile, mended from three sherds. H. to rim 0.058, to top of handle 0.115; Diam. rim 0.083.

Class 8. Medium uneven 7.5YR 7/4–N 5/0 core. Slightly spongy fabric; some medium angular white, many tiny irregular dark and white inclusions.

Shape 14. Scoop, askoid body with wishbone handle. Burnished to smooth and compact surface, no luster. Burnishing marks apparent.

Final Neolithic

14 Scoop Fig. 2.12

(2203-2-1) EU 11 FN fill, E20703.00–20704.00/ N6441.00–6442.00

Complete profile, mended from three pieces. Max. p.W. 0.06.

Medium uneven 5YR 5/6–4/1. Somewhat layered; few large angular white, many tiny irregular–angular red, dark, and light inclusions.

Shape 14. Scoop, small; flat "base" below round handle attachment, rounded rim. Surface mottled red/ orange to gray.

Final Neolithic

15 Scoop Fig. 2.12

(2208-2-2) EU 11 fill, E20703.00–20704.00/ N6441.00–6442.00

Handle fragment. Max. p.L. 0.07.

Medium mottled 5YR 3/1. Tiny angular gray, some small angular and irregular gray inclusions.

Shape 14. Scoop handle with portion of rim; typical FN "wishbone" handle for scoop. Finishing strokes evident (not burnished).

Final Neolithic

16 Scoop Fig. 2.12

(94-2-6) Harland's Trench Q (exact location unclear)

Handle fragment. Max. p.H. 0.043; max. p.W. 0.045; Diam. ca. 0.017 × 0.016.

Medium even N 5/0. Tiny and small irregular red and dark inclusions; many tiny vacuoles.

Shape 14. Handle, wishbone type, probably for scoop. Burnished (no gloss), pale surface (7.5YR 7/2).

In pencil on sherd: "Q" (i.e., Trench Q). TS lot 54:527.

Final Neolithic

17 Hemispherical bowl Fig. 2.12

(2208-2-4) EU 11 fill, E20703.00–20704.00/ N6441.00–6442.00

Complete profile mended from three sherds. Diam. rim 0.235.

Coarse even 5YR 3/2–3. Tiny and small rounded and irregular light and dark, occasional large irregular gray inclusions.

Bowl, hemispherical, slightly flaring lip.

Secondary burning.

Final Neolithic–Early Helladic I

18 Bowl Fig. 2.12

(2117-2-1) EU 5 Cistern 2, E20696.00–20697.05/ N6461.85–6462.80

Handle and wall fragment. Max. p.W. 0.055; Th. wall 0.006.

Class 8. Coarse uneven 7.5YR 5/6–N 5/0 core. Many small irregular white inclusions.

Bowl with double-horned lug. Burnished interior, some on exterior.

Secondary burning?

Final Neolithic–Early Helladic I

19 Deep bowl Fig. 2.13

(2201-2-6) EU 11 plow zone, E20703.00–20704.00/ N6418.00–6442.00

Rim and handle fragment mended from two sherds. Diam. rim ca. 0.21.

Class 10. Coarse uneven 7.5YR 6/4–N 6/0 core. Many tiny–small irregular white, small–medium irregular black inclusions; many inclusions burnt out, resulting in small vacuoles.

Bowl, deep, slightly thinning rim. Two-pronged lug below rim. Slightly ridged on interior, perhaps coils from manufacture, or just finishing?

Final Neolithic

20 Deep bowl? Basin? Fig. 2.13

(2201-2-5) EU 11 plow zone, E20703.00–20704.00/ N6418.00–6442.00

Rim fragment. Max. p.dim. 0.078 (piece too narrow for orientation).

Class 10. Coarse uneven 5YR 4/3 exterior to 2.5YR 5/8 interior. Few medium angular white and gray, many tiny and small angular and irregular white inclusions.

Bowl, deep? Basin? Flat lip. Interior smoother than exterior.

Final Neolithic–Early Helladic I

21 Bowl Fig. 2.13

(2203-2-2) EU 11 FN fill, E20703.00–20704.00/ N6440.00–6442.00

Rim fragments mended from 11 sherds. Max. p.H. 0.10; min. Diam. pedestal 0.07.

Medium coarse uneven 7.5YR 7/4 to N 4/0 mottled. Soft feel, somewhat layered; tiny and small irregular light, medium angular gray and light inclusions.

Bowl, pedestal. Two holes (Diam. 0.015) on opposite sides below level of minimum diameter. Originally burnished?

Final Neolithic–Early Helladic I

22 Pedestal Fig. 2.13

(2201-2-3) EU 11 plow zone, E20703.00–20704.00/ N6418.00–6442.00

Base fragment. Max. p.H. ca. 0.09; min. p.Diam. 0.045; Diam. base ca. 0.115.

Class 11. Medium uneven 7.5YR 6/2–10YR 7/1 core. Tiny irregular gray and white inclusions.

Pedestal, flaring. Burnished with vertical strokes.

Fabric fired gray like Class 1, but surface burnished, and not red.

Late Neolithic–Final Neolithic

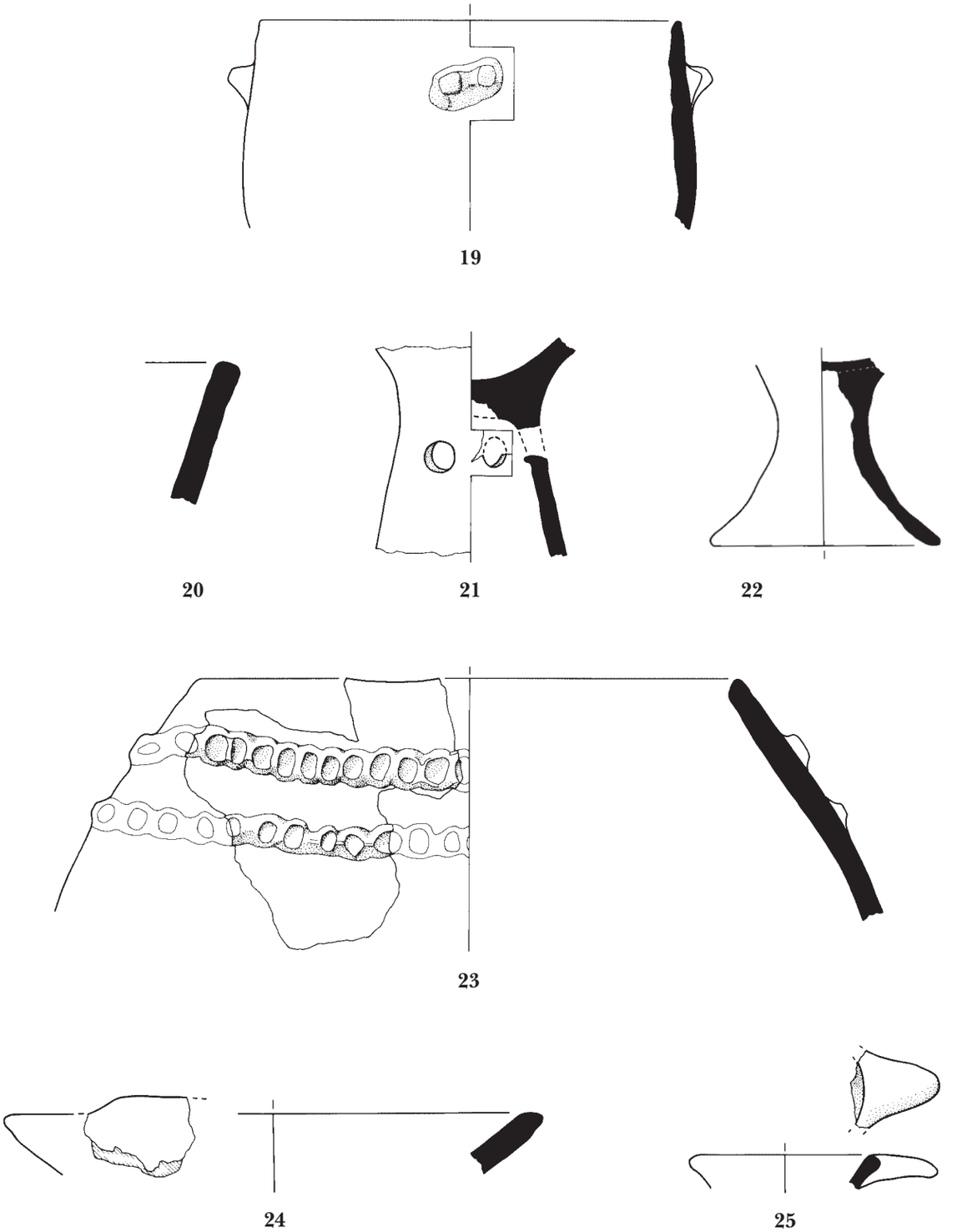

FIGURE 2.13. Neolithic–EH I pottery from various deposits (**19–25**). *Scale 1:3*

23 Jar Fig. 2.13

(2201-2-7) EU 11 plow zone, E20703.00–20704.00/N6418.00–6441.00

Rim fragment mended from two sherds. Max. p.H. 0.14; Diam. rim ca. 0.27.

Coarse uneven 2.5YR 2.5/4 to 2.5YR 5/6 mottled. Fabric similar to Classes 10 and 30; many tiny and small sand, some large to very large (0.008) light colored limestone(?) inclusions.

Jar, holemouth, insloping shoulder. Two rows taenia type C. Surface wiped.

Joins SU 2201, SU 2204 E20703/N6437.

Final Neolithic

24 Baking pan Fig. 2.13

(2115-2-4) EU 5 Cistern 2, E20696.00–20697.05/ N6461.85–6462.80

Rim fragment. W. 0.049; Th. 0.011.

Class 8. Medium uneven N 5/0–5YR 6/6. Irregular uneven breaks; few medium irregular, some small rounded white and light inclusions.

Shape 27. Baking pan, rim. Plain with smoothed and well burnished interior, exterior rough. Burnishing has compacted surface.

Final Neolithic–Early Helladic I

25 Spoon? Fig. 2.13

(360-2-1) EU 2 sondage, E20714.00–20715.00/ N6413.00–6414.00

Handle fragment. L. tab 0.036.

Class 6. Medium uneven 5YR 5/6–4/1. Very unusual in fabric and shape; many tiny irregular light and dark inclusions; many vacuoles on surface.

Shape 25. Horizontal tab, for spoon? Slight burnishing.

Neolithic

INTRODUCTION TO THE EARLY BRONZE AGE AT TSOUNGIZA

Two of the most important contributions our excavations at Tsoungiza have made are the documentation of (1) the transition from the EH I period to the EH II period, and (2) the earlier phases of the EH II period in Greece. At few sites has this transition or the early EH II period been examined in any detail, because either one period or the other is lacking, or because excavations have not reached sufficiently deep levels. Consequently much of our knowledge of the EH I period in particular has been based on soundings of limited extent, such as those at Asine[1] or Zygouries.[2] The evidence from Eutresis[3] was taken to be the standard sequence for EH I and the transition to EH II—even for the Peloponnese, as the site of Lerna for the most part lacks EH I levels,[4] supplemented by the small-scale excavations at Perachora.[5] New evidence for the EH I period in the Argolid has come from surface survey collections and a small sounding that establishes a phase at the end of EH I for the northeastern Peloponnese different from phases in the regions to the north, the Talioti phase.[6] The excavations at Tsoungiza confirm the existence of the Talioti phase and, more importantly, document the changes in the material assemblages in the transition from EH I into EH II.[7]

Based on his work at Tsoungiza in 1926–1927, Harland had established a sequence that, while not necessarily using the terminology we use today, nevertheless firmly established the stratigraphic sequence of EH I, EH II, and EH III. In this respect he anticipated by 30-some years the results derived from Caskey's excavations at Lerna that firmly established the stratigraphic relationship of these periods,[8] something Blegen was not able to do at Korakou and Zygouries. Unfortunately Harland's manuscript was never finished, and his documentation languished until NVAP's explorations of Tsoungiza.

Following the practice of Blegen, Wace, and others of the time, Harland had divided his Early Bronze Age sequence into EH I, EH II, and EH III, based primarily on the pottery classes established by Blegen and Wace.[9] He was well aware of the possibility of a stratigraphic

1. Square F–G 14 (Frödin and Persson 1938, p. 59).

2. Blegen 1928, pp. 28, 76–78.

3. Goldman 1931; Caskey and Caskey 1960.

4. Caskey 1960; Wiencke 1989, p. 496, n. 1.

5. Fossey 1969.

6. Both Dousougli (1987) and Weisshaar (1990) suggest the Talioti phase represents the end of EH I, mainly because of similarities with the late EB I Kampos Group of the Cyclades, and because of the certain continuity into the succeeding EH II period.

7. The evidence from Tsoungiza is insufficient to address Maran's proposition (1998, p. 9) that the Talioti "phase" represents the entire EH I period in the northeastern Peloponnese, and not just the later portion as originally proposed by Dousougli (1987) and Weisshaar (1990). Maran's idea is an attractive one, and would help in constructing a continuous sequence of material for the transition from the Neolithic into the Early Bronze Age in the northeast Peloponnese. Yet there are some indications, such as the small occupation on the acropolis at Halieis (Pullen 2000), that there is a transitional phase between the Final Neolithic as represented at Franchthi Cave and EH I as represented by the Talioti material. See pp. 95–96, below, for further discussion of the chronological relationships of the Tsoungiza EH I period.

8. Caskey 1960.

9. Wace and Blegen 1916–1918.

sequence that might be different, but he was working under Blegen, in Blegen's territory, on a site that Blegen was overseeing. The introduction to the Early Helladic architecture chapter in his manuscript deserves to be quoted here:

> Since there appear to be three main building periods represented by the walls and other evidence brought to light on the hill and since the pottery falls into three classes which correspond stratigraphically with these three wall-levels, respectively, one may designate these three sub-period[s] as Early Helladic I, II, and III.
>
> Of course, this is in a way an arbitrary division. However, there appeared to be some justification for this division rather early in the campaign and this classification was adhered to for convenience in descriptions and in the designation of levels.
> It may be shown subsequently that our Early Helladic I is really the first phase of Early Helladic II and hence had better be referred to as Early Helladic IIa. . . . House A belongs to this sub-period.
>
> But there is evidence of habitation on Tsoungiza before the building of House A. There are some *bothroi* which appear to antedate this building. Furthermore, House A is too large and too well built to be considered the work of the earliest people of the Bronze Age. Surely this structure must have been preceded by dwellings of less size and less ambitious walls. But, aside from a few fragments of walls of questionable date, there are no architectural remains on the hill, antedating this House A. . . . Whatever houses were built here previously, they have left no trace that one may definitely identify as such.
> Since some potsherds and other objects were found below the floor-level of this house, House A may represent a later phase of Early Helladic I.[10]

Of course we would now place House A by the ceramic evidence into the Early Helladic II period, and not the earliest portion of that period on Tsoungiza. Some of the bothroi (pits) that Harland mentions do belong to EH I as we would now define it.

A second major contribution of the excavations on Tsoungiza is the documentation of the earlier phases of EH II, phases that precede that of Harland's House A. We have been able to isolate significant deposits with associated architecture from the Early Helladic II Initial period. In order to make the most use of Harland's material for reconstructing the sequence at Tsoungiza, and to emphasize the importance of Tsoungiza for understanding the end of EH I, the transition from EH I to early EH II, and early EH II, I have divided the discussion into three separate chapters: Chapter 3 for EH I and transition from EH I to EH II, Chapter 4 for the EH II Initial period, and Chapter 5 for the remainder of the EH II period, called here EH II Developed.[11] This division follows the stratigraphic evidence at Tsoungiza, where the deposits for EH I and transitional EH I to II are found in EU 5 on the crown of the hill; the primary deposit of EH II Initial is found in an area on the southeastern slope of the hill excavated in 1982 under UCB; and the EH II Developed deposits excavated by both Harland and NVAP are found on the crown of the hill in EU 5. There are a number of features that span these terminological divisions, and in the discussions I draw attention to those features. There will be some duplication of discussion with respect to ceramic features and shapes among the various chronological divisions, but I believe this will help demonstrate the continuity between EH I and EH II. The apparent gap in the sequence between FN and EH I on the one hand and the gap between EH II and EH III on the other allow for the FN and EH III periods to be discussed separately (Chaps. 2 and 6, respectively).

10. Harland MS, p. 33.

11. The term "EH II Developed" is used instead of "EH II Late," as the sequence at Tsoungiza seems to correspond to what has been called variously EH IIA or early EH II, and ends well before the end of the EH II period as represented at other sites such as Lerna and Tiryns.

The EH I period at Tsoungiza, discussed in Chapter 3, is similar to the Talioti phase of EH I represented in the Argolid, mainly by surface finds.[12] The EH II Initial period at Tsoungiza (Chap. 4) is equivalent to the earliest EH II at Lerna (Lerna period III), a phase that Wiencke has called Lerna III phase early A.[13] The EH II Developed period at Tsoungiza (Chap. 5) is similar to the phase late A and phase B material from Lerna period III (EH II). The latest material from the EH II period at Tsoungiza (our EH II Developed Phase 3), not well represented in the excavations of NVAP, may extend into Lerna III phase C. The EH II settlement at Tsoungiza seems to have been abandoned well before the phase of the House of the Tiles at Lerna, Lerna III phase D. Because of the importance of the Lerna sequence for the EH II period, extensive references to Lerna are given throughout Chapters 4 and 5. Similarly for the EH III period (Chap. 6), period IV at Lerna forms the most important comparison,[14] and extensive references are again made to Lerna in Chapter 6.

12. Dousougli 1987; Weisshaar 1990.
13. *Lerna* IV.
14. *Lerna* III, p. xiii.