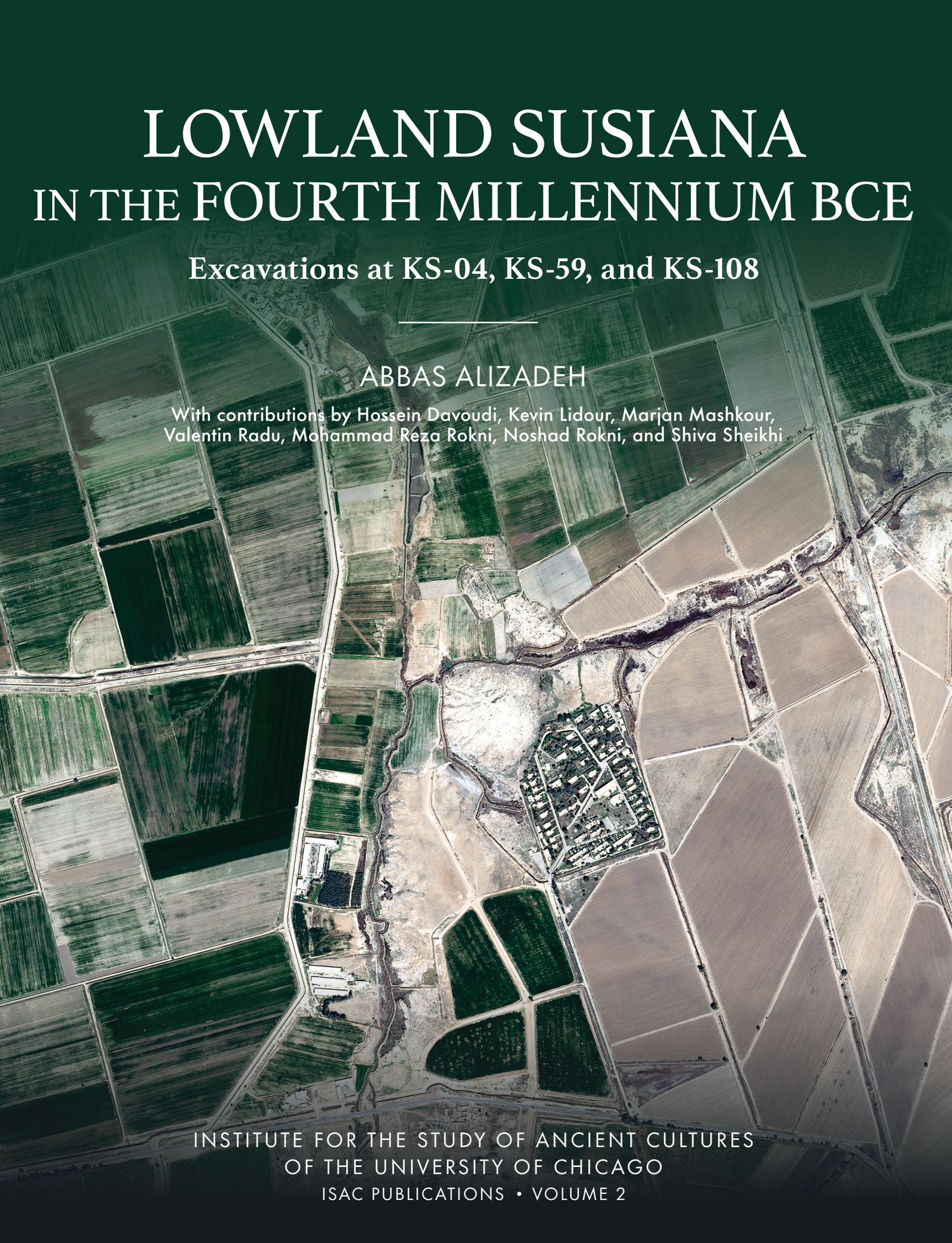
LOWLAND SUSIANA IN THE FOURTH MILLENNIUM BCE

Excavations at KS-04, KS-59, and KS-108

ABBAS ALIZADEH

With contributions by Hossein Davoudi, Kevin Lidour, Marjan Mashkour, Valentin Radu, Mohammad Reza Rokni, Noshad Rokni, and Shiva Sheikhi



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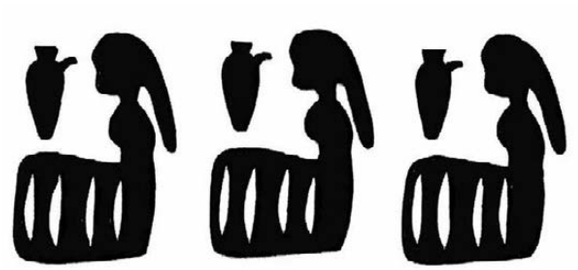

Late Susa II cylinder seal impression
(see plate 78)

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with contributions by

HOSSEIN DAVOUDI, KEVIN LIDOUR, MARJAN MASHKOUR, VALENTIN RADU, MOHAMMAD REZA ROKNI, NOSHAD ROKNI, AND SHIVA SHEIKHI

and an appendix on

ROBERT McCORMICK ADAMS'S 1960–61 SUSIANA SURVEY

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Abbreviations

Ach.	Achaemenid
Acr.	Acropolis
Akk.	Akkadian
ASL	above sea level
BM	British map
BRB	beveled-rim bowl
ca.	*circa*, about, approximately
cc	cubic centimeter(s)
cf.	*confer/conferatur*, compare
cm	centimeter(s)
dm	diameter
Ds	distal
E	east
E. Isl.	Early Islamic
e.g.	*exempli gratia*, for example
et al.	*et alia*, and others
F	feature
fig(s).	figure(s)
Fm	femur
g	gram(s)
GIS	geographic information system
ha	hectare(s)
Hm	humerus
ht	height
ICHTO	Iranian Cultural Heritage and Tourism Organization
i.e.	*id est*, that is
ISAC	Institute for the Study of Ancient Cultures (University of Chicago)
Isl.	Islamic
Kass.	Kassite
km	kilometer(s)
KS	Khuzestan survey
L	layer
LS	Late Susiana
LSI	Log Size Index
LSu	Late Susa
m	meter(s)
M. Isl.	Middle Islamic
Mc	metacarpal
mm	millimeter(s)
MB	Middle Babylonian
MNHN	Muséum national d'Histoire naturelle (Paris)
MNI	minimum number of individuals
mos.	months
Mp	metapodial
Mt	metatarsal
N	north
NB	Neo-Babylonian

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NISP	number of identified specimens
no(s).	number(s)
NSF	National Science Foundation
OB	Old Babylonian
Op.	Operation
p.	page
Parth.	Parthian
Ph	phalanx
pl(s).	plate(s)
Px	proximal
Rd	radius
S	south
Sas.	Sasanian/Sassanian (the latter = Adams's spelling)
Sc	scapula
Scph	scaphoid
Sq.	square
sp.	species
Sus.	Susiana
Tb	tibia
Tls	talus
Ul	ulna
W	west

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Introduction

We excavated the three major prehistoric population centers of KS-04, KS-59, and KS-108 in upper Susiana (in the modern-day province of Khuzestan) during two 45-day seasons from 2004 to 2006. The research and fieldwork at KS-04 and KS-108 were supported by a generous grant from the National Science Foundation (NSF; grant number BCS-0345988), as well as by funding from the Institute for the Study of Ancient Cultures (ISAC; formerly Oriental Institute) of the University of Chicago. Excavations at KS-59 were supported by a small grant from ISAC and by the Iranian Cultural Heritage and Tourism Organization (ICHTO). Here I would like to express our gratitude to Dr. John Yellen of the NSF; Dr. Gil Stein, former director of ISAC; Mr. Seyyed Mohammad Beheshti, former director of ICHTO; Dr. Mohammad Hassan Talebian, former director of the Haft Tappeh / Chogha Zanbil and Parse-Pasargadae Research Foundation Project and former deputy director of ICHTO; and Mr. Jalil Golshan, former deputy of ICHTO's research department, for their much-needed financial, logistical, and moral support.

We chose these three sites because they are large fourth-millennium BCE regional centers, and as such they played a prominent role in Gregory Johnson's analysis of the pottery collection that he gathered in his 1970–71 regional survey of northern Susiana, as well as in his analysis of the dynamics of fourth-millennium BCE Susiana. All these sites were occupied to various extents during the crucial Susa II (Uruk) period. Johnson's analysis went on to become the basis for a number of seminal papers he coauthored with Henry Wright on the evolution of complex societies and early states in the region. Since Johnson's analysis of the fourth-millennium BCE settlement evolution was based primarily on a rigorous statistical treatment of the surface collection, we wanted to contextualize his pottery typology, on which his fourth-millennium BCE subphases were based.

We intended to start our 2005 season in late September or early October. But because of a number of bureaucratic problems and delays, we did not receive our official permits from the late Dr. M. Azarnoush until November—not an ideal time of year to do archaeology in southwestern Iran, where the rainy season starts in that month and continues into March. As it happens, Khuzestan was much wetter and colder than normal in the fall and winter of 2005–6; much of the country experienced unusually high amounts of rainfall and even snow in arid regions such as Kerman (central Iran) and Sistan and Baluchestan (southeastern Iran). Although the farmers who practice dry farming were very happy, we archaeologists were frequently forced to stay in our camp. Even when it was not raining and the ground was dry enough for excavation, heavy fog that sometimes lasted for hours or the entire day hampered our efforts and made distinguishing soil colors difficult. The fog was especially thick in the early morning hours, when we drove to the sites. The visibility rarely exceeded 10 m, which made it extremely dangerous to drive on the narrow roads populated with oversized sugarcane trucks, buses, minibuses, motorcycles, pickup trucks, sheep, goats, and water buffalo.

Our team during the 2004–5 season consisted of more than fifty university students, as well as Mr. Ali Mahfrozi and Dr. Lili Niakan, our two ICHTO representatives (fig. 1). We had a similar number of students and staff in the 2006 season (fig. 2). I am grateful to all the students and our ICHTO representatives for their help and enthusiasm. I also want to express my appreciation to our local botanist, Mr. Noshad Rokni (fig. 3:B), who was responsible for retrieving seeds and training the students in wet sieving. My thanks also go to the staff of the Haft Tappeh chemical laboratory and Ms. Soheila Zakavi for the chemical analysis of the various samples of mudbricks from KS-59.

Marjan Mashkour is a busy zooarchaeologist with a heavy workload—especially in Iran, where she is most active—and many archaeologists entrust their faunal collections to her expertise. Yet she very kindly agreed to analyze the bones from KS-59 in the new zooarchaeological laboratory she played a major role in establishing at the University of Tehran's Institute of Archaeology. I am grateful to Dr. Mashkour and her colleagues and students for undertaking the analysis. The results are included in this volume as appendix B.

For both the 2004–5 and 2006 seasons, we stayed at the Haft Tappeh Archaeological Compound (figs. 3–6). Our hosts at this pleasant and almost self-sufficient compound were extremely gracious to us, and some

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twelve Haft Tappeh resident researchers were crammed into a single room to free the remaining four rooms for our expedition members. Because only two of our rooms were available for women and we wanted to accommodate as many female archaeologists and students as possible (since fieldwork opportunities for them are limited), with ISAC's financial help we were able to make six sets of bunk beds, each with three levels, so that we could fit nine women into two 3 × 4 m rooms next to the kitchen. Most of the male students slept in sleeping bags in the library, where we sometimes held our classes and meetings. During the 2006 season, however, a spacious and accommodating lecture hall was provided to us for this purpose (figs. 3:C, 6:D). The more than sixty people who constituted our group shared only three toilets and showers. These conditions made for a tense environment, but aside from a few minor and insignificant personal problems, almost all the members of our team had smiles on their faces every day, and their enthusiasm for learning and participating in the fieldwork in Khuzestan made up for all the difficulties.

Almost every evening before supper, we held workshops, seminars, and classes to discuss and teach various archaeological topics (figs. 3:C, 5:C, 6:D). Every weekend, we took the students and staff on field trips to visit major archaeological sites in the region and to mingle with the Bakhtiari nomads in their winter camps in northern Khuzestan (fig. 5:E). Even though most of the students lacked field experience, we found them reliable, teachable, disciplined, and real troopers. They joined our expedition with an impressive work ethic and unlimited enthusiasm and energy. What is more, since our season coincided with the fall semester, they either left their classes or received permission from their professors to be in the field with us. I wish them a bright future and hope to see them make major contributions to the field of Iranian archaeology.

We left Khuzestan in late December 2006 with the hope of returning to expand our stratigraphic trench at KS-59 and to reveal the complete plan of a large, fourth-millennium BCE monumental building that we had partially excavated in the North Mound of KS-59. Unfortunately, for various reasons, we have not been able to do either one. However, I hope to return to the site in the near future and shed more light on fourth-millennium BCE life at this important satellite of Susa.

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Figure 1. 2004–5 season staff and students. *Front row, left to right:* K. Borhani, J. Mohammadi, S. Alkathir, Y. Zalaghi, M. Karami, I. Habibi, N. Montazeri, M. Avaze, N. Rava, M. Falah, M. Qaem. *Second row, left to right:* A. Zalaghi, T. Hartnell, S. Ebrahimi, A. Talebian (Dr. Talebian's daughter), A. Jamshidi, S. Akhtar, M. Zare, M. Mollaii, M. Zarinkuh, M. Khalili, K. Aqaii, S. Beigi. *Standing, left to right:* A. Ahrar, E. Karimi, M. Vahidi, S. Bana (driver), M. Heidari, R. Valizadeh, S. Qorbani, L. Niakan, M. Lajmiri, H. Ashjaii, Dr. M. Talebian, A. Alizadeh, S. Hamzavi, A. Mahfrozi, S. KabiI (driver), M. Zare, B. Eshghi (driver), M. Hotan, M. Omidfar, Y. Razmahang, M. R. Rokni, E. Bordbar, K. Chenani (museum guard).

Figure 2. 2006 season staff, local workers, and visitors. *Front row, left to right:* local worker, M. Karami, I. Habibi, L. Saiahi, visitor, O. Hotan, A. Malek, M. Heidari, S. Husseinzadeh, M. Avaze, visitor, M. Vahidi, Z. Oraman, N. Montazeri, L. Niakan. *Second row, left to right:* M. Omidfar, R. Ansari, M. Zare, Sh. Abdulvand, L. Ahmadzadeh, A. Peimani, B. Heidari, A. Alizadeh, local worker, S. Hamzavi, M. R. Rokni, M. Zarinkuh, Y. Zalaghi, M. Farhadpour, M. Khadish. *Standing, left to right:* local worker, E. Bordbar, six local workers, visitor, local workers.

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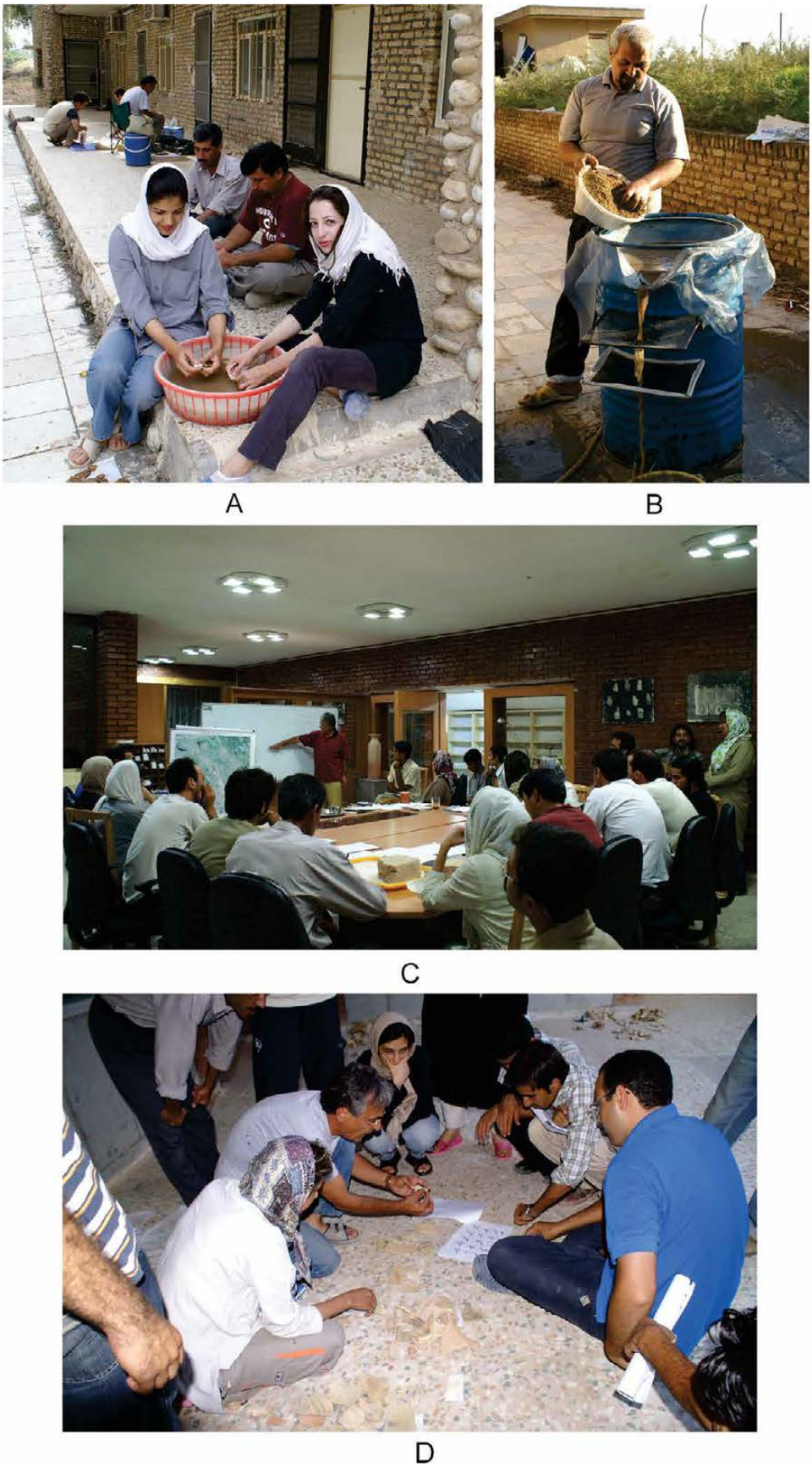

Figure 3. Daily activities. *A*, students washing pottery; *B*, Mr. Rokni operating an Ankara-type flotation tank; *C*, students and staff attending an evening class; *D*, a pottery workshop.

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Figure 4. Daily activities. *A–B*, breakfast at KS-59; *C*, barbecue at Haft Tappeh camp; *D*, dinner at Haft Tappeh camp.

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Figure 5. Daily activities. *A*, Ms. Montazeri, our photographer, trying her hand at baking bread in a nomadic tent; *B*, students laying out a trench; *C*, students learning technical pottery drawing; *D*, students classifying potsherds; *E*, students visiting Chogha Bonut.

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A

B

C

D

Figure 6. Haft Tappeh Archaeological Compound. *A*, entrance; *B*, dining room; *C*, dormitory, *D*, lecture hall and library.

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1
Khuzestan's Environment

INTRODUCTION

The southwestern province of Khuzestan (ancient Susiana, figs. 7–13) has undergone tremendous physical and demographic changes in the past fifty years. Among the physical changes, leveling of the land and the construction of large and numerous irrigation canals have destroyed many archaeological sites and eradicated the traces of myriad ancient irrigation canals and ditches that Robert McCormick Adams had recorded in his 1960–61 survey of the region.[1] The invasion of the Iraqi army under Saddam Hussein during the Iran–Iraq War in 1980–88 exacerbated the situation by inflicting additional physical damage and unspeakable human casualties in the region.

The Iraqi invasion of Khuzestan resulted not only in the abandonment of a great number of villages in the western and especially southwestern part of the province but also in the displacement of large portions of the populations of cities and towns such as Susangerd, Ahvaz, Khorramshahr, Susa, and Dezful. In the 1990s, the prewar population of Khuzestan not only recovered but almost doubled, and the increase continued at both the provincial and national levels, with dire consequences for the future of agriculture in this arid and semiarid nation.

Even with the devastation caused by the Iraqi invasion and the mismanagement of natural resources, Khuzestan remains one of the few major agricultural provinces in Iran—what I call "Iran's breadbasket." Nevertheless, unless serious long-term preservation of the soil and water sources is implemented, Khuzestan—already stretched to its limits in feeding the country's people—will soon cease to be the most agriculturally productive region in Iran. Save for the fringes of the plain, where the soil is not particularly rich and is not reached by canal irrigation water, fallow or uncultivated land is extremely rare. Nowadays, one can drive for miles on the main and dirt roads between the Karkheh and Karun Rivers on the east–west axis and between Dezful and Ahvaz on the north–south axis without seeing a single plot of uncultivated land—almost all the land has been fortified mercilessly with chemical fertilizers.

In this general area, only the narrow margins of individual farms and the shoulders of paved roads are left unfarmed. Even large archaeological mounds with gentle slopes are invariably under cultivation, and their low sectors are subject to annual leveling by the farmers. Though illegal, these "extra" plots of land are exclusively irrigated by rain, since irrigation canal water cannot reach even the low slopes of the mounds. The southern sector of KS-04, which was completely plowed, is a good example. Our 1 × 1 m probes at KS-59 and KS-108 also showed that large expanses of these ancient mounds were completely leveled and turned into farmland (see chapter 3 with fig. 44).

The land never rests; as soon as one crop is harvested, another one is planted. Sugarcane, wheat, maize, vegetables, and many types of melons are the major crops. Numerous dams on the Karkheh, Dez, and Karun have drastically reduced the rivers' spring floods that once annually fertilized the land. Working the land year-round, however, has depleted the soil of its natural nutrients, and farmers rely heavily on chemical fertilizers, with long-term and dire consequences for the environment. In the irrigated plots, the land is plowed and sowed during the first week of November, and the crop harvested in early May. In the rain-fed plots that are scattered in the margins of much of the northern part of the province, the land is sowed from mid-October to mid-November and harvested in May.

1 Adams 1962.

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Figure 7. Map showing the location of some archaeological sites in Iran and Iraq.

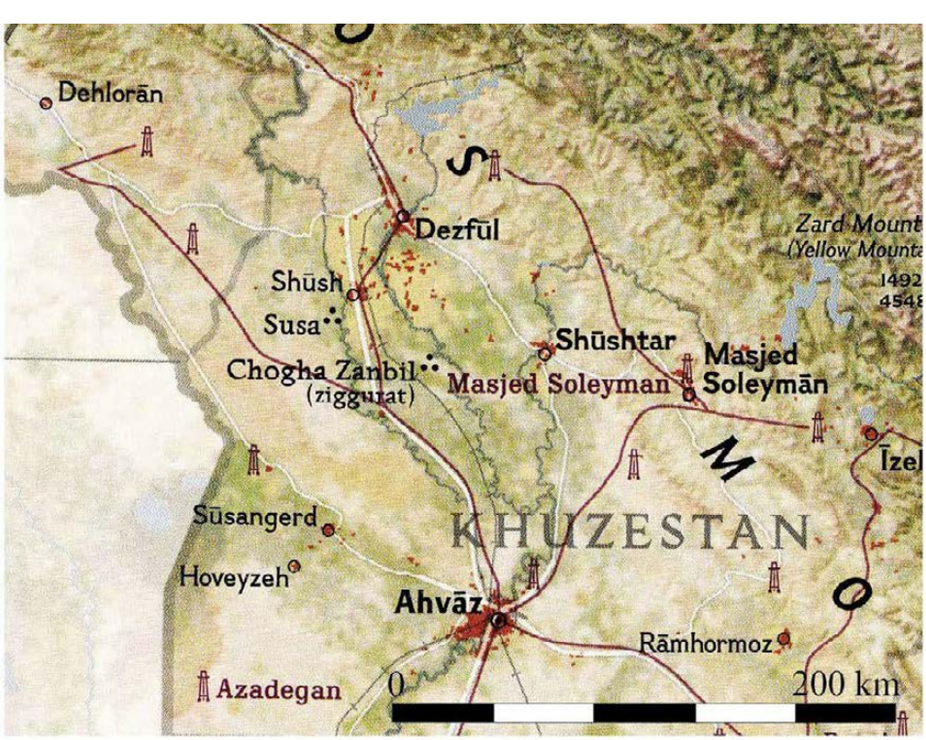

Figure 8. Map of Khuzestan.

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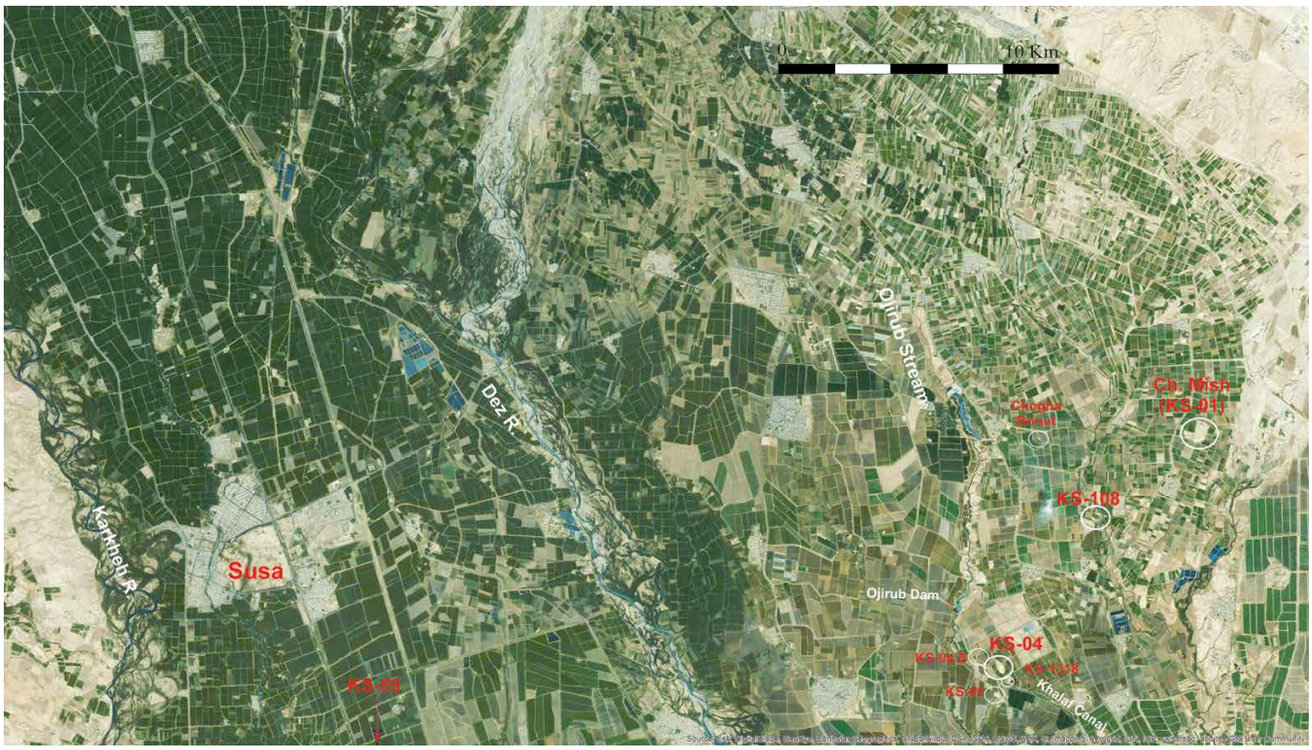

Figure 9. Satellite image of the northern Khuzestan Plain. Courtesy of Environmental Systems Research Institute.

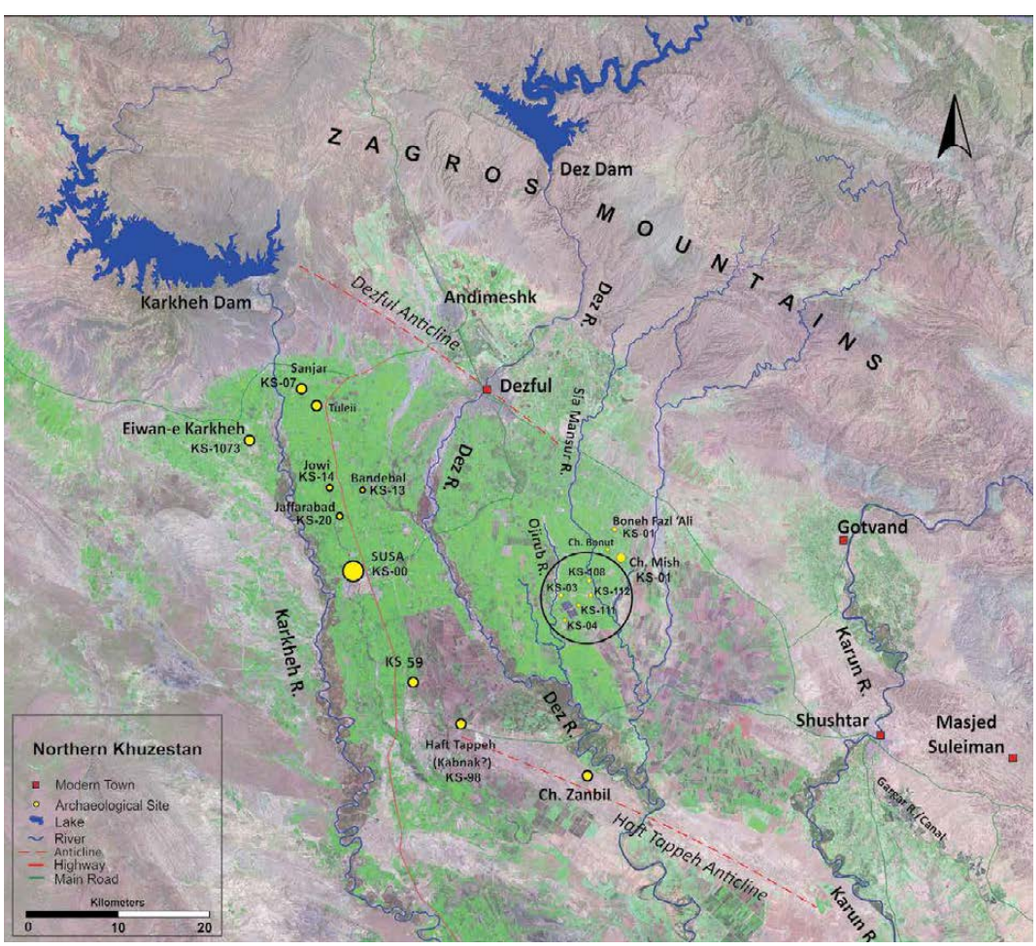

Figure 10. Map of northern Khuzestan with some major sites and rivers.

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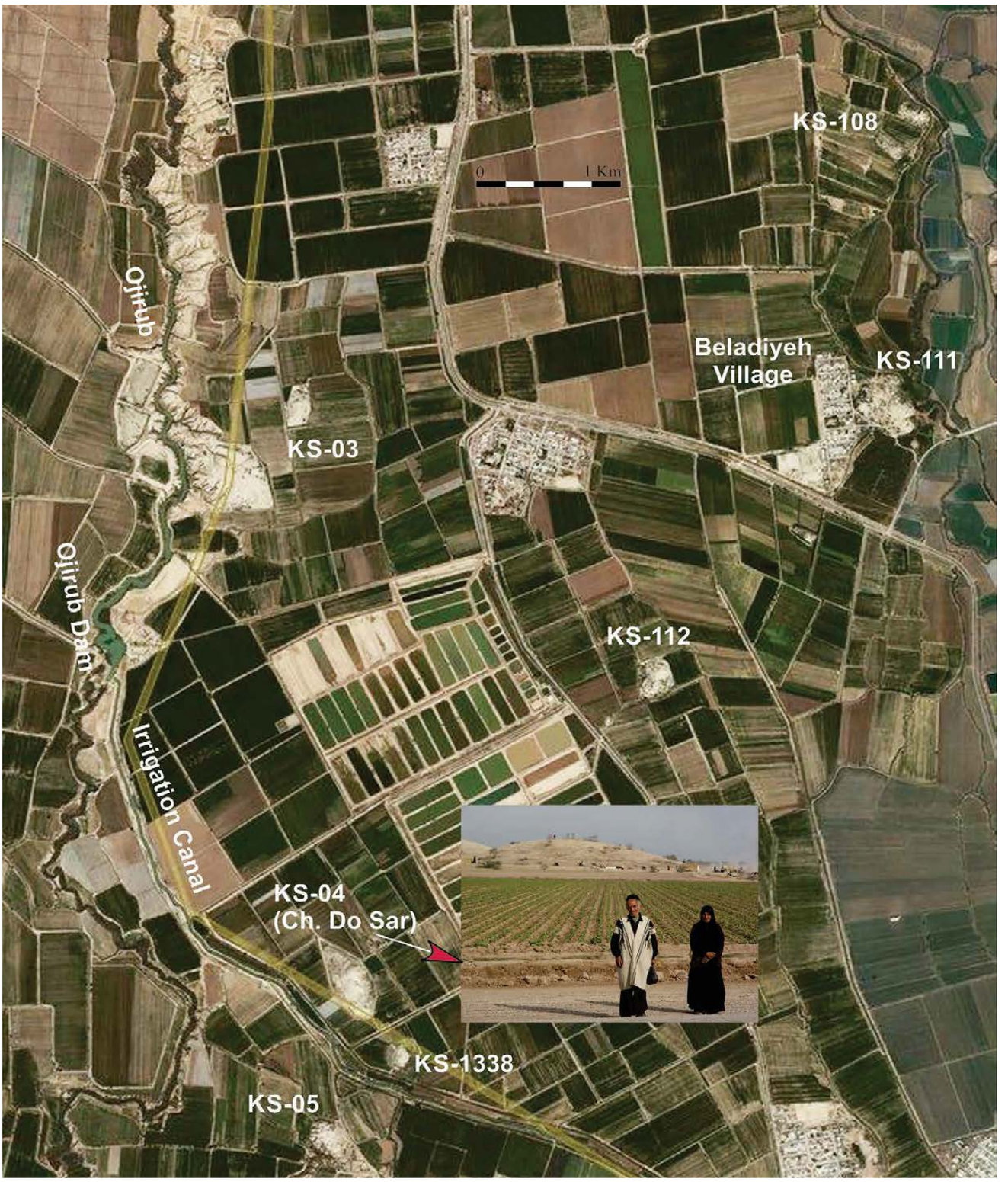

Figure 11. Close-up satellite image of the cluster of sites in the area of KS-04 and KS-108.

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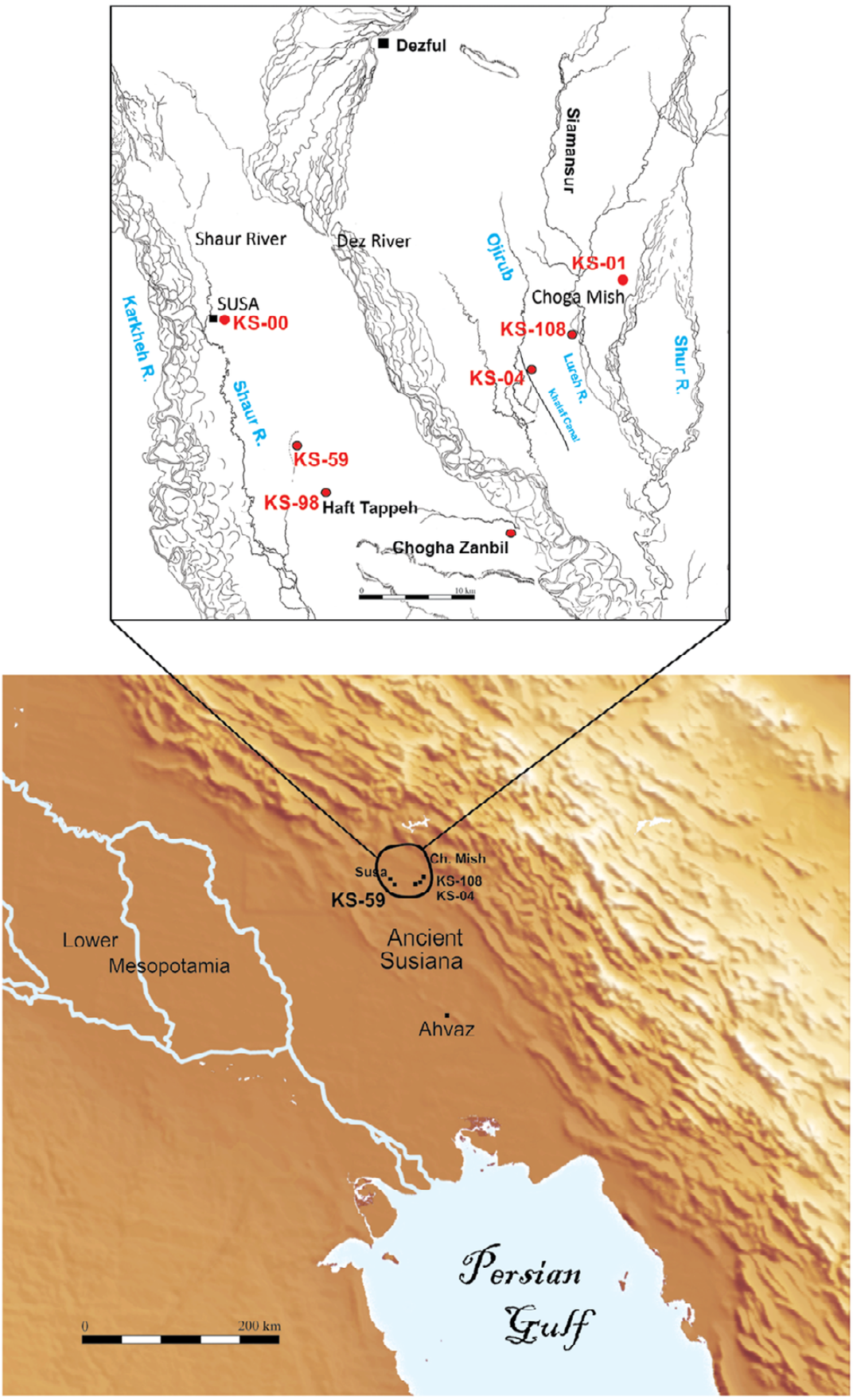

Figure 12. Map of southwestern Iran showing the locations of KS-04, KS-59, and KS-108 in Susiana.

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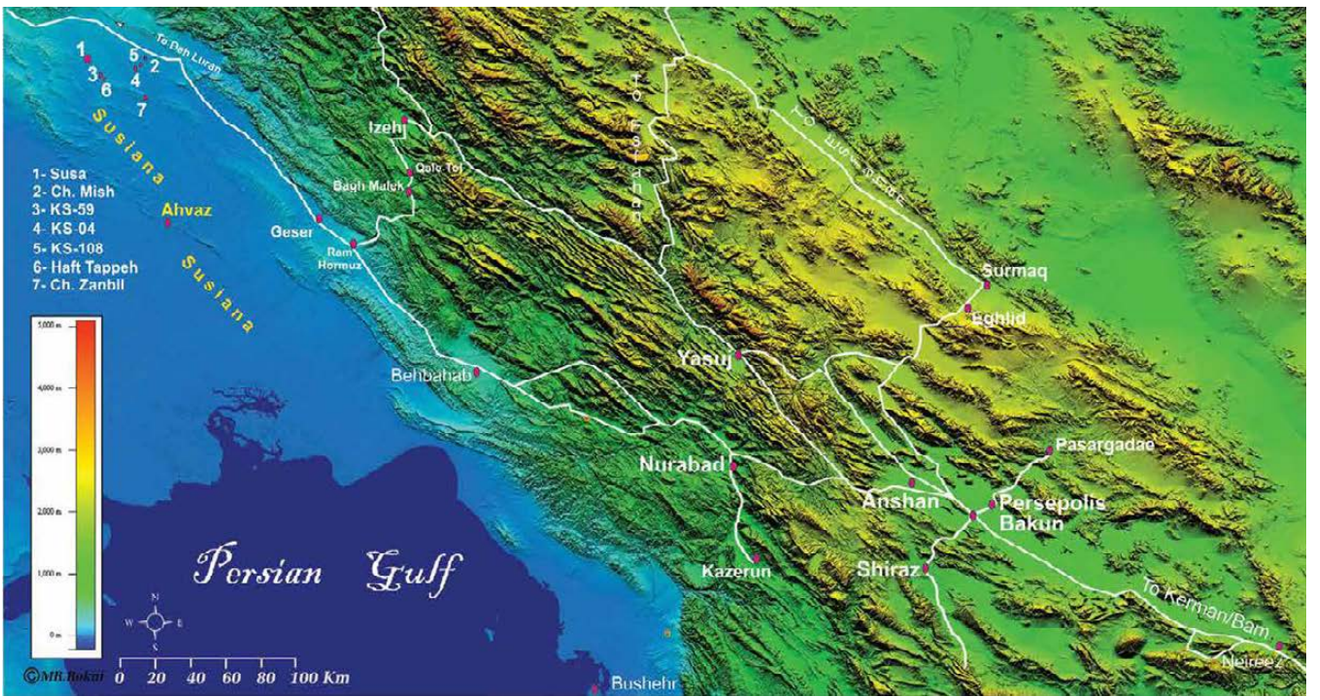

Figure 13. Map of southwestern Iran showing the location of the excavated sites, major communication routes, and natural features.

MAJOR DIFFERENCES IN GEOGRAPHY AND CLIMATE BETWEEN SUSIANA AND SOUTHERN MESOPOTAMIA

Even though lowland Susiana is, geologically, an extension of the Mesopotamian plain, its geography, climate, and hydrology are vastly different from those of the plain. These factors played a major role in the socioeconomic development of lowland Susiana and seem to have been primarily responsible for major differences in its cultural trajectory as compared with that of southern Mesopotamia.

The alluvial upper plain of Khuzestan lies within half a day's walking distance from the Zagros mountain chain that surrounds it from the north-northwest to the southwest (figs. 10, 12). Unlike the Euphrates and the Tigris, of Khuzestan's three major rivers only the Karun is navigable, but only up to the provincial capital of Ahvaz; beyond that city, the river can be traveled only with difficulty just to the south of the confluence of the Dez, Karun, and Gargar, a few kilometers southeast of Chogha Zanbil.

The seasonal temperatures are much milder than in southern Mesopotamia, and the annual precipitation is much higher (compare tables 1–2 with figs. 14–15); though risky and unpredictable at times, the higher precipitation allows for extensive dry farming, which is still practiced in the northern sectors of the plain. It is therefore not surprising that even before Khuzestan was subjected to drastic physical changes resulting from agribusiness projects, no traces of major pre-Sasanian irrigation canals could be found there, and the numerous small irrigation canals that Adams mapped in his survey were of recent date.

Before the introduction of modern canal irrigation technology, the center of the plain was crisscrossed by many small, natural streams that could easily be tapped for small-scale irrigation.[2] The fact that sheep and goats have difficulty crossing numerous water channels may perhaps account for the historical spatial distribution of pastoralist tribes in the region, with the Dez marking the borderline between the pastoral nomadic tribes that descended onto the plain from the east and northeast and used the eastern sectors of the plain as their winter campsite.

In the upper Susiana plain, the pebbly soil is fed by underground springs and a high water table from the seepage of the Karkheh and Dez rivers that make the area ideal for dry farming[3]—in fact, the Shaur River originates some 20 km north of Susa from many small and large springs on the eastern bank of the Karkheh (fig. 12). In the eastern sector of the plain, before the land was broken up by numerous wadis that

2 Adams 1962.

3 Adams 1962, 110.

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Table 1. Amount of rainfall in northern Khuzestan, 1961–2014 (in mm).

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1961	327.4	51.3	42.6	65.5	2	0	0	0	0	0	63	42	593.8
1962	—	29	2.6	123	0	0	0	0	0	0	15	102.8	272.4
1963	42.4	86.8	11	7.7	65.1	0	0	0	0	0	45	102.5	360.5
1964	2	28	10	2	0	0	0	0	0	0	17	79	136.4
1965	236	7	42	18.5	0.4	0	0	0	0	24	67.4	3	398.3
1966	48	90.8	37.3	3.9	0.2	0	0	0	0	30	0	17	227.2
1967	26	67	8.9	22.2	23.1	0	0	0	0	2	104	13	266.2
1968	36	67.1	8.3	63.3	16.4	0	0	0	0	1	83.4	71	346.5
1969	186	61.1	74.4	88.1	26	0	0	0.1	0	0.4	36	55.2	527.2
1970	137	27	28	9.3	4	0	0	0	0	2	18.2	61.2	286.7
1971	7.6	40.2	77	124.2	9	0	0	0	0	0	107.4	75	440.4
1972	102	23	136.2	61.9	8	0	0	0	0	0	92.4	124.9	548.4
1973	20	71.1	8.5	9	0	0	0	0	0	0	15	51	176.6
1974	242.6	142.3	35	52	3.4	0	0	0	0	0	8	147	630.3
1975	88	58.3	3.2	24.1	1	0	0	0	0	0	33	172.3	379.9
1976	165.2	126.7	134	47.5	7	0	0	0	0	5	0.4	99.5	585.3
1977	124.3	15	52	44.4	6	0	0	0	0	23.2	—	181.7	446.6
1978	33.8	38.6	40.2	4	1	0	0	0	0	0.2	27.3	77.7	222.8
1979	162.7	14.6	14.9	0	17.2	0	0	0	0	21	17	131.2	378.6
1980	80.1	194.9	41	9.4	1	0	0	0	0	0	61	76	463.4
1981	144	91.6	92	4	0	0	0	0	0	2.3	25.8	60	419.7
1982	200.1	84.9	69.4	25.3	22	0	0	0	0	31.2	59.2	70.2	562.3
1983	96	22.7	53.4	14.8	15.1	0	0	0	0	0	15.5	36.8	254.3
1984	71.8	2.2	75.4	11.5	9.3	0	0	0	0	0	72.9	59.9	303
1985	59.2	40.1	39.3	31.4	22	0	0	0	0	0	21	104.6	317.6
1986	40.1	90.8	125.1	47.4	12.6	0	0	0	0	0	105.3	89	510.3
1987	11	20.8	107.8	6.8	1.3	0	6	0	0	68.3	9.1	126.9	352
1988	93.1	94.5	62.6	52.5	1	0	0	0	0	0	4.3	97.3	405.3
1989	56.6	69.9	61.9	10	1.5	0	0	0	0	0	25.4	136.5	361.8
1990	78.7	42.8	11.5	52.3	1	0	0	0	0	12	4.8	31.6	234.7
1991	104	83.8	100	15.8	0	0	0	0	0	47.2	30	181.4	562.2
1994	145.5	10.8	76.3	19.2	1.4	0	0	0	0	14.1	268.3	32.5	568.1
1995	30.2	56.1	15.2	73.5	3.9	0.8	0	0	0	62	0	17	257.9
1996	98	150.9	94.6	56.8	0.2	0	0	0	0	0	8.1	44.1	452.7

(*continued*)

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Table 1. Amount of rainfall in northern Khuzestan, 1961–2014 (in mm) (*continued*).

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1997	100.3	0.1	282.1	29.6	0.4	0	0	0	0	12.8	206.4	74	705.7
1998	153.1	58.8	170.4	2.4	5	5.5	0	0	0	0	27.2	26.2	438.1
1999	216.8	86.2	146.2	2.6	0	0	0	0	0	1.4	0.5	76.4	530.1
2000	82.2	50.2	13	1.6	3	0	0	0	0	0.8	39.9	239	429.7
2001	69.6	52.7	33.6	1.2	21	0	0	0	0	12	0	175.3	365.4
2002	112.4	42	34.7	100.4	4.2	0	0	0	0	0	54.9	41.4	390
2003	43	21	46	68.2	0	0	0	0	0	10.5	29.4	127.8	345.9
2004	179.8	11.8	13.8	55.1	4.3	0	0	0	0	0	87.7	113.1	465.6
2005	121.8	38.2	73.4	21.8	5	0	0	0	0	0	21.2	56.2	332.6
2006	93.9	148.4	23.8	40.6	0	0	0	0	0	70.9	33.3	121	531.9
2007	89.8	24	47.6	51.9	4	0	0	0	0	0	5.2	66.7	289.2
2008	67.7	4.4	0.1	22.6	0.1	0	0	0.2	0.2	11.8	126.6	3	275.9
2009	9.5	13.9	14.1	44	2.9	0	0	0	9.2	36.8	55.5	140.4	317.1
2010	10	27.5	4.1	44.9	43	0	0	0.1	0	0	9	29.7	168.3
2011	119.2	37.2	37	10.1	6.1	0	0	0	0	0	60.7	0.1	270.4
2012	12.1	58.3	7.1	8.5	2.4	0	0	0	0	13.6	87.7	107.9	297.6
2013	114.9	5.4	5.7	2	121.8	0	0	0	0	0.1	41.4	64.1	355.4
2014	103.5	6.2	100.6	24.3	0.2	0	0	0	0	25.3	52.4	9.5	322

Source: Iran Meteorological Organization (http://www.irimo.ir; accessed September 2016).

Table 2. Amount of rainfall in the Ahvaz area, 1961–2014 (in mm).

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1961	122.9	22	24.8	16	0	0	0	0	0	0	11.4	24	221.1
1962	38	29	0	55	0	0	0	0	0	0	21	30	173
1963	11.3	21	5	28	53.5	0	0	0	0	0	2	37	157.8
1964	1	8	6	0	0	0	0	0	0	0	0	63	78
1965	75	12	30	13	0	0	0	0	0	13	4	4	138
1966	16	49	12.6	19	0	0	0	0	0	28	0	6	130.6
1967	18	64	3	11	18	0	0	0	0	3	136	10	263
1968	2	22	44	40	5	0	0	0	0	38	—	63	214
1969	153	—	11	49	17	0	0	0	0	6	115	10	361
1970	149	5	17	5	19	0	0	0	0	19	1	46	261
1971	42	45	17	35	10.1	0	0	0	0	0.3	46	43.7	239.1

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Table 2. Amount of rainfall in the Ahvaz area, 1961–2014 (in mm) (*continued*).

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1972	75.5	4.6	118	23	5	0	0	0	0	0	27	73	326.1
1973	6	29	3.4	8	0	0	0	0	0	0	0	26.5	79.2
1974	125	47.2	14	16	0	0	0	0	0	0	6	146	354.1
1975	49.6	37	9	45	12	1	0	0	0	0	7	120.6	280.2
1976	66	63.5	27	2.5	8	0	0	0	0	15	0	74	256
1977	79	2	29	5	5	0	0	0	0	4.5	—	95.1	219.6
1978	38	10.4	27	0	0	0	0	0	0	0	20.3	63.8	159.5
1979	59	0	7	0	8.4	16	0	0.1	0	43	0	73.6	191
1980	35	159.7	28.5	4	3	0	0	0	0	0	17.4	48	295.6
1981	81.2	50.6	8.6	0.5	0	0	0	0	0	7.5	29	56.7	234.1
1982	86.6	39	47.6	5	13.1	0	0	0	0	14.6	88.7	66.8	361.4
1983	77.9	3.6	27.9	12	16.4	0	0	0	0	0	42.4	6.8	187
1984	41.9	0.1	99.6	0.2	0.3	0	0	0	4	0	88.3	22	252.4
1985	41.5	10.5	4.2	12.4	0	0	0	0	0	0	47.2	43.6	159.4
1986	10	52.1	59.9	44.5	3.5	0	0	0	0	2	86.9	68.5	327.4
1987	2.7	23.4	65	0.6	0	0	3	0	0	51.6	6.8	97.8	247.9
1988	38.3	48.3	35.8	11	0	0	0	0	0	0	6.2	45.4	185
1989	11.6	39.3	14	3.5	3.1	0	0	0	0	1.6	38.3	113.4	224.8
1990	32.5	34.4	24.6	5.3	0.6	0	0	0	0	2	27	9.6	136
1991	101	42.9	83.7	17.2	0	0	0	0	0	60.7	0.3	104.5	410.3
1992	46.6	31	42	9.6	10.3	0	0	0	0	0	31.5	131.5	302.5
1993	76.3	39.4	16.1	54	3	0	0	0	0	5.8	22.6	1.9	219.1
1994	21.5	0.1	56.7	22.4	0.2	0	0	0	0	12.1	95	20.2	228.2
1995	22	15.9	19	5.3	2	0.2	0	0	0	0	0	22	86.4
1996	109	61.6	63.8	31.8	2	0	0	0	0	0	2.4	19.3	289.9
1997	23.6	0	129.1	18.6	2.7	2	0	0	0	2	223.1	67.7	466.8
1998	117.8	16.9	14.4	6	0.4	0	0	0	0	1	12.1	2.3	170.9
1999	41.8	82.1	49.3	0.1	0	0	0	0	0	0.4	14.1	40	227.8
2000	53.6	12.7	9.8	1	0	0	0	0	0	9.2	23	125.5	234.8
2001	30.7	24.8	23.2	0	0	0	0	0	0	4.2	12.7	131.7	227.3
2002	41.9	26	14	40	0	0	0	0	0	0	14.5	34.9	171.3
2003	45.2	24.4	24.2	20.6	0.3	0	0	0	0	0	73.9	30.2	218.8
2004	125.9	13.2	1.5	22	0.3	0	0	0	0	0	21.4	87.5	271.8
2005	61.4	11.4	37.2	6	0	0	0	0	0	0	42.2	29.9	188.1

(*continued*)

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Table 2. Amount of rainfall in the Ahvaz area, 1961–2014 (in mm) (*continued*).

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2006	62.6	64.1	4.2	21.6	0	0	0	0	0	11.2	18.9	86.5	269.1
2007	24.4	13.8	17.5	53.3	0.2	1.3	0	0	0	0	0.2	43	153.7
2008	51.2	1.2	0	1	0	0	0	0	5	9.2	37.2	0.3	100.1
2009	6.3	9.2	12.6	9.5	0.1	0.4	0	0	0	1.5	69.2	113.7	222.5
2010	12	5.3	2	36.5	5	0	0	0	0	0	7	9	76.8
2011	42.8	56.7	12.1	10.4	3	0	0	0	0	0	19.4	0	163.8
2012	9.8	67.4	0.9	6.1	0.4	0	0	0	0	0.3	103.6	55	243.5
2013	43.1	0.1	2.7	1.2	22.4	0	0	0	0	0	56.4	7.6	133.5
2014	85.8	3.2	44.3	24.4	0.2	0	0	0	0	10.9	35.1	13.3	217.2

Source: Iran Meteorological Organization (http://www.irimo.ir; accessed September 2016).

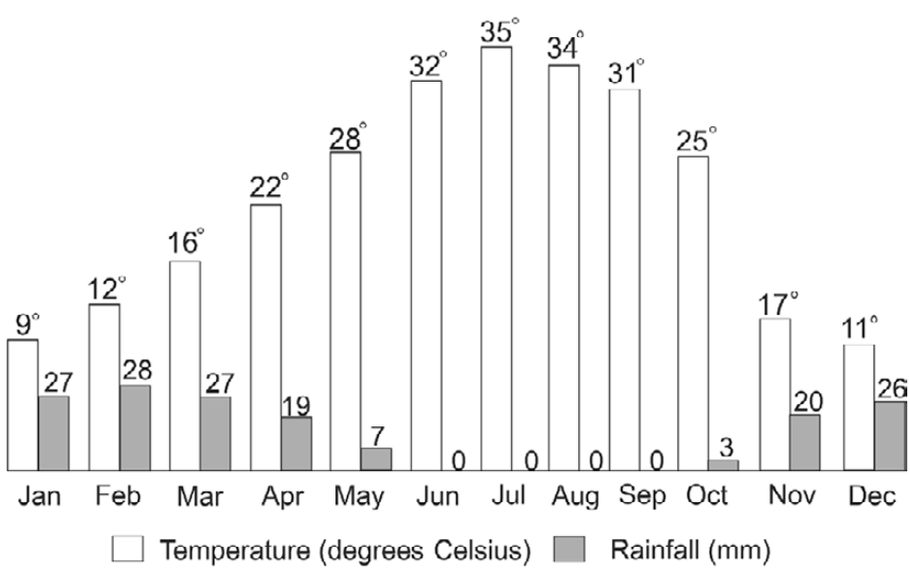

Figure 14. Monthly rainfall and temperatures in the Baghdad area (Students of the World 2016).

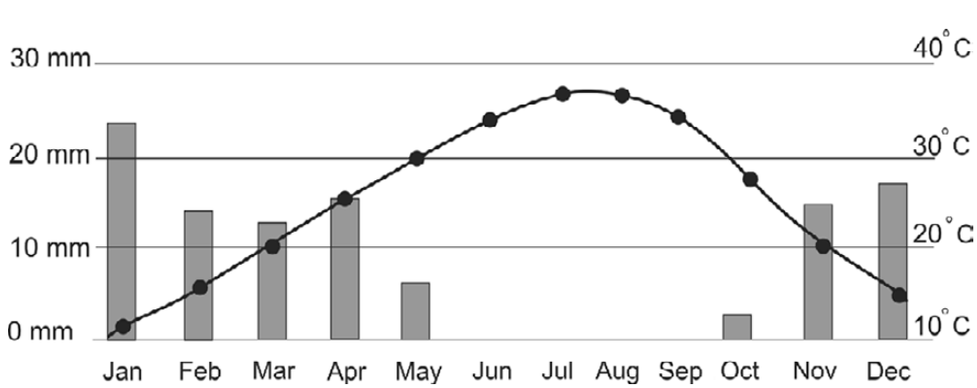

Figure 15. Average rainfall in the area around Ur, 1960–90 (World Bank 2016).

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today mark the landscape, seasonal floodwaters were distributed widely across the area, thereby making the practice of recessional, or décrue, farming possible.[4] This area is the heart of the winter pastureland of the Bakhtiari tribes, and compared with the lands on the western bank of the Karun River, ancient villages (especially those dating earlier than the second millennium BCE) and modern-day villages alike are rare here. In 1961, when archaeological and geomorphological evidence from Khuzestan was much more limited, Adams astutely observed that "Elamite military prowess did not derive from a large, densely settled peasantry occupying irrigated lowlands in what is often loosely considered the heart of Elam. Instead, the enclave around Susa must have been merely one component in a more heterogeneous and loosely structured grouping of forces."[5]

As mentioned above, in contrast to southern Mesopotamia, dry farming is risky here but still possible, and major canal irrigation does not seem to have been practiced until the middle of the second millennium BCE at the earliest.[6] Had this been the case, then—again in contrast to southern Mesopotamia—there could not have been fierce competition in lowland Susiana between upstream and downstream irrigators. Adams considers such competition a major source of conflict and perhaps a practical reason for the development of urban life and fortified cities as an adaptive measure against the uncertain conditions of farming.[7]

The gradient in upper Susiana is much steeper than that in lower Mesopotamia, so salinization, especially in the central and western part of the region, is not a problem and may not have been a problem in antiquity either. No permanent or seasonal marshes exist in upper Susiana, though in the lower part—south of the Haft Tappeh anticline—vast areas become seasonally inundated, and in summer a layer of salt covers the dried bottoms of these marshes.

With these characteristics in mind, Khuzestan's geography and climate may be divided into multiple overlapping zones as follows.

4 Alizadeh et al. 2004.

5 Adams 1962, 115. Wright and Johnson (1975, 268) also note: "This large plain receives rainfall usually adequate for cultivation and is also crossed by rivers well-suited for irrigation; hence it is not surprising that it was a center of early village development, of state origin, and of massive and apparently very productive agricultural investments by successive empires."

6 Alizadeh et al. 2004.

7 Adams 1974.

ARID ZONE

This region lies to the south and southwest of Ahvaz, the provincial capital of Khuzestan (figs. 7–8). It consists of fine silt with no hard rocks or sand dunes. Large areas of this zone are covered with saline marshes, which partially dry up in summer. The soil is mostly saline, especially in the southeastern part, with severely limited agricultural possibilities. The arable lands, used primarily for the cultivation of date palms, are constantly reduced by active erosion. Outside the marshes the land is desert-like, with very poor flora. This zone receives 100–250 mm of rain annually, though greater levels of precipitation also occur (table 2). Much of the precipitation, as in other zones, occurs between the months of October and April. No archaeological remains have been reported in this region.

SEMIARID ZONE

Covering about 15,000 km^2, the Ahvaz and Susangerd regions constitute the southern limits of this zone, which stretches north to the area south of the Haft Tappeh anticline (fig. 8). This zone is much less homogeneous than the arid zone. It is mostly silty, with large saline areas and some marshes, especially on the western banks of the Karun. The Karun, Dez, and Gargar (a branch of the Karun) merge some 40 km north of Ahvaz and about 18 km south of the Haft Tappeh ridge. From here, the combined river runs a straight course for about 20 km before it begins to meander again just north of Ahvaz. This stretch of straight course has always been suspected to be a Sasanian canal, but not much research has been conducted in this area. The remnants of an ancient dam at the junction of these three rivers—a dam known as Band-e Ghir ("Bitumen Dam")—supports the idea. My own superficial examination of the dam suggests the presence of both Elamite and Sasanian baked bricks at Band-e Ghir.

This zone contains almost all the sandy areas and dunes of Khuzestan, as well as low sandstone or marl/gypseous hills.[8] Beyond a radius of 12 km on each side of the river, especially on the eastern side, the badland stretches all the way to the piedmont of the Zagros Mountains. Erosion is very active in the region east of Ahvaz and south of the Haft Tappeh ridge.

Prior to the construction of multiple dams on the Dez and Karun, this region was inundated for many kilometers away from the river and received large

8 Pabot 1961, 20.

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amounts of silt. Because of the high content of minerals (e.g., salt, gypsum, calcium carbonate), intense evaporation, and poor drainage, overirrigation may have caused irreversible salinization.[9] My observations in Khuzestan, however, indicate that salinization could not have been a major problem in this region. In areas where water is available, farmers repeatedly inundate and drain saline land to "wash" it, the whole process taking a few weeks. The flora in this region is much richer than that in the arid zone. It is primarily date palms, vegetables, and summer crops, such as different types of melons, that are cultivated.

This zone receives 200–250 mm of rain annually, though totals in excess of 300 mm and even 400 mm in some years are not unknown (table 2). As in other regions of Khuzestan, much of the precipitation occurs between the months of October and April, with December and January being normally the wettest.

DRY ZONE

Stretching from the Haft Tappeh anticline to the Dezful anticline in the north and from the Karkheh River in the west to the piedmont at Masjid Suleiman, this flat, alluvial part of the Susiana plain is the most fertile and productive zone in the province (fig. 10). This zone is also where the majority of ancient and modern population centers are located. It has relatively few silty areas and somewhat rocky ground. The natural flora—comprising at least 500 species—is much richer here than in the other zones (see appendix D). In general, there is no precipitation in the summer, and the precipitation in winter sometimes comes in the form of torrential rains that quickly saturate the soil. Unlike in southern Mesopotamia, the amount of annual precipitation here (table 1) makes the area ideal for dry agriculture, and, though it is risky, large tracts of marginal lands are under such cultivation.

RIVERS

The three major rivers (the Karkheh, Dez, and Karun), along with smaller streams that irrigate Khuzestan, drain about 100,000 km^2 of the Zagros Mountains.[10] The rivers follow the lines of three major northwest–southeast geological ridges resulting from vertical tectonic movements that had a considerable impact on the hydrology and drainage of the plain.[11] The areas between these ridges form a series of independent plains. The soil immediately below a ridge is less saline and has coarser sediments, with accordingly better drainage.[12] Before the construction of major dams on the Karun, Karkheh, and Dez, the maximum river discharge occurred in midspring. Minimum discharge occurs in late fall / early winter and in late summer.[13] Unlike the three major rivers, the Shaur—a small river flowing to the west of Susa and originating from a perennial spring and seepage of the Karkheh—has its maximum and minimum discharges in November and April/May, respectively. Because the Shaur has its maximum discharge in the dry seasons, it is heavily tapped, especially for summer crops.

In northern Khuzestan, the bed of the Karun is located some 10 m below the surface, so it is impossible to tap this river's water without mechanical pumps. South of the Haft Tappeh anticline, the river runs closer to the surface of the plain; therefore, most of its water is used in the south, in the region of Ahvaz. If the present evidence is any indication, there existed until recently vast riparian forests on the banks of the three major rivers. The largest of such forests still exists along the banks of the Dez and is populated by numerous species of birds and mammals.

9 Kirkby 1977, 253.

10 Kirkby 1977, 251.

11 Lees and Falcon 1952.

12 Schroeder 1953, 12.

13 Oberlander 1968, 267.

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Lowland Susiana in the Fourth and Early Third Millennia BCE

INTRODUCTION

We excavated the three major population centers of KS-04 (Chogha Do Sar, "Two-Headed Mound"), KS-59 (Abu Fanduweh), and KS-108 (Beladieh) (see figs. 9–13 in chapter 1) because we wanted not only to obtain excavated material and data from these hitherto unexcavated fourth-millennium BCE towns[1] but also to find stratified evidence for Gregory Johnson's ceramic types for the three early, middle, and late phases of the Susa II (Uruk) period.[2] In addition, we wanted to check, through excavation, Johnson's size estimates for these three sites—estimates that were instrumental in his political and demographic analysis of fourth-millennium BCE Susiana.

While we found stratified evidence for Johnson's ceramic types at all three sites, our numerous trenches indicated that the extent of the three archaeological phases of the fourth millennium BCE differed from those that Johnson obtained from his survey. The archaeological evidence is presented and discussed in the following chapters. Here I provide both a narrative and comparative context for the available archaeological and historical interpretations of the cultural trajectory of Susiana from the late fifth to the early third millennium BCE. I then offer a set of different interpretations and discuss the social and economic dynamics in Susiana vis-à-vis its powerful southern Mesopotamian neighbor.

THE FOURTH MILLENNIUM BCE

The second half of the fourth millennium BCE witnessed a series of socioeconomic developments second only to those of the era of animal domestication, farming, and village life 4,000 years earlier. The fourth millennium BCE was the time of the formation of early states, urbanization, and early steps in the invention of writing. The most influential explanatory model for lowland Susiana at the dawn of civilization is that developed by Gregory Johnson and Henry Wright in a book and a series of influential articles.[3] Unlike others, especially Guillermo Algaze,[4] who consider fourth-millennium BCE lowland Susiana to be either a colony of Uruk or heavily influenced by Uruk, Wright and Johnson treat the social, economic, and political events in the lowlands as local developments.

The development of state organizations in the ancient Near East has been a major topic of discussion among political philosophers, archaeologists, and anthropologists, who have used a number of models to reconstruct the processes that resulted in the emergence of the first states.[5] The local exchange of material goods and its attending administration is one of the models used by Wright and Johnson to explain the development of socioeconomic complexity and

1 Ezat Negahban, of the University of Tehran, excavated a step trench at KS-59's South Mound in the early 1960s, but nothing was published and the material from that trench at the Haft Tappeh archaeological base (only sherds) is hopelessly mixed because it lacks any labels.

2 Johnson 1973. The fourth-millennium BCE materials are relatively well represented in the long sequence at Susa Acropolis (Le Brun 1971, 1978a). To avoid any theoretical implications, I have used, instead of the borrowed "Uruk" terminology, the established and indigenous Susa designation of Susa II phases for the fourth millennium BCE in southwestern Iran. Nevertheless, when referring to Johnson and Wright's designation, I use their terminology; see also Potts 1999, 64–66.

3 Johnson 1973, 1980, 1987, 1988–89; Wright 1977, 1998, 2001a; Wright and Johnson 1975, 1985.

4 Algaze 1989, 1993. Algaze revised this idea in 2001 and subsequent articles.

5 For a summary and critique of the theories and hypotheses, see Yoffee 1993; also Haas 1982; Smith 2003, 78–111.

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the formation of early state organizations in lowland Susiana.

It was only in the early 1970s that the question of the emergence of early states in lowland Susiana was seriously and systematically addressed. In 1973, Johnson presented a model based on an intraregional network of exchange and hierarchical administration; later, with the collaboration of Wright, this model was expanded and evolved (see the references cited in n. 3). The theoretical part of the Wright/Johnson model is based primarily on the ideas of information flow, central place theory, and intraregional economic competition and violence. In their various analyses, Wright and Johnson did not consider possible interactions between the lowlands and highlands as a major factor in the development of complexity in lowland Susiana. This omission is particularly important because we know that beginning in the Late Middle Susiana phase (ca. 5200 BCE; table 3), lowland ceramics penetrated Fars and the central Zagros and replaced local wares. The inclusion of the highlands population in Wright and Johnson's model introduces an important factor that can explain the major fluctuations in the settled population of eastern Susiana from the early fifth to the mid-third millennium BCE.[6]

Nevertheless, here I am primarily concerned with the archaeological evidence that provided the foundation for the Wright/Johnson model, on the one hand, and the role of lowland Susiana and the highlands in the dynamics referred to as the "Uruk expansion" model, on the other hand. In their interpretation of the archaeological evidence, Wright and Johnson consider the latest phase of the Susa II period (their Late Uruk phase) as a "collapse"—not only in lowland Susiana but also in southern Mesopotamia. This inference is based primarily on surface survey that indicated a reduction in the size of the regional settlement and population. As mentioned earlier, we conducted our excavations at the three major population centers in Susiana not only to test the validity of Johnson's site-size estimates but also to provide a stratified context for the ceramic types he assigned to the three archaeological and social phases of fourth-millennium BCE Susiana.

The dynamics that resulted in the emergence of state organizations in Susiana are couched by Wright and Johnson in an evolutionary frame that spans the entire fourth millennium BCE (table 4). The three evolutionary stages in the process proposed by Johnson include Early, Middle, and Late Uruk phases.[7] It is these three phases of the Susa II (Uruk) period that concern us here, as they are not simply archaeological but also social-evolutionary.

Population and exchange were considered prime movers in the Wright/Johnson analysis.[8] Wright and Johnson emphasized the centralized production of ceramics and the presumed competition among the three rival production centers in Susiana. Because there is no obvious variation in shape or other attributes of Susiana's fourth-millennium pottery, Johnson used minute measurements of the angles of handles, appliqué decorations, lips, and the like to distinguish the products of the three distinct competing workshops, each with its own administrative and distribution center.[9]

Johnson considers his Late Uruk phase to be a period of collapse—not only a systemic collapse but also a demographic one, with the occupation of the plain reduced by 77 ha as a result of "severe 'neighborly dispute.'"[10] Our excavations at KS-04, KS-59, and KS-108 provided stratified evidence for Johnson's ceramic diagnostics for the three phases of the Susa II period but not for his site-size estimates, as I discuss in the following chapters. I also argue that the sophistication and geographical reach of the following Proto-Elamite civilization cast doubt on a systemic collapse in the late fourth-millennium BCE Susiana polity.[11] To be fair, our knowledge of the Proto-Elamite civilization and its expansion into the Iranian Central Plateau has improved greatly since the 1970s. I interpret the events at the close of the fourth millennium BCE as a substantial reorganization of the socioeconomic structure of society resulting from the tension between lowland Susiana and the highlands that began in the early fifth millennium BCE and continued even into the historical period. I have discussed this highland–lowland model extensively elsewhere[12] and focus here on the character of the fourth- and early third-millennia BCE Susiana polity as inferred from the archaeological evidence.

6 Alizadeh 1992, 2008, 2010; for an extensive review of the material culture of this period, see Alizadeh, Ahmadzadeh, and Omidfar 2014.

7 Johnson 1973, 1987, 1988–89.

8 Wright and Johnson 1975, 284.

9 Johnson 1973, 107–9, 175–97; see also Wright and Johnson 1975, 280.

10 See Johnson 1988–89, 604–5 with table. Johnson considers Uruk "colonies" such as Jebel Aruda and Habuba Kabira to be not colonies but rather sites occupied by "refugees" from southern Mesopotamia who lost in power struggles (Johnson 1988–89, 607).

11 See Alden 1982; Alizadeh, Aghili, and Sarlak 2013; Alizadeh, Ahmadzadeh, and Omidfar 2013; Amiet 1986, 75–140; Desset 2016, 96–97; Miroschedji 2003, 24–25; Mutin 2013, 6–7.

12 Alizadeh 2010.

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Table 3. Relative chronology of Iran and Mesopotamia.

Date BCE	Susiana		Deh Luran	Zagros Mountains	Fars		Central Plateau		Mesopotamia		
	Period	Site			Period	Site	Period	Site	Period	North	South
2900	Proto Elamite (Susa III)	Susa Acropole							Jemdet Nasr		
3100		17A–16	Farrokhabad A21–20 B32–31	Godin VI.1 (V)		Banesh	Early Bronze I	Arisman C Sialk IV			
3200	Late (SUSA II)	18–17B							Late (URUK)		Eridu II–I
3500	Middle (SUSA II)	21–19		Godin VII	Late Fars	Lapui	Late Plateau	Ghabrestan 3	Middle (URUK)	Gawra VIII	
	Early (SUSA II)	23–22	Sargarab						Early (URUK)	Gawra XI–XA	Eridu IV–III
4000	Terminal Susa I	24						Ghabrestan 1 Sialk III 1–3	Terminal Ubaid	Gawra XII	
4200	Late Susiana 2 (Susa I)	25 26 27		Godin VIII (Se Gabi)		Tall-e Bakun A		Hessar 1A Ghabrestan 1 (Levels 19–17)	Ubaid 4		
4400		Bandebal 11	Farrokhabad A24–31	Hakalan Parchineh (Nomadic Cemetery)	Middle Fars 2						Al-Ubaid
4600	Late Susiana 1	Qabr Sheikeyn	B39–47			Tall-e Gap	Middle Plateau				
		Dar Khazineh (Nomadic Cemetery)		Godin IX	Middle Fars 2				Ubaid 3		
4800		Jafarabad 3m–n	Bayat Phase								
	Late Middle Susiana	Chogha Mish	Mehmeh Phase	Godin XI				Zaghch			
5000		Jawi 1								Arpachiyah H3–H4	
		Bandebal 11		Dalma	Middle Fars 1	Tall-e Bakun B2			Ubaid 2		Haji Mohammad
		Chogha Mish	Khazineh Phase								
5200	Early Middle Susiana										
5400											
					Early Fars	Tall-e Bakun B1 Jari A	Early Plateau				
5600	Early Susiana	Jafarabad 6–4 Chogha Mish	Sabz Phase						Ubaid 1	Arpachiyah H1 Halaf	Eridu XIX
					Late (Archaic 2)	Jari B Jari A		Chahar Boneh Lower Sialk I			
5800											
5900	Archaic Susiana 3	Chogha Mish	CMT		Early (Archaic 2)	Jari A Bashi			Ubaid 0 Samarra	Samarra Es-Sawwan I	Tell-e Oueile 11–19
					Transitional	Rahmatabad Mushki Hormangan					
6100	Archaic Susiana 2	Chogha Mish	Surkh Phase	Haji Firuz	Archaic Fars 1	Mushki	Archaic Plateau				
									Hassuna	Hassuna 1a	
6300	Archaic Susiana 1	Chogha Mish	Sefid Phase					Tappeh Deh Kheir Tappeh Sang-e Chakhmaq			
6500	Archaic Susiana 0	Chogha Bonut (Zone F) Toleii		Abdul Husein	Formative Fars	Rahmatabad Tol-e Sangi Qasr Ahmad				Um Dabaghieh IV	?
6700			Mohammad Jafar Phase	Guran					Jarmo		
	Formative Susiana	Chogha Bonut (Zones B–E)	Ali Kosh Phase							Late Jarmo	
6900							Aceramic Plateau	?		Early Jarmo	
			Buz Murdeh Phase		Aceramic Fars	Rahmatabad Tol-e Sangi Qasr Ahmad				Maghzalieh	
7200	Aceramic Susiana	Chogha Bonut (Zone A)		Asiab							
				Ganj Darreh							
8000				Chia Sabz							
9000				Sheikhi Abad							
				Jani							
10000											

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Table 4. Stratigraphic correlation of the three excavations at Susa Acropolis.

			Periodization		
Acropolis I	**Acropolis II**	**Acropolis III**	**Le Brun**	**Johnson**	**Observations**
17A–B	1	2	Late Susa II	Late Uruk	Clay balls disappear;* bullae, new type of tablets, large narrow spouted jars with band rims, typical early Susa III painted bowls and polychrome jars, tall BRBs, and zoomorphic miniature stone vessels appear
18A–D	2	3?	Late Susa II	Late Uruk	Bricks** 25 × 11 × 10 cm; cylinder seals, clay balls, and first tablets with impressed numerical signs and bullae; door and jar sealings
19	3	4?	Middle Susa II?	Middle Uruk	No architecture; bricks 24 × 12 × 6 cm; dark red-washed vessels only in this level, bottles(?), a few pieces of jars with black band painted near neck, one with white paint on red slip, first clay balls(?)
20	4a–d	5–6?	Early Susa II	Middle Uruk	Bricks 30 × 17 × 7.5 cm and 24 × 12 × 6 cm; first cylinder seal***
21	5	7	Early Susa II	Middle Uruk	Vessels with tapering spouts appear; considerable red-washed pottery, red-washed band-rim bowls, carinated spouted jars, reserved slip; bricks 34 × 16 × 10 cm
22	6	8–11 Not excavated below Level 11	Early Susa II	Early Uruk	Bricks 24 × 12 × 6 cm; no painted pottery, standard BRBs, round-rim bowls, finger-impressed band-ledge-rim bowls, straight spouts, strap handles

(*continued*)

PROBLEMS WITH URUK INFLUENCE IN LOWLAND SUSIANA

— In fact, the label "Uruk" has come to be associated with both [Susiana and Uruk] assemblages (i.e., ceramics, imagery, administrative documents) leading to the unarticulated assumption that all material proxies of this period originated at the site of Uruk.[13]

— This [Mesopotamian-centric approach] says much about perceptions of similarities between the Mesopotamian and Iranian lowlands, and it may well reflect the ongoing perception that Susiana is no more than an eastern cultural extension of the Mesopotamian alluvium in some periods.[14]

The primacy of urban development in southern Mesopotamia—at the expense of Susiana and northern Syria—is now being broadly questioned. In this regard, I would point to the origins of administrative technology and glyptic art in pre- and protoliterate Southwest Asia. Claiming that southern Mesopotamia and the city of Uruk specifically were influenced from outside has become quasi-taboo. As such, Uruk has been elevated to morganatic status throughout the ancient Near East, and the inertia is so strong that numerous scholars writing about cultural development in this region blissfully ignore the available evidence.[15] In

13 Pittman 2013, 294.

14 Weeks, Petrie, and Potts 2010, 246.

15 The most recent example of this type of inertia is reflected in an exchange between Jacob Dahl and Holly Pittman on whether the Hacinebi sealed clay ball came from Susiana: "*Pittman:* I really don't think so. The fact is that Jim Blackman did

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Table 4. Stratigraphic correlation of the three excavations at Susa Acropolis (*continued*).

			Periodization		
Acropolis I	**Acropolis II**	**Acropolis III**	**Le Brun**	**Johnson**	**Observations**
23	7 Final stage of Susa Terrace		Terminal Susa I	Early Uruk	Bricks **30 × 15 × 8 cm**, 32 × 16 × 10 cm, and 30 × 18 × 10 cm; red and painted pottery extremely rare, proto-BRBs, neckless ledge-rim jars; abandonment of High Terrace
24	8		Susa I (*récente*)	Transitional	Bricks 35 × 35 × 13 cm and 40 × 30 × 12 cm; painted pottery continues, unpainted jars with flaring neck, fine plain bowls, finger-impressed band-rim bowls
25A–C	9 Signs of extensive fire		Susa I (*moyenne*)	Susa I	Painted pottery, stamp seals; bricks 60 × 25 × 10 cm
26	10a–b "*Massif funéraire*"		Susa I (*ancienne*)	Susa I	Painted pottery, stamp seals, door and jar sealings; bricks 60 × 28 × 11 cm, 45 × 30 × 11 cm, 42 × 24 × 10 cm, 32 × 32 × 10 cm, and 27 × 24 × 11 cm
27	11a–b "*Massif funéraire*"		Susa I (*ancienne*)	Susa I	Painted pottery, stamp seals; bricks **60 × 25 × 10 cm**, 65 × 23 × 10 cm, 60 × 25 × 10 cm, 50 × 32 × 10 cm, 42 × 23 × 11 cm, 40 × 20 × 8 cm, and 40 × 40 × 10 cm

Note: BRB = beveled-rim bowl. *Le Brun (1978a, 72) reports a single clay ball from this level but provides no illustration. **All brick measurements come from Acropolis II excavations (Canal 1978a, 1978b) except for the two highlighted in boldface, which come from Acropolis I (Le Brun 1971). ***Le Brun 1971 (209, fig. 43:10) reports a single cylinder seal from Level 21, but Le Brun 1999 and Le Brun and Vallat 1989, 36, assign it to Level 20. Acropolis I was excavated by Le Brun from 1969 to 1979, Acropolis II was excavated by Perrot and Canal in 1972 (Canal 1978a, 1978b), and Acropolis III was excavated by Wright in 1978 (Wright 1988).

the sixth and fifth millennia BCE, every region outside southern Mesopotamia with black-on-buff pottery is considered either "Ubaid" or "Ubaid related"—or even "Ubaid-related-related."[16] Similarly, wherever Susa II / Uruk ceramic types and administrative technology are found outside southern Mesopotamia of the fourth millennium BCE, the society in that area is labeled as either a colony of Uruk or being influenced by it.

There is no question that Uruk (and, in general, the polities of southern Mesopotamia) contributed tremendously to ancient Near Eastern civilization and that no other region comes close to historical Mesopotamian contributions in geometry, poetry, astronomy, technology, or literature in the period from about 2800 to 600 BCE. But this achievement should not eclipse the contributions of other regions, especially those of lowland Susiana and even highland Fars. As mentioned above, Wright and Johnson have long demonstrated

the [instrumental neutron activation] analysis and it [the clay] is identical to analyses that he has done of material from Susa. *Dahl:* Yes, but sand and clay have flowed in those rivers for thousands of years. They did a test up there in Hacinebi, but similar sediments could have been washed down from somewhere else etc. *Pittman:* No, that is not how neutron activation works. *Dahl:* OK, that is my view on this" (Petrie 2013, 427). Another example of this "Uruk colony inertia" is that despite overwhelming chemical (clay, bitumen) and glyptic evidence, even the excavator of Hacinebi still refers to the site as an "Uruk colony." See below for details.

16 This absurd and unreflective viewpoint has even been expressed to describe the sophisticated and completely different ceramics of Susa I and Tall-e Bakun A. See Weeks, Petrie, and Potts 2010 for specific discussion of the problem.

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the indigenous political development in lowland Susiana. The socioeconomic complexity in lowland Susiana that resulted in the crystallization of urbanism and the state had a long history of development not found archaeologically in southern Mesopotamia. No one disputes the control mechanism of administrative technology and its primary component—sealing, particularly door sealing—the earliest evidence of which was found at Tall-e Bakun A (ca. 4400 BCE) and later at Susa (ca. 4200 BCE), that is, in both the highlands and the lowlands.[17] This evidence dates to a thousand years before administrative technology (including door sealing) appeared at Uruk or any other center in southern Mesopotamia. Furthermore, evidence for administrative technology appears in the lowlands even earlier, during the Middle Susiana period, with examples from Bendebal, Jafarabad,[18] Chogha Mish, and Chogha Bonut.[19] In northern Mesopotamia, Gawra, with its monumental architecture and administrative technology, ranks as much more sophisticated and advanced than any population center in southern Mesopotamia.[20]

The largest mid- and late fifth-millennium BCE corpus of seals and sealings comes from Tall-e Bakun and Susa.[21] I have discussed the importance of door sealings vis-à-vis sealings of movable containers in detail elsewhere.[22] Here, a summary of the argument will help clarify the points I set out to make in this chapter, namely, the long history of social complexity and administrative technology in both the highlands and the lowlands of Iran. The use of door sealings is perhaps the most important tangible clue to the level of socioeconomic complexity in a given prehistoric society. The practice goes beyond a simple and flexible means of control over property and storage. Door sealings are conically shaped lumps of clay with a flattish base. Used to protect rooms and their contents from unauthorized entry, they were a feature of administrative technology that lasted throughout the ancient Near East well past the Neo-Assyrian and Achaemenid periods.[23] Obviously, a lump of clay is hardly a deterrent against unauthorized entry; rather, it is the attending political sanction that underlies its administrative importance. In the absence of this sanction, door sealing would be an exercise in futility if intended to bar unauthorized entry.

Door sealings may be taken as the earliest tangible evidence of a socioeconomically hierarchical society. At Bakun, the evidence of door sealing is accompanied by another important feature of social segregation; the physical separation of residential, production, and administrative sectors at the prehistoric site of Tall-e Bakun A[24] is considered a major criterion for the early stages of social and political complexity.[25] In other words, control of social norms and the monopoly of economic and political power are at the core of state formation processes. The evidence of door sealings at Bakun A is but a single, discrete step in that direction, a major transitional step in the direction of control and centralization, and a link in the complex chain of social evolution. Marshall D. Sahlins observed that "in tribes, production, polity, and piety are not as yet separately organized, and society not as yet a holy alliance of market, state and church. . . . The tribal structure is generalized. . . . It lacks an independent economic sector or a separate religious organization, let alone a social political mechanism."[26]

According to Sahlins, "exchange in tribal societies generally proceeds under certain constraints. Competition and gain are often excluded, either in the attempt to make friendly relations or at least to avoid unfriendly ones."[27] What I see in the evidence of administrative technology, particularly door sealing, is an attempt to exercise control over production, regulate the flow of goods, and limit access to resources. The social structure suggested by the use of door sealings is fundamentally different from structures in which the flow of materials and exchange are informal: "A primary segment is a face-to-face organization of kinsmen; good order here is largely achieved through kinship etiquette with its personal sanctions of ridicule, gossip, and ostracism."[28] The evidence of administrative technology at Tall-e Bakun A and Susa indicates an

17 For Susa, see Amiet 1972; for Bakun, see Alizadeh 1988, 2006.

18 Pittman (2013, 296) cites Dollfus "1977" for the evidence of stamp seals from Jafarabad and Jowi. But the references should be Dollfus 1975 and 1983 (not 1977) for Jafarabad and Bendebal, respectively. Jowi did not produce any stamp seals. See Dollfus 1976, pl. 19:8; 1983, fig. 95:5.

19 For Chogha Mish, see Alizadeh 2008; Delougaz and Kantor 1996; for Chogha Bonut, see Alizadeh 2003.

20 Pittman 2001, 2013; Tobler 1950.

21 Tappeh Giyan, near Godin in the central Zagros region, also produced a number of stamp seals with motifs very similar to those of Tall-e Bakun and Gawra in northern Mesopotamia. For Giyan, see Contenau and Ghirshman 1935; for Gawra, see Tobler 1950.

22 Alizadeh 1988; 2006, 83–90.

23 See Alizadeh 1988, 2003. For the similar practice, albeit using lead instead of clay, in sealing modern government warehouses in Iran, see Alizadeh 2015.

24 Alizadeh 2006.

25 Wright 1984, 43–44.

26 Sahlins 1968, 15.

27 Sahlins 1968, 9.

28 Sahlins 1967, 96.

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attempt to regulate and/or limit access to resources and, as such, represents a transitional phase between the typical face-to-face social and economic behavior characteristic of tribal groups and a more complex form of society. Irene Winter has argued that "the shift to complex administrative organization, accompanied by the need for documentation on a large scale, is also generally associated with a corresponding diminution of importance given to 'face-to-face' encounters."[29]

Bakun, abandoned around 4100 BCE, did not last long enough to provide evidence for the next stage of its socioeconomic development. But Susa did. The impressive monumental high platform of the Susa I phase (ca. 4200 BCE), which required huge economic investment and labor to erect and maintain;[30] the rich cemetery that produced arguably the most sophisticated prehistoric painted pottery, as well as copper roundels and axes obtained from the highlands;[31] and glyptic imagery that exhibits the earliest appearance of the "master of snakes" and "priest-king" and that reflects a hierarchical society all indicate the presence of a complex social and political system in a nascent major urban center in Susiana—a center that developed to hold its central position for almost 4,000 years until the end of Achaemenid times. Stamp-seal impressions from Susa dating to about 4200 BCE provide vivid evidence of the social hierarchy with a powerful central figure in late fifth-millennium BCE Susa.[32] In one example (fig. 16), the central figure is clad in a long kilt, wears a round medallion,[33] and holds up what may be a libation vessel; he is also crowned with a headdress of unknown nature. This figure is followed by a half-naked man in a loincloth who carries a vessel-like object on his head. Various smaller naked or loinclothed figures are shown standing with their arms raised or prostrating themselves around the central figure. The central figure may be interpreted as a religious one and the scene as a ritual. But the line between political and religious roles, especially in such remote antiquity, is very fine considering that most ancient kings were also the heads of their religious spheres.

There is no evidence of administrative technology in southern Mesopotamia, particularly in Uruk, until the Late Uruk phase, when clay balls appear.[34] Rainer Boehmer and Holly Pittman have addressed

Figure 16. One of several seal impressions from Susa with a large central figure and smaller subordinates.

the influence of Susiana glyptic art at Uruk, the former briefly and the latter extensively.[35] In a detailed article, Pittman addressed the origins of fourth-millennium BCE glyptic imagery in southern Mesopotamia, Syria, and Anatolia. She moreover showed that Hacinebi, considered an "Uruk colony," has the type of glyptic imagery that originated in lowland Susiana.[36] While general stylistic similarities may not constitute strong enough testimony to support Pittman's conclusions, instrumental neutron activation analyses performed by Jim Blackman on the sealings of movable containers and the clay ball from Hacinebi provide much stronger evidence. Blackman concluded that the clay impressed with stamp seals of local Anatolian style at Hacinebi came from local sources, while the clay stamped with cylinder seals matches the clay from Susa and other sites in Susiana.[37] Chemical analysis of Hacinebi bitumen samples, too, has shown that they primarily came from Susiana, Deh Luran, and the southern Zagros piedmont.[38]

Below I argue that the same Susian style and execution in the glyptic imagery from Hacinebi, Sheikh Hassan, and most examples from Habuba Kabira and even Uruk exhibit features specific to lowland Susiana. In terms of ceramic types, Pascal Butterlin has shown, among other problems posed by the Uruk-centric conception, the stark contrast between the abrupt appearance of the so-called "Uruk ceramic types" and their

29 Winter 1991, 91–92.

30 Pollock 1999, 180.

31 Hole 1990, 1992.

32 See Amiet 1972, pl. 2, for a number of such seals.

33 Such round medallions made of copper were found in some of the tombs at the foot of Susa's High Terrace.

34 Boehmer 1999, 125, pls. 79–101.

35 Boehmer 1999, 125; Pittman 2013.

36 Pittman 2013.

37 Blackman 1999.

38 Schwartz, Hollander, and Stein 1999; Stein 1999, 18.

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gradual development at Susa.[39] In fact, the futility of assigning the Uruk pottery forms to levels in the deep Warka sounding[40] has made the fourth-millennium BCE Susiana periodization of Wright and Johnson the basic reference point for all other sites and regions with Susa II / Uruk pottery types. The reader will find the same gradual development of fourth-millennium BCE ceramics at KS-59 as well. Moreover, wheel-made pottery is also considered a hallmark of the Uruk period. This technology, too, may have been borrowed from Anatolia,[41] from the Iranian Central Plateau,[42] or most probably from lowland Susiana, where from at least the beginning of the Terminal Susa / Early Susa II phase (ca. 3900/3800 BCE) regular striations appear on the interior surface of some fine vessels from Susa KS-00,[43] KS-04, KS-59, and KS-108, especially in jars with high, flaring necks that, unlike the preceding Susa I high-necked jars, regularly exhibit striations and show absolutely no seams between the base of the neck and the shoulder (see chapter 4 with pls. 17:B–C and 65:G, I); such seams are regular and present features of handmade, high-necked jars.

While stamp seals and sealings with stamp-seal impressions existed in both the highlands and the lowlands from the fifth millennium BCE, the earliest evidence of the use of cylinder seals appears in Susa Acropolis I Level 21—that is, during the early Middle Susa II / Early Middle Uruk phase.[44]

Despite their superficial similarity, close examination of the glyptic design repertoires of Susiana and Uruk reveal significant differences in both their subject matter and their execution (see comparative table 5). Beyond Pittman's analysis, I address here these additional important differences. Although in both regions this art exhibits a general standard in the modeling and spacing of the figures, there are clear differences not only in subject matter but also in the way details are rendered. The great majority of the figures depicted on the sealings from Uruk show facial and bodily details such as muscles, eyes, ears, and mouths. In contrast, in lowland Susiana, with few exceptions, figures—both animals and humans—almost always lack such details. Decades ago, Amiet[45] pointed out the rare occurrence in Mesopotamia[46] of the horizontal-winged creature, probably a griffin, popular at both Susa and Chogha Mish, which Boehmer also considered Susian ("Elamisch").[47]

While a great number of glyptic scenes from Susa and Chogha Mish parallel each other exactly, they exhibit only general similarities to those found at Uruk. This circumstance is important because—except for door sealings, which by definition had to be made and stored locally—the sealings of moveable containers, if shipped, are to be found at their designated destinations. The clay ball and the jar stopper found at Hacinebi, both items having typical Susiana subject matter, are good examples.

Absent from the Uruk glyptic corpus are scenes of men squatting in a row with animals, as well as domed buildings, presumably granaries. In general, scenes of people engaged in various activities are extremely rare in southern Mesopotamia, whereas Susiana glyptic art is populated with scenes of animal husbandry, plowing, sowing, harvesting, grain storage, carpet weaving, and textile production. The absence of such scenes in the sealings from Uruk does not, of course, mean such activities did not take place there;[48] it only underlines the ideological and iconographic approach of the Uruk administration in symbolic expression. Boehmer also considered several prominent types of subject matter from Uruk—such as the "snake master," rows of animals, intertwined snakes, and a single example of a line of humans in front of a seated figure with crossed legs, so consistently typical of Susiana glyptic art—to be Susian ("Elamisch") in origin (see below).[49] Of utmost importance would be analyzing these "Elamisch" examples chemically for the source of their clay.

The absence from Susiana of a number of scenes and individual elements so common at Uruk is equally important. The southern Mesopotamian hybrid "frog-headed" human, always depicted frontally,[50] and flying "eagles" spaced in a network of twisted cables[51] are

39 Butterlin 2003.

40 See Nissen 2001.

41 Wheel-made pottery appeared in precontact Hacinebi phase A; see Boden in Stein et al. 1997, 132.

42 See Majidzadeh 1977 for a description of Sialk III wheel-made pottery. The contemporary Godin VI:2 pottery was also wheel made; see Rothman and Badler 2011, 88.

43 Adams never assigned a number to Susa. Considering the importance of Susa, and to be consistent with Adams's numbering system, we assigned it the number 00, since 01 was already assigned to Chogha Mish, the second most important site in the region.

44 Le Brun 1999; Le Brun and Vallat 1978, 1989.

45 Amiet 1957, 126; 1972, 76.

46 Lenzen 1964, pls. 26:g, 28:c.

47 Boehmer 1999, 125, pls. 79–101.

48 Algaze (2008, figs. 14–15, 22, 24) uses glyptic images from Susa and Chogha Mish to illustrate daily activities at Uruk.

49 Boehmer 1999, pl. 96:W20987. Sitting cross-legged is still common in the Middle East.

50 Boehmer 1999, pl. 66.

51 Boehmer 1999, pls. 67–68.

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completely absent from lowland Susiana. The popular serpent-necked "panthers"[52] occur only once at Susa[53] and are completely absent from Chogha Mish.

Scenes depicting animals emerging from a hut[54] are completely unknown from Susiana, as are those depicting the Inanna symbol/standard[55] with or without associated animals.[56] Such scenes may depict religious or ideological symbols, and accordingly their presence and absence are much more important than stylistic traits in underscoring structural differences between the two societies. Of equal importance are scenes depicting the ruler/priest with animals and/or vegetation. Again, while some of the scenes and motif elements may have been related to various practical issues or styles/conventions in the two regions, others—such as the Inanna symbol, calves emerging from a hut, the ruler/priest engaged in various activities, and mythological creatures—reflect religious and ideological differences, and one would not expect such differences in colonies populated by people from Uruk.

Apart from the specific motifs and compositions Pittman adduced to show the influence of Susiana glyptic at Uruk, and the analysis above, I discuss here in detail a particular rendering of seated figures in the glyptic art from Susiana, Uruk, and the so-called "Uruk colonies" in Syria and Anatolia. In Susiana, glyptic scenes invariably show seated people as cross-legged, with their knees clearly indicated. This style of representation starts much earlier, perhaps in Early Susa II or early Middle Susa II, as evidenced by two stamp seals published by Amiet.[57] This specific feature continues until the beginning of the Susa III phase, around 3100 BCE. At Hacinebi it appears in three published and two unpublished scenes, of which two exhibit other specific Susiana glyptic features—namely, the row of archers and domed buildings/silos.[58] The cylinder-seal impression on a jar stopper shows three superimposed objects that look like "ears,"[59] an impression otherwise found only at Chogha Mish and Susa.[60]

The glyptic evidence from Habuba Kabira suggests a mixture of Uruk and Susiana styles and subject matter. The frontal-face panthers with long, twisted necks are typical of Uruk glyptic art,[61] as is the scene with a large figure seated on a platform shooting arrows at boars.[62] But the majority of the sealings show figures without facial features and engaged in daily activities. The seated figures in most such scenes are shown with their legs crossed, as they are in Susiana (table 5).[63] With the sole exception of the seated man shooting arrows, the creatures emerging from a hut, the long-necked panthers, and the back-to-back bulls with twisted and connected tails, there is almost nothing in the glyptic art of Habuba Kabira that is not found in Susiana with the characteristic style of lacking facial features and crossed legs.[64]

Sheikh Hassan yielded only a few sealings. The impression with opposed rampant lions is not unknown in Susiana,[65] but depicting them with their paws resting on an object seems to be an Uruk invention.[66] The impressions on two clay balls consist of a row of men holding staff-like objects and two registers of seated figures with crossed legs, knees clearly shown (table 5); these scenes are typical of Susiana glyptic art. Rows of standing/walking figures with or without a staff are common at both Susa and Chogha Mish[67] but rare at Uruk. Although seated figures with crossed legs are typical in Susiana, here they are shown with eyes clearly indicated—not a Susiana characteristic. It is extremely important to bear in mind that all the sealings from Hacinebi and Sheikh Hassan discussed here are found on either clay balls or other movable objects.

Except for the lack of facial and bodily features, all the scenes and types of subject matter from Jebel Aruda seem to be of Uruk origin but of much inferior

52 Boehmer 1999, pl. 60.

53 Amiet 1972, nos. 475–76.

54 Boehmer 1999, pl. 89:A–E; Brandes 1979, pl. 32.

55 One type of tapering pole with a single half loop attached to its tip occurs at both Susa and Chogha Mish, though it is not common (Amiet 1972, nos. 456, 694; Delougaz and Kantor 1996, pl. 154:A). This symbol, perhaps representing a temple or deity (Englund 1998, 69), should not, however, be confused with the specific Inanna symbol.

56 Boehmer 1999, pls. 10, 89:A–E.

57 Amiet 1972, pls. 3:452, 4:457.

58 See Pittman 1999, fig. 3:5, 7, 8. For the unpublished examples, see Pittman 2013, fig. 16.15:fi–ii.

59 Pittman 1999, fig. 3:3.

60 Delougaz and Kantor 1996, pl. 138:I. For Susa, see Amiet 1972, pl. 19:713–14.

61 Strommenger, Sürenhagen, and Rittig 2014, pl. 197:14. For Uruk, see Boehmer 1999, pls. 56–59.

62 Strommenger, Sürenhagen, and Rittig 2014, pl. 193:1.

63 Exceptions are shown in Strommenger, Sürenhagen, and Rittig 2014, pls. 194:11, 15; 195:2, 4, 8.

64 Strommenger, Sürenhagen, and Rittig 2014, pls. 193:1, 4; 197:14; 198: 4, 8.

65 Boese 1995, pl. 8:d.

66 Boehmer 1999, pls. 27–28.

67 For Susa, see Amiet 1972, pls. 18–19; for Chogha Mish, see Alizadeh 2008, fig. 76:AA; Delougaz and Kantor 1996, pl. 152.

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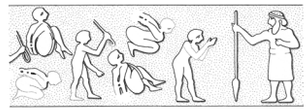
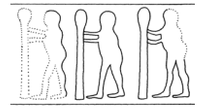
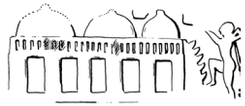
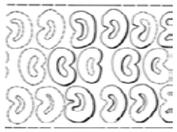
Table 5. Similarities and differences in glyptic subject matter and style between Susiana, Uruk, and some of the "colonies."

	Susiana	Uruk	Habuba	Hacinebi	Sheikh Hassan
1					
2					
3					
4					
5					
6					
7					
8					

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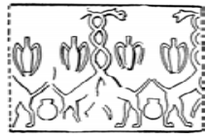
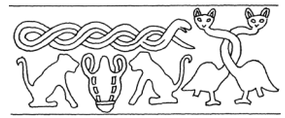
9





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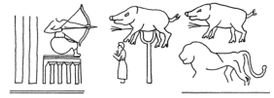
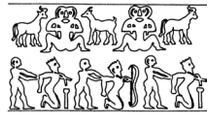
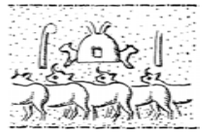


11



12



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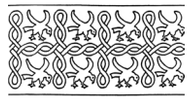

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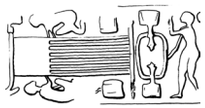

Sources (by column, from top to bottom): Susiana—Amiet 1972, pl. 2:220, 230; Delougaz and Kantor 1996, pls. 156:C, 150:F, 152:D, 150:A; Amiet 1972, pl. 16:660; Delougaz and Kantor 1996, pl. 138:I; Amiet 1972, pls. 3:452, 13:600; Delougaz and Kantor 1996, pl. 148:B; Amiet 1972, pl. 17:673. Uruk—Boehmer 1999, pls. 95:a–i, 17:4a–l, 96:a–d, 99:b, 60; figs. 66, 65:a–c, 89 (Anu ziggurat), 53, 68. Habuba—Strommenger, Sürenhagen, and Rittig 2014, pls. 193:2, 194:8, 193:7, 197:14, 193:1, 193:4, 198:8, 194:6. Hacinebi—Pittman 1999, figs. 3:5, 3:7, 3:3; Sheikh Hassan—Boese 1995, fig. 8:b, c.

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craftsmanship. Of particular interest are the seated figures; none are rendered with their legs crossed.[68]

The aim of the foregoing discussion is by no means to argue for "Susiana colonies." The archaeological interpretation and the analysis offered here of the glyptic art, including the major differences in the style of representation and subject matter and the semiotic differences that exist in a number of scenes between the glyptic art of Uruk and that of Susiana, should make us reflect on the strong possibility that the idea of Uruk colonies (presumably established by people from Uruk / southern Mesopotamia) is simplistic and ignores a large body of archaeological evidence. This evidence clearly shows that we may be dealing with a much more complex interregional system of exchange—one that consisted of polities in southern and northern Mesopotamia and in the lowlands and highlands of Iran, as well as those in southern Anatolia, involving itinerant potters, seal cutters, and even administrative agents from both Susiana and southern Mesopotamia. We may never have enough archaeological data to shed light on the fundamental features and dynamics of this complex, multiregional system of exchange and production, but viewing Southwest Asia in the fourth-millennium BCE from this perspective may facilitate future research and especially interpretations of the available data.

GODIN AS A NODE OF INTERACTIONS BETWEEN LOWLAND SUSIANA AND THE CENTRAL PLATEAU

I chose to discuss this topic following the presentation of the fourth-millennium BCE material because, as argued below, Godin VI:1 (formerly Godin V)[69] straddles the period between the Late Susa II and Susa III / Proto-Elamite phases, and many have considered it (erroneously) to be a colony of Uruk.

To understand the evolution of late fourth-millennium BCE Godin, we need to review the history of its initial occupation and interregional contacts. Early Sialk III–period pottery was found at Tappeh Se Gabi, a site near Godin. This distinctive pottery was found superimposed on earlier levels containing Dalma ware.[70] This phase of occupation with Sialk III pottery is known as Godin VII and VI:3–2, which at Godin Tappeh was found in a very small area known as "Operation B cut." Similar pottery was also reported from Tappeh Giyan,[71] near Nahavand, but at Giyan it is hopelessly mixed with earlier and later ceramics. The Sialk III–period pottery was completely new in the region and had no connection whatsoever with the earlier Dalma painted tradition, as Louis Levine himself noticed.[72]

There is a great possibility that a hiatus existed between the two phases that may not have been noticed (since Levine laments the small size of the trench and its confused nature[73]), though the continuation of the plain ware of the Dalma tradition indicates some continuity. Despite the fact that the shapes and decorations of Godin VII and VI:3–2 painted ceramics are almost identical to those from Sialk III[4–5] and III[6–7], the former are invariably described as "local"—an identification that prevented all those who analyzed the early occupation at Godin from placing it within a wider interregional context and node of interactions.[74]

Consequently, the nature of the interactions between the central Zagros region and population centers in the Central Plateau after the collapse of the Susa polity around 4000 BCE (Sialk III period) has not been explored. Previously, starting in the Late Middle Susiana phase (ca. 5000 BCE) and especially during the Late Susiana 1 phase (ca. 4800–4500 BCE), lowland Susiana expanded into the highlands, including the Zagros Mountains, Fars, and the Central Plateau. I have discussed the expansion of Middle Susiana in detail in a number of papers and books and need not repeat the discussion here.[75] This Susiana expansion into and interaction with the highlands was substantially diminished during the Late Susiana 2 / Susa I phase and came to an abrupt end with the upheaval in lowland Susiana around 4000 BCE.

The absence of the lowland in the Zagros Mountains around 4000 BCE seems to have spurred an expansion of the Central Plateau agency into the region. This subsequent expansion of Sialk III culture into the western zone of the Zagros Mountains suggests that

68 van Driel 1983, figs. 21–23, 42.

69 Gopnik and Rothman 2011.

70 Young and Levine 1974, 6; see also Rothman and Badler 2011, 73–74.

71 Contenau and Ghirshman 1935, pls. 37:11, 47–51.

72 Young and Levine 1974, 6. In referring to this new pottery, Young notes: "The assemblage contains many new features not present in the earlier Dalma period pottery, as well as some that *might be considered derivative* from that earlier assemblage" (Young and Levine 1974, 6; italics added).

73 In Young and Levine 1974, 10.

74 See Weiss and Young 1975; Young 2004, quoted in Rothman and Badler 2011, 82; Young and Levine 1974; also Rothman and Badler 2011, 90, where the pottery is characterized as "very much part of the Zagros mountain culture area."

75 For detailed analyses and documentation, see Alizadeh 1992, 2008, 2010; Alizadeh, Ahmadzadeh, and Omidfar 2013, 2014. For pottery, see also Esmaeili Jelodar and Zolghadr 2014; Khosrowzadeh 2010; Stein 1940; Zagarell 1982.

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some entrepreneurs, producers of raw materials (e.g., copper, turquoise, lapis),[76] and potters in that region stepped into the vacuum and established an east–west trading route via the Kangavar valley to points west and northwest. By about 3300 BCE, when the Susiana polities had already crystallized, contact between the highlands and lowland Susiana was reestablished, and Late Susa II and Proto-Elamite ceramics and administrative technology appeared at a number of sites in the Central Plateau (Sialk,[77] Qabrestan,[78] Qoli Darvish,[79] Arisman,[80] Sofalin,[81] Ozbaki[82]), Esfahan,[83] and the Kerman (Yahya) and Fars (Malyan) regions.

Sialk III$^{6-7}$–period ceramics in the central Zagros region have been recorded primarily through surface surveys.[84] These surveys indicated that Sialk III ceramics did not penetrate south of the Bakhtiari region of the Char Mahal, the focus of Alan Zagarell's survey, but Proto-Elamite pottery was found in at least one site in this region as well.[85]

According to the revised chronological and stratigraphic assignment, the earliest evidence of Sialk III ceramics at Godin occurs in Godin VII, and they reach the highest percentage in the VI:3 period.[86] As mentioned above, these ceramics were unrelated to any previous pottery tradition in that region. The ceramics of the Godin VI:3–2 phases are clearly of the Sialk III^{6} tradition (figs. 17–18), while those of Godin VI:1—that is, the settlement with an enclosure wall (the former Godin V phase)—date to the Sialk III^{7} and IV phases. It is therefore difficult to understand why these ceramics are consistently referred to as "local" and "very much part of the Zagros mountain cultural area."[87] In fact, Mitchell Rothman and Virginia Badler's comparison of a typical Sialk III$^{6-7}$ painted vessel of Godin VI:2[88] with Susa I painted vessels, some 400 years older than Godin VI:2, is puzzling, considering that they cite Qabrestan III and Sialk III as comparative materials.[89] It seems that the erroneous Susa comparison may have been made to create an opening for the superfluous discussion of the Susa I–period high platform and its implications for social complexity.

Moreover, the Proto-Elamite ceramics of Godin VI:1 occur with the square numerical tablets typical of Susa Acropolis I Level 17A, and the glyptic styles are clearly comparable to those of Susa Acropolis I Level 17A and early Level 16. Despite the uncritically accepted "gap" between the Susa II and Susa III periods (because of erosion between Acropolis I Levels 17A and 16), Level 17A yielded a mixture of ceramics typical of the Late Susa II and Early Susa III phases; as a result, Level 17A must be considered a transitional phase between Susa II and Susa III. The erosion layer in a small area between Levels 17A and 16[90] is local, and nowhere else is such a gap between the Susa II and III phases documented. Our excavations at KS-59, as well as at Tall-e Geser in the Ram Hormuz plain,[91] have indicated a gradual transition between these two phases, with no stratigraphic gap between them (see chapters 3 and 4). Drooping and straight spouts, bottles, four-lug jars, and beveled-rim bowls all occur in both the Late Susa II and Early Susa III phases with typical Proto-Elamite ceramics, just as they do at Godin.

The pottery of the Godin VI:1 oval compound is a mixture of painted and unpainted Late Susa II and III (Proto-Elamite) types. The Proto-Elamite types first appear in Susa Acropolis I Level 17A,[92] a transitional phase from Late Susa II to Susa III.[93] Some of the plain and pedestaled vessels from Godin VI:2 also continue into this phase.[94] A typical Sialk IV^{1} (Proto-Elamite) jar with an open spout appears in Godin VI:1.[95] This specific type first appears in Susa Acropolis I Level 17B.[96] But outside Susiana it appears at Sialk, Arisman, Yahya, and Qoli Darvish (near Tehran) with typical

76 See also Weiss and Young 1975.

77 Ghirshman 1938.

78 Majidzadeh 1977, 1981.

79 Alizadeh, Aghili, and Sarlak 2013.

80 Helwing 2011.

81 Dahl, Hessari, and Yousefi Zoshk 2012; Hessari 2011; Hessari and Akbari 2007.

82 Majidzadeh 2010a, 2010b.

83 Javeri and Haji Mohammad Alian 2011; Khatib Shahidi et al. 2007.

84 E.g., Henrickson 1985; Levine and Young 1987.

85 Zagarell 1982, pl. 14.

86 See Rothman and Badler 2011, 79, for the stratigraphic problems of these two periods at Godin.

87 Rothman and Badler 2011, 90.

88 "A painted pot found at Godin phase VI:2 bore a painting of a horned animal that is very similar to the images found on some of the pottery from this period at Susa" (Rothman and Badler 2011, 78).

89 Rothman and Badler 2011, 90. In comparing the pottery from Godin VI with Susa I, they even ignore the ^{14}C table on p. 85, which gives a range of 3500–3000 BCE.

90 Le Brun 1971.

91 Alizadeh, Ahmadzadeh, and Omidfar 2014.

92 Le Brun 1971, fig. 53.

93 For a detailed description of this class of pottery, see Alizadeh, Ahmadzadeh, and Omidfar 2013, 2014.

94 Rothman and Badler 2011, fig. 4.51. Weiss and Young (1975, 15) erroneously suggested that Sialk IV was occupied after Godin VI:1 was abandoned.

95 Rothman and Badler 2011, fig. 4.50.

96 Le Brun 1978a, fig. 24:9–10.

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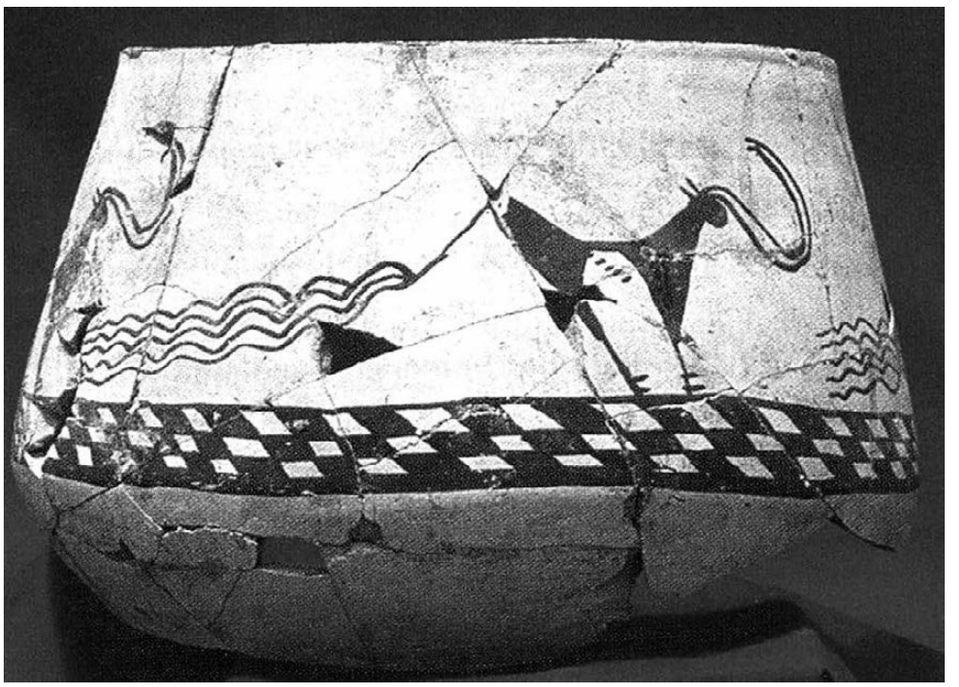

Figure 17. Godin VI:2 painted bowl (Rothman and Badler 2011, fig. 4.6).

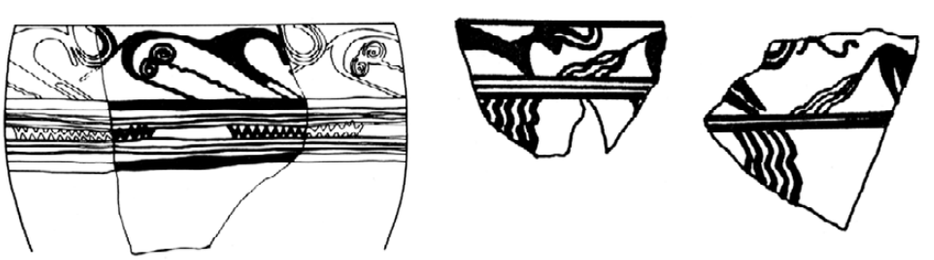

Figure 18. Examples of Sialk III[6–7] painted bowls (Ghirshman 1938, pls. 82–83).

Proto-Elamite painted and plain vessels.[97] The Sialk IV pottery assemblage also includes beveled-rim bowls, shallow trays, and straight and drooping spouts, together with a few examples of Sialk III[7] plain and painted pottery, just as it does in Godin VI:1.[98]

The numerical tablets (*coussinets bombés*[99]) found at the Godin VI:1 oval compound assumed their new rectangular, early Proto-Elamite shape, which actually began to appear in Susa Acropolis I Level 17A and continued into early Level 16.[100] A number of these tablets bear seal impressions on four sides and on the obverse; some of them have fingernail impressions, and one a pictographic sign,[101] as well as numerical notches[102] (characteristics of early Proto-Elamite tablets[103]), also reported from Susa Acropolis I Level 17A.[104] The po-

97 For Arisman, see Helwing 2011, fig. 113; 2013; for Sialk, see Ghirshman 1938, pls. 87–90; for Yahya, see Mutin 2013, figs. 3.14:4–6; 3.15; for Qoli Darvish, see Alizadeh, Ahmadzadeh, and Omidfar 2013, fig. 12:12.

98 Ghirshman 1938, pls. 89–90. See also examples of beveled-rim bowls and red-wash/ four-lug jars from the Proto-Elamite levels at Susa Ville Royale I (Carter 1980, figs. 7–8, 13–14).

99 Le Brun and Vallat 1978, 30.

100 Le Brun 1971, figs. 44:7–8, 12; 59:7, 13–14 ; 1978b, fig. 8:1, 6. See also a similar tablet found at the earliest Proto-Elamite level at Susa Ville Royale I (Carter 1980, fig. 7:8).

101 Pittman 2013, 329; Rothman 2013, 90; Weiss and Young 1975, fig. 4.2; see also Matthews 2013, 346–47, for a detailed analysis of this sign.

102 Tablets with only numerical signs occur alongside tablets with both ideographic and numerical signs and are not necessarily earlier.

103 Englund (1998, 53) considers this type of tablet as transitional to protocuneiform tablets. See also Weiss and Young 1975, 8, for a detailed description of the Godin VI:1 tablets. In a discussion, Jacob Dahl (in Petrie 2013, 432) suggests that "Godin tablet[s] may be written by someone who later became a *Proto-Elamite* person, because he puts his non-numerical sign before the numerical notation."

104 Le Brun and Vallat 1978, 1989. Vallat (1971, 237) refers to this phase as "au contact 17A–16," which we may take as

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sition of that single sign before the number confirms it as Susian (Proto-Elamite) rather than Urukian.[105] A similar type of tablet found in the early stage of Sialk IV (Sialk IV[1]) later (in the Sialk IV[2] phase) bears ideographic signs.[106] Pittman has correctly characterized several seal impressions on these tablets as early examples of the Proto-Elamite glyptic style.[107] In fact, the mixture of Late Susa II and Early Susa III is typical of the transitional phase of Susa Acropolis I Level 17A and Sialk IV[1]. The two cylinder seals[108] are of purely Proto-Elamite style; at least one seal impression from Sialk IV[1] matches the notched horns of the goat on the Godin cylinder-seal design of Gd 73-210.[109]

One architectural feature in the oval compound is also typically Proto-Elamite: the main rooms are furnished with rectangular ovens set against a wall.[110] Such features are found at contemporary Susa,[111] Qoli Darvish,[112] Malyan,[113] and Arisman.[114]

Harvey Weiss and Cuyler Young considered Godin VI:1 to be a Susiana colony or "trading post immediately supported by a local agricultural village or town."[115] Nevertheless, Young later connected Godin VI:1 to Uruk, while Weiss connected it to the Diyala.[116] Rothman and Badler suggested the oval compound of Godin VI:1 was "a fort guarding the High Road,"[117] and Roger Matthews considered it a local administrative center.[118] Given the foregoing evidence of strong parallels with Proto-Elamite sites in Susiana, Fars, and the Iranian Central Plateau, the Godin VI:1 oval compound cannot be considered anything but a Proto-Elamite outpost populated with people from the lowlands and highlands—an outpost that perhaps played an important part in an interregional network of production and distribution very similarly to Hacinebi, Sheikh Hassan, and Jebel Aruda.

With this background, we can now address the most interesting feature of the Godin VI:1 oval compound: its enclosure wall. This type of protective wall is extremely rare in late fourth- and early third-millennia BCE Iran. It is possible that, as Rothman and Badler suggest,[119] the compound was a fort guarding the high road that linked east and west. It is equally possible that the inhabitants of the compound were afraid of raids by a group of people Young called the "Barbarians of Godin IV." Young was referring to the trans-Caucasians who had penetrated northwestern Iran in the late fourth or early third millennium BCE and overran Godin. Since, farther north in Azerbaijan, the Caucasians appeared earlier (ca. 3400 BCE), their penetration into the Zagros Mountains must have been gradual, and the inhabitants of Godin VI:1 may have known about them and their much earlier incursion. A protective measure—the enclosure wall—obviously failed, and with it collapsed the entire network of Proto-Elamite nodes of production and distribution in western Iran and the Central Plateau.[120]

The demise of Godin VI:1 and contemporary sites in the central Zagros region and western part of the Central Plateau coincides with the penetration/invasion of Caucasians—that is, the Kura-Araxes hordes—around 3100/3000 BCE. This is the time when the sphere of lowland–highland interaction, and in fact cooperation, shifted to the east and new nodes of exchange and communication, such as Konar Sandal, Shahdad, and Shahr-e Sukhteh, developed. This interruption of the long-established western land routes resulted in the establishment of maritime trade through the Persian Gulf, bypassing the now-unstable Elamite highlands.

Here is not the place to detail how the system of joint production and distribution of material goods, primarily copper and semiprecious stones, developed between the lowlanders and the inhabitants of the Central Plateau. Suffice it to say that with increasing social complexity in lowland Susiana and further development of administrative technology, which now included clay balls and numerical tablets, the hierarchy of both regions saw the advantage of close cooperation in producing and distributing raw and manufactured goods to points west and northwest. A glance at a map identifying sites with evidence of metallurgy, Proto-Elamite pottery, and administrative technology

meaning interface or transitional.

105 See Dahl, Petrie, and Potts 2013.

106 Ghirshman 1938, pls. 92: S.1617, S.1619, and 93:S.539.

107 Pittman 2011, 114; 2013.

108 Rothman and Badler 2011, fig. 4.42:Gd 73-260, Gd 73-210.

109 Ghirshman 1938, pl. 94:S.1614.

110 Rothman and Badler 2011, fig. 4.19.

111 Level 16; Le Brun 1971, pl. XIX:2.

112 Alizadeh, Ahmadzadeh, and Omidfar 2013, figs. 5–6.

113 Sumner 2003, figs. 12–13.

114 Helwing 2011, figs. 7–9.

115 Weiss and Young 1975, 14.

116 Weiss 2003; Young 1986.

117 Rothman and Badler 2011, 81.

118 Matthews 2013.

119 Rothman and Badler 2011, 81.

120 See Weiss and Young 1975, 15; also Alizadeh, Ahmadzadeh, and Omidfar 2013 for a list of several sites in the Central Plateau that were abandoned at this time.

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(e.g., Arisman,[121] Sialk,[122] Ozbakı,[123] Qabrestan,[124] Qolı Darvısh,[125] Godin[126]) reveals that these sites were situated near copper deposits and in strategic locations on the ancient road system connecting them to points south and west, including the Diyala and southern Mesopotamian regions.

THE SUSA III (PROTO-ELAMITE) PERIOD IN THE EARLY THIRD MILLENNIUM BCE

The fact is that we simply do not know what happened to the late fourth-millennium polities in Susiana and southern Mesopotamia. But the trajectories of cultural and political development in the two regions were vastly different. Whereas southern Mesopotamia became populated with city-states and developed cuneiform writing, including an impressive body of literature and historical documents, Susiana had one relatively large population center at Susa with some small, village-sized satellites.[127] Whereas the Sumerian city-states of southern Mesopotamia developed hymns, legends, mythologies, and poetry and committed those works to writing, nothing of literary importance was written down in the Elamite world. Of course, this lack does not necessarily mean such subjects did not exist in Elam, since the Elamites may have preferred a strong oral tradition. Even during the glorious Middle Elamite period, Elamite scribes did not produce any appreciable body of literary or historical material, nor did urbanism develop on a par with southern Mesopotamia. Yet the Proto-Elamite polity in Susiana had a cadre of scribes who produced more than 1,500 administrative tablets, some of which recorded a large number of animals and humans not commensurate with the seemingly empty landscape of Susiana between 3100 and 2800 BCE. What is more, the scribal tradition, though it did not last, spread far into the highlands in many areas, where its characteristic ceramics or potters were even found in many more places.[128]

The period labeled "Proto-Elamite," known primarily from Susa (Susa III) and Malyan, may thus be considered to be the emphatic break from the shared cultural sphere between lowland Susiana and southern Mesopotamia. This period, which spans the late fourth and early third millennia BCE, is best known at Susa in the lowlands and at Malyan (ancient Anshan) in the highlands,[129] a lowland–highland dual center of power that endured throughout much of Elamite history.

Numerous excavations, discoveries, and analyses in the past three decades have helped resolve a sharper image of the culture and civilization we now know as Proto-Elamite. Today we can define Proto-Elamite as a period of high artistic creativity in sculpture and glyptic art, as well as a period of economic and social interaction between spheres with shared elements of material culture, including an outstanding class of mono- and polychrome painted pottery; sculptures; stone vessels; numerical, pictographic, and logographic administrative tablets; specific glyptic styles; architectural plans; and building techniques.

The pottery of this period was wheel made and in many cases was tempered with fine chaff. Prominent forms include four-lugged jars, usually with a sharp carination and one or two ridges on the shoulder; spouted vessels; cylindrical and bottle forms with or without nose lugs; low- and high-pedestaled goblets; bell-shaped or flaring carinated bowls; standard and tall, slender, beveled-rim bowls; and shallow trays. The most characteristic feature of the pottery of the Proto-Elamite phase is its surface treatment (see pls. 24 and 26–27 for some examples). Proto-Elamite potters commonly applied at least two colors of wash to the exterior of the vessel; open forms received wash on both the interior and exterior surfaces. The applied washes range in color from bright red to maroon to light brown, dark brown, and sometimes even gray-brown. The wash was applied unevenly, and the vessel's surface is often streaky. Apart from the colorful washes applied to the surface of the pottery, both open and closed vessel forms are often decorated with white, brown, maroon, or red bands or a combination of such bands with painted geometric shapes. No human, animal, or floral designs occur.[130]

While Proto-Elamite pottery, mudbrick architecture, and elements of administrative technology (such as various types of bags, jars, bales, and door sealings)

121 Arisman did not yield any evidence of administrative technology; see Helwing 2011, 2013.

122 Ghirshman 1938.

123 Majidzadeh 2001, 2010a, 2010b.

124 Majidzadeh 1977, 1981.

125 Alizadeh, Ahmadzadeh, and Omidfar 2013.

126 Gopnik and Rothman 2011.

127 See Alden 1987.

128 Proto-Elamite tablets have been found at sites as far as the Iranian Central Plateau (19 from Sialk; 1 from Hissar; 1 from Ozbaki, about 20 from Sofalin; and several from Qoli Darvish), Kerman (27 from Yahya), Sistan (1 from Shahr-e Sokhteh), Fars (32 from Malyan), and the Ram Hormuz area (1 from Geser), but the overwhelming majority (more than 1,400) come from Susa. These Proto-Elamite administrative tablets contain information on disbursements of grain, sheep, goats, and their products, as well as labor lists (Dahl 2005).

129 Alden 2013; Sumner 2003.

130 Alizadeh, Ahmadzadeh, and Omidfar 2013, 2014.

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developed with modifications directly from the earlier Late Susa II phase, Proto-Elamite glyptic art and its subject matter are entirely new.[131] In contrast to the preceding Late Susa II–phase glyptic repertoire, in which humans featured prominently in various scenes, humans are almost completely absent in the Proto-Elamite phase.[132] And unlike the preceding period, animals perform human activities in the Proto-Elamite phase, such as food production and cultic rituals. Bulls and lions, which feature prominently in this new glyptic style, also take the place of humans in symbolic power positions; the most famous of such scenes is the impression of the "seal of the ruler of Susa"[133] on a Proto-Elamite tablet.

The vast geographic distribution of Proto-Elamite tablets and pottery in Iran at sites either in strategic locations (such as Godin Tepe on the ancient east–west highway) or near natural resources (such as copper and semiprecious stones not found in lowland Khuzestan) indicate expansion and colonization by people from southwestern Iran. Archaeological excavations have also indicated that such expansion was achieved not by violence and relocation of the local population but through peaceful operations and mutual agreement with the local inhabitants.

It is interesting to note that the establishment of Proto-Elamite colonies coincides with the demise and abandonment of such centers of exchange as Sheikh Hassan, Jebel Aruda, Hacinebi, and Habuba Kabira in Syria and southeastern Anatolia. What is so puzzling about the Proto-Elamite colonies is that even though they were established primarily in the highland regions rich in copper and semiprecious stones, the administrative tablets deal almost exclusively (as far as philologists can gather from the texts[134]) with food rations, grain measures, and lists of animals and humans (probably slaves or low-ranking workers), with no reference to craft production or raw materials.[135] What is more, with the exception of the Proto-Elamite administrative tablets from Susa that record large amounts of grain and dairy products and large numbers of animals, the level of administrative notations reflected in the texts from these colonies is quite low and within the range of local economy.[136]

Sometime early in the third millennium BCE, perhaps around 2800 BCE, the Proto-Elamite sphere of interaction collapsed and the colonies/nodes of interregional communication were abandoned. Susiana itself came under the cultural and perhaps political influence of southern Mesopotamia. At the same time, new production and population centers either appeared or grew rapidly in Kerman and southeastern Iran. We do not know the real cause of such important socioeconomic and political changes in the early third millennium BCE. But archaeological and historical evidence suggests that such drastic changes may be attributed to invasion or penetration deep into western Iran and the western Iranian Central Plateau by a new people from the Caucasus with a distinct gray pottery, a people who disrupted the trade routes in western Iran. In addition to this interruption in northwestern Iran, the rapid development of the competing Sumerian city-states in southern Mesopotamia around 2900 BCE may have created interregional stress that proved simply too great for the Proto-Elamite polity to overcome.

131 On stylistic grounds, Amiet (1972, 109–45) has divided the Proto-Elamite corpus of seal impressions from Susa into four styles: (1) *séries de style Mésopotamien*; (2) *séries proto-élamite ancienne*; (3) *séries proto-élamite classique*; and (4) *séries diverses*. In the absence of stratigraphic information from the early excavations at Susa, we do not know whether these four styles were used simultaneously or had chronological significance. But the style that stands out as an almost complete break from the past glyptic tradition is series 3, the Classic Style.

132 A rare example is shown in Amiet 1972, pl. 25:1013.

133 Harper, Aruz, and Tallon 1992, 75, pl. 47.

134 Dahl 2005, 2015; Damerow and Englund 1989.

135 Dahl 2015; Damerow and Englund 1989.

136 Lamberg Karlovsky 1989, x.

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3
Surveys and Excavations

SURVEYS AND EXCAVATIONS AT KS-04 AND KS-108

INTRODUCTION

We excavated KS-04 and KS-108 using a layer/feature recording system for stratigraphic control of archaeological deposits.[1] In this system, layers and features are represented by the letters L and F, respectively, followed by a number. Using this method is time consuming and requires considerable field experience. In several areas where we lacked experienced supervisors or sufficient time to reach the desired deposits, we used arbitrary 20 cm levels. We sieved one-fifth of all deposits except mudbrick detritus; 100 percent of the contents of pits were both dry and wet sieved.

Before we excavated the three sites, we laid a grid composed of 10 × 10 m squares over the entire surface of each one and collected everything we saw within the squares (see figs. 23, 30, 41, and 43–44 below). The masses of material we collected, primarily pottery, are now at the pottery bank of the National Museum of Iran in Tehran.

For registering pottery and objects, we used the site number followed by an uppercased letter (P for pottery, F for flint blade, C for clay object, M for metal) and a suffixed number—for example, KS107-P28 and KS108-F204. In the tables that accompany this volume's plates, the exact provenience of each object, its assumed chronological position, and its description are given.

1 We define a *layer* as an unintentional accumulation of dirt with no specific geometric shape (e.g., erosion material, a suprafloor accumulation, mudbrick detritus) or as the contents of a well, pit, gutter, and the like. A *feature* is defined as something that is intentionally made or formed, such as a well, pit, wall, wall foundation, or bench.

KS-04

KS-04 (263493 E, 3561107 N), known locally as Chogha Do Sar[2] ("Two-Headed Mound") and with a total area of about 7 ha, is located near the Ojirub River, a branch of the Dez, where some forty years ago Henry Wright observed what seems to be a fourth-millennium BCE irrigation canal (figs. 9–13). There are two canals on the western side of KS-04 (fig. 19)—the closer one is a 4 m wide, 2 m deep drainage canal; the other, much wider (8 m) and deeper (5 m), is an irrigation canal that brings water from the Ojirub, some 900 m northwest of the site, and is known locally as Nahr Khalaf (Khalaf Stream). The irrigation canal is fed by the waters behind a dam just next to the head of the canal (fig. 20). The easy access to water has made the banks of this canal an ideal campsite for some of the nomadic Bakhtiari tribes (fig. 21). According to the locals, the irrigation canal was constructed by the order of Sheikh Khalaf, a powerful and ruthless local tribal chief, sometime between 1915 and 1920.[3]

Robert McCormick Adams seems to have been the first person to survey the site systematically.[4] In his

2 KS-04 was first surveyed by Robert McCormick Adams of the University of Chicago's Oriental Institute (now the Institute for the Study of Ancient Cultures) in 1960–61 (Adams 1962). Adams listed the site as "Ishan Abu Diyyayyat," and Gregory Johnson used the same name in his publication of a decade later (Johnson 1973, 74, table 18). When we visited the site, local farmers had never heard of this name—they knew the site only as Chogha Do Sar. Adams took the (probably erroneous) name from the 1917 British survey map.

3 Sheikh Khalaf was an ally of Sheikh Khaz'al (خزعل) from the Ka'b (كعب) tribe, the then ruler of much of Khuzestan. After Khaz'al was arrested in 1925 by Reza Shah and taken to Tehran, and following his death, Sheikh Khalaf fled to Basra; no one knows for certain whether he died there or returned to Khuzestan.

4 Adams 1962.

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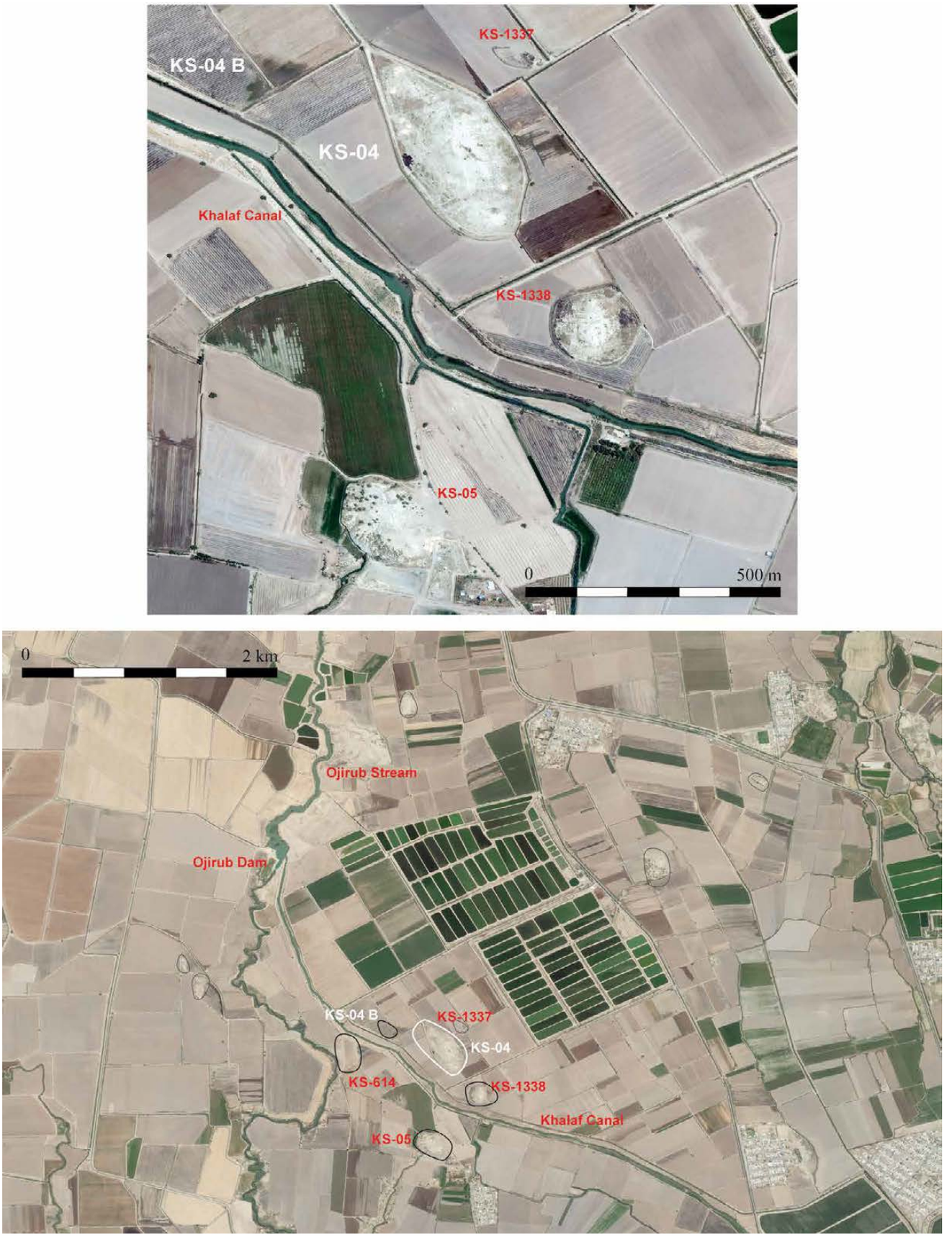

Figure 19. Satellite images of KS-04 and its immediate surroundings. Courtesy of DigitalGlobe.

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A

B

Figure 20. *A*, Khalaf irrigation canal west of KS-04; *B*, dam on a branch of the Ojirub River.

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Figure 21. *A*, Nomadic encampment along the Khalaf canal; *B*, inside a tent; *C*, tribesmen sewing strips of goat-hair fabric to make black tents.

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unpublished list of the areas he surveyed, he reports the presence of the Middle Susiana and Late Susiana 2 (Susa I/A) periods. Gregory Johnson found sherds of the Early and Middle Susa II (Early–Middle Uruk) phases in his survey.[5] Our survey and excavations produced evidence of the Early Susiana, Middle Susiana, Late Susiana 1, Late Susiana 2, Terminal Susa, and Early Susa II phases (pls. 1–7). Neither in our survey nor in our excavations did we find any sherds of the Middle Susa II (Middle Uruk) phase.

When we visited the Khalaf irrigation canal, we discovered sherds of the Early Susiana period strewn over a plowed field (fig. 22). To the northwest of this field, a very small, low mound was the only vestige of this Early Susiana settlement, which to my knowledge had never been reported. Based on our survey and the spatial distribution of sherds, this Neolithic settlement may have covered just over 2 ha—a sizable settlement for this early period. We could not find a local name for it and therefore numbered it KS-04B.

After laying out a grid on KS-04 and collecting the materials found within the 10 × 10 m squares, we opened fifteen trenches in various squares and one stratigraphic trench in Square R15-N. In addition, we opened four 1 × 1 m probes at the base of the mound to measure its eastern extension beyond its contour (fig. 23). None of these four probes produced a stratified deposit, and the few sherds we found in them had washed in from the main mound.

In our stratigraphic trench, we found evidence of a possible high platform of mudbrick similar to the one at Susa. We opened numerous small trenches on the high mound mainly to ascertain its extent. Almost all these small trenches contained evidence of this platform, and Square M14 also yielded evidence of fire and destruction (figs. 24–26).

In almost all the trenches on the mound, we found remains of burials with varying degrees of preservation. The skeletons were found in simple pits and had no objects associated with them (fig. 25). These remains and the orientation of the skeletons dated the burials to the Islamic period. The local farmers had no information about the burials; based on our knowledge from excavations in Fars and at other sites in Khuzestan, we attributed them to the nomadic tribes who, prior to the 1950s, habitually used archaeological mounds as burial grounds to protect the graves from inundation.

Except for Squares M14, O16, P15, and R14 and the stratigraphic trench R15-N (fig. 24), other areas produced only scattered mudbricks and badly preserved Islamic burials, as well as some sherds. The best-preserved Islamic burial was found in Square O16 (fig. 25). Here, the burial pit (F 3) had cut into a thick layer of mudbrick detritus or very compact earth and two courses of mudbricks (F 4). In the western part of the square, five courses of mudbrick (F 2) were preserved, but a thick layer of detritus indicated that other activities had occurred there in ancient times, the nature of which we could not determine. Similar mudbrick courses and detritus were found in Squares P15-N and R14. Limited time and a lack of experienced field supervisors prevented us from expanding many of these areas or excavating them deeper. But most of them contained remains of the mudbrick structure we had found in our stratigraphic trench.

The largest of these excavation areas was the 3 × 5 m Square M14 (fig. 26:B), located on the western edge of the high mound. Here, after a layer of topsoil, we came down on a tough, compact layer of mudbrick detritus mixed with fragmentary mudbricks. Below it appeared a series of mudbricks mixed with dark ash. Just a few meters away from the eastern section, we found a thick layer of ash and pieces of burned bricks. Farther west, this burned layer was mixed with another layer of detritus and thinned out toward the western slope of the mound.

Square R15 and the Mudbrick Platform

We opened a 3 m wide stratigraphic trench in Square R15-N to reveal the stratigraphic sequence of the cultural deposit at KS-04 (fig. 24). After removing some 40 cm of topsoil, we came down on a mudbrick feature that covered the entire area of the trench. Assuming we might be dealing with a mudbrick floor, we articulated the bricks and left the exposed area as the first step of the trench. When we penetrated below this feature, we realized that it could not be a floor, as it continued both vertically and horizontally. We excavated the feature, which now appeared to be a solid mudbrick platform, to a depth of 72.90 m ASL, about 2 m below the surface of the mound.

In the construction of this platform, both whole bricks (44 × 22 × 10 cm) and brick fragments were used, but in no particular order. No mortar was used to bind the bricks; instead, it seems they were embedded in a mass of mud that in places was about 20 cm thick. Although we did not find the platform's face, which most probably had eroded away, it was presumably constructed with bricks laid in an orderly manner. Our excavations in the other squares on the high mound indicated that at least the upper stage covered

5 Johnson 1973, 74.

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A

B

C

Figure 22. Collecting sherds in a field near the Khalaf canal. *A*, Early Susiana sherds at KS-04-B; *B*, remnant of an Early Susiana mound (at left); *C*, students collecting sherds from the razed KS-04B.

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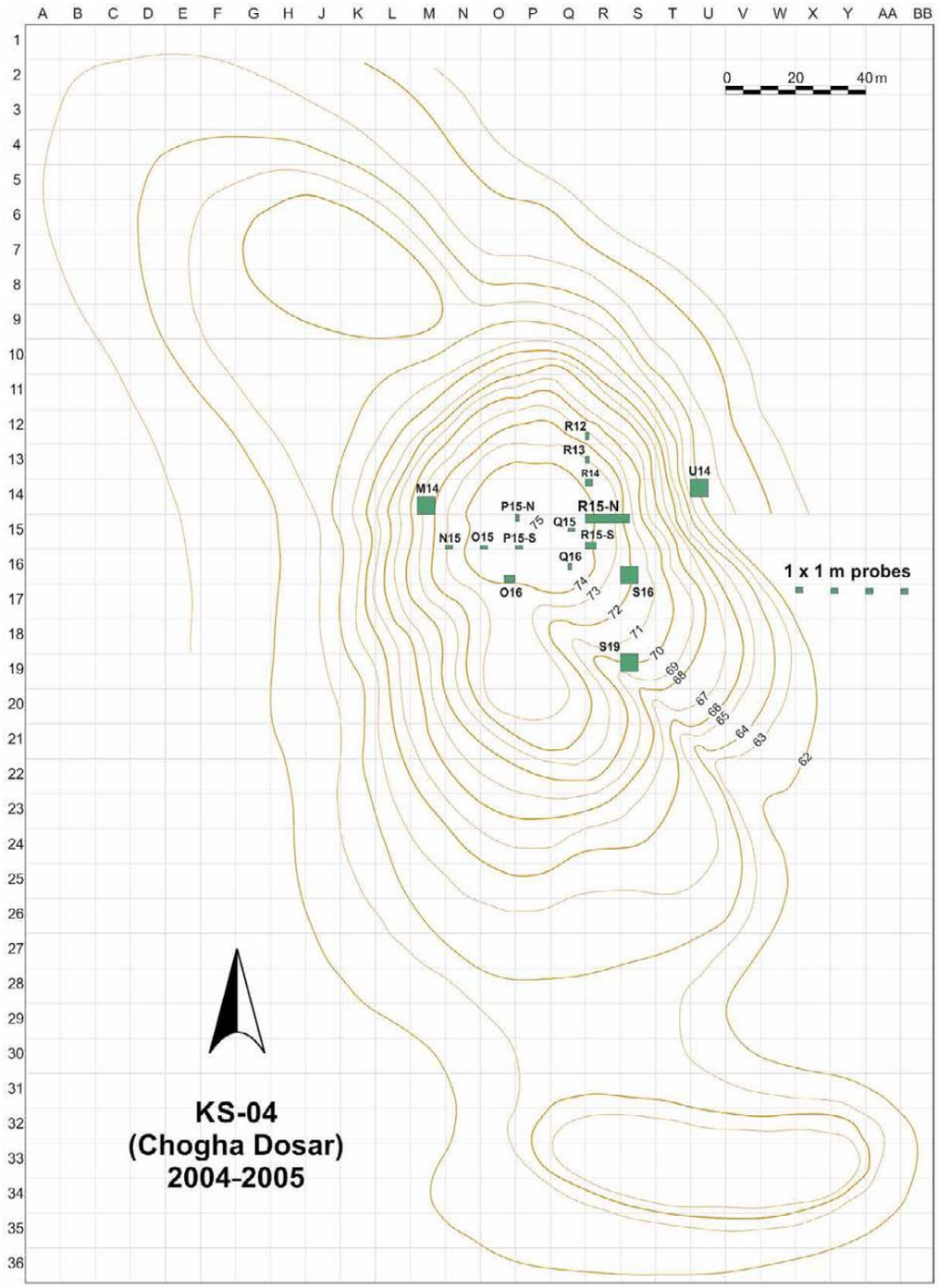

Figure 23. KS-04 contour map.

the entire area of the high mound and measured about 500 m^2.

This mudbrick platform seems to have belonged to two cultural phases, separated by an erosion layer of 10–20 cm. To judge from the pottery we recovered from this feature, the upper stage dated to the Late Susiana 2 (Susa I/A) phase and the lower one to the preceding Late Susiana 1 phase (ca. 4800–4400 BCE). Similar platforms are known at two other sites in Susiana. The one at Susa dates to the Late Susiana 2 period. The other, at the small site of Qabr Sheykheyn and now heavily damaged and reduced, is located 30 km southeast of Dezful and 20 km northwest of Shushtar; it measures 80 × 40 m and, at the time of Harvey Weiss's excavation, rose 6 m above the surrounding plain.[6] Unfortunately, Weiss did not publish any top plans or

6 See Hole 1987, 41; Weiss 1972.

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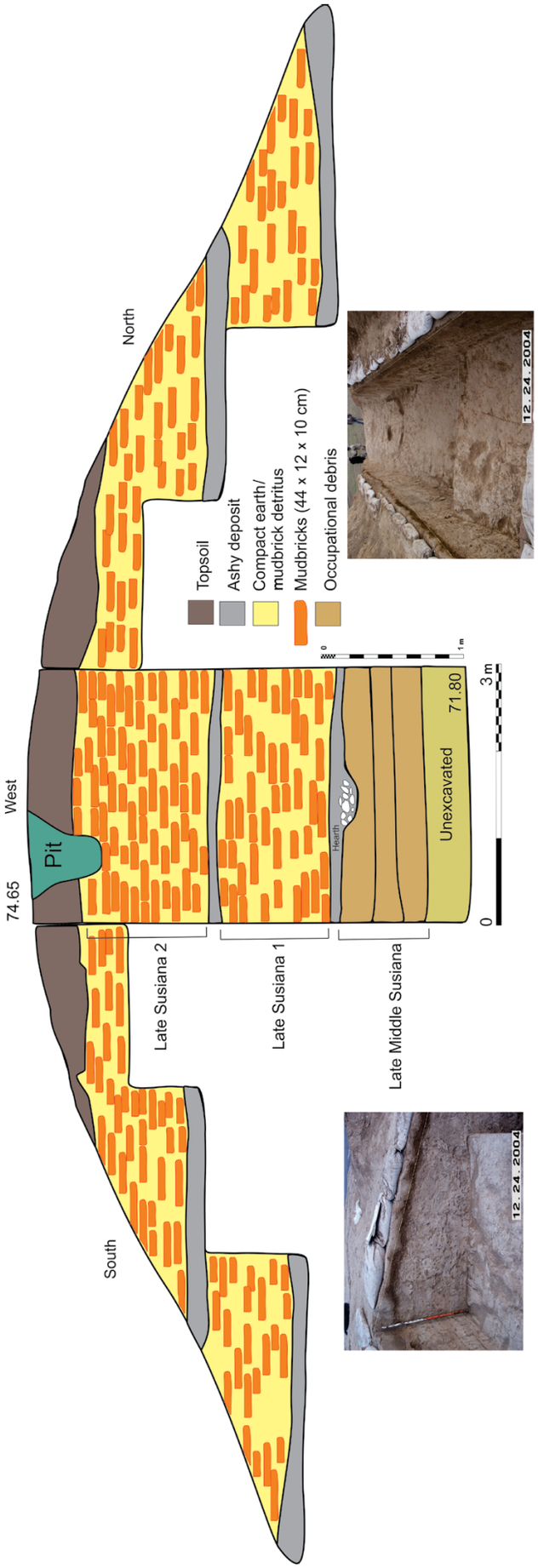

Figure 24. Schematic section of KS-04 stratigraphic trench R15-N.

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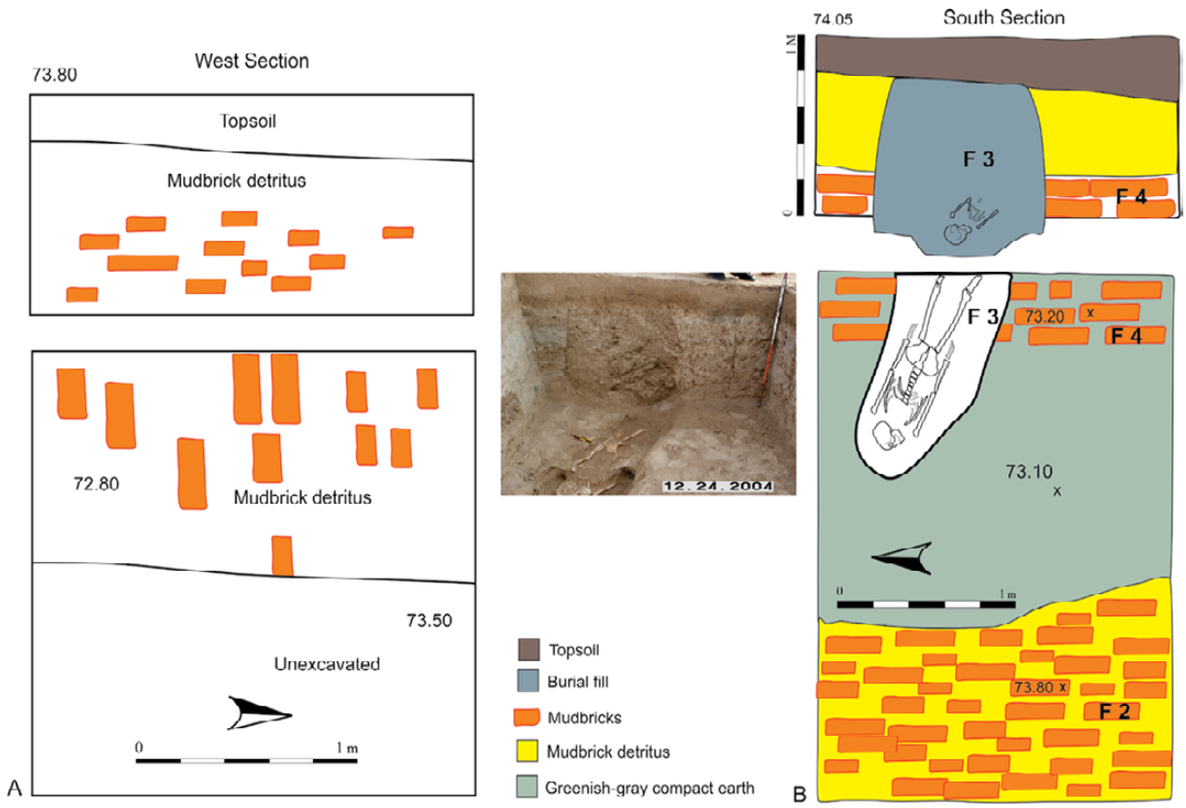

Figure 25. KS-04 top plans and sections. *A*, Square R14; *B*, Square O16.

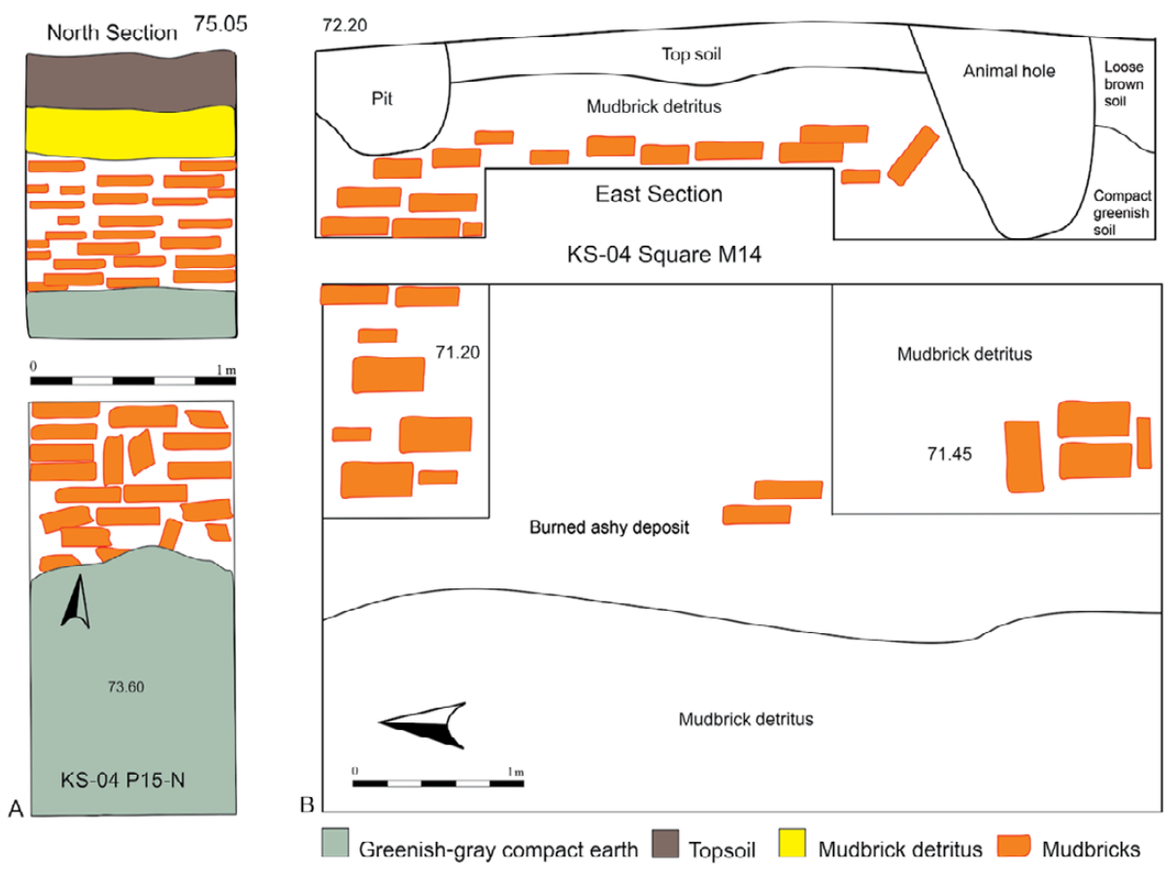

Figure 26. KS-04 top plans and sections. *A*, Square P15-N; *B*, Square M14.

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sections either in his short preliminary report[7] or in his doctoral thesis,[8] but he did report at least three stages of platform construction; one stage was preserved to as much as 30 m^2 and consisted of at least eight courses of mudbricks, of which the Late Susiana 1 bricks measured 52 × 25 × 8 cm and 40 × 22 × 10 cm.[9] Weiss also reported the presence of "wall pegs" for the Late Susiana 2 platform but provided no illustration.[10] We found no wall pegs (*clous*) at KS-04, but we did find a few examples of square baked bricks with a central hole to accommodate such pegs, as at Susa (pl. 91:D). Early baked bricks were also found at Geser, dating to the late fifth millennium BCE.[11]

To appreciate the importance of this mudbrick platform, we should briefly consider the famous Susa platform. Susa was established around 4400 BCE next to the Shaur River on the opposite side of the plain, probably initially as several closely spaced hamlets that later joined to form a single population center of 10–12 ha. Sometime after the initial settlement, a 10 m mudbrick platform that probably supported a temple was constructed at the site, and Susa became a regional cultic and administrative center. At some point, a violent event led to a conflagration of the platform that presumably entailed a large number of violent deaths. The dead were buried in a massive cemetery constructed at the foot of the platform, with perhaps some 2,000 burials.

We know very little about this cemetery because it was excavated in the days when archaeology had not yet become scientific in its procedures. As a result, interpretations of what caused this catastrophic event in the largest and strongest population center of the time range from nomadic invasion from the highlands to communicable diseases caused by starvation to a peasant revolt.[12] Except for the possibility of a peasant revolt, no other internal, intraregional factor, such as a rival center, has been suggested to explain this catastrophic event, because no contemporary site large enough to be considered a potential rival to Susa had been recorded in archaeological surveys.

Our investigations at KS-04 provide clues that can be used to develop an alternative (though by no means definitive) interpretation of Susa's fate during the Late Susiana 2 phase. Much of what is asserted here about the nature of the KS-04 mudbrick platform will have to be supported by extensive excavation at the site. Until that occurs, our conclusions must remain speculative. It is the presence of a monumental and labor-intensive mudbrick platform, together with the size of the site in this phase (ca. 4–4.5 ha), that allows us to offer an alternative to lowland Susiana's regional structure in the period prior to the crystallization of state organizations and urban centers. We need to analyze our data critically, conduct more excavations at the site, and consider questions specifically formulated to shed light on its nature. But based on the raw data we currently have at our disposal, KS-04 seems to be a good candidate as Susa's regional competitor. If this suggestion turns out to be valid, the violence attested at both Susa and KS-04 may reflect a rivalry for regional hegemony that eventually frustrated KS-04's growth in succeeding periods.

KS-108

KS-108 (266502 E, 3565471 N) is located northeast of the Susiana plain (figs. 9–13). A branch of the Siamansur River runs along the northern side of the mound and turns sharply south at the northeastern edge of Mound A (figs. 27–28). The stream originates from the seepage of the Siamansur and Lureh rivers and a few natural springs some 10 km north of KS-108.

KS-108 appears to comprise three distinct mounds that are completely surrounded by cultivation (figs. 27, 29). Mound A, the main mound, consists of a 14 m high mound and terrace that rise some 6 m above the surrounding plain. KS-108 was first reported by Adams and appears in his unpublished list as "Chogha Kabira / Tepe Kirub," measuring 180 × 100 m with a height of 8 m. Johnson uses the name Chogha Kabira for the site in his 1973 publication.[13] When we asked local villagers about the site's name, all identified it as Tappeh Beladieh—no one had heard of Chogha Kabira or Tepe Kirub. Adams probably took those names from a 1917 British survey map (see figure A1 in appendix A). Adams recorded both the height and the area of KS-108's Mound A incorrectly in his list. Johnson's survey (using a plane table and alidade; fig. 29) and our surveys (using a total station) have shown that the main mound measures 160 × 100 m and 14 m in height; Mound B measures 180 × 100 m and 6 m in height; and Mound C, only 2 m high, measures 60 × 35 m.

Adams also identified pottery ranging in date from Early Susiana to the Susa II period. Neither in our

7 Weiss 1972.

8 Weiss 1976.

9 Weiss 1972.

10 Weiss 1972, 173.

11 Alizadeh, Ahmadzadeh, and Omidfar 2014, 22, fig. 17. During my tenure at Susa in 2013–14, I found a number of similarly sized baked bricks but without stratigraphic information.

12 Hole 1990, 1992.

13 Johnson 1973, 76, table 18.

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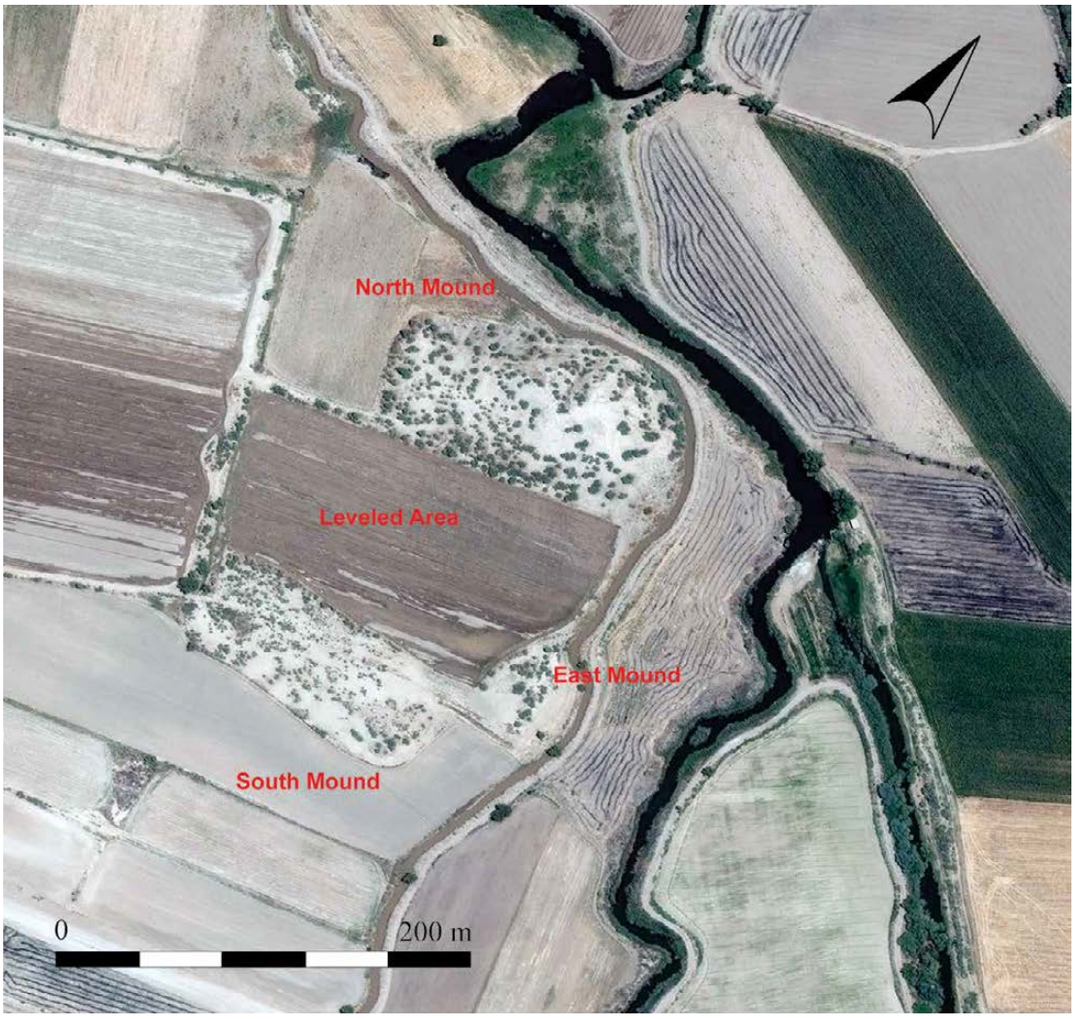

Figure 27. Satellite image of KS-108. Courtesy of Digital Globe.

survey nor in the excavated areas did we find any sherds older than the Late Middle Susiana phase on the main mound; Mounds B and C had sherds only of the Susa II period. On Mound A, we also found some sherds of the Sukkalmakh (Old Babylonian), Sasanian, and early Islamic periods, but our excavations did not reveal any traces of these periods beneath the surface. It is unlikely that the remains of these late phases were washed away; the historical sherds, together with the early Islamic graves we found on the mound's summit, were probably left by nomadic people who used the mound as their seasonal campsite. Johnson also reported the presence of the Terminal Susa phase (ca. 4000–3900 BCE) at the site; we did not find sherds of this phase but did find evidence of all of Johnson's Susa II phases both in our trenches and on the surface.

As work continued on the main mound, we opened a number of 1 × 1 m probes in the flat, cultivated area between it and Mound B (fig. 30). As with the flat, cultivated area between the North and South Mounds at KS-59 (see below), this flat area south of the KS-108 main mound had also been razed to ground level by local farmers; just below the surface, we found evidence of a Susa II occupation. Thus the three distinct mounds must be considered one, with a total area of about 7 ha.

As at KS-04 and KS-59, it was important for us to have a stratified sequence of the cultural phases present at KS-108. We chose the steepest part of the mound in Square L4 and opened a 3 m wide trench (figs. 30–31). Here, after about 30 cm of topsoil, we came down on a series of occupational debris layers that had accumulated at the base of a mudbrick wall about 1 m below the surface of the trench. The pottery from this level belonged to the Late Susa II phase. Layer 1 seems to have been an open area filled with the debris of a living unit not found within the limits of the trench.

Below the beaten floor of L 1 we found 35 cm of compact earth, mudbrick detritus, and whole and fragmentary mudbricks that may have belonged to a lower wall of L 2. The pottery in L 2 belonged to the Middle Susa II phase. Two large trash pits from L 2 penetrated

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Figure 28. Views of KS-108. *A*, looking east with a cultivated field in the foreground where much of the mound's terrace was razed; *B*, Sukhtai Stream at the base of the mound.

an occupational debris deposit of L 3. No architectural phase was found associated with this Early Susa II level.

Layer 4 yielded ceramics of Late Susiana 2 date. Much of this level was destroyed by a large pit dug from L 3, and a partially preserved wall was all we found. It is possible that the architectural unit here may have stood abandoned for some time, as we did not find any sherds dating to the Terminal Susa phase—an intervening phase between the Late Susiana 2 and Early Susa II phases. Nor did we detect any physical evidence of the presumed abandonment (possibly because of the lack of vigorous supervision).

Layer 4 was separated from L 5 by a thin erosion layer between the remains of the Late Susiana 2 phase and those of the preceding Late Susiana 1 phase. The only evidence of architecture that we found in L 5 was a wall of long bricks measuring 46 × 12/10 × 10/8 cm. The large pit that had been dug from L 3 also destroyed the top of this wall. No other architectural feature was found associated with the wall. Fallen mudbricks in the matrix of detritus indicate that this architectural unit, too, may have stood abandoned for some time.

Layer 6 was separated from L 5 by a compact, beaten-earth floor. Pottery from L 6 dates it securely

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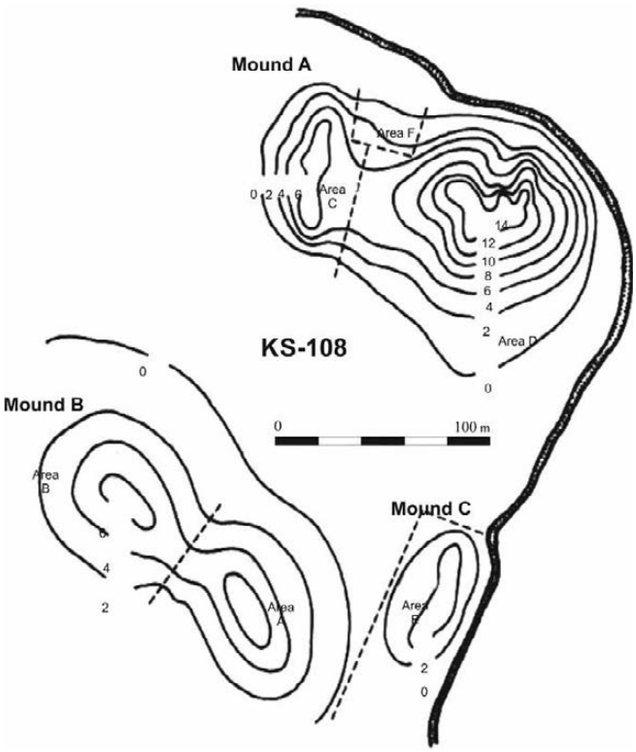

Figure 29. KS-108 contour map by Gregory Johnson (areas A–E indicate sherd collection).

to the Late Middle Susiana phase. A lack of time prevented us from penetrating deeper below this level, but to judge from the surface pottery, the Late Middle Susiana seems to be the earliest phase of occupation at KS-108.

To access horizontal exposure of the preserved architecture at KS-108, we excavated multiple trenches on both the terrace and the summit of the mound. Squares B5, B6, C5, C6-S, and N5 either were badly damaged by the plowing of local villagers or had been filled with wash from upper parts of the mound (fig. 30).[14]

Just below the surface in Square M6, we found a number of intact though badly disturbed burials (fig. 32:A). Features 1 and 5, two of the better-preserved burials, were furnished with a series of mudbricks against which the dead had been placed. One of these features (F 1), presumably a female burial, had a necklace of semiprecious stones around the skeleton's neck (fig. 32:A; pl. 82:F). All the skeletons were oriented east–west and faced south (toward Mecca), a sure sign that they all belonged to the Islamic period. Bones jutting out of robber pits on the high mound discouraged us from continuing this trench or moving to another spot.

Square C6-N was the only area on the terrace that produced relatively undisturbed archaeological remains (fig. 32:B). Below some 35 cm of topsoil we encountered three large trash pits, F 4 and F 5, which did not contain much archaeological material and may well have been of recent date. Feature 6 was a burial pit in which we found a skeleton; the pit was capped by a series of mudbricks and had penetrated deep into L 12, of Late Susa II date.

Features 1 and 2 were ancient pits; they contained mudbrick fragments and whole and fragmentary beveled-rim bowls (fig. 32:B). Both pits had also penetrated the ancient surface of L 12. On the west of the trench, we came down on F 8, a plastered floor. This floor was relatively clean except for some sherds and two loom weights. The most interesting features associated with the floor were a square bin made of mudbricks (F 7) and a pottery vat immediately to the northwest of the bin and resting on the floor. For reasons we did not understand, much of the plastered floor was heavily damaged to the east. We could not determine whether L 12 was a living surface, but we found an intact small jar resting at 77.50 m ASL.

Even though we were eager to excavate this promising area to deeper levels, for reasons mentioned in the volume introduction we had to abandon the site with hopes of returning. With an area of about 7 ha, KS-108 must have been a small town—most probably a satellite of Chogha Mish, the largest population center in eastern Susiana in the late fourth millennium BCE. We did not find any evidence of administrative technology at the site—but given the fact that our stratigraphic trench was only 3 m wide and other areas either did not have undisturbed archaeological layers or, as in Square C6-N, were not penetrated deep enough, the possibility remains that future large and deep exposures may yield evidence of administrative technology.

SURVEY AND EXCAVATIONS AT KS-59

INTRODUCTION

KS-59, known locally as Abu Fanduweh, is located about 12 km south of Susa (figs. 9–12, 33–39). The site consists of two complexes, southern (245468.53 N, 355033.51 E) and northern (245542.96 N, 3550545.92 E), separated by the Nahr Atij (Atij Stream). The South Mound is roughly circular and stands at an elevation of 80.75 m ASL, some 18 m above the surrounding plain.

14 Workers from the nearby village of Beladieh told us that they had stopped using the terrace as a farm only recently and that this portion of the site had been heavily plowed for fifty years.

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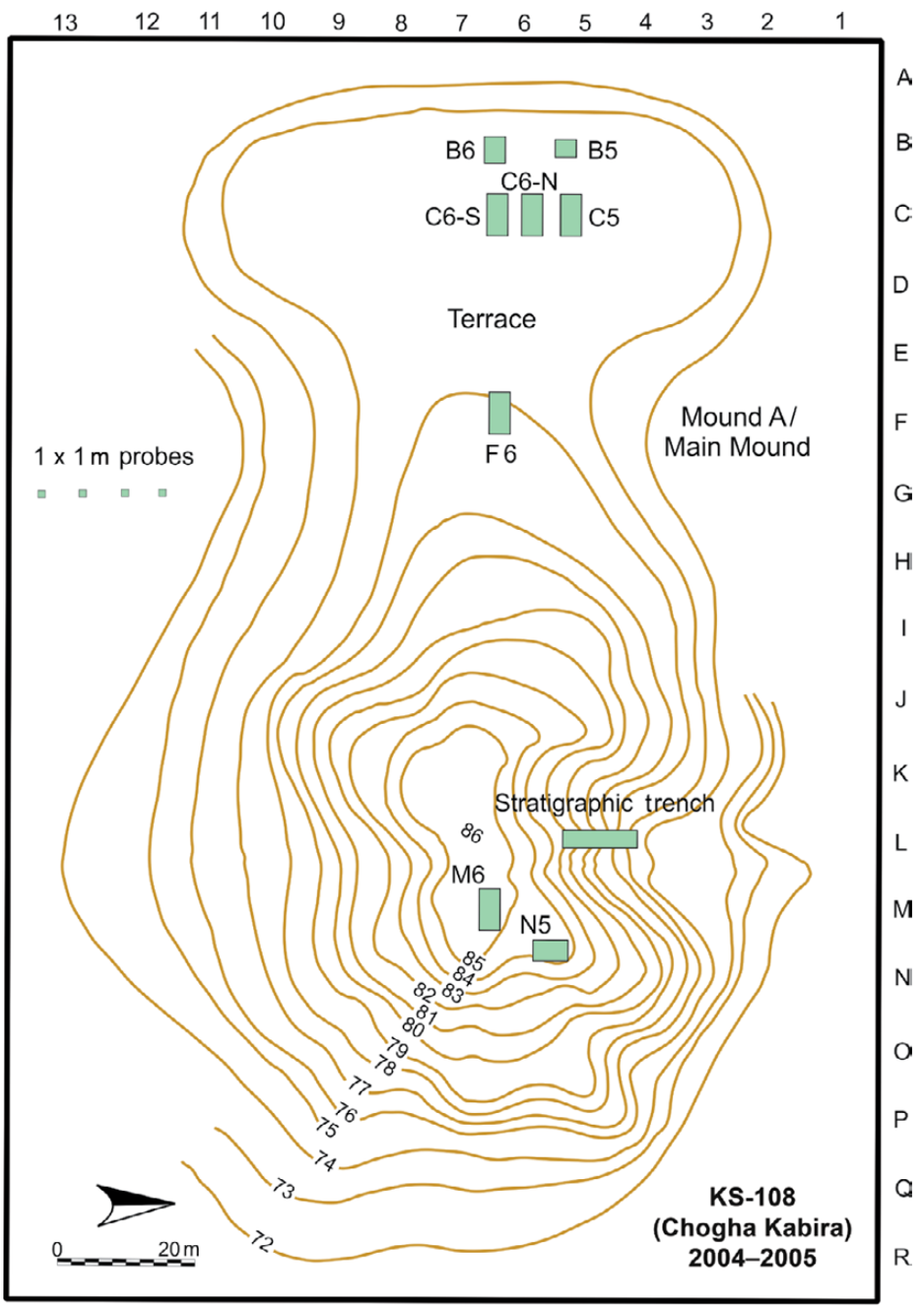

Figure 30. KS-108 contour map of Mound A.

The northern complex is a saddle-shaped mound and stands at 75.30 m ASL, some 9 m above the surrounding plain.

KS-59 was first recorded by Adams in his 1960–61 survey as "Ishan Rud (Abu Fanduweh)," a site with a diameter of 280 m and a height of 14 m.[15] Adams listed Middle Susiana, Susa I, Susa II, Susa IV/D, Isin-Larsa to Old Babylonian, and possibly Kassite as the periods attested there. In our survey and excavations, we found pottery dated to the Late Middle Susiana; Late Susiana 1; Late Susiana 2; Early, Middle, and Late Susa II; Proto-Elamite / Susa III; Susa C; Sukkalmakh (Old Babylonian); and Middle Elamite (Kassite) phases. We found no evidence of the Susa IV / Susa D (Early Dynastic / Akkadian) phase.

Because Adams did not discuss individual sites in his 1962 article or provide any top plans of the sites he surveyed, it is not clear how he measured the diameter of KS-59. But we can safely assume that he measured only the South Mound, whose north–south diameter comes close to the dimensions he gave, and that he probably did not survey the northern complex.

15 Adams 1962.

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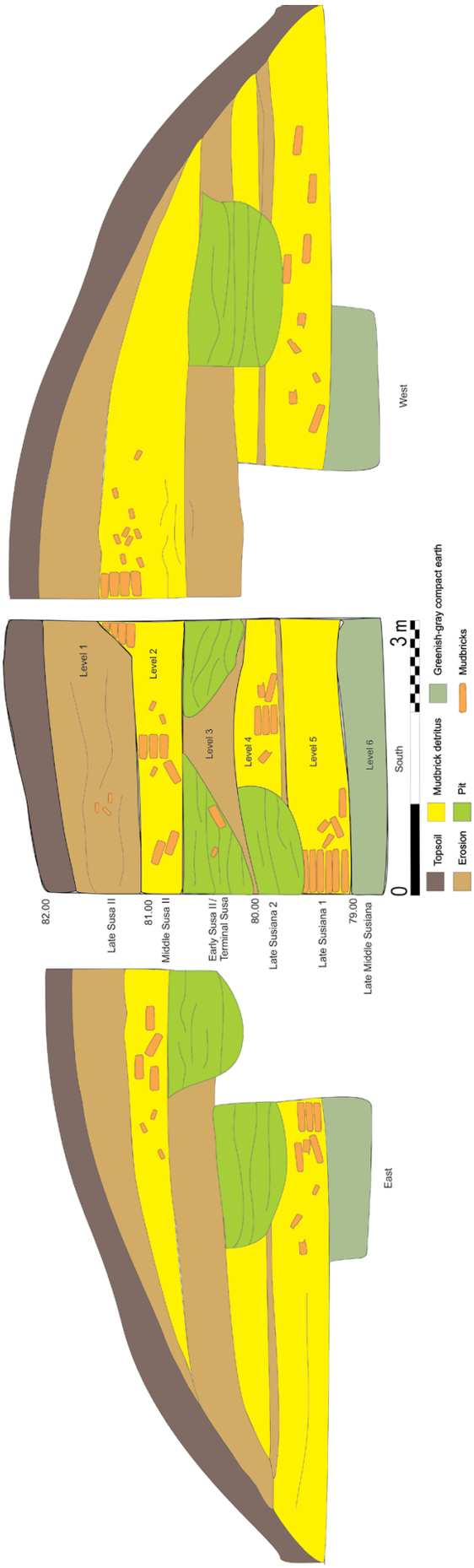

Figure 31. South, east, and west sections of stratigraphic trench in Square L4.

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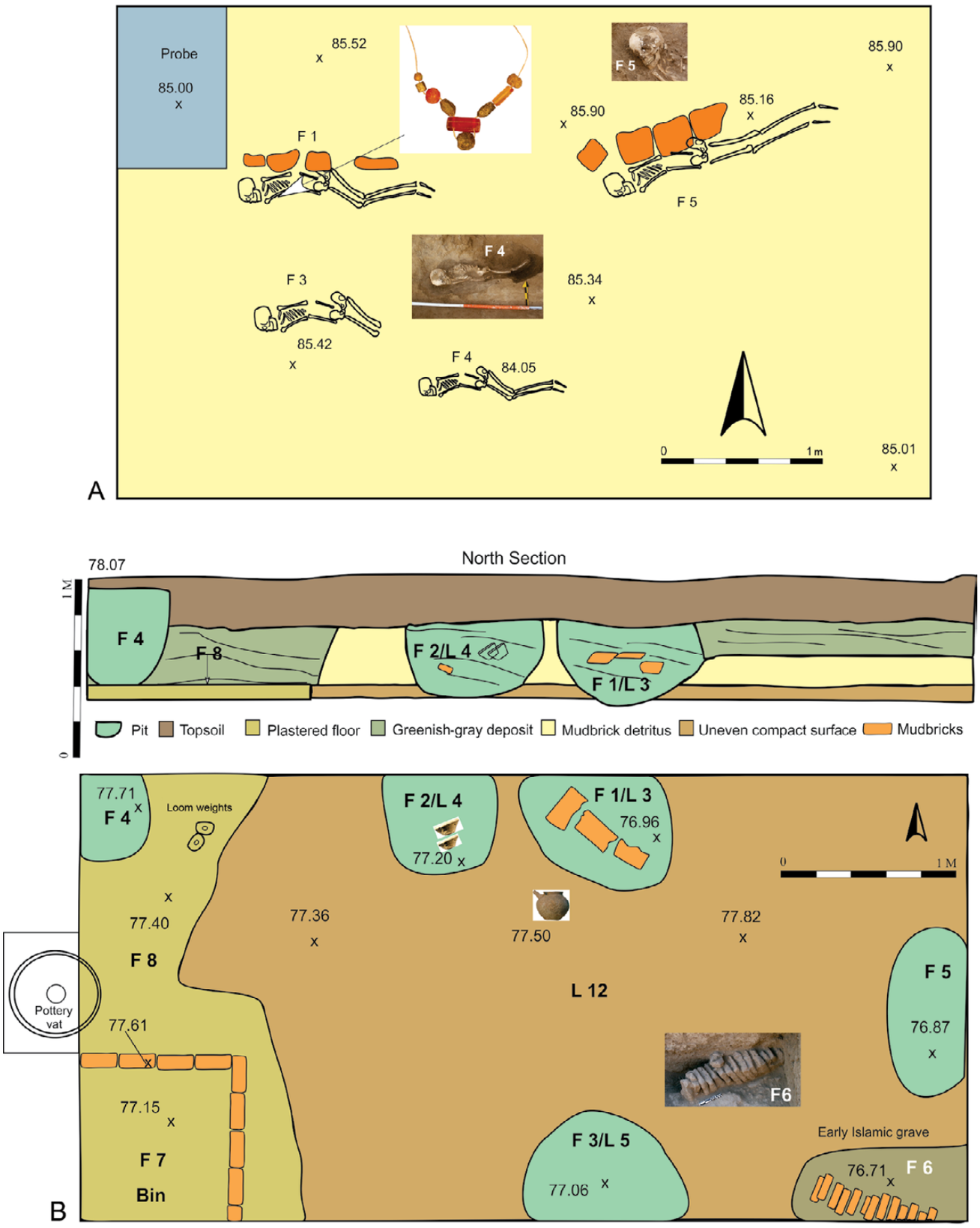

Figure 32. KS-108 excavated areas. *A*, early Islamic graves in Square M6; *B*, Late Susa II remains in Square C6-N.

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Figure 33. Satellite image of KS-59 and its environs.

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Figure 34. Close-up view of KS-59.

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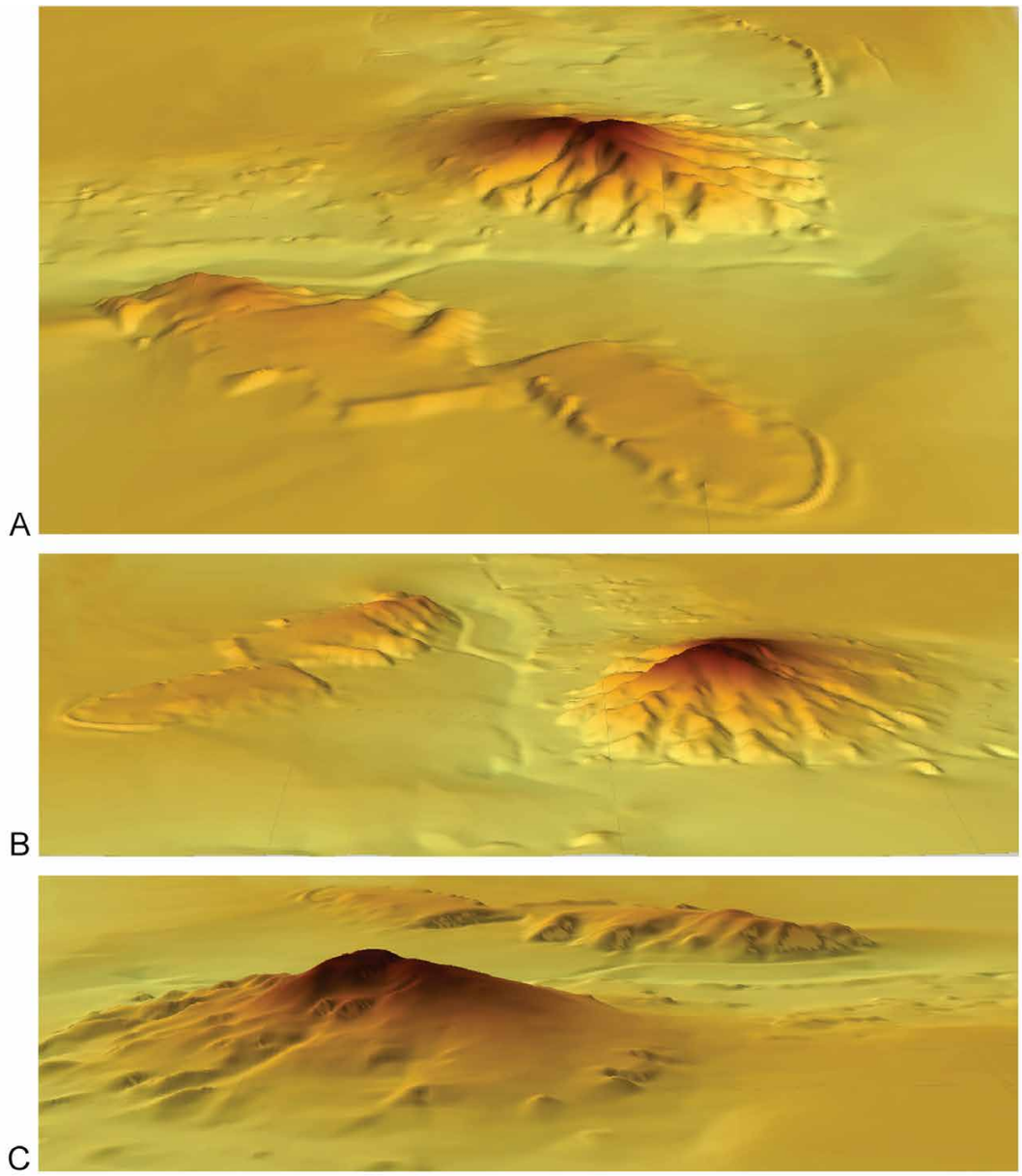

Figure 35. Three-dimensional maps of KS-59. Courtesy of M. R. Rokni.

SURVEY

In 1970–71, Johnson systematically surveyed KS-59. Since Johnson's interest was focused on the material dating to the fourth millennium BCE, he reported only the presence of Terminal Susa I and Susa II—that is, the Early, Middle, and Late Susa II (Uruk) phases.[16] Johnson divided his estimated 9.94 ha area encompassing both the North and South Mound complexes into eight sections, A to H, in which he conducted his "systematic, stratified, unaligned, random sampling."[17] On the basis of this methodology, Johnson provided occupational areas for his fourth-millennium BCE phases: 6.92 ha for the Early Uruk, 9.56 ha for the Middle Uruk, and 8.16 ha for the Late Uruk (here, the Early, Middle, and Late Susa II phases).[18] Johnson also surveyed a large complex of fourth-millennium BCE pottery kilns on the northwest of the northern complex.[19] In the 2006 season, we found that this kiln area had been completely obliterated by local farmers.

The South Mound was excavated by Ezat O. Negahban in the early 1960s, when he was also excavating Haft Tappeh (fig. 40:A). Here he excavated a 5 m wide step trench, presumably down to sterile soil. Negahban never published a report of his excavations, but

16 Johnson 1973, 75, table 18.

17 Johnson 1973, 24.

18 Johnson 1973, 75, table 18, pl. XIV.

19 Johnson 1973, 107–9, fig. 21.

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Figure 36. KS-59 South Mound viewed from the south in 1961 (*top*) and 2006 (*bottom*).

he used the surface of the mound as his sherd yard (as he habitually did at any site he excavated), thereby rendering distorted and unreliable any conclusions based on future surface surveys. If Johnson was aware of this fact, he did not mention it in his reports. Nevertheless, we also surveyed the South Mound within seven parallel strips—not to draw any conclusions but rather to see the evidence of the phases below the surface (fig. 41; pls. 8–15). My estimates of the fourth-millennium BCE occupational areas are based on our trenches and probes, which indicated an area of more than 2 ha for the Early Susa II phase of the South Mound. Both the northern and the southern complexes were occupied during the Middle and Late Susa II phases, each with a total occupied area of 15 ha.

Our intensive survey of the North and South Mounds, together with the results of our numerous probes throughout the site, indicated that in antiquity the two complexes had been a single mound comprising a high mound in the south and a low terrace in the north, thus increasing the settlement's total area during the fourth millennium BCE to more than

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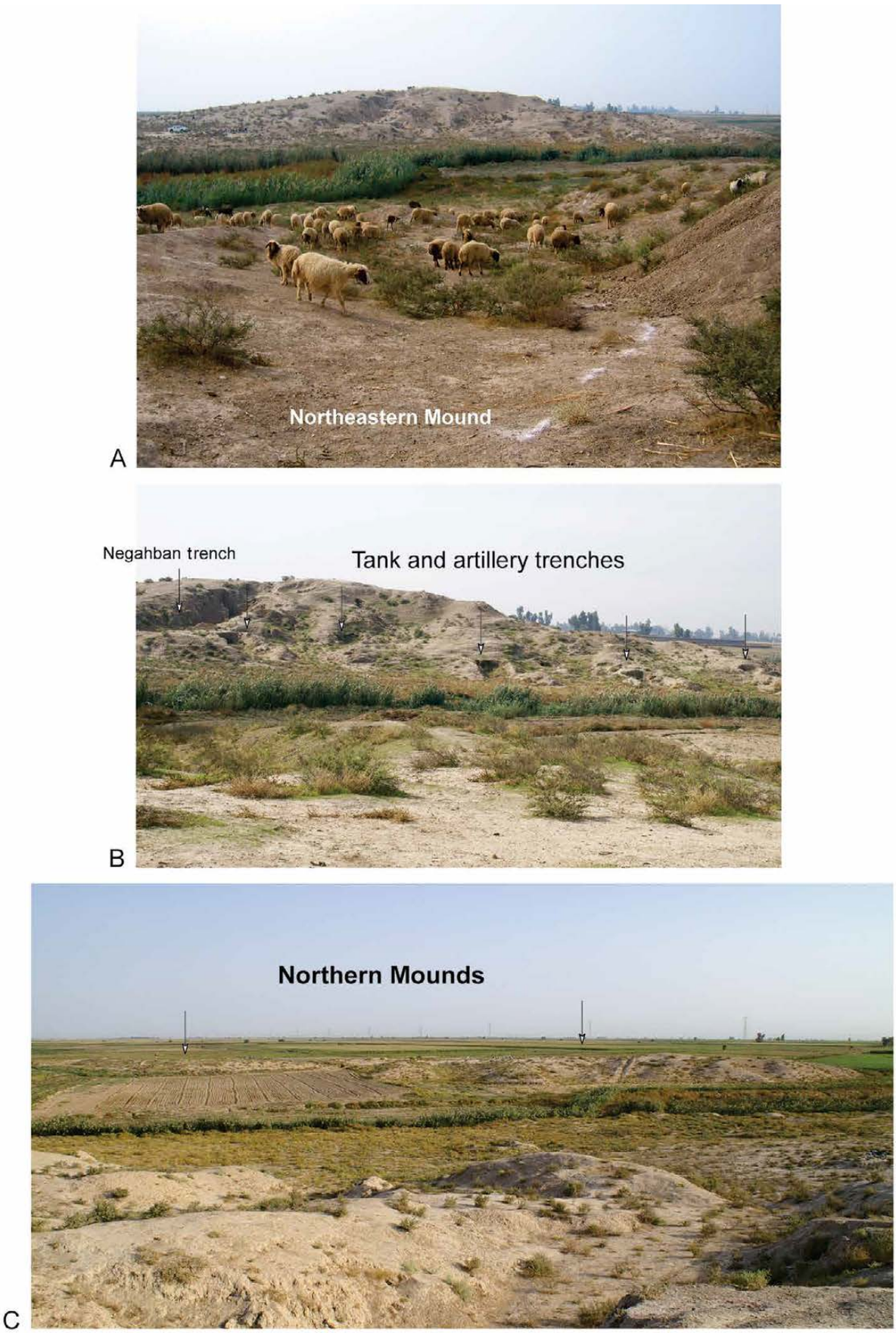

Figure 37. *A*, KS-59 South Mound viewed from the North Mound; *B*, defensive artillery and tank trenches dug in the South Mound during the Iraqi invasion of Khuzestan; *C*, northern mounds viewed from the South Mound.

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Figure 38. *A*, KS-59 South Mound viewed from the west; *B*, Atij Stream at the South Mound's base.

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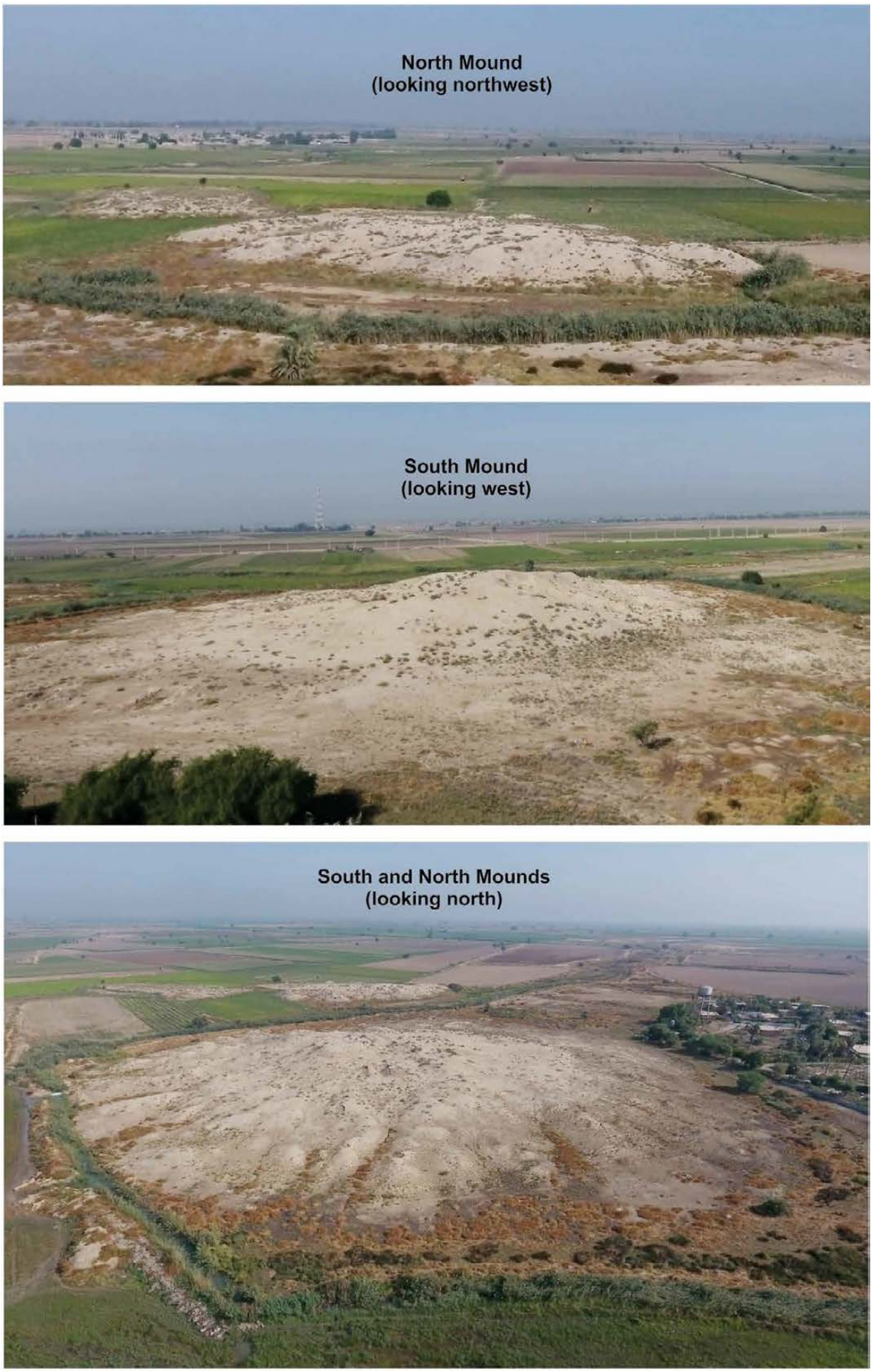

Figure 39. Aerial views of the KS-59 mound complex.

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A

B

Figure 40. *A*, Negahban's 1965–66 step trench in KS-59; *B*, the positions of the 1965–66 and 2005–6 trenches.

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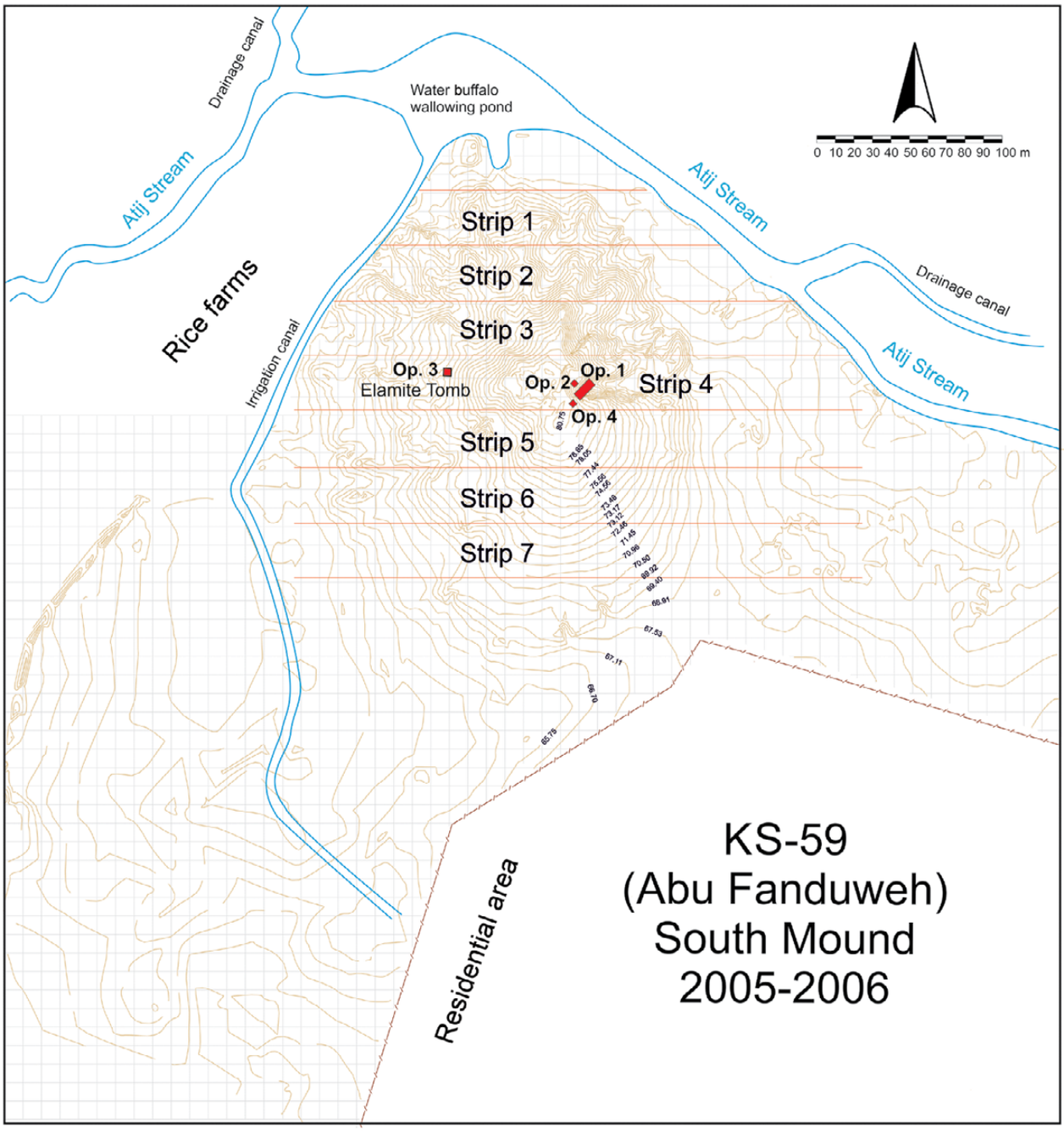

Figure 41. Contour map of KS-59 South Mound.

15 ha—5 ha larger than Johnson's estimate. We found no Early Susa II (Johnson's Early Uruk) sherds on the northern complex.

Our surface collection and excavations indicated that the South Mound was occupied sometime during the Late Middle Susiana phase (ca. 5000 BCE) and continued to be occupied during the Late Susiana 1 and 2 and Susa II and III phases (pls. 16–29). The site was apparently abandoned for about a millennium and then reoccupied during the Sukkalmakh period around 1800 BCE (pl. 25). Apparently, the South Mound was used as a cemetery during the Middle Elamite period between 1300 and 1100 BCE (fig. 42).

The northern complex seemed pristine. There were no signs or reports of any prior excavations, and, except for major leveling of the site in the flat area on the east and south, the mound itself seemed untouched above the level of the plain. We first laid a grid on the entire northern complex and collected everything we saw within the 10 × 10 m squares (figs. 43–44; table 6). The entire surface collection is now at the pottery bank of the National Museum of Iran in Tehran.

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Figure 42. Views of robbed Middle Elamite brick vault tomb in KS-59 South Mound Operation 3.

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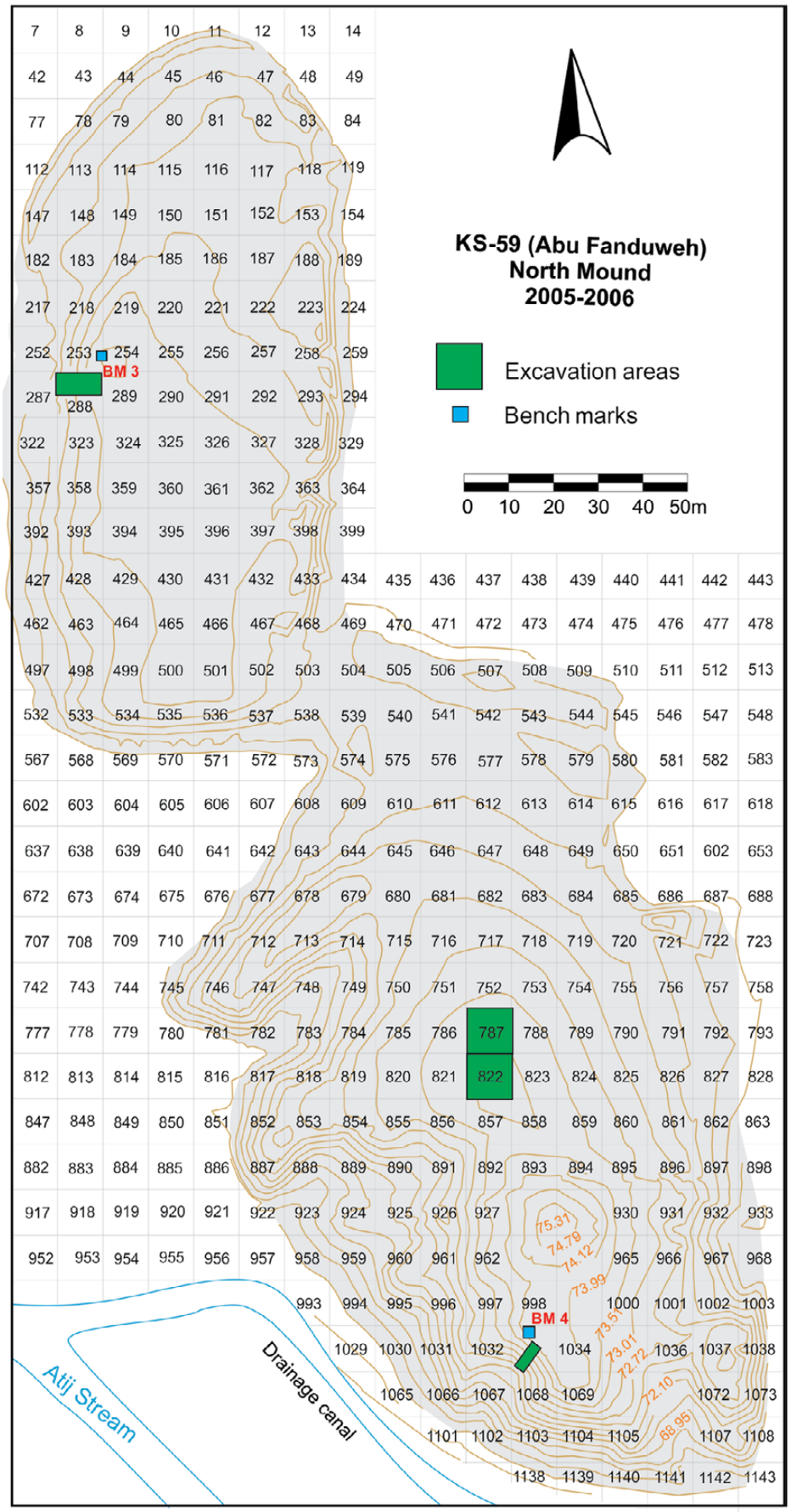

Figure 43. Contour map of KS-59 North Mound complex.

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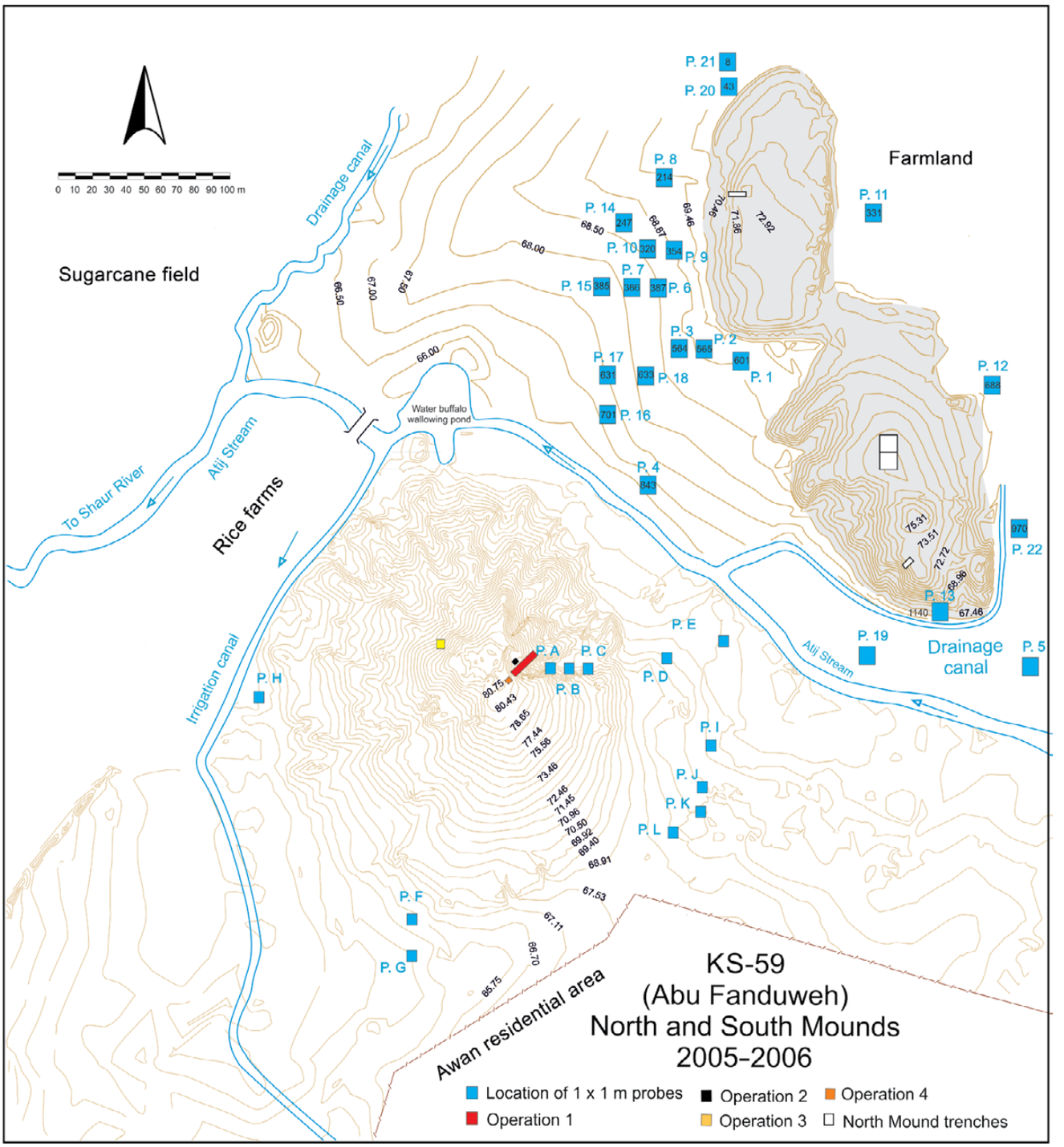

Figure 44. Contour map of KS-59 showing the locations of probes and excavated areas.

The earliest occupational phase of the North Mound is Middle Susa II. This mound was abandoned at the end of the Late Susa II phase. Here, just as at the South Mound, we found sherds of the Middle Elamite, Sasanian, and Islamic phases on the surface (table 6). Although none of our excavated trenches and numerous probes yielded any sherds of those periods, the presence of Sasanian or Islamic baked bricks on the surface points to the possibility that buildings of those dates once existed here but were obliterated. However, no other surface signs supporting this possibility, such as a concentration of bricks or pottery, were found. Nor did we find any late remains in our four operations at the northern complex.

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Table 6. Spatial distribution of various pottery and objects on KS-59 North Mound.

Square no.	Coarse ware	Medium ware	Fine ware	Gray ware	Susiana painted	Flint blade	Debitage	Other
79	108	133	—	—	—	—	—	1 glazed Islamic
80	89	14	15	—	—	—	—	—
81	18	89	34	—	—	—	—	Pottery slag
82	—	201	27	—	LS 2: 1	1	3	1 baked-brick fragment
114	89	108	22	1	—	2	1	—
115	136	88	12	—	—	—	—	—
116	68	52	—	—	—	—	—	1 glazed Islamic
117	103	56	22	—	—	2	3	3 Islamic
149	85	72	12	—	—	—	—	1 glazed Islamic, 1 baked-brick fragment
150	80	63	8	—	—	—	—	1 baked-brick fragment
151	51	110	13	—	—	—	—	—
152	—	—	9	—	—	1	—	2 glazed Islamic, 1 baked-brick fragment
181	132	89	18	—	LS 2: 1	—	—	—
182	34	15	—	—	—	—	—	—
183	53	10	3	—	—	—	—	—
184	94	72	13	—	—	—	—	2 reserved slip sherds
185	57	32	—	—	—	—	—	—
186	75	54	10	—	—	—	—	—
187	—	69	7	—	—	3	—	3 glazed Islamic, 1 baked-brick fragment
219	24	122	28	—	LS 2: 1	1	—	—
220	10	25	4	—	—	—	—	1 baked-brick fragment, 1 spindle whorl
221	50	47	8	—	—	—	—	1 pottery slag
222	42	12	2	—	—	—	—	—
223	18	6	—	—	—	—	—	—
224	10	—	—	—	—	—	—	—
254	85	61	22	—	—	—	—	1 blue-glazed Islamic
255	26	—	6	—	—	—	—	—
256	50	15	—	—	—	—	—	—
257	88	—	8	—	—	—	—	1 whetstone
258	7	3	—	—	—	—	—	—
259	11	—	2	—	—	—	—	—

(*continued*)

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Table 6. Spatial distribution of various pottery and objects on KS-59 North Mound (*continued*).

Square no.	Coarse ware	Medium ware	Fine ware	Gray ware	Susiana painted	Flint blade	Debitage	Other
260	—	15	11	—	—	—	—	—
289	95	71	17	—	—	—	—	1 baked-brick fragment, 1 blue-glazed Islamic
290	83	62	11	—	—	—	—	1 animal figurine
291	40	32	8	—	—	—	—	1 conical token
292	—	26	5	—	—	1	—	3 baked-brick fragments
293	18	31	—	—	—	—	—	—
324	219	150	39	1	—	—	1	1 spindle, 1 pottery slag, 1 mace-head
325	90	28	12	—	—	—	—	—
326	32	28	8	—	—	—	—	1 reserved slip
327	—	—	16	—	—	1	—	—
328	11	5	—	—	–	—	—	—
359	66	52	15	—	—	—	—	—
360	50	30	7	—	—	—	—	—
361	65	11	11	—	—	—	—	1 whetstone, 1 baked-brick fragment
362	231	52	12	—	—	—	—	—
394	60	32	12	—	—	—	—	—
395	38	22	8	—	—	—	—	—
396	64	29	8	—	—	—	—	—
397	—	90	11	—	LS 2: 1	—	—	1 stone vessel fragment
428	32	15	5	—	—	—	—	—
429	80	65	21	—	—	—	—	1 pottery slag
430	59	38	15	—	—	—	—	—
431	50	38	17	—	—	—	—	1 baked-brick fragment
432	—	—	29	—	—	—	—	2 baked-brick fragments
464	62	58	18	—	—	—	—	—
465	21	129	27	—	—	—	—	—
466	100	94	18	—	—	1	—	1 mudbrick fragment
467	—	—	14	1	—	—	—	—
499	102	89	21	—	—	2	—	1 baked-brick fragment
500	105	48	18	—	—	—	—	1 pottery slag
501	—	101	20	—	—	—	1	—
502	440	54	11	—	—	—	—	—

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Table 6. Spatial distribution of various pottery and objects on KS-59 North Mound (*continued*).

Square no.	Coarse ware	Medium ware	Fine ware	Gray ware	Susiana painted	Flint blade	Debitage	Other
503	—	—	53	3	—	3	—	1 pottery slag
534	260	27	—	2	—	—	—	1 twisted-glass bracelet
535	130	30	11	—	—	—	—	—
536	150	65	7	—	—	—	—	—
537	89	56	16	—	—	—	—	—
538	95	23	—	—	—	2	1	23 Islamic sherds
539	—	25	7	—	—	—	—	—
540	—	32	3	—	—	—	—	—
541	34	57	11	—	—	1	—	1 pottery slag
542	—	—	17	—	—	—	—	2 baked-brick fragments
573	—	—	13	—	—	—	—	—
574	—	—	21	—	—	—	—	1 pottery slag, 1 baked-brick fragment
575	—	—	13	—	—	—	—	—
576	—	—	33	—	—	—	—	—
577	—	—	52	—	—	—	—	1 whetstone
578	221	89	31	—	LS 2: 1	—	7	—
579	—	69	—	—	—	—	—	—
609	—	—	38	—	—	—	—	—
610	—	—	29	2	—	2	—	1 pottery slag
611	61	—	16	2	—	1	—	1 Islamic sherd
612	102	73	15	—	—	—	2	1 spindle whorl
613	—	82	21	—	—	—	3	1 baked-brick fragment
614	42	23	10	1	—	2	3	4 baked-brick fragments
645	23	18	18	—	—	—	2	—
646	—	—	29	—	—	—	—	2 baked-brick fragments
647	—	—	22	—	—	2	—	—
648	67	32	22	—	—	2	—	1 baked-brick fragment
649	—	—	45	—	—	2	—	—
680	233	78	17	—	—	7	—	1 alabaster bowl fragment, 1 pottery slag
681	43	22	11	—	—	1	—	3 baked-brick fragments
682	—	—	34	—	—	—	—	2 baked-brick fragments

(*continued*)

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Table 6. Spatial distribution of various pottery and objects on KS-59 North Mound (*continued*).

Square no.	Coarse ware	Medium ware	Fine ware	Gray ware	Susiana painted	Flint blade	Debitage	Other
683	76	32	12	—	—	—	—	—
684	—	—	42	1	—	1	—	—
715	—	155	14	—	—	1	2	1 baked-brick fragment, 1 pottery slag
716	302	22	7	1	LS 1: 1	1	3	1 baked-brick fragment
717	423	56	75	3	—	2	—	1 deep-blue Islamic sherd, 1 copper needle?
718	324	102	54	1	—	1	4	1 baked-brick fragment
719	245	108	74	—	—	3	3	1 glazed Islamic
749	—	—	18	—	—	—	—	1 baked-brick fragment
750	324	87	42	1	—	3	5	32 pottery slags, 1 deep-blue Islamic sherd
751	247	98	26	7	LS 2: 1	1	1	1 piece of glass, 1 glazed Islamic, 1 Sasanian sherd
752	129	76	91	—	LS 2: 1	4	—	1 glazed Islamic
753	433	104	35	—	—	4	—	1 piece of glass
754	87	54	21	1	—	—	—	1 baked-brick fragment, 1 glazed Islamic, 1 pottery slag
785	432	122	48	—	LS 2: 1	2	3	5 pottery slags
786	453	211	89	3	—	2	—	2 pottery slags, 1 Sasanian and 2 unidentified sherds, 2 tetrahedron tokens
787	341	230	102	—	—	—	—	1 conical token, 1 glass bracelet, 1 Sasanian sherd
788	345	203	78	—	LS 1: 1	2	9	2 pottery slags, 1 green-glazed Islamic sherd
789	423	312	104	—	LS 1: 1	1	5	1 baked-brick fragment
820	401	256	112	1	LS 1: 1	1	2	3 green-glazed Islamic sherds
821	280	98	82	—	—	—	2	—
822	145	102	122	—	—	2	4	1 green-glazed Islamic sherd, 1 piece of glass
823	230	105	99	—	LS 1: 3	—	5	1 spindle whorl, 2 pottery slags
824	230	78	82	—	—	3	2	1 blue-glazed Islamic sherd
825	146	89	65	—	—	—	3	—
826	110	73	43	—	—	—	—	—

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Table 6. Spatial distribution of various pottery and objects on KS-59 North Mound (*continued*).

Square no.	Coarse ware	Medium ware	Fine ware	Gray ware	Susiana painted	Flint blade	Debitage	Other
855	—	—	24	1	—	—	—	1 glass bracelet
856	201	101	45	—	—	1	—	—
857	313	112	57	—	—	—	3	—
858	224	98	40	—	—	7	3	1 blue-glazed Islamic sherd
859	322	109	67	—	LS 2: 1	5	6	—
860	209	87	32	—	—	1	—	—
861	123	56	23	—	—	2	—	—
862	87	32	12	—	—	—	—	—
890	103	45	16	—	LS 2: 2	—	—	2 baked-brick fragments
891	209	66	17	—	—	—	—	1 baked-brick fragment
892	450	122	39	—	LS 1: 2	—	3	1 Islamic sherd, 1 shell, 2 pottery slags
893	42	15	11	—	—	2	—	1 baked-brick fragment, 1 glazed Sasanian sherd
894	98	43	15	—	—	4	—	—
895	104	32	10	1	—	—	—	3 baked-brick fragments, 1 stone mace-head
896	98	23	8	—	—	—	—	2 glazed Islamic sherds
927	212	45	23	—	—	1	—	1 pottery slag, 1 baked-brick fragment
928	142	32	16	—	—	2	3	—
929	42	12	5	—	—	—	—	—
930	34	8	—	—	—	—	—	—
964	56	17	7	—	—	—	—	—
965	76	15	10	—	—	2	—	—
998	56	11	15	—	—	—	—	—
999	78	16	11	—	—	—	—	—
1000	67	13	8	—	—	—	—	—
1001	54	14	6	—	—	—	—	—
1034	43	11	5	—	—	—	—	—
1035	52	12	8	—	—	4	—	—

Note: LS = Late Susiana. None of our trenches and probes yielded pottery of this period.

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EXCAVATIONS: INTRODUCTORY REMARKS

As a large satellite of Susa in the fourth millennium BCE and a regional pottery workshop, KS-59 is an important settlement to investigate. Unfortunately, we lacked a sufficient number of seasoned field supervisors to carry out detailed stratigraphic excavations. This circumstance, coupled with the fact that there was no guarantee the excavation could continue for even one more season, forced us to work like there was no tomorrow and to settle for arbitrary 20 cm levels in some of the operations.

Our primary goals in excavating KS-59 were to establish the occupational history of the settlement, find stratified evidence for Johnson's subdivision of the Susa II (Uruk) period, discover evidence of intraregional trade, identify possible differences between the southern and northern complexes, and determine the actual extent of the fourth-millennium BCE phases of occupation through a large number of probes. Our surface survey of the two complexes showed that the South Mound was first occupied sometime during the Late Middle Susiana phase, perhaps around 5000 BCE. It was only in the mid-fourth millennium BCE that the settlement greatly expanded to the north, as we found evidence there of Middle and Late Susa II occupation in all our trenches, as well as in our numerous probes. All sixteen of the 1 × 1 m probes we excavated on the west and southwest of the North Mound (fig. 44) produced remains of the second half of the fourth millennium BCE (the evidence of the Late Susiana occupation is limited to the few sherds we found on the surface). All these probes reached sterile soil at 1.5–2.0 m below the level of the agricultural field. The fact that Probes 4 and 19, close to the Atij Stream, reached the water table at 1.5 m below the level of the field may indicate that the stream could not have existed in the fourth millennium BCE; but I am unable to establish the date of its genesis. It is possible that this stream was originally created as an irrigation canal, perhaps by the Elamites.

The South Mound

Operation 1

Since the South Mound seemed to have a long sequence of occupation from the early fifth to the mid-second millennium BCE, it presented an ideal location for excavating a stratigraphic trench, for which we needed to locate the mound's steepest sector. This sector happened to be near the area of Negahban's trench (figs. 40–41). We therefore opened a 4.5 m wide trench perpendicular to Negahban's. Because we lacked a sufficient number of seasoned field supervisors and there was no guarantee we could conduct future work at the site, and because we needed to establish a stratified sequence for the entire history of occupation, we decided to excavate Operation 1 with arbitrary 20 cm layers. This approach was not ideal, especially since this methodology is woefully inadequate to deal with intervening transitional phases.

Just below the topsoil, which included a mixture of Sukkalmakh and Susa III sherds, we came down on a thick deposit of mudbrick detritus mixed with Proto-Elamite and Late Susa II sherds. A deep pit had been cut into this matrix; to judge from the pottery, mixed with ashy and greenish dirt, this pit must have been cut from a much higher level during the Sukkalmakh occupation in this area of the mound (fig. 45).

Below the Proto-Elamite levels, we found a thick deposit of mudbrick detritus, which must have resulted from the leveling or wash of a mudbrick building of Late Susa II date that once stood there. Here we found the corner of a building whose walls consisted of rows of stretchers and headers. To the east of F 7 was a space—probably an open one, perhaps a courtyard—that contained a fireplace paved with rocks. Next to this fireplace, we found an extensive burned surface that may have been associated with whatever activities were performed in the presumed courtyard (fig. 46:B). No other features were found here, and the surface was relatively clean.

Below this courtyard lay another thick deposit of mudbrick detritus and thick traces of a badly damaged mudbrick wall, which we could not articulate. The pottery associated with this level dated to the Middle Susa II phase. As the excavations proceeded to lower levels, the amount of Middle Susa II pottery types diminished and we began finding types associated with the Early Susa II phase. However, we were unable to find a stratified surface or other markers that would indicate a physical separation between the two phases.

In Operation 1, a 10–15 cm layer of compact earth contained all that we found of ceramic types typical of the Terminal Susa I phase (pl. 17). Below this level, we encountered a comparatively thick deposit of the Late Susiana 2 phase. The only architecture associated with this phase consisted of one row of a mudbrick wall at 74.18 m ASL. To the east of F 11, we found a courtyard with a rock-paved fireplace (fig. 47). No other features were associated with the latest phase of architecture. Below this level, at an elevation of 73.25 m ASL, we came down on what seemed to be an open space. Here, next to a burned area, we found a chunk of red ochre (fig. 47:A).

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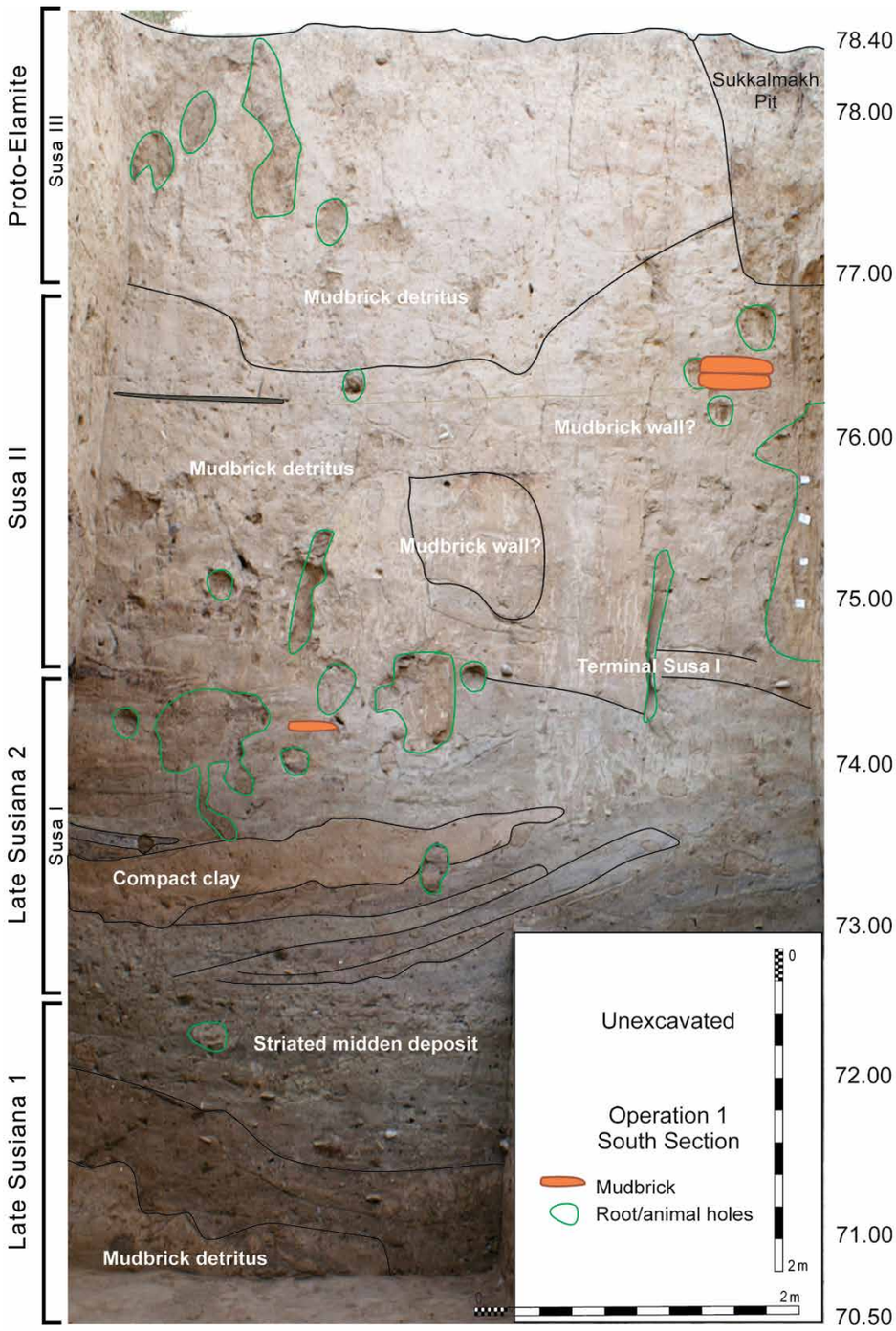

Figure 45. South section of South Mound Operation 1.

The remains of the Late Susiana 2 phase were separated from the preceding Late Susiana 1 phase by a layer of mudbrick detritus and compact earth. The only architectural remains we found in this level were F 14—a wall with three rows of bricks oriented north–south—and F 15—a fragmentary pisé wall perpendicular to F 14 (fig. 46:A). In the southwestern area of these architectural features, we found a burned patch of earth, indicating that this space may have been a courtyard.

The remains of the Late Susiana 1 phase continued to a depth of 70.5 m ASL, where we stopped the operation. To take this level deeper, we needed to remove the backfill of Negahban's step trench, a laborious and time-consuming task. To reach the lower levels and access the remains of the preceding Middle Susiana phase, as well as sterile soil, we moved the operation to a spot with only 1 m of wash to remove. Here we opened three 1 × 1 m probes (Probes A–C). Below

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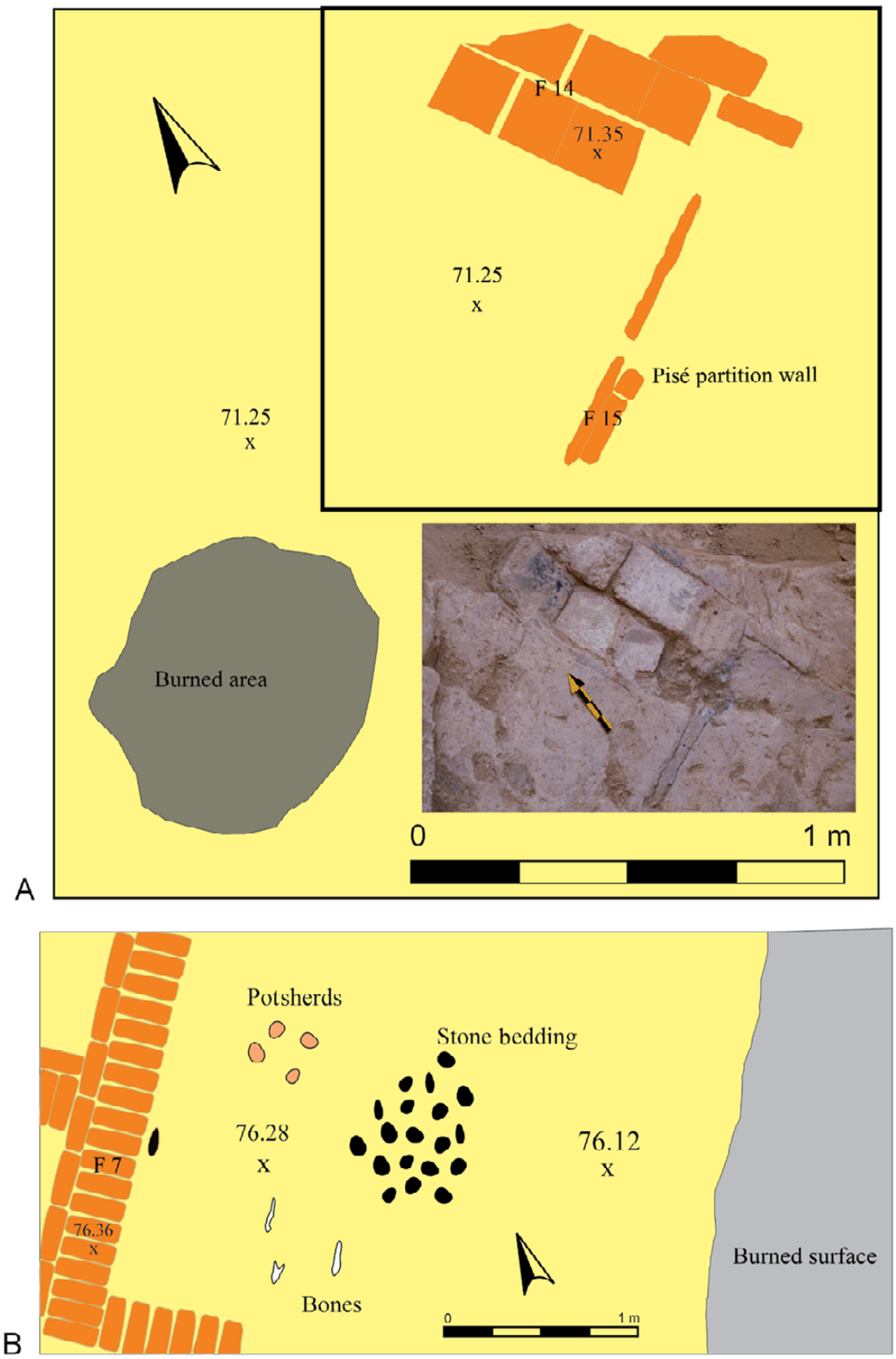

Figure 46. Operation 1. *A*, remnants of Late Susiana l dwelling; *B*, Late Susa II architecture.

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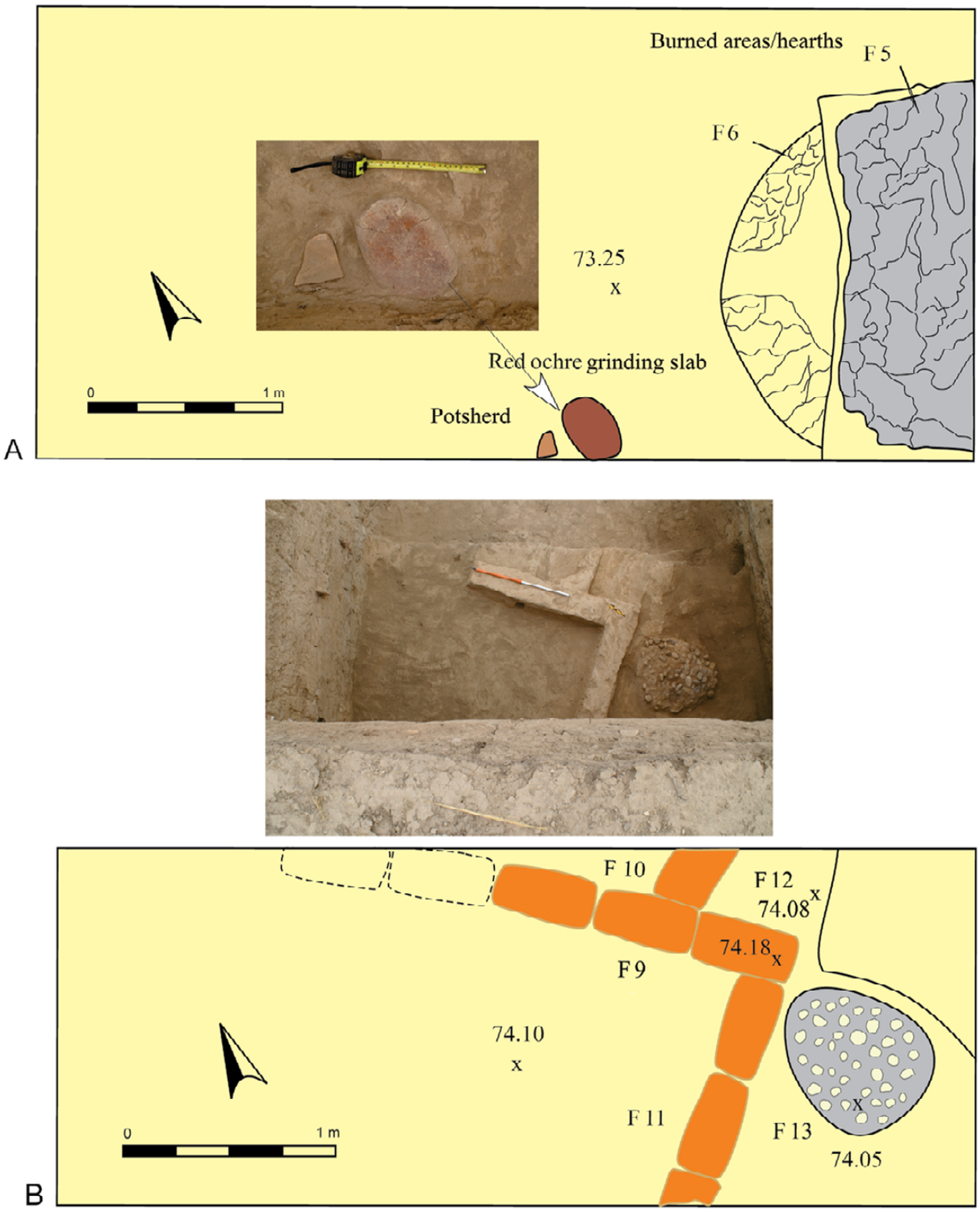

Figure 47. Operation 1. *A*, red-ochre grinding slab and hearths; *B*, Late Susiana 2 residential architecture.

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1.5–2.0 m of cultural deposit, we reached sterile soil (fig. 48).

Operation 2

Immediately to the southwest of Operation 1, we opened a 2 m wide step trench (figs. 41, 44, 48:A). But after a day's work, we realized that this area of the mound had been heavily disturbed by an antiaircraft artillery trench excavated for defense against the Iraqi invasion of Khuzestan—so we stopped our work there.

Operation 3

On the western slope of the South Mound (figs. 41, 44), we found a concentration of square baked bricks. Such bricks were also scattered on the South Mound itself and belonged to robbed tombs. The surface condition of the tomb in Operation 3 suggested that we might be able to find its general plan.

When we cleared the dirt and removed the broken bricks, we found the lower parts of a typical Elamite vaulted tomb with a paved floor (fig. 42). The tomb had been robbed clean except for the skeleton of a woman and the skull of a child next to her. No other objects were found in this operation. The broken pottery inside and around the tomb dated it to the Middle Elamite period (ca. 1300–1000 BCE).

Operation 4

The top levels of Operation 1 indicated the presence of a Proto-Elamite phase on the summit of the mound. To gain a larger exposure of this phase, we opened a 3 × 2 m trench on much higher ground at the southwestern edge of Operation 1 (figs. 41, 44). Here we excavated nine occupational levels (fig. 49). The topmost level, just below F 1, consisted of a mudbrick wall of the Sukkalmakh period. Only three courses of this wall were preserved. It was located near a foundation trench (L 2) with a mixture of Proto-Elamite and Sukkalmakh sherds (pl. 25).

Below this level, we found a series of deposits consisting of mudbrick erosion/wash, compact earth, water-laid sandy soil, ash, and midden (fig. 49). These varied deposits were separated from one another by a series of surfaces, but we found no architecture in this area. The almost 3 m of archaeological deposits dating to the Proto-Elamite phase are similar in thickness to those found at Susa[20] but contained no evidence of administrative technology. The lowest deposit, 1 m thick, represents a gradual and smooth transition from the Late Susa II phase to Susa III. Neither here nor at Geser[21] did we find any evidence of the suggested "gap" between the Late Susa II and Susa III phases. This gap in the sequence, used in almost all interpretations of the origins of the Proto-Elamite period, was suggested by Le Brun's extremely schematic section drawing of the Acropolis I of Susa between Levels 17A and 16.[22] It now appears that the Susa gap in that portion of the Acropolis must have been of local nature and cannot be extended to what happened on a regional level. Furthermore, Le Brun and many others who follow his dating consider Level 17A of Acropolis I as belonging to the Late Susa II phase. This interpretation simply ignores the transitional nature of Level 17A in relation to the following Proto-Elamite phase. Polychrome, bichrome, and ribbed red ware vessels and tall beveled-rim bowls, as well as a change in the shape and size of tablets—hallmarks of the Proto-Elamite phase—occur in Level 17A alongside typical Late Susa II forms.[23] Operation 4's basal levels have the same transitional character, minus the evidence of administrative technology.

The North Mound Complex

Introduction

Prior to our excavations at the North Mound complex, we laid an extensive grid and collected all the materials we found in the individual 10 × 10 m squares (fig. 43; table 6). That material is now available at the pottery bank of the National Museum of Iran in Tehran. Our extensive and intensive survey of this sector of KS-59 yielded Late Susiana pottery (on the surface), Middle to Late Susa II pottery, and some Sasanian and Early Islamic sherds, glass, and baked bricks (only on the surface). Table 6 shows the distribution of the late historical material found in the individual squares.

The relatively flat summit of the North Mound complex was ideal for horizontal exposure of its fourth-millennium BCE cultural remains. We therefore chose the highest flat area of the mound and opened two side-by-side trenches in Squares 787 and 822 (figs. 43–44). To gain quick vertical exposure of the cultural sequence, we also opened two 2 m wide trenches in

20 Le Brun 1971, fig. 32.

21 Alizadeh, Ahmadzadeh, and Omidfar 2014.

22 Le Brun 1971, fig. 32.

23 Le Brun 1971, figs. 52–53; 1978b, figs. 8–9. See also Dittmann 1986, 171–72, for many other shared forms between Levels 17A and 16.

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Figure 48. KS-59 probes. *A*, position of Probes A–E in the South Mound; *B*, Probe 18 (North Mound); *C*, Probe 9 (North Mound).

Squares 288 and 1033. In Square 1033, we encountered only a thick deposit of hard, compact clay and a soft midden deposit that produced much of the pottery obtained from this trench. We were able to excavate the trench to a depth of only 2 m below the surface.

The stratigraphic trench in Square 288 was more productive. Although the only architecture we discovered here was a fragmentary wall of Late Susa II date, we also found an extremely rare Late Susa burial (F 3) in a simple pit cut into the surface that must have belonged to the fragmentary wall (fig. 50). Associated with the burial were two small pottery jars and one small stone jar. A pit from a higher level (F 4) had cut into the burial and destroyed the skull. We discontinued excavation of this trench as well and instead concentrated our efforts on Squares 787 and 822.

As we continued our horizontal excavation of those squares, we also chose to dig at twenty-two 1 × 1 m locations to ascertain the settlement size of the northern complex, since our extensive survey had found pottery in the cultivated field on the flat sector of the western and southern parts of the mounded site (figs. 44, 48). Except for Probes 5, 11, 12, and 22, all these probes contained cultural deposits of the fourth millennium BCE (pls. 30–38) to a depth that varied from 1.5 m to more than 2 m. We reached the water table in Probes 4 and 19, which were close to the Atij Stream, at about 1.5 m below the surface. Because we were interested only in the extent of the settlement beyond the mounded site, and because we lacked a sufficient number of experienced field supervisors to oversee the work in these probes, local workers excavated them with minimal supervision. Still, the exposed sections indicated that no architectural features were missed, though many surfaces and even floors appeared in them. The earliest pottery we obtained from these probes dates to the Middle Susa II phase. The most important conclusion resulting from this

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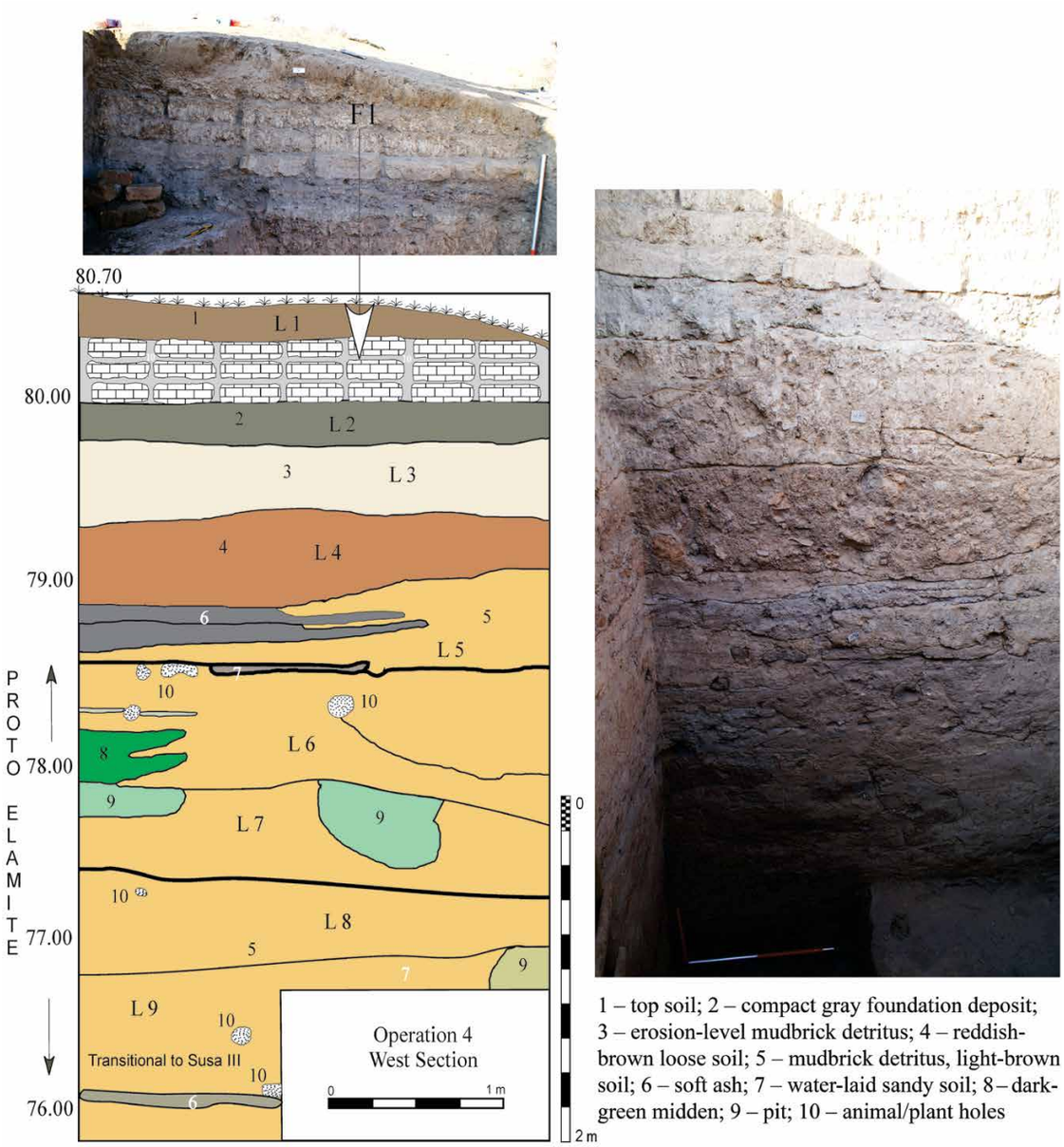

Figure 49. Operation 4. Photograph and line drawing of west section.

work is that the mounded site had been much larger: according to the local farmers, the southwestern part of the site had been leveled in the early 1960s during the agribusiness canal irrigation project, and the western part, where the complex of pottery kilns was located, had been leveled in 1996.

The depth of our probes created a major problem, for adding the 1.5–2.0 m of deposit in the flat area to the 7 m of deposit in the mounded site results in some 9 m of archaeological deposit that must have accumulated in just 500 years (ca. 3500–3000 BCE). We did not reach sterile soil in any of our trenches in the mounded site, so the only explanation I can offer for the unusual thickness of the deposit is that—as at many other archaeological sites in Khuzestan, including Susa, Chogha Mish, and Chogha Bonut—a natural hill was chosen as the foundation for the northern settlement.

Square 787

Architectural Phase 1

Below 20–30 cm of mixed topsoil on the western part of the square, we came down on two large pits (F 9 / L 7 and F 11 / L 8 in fig. 51), filled with loose dirt mixed with ash, that contained a number of intact and fragmentary beveled-rim bowls. In the eastern part of the trench, we reached a series of mudbrick walls (F 14, F 17, F 19, and F 20; figs. 51–52) that turned out to be the enclosure walls of a large

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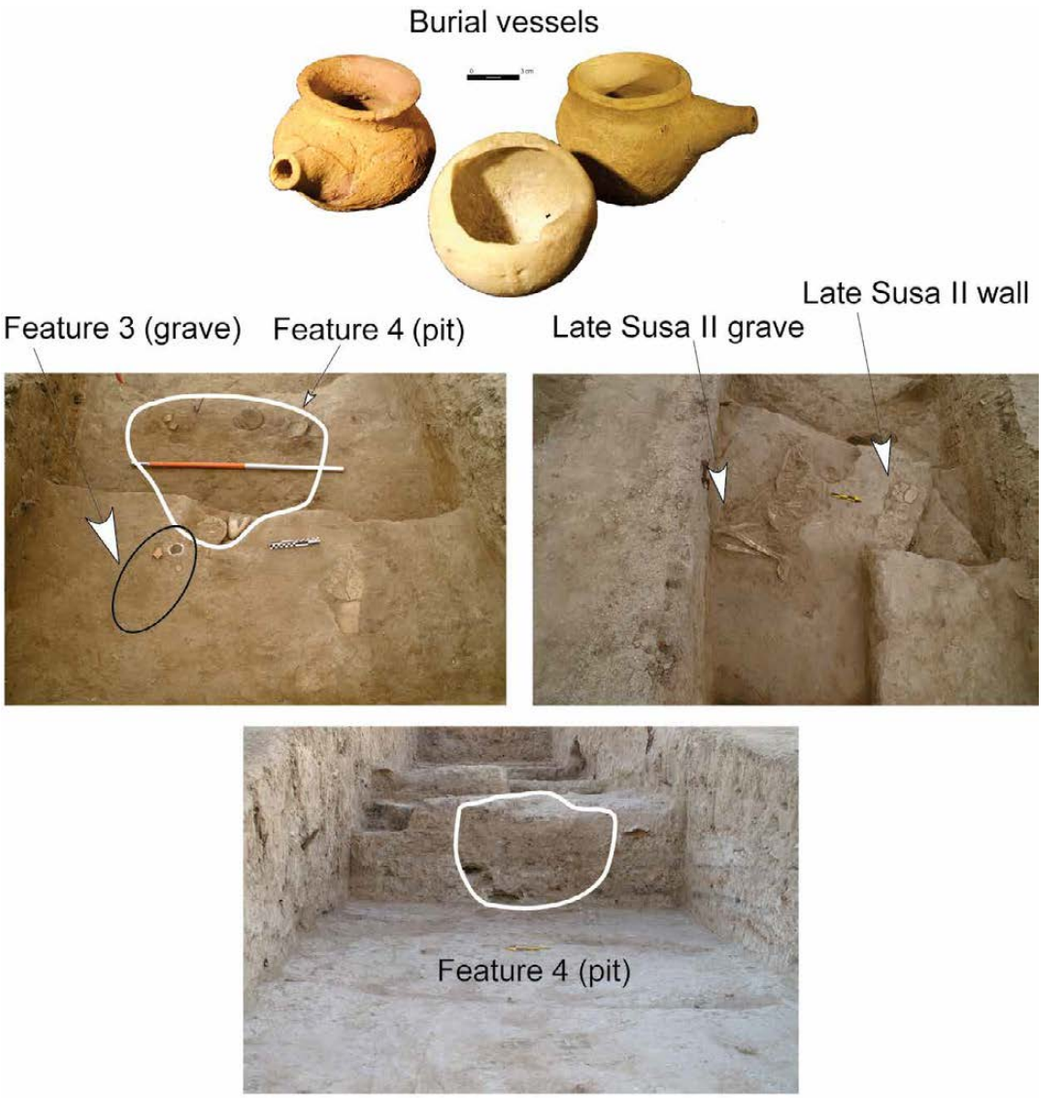

Figure 50. Late Susa II grave in Square 288.

building with a mudbrick pavement (F 18). The entrance to this monumental building was located at its northwestern extent between walls F 14 and F 17. Opposite this doorway, next to wall F 19, we found a beveled-rim bowl filled with the lower limb of a pig, presumably an offering.

All these walls were preserved up to three courses of brick, with headers and stretchers (fig. 51). The mudbrick floor (F 18) was only one course high and was damaged in many places. Layers 5 and 6 were part of the thick, mudbrick detritus layer found below a soft, greenish-brown deposit (L 2 and L 4 in fig. 51:A). A partially preserved wall (F 21) was found to the southwest of this building; it turned out to be the northern extension of the wall of another monumental building in Square 822. Scattered mudbricks were found on a thick layer of mudbrick detritus, which may represent wall collapse. Both the mudbrick floor and the walls rested on a layer of mudbrick detritus (L 17 in fig. 51:A) that covered the entire square.

Architectural Phase 2

The removal of L 17 revealed a large, open space and the walls of two large buildings; the southern one turned out to be the northwestern extension of a monumental building in the adjoining square. The southern walls (F 25, F 26, and F 27 in fig. 53) had four courses and were built with headers and stretchers. These walls may have been even higher, but we did not penetrate below L 21. None of the buildings of the Phase 2 architecture was furnished with a mudbrick floor. Room 2 had a thin mud-plaster floor (F 23; figs. 52:A, 53), and the floor in Room 1 consisted of beaten earth; both floors were clean and almost devoid of trash.

Below L 14, we found a large pit (F 15 / L 20 in fig. 53) in the open area between the two buildings.

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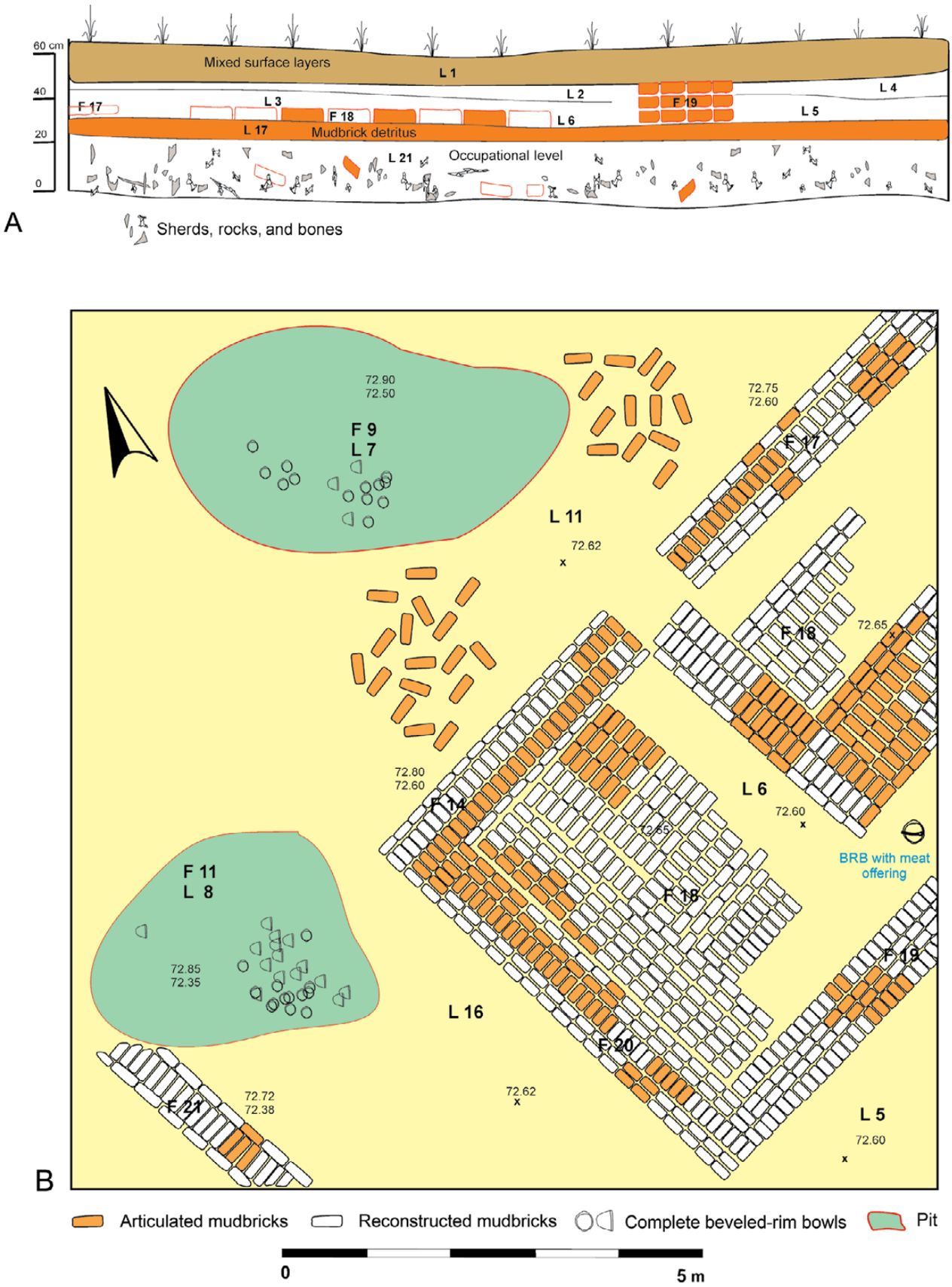

Figure 51. Square 787. *A*, north section showing remains of Phases 1–2; *B*, architectural Phase 1.

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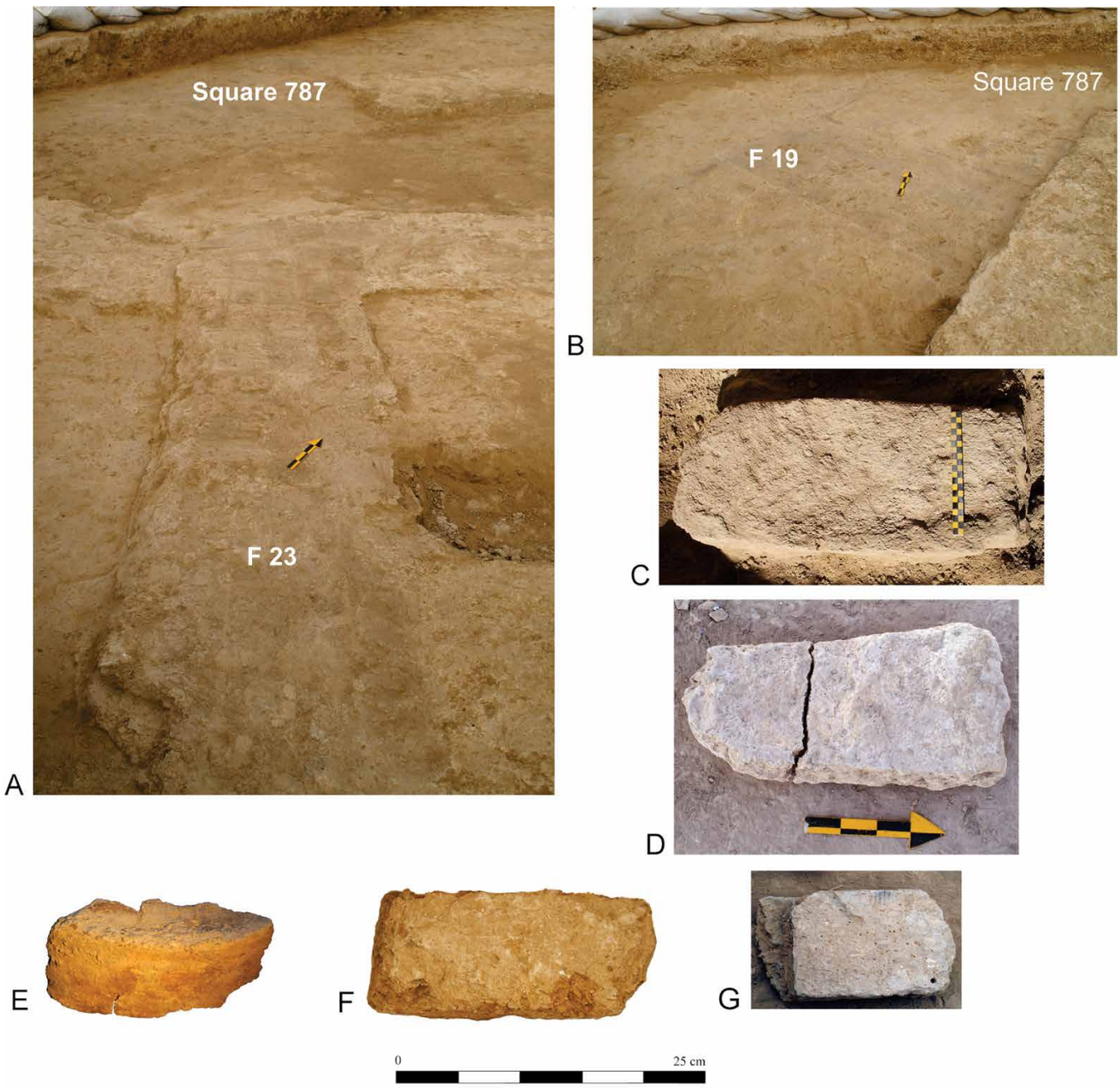

Figure 52. *A–B*, KS-59 Late Susa II mudbrick walls; *C*, KS-04 mudbrick; *D*, KS-59 mudbrick (Late Susiana); *E–G*, KS-59 mudbricks (Late Susa II).

Its stratigraphic position indicates that this area may have been abandoned for some time before it was leveled and the Phase 1 building was erected. This pit, too, contained a number of fragmentary and whole beveled-rim bowls.

Square 822

Architectural Phase 1

Square 822 was excavated simultaneously with Square 787 (figs. 43, 54–56). Here, too, we came down on a series of mudbrick walls that were obviously contemporary with, and even parts of, the buildings we found in the adjoining square. The walls of the Phase 1 building were constructed with headers and stretchers but were not as thick (fig. 54). Like the Phase 1 buildings of Square 787, up to three courses of mudbricks were preserved. Room 1 had a much better preserved mudbrick floor (F 1). The northern part of this floor had been disturbed—probably from secondary use after its abandonment, as suggested by a semicircular structure (F 6) and a number of beveled-rim bowls found next

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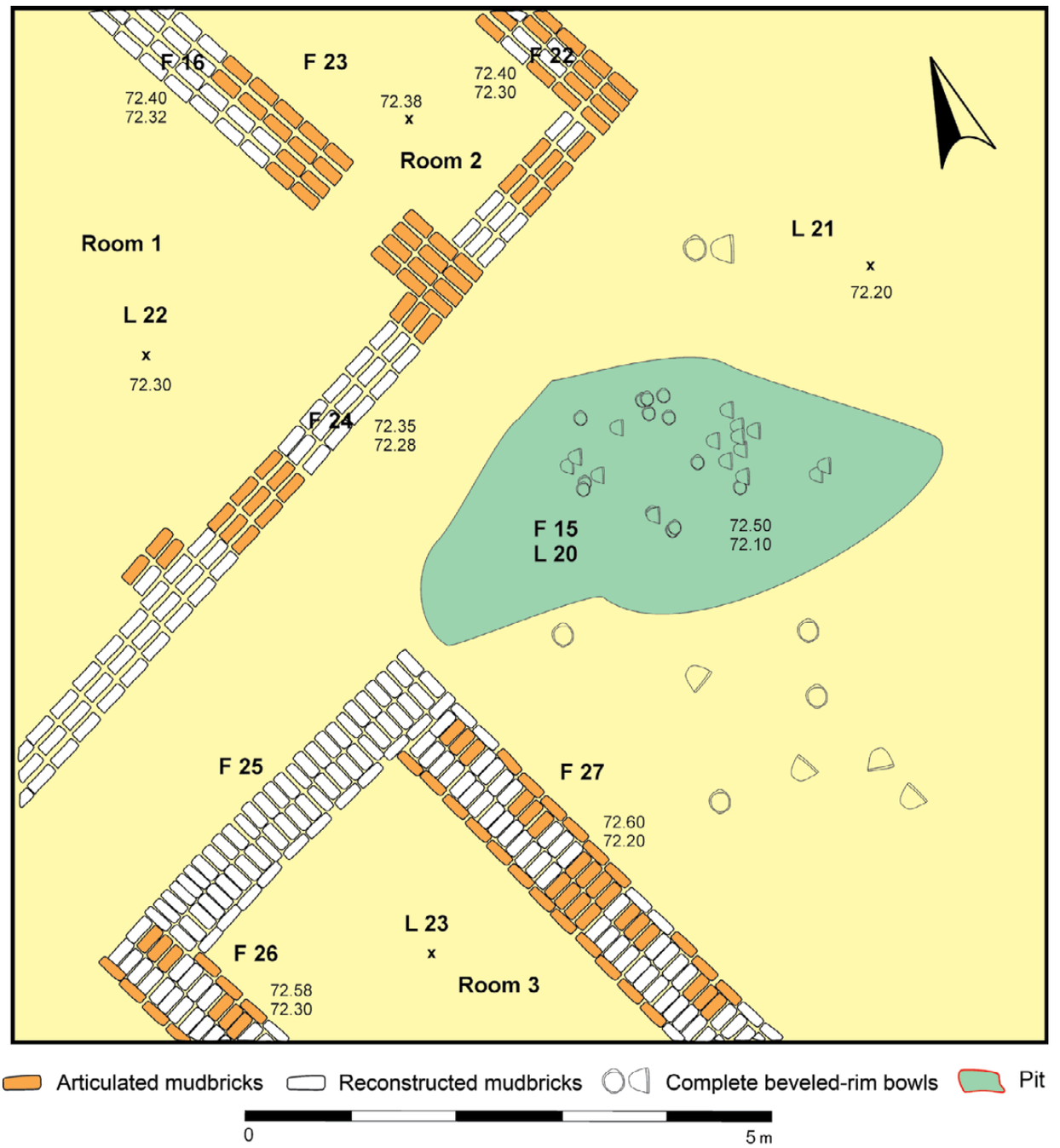

Figure 53. Square 787 architectural Phase 2.

to it. Wall F 14 provided the doorway to another long room, Room 2. But two large trash pits (F 8 / L 6 and F 15 / L 10) and a smaller one (F 12 / L 7) had damaged much of the floor and walls associated with this room.

Another pit (F 13 in fig. 54) had damaged the northeastern wall (F 5 and F 9) of this building. To the north of this wall, yet another large trash pit (F 16 / L 13) was found in what seems to have been an open space. All these pits contained intact and fragmentary beveled-rim bowls, as well as almost all the evidence of administrative technology we found here. We discovered two fragmentary curved bricks in F 15 / L 10, but whatever function they served is unknown. If they had been used to form a round column, then surely more than two pieces would originally have existed.

Parallel walls F 3 and F 4 seem to belong to a long building, with L 5 as an alley between them. They also may have constituted the southwestern wing of a larger building to which all the walls of the Phase 1 architecture belonged. We could have explored this area by

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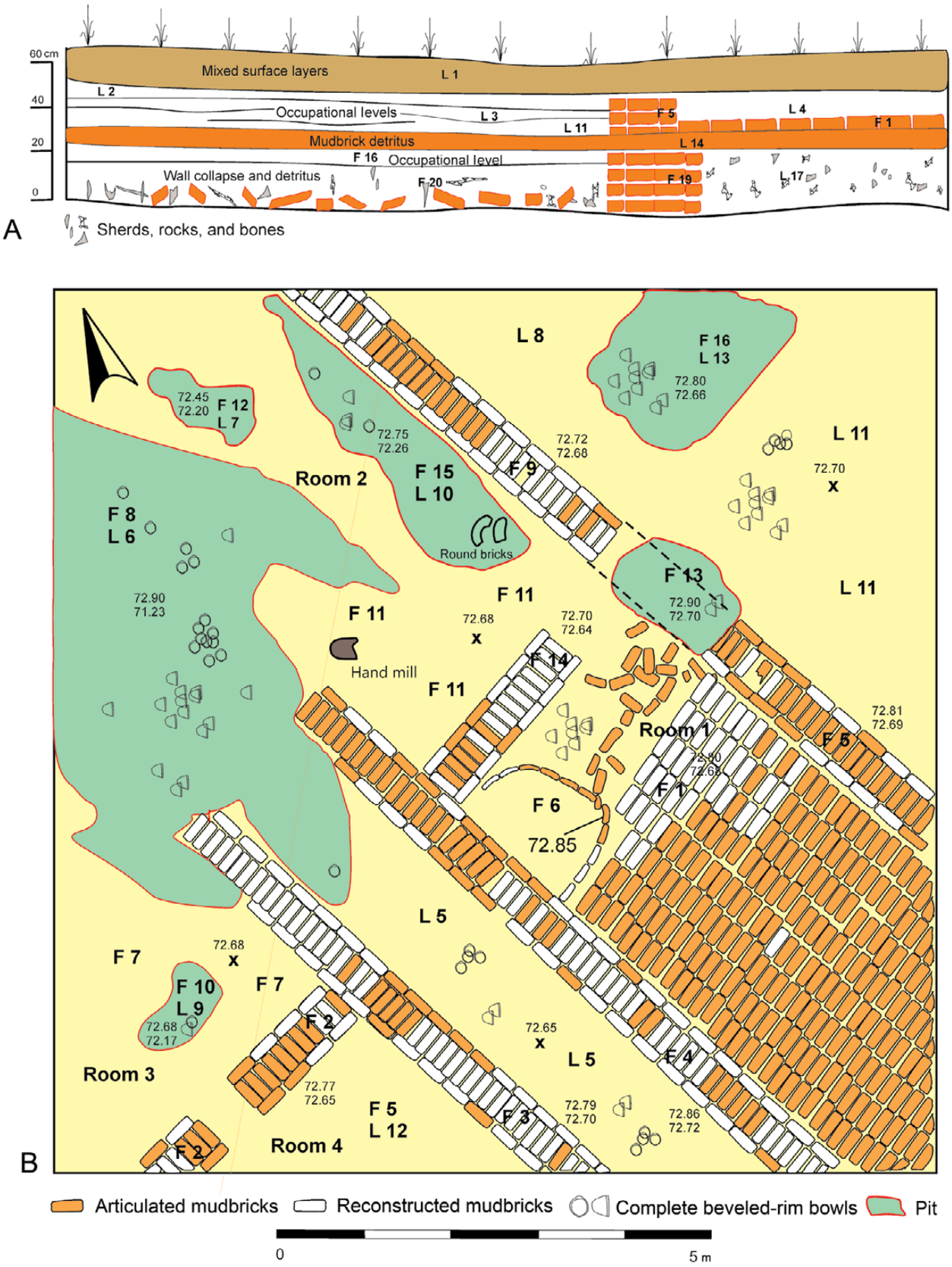

Figure 54. Square 822. *A*, north section showing remains of Phases 1–2; *B*, top plan of architectural Phase 1.

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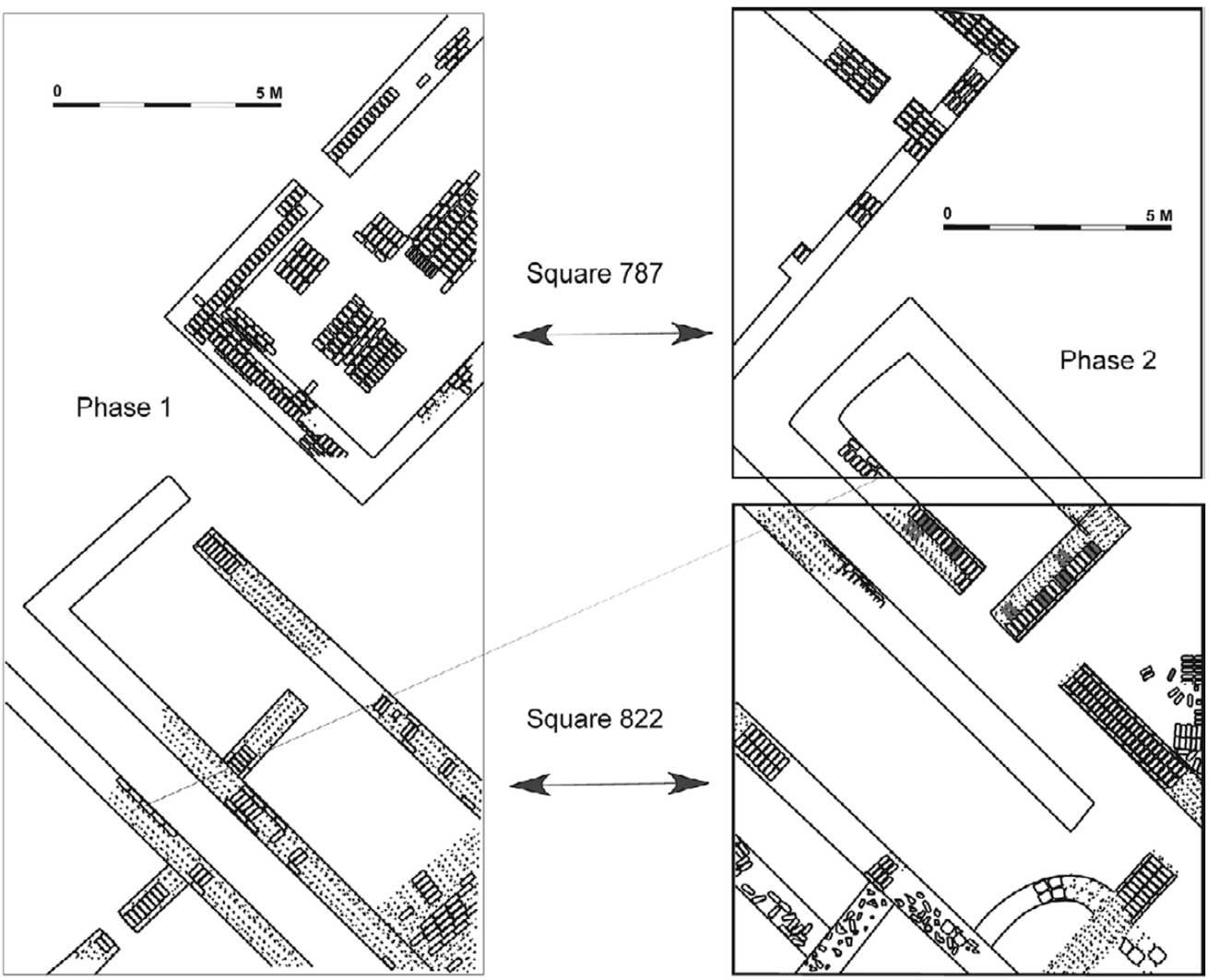

Figure 55. Reconstruction of architectural phases in Squares 787 and 822.

extending the operation to the adjoining squares, but we lacked both the workers and the time to do so.

Architectural Phase 2

Here, as in Square 787, a layer of mudbrick detritus (L 14) separated the architectural remains of Phase 1 from Phase 2. Below this layer, a series of thick walls with at least four courses of bricks indicated the presence of a monumental building in this phase. Two large trash pits (F 8 / L 6 and F 15 / L 10 in fig. 57) had penetrated the building levels of this phase and damaged its walls and floors. To judge from the preserved plan, we may have here at least two separate buildings, one to the north (F 18, F 19, F 21, F 28, and F 31) and another to the south (F 17, F 22, F 23, and F 30). A mudbrick floor (F 20) may have existed to the north of wall F 19.

At the corner of Room 1 (L 18), we found a semicircular mudbrick structure (F 29 in fig. 57) containing some traces of ash and burned bones. Between walls F 31 and F 18, we found a number of ceramic gutters next to some rocks and scattered pieces of animal bones (figs. 57, 58:A). In the middle of Room 1, we found two hearths (F 25 / L 22 and F 26 / L 23 in fig. 57), each with a central rectangular support for a grate (fig. 58:B–C), though we found nothing in the hearths resembling a grate. The central supports and the walls of these hearths had been burned to a brownish-red color. They contained only an ashy deposit with no trash. I am uncertain whether these hearths belonged to the buildings of this phase or were constructed in an open space shortly after the building was abandoned.

The size of the walls and the scale of the buildings in both architectural phases suggest that a large, monumental complex existed in this part of the settlement in the Late Susa II (Late Uruk) phase. The buildings appear to be administrative rather than residential.

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Figure 56. Late Susa II architectural remains in Squares 787 (top) and 822.

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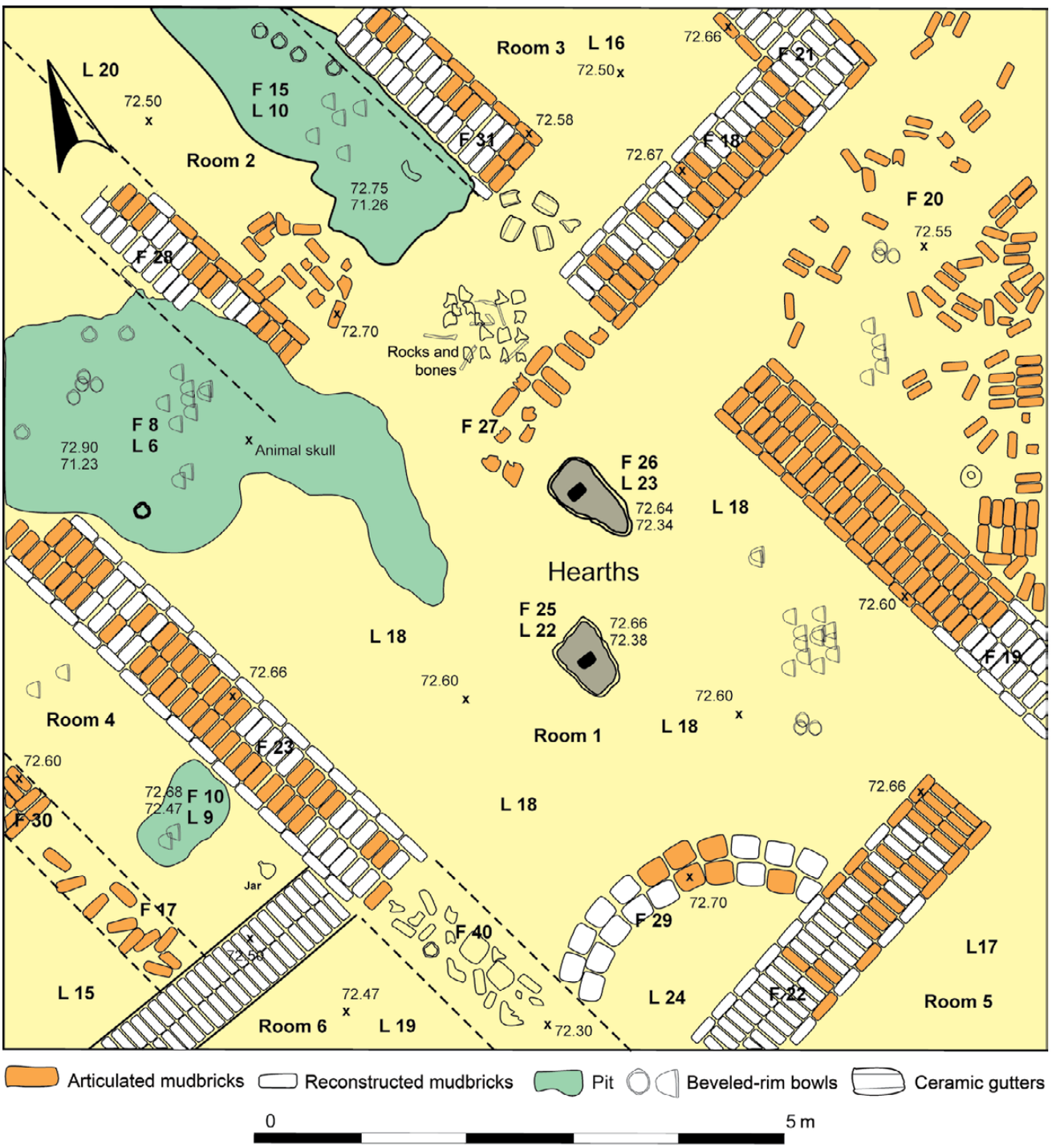

Figure 57. Architectural Phase 2 in Square 822.

These two phases of architecture are the best preserved and most extensive formal architecture so far discovered in lowland Susiana. The fact that they are so close to the surface of the mound and can be easily accessed is promising for future research here. At the end of the season, we laid gunnysacks throughout the excavated areas and filled the trenches with dirt to preserve them. We hope to return to the site and continue our research on this very promising fourth-millennium BCE settlement.

SUMMARY

Just as the surface sherds indicated, the South Mound was first settled during the Late Middle Susiana phase, around 5000 BCE. The settlement continued through

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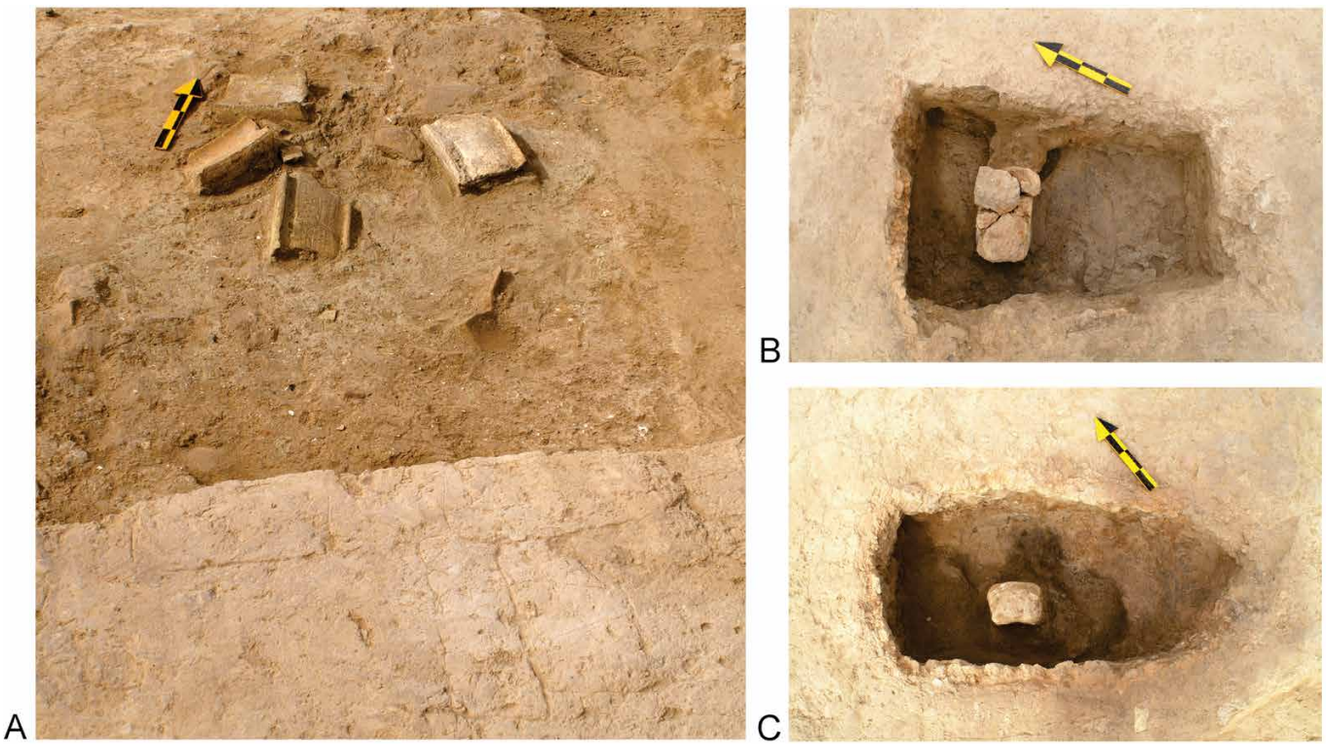

Figure 58. Square 822. *A*, pottery gutters; *B–C*, hearths.

the succeeding Late Susiana 1, Late Susiana 2, and Terminal Susa I phases (ca. 4800–3900 BCE). Our 1 × 1 m probes here indicated that the size of the settlement covered no more than 1.5 ha during these phases.

The earliest pottery we found in Probes F–L was of Early Susa II date. If other parts of the South Mound, especially its northwestern sector, were occupied, then the size of the Early Susa II settlement could have exceeded 5 ha. But I am unsure of this estimate based on surface sherds, since Negahban used the mound as a sherd yard, and a number of artillery trenches dug there artificially increased the spatial distribution of surface sherds.

Our probes, not the surface sherds, indicate a substantial expansion of the settlement during the following Middle and Late Susa II phases—an expansion not only of the original settlement on the South Mound but also an area of 7 ha to the north, resulting in a total area of about 11 ha for the entire settlement (North and South Mounds) during the second half of the fourth millennium BCE. The monumental buildings we discovered in Squares 787 and 822 indicate that KS-59 was an important administrative center during the Susa II phase.

The settlement contracted greatly during the following early Proto-Elamite phase. The only evidence for this phase came from the summit of the South Mound, in our Operations 1 and 4. None of the probes we excavated on the South Mound yielded any pottery from this phase. The South Mound also was abandoned, perhaps around 2800 BCE.

KS-59 remained abandoned for about a thousand years. It was reoccupied during the Sukkalmakh period (1900–1500 BCE). This occupation may have been limited to a single building on the summit of the South Mound, very similar to the single Sukkalmakh building on the summit of Chogha Mish.[24] The duration of the Sukkalmakh occupation of the South Mound is unknown, but the evidence from Operation 4 suggests a short time, perhaps one or two generations. No other occupational levels were discovered throughout the KS-59 site complex. But the South Mound seems to have been used as a cemetery during the following Middle Elamite period (ca. 1300–1000 BCE). Although we found Sasanian and Early Islamic sherds on both mound complexes, we found no occupational layers or architectural remains of these late periods in our excavated areas.

Further investigation is needed to develop more certain estimates of the settlement's size during each attested occupational phase. Major differences exist between our estimates of the settlement size of KS-59 during the fourth millennium BCE and those calculated by Johnson,[25] differences that cannot be accounted for only by the fact that Johnson's estimates are decimally

24 Delougaz and Kantor 1996, 18–24.

25 Johnson 1973, table 18.

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determined. Based on surface collection, Johnson listed the following estimates for the archaeological phases of the fourth millennium BCE: Terminal Susa I, 5.16 ha; Early Uruk, 6.56 ha; Middle Uruk, 9.56 ha; and Late Uruk, 8.16 ha. His estimate for the total area of KS-59 was 9.94 ha.

As mentioned earlier, Negahban used the surface of the South Mound as a sherd yard, and the mound was later heavily dug for antiaircraft artillery, so any estimates of site size based on the spatial distribution of surface sherds is misleading. We based our site-size estimates on the results of our probes and trenches. Without excavating a large number of probes on the flat circumference of any settlement, it is impossible to arrive at the settlement's exact size, let alone the size of an individual occupational phase, Johnson's two-decimal estimates notwithstanding. Certainly Johnson was unaware of the site's extent in the flat, cultivated area south and west of the northern complex. Including that area increases the total occupational area of KS-59 to about 11 ha.

The initial occupation of the site during the Late Middle Susiana phase could not have exceeded 2 ha in size, and it remained so until the end of the Late Susiana 2 phase. The site's extent during the following Terminal Susa I phase is uncertain, but the size of the settlement could not have exceeded 1 ha.

Our trenches and probes in the South Mound indicated a substantial increase in the extent of the settlement during the Early Susa II phase, when its size reached about 6 ha. Beginning in the Middle Susa phase, the settlement was extended to the north of the original settlement, and an additional 5 ha became occupied, for a total of size of 11 ha.

We documented a similar size for the Late Susa II phase, though for this period Johnson estimated a reduction of 1.45 ha. In the following Proto-Elamite phase, the North Mound was abandoned and only about 1 ha of the South Mound was occupied. By about 2800 BCE, the entire site was abandoned and not reoccupied until the first half of the second millennium BCE during the Sukkalmakh (Isin-Larsa and Old Babylonian) period. The reoccupation of the South Mound during this period was limited to the mound's summit and therefore could not have been larger than perhaps 0.5 ha.

Between 1300 and 1000 BCE, during the Middle Elamite period, the South Mound was used as a cemetery. Sherds of Sasanian and Early Islamic date were found on both the South and North Mounds but were not associated with any occupational levels.

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4
Pottery

INTRODUCTION

The pottery of fourth-millennium BCE Susiana and southern Mesopotamia has been adequately and extensively described in numerous books and articles. Here I describe the types of wares we found at KS-04 (pls. 1–7), KS-59 (pls. 8–62), and KS-108 (pls. 63–76). Since all three sites had prehistoric occupation as well, I begin with the pottery of these early occupations.

EARLY SUSIANA PERIOD

Most of the Early Susiana (ca. 5800–5500 BCE) sherds came from the destroyed mound of KS-04B, which appears to have been occupied only during this period (pl. 1). A few surface sherds of the same date from KS-04 (pl. 1:B, I–J) indicate the earliest date for this settlement.

The standardization of pottery manufacturing that began in the preceding Archaic Susiana 3 phase (ca. 6000–5800 BCE) became established in the Early Susiana period. The overwhelming majority of Early Susiana pottery vessels have a gritty buff paste with medium to large red, brown, and black grits. The clay on the banks of the Ojirub River in northeastern Khuzestan contains similar grits. The paste of some vessels is tempered with chaff and straw. Their surface color ranges from warm buff to brownish buff and sometimes very pale-pinkish buff. Among the various classes of prehistoric Susiana pottery, the Early Susiana vessels have the grittiest face. The vessels are handmade but exquisitely formed. On larger vessels, scoring marks are sometimes visible on the lower body near the base. Although the application of slip is evident on some pieces, particularly the plain flanged vessels and open bowls with flaring rim, it is not always easy to detect.

There is no difference between the decorated and plain vessels in manufacturing or surface treatment. When paint is present on them, it is predominantly black in color, but brown, olive black, and sometimes reddish brown can also be seen. A number of vessels (particularly those with heavy walls, such as pedestaled bowls; see pl. 1:J–K) were overheated; they exhibit greenish-black or greenish-brown paint and a greenish-buff surface.

MIDDLE SUSIANA PERIOD

The Middle Susiana period (ca. 5500–4800 BCE) is divided into early and late phases based on manufacturing technique, forms, and especially decoration.[1] While the ceramics of the early phase parallel those of the Ubaid 2 / Haji Mohammad phase in southern Mesopotamia, the ceramics of the late phase bear little resemblance to those of the Ubaid 3 phase. All three settlements—KS-04, KS-59, and KS-108—yielded Middle Susiana ceramics (pls. 2–3, 16, 63). But unlike KS-04, which was settled during the Early Susiana period, KS-59 and KS-108 were established during the Late Middle Susiana phase. This phase of settlement is of utmost importance in the prehistory of the lowlands, as it is when the population increased,[2] monumental architecture appeared, and early signs of administrative technology emerged. In terms of pottery manufacturing and decoration, the Late Middle Susiana phase marks a complete break from Mesopotamia. From the Archaic 3 phase to Early Middle Susiana (contemporary with Ubaid 0–2), the pottery assemblages of southern Mesopotamia and Susiana show great similarities and parallel development.

1 See Alizadeh 1992, 2008; Delougaz and Kantor 1996.

2 Adams 1962; Dittmann 1984; Hole 1987; Kouchoukos 1998.

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The pottery assemblage of this phase is characterized primarily by two major wares—buff and red—and their varieties. In addition to these two wares, a specific type of gray ware also appears. But no gray ware was found in our survey or excavation of these settlements.

STANDARD BUFF WARE

As with most prehistoric pottery, the buff ware of the Late Middle Susiana phase varies in color from brownish buff through creamy buff to a greenish or grayish buff. The clay shows varying densities of sand. Although the paste of the preceding Early Middle Susiana phase is still somewhat gritty, that of the Late Middle Susiana seldom contains grits.

The entire pottery assemblage is handmade; unlike those of the preceding phase, the surfaces of these vessels are usually smooth and rarely exhibit scoring marks. In some examples it is easy to see a thin, buff-colored slip, but since most of the vessels were wet smoothed, their dense surface often creates the illusion of a separate slip.

A dark paint, ranging from black to dark brown to (very rarely) dark maroon, was used for decoration. On vessels that were overheated, both the surface and the paint exhibit a greenish tinge. When the paint is thick, it is granular and tends to flake off, leaving a perfect impression. Perhaps as a result of its chemical components, the paint has sometimes eaten into the surface and is slightly sunken into it.

FINE BUFF WARE

This type of ware, which is the hallmark of the following Late Middle Susiana period, begins in this phase. Examples of it in the assemblage include a large number of bell-shaped vessels and large conical cups made of a well-levigated clay with thin walls (pls. 2:A, D, K; 63:G, K). Vessels made of this paste are slipped, and the paint varies from light to dark brown and sometimes olive brown.

PLAIN RED WARE

A limited number of varieties of this ware occur during the Late Middle Susiana phase, but their quantity increases in the following Late Susiana period, especially in the Late Susiana 2 phase (ca. 4400–4000 BCE). In all the varieties, the paste is the same; only the surface treatment differs from one variety to another. The red ware has a dense, granular, sandy paste and is often fired at such high temperatures that the sherds, when tapped against a solid surface, produce a metallic sound. In some examples, mica and some fine to medium-sized calcite particles are found in the paste. Because mica-bearing sand is not native to lowland Susiana but is common in the highlands, it is very possible that the appearance of such vessels in the lowlands resulted from newly established contact with the highlands of both Fars and the central Zagros region. It is equally possible that such mica-bearing vessels are imports or indicate the movement of artisans.

The color of the paste is basically brick red with shades of reddish brown, light orange, or pinkish red. In rare examples, the reddish tone of one surface grades into orange buff toward the other. Dark cores are uncommon; although they sometimes occur, they certainly are not as common as in the succeeding Late Susiana period.

GRAY WARE

During the second phase of the Middle Susiana period, some vessels appear with a fine, gray, sandy paste. Their surface is usually burnished, a technique used almost exclusively on simple convex bowls. This rare Middle Susiana ware has a relatively wide spatial distribution in lowland Susiana. We did not, however, find any examples of this ware that could be securely dated to the Late Middle Susiana phase.

LATE SUSIANA PERIOD

The pottery assemblage of the Late Susiana period (ca. 4800–4000 BCE; pls. 4–5, 10:B–C, 11:A, 12:A, 13:A, 16, 64) is quite homogeneous in terms of ware and surface treatment. The pottery of this period differs from that of the preceding Late Middle Susiana only in the type of decoration. Similarly, decoration is the only difference between the ceramics of this period's two phases, Late Susiana 1 and Late Susiana 2. In the early (Late Susiana 1) phase, dots are heavily used as decorative elements, animal images are limited, and there are no human images. In the following Late Susiana 2 phase, the art of pottery decoration reaches its highest point in Susiana. Decorative dots are still used, but sparingly. Animals and humans become popular as decorative motifs, and open bowls show heavy overall decoration.[3]

3 For an extensive treatment of the ceramics of the Late Susiana period, see Alizadeh 1992, 2008; Delougaz and Kantor 1996.

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STANDARD BUFF WARE

This ware comes primarily in two varieties, common and fine, including a number of subvarieties in each class. The clay of the fine variety is dense and often includes such fine sand that it is invisible to the naked eye. In examples of the common variety, sand and occasionally grits, as well as traces of chaff, are clearly visible. The color of the ware varies considerably, ranging from yellow/cream to brownish to apricot or pink buff. Some overfired pieces exhibit a greenish-buff surface. The core of the buff ware is monotone and completely oxidized. Horizontal striations are often visible on the surface, particularly in the interior and on the neck of jars. Decorated specimens are painted with black, purple-black, or reddish-brown paint. Varieties of both matte and glossy paint occur.

TERMINAL SUSA I PERIOD

Little is known about the transitional Terminal Susa I period (ca. 4000–3900 BCE). The best-known aspect of this crucial phase is its ceramics. Otherwise this short, transitional phase is shrouded in mystery and thus resembles the (probably contemporary) Terminal Ubaid phase in southern Mesopotamia.

The most prominent forms of this phase are the jars with high-flaring necks (pls. 7:B, 17:B–C), fine bell-shaped bowls (pls. 6:B, F, H; 11:D, 17:A), and open vessels with finger-impressed appliqué decoration, which continue into the following Early Susa II phase (pl. 6:K). The jars with high-flaring necks show strong, regular striations on the interior, and unlike the necked jars of the earlier periods, the point between the neck and shoulder is seamless, thus indicating the use of a pottery wheel for fashioning the vessel.

SUSA II (URUK) PERIOD

The largest pottery corpus from our excavations belongs to the fourth millennium BCE (ca. 3900–3100 BCE) and comes primarily from KS-59 (pls. 8:A, F; 9:A–B, H, J; 12:H, J, L–N; 13:F–G, I–K; 14:A–D, F–G, I–L; 15:A–F; and passim). Table 7 shows the stratigraphic position of many diagnostic Susa II ceramics from KS-59 and Susa.

KS-04 yielded only some Terminal Susa I sherds and a few dating to the Early Susa II phase (pl. 6). Our early fourth-millennium BCE pottery from KS-108 came primarily from the narrow step trench (fig. 31; pl. 65), with limited forms. Most of the fourth-millennium BCE sherds from this settlement belong to the Late Susa II phase and came primarily from our horizontal exposures (pls. 66–76).

The fourth-millennium BCE ceramics in lowland Susiana may be divided into a number of specific wares on the basis of paste, tempering agent, and surface treatment, as follows: (1) coarse ware; (2) standard ware; (3) fine ware; (4) red ware; and (5) gray ware. For comparative purposes, many specific ceramic types and diagnostics of the pottery assemblage of fourth-millennium BCE Susiana from our own excavations and from those conducted by Alain Le Brun, Denis Canal, and Henry Wright at Susa are presented in table 4.

COARSE WARE

The paste of this ware is often sandy with some medium grits, and tempered with chaff or straw. The clay is granulated and does not seem to have been levigated. The color of the paste ranges from brownish buff to grayish brown to orange and reddish buff. Beveled-rim bowls, shallow trays, and some cooking jars are prominent classes of vessels made of this type of ware. Pipes and gutters are also made from this kind of clay. The proto-beveled-rim bowl—a type of coarse, mold-shaped bowl with a blunt lip, considered a precursor of the beveled-rim bowls—is also made of this ware, but examples of it are by no means abundant (pls. 18:A, 38:B, 65:B–C). The most numerous forms made of this ware and typical of the Early Susa II phase are the holemouth jars with folded rim (pls. 17:D, 18:G–H, 65:L). But these cooking and storage vessels continue into the Middle Susa II phase as well.

Among the vessel types made of this paste, beveled-rim bowls are by far the most ubiquitous. From both the surface and the excavated areas, beveled-rim bowls constitute about 70 percent of the total number of sherds recovered in various probes of the North Mound. Such bowls are also the most numerous vessels found intact, almost always either scattered or piled in large refuse pits (figs. 51, 53–54, 57). One large example came from a room in Square 787 (fig. 51; pl. 77:C). This specimen was found upside down and contained an ulna and radius of a sheep—presumably an offering or ration, though this is merely an assumption.

Archaeologists have proposed a wide range of functions for the ubiquitous beveled-rim bowls, but none of their suggestions has proved satisfactory. The mysterious fact that many thousands of these bowls are buried intact and in trash pits defies explanation. I shall merely note here that examples, in several sizes, were among the 443 intact bowls we found at Abu Fanduweh. After measuring their capacities, we

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Table 7. Tally of specific Susa II pottery types found at KS-59.

	Pottery type	Square 787	Square 822	Elsewhere in KS-59	Johnson type designation	Johnson period assignment	Susa Acropolis
1		0	0	2 pieces, South Mound surface	Type 7: band-rim bottle	Late Uruk	Acr. I Level 17, Acr. II(?), Acr. III Level 2 (Late Uruk)
2		Numerous, all levels	Numerous, all levels		Type 2: standard beveled-rim bowl	Middle–Late Uruk	Acr. I Levels 22–17, Acr. II(?), Acr. III Levels 7–5 and 2 (Middle–Late Uruk)
3		0	0	5 pieces, South Mound surface	Type 21: grooved round-rim jar	Early Uruk	Acr. I Levels 21–17 (Middle/Late Uruk), Acr. III Level 7 (Early–Middle Uruk)
4		4 pieces	0		Type 25: triangular-rim jar	Middle–Late Uruk	Acr. I Levels 18–17, Acr. II(?), Acr. III(?) (Middle–Late Uruk)
5		5 pieces	4 pieces		Type 27: low expanded band-rim jar	Middle–Late Uruk	
6		2 pieces	11 pieces		Type 15: ledge-rim bowl	Middle–Late Uruk	
7		5 pieces	7 pieces		Type 25: triangular-rim jar variant	Middle–Late Uruk	
8		3 pieces	5 pieces		Type 23: straight expanded-rim jar	?	Acr. I Levels 21 and 17, Acr. II Level 7(?), Acr. III Level 7 (Middle–Late Uruk)
9		2 pieces	3 pieces		Type 26: high expanded-band-rim jar	Early–Middle Uruk	Acr. I Level 21, Acr. II Level 7, Acr. III(?) (Middle–Late Uruk)
10		1 piece	7 pieces		Round undercut-rim jar	?	Acr. I Levels 21–17, Acr. II Level 8, Acr. III Level 4 (Middle–Late Uruk)
11		0	2 pieces		Type 53: incised-rim lug	Late Uruk	

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Table 7. Tally of specific Susa II pottery types found at KS-59 (*continued*).

	Pottery type	Square 787	Square 822	Elsewhere in KS-59	Johnson type designation	Johnson period assignment	Susa Acropolis
12		2 pieces	3 pieces		Type 22: flared round-rim jar	Early Uruk	See no. 3
13		7 pieces, most levels	28 pieces, most levels		Type 9: sinuous-sided cup with pouring spout	Middle–Late Uruk	Acr. I Levels 21–17, Acr. II(?), Acr. III Level 2 (Middle–Late Uruk)
14		0	0	1 piece, Op. 1; 1 piece, Op. 4; 1 piece, Probe F	Type 4: proto-beveled-rim bowl	Early Uruk	Acr. I Level 23, Acr. II(?), Acr. III Level 7 (Early Uruk)
15		0	0	Only 1 from KS-108 Early Susa II context	Thumb-impressed bowl base	?	?
16		0	0	2 pieces, Op. 1	Type 12: rounded-rim bowl	Early Uruk	?
17		0	15 pieces		Type 50: plain and punctated strap handle	Middle–Late Uruk	Acr. I Levels 21–17 (Middle/Late Uruk), Acr. II Level 5 (Middle Uruk), Acr. III Levels 6 and 2 (Middle–Late Uruk)
18		0	0	3 pieces, Op. 1; 4 pieces, South Mound surface; 2 pieces, Probe F	Type 30: neckless ledge-rim jar	Early Uruk	Acr. I Level 22, Acr. II(?), Acr. III Level 7 (Early Uruk)
19		0	0	4 pieces, Op. 1; 2 pieces, South Mound surface	Type 18: impressed-strip bowl rim	Early Uruk	See no. 20

(*continued*)

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Table 7. Tally of specific Susa II pottery types found at KS-59 (*continued*).

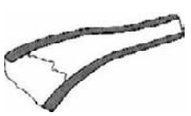
	Pottery type	Square 787	Square 822	Elsewhere in KS-59	Johnson type designation	Johnson period assignment	Susa Acropolis
20		0	0	4 pieces, Op. 1; 2 pieces, South Mound surface	Type 18: finger-strip bowl rim	Early Uruk	Acr. I Level 22, Acr. II Level 7 (Early Uruk)
21		0	0	4 pieces, Op. 1; 2 pieces, South Mound surface	Type 18: finger-strip bowl rim variant	Early Uruk	See no. 20
22		2 pieces	6 pieces		Type 47: conical spout	Late Uruk	
23		1 piece	2 pieces		Swollen spout	?	
24		4 pieces	11 pieces		Slightly curved spout	?	
25		7 pieces	16 pieces		Tapering spout	?	Acr. I Levels 21–17, Acr. II Level 2, Acr. III Level 2 (Middle–Late Uruk)
26		3 pieces	7 pieces		Type 46: drooping spout	Late Uruk	
27		0	0	1 piece, Op. 1	Type 45: straight spout	Early Uruk	Acr. I Level 21, Acr. II(?), Acr. III(?) (Middle–Late Uruk)
28		0	1 piece		Type 52: fully twisted vertical handle	Late Uruk	
29		0	1 piece		Type 51: flat twisted handle	Late Uruk	

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Table 7. Tally of specific Susa II pottery types found at KS-59 (*continued*).

	Pottery type	Square 787	Square 822	Elsewhere in KS-59	Johnson type designation	Johnson period assignment	Susa Acropolis
30		0	1 piece		Type 52: horizontal twisted handle	Late Uruk	
31		10 pieces	9 pieces		Type 50: simple strap handle	Middle–Late Uruk	Acr. I Levels 21 and 17, Acr. II Level 5, Acr. III Levels 6 and 2 (Middle–Late Uruk)
32		1 piece	0		Type 41(?): registers of rocker imprints	Early–Late Uruk	
33		1 piece	0		Incised scallops	?	
34		0	1 piece		Type 38: incised oblique band	Late Uruk	
35		1 piece	2 pieces		Type 36: cross-hatched band	Middle–Late Uruk	
36		0	0	1 piece, Probe F	Type 33: punctated shoulder decoration	Early–Middle Uruk	
37		Numerous	Numerous		Type 6: coarse shallow tray	Middle–Late Uruk	

Note: Examples from Susa consist of those published and unpublished forms from the operations at Susa known as Acropolis (Acr.) I, II, and III. Acropolis I was excavated by Le Brun in 1969–79; Acropolis II (on the High Terrace) was excavated by Perrot and Canal in 1972 (Canal 1978a, 1978b); and Acropolis III, a trench next to Acropolis I, was excavated by Wright in 1978 (Wright 1988). Canal did not publish any pottery from Acropolis II; Le Brun published only a handful of examples from Acropolis I Levels 18 and 17. Wright excavated eight levels, of which only some examples of the pottery, from Levels 2 and 7, were published. Most of the examples cited in the table are from my study of the materials from the three operations during my nine months' tenure at the Susa Château.

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Table 8. Volumes of complete beveled-rim bowls from KS-59.

Volume (in cc)	Number of examples
350–400	8
400–450	64
450–550	78
550–600	173
600–700	98
900–950	15
950–1,000	4
>1,000	3

determined that the rarest size can hold a volume of more than 1,000 cc, while the most common volume is 550–600 cc (table 8; pl. 77). The fact that the largest number of examples (173) and the second largest number (98) fall within the 0.488–0.623 liter range that Gregory Johnson calculated for the amount of ration that prevailed from the Middle to Late Susa II period suggests that these beveled-rim bowls were used for rationing.[4]

STANDARD WARE

As in many pottery classifications, the coarse and standard wares overlap, with the latter made from a better-quality clay. But the major difference between the two wares consists in the absence of vegetal tempering in the standard ware. For the most part, the ware has a gritty paste, but in some cases fine sand and small- to medium-sized calcite particles can be seen. The grits are primarily brown, maroon, gray, or black. Just as with the pottery of the Early Susiana period, the clay used in making Susa II standard wares may have come from the banks of the Ojirub River, whose clay contains the same type of grits. The size and concentration of the grits vary, from small to large and from dense to sporadic. Vessels in this group are primarily buff in color, but shades of yellowish, pinkish, and reddish buff also occur. Some examples are fired to a greenish buff or greenish gray. In general, however, these vessels were not baked at high temperatures, and the reduced atmosphere in the kiln is apparently responsible for occasional gray cores.

4 Johnson 1973, 129–39.

Whereas in most cases wheel striations are visible on the interior of the vessels, the exterior was usually smoothed, scraped, pared, or scratched in such a manner that all traces of striations were obliterated. The application of slip, usually creamy buff, is apparent in some examples; but whether all vessels in this group were slipped is not clear, since false slip can be created by wet smoothing. True slip can be seen on vessels whose wet-smoothed surface is scraped with a blunt tool (reserved slip).

FINE WARE

The clay of these vessels seems to have been well levigated but in many cases still contains fine sand. Scattered, occasional, and probably accidental small grits are not uncommon. The color of the ware ranges from creamy/yellowish to pinkish buff. Both the core and the surface of vessels that were overheated display a greenish-buff color.

Unlike the previous group, vessels made of fine clay tend to be relatively small and exhibit a uniform, oxidized core. The entire surface is evenly smoothed and usually covered with a creamy-buff or yellowish-buff slip. Although the upper body of the vessel is much smoother than that of the standard ware, the lower body, close to the base, remains comparatively rough. The most prominent form of this type of ware is a small, thin-bodied cup with a pouring lip (e.g., pls. 22:A; 34:A; 39:A, D; 53:A–B). The corpus of vessel shapes in this group is limited, the ware being obviously unsuitable and uneconomical for ordinary and cooking vessels.

RED WARE

Equally rare are vessels made of reddish clay. Although some examples have red-washed surfaces, it is not the red wash that defines this group, for red wash occurs on standard buff and fine wares as well. The paste of the ware is red and sandy with occasional grits. Sometimes a bright-red wash is applied to the surface and may or may not be burnished. In the burnished examples, burnishing strokes may be visible or the entire surface of the vessel may be evenly polished. We found no examples of this type of ware in our excavations.

GRAY WARE

Of all the fourth-millennium BCE Susiana pottery types, gray ware is the rarest. Vessels made of this ware have a dense, sandy, dark- to light-gray clay with occasional

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grits, sometimes tempered with straw. The shapes of the vessels made of gray ware are almost the same as those made of standard buff ware. This similarity and the rarity of the type suggest that the gray-ware vessels may have been imitations of stone vessels. Although we found several sherds of gray ware in our surveys, they were not diagnostic enough to be assigned to the Susa II period.

SUKKALMAKH (OLD ELAMITE) PERIOD

Of the three sites we surveyed and excavated, only the settlement at KS-59 showed Sukkalmakh occupation. Excavations in our Operations 1 and 4 indicated that only the South Mound of KS-59 was occupied during this period (ca. 1900–1500 BCE) and that the occupation was limited to the summit of the mound, a situation very similar to the Sukkalmakh occupation at Chogha Mish.[5]

Like the Shimashki ceramics, the Sukkalmakh pottery shares a great many forms with contemporary Mesopotamia and is well known and well defined in the literature.[6] Our small collection of sherds datable to the Sukkalmakh period comes mainly from Operation 4 and the surface of KS-59 (figs. 41, 49). This wheel-made pottery has a buff-colored fabric with varying tinges of orange-yellow to brown-gray. The paste is usually sandy or gritty and is frequently tempered with straw, especially in large vessels. Some pieces exhibit a thin, light-buff or yellowish-buff layer on the exterior and interior that may be interpreted as slip. This effect probably resulted from the high temperatures to which the vessels were exposed in the kiln. The large vessels also have a gray core.

Low, ring-based bowls with almost-vertical upper bodies and slight carination near the base are the most common. Shouldered jars, usually with sharp carination, are the most dominant among the closed forms (pls. 10:K, 11:G, 12:F, 25:A–I). Less common are globular jars without shoulders. Large vats with heavy rims and often a prominent ledge near the lip are also common, and they continue into the Middle Elamite period with some variations (pls. 8:B, 10:L, 12:B–C, 15:H–I, 25:K–L). High- and low-necked jars (pls. 9:C–D, I; 25:B) and various types of bowls (pl. 25:G–J) are also common.

MIDDLE ELAMITE PERIOD

The few Middle Elamite sherds we have (for example, pls. 10:A, L; 12:E, G) come from the surface of KS-59. We found no stratified deposits from this period (ca. 1350–1000 BCE) in our excavated areas. To judge from a number of intact and broken bricks, as well as the robbed Middle Elamite vaulted tomb we found in Operation 3 (figs. 41–42), KS-59 must have been used as a cemetery during this period, most probably by the residents of nearby Haft Tappeh (fig. 33).

The Middle Elamite phase is a comparatively well-known and well-defined historical and archaeological phase, dated to about 1400–1000 BCE.[7] The pottery is primarily buff or light brown in color, with a possible buff slip. The paste always has sand inclusions, and some larger vessels are tempered with chaff. Conical bowls, Elamite goblets, globular pots with sharply carinated shoulders, button-based jars, band-rim jars, and funnel-based vats are the most characteristic forms in this period. Compared with the Sukkalmakh phase, the repertoire of ceramic forms is more limited—a characteristic attributed to the increasing urbanization and centralization of this craft.[8]

5 See Alizadeh 2008, 30; Delougaz and Kantor 1996, 18–22.

6 Carter 1971, 1979; Carter and Stolper 1984, 146–48; Gasche 1973.

7 Carter and Stolper 1984, 164; Miroschedji 1981.

8 Carter and Stolper 1984, 164.

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5
Administrative Technology

INTRODUCTION

The crystallization of village life in the Near East coincided with the appearance of a class of clay objects known as *tokens*. The new economic and social environment of early Neolithic farming villages seems to have presented stronger economic and social pressure for a personal, if not interpersonal, mnemonic notation system—an exigency of life that does not seem to have been necessary in the earlier, fluid, hunter-gatherer communities of the Upper Palaeolithic. Still, Alexander Marshack has demonstrated that abstract notational systems existed even in the Aurignacian and Magdalenian periods in Europe, some 20,000 years ago.[1] As Marshack notes, such systems need not be formal, representing actual numbers; they can be "an informal tradition whose basic system is the accumulation of sets and subsets, but the precise form or style of the accumulation was not culturally determined except in general terms."[2] Only relatively recently were such clay objects systematically analyzed and interpreted as tokens for numerical notation.

The early Neolithic clay tokens are of simple shapes and have a wide geographic distribution in the Near East. They occur in the Levant (e.g., Beisamoun, Jericho), Jordan (e.g., Beidha, Ain Ghazal), Syria (Mureybet, Aswad), Anatolia (Çayönü, Çan Hasan, Demircihüyük), Iraq (Jarmo, Maghzaliyah, Mu'lefaat), Iran (Ganj Dareh, Asiab, Ali Kosh, Chogha Mish, Zaghe), and Turkmenistan (Anau, Jeitun). We do not know whether clay tokens developed in a particular region and then spread throughout the Near East. By the middle of the Neolithic period, around 5500 to 5000 BCE, clay tokens are associated with monumental buildings, but the early stages of their development and use need not have been encouraged by regional economic impetus. Such simple systems of notation may have developed independently more than once and in more than one region. After all, the human brain is hard-wired to seek patterns and to organize them into some sort of manageable form. This fact, coupled with the shared exigencies of daily life, could have led to the parallel development of simple mnemonic methods of recording numerical data with notches on a stick, a collection of pebbles,[3] or a collection of variously shaped clay objects that were easy to make, store, carry, and count.

SEALS, SEALINGS, AND TOKENS

Our small collection of seals, sealings, and tokens come exclusively from KS-59. We did not expect to have any fourth-millennium BCE evidence of sealings from KS-04, since the site was deserted around 3800 BCE. But we were surprised that our excavations and survey at the extensive occupation of the small, fourth-millennium BCE town of KS-108 did not produce any items of administrative technology, even though we carefully sifted the contents of all the trash pits where such evidence is primarily found.

The evidence of administrative technology from KS-59 comes exclusively from Square 822 (pls. 78–79). We retrieved various types of sealings, including door, bale, bag, and jar sealings (pl. 78). Except for a three-row register of seated female figures with a typical Late Susa II jar in front of their faces (pl. 78:A–B) and an image of a spider made by a stamp seal (pl. 78:C),

1 Marshack 1972a, 1972b.

2 Marshack 1972a, 825.

3 Lieberman 1980; Oppenheim 1959; Schmandt-Besserat 1974.

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other seal impressions are not clear enough to be reconstructed.

We found two stamp seals with geometric designs, one intact (pl. 79:A) and one fragmentary (pl. 79:I); both seals were made of bone. We found a number of clay tokens of various shapes (pl. 79:B–H), but no clay balls or complex tokens. We also found a clay tablet with a pair of impressed holes, but no seal impressions (pl. 79:L).

Three pieces of pierced clay (pl. 79:N–P) may have been used as either tokens or tags. But since I could find no close parallels for these items, I am uncertain of their original function.

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6
Small Objects

STONE OBJECTS

Among the stone objects we found in our excavations (pls. 80–89) are two vessels. One of them is a fragment of a typical Late Susa II stone bowl with banded rim (pl. 80:H); the other vessel is a closed form that was buried as a funerary gift in grave F 3, Square 288 (fig. 50).

Other objects include grinding stones (pl. 80:A–B), pounders (pl. 80:G, I), a pierced stone—probably a loom weight or sinker (pl. 80:C), and two pendants—one of them in the shape of an animal, probably a bird (pl. 80:J), and the other in the shape of a coffee bean (pl. 80:K). Plate 82:C may also be a loom weight, but this identification is uncertain. A flattish rock with a round depression in the middle (pl. 82:A) may have been used to shape hard objects, but its exact function is also uncertain. Plate 81:C and E are button-like objects from a Late Susiana 2 context; plate 81:C may be a seal blank, while plate 81:E, made of malachite and with a pierced handle, may have been used as a button.

Plate 80:F is one of several examples of flint sickle blades originally hafted in a handle, probably of wood. Such hafted flint sickles appear in the fifth millennium BCE in Susiana and seem to have disappeared in the third millennium.

Plate 80:D is a stone weight, though some archaeologists would refer to it as a "mace-head."[1] Such objects are found in Susiana, Mesopotamia, Syria, and southwestern Anatolia. They seem to have appeared in the last century of the fourth millennium BCE and disappeared after the Late Susa II / Late Uruk phase. They invariably have crossed grooves and a flat base.

Clearly, these stone objects were not designed to be inserted into a handle, since their flat bases would make it impossible to mount them effectively. Their crossed grooves suggest they were meant to be suspended (see the hypothetical reconstruction in pl. 80:E). Many such weights were found at Habuba Kabira; Eva Strommenger, Dietrich Sürenhagen, and Dessa Rittig illustrate and discuss thirteen of them under the rubric "weights," identifying them specifically as loom weights (*Webgewichte*).[2] Considering that a piece of rock can serve quite adequately as a loom weight and one would not invest significant effort in carving specific shapes and sizes for use as such mundane tools, these objects could not have been used in weaving (see also below). Robert McCormick Adams and Hans Nissen hesitatingly called them "mace-heads" and also suggested they might be sling shots.[3] Roger Matthews identifies the one example reported from Jemdet Nasr as a "bola,"[4] and Gil Stein describes the only example found at Hacinebi as simply a weight.[5]

Except for the multiple examples from Tall-e Geser,[6] the one from Chogha Mish,[7] and the one from KS-59 (pl. 80:D), none of the published examples have been weighed. But one can tell by their size and widest diameter that they exhibit some standardization. The widest diameters of those from Tall-e Geser are 8 cm and 10 cm and weigh 906 and 1041 g, respectively. The KS-59 example has a diameter of 8.2 cm and weighs 895 g, while the Chogha Mish example weighs 890 g. Although the weights of these examples are not identical, they are close enough to suggest two categories

1 E.g., Adams and Nissen 1972, 211; Le Brun 1971, 182, fig. 55:2; 1978b, 140, fig. 39.

2 Strommenger, Sürenhagen, and Rittig 2014, 251–53.

3 Adams and Nissen 1972, 211.

4 Matthews 1989, fig. 3:1.

5 Stein 1999, fig. 7:f; 2001, fig. 8.8. Such weights were also found at Sheikh Hassan; see Boese 1995, 175, pl. 13:b.

6 Alizadeh, Ahmadzadeh, and Omidfar 2014, 220–21, fig. 97:F, H.

7 Delougaz and Kantor 1996, pl. 29:I.

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of weight measures. All the examples discovered and published to date show two distinct sizes; the fact that one group has a widest diameter ranging from 7.8 to 8.3 cm and the other group a widest diameter ranging between 9.7 and >10 cm suggests that the unweighed examples must fit into one or the other of these two categories. While it is true that the objects show slight variations in weight and diameter, such variations are to be expected in handcrafted objects. Considering that such uniformly shaped weights with two distinct categories of size and weight have been found at sites with strong connections to Susiana and Uruk, I conclude that the makers followed a set of standards common at these sites.

FLINT BLADES

We found many flint blades at all three sites (pls. 83–87). These items range in date from the Late Middle Susiana period to Susa III (ca. 5000–2900 BCE). We discovered the blades scattered throughout all occupational levels, with no single concentration of them in any specific locus. Nor did we find much debitage, presumably because we did not locate the spot where they were manufactured (assuming they were manufactured at these sites).

The collection was meant to be described and analyzed by two lithics specialists. Unfortunately, their circumstances and workloads prevented them from executing this task. I have nevertheless included their illustrations in this volume, with brief descriptions of the items and their contexts, for the benefit of researchers interested in the collection.[8]

HOES / HAND AXES AND ADZE

Fan-shaped stone hoes or hand axes, many of them with bitumen-smeared handles, appear in Susiana at the end of the Archaic Susiana 3 phase (ca. 5900 BCE) and continue into the fourth millennium BCE.[9] Those shown in plate 88:A–B are typical of the Early Susiana period, while plate 88:D is much closer in shape to those typical of the fourth millennium BCE. The adze (pl. 88:C) may belong to the Early Susa II period, judging from its similarity to other examples attributed to this phase.

SPINDLE WHORLS

We found only two spindle whorls made of stone (pl. 89: C, E).

CLAY OBJECTS

We found multiple clay objects at all three sites (pls. 81–82, 89–93). From our fourth-millennium BCE contexts, we unearthed a number of pottery sickles and fragments so common in southern Mesopotamia and Susiana (pls. 91:B, 92:A–C). Such objects seem to appear in southern Mesopotamia as early as the Late Ubaid phase,[10] while in Susiana they seem to have appeared sometime in the fourth millennium BCE and thus must have been introduced into the region.

Our only example of a bent-clay "nail" or muller came from a late fifth-millennium BCE context in KS-04. In southern Mesopotamia such items appear in the Late Ubaid phase and, according to Adams and Nissen, continue into the late fourth millennium BCE as well.[11] But in Susiana they are found no later than the Late Susiana 2 phase.

Apart from some stone loom weights described above, we also found baked-clay spool-shaped weights and baked-clay sinkers (pl. 92:D–E). A tapering pipe with a series of uneven, narrow incisions on the wide opening (pl. 92:F) may have been used in textile manufacturing, but this hypothesis is highly uncertain. We found a large number of egg-shaped, unbaked-clay sling shots that came primarily from various fourth-millennium BCE contexts (pls. 81:A, 92:G). A similarly shaped object came from KS-108 (pl. 82:E), but it is painted and seems to have been broken at one end; it may be the head of a figurine or some type of token. All the jar stoppers that we found date to the Late Susa II phase, when bottles appeared in the pottery assemblage (pl. 92:H–J). A number of clay cones came from KS-59 and KS-108 (pl. 82:G), but none from KS-04. None of the examples were painted, nor did they have deep depressions on their bases, the latter being a common feature in cones used as architectural decorative elements.

ANTHROPOMORPHIC AND ZOOMORPHIC FIGURINES

We found a great number of human and animal figurines in our survey and excavations. The human fig-

8 The collection is now at the National Museum of Iran and can be studied on request.

9 See Alizadeh 2008, 90, fig. 87:C, J–O; Delougaz and Kantor 1996, pl. 245; Dollfus 1971, fig. 26; 1975, fig. 37.

10 Adams and Nissen 1972, 208.

11 Adams and Nissen 1972, 210.

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urines (pl. 93:D–H, K–L) come exclusively from KS-59 and date to the Middle Elamite period with the exception of plate 93:H, which is stylistically similar to those found in Sukkalmakh contexts.[12] All were mold made and baked, and since we found no occupational deposits dating to the Middle Elamite period, these figurines may have been among the funerary objects in the tombs that had been robbed.

Three clay animal figures, two painted and one plain, date to the early fifth millennium BCE (pls. 82:D, 91:A, C). The other such figurines belong to the second millennium BCE and come from KS-59 (pl. 93:A–C, I–J, M–N).

SPINDLE WHORLS

We found some twenty pieces of baked-clay whorls in our survey and excavations at all three sites (pls. 89–90). Plate 90:J is a star-shaped whorl typical of those from the Early Susiana period, while plate 90:H–I date to the Late Middle Susiana phase.[13]

By the late fifth millennium BCE, during the Late Susiana 2 phase, spindle whorls were no longer decorated, and many shapes continued into the Susa II period (pls. 89:A–B, F–G; 90:A–G). Therefore, many such whorls can be dated with certainty only by their context and associated ceramics.

METAL OBJECTS

We found multiple very fragmentary and badly corroded objects of copper and bronze, but only five pieces (pl. 94:A–E) were preserved well enough to be illustrated. In all but one case, it is impossible to say with any certainty what type of objects they represent. The only clearly identifiable and datable object is the arrowhead typical of the Achaemenid period (pl. 82:B). Most interestingly, it was found at KS-108, a site with absolutely no evidence of first-millennium BCE occupation. Objects such as this one, as well as coins, are routinely collected by local farmers, especially after a rain. So, purely speculatively, it is possible that KS-108 was a battle site sometime during the Achaemenid period.

12 See Spycket 1992, pl. 66:488.

13 Cf. Alizadeh 2008, fig. 83; Delougaz and Kantor 1996, pl. 232; Dollfus 1975, fig. 31.

MISCELLANEA

Fragmentary and intact glass bracelets are found on the surface of many ancient sites in southwestern Iran, but never in excavations. Glass bracelets (pl. 81:B) were popular among nomadic women, and the presence of such items at ancient sites may have resulted from the use of these mounds as temporary nomadic camps.

Equally common in southwestern Iran are Islamic cemeteries on the summit of many ancient mounds. Such cemeteries belong to either nearby villages or nomadic tribes that set up their camps on or near such sites. The choice of the mounds as cemeteries has a practical reason, as graves would not be destroyed by flooding in rainy seasons; the mounds also make good landmarks by which cemeteries can be easily located. In accordance with Islamic tradition, the graves in such cemeteries are almost always devoid of funerary gifts. The necklace with semiprecious stones recovered at KS-108 (fig. 32:A; pl. 82:F) is the only funerary object we found in such graves. The KS-108 graves differ from isolated Islamic graves at other sites (e.g., those at KS-04; fig. 25) in that almost all the KS-108 graves were lined and covered with mudbricks. KS-108 lacks occupational deposits later than 3100 BCE, so it is possible that the graves at the site belonged to an early Islamic phase when Islamic funerary tradition and law were not closely observed.

On the surface in Square R15 at KS-04 we found two whole and some fragments of square baked bricks, one of which has a hole in the middle (pl. 91:D–E). The specimen with a central hole may have been meant to hold a wall cone or nail decoration (*clou*) similar to those that decorated the surface of the high platform at Susa. Although such bricks were found on the surface, I have tentatively dated them to the Late Susiana 2 phase (ca. 4400–4000 BCE) because of their similarities to those from the Susa Acropolis.[14]

14 Square mudbricks with similar dimensions were reported from Level 10 of the Acropolis II excavations (Canal 1978b, 23). See also Stève and Gasche 1971, pls. 179, 191:22–23, and photographic pl. 94:3–4, 6, 9. I found, as well, several square baked bricks with the same dimensions in the storerooms of the Susa Château during my tenure there. Late fifth-millennium BCE baked bricks were also found at Geser; see Alizadeh, Ahmadzadeh, and Omidfar 2014, 22, fig. 17.

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Appendix A

Robert McCormick Adams's 1960–61 Survey of Khuzestan

Robert McCormick Adams was the first archaeologist to systematically survey the upper plains of Khuzestan and use combined ecological, archaeological, and geomorphological data to infer, in a seminal article, long-term population fluctuations and the socioeconomic history of ancient Susiana from about 6000 BCE to Islamic times.[1] Adams went on to elucidate the processes of social complexity and urbanism in the Diyala[2] and southern Mesopotamian regions.[3] His pioneering work in Khuzestan showed the importance of looking beyond the limits of excavation for a much broader understanding of cultural processes.[4]

Prior to Adams's survey in Khuzestan, archaeologists routinely used local names to record archaeological sites. However, some sites have more than one local name. Local names can also be long and are often misspelled by nonlocal archaeologists; using them could thus result in a crowded site-distribution map and misidentification. Adams devised a system that used the initial of the name of the region as a prefix in a sequential numbering of the sites, such that KS-01 stands for Khuzestan Survey, site number 1—that is, Chogha Mish. Regional surveys subsequently used the same method and expanded the number of sites, which now total more than 1,600.[5]

Adams produced a list of all his sites with detailed measurements and the periods attested at them. Neither these measurements nor any ceramic samples of the attested periods were published. Adams used the 1917 British Basra Survey Party map of northern Khuzestan (fig. A1), as well as aerial photos, to locate sites and irrigation canals.[6] But unlike in his publications of 1965 and 1972 (the latter coauthored with Nissen), where such important data are presented along with pottery exemplifying archaeological phases, Adams did not publish his list, his detailed distribution map of the sites, or the pottery, though he generously gave copies to subsequent archaeologists who resurveyed the region. Nevertheless, both the informative and detailed 1917 British map and Adams's original map remained unpublished.[7]

Since GPS did not exist in the 1960s, the locations of the sites Adams discovered are generally accurate but not precise. Given the proximity of many of the sites to each other, locating Adams's sites on the ground without a detailed map would quickly lead to confusion. This problem would be exacerbated without information about the measurements of individual sites and the periods attested there. So Adams's list must be used in conjunction with his map to locate his 240 sites on the plain.[8] For these reasons, I decided to make these documents available in this appendix. Adams's original map is very large and marked with a great number of modern and ancient waterways (fig. A2). I have simplified his map by deleting most of

1 Adams 1962.

2 Adams 1965.

3 Adams and Nissen 1972.

4 This appendix is not meant to discuss Adams's immense contribution to Near Eastern archaeology. For that, see Stone 2007; Wright 2001b; Yoffee 1997.

5 Adams surveyed and recorded only 240 sites, some of which were twin sites or clusters of small mounds.

6 The 1917 British map is extremely valuable because a large number of sites marked on it no longer exist—nor do a number of villages that were deserted after World War I.

7 Robert Wenke (1975–76) and Robert Schacht (1987), who were among those who resurveyed the region, produced distribution maps with KS numbers. But Wenke dealt only with the sites dating to the Parthian and Sasanian periods and Schacht with those dating to the Elamite phases.

8 Site numbers higher than 240 in figure A1 refer to sites numbered by Wenke (1975–76).

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Figure A1. 1917 British survey map.

the waterways (fig. A3). Adams did not assign a number to Susa; in a 2001 survey of Khuzestan, we designated Susa as KS-00.[9]

In table A1, I added an "Observations" column to Adams's list with additional information about each site. For the archaeological/historical periods from 2400 BCE onward, Adams used abbreviated designations for Mesopotamian periods. The table here uses Akk. = Akkadian, OB = Old Babylonian, Kass. = Kassite, MB = Middle Babylonian, NB = Neo-Babylonian, Ach. = Achaemenid, Parth. = Parthian, Sas. = Sasanian, and Isl. = Islamic, including E. Isl. = Early Islamic and M. Isl. = Middle Islamic. For periods prior to 2400 BCE, Adams used abbreviated versions of the names that were introduced and discussed by the French archaeologist Louise Le Breton.[10] They include Sus. a = Susiana a, Sus. b = Susiana b, Sus. c = Susiana c, and Sus. d = Susiana d. These periods, rarely

9 Alizadeh et al. 2004.

10 Le Breton 1957.

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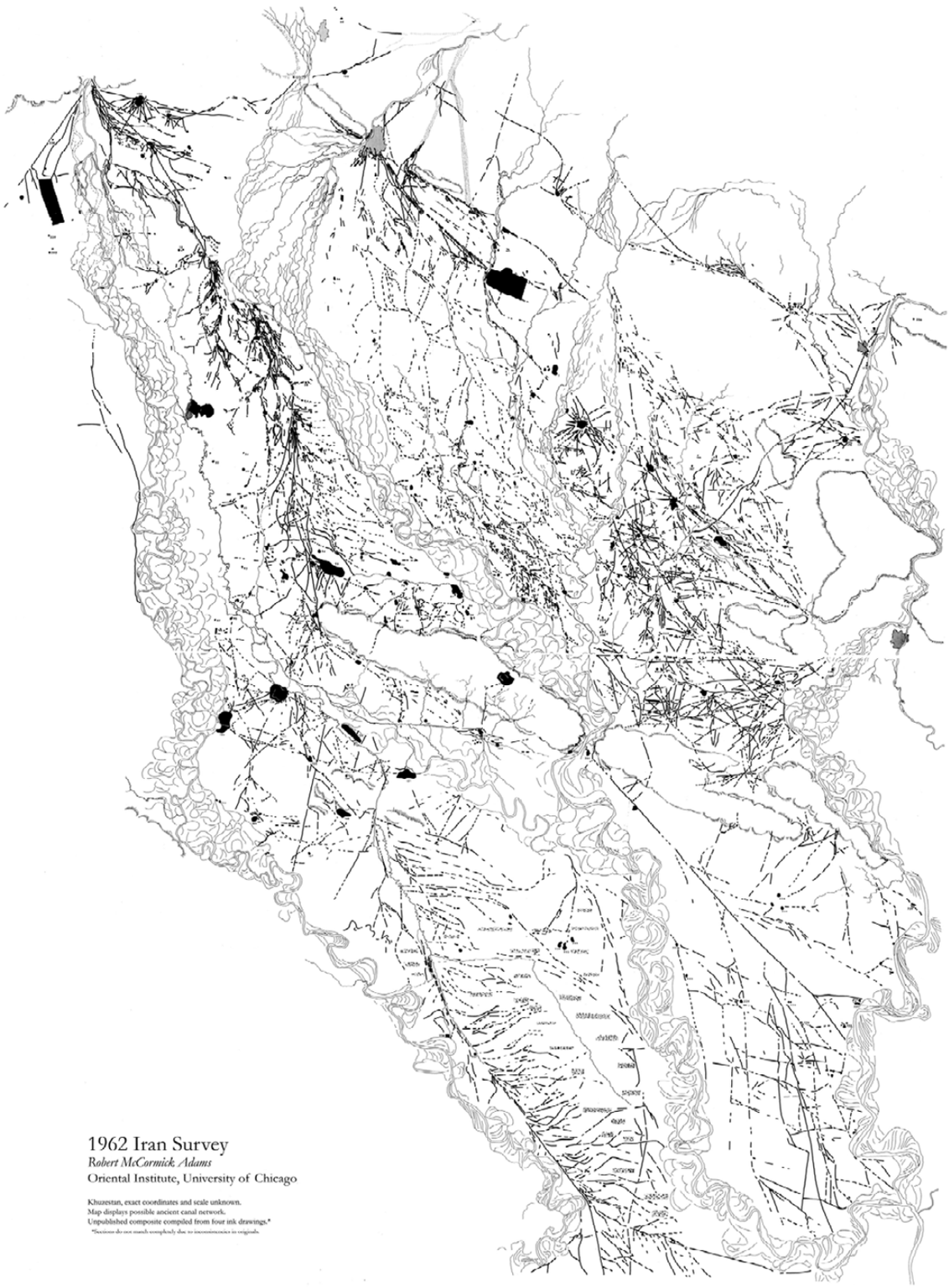

Figure A2. Original distribution map of sites surveyed by Adams.

used nowadays, cover the span of time from about 5800 to 4400 BCE and correspond to the Early Susiana, Early Middle Susiana, Late Middle Susiana, and Late Susiana 1 periods. "Susa" followed by the capital letter A, B, C, or D stands for the periods attested at Susa itself—that is, Susa A, B, C, and D, spanning from 4400 BCE to the Awan period (ca. 2400 BCE). As if this convention were not confusing enough, the capital letters are rarely used and are now replaced by the roman numerals I–IV—that is, Susa I, II, III, and IV—based on more accurate archaeological excavations at Susa from 1961 to 1978.

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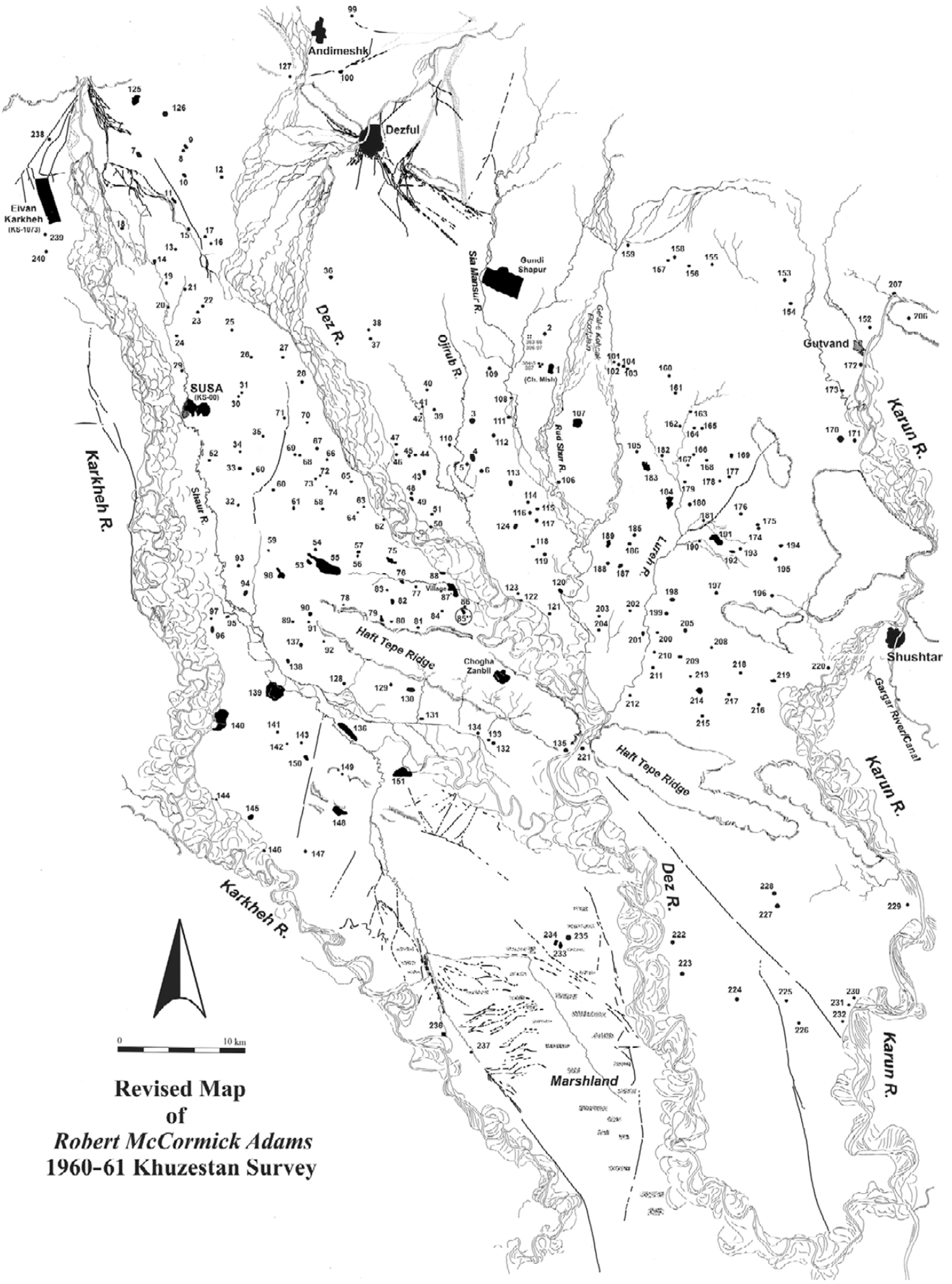

Figure A3. Revised distribution map of sites surveyed by Adams.

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan.

KS no.	Site name	Size (in m)	Periods attested	Observations
01	Chogha Mish	700 N–S × 450 × 24 ht	Sus. a–Susa B, Sas.	Marked and named on the BM. Chogha Mish also has evidence of the Archaic (ca. 6400–5800 BCE), Sukkalmakh, Achaemenid, and Parthian periods.
02	Tepe Fazl ʾAli*	150 dm × 9 ht	Sus. a–Susa B	Marked and named on the BM. The correct name is "Chogha Boneh Fazl Ali." KS-02 also has evidence of the Archaic period (ca. 6400–5800 BCE).
03	Tepe Dichiyah (Chogha Pahn*)	350 dm × 9 ht	Sus. a, MB	Marked and named on the BM. KS-101 and KS-102 are also called "Chogha Pahn."
04	Ishan Abu Diyyayyt	350 × 13 ht + 2 small [mounds]	Sus. b–Susa A	Probably marked (below KS-03) on the BM but not named. "Diyyayyat" is the local pronunciation of Arabic *dajjajat* "chickens." KS-04 also has evidence of the Early Susiana and Early Susa II phase (Early Uruk).
05	Ishan al-ʾAin	250 NW × 150 × 11 ht	Sus. b–d, OB	Not marked on the BM.
06	Ishan Iraydeh	300 NNW × 180 × 7 ht	Sus. c–Susa A	Not marked on the BM.
07	Tepe Sanjar*	450 NNW × 320 × 12 ht	Sus. a–Kass., MB?	KS-113 also is named "Sanjar." KS-07 also has evidence of LS 1 and Susa III (Proto-Elamite) occupation.
08	Tepe Saiyah*	120 dm × 3 ht	Sus. a–d, Parth.–Sas.	This site, KS-09, and KS-11 are collectively marked and named on the BM.
09	Tepe Saiyah*	320 NNW × 250 × 3 ht	Seleucid–Parth.	See KS-08.
10	—	350 WNW × 120 × 3 ht	Sus. b–Susa D, Parth.	Not marked on the BM.
11	Tell Siya	500 NW–SE × 150 × 4 ht	Larsa–OB, Parth.–Sas.	See KS-08.
12	Tepe Waskhara*	250 WNW × 100 × 6.5 ht	Sus. b–Susa A, Parth.	Not marked on the BM.
13	Tepe Band-i-Bal	200 dm × 8–10 ht	Sus. c–Susa A	Tappeh Bendebal. Marked on the BM as "Tappeh Bandabal."
14	Tepe Jowi	250 × 8 ht	Sus. b–Susa A	Marked on the BM as "Tappeh Juwi."
15	—	300 NW × 170 × 3 ht	Sus.?, MB–Ach.	Not marked on the BM.
16	Tepe Mohammed Agha*	100 dm × 11 ht	Susa A, Parth.	Marked and named on the BM.
17	—	100 dm × 3 ht	Sus. b–Susa C	Marked but not named on the BM.
18	Tepe Kaftāreh*	200 NNW × 80 × 4 ht	Kass.?, NB–Parth.	Marked and named on the BM.

(*continued*)

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
19	—	150 dm × 9 ht	Sus. b–Susa A	Most probably Tappeh Radadeh south of Jowi (KS-14).
20	Tepe Jaffarabad	90 dm × 8 ht above plain	Sus. a–Susa A	Marked but not named on the BM.
21	—	50 dm × 3 ht	Sus. b–d	Marked but not named on the BM.
22	—	180 dm × 11 ht	Sus. b–Susa B	Marked but not named on the BM.
23	—	160 E–W × 90 × 5 ht	OB–Kass.–MB?	Marked but not named on the BM.
24	Tepe Suleiman	100 dm × 15 ht	Sus. c–Susa B, Sas./Isl.	Marked and named on the BM as "Tall Sulaiman."
25	—	150 × dm × 1.5 ht	OB–Kass., M. Isl.	Marked but not named on the BM.
26	—	120 dm × 2 ht	Ach.?, Parth., M. Isl.	Marked but not named on the BM.
27	Tepe Jadari	120 dm × 10 ht	Sus. d–Susa A, Sas.	Marked but not named on the BM.
28	Tepe Bullahan	80 dm × 10 ht	Sus. c–Susa A	Tappeh Buhalan / Abu Halaneh. Marked but not named on the BM.
29	—	120 NNW × 80 × ?	Susa A	Tappeh Douecia, named by the French archaeologists at Susa.
30	—	100 NNW × 60 × 2.5 ht	Ach.?–Parth.	Marked but not named on the BM.
31	Tepe Ayadana	100 dm × 2 ht	Ach.?–Parth.	This very low mound is now just to the west of the Susa railroad station and does indeed have an Achaemenid component.
32	—	170 dm × 5 ht	Seleucid–Parth.	Marked but not named on the BM, immediately east of Hamzeh Mausoleum.
33	Ishan Rud	220 N–S × 150 × 6 ht	Sus. c–Susa A, Parth.	Marked on the BM as "Rūt."
34	—	100 NS × 80 × 5 ht	Susa A–B, Parth.	Marked on the BM as "Hasmūt."
35	—	160 NNE × 120 × 4.5 ht	Susa A–B, Parth.?–Sas.?	Marked but not named on the BM.
36	Tepe Sherif Oaʾ (Sharafabad*)	200 NW × 150 × 10 ht	Sus. a–Susa B	Marked and named on the BM.
37	Tepe Qaleh Bongoon	? × 7 ht	Susa A?, OB–Kass., MB?	Not marked on the BM.
38	Tepe Farash*	90 dm × 7 ht	Sus. a–Susa A	Marked on the BM as "Tappeh Farrash."
39	Chogha Fatayum*	250 N–S × 150 × 10.5 ht	Susa A–B, OB	Marked on the BM as "Chogha Fathiyian."
40	—	125 NNE × 100 × 6 ht	Sus. ?–Susa A	Marked but not named on the BM.
41	—	150 NNE × 80 × 9 ht	Sus. a–c?, Parth.	Marked but not named on the BM.

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
42	—	90 dm × 7 ht	Sus. b–Susa A	Marked but not named on the BM.
43	Tepe Shamʾan (Chimmira*)	? × 15 ht	Sus. b–Susa A, Sas.	Also known as Tappeh Shamʾun (Alizadeh 1992, fig. 2).
44	2 small tells	150 EW × 100 × 4 ht	Sas.	Not marked on the BM.
45	—	120 cm × 9 ht	Sus. a–d	Not marked on the BM.
46	—	120 NE × 90 × 3.5 ht	Prehistoric traces, Sas.	Marked on the BM as "Sahhāq."
47	Tepe Delam	180 dm × 8 ht	Sus. a–d?, OB–Kass.	Not marked on the BM.
48	Tepe Shamaʾoon (Zein ul-ʾAbidin*)	200 dm × 13 ht	Susa D?–OB, Sas.	Marked on the BM as "Zein ul-ʾĀbidin."
49	Bugga Ishan*	280 NW × 120 × 12 ht	Sus. a–Susa B	Marked on the BM as "Bugga Ishān Tabbāb."
50	Tepe Albu Hamdan Alvan	120 EW × 90 × 10 ht	Sus. a–Susa B	"Al Bu Hamdan" is the name of the Arabic-speaking tribe in this region.
51	Tepe Baraki*	150 dm × 5 ht	Susa D?, Parth.–Sas.	Marked on the BM as "Barakī."
52	Tepe Bolahiyah	100 dm × 3 ht	Susa A–B, Sas.	Marked but not named on the BM.
53	—	500 WNW × 270 × 6 ht	Akk.?–Larsa?, OB–MB, Sas.	Marked but not named on the BM.
54	—	250 WNW × 200 × 4 ht	Susa B–D	Marked but not named on the BM.
55	—	3+ km WNW–ESE	Sas.–E. Isl.	Not marked on the BM.
56	Abu Rasain*	220 NS × 150 × 4 ht	Parth.–Sas.	Marked on the BM as "Abu Rāsaīn."
57	Abu Rasain*	300 EW × 200 × 7 ht	Larsa–MB	Marked on the BM as "Abu Rāsaīn."
58	Tepe Shahami (Tepe Abu Shimah*)	250 NNW × 100 × 6 ht	NB–Parth.	Marked on the BM as "Abu Shimah."
59	Ishan Rud (Abu Fanduweh*)	280 dm × 14 ht	Sus. b–Susa D, Larsa–OB, Kass.?	Marked on the BM as "Abu Fandūweh." We did not find on the surface or in our trenches any evidence of Adams's phase Susa D/IV (i.e., Early Dynastic / Akk.). Adams did not survey or measure the northern complex. Today, the locals do not recognize the name "Ishan Rud."
60	Tepe Abu Shokha (Tel Malih*)	180 EW × 100 × 5 ht	Sus. b–Susa A	A series of small mounds. There are two KS-60s on Adams's map, but only one is mentioned in his list. Marked on the BM as "Tall Malih."
61	—	200 NS × 100 × 8 ht	Sus. d–D, Sas.–E. Isl.	Marked but not named on the BM.

(*continued*)

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
62	—	80 NW × 40 × 2 ht	MB	Marked but not named on the BM.
63	—	110 dm × 3.5 ht	Sus. c–Susa A, Sas.	Marked but not named on the BM.
64	—	150 dm × 3.5 ht	Sus. c–Susa A, B?, Sas.	Probably "Abu Shimah" on the BM.
65	Ishan Bisr	220 dm × 6 ht	Sus. d–Susa A, Sas.	Marked but not named on the BM.
66	Ishan Dho'may	110 dm × 6.5 ht	Sus. b–Susa A	Marked but not named on the BM.
67	—	200 dm × 6 ht	Sus. c–Susa A, Sas.	Marked but not named on the BM.
68	—	110 dm × 3 ht	Sus. c–d, Sas.	Marked but not named on the BM.
69	—	70 dm × 2 ht	Sas.–E. Isl.	Marked but not named on the BM.
70	—	110 NNW × 80 × 5 ht	Sus. c–Susa A?, Sas.– E. Isl.	Marked but not named on the BM.
71	Ishan el-Kelai	200 NNW × 100 × 3 ht	Sus. b–Susa A	Marked but not named on the BM.
72	Ishan Suweidat*	180 NS × 100 × 6 ht	Sus. c–Susa A?, OB–MB, E. Isl.	Marked on the BM as "Suweidat."
73	Ishan Suweidat	100 dm	Sus. c–Susa A, Sas.	Marked but not named on the BM.
74	Ishan Suweidat	100 NNE × 60 × 7 ht	Sus. d–Susa A	Marked but not named on the BM.
75	Abbas Ulai*	1000 WNW × 250 × 3 ht	Sas.–E. Isl.	Marked on the BM as "Abbas Ulai."
76	—	220 dm × 7 ht	Susa B–D, Parth.–Sas.	Marked on the BM as "Saiyid Muhammad."
77	—	150 dm × 4 ht	Sus. c–Susa A	Marked but not named on the BM.
78	Sassanian building	50 × 50	Sas.	Not marked on the BM.
79	Ishan al-'Ain	650 × 130 × 13 ht	Susa A?–B, Larsa–OB–MB?	Marked but not named on the BM.
80	–	eroded	Susa A	Not marked on the BM.
81	small sparse mound	—	MB	Not marked on the BM.
82	scattered small hummocks	—	Sas.	Not marked on the BM.
83	—	150 dm × 3 ht	Sus. A–C, Sas.	Marked but not named on the BM.
84	—	120 NNE × 80 × 3 ht	Sus. d–Susa A, Sas.?–E. Isl.	Marked but not named on the BM.
85	3 mounds	5–9 ht	Sas.	Marked but not named on the BM.

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
86	—	120 ENE × 90 × 6 ht	Sus. c–Susa A, Sas.–E. Isl.	Marked but not named on the BM.
87	—	low, irregular	Sas.	Not marked on the BM.
88	Tepe Khoshan	500 WNW × 100 × 6 ht	Sas.	Not marked on the BM.
89	—	160 NNW × 100 × 6.5 ht	Sus. c–Susa A	Not marked on the BM.
90	Khazaneh Sabeh*	13 ht	Susa A, OB–MB, Sas.	Marked and named on the BM.
91	—	150 dm × 2 ht	Sus. b–c?, Sas.	Not marked on the BM.
92	2 Sassanian forts?	125 WNW × 100 × 3 ht	Sas.	Not marked on the BM.
93	—	100 dm × 4.5 ht	Sus. b–d?, Susa B–C, Akk.–MB	Not marked on the BM.
94	—	210 NNE × 150 × 4 ht	Sus. b–Susa C	Not marked on the BM.
95	—	eroded	Sas.	Not marked on the BM.
96	Tepe Keihf	420 NS × 120 × 13 ht	Sus. a–OB, Kass.?	Not marked on the BM.
97	—	150 dm × 3.5 ht, eroded	Sus. a–Susa A, Sas.	Not marked on the BM.
98	Haft Tepe (Sab'a Haft Sheghal*)	20 ht	Susa B, OB–MB, Parth.?–Isl.	Marked and named on the BM.
99	—	150 dm × 1 ht	Sus. a–b, Sas.–E. Isl.	Marked on the BM as "Tappeh Tirushah."
100	Tepe Charma*	350 EW × 250 × 7 ht	Akk.–MB	Marked and named on the BM.
101	Chogha Pahn	200 dm × 3 ht	Sus. a–b, Susa A?	Marked as a single mound and named on the BM as "Tappeh Chogha Pahn."
102	Chogha Pahn	200 NNW × 150 × 7 ht	Sus. c–Susa A?, Susa B, Kass.	Marked as a single mound and named on the BM as "Tappeh Chogha Pahn."
103	—	100 dm × 3 ht	Sus. c–d traces	Not marked on the BM.
104	—	90 dm × 2 ht	Sas.–E. Isl.	Not marked on the BM.
105	—	50 dm × 4.5 ht	Sus. b–Susa A	Not marked on the BM.
106	—	80 dm × 6 ht	Sus. b–Susa A, Sas.	Not marked on the BM.
107	Tepe Jeliya'	620 dm × 7 ht	Sas.	Marked on the BM as "Darwish Abdun Nabi."

(*continued*)

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
108	Chogha Kabira (Tepe Kirub*)	180 WNW × 100 × 8 ht	Sus. a–Susa B	Marked on the BM as "Tappeh Kirub." The village of Beladieh with the Bakhtiari tribesmen, some 1,000 m to the south, is not on the BM and must have been settled after 1917. In our survey and excavations, we did not find any traces of Adams's Sus. a (Early Susiana).
109	Chogha Mirza Ali*	90 dm × 6 ht	Sus. a–c, Sus. d–Susa A, Susa B?	Marked and named on the BM.
110	—	140 NS × 80 × 5 ht	Sus. a–b, Sas.	Not marked on the BM.
111	Tepe Baladieh	200 dm × 3 ht	OB–MB	The village is built on the western slope of the mound. Neither the village nor the mound is marked on the BM.
112	Tepe Twaim (Chogha Dausar*)	250 NNE × 130 × 6.5 ht	Sus. a–Susa A	Marked on the BM as "Chogha Dausar."
113	Tepe Shangar (Sanjar*)	400 NNW × 200 × 14 ht	Sus. a–Susa B, Sas.–E. Isl.	Marked on the BM as "Sanjar." KS-07 also is called Sanjar.
114	Ishan al-Khaimeh*	150 dm × 7 ht	Sus. a–Susa A	Marked on the BM as "Ishan al-Khaimeh."
115	—	190 dm × 3 ht	OB–MB, Sas.–E. Isl.	Marked on the BM.
116	—	110 NW × 30 × 3.5 ht	Kass.–MB, Ach.?	Marked on the BM.
117	—	160 NW × 120 × 4.5 ht	Sus.?, Sas.	Marked and named on the BM.
118	—	110 NNW × 70 × 7 ht	Sus. a–d	Marked on the BM as "Ubbul Bashir."
119	—	170 dm × 3 ht	Sas.–E. Isl.	Marked on the BM.
120	Tepe Deh No	380 WNW × 250 × 16 ht	Sus. a–Susa A, Akk.–MB, Sas.–Isl.	Marked and named on the BM. As the BM shows, there was a fort on top of this flat-topped mound that belonged to the local Al-Kathir Sheikh. There is no trace of this fort today.
121	—	130 dm × 7 ht	Sus. a–c, Sas.	Marked on the BM.
122	—	80 dm × 6 ht	Sus. c–Susa A, Sas.	Marked on the BM.
123	—	140 EW × 100 × 6.5 ht	Sus. c–Susa A	Marked on the BM.
124	Abu Rasain*	360 ENE × 150 × 8 ht	Sus. c–Susa A	Marked and named on the BM.
125	scattered ruins	—	Sas.–Isl.	Not marked on the BM.
126	—	200 EW × 150 × 2.5 ht	Sas.–Isl.	Not marked on the BM.

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
127	Chogha Gurg (small fort)	—	Sas.	Not marked on the BM.
128	—	170 dm × 2.5 ht	Larsa–OB–MB?, E. Isl.	Not marked on the BM.
129	2 Islamic forts	—	Isl.	Not marked on the BM.
130	scattered hummocks	—	Sus. c–d, Sas.	Not marked on the BM.
131	—	180 dm × 4.5 ht	OB–MB	Not marked on the BM.
132	—	230 dm × 3 ht	Sus. d–Susa A, Akk.?, MB?	Not marked on the BM.
133	—	230 WNW × 150 × 2 ht	Isl.	Not marked on the BM.
134	scattered irregular tells	2.5 ht	Isl.	Not marked on the BM.
135	—	360 EW × 150 × 6 ht	Sus. d–Susa A, Sas.?, E. Isl.	Not marked on the BM.
136	—	2 km NW × 500 × 3 ht	Sas–E. Isl.	Not marked on the BM.
137	—	240 NNE × 170 × 2 ht	Isl.	Not marked on the BM.
138	—	300 NNW × 100 × 2.5 ht	MB–NB, Ach.?, Isl.	Not marked on the BM.
139	Sur/Ahwoidat (large city)	—	Isl.	Not marked on the BM.
140	city	—	Isl.	Not marked on the BM.
141	—	100 dm × 1.5 ht	Sas.?–E. Isl.	Not marked on the BM.
142	—	70 dm × 1.5 ht	OB–Kass., Sas.?	Not marked on the BM.
143	—	120 dm × 4 ht	Sus. b–Susa A	Not marked on the BM.
144	—	60 dm (eroded) × 9 ht	Sus. c–Susa A	Not marked on the BM.
	(lower tell ESE of KS-144)	—	MB–Ach., Sas.?	Not marked on the BM.
145	—	500 EW × 360 × 3 ht	MB?–Ach., Sas.?	Not marked on the BM.
146	Ishan Abu Shichah	80 SW × 2.5 [ht], 150 NE × 2 [ht]	Sus. c–Susa A, Kass.–MB	Not marked on the BM.
147	—	200 dm × 3 ht	OB–Kass.–MB?	Not marked on the BM.
148	sprawling hummocks	1000 WNW × 500 × 1–2 ht	Sas.	Not marked on the BM.
149	—	120 dm × 11 ht	Sus. b–Susa D	Not marked on the BM.

(*continued*)

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
150	many low hummocks	360 NW × 200–250	Sas.–E. Isl.	Not marked on the BM.
151	Ishan Jiliya'at	1500 WNW × 800 × 9 ht	Sas.	Not marked on the BM.
152	—	170 dm × 4 ht	Sus. b–c	Not marked on the BM.
153	—	250 dm × 2.5 ht	Susa B–C, D?	Not marked on the BM.
154	—	100 dm × 2 ht	Sus. b–Susa A	Not marked on the BM.
155	—	60 dm × 1 ht	Sus. a	Not marked on the BM.
156	—	60 dm × 1.5 ht	Sus. b–c	Not marked on the BM.
157	—	180 dm × 3 ht	Sus. c–Susa A	Not marked on the BM.
158	Imam Sauzau*	125 NNE × 80 × 1.5 ht	Sas.?–E. Isl.	The shrine is marked on the BM. The name is a corrupt form of Luri *Imam Suzoo* (i.e., Sabz "green").
159	—	170 NW × 80 × 3 ht	Sus b–d, E. Isl.	Not marked on the BM.
160	—	120 dm × 2 ht	Sus. b–Susa A	Not marked on the BM.
161	—	200 E–W × 120 × 3 ht	Sus. c–Susa A	Not marked on the BM.
162	Tepe Bachum		Sus. b–d	Marked on the BM.
163	Tepe Imam Ali	150 dm × 2 ht	Akk.–Kass.	Marked on the BM.
164	—	80 dm × 3 ht	Sus. b–c, Akk.–Larsa	Marked on the BM.
165	Chogha Pahvandeh*	170 EW × 90 × 12 ht	Sus. b–Susa C	Marked and named on the BM.
166	—	40 dm × 4 ht	Sus. c–Susa A	Marked on the BM.
167	—	50 dm × 4 ht	Sus. c–Susa A	Marked on the BM.
168	—	100 NW × 40 × 4 ht	Sus. a–Susa A, Akk.–Larsa.	Marked on the BM.
169	—	70 dm × 5 ht + hummocks	Sus. c–Susa A, Sas.	Marked on the BM.
170	low hummocks		Sas.–E. Isl.?	Not marked on the BM.
171	—	250 EW × 200 × 4 ht	Susa B–C, D?	Not marked on the BM.
172	Chogha Ab (Chogha Gutwand*)	240 NS × 100 × 8 ht	Sus.?, Kass.–MB–Ach.?	Marked on the BM as "Tappeh Gutwand."
173	—	170 dm × 2 ht	Sus. b–Susa B, C, Sas.	Not marked on the BM.
174	—	120 ENE × 60 × 5 ht	Sus. a–Susa A	Not marked on the BM.
175	—	100 × 3.5 ht	Akk.–Larsa?	Not marked on the BM.

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
176	—	170 NS × 80 × 6.5 ht	Sus. d–Susa A	Not marked on the BM.
177	—	160 NS × 100 × 2 ht	Akk.–Larsa?	Not marked on the BM.
178	—	140 NS × 80 × 8 ht	Sus. b–Susa A	Not marked on the BM.
179	—	100 × 100 × 1.5 ht	Kass.?–MB–Ach.–Parth.?	Marked on the BM.
180	—	50 dm × 3 ht	Sus. c–Susa A	Marked on the BM.
181	—	30 dm × 3 ht	Sus. c–Susa A	Marked on the BM.
182	—	170 dm × 2 ht	Sus. a–b	Not marked on the BM.
183	scattered ruins	1–2 ht	Sas.	Not marked on the BM.
184	scattered ruins	1–2 ht	Sas.–E. Isl.	Not marked on the BM.
185	—	270 dm × 3 ht	Sas.–E. Isl.	Not marked on the BM.
186	—	80 dm × 3 ht	Sus. c–d	Not marked on the BM.
187	—	300 dm × 4 ht	Sas.?–E. Isl.	Not marked on the BM.
188	—	90 dm × 1.5 ht	Parth.	Not marked on the BM.
189	sprawling settlement	1–1.5 ht	Parth.?–Sas.	Not marked on the BM.
190	2 mounds	each 40 dm × 2 ht	Sus. b–c	Marked on the BM.
191	large settlement	0.5–2.5 ht	Sas.	Not marked on the BM.
192	small scattered hummocks	2 ht	Sas.	Marked on the BM.
193	—	60 dm × 2 ht	Sus. b–c	Marked on the BM.
194	widely scattered hummocks	1 ht	Sas.?, E. Isl.	Not marked on the BM.
195	—	60 dm × 1 ht	Sus. b–d	Not marked on the BM.
196	very small mound	1 ht	Sas.–E. Isl.	Not marked on the BM.
197	Burj-i Bazazi	180 dm × 4 ht	Sus. c–Susa A	Marked on the BM.
198	—	390 EW × 120–220 × 4 ht	Sus. b–c, Isl.	Marked on the BM.
199	—	250 dm × 1.5 ht	Isl.	Marked on the BM.
200	Tell Bahat	120 dm × 6 ht	Sus. ?, Kass.–Parth.	Marked on the BM.
201	—	100 dm × 2 ht	Sas.–Isl.	Marked on the BM.
202	—	110 dm × 3 ht	Sas.–Isl.	Marked on the BM.
203	—	120 dm × 3 ht	Sas.	Marked on the BM.

(*continued*)

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
204	Tell Gilligah	100 × 100 × 10 ht	Sus. b–Susa A, Kass., Parth.–Sas.	Marked on the BM in the area named "GILLIGAH." Adams must have adopted that name for the site.
205	—	250 dm × 2 ht	Sas.?, E. Isl.	Marked on the BM.
206	Kuh-i Mamazad	2 km × ?	Sas.? (no sherds)	Not marked on the BM.
207	Tell Khaneh	? (cliffs and overhangs)	?	Not marked on the BM.
208	—	150 dm × 5 ht	Sas.?, Isl.	Marked on the BM.
209	—	40 dm × 2 ht, crescent	NB–Ach.	Marked on the BM.
210	—	160 EW × 100 × 5 ht	Parth.–Isl.	Marked on the BM.
211	—	170 dm × 4 ht	Parth.–Isl.	Marked on the BM.
212	—	50 dm × 2 ht	Sus. c–Susa A	Marked on the BM.
213	—	250 NW × 150 × 2.5 ht	Parth.–Sas.?	Marked on the BM.
		200 × 100 × 1.5 ht	Parth.–Sas.?	
214	—	600 EW × 420 × 3.5 ht	Parth.	Marked on the BM.
215	—	80 dm × 4.5 ht	Sus. a–Susa A, Parth.	Marked on the BM.
216	3 mounds	each 100–150 dm × 3–4 ht	Kass.–MB traces, Parth.–Sas.	Marked on the BM.
217	—	40 dm × 1.5 ht	Ach.	Marked on the BM.
218	—	160 dm × 5 ht	Sus. c–Susa A, Sas., E. Isl.?	Marked on the BM.
219	—	450 EW × 300 × 3 ht	Sas.–E. Isl.	Marked on the BM.
220	Tepe Sardarabad	150 dm × 12 ht	Sus. c–Susa A, OB–MB, Parth.?–Sas.?, Isl.	Not marked on the BM.
221	—	30 dm × 1.5 ht	Sus. d–Susa A, E. Isl.	Not marked on the BM.
222	Imam Sho'aib	180 NW × 120 × 3.5 ht	Ach.–Parth., E. Isl.	Only the shrine is marked on the BM, spelled "Shu'aib."
223	—	170 dm × 1.5 ht	Ach.–Parth.?	Marked on the BM as "Shaikh Finjan."
224	—	240 NW × 150 × 2 ht	Ach.–Parth., E. Isl.	Marked on the BM as "Mutaitiyeh."
225	—	150 NNW × 100 × 2 ht	OB–MB, E. Isl.	Marked on the BM.
226	—	100 dm × 4.5 ht	Susa A–C	Not marked on the BM.

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Table A1. Robert McCormick Adams's list of sites from his 1960–61 archaeological survey in Khuzestan (*continued*).

KS no.	Site name	Size (in m)	Periods attested	Observations
227	Tepe Guriyah (fort)	180 dm × 4.5 ht	Sas.	Marked and named on the BM.
228	—	240 dm × 5 ht	Sus. c–Susa A	Not marked on the BM.
229	—	300 dm × 3 ht	E. Isl.	Not marked on the BM.
230	—	140 dm × 2.5 ht	Susa D, Sas. traces	Not marked on the BM.
231	irregular, spread out	2 ht	Sas., E. Isl.	Not marked on the BM.
232	Tepe Seyyed Khalaf	140 dm × 4.5 ht	Sus. d–Susa A, OB, E. Isl.	Not marked on the BM.
233	—	300 dm × 6 ht	Susa A–B, OB–MB	Marked on the BM.
234	2 mounds	220 dm × 8.5 ht 140 dm × 4 ht	MB–Ach.–Parth. MB	Marked on the BM.
235	Tepe Jajis*	300 NW × 220 × 10 ht	OB–Parth., Sas.–E. Isl.	Marked and named on the BM.
236	—	300 × 300 × 2 ht	Isl.	Marked on the BM.
237	—	150 dm × 4 ht	OB–MB	Marked on the BM.
238	—	100 dm × 3.5 ht	Sus. a–Susa A, Sas. traces	Not marked on the BM.
239	Ishan al-Aswad	150 dm × 8 ht	Sus. a–d	Not marked on the BM.
240	Ishan Imam Atuyi (Tepe Halvimash*)	140 dm × 8 ht	Sus. b–Susa A	Not marked on the BM.

Notes: dm = diameter; E = east; ht = height; LS = Late Susiana; N = north; S = south; W = west. * = name taken from the 1917 British map (BM). Note Adams's spelling, "Sassanian," at KS-78 and KS-92.

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Appendix B

Faunal Remains of KS-59 (Abu Fanduweh)

Shiva Sheikhi,[1] *Hossein Davoudi,*[2] *Valentin Radu,*[3] *Kevin Lidour,*[4] *and Marjan Mashkour*[5]

INTRODUCTION

The main focus of this study is to document animal exploitation and subsistence economy at Abu Fanduweh during the Late Susa II period (ca. 3900–3100 BCE). It also aims to compare, diachronically and synchronically, the faunal assemblage of KS-59 with that of other sites in Khuzestan. Among the key questions for the fourth millennium BCE in southwestern Iran is the emergence of specialized economies, expressed by the development of pastoralism and possibly of residential mobility.[6]

PROVENIENCE OF THE BONES

Bones were collected in two 10 × 10 m operations (Squares 787 and 822) from stratified and nonstratified deposits. A total of 2,542 pieces of bone weighing 9,784 g were registered from various contexts; 73 percent of the collection came from accumulated living debris, 6 percent from collapse and mixed contexts, 5 percent from architectural units, and 1 percent from open spaces and ovens (table B1; fig. B1).

These contexts belong to different phases, and bones were distributed from the Late Middle Susiana to the Old Elamite (Sukkalmakh) periods. The volume of animal bones seems not to be related to the surface of excavation; table B2 shows the distribution of animal bones in each period. The bulk of animal remains were recovered in large pits from horizontal excavations in 10 × 10 m Squares 787 and 822, dated to the Late Susa II phase. Of the 2,542 total bones studied, 90 percent belong to the Late Susa II phase (ca. 3350–3100 BCE).

METHODS

The bones were washed on-site and transferred to the archaeozoology section of the Bioarchaeology Laboratory / Central Laboratory at the University of Tehran. For the taxonomic identifications, we used modern comparative collections as well as anatomical atlases.[7] The two main quantification methods used here are number of identified specimens (NISP) and weight (in grams). We employed these methods for estimating the frequency of each species in the collection. Weight was also applied for understanding the relative importance of a species. Some bones with no criteria for identification were allocated to categories of size and sorted into large and medium mammal groups according to the size of the specimens.

The faunal remains of KS-59 include fragmented and well-preserved bones. Identified bones represent

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5 Director of research and archaeozoologist, Archaeozoology & Archaeobotany Unit (UMR 7209), Muséum national d'Histoire naturelle / Centre national de la recherche scientifique, Paris, France (marjan.mashkour@mnhn.fr); corresponding author.

6 Adams 1962; Alizadeh et al. 2004; Redding 1981a; Zeder 1991.

7 E.g., Barone 1986; Pales and Garcia 1981.

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Table B1. Provenience of animal bones at Abu Fanduweh: number and weight of remains.

Context	Number of remains	Weight of remains (g)	Number of remains (%)	Weight of remains (%)
Pit	1,870	6,295	73.6	64.3
Living surface	337	2,185	13.3	22.3
Surface	31	451	1.2	4.6
Collapse	97	299	3.8	3.1
Room floor	43	129	1.7	1.3
Mixed	51	154	2.0	1.6
Inside room	59	115	2.3	1.2
Interior surface	38	100	1.5	1.0
Open space	12	40	0.5	0.4
Deliberate fill	3	6	0.1	0.1
Oven	1	10	0.0	0.1
Total	2,542	9,784	100.0	100.0

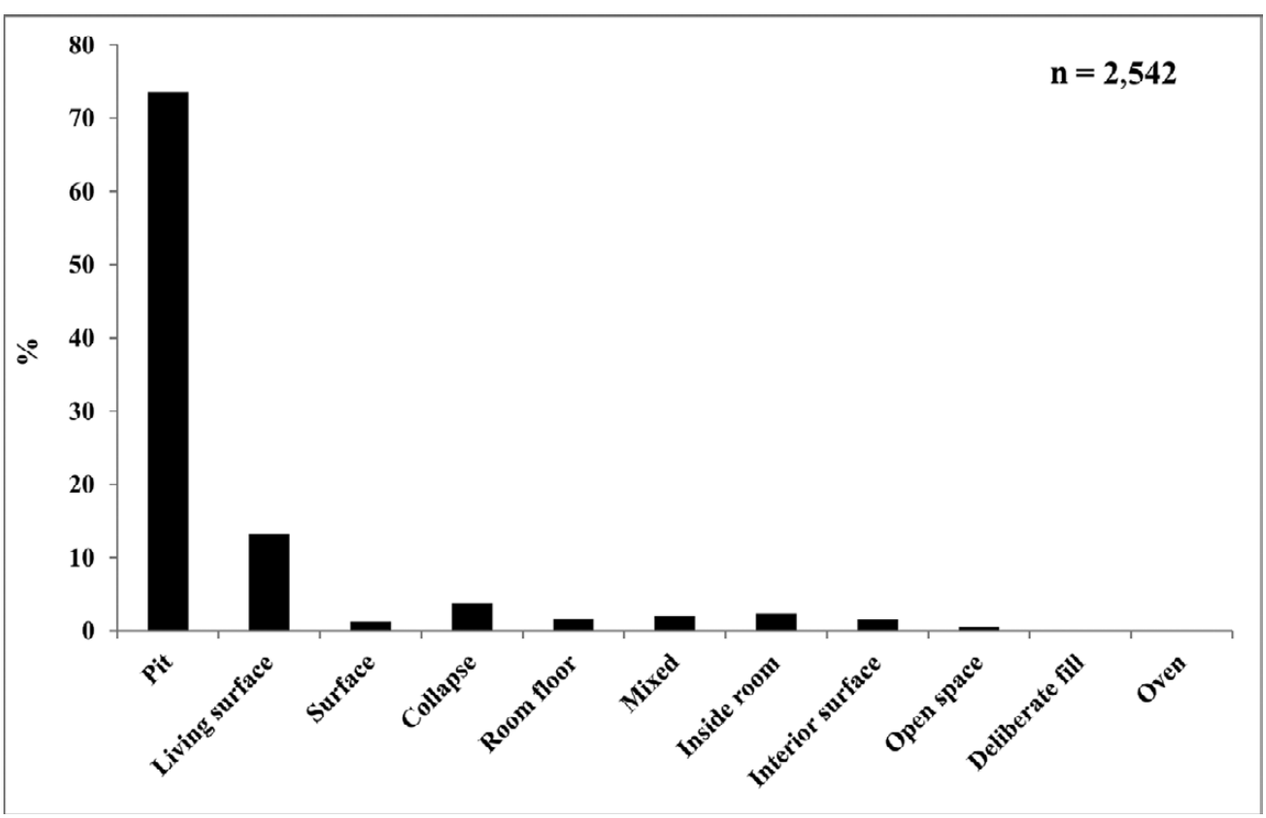

Figure B1. Distribution of animal bones from various contexts.

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Table B2. Distribution of animal bones by period at KS-59.

Terminology	Number of remains	Weight of remains (g)	Number of remains (%)	Weight of remains (%)
1900–1600 BCE	68	205	2.7	2.1
3100–2800 BCE	39	79	1.5	0.8
3350–3100 BCE	2,300	8,435	90.4	86.2
4400–4000 BCE	31	57	1.2	0.6
4800–4400 BCE	77	818	3.0	8.4
5200–4800 BCE	27	190	1.1	1.9
Total	2,542	9,784	100.0	100.0

54 percent of the number of remains and 73 percent of their weight (table B3). The weight of the identified bones indicates that the collection is well preserved and also shows that unidentified bones are rather small and very fragmented (table B3). Figures B2 and B3 compare the number and weight of the fragments identified and the number and weight of the fragments unidentified in each phase. From a taphonomical point of view, it can be concluded that the faunal assemblage of KS-59 is highly affected by fragmentation. This conclusion is particularly visible in figures B2 and B3, where the number of remains exceeds the weight of remains.

FAUNAL SPECTRUM

The bone identification results show that the remains can be attributed to four main categories: domestic mammals, wild mammals, minor taxa such as birds and fish, and unidentified bones. Twelve bones of Rodentia, amphibians and reptiles, and Mollusca found in the remains are intrusive (table B4). Domestic mammals, including cattle, sheep, and goats, are dominant in the assemblage in all periods (fig. B4). Table B5 shows the detailed results of the Late Susa II phase.

Table B3. Number and weight of identified and unidentified animal bones from KS-59.

Taxa	Number of remains	Weight of remains (g)
Total identified	1,366	7,107
Total unidentified	1,164	2,667
Total intrusive	12	10
Grand total	2,542	9,784
Identified (%)	53.74	72.64
Unidentified (%)	45.79	27.26

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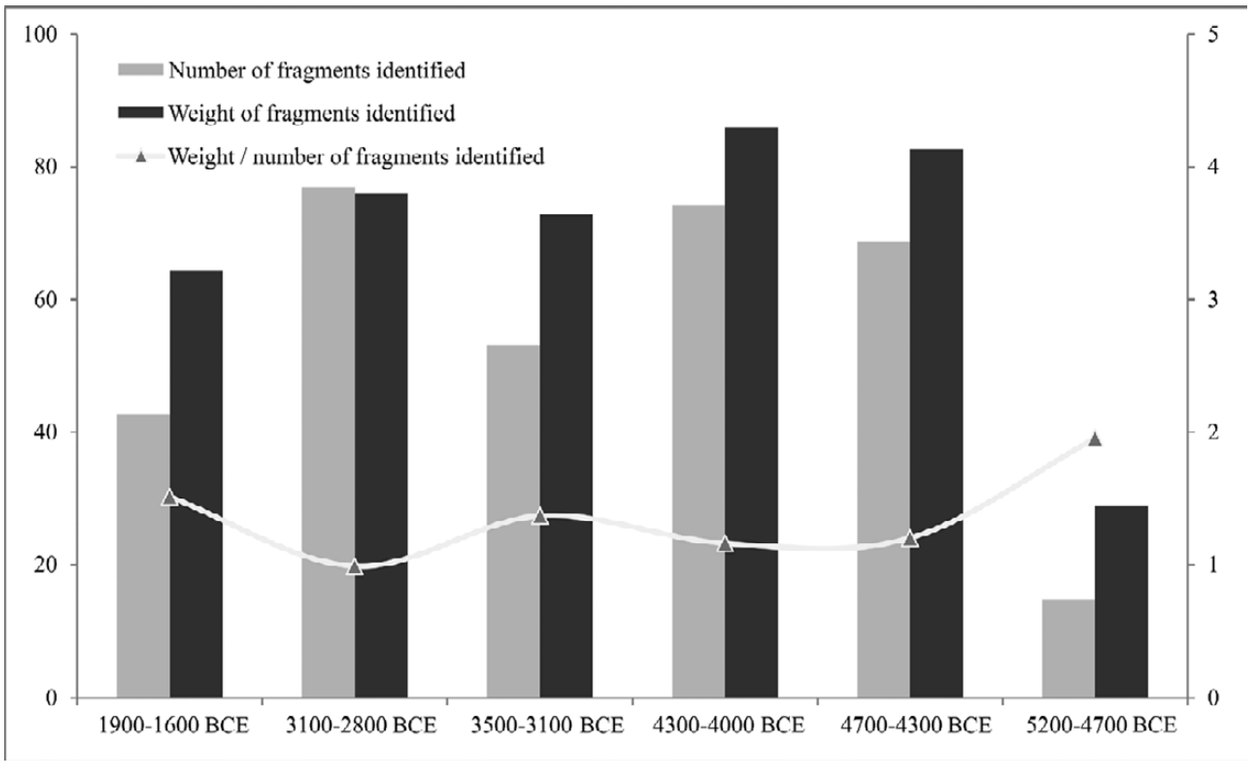

Figure B2. Comparison of the number of fragments identified and the weight of fragments identified in each period.

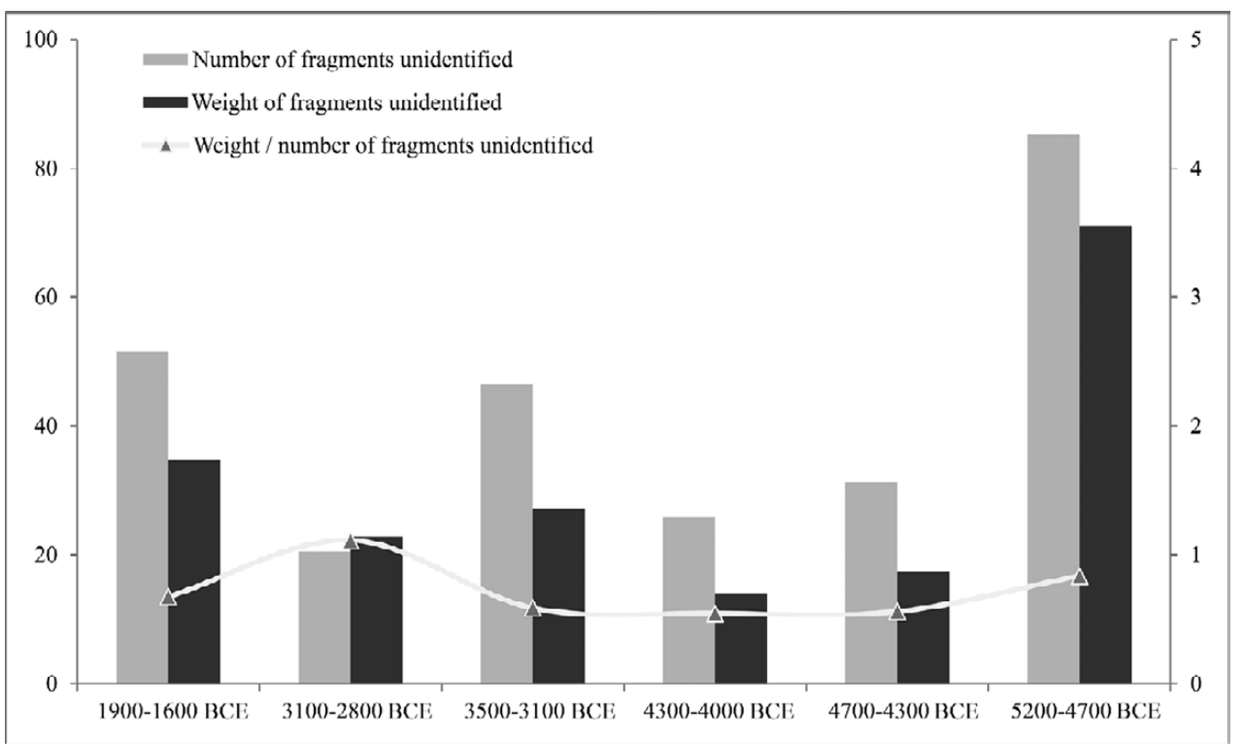

Figure B3. Comparison of the number of fragments unidentified and the weight of fragments unidentified in each period.

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Table B4. Taxonomic distribution of animal remains in the assemblage.

Taxa	**NISP**	**Weight (g)**	**NISP (%)**	**Weight (%)**
Identified bones				
Bos cf. *taurus*	239	3,141	17.5	44.2
Ovis aries	90	523	6.6	7.4
Capra hircus	36	167	2.6	2.3
Caprinae	913	2,738	66.8	38.5
Gazella sp.	14	56	1.0	0.8
Sus scrofa	35	271	2.6	3.8
Equidae	5	135	0.4	1.9
Canis sp.	4	31	0.3	0.4
Vulpes sp.	5	9	0.4	0.1
Canidae	2	16	0.1	0.2
Aves	4	4	0.3	0.1
Fish	19	16	1.4	0.2
Total identified	1,366	7,107	100.0	100.0
Unidentified bones				
Large mammal	351	1,696	30.2	63.6
Medium mammal	488	733	41.9	27.5
Unidentified	325	238	27.9	8.9
Total unidentified	1,164	2,667	100.0	100.0
Intrusive				
Rodentia	2	1		
Amphibians and reptiles	7	5		
Mollusca	3	4		
Total intrusive	12	10		
Grand total	2,542	9,784		
Identified (%)	53.7	72.6		
Unidentified (%)	45.8	27.3		

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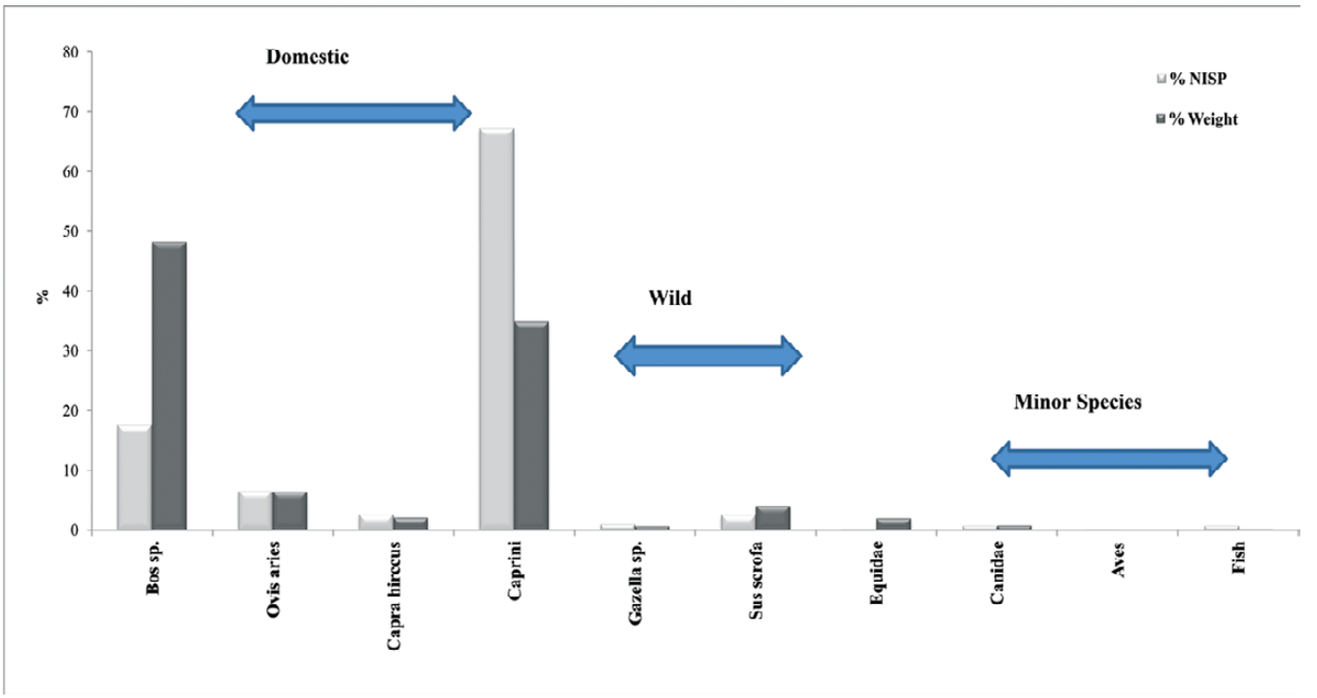

Figure B4. Faunal spectra of KS-59 in all phases.

DOMESTIC MAMMALS

The bulk of the faunal remains from KS-59 belongs to domestic mammals, with an average of 94 percent of NISP. Among domesticates, two major subfamilies, Caprinae and Bovinae, are dominant (fig. B4; table B5).

CAPRINAE (SHEEP AND GOATS)

The differentiation between sheep and goat bones was based on morphological features,[8] while Caprinae bones with no distinguishable features for one of the two genera were assigned to the subfamily (fig. B5). Sheep (*Ovis aries*) and goat (*Capra hircus*) are the dominant species in KS-59 and are the most common domestic mammals—78 percent during the Late Susa II period and 76 percent of NISP for the whole occupation; cattle are the next most important type of exploited animal. Sheep are more common than goats by a ratio of 2.5 to 1 (table B4; fig. B4). *Ovis* and *Capra* bones are represented by significant remains in the Late Susa II phase—the 954 such bones in the assemblage are principal to further metric and morphological analysis in the following sections (table B5).

BOVINAE (CATTLE)

Cattle (*Bos* cf. *taurus*) represent the second most important type of exploited animal at KS-59. Their remains are the most abundant after Caprinae, comprising 18 percent of NISP and 48 percent of weight (tables B4–B5). Cattle are the most important animal resource for providing meat, dairy products, and work power (fig. B6).[9] It should be noted that the bones of large mammals and medium mammals belong also to cattle, sheep, goats, and other mammals, but due to the lack of distinguishable criteria for taxonomic identification we assigned them to the category of unidentified bones.

WILD MAMMALS

Wild mammals represent a very small portion of the collection—only 4.8 percent (sixty-five bones) of

8 Boessneck 1969; Clutton-Brock et al. 1990; Helmer and Rocheteau 1994.

9 Boessneck 1969; Clutton-Brock et al. 1990; Helmer and Rocheteau 1994.

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Table B5. Distribution of identified species by number of identified specimens and weight in the Late Susa II phase.

Taxa	NISP	Weight (g)	NISP (%)	Weight (%)
Identified				
Bos cf. *taurus*	221	2,945	18	48.0
Ovis aries	87	510	7.1	8.3
Capra hircus	34	151	2.8	2.5
Caprinae	833	2,379	67.9	38.8
Gazella sp.	12	39	1.0	0.6
Suidae	14	69	1.1	1.1
Equidae	0	0	0.0	0.0
Canis sp.	3	22	0.2	0.4
Vulpes sp.	0	0	0.0	0.0
Canidae	0	0	0.0	0.0
Aves	4	4	0.3	0.1
Fish	19	16	1.5	0.3
Total identified	1,227	6,135	100.0	100.0
Intrusive				
Rodentia	2	1		
Amphibians and reptiles	2	2		
Mollusca	3	4		
Total intrusive	7	7		
Unidentified				
Large mammal	305	1,411	28.6	61.5
Medium mammal	438	646	41.1	28.2
Unidentified	323	236	30.3	10.3
Total unidentified	1,066	2,293	100.0	100.0
Grand total	2,300	8,435		

identified specimens from all periods. The wild species include gazelles, boars, equids (possibly hemiones), and carnivores. It seems that boars and gazelles were hunted but not a substantial source of meat. The gazelle (*Gazella subgutturosa*) is the least represented hunted herbivore, comprising 1 percent of NISP (fourteen bones), and is limited to the Old Elamite (Sukkalmakh) and Late Susa II phases (tables B4–B5). The boar (*Sus scrofa*) seems to be the most favored hunted animal during the Late Susiana 1 to Late Susa II phases and is represented by 2.6 percent of NISP (thirty-five bones). Eleven bones (0.8 percent) were allocated to carnivora including Canidae, *Canis* sp., and *Vulpes* sp. Of these remains, three *Canis* bones from the Late Susa II phase belong to the domestic dog (*Canis familiaris*; table B5, fig. B7).

Four bones from the Late Middle Susiana and one bone from the Late Susiana 1 phase belong to equids.

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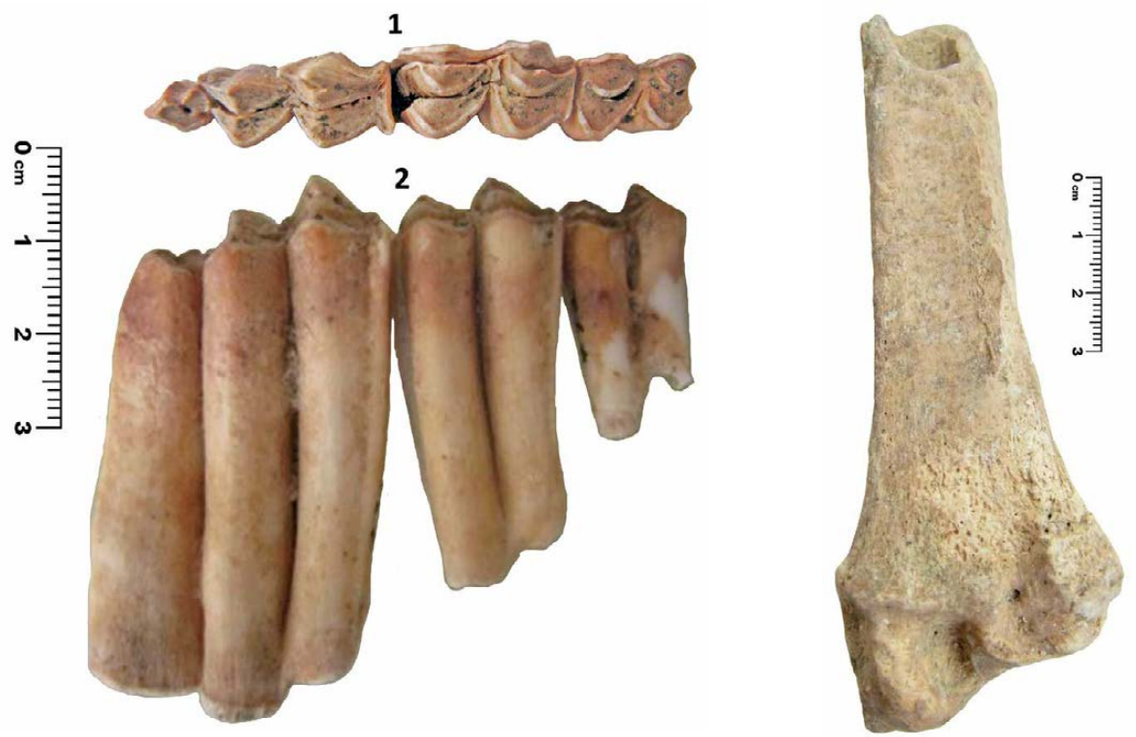

Figure B5. Examples of molars and radius from Square 822. *Left:* Square 822, L 6 / F 8, Late Susa II, *Ovis aries* teeth, first, second, and third molar, left side (1) occlusal view and (2) lateral view. *Right:* Square 822, L 10 / F 15, Late Susa II, Caprinae radius, distal end, right side, posterior view.

Figure B6. Examples of metacarpal and phalanges from KS-59. *Left*: Op. 1, 73.80–73.53 m ASL, Late Susa I, *Bos* cf. *taurus* metacarpal, distal end, right side, anterior view. *Right*: Square 822, L 10 / F 15, Late Susa II, *Bos* cf. *taurus* first, second and third phalanges, anterior view.

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The taxonomic identification of Equidae bones and teeth is very difficult, especially in Southwest Asia because of the possible presence of multiple wild and domestic species such as horses, hemiones, asses, and hybrids.[10] The two teeth found in KS-59 include a second premolar and another first or second molar (fig. B8). Generally, taxonomic identification from lower teeth is based on the morphology of the third and fourth premolars and the first and second molars; however, this method is very difficult to apply on loose teeth. Because of this issue and because of the bad preservation of the first/second molar from KS-59, we prefer not to suggest a precise identification. Interestingly, we found no Equidae bones in the Late Susa II phase; we know that domestic horses and even donkeys were present (though few in number) in this phase on the Iranian Plateau.[11] The absence of equid bones in this period is perhaps due to the fact that they were no longer exploited for meat and thus not dumped in the same area as other food animals.

Figure B7. Example of humerus from Square 822, L 14, Late Susa II, *Canis familiaris* humerus, proximal end, right side, anterior view.

10 Mashkour 2001b.

11 Benecke 2011; Mashkour 2001a, 2002a, 2003; Zeder 1986.

FISH

A total of nineteen fish bone fragments weighing 15.5 g were collected in KS-59 and belong to the Late Susa II phase (table B6). At least nine of these fragments were identified as belonging to bony fish (Teleostei). Regarding the diagnostic pieces, their state of preservation is quite good; they lack visible concretions and porosities on the surface and have a light patina (figs. B9–B11). No fire marks were detected on the bones—not even on the spines that are exposed when the fish is directly grilled on hearths. Nor were any cut marks present.

The diagnostic bones come mostly from the cranial skeleton (four specimens). The postcranial parts are limited quantitatively (two fin spines and two pterygiophores), but a single catfish precaudal vertebra is also present. According to Desse-Berset and Desse,[12] the deficit of postcranial elements could indicate fish

Figure B8. Examples of molars from KS-59. *Top*: Op. 1, 72.48–72.20 m ASL, Late Middle Susiana, Equidae inferior third molar tooth, right side, ventral, occlusal, and lateral views. *Bottom*: Op. 1, 72.48–72.20 m ASL, Late Susiana 1, Equidae inferior molar one-half tooth, right side, ventral, occlusal, and lateral views.

12 Desse-Berset and Desse 2011, 371.

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Table B6. Identified fish bones, Late Susa II phase.

Context			Taxonomy				Anatomy		Quantification		
Square	Layer	Feature	Class	Order	Family	Species	Skeletal part	Position	NISP	MNI	Weight (g)
822	2						Unidentified	Unidentified	1	0	2.534
822	6	8					Unidentified	Unidentified	9	0	0.191
822	6	8	Teleostei	Perciformes	Sparidae	*Sparidentex* sp.	Premaxilla	Left	1	1	2.117
822	6	8	Teleostei				Dorsal spine	Axial	1	0	0.428
822	6	8	Teleostei				Pterygiophore	Axial	1	0	1.358
822	6	8	Teleostei				Dorsal spine	Axial	1	0	0.267
822	6	8	Teleostei				Pterygiophore	Axial	1	0	0.284
822	6	8	Teleostei				Supraoccipital	Axial	1	0	0.160
822	10	15	Teleostei	Siluriformes			Precaudal vertebrae 8	Axial	1	1	0.947
Probe 9, −150 cm			Teleostei	Perciformes	Sciaenidae	*Protonibea diacanthus*	Dentary	Right	1	1	3.576
Probe 9, −150 cm			Teleostei	Perciformes	Sciaenidae	*Protonibea diacanthus*	Angulo-articular	Right	1	0	3.587

Note: MNI = minimum number of individuals.

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Figure B9. Examples of fish vertebrae from KS-59. *Left*: Precaudal vertebrae of a catfish (Siluriformes), cranial, ventral, and dorsal views (height 14.7 mm, width 17.2 mm, thickness 6 mm). *Right*: Fin spine in lateral view and axonost (proximal pterygiophore), cranial view.

Figure B10. Examples of fish premaxillae. *Left*: Left premaxilla of *Sparidentex* sp., mesial and ventral views. *Right*: Supraoccipital of a bony fish (Teleostei), possibly Sparidae, lateral view.

Figure B11. Examples of fish bones. *Left*: Axonost (proximal pterygiophore) and fin spine, both in lateral view. *Right*: Right anguloarticular and right dentary of a blackspotted croaker (*Protonibea diacanthus*), both in mesial view.

precooking butchery—as in heading, despite the lack of cut marks[13]—because the rachis is the most valuable part as food. Heads are often thrown out during processing and rachises after consumption, thus resulting in two distinct food waste contexts.

Three distinct taxa were identified (MNI = 3): a blackspotted croaker (*Protonibea diacanthus*), a porgy belonging to the genus *Sparidentex*, and a catfish (Siluriformes). Identifications were made according to the principles of comparative anatomy and using the osteological fish collection of UMR 7209 (Archéozoologie et Archéobotanique) at the Muséum national d'Histoire naturelle (MNHN) in Paris.

13 Belcher 2011, 98.

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Weight (nongutted) and size (total length) estimations were proposed. The porgy is the smallest, at about 50 cm in length and 2,500 g in weight; the croaker could reach about 1 m in length and 12,500 g in weight.

Marine catfishes (Ariidae) are very common over soft beds of the coastal Persian Gulf—especially around estuaries and mangroves—whereas other catfish taxa (e.g., *Silurus* spp.) are known in Iran from fresh waters.[14] The blackspotted croaker is a near-shore fish well attested on the western coast of the Persian Gulf. This species is also known to be able to ascend estuaries and tidal rivers.[15] *Sparidentex* are coastal fishes living in moderate depths,[16] over reefs, and in adjacent habitats.[17] Although the *Sparidentex* genus contains only four valid species, three of them could be present in the area,[18] and one of them, *Sparidentex belayewi*, is considered a freshwater invader. Thus some differences were noted between the archaeological bones and those of *Sparidentex hasta* specimens in the MNHN collection—in particular, the number of canine teeth on the anterior margins of the premaxilla.[19]

The identified fishes are able to enter brackish or even fresh waters. The presence of the remains of catfish (Ariidae or Siluridae), croaker (*Protonibea diacanthus*), and even sparid (*Sparidentex hasta* or *Sparidentex belayewi*) raises questions about freshwater fishing. But because of the diversity of fish in the region, precise identification of the catfish and sparid is not possible on the basis of a single vertebra or a single incomplete premaxilla. The distance between the site and the coastline (more than 200 km) raises questions about fish conservation techniques, such as drying and salting. These practices could perhaps be detected on the basis of a wider number of remains and by analyzing anatomical distribution and diagnostic cut marks.[20] But this distance was probably less during the mid-Holocene period,[21] and sea fishing expeditions might have been easier to conduct than they are today. Since Abu Fanduweh was established near riverbanks, however, it is more than likely that the ancient inhabitants also captured freshwater fish.

14 For the listing, see Coad 2014.

15 Sasaki 2001.

16 Bauchot and Smith 1984.

17 Randall 1995, 228.

18 Amir, Siddiqui, and Masroor 2014.

19 See also Amir, Siddiqui, and Masroor 2014, fig. 2.

20 Belcher 2011, table 11.1.

21 Lambeck 1996, 56.

BIRDS

Four bird remains were found in KS-59, in Square 822. Three bones, including three left ulnas, belong to three Eurasian wigeon (*Anas penelope*) individuals. One right coracoid was allocated to the Phasianidae family—heavy, ground-living birds that include pheasants and partridges, among other Galliformes. The bone we found was not diagnostic enough to refine the taxonomic identification.

TAPHONOMY AND BONE PRESERVATION

To investigate how animals have been used after their death or slaughter, it is necessary to record all types of traces left on their bones. These traces can result from the natural conditions of the place where the bones were deposited, including the acidity of the soil and weathering, which can cause fragmentation. They can also result from anthropogenic activities, such as butchery, cooking, and consumption. All these factors affect the integrity and preservation of the skeletal remains.

Observation of the animal remains from Abu Fanduweh identified 317 fragments with traces of human and animal activities (table B7; fig. B12), as well as some postdepositional traces on the bones. Carbonization constitutes the more common category of traces; it includes heated, carbonized, and calcined bones. Caprinae and Bovinae include respectively more traces of carbonization within identified taxa (fig. B13). Cut marks, including incisions and chop marks resulting from butchery, are common on Caprinae and Bovinae bones (fig. B14). We recorded all the traces, including burning and butchery, on the bones of large and medium mammals. It should be noted that the bones very rarely show traces of animal activities, such as digestion, bites, and gnawing by carnivores and rodents (fig. B15).

As mentioned earlier, the weight of the unidentified bone remains indicates that they are small in size but numerous (figs. B2–B3). This circumstance is due to several factors. First, the site's arid environment causes the loss of organic matter and the demineralization of the bones. Accordingly, 52 percent of them display modern breakage and fragmentation; an anthropogenic breakage pattern can be observed on only 32 percent of the assemblage (fig. B16). Finally, 16 percent of the bones are intact.

The distribution and frequency of skeletal elements of cattle and Caprinae (sheep and goats) during the Late Susa II phase indicate that all parts of their

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Table B7. Distribution of anthropogenic traces on the animal bone assemblage of KS-59.

Species	Fire	Fire (%)	Cut mark	Cut mark (%)
Bos cf. *taurus*	7	2.9	1	0.4
Caprinae	140	23.3	23	3.8
Large mammal	21	6.0	4	1.1
Medium mammal	77	15.8	10	2.0
Unidentified	34	10.5	0	0.0
Total	279	13.9	38	1.9

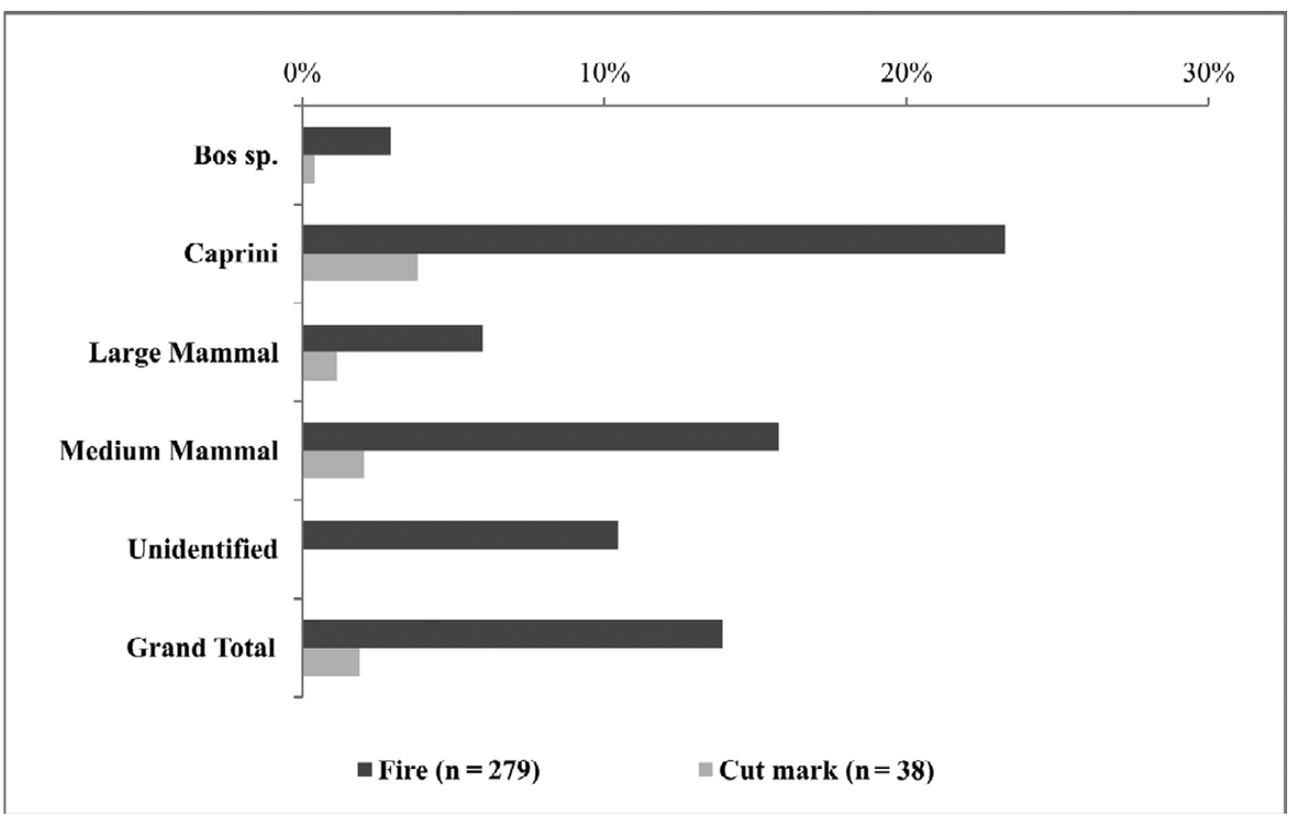

Figure B12. Distribution of anthropogenic traces recorded in the KS-59 bone assemblage.

skeletons are present in the assemblage. Regarding cattle, 48 percent of the assemblage's bones belong to the head, only 6 percent to the body and limbs, and 46 percent to lower parts (fig. B17). Interestingly, the body (ribs and vertebrae) and limbs (scapula, humerus, radius, ulna, coxal, femur, and tibia)—that is, the meat-bearing parts of the carcass—represent a much lower percentage compared to the other parts. This pattern is different for the skeletal parts of Caprinae, where 40 percent belong to the head, 11 percent to the body, 30 percent to the limbs, and 19 percent to lower parts (fig. B18). The anatomical parts of Caprinae indicate the regular exploitation and division of the carcasses; but the situation regarding the skeletal parts of cattle could be due to certain cultural traits in the utilization of this important species and meat deposition in large pits. In this regard, further excavation in other areas of the site could uncover better evidence that would lead to a more secure interpretation for the Late Susa II phase.

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Figure B13. Examples of burned bones. *Left*: Op. 1, 73.30 m ASL, Late Susiana 1, Caprinae tibia, distal end, right side, posterior view. *Center*: Square 822, L 10 / F 15, Late Susa II, Caprinae inferior third molar tooth, left side, lateral view. *Right*: Square 822, L 10 / F 15, Late Susa II, Caprinae calcaneus, left side, anterior view.

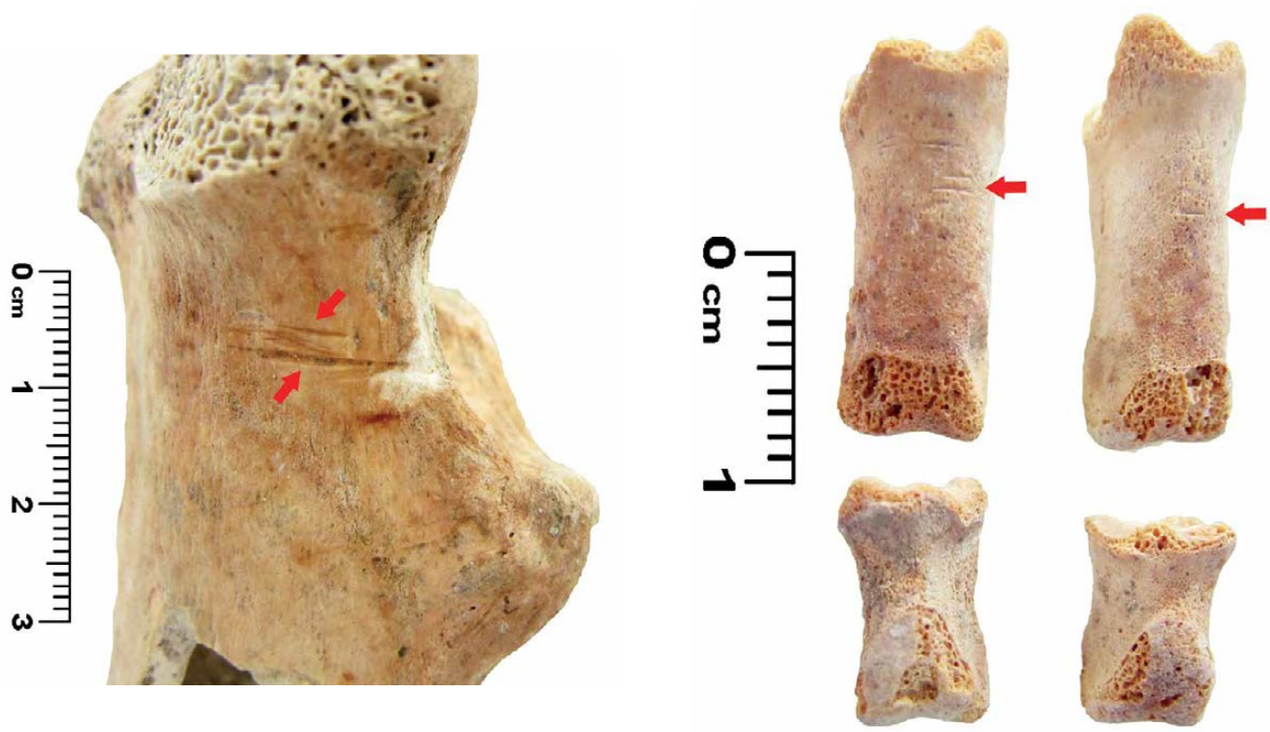

Figure B14. Examples of animal bones with cut marks. *Left*: Probe 9, −150 cm, Late Susa II, Caprinae femur, proximal end, right side, lateral view. *Right*: Square 822, L 10 / F 15, Late Susa II, fetus/juvenile Caprinae first and second phalanges, anterior view.

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Figure B15. Examples of digestion traces and animal bites. *Left*: Square 822, L 6 / F 8, Late Susa II, digested Caprinae bone, distal end of first phalanx, posterior view. *Right*: Op. 1, 74.68–74.57 m ASL, Late Susiana 1, carnivore tooth impacts on Caprinae metatarsal, proximal end, right side, anterior view.

The absence of tooth remains precludes the development of an accurate view on animal kill-off patterns at the site. The distinction between adult and young animals could be made by examining the epiphyseal fusion of bones, which begins around birth and mostly concludes by the end of the juvenile period.[22] The fusion data of sheep and goats were evaluated on 140 bones from the Late Susa II period. The data indicate the harvest of young animals, with nearly 50 percent of the herd culled before individuals reached 2.5 years of age and about 33 percent of them surviving beyond four years of age. This ratio shows that males were probably killed at a young age for tender meat, while females were kept for breeding, milk, wool, hair, and meat (table B8). The epiphyseal fusion of fifty bones of cattle during the Late Susa II period indicates that approximately 80 percent of the bones belong to adult animals of between fifteen and twenty-four months of age.

MORPHOLOGY OF THE BOVIDAE POPULATION AT KS-59

Analysis of the size of animals is used for establishing the taxonomic identity of bones from mammals. Size is one of the main criteria for distinguishing between closely related species and identifying morphological modification within a species over various periods and regions.[23] The measurement of intact postcranial bones, or of the distal and proximal parts of bones, is very important for simplifying the typology of species.[24] Here the measurement of sheep, goat, and cattle bones is used to examine the general size distribution of each of these populations at Abu Fanduweh and to compare it with that of other contemporaneous sites either in the same region or in other areas of the Iranian Plateau (tables B9–B11). We use the Log Size Index (LSI) method, in which all measurements are converted to logarithms to diminish the difference in scale in various measurements of bones.[25] Every measurement is compared to the standard measurement of a recent individual and uses the distance from the standard as an indication of the size of an unidentified individual from the assemblage. Published measurements for wild sheep (*Ovis orientalis*) and goats (*Capra aegagrus*)[26] and for domestic cattle (*Bos taurus*)[27] were used as the standard measurements.

22 Davis 1987, 39.

23 Davis 1987, 37–38.

24 von den Driesch 1976.

25 Meadow 1999; Uerpmann 1979.

26 Uerpmann and Uerpmann 1994.

27 Helmer 1992.

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Figure B16. Sample of modern fragmentation, Late Middle Susiana phase.

CAPRINAE POPULATION

The LSI profile of KS-59 was compared with those of other modern and contemporaneous sites in the region, including Tepe Mehr Ali[28] and Tall-e Malyan[29] in Fars province and Tepe Qabrestan in the Qazvin Plain.[30] The choice of comparative sites was made only to highlight the differences from the target population at KS-59. The average size of the *Ovis* population at KS-59 is smaller than the reference bone (*Ovis orientalis*) and belongs to *Ovis aries* (domestic sheep). It is noteworthy that some bones that are larger than the reference bone (by more than 0.05 percent) may relate to wild animals, while the bivariate analysis also exhibits some large samples for *Ovis*. Comparison of the average sizes of *Ovis* at KS-59 with those at the other mentioned sites in different periods generates valuable results. Generally, the average sizes of *Ovis* at KS-59 are intermediate and very close to the specimens from Tepe Mehr Ali and Malyan, and the average sizes of the examples from Tepe Qabrestan are specifically larger than those from KS-59 during various periods. The evaluation shows closeness in intermediate size and the same trend of sheep population in southwestern Iran (fig. B19).

In contrast to sheep, for goats the general trend is different. The average size of goats is smaller than that represented in the modern reference collection, and all the bones in our assemblage can easily be allocated to the domestic goat (*Capra hircus*). In general,

28 Sheikhi, Mashkour, and Sardari 2011.

29 Zeder 1985.

30 Mashkour 2001a.

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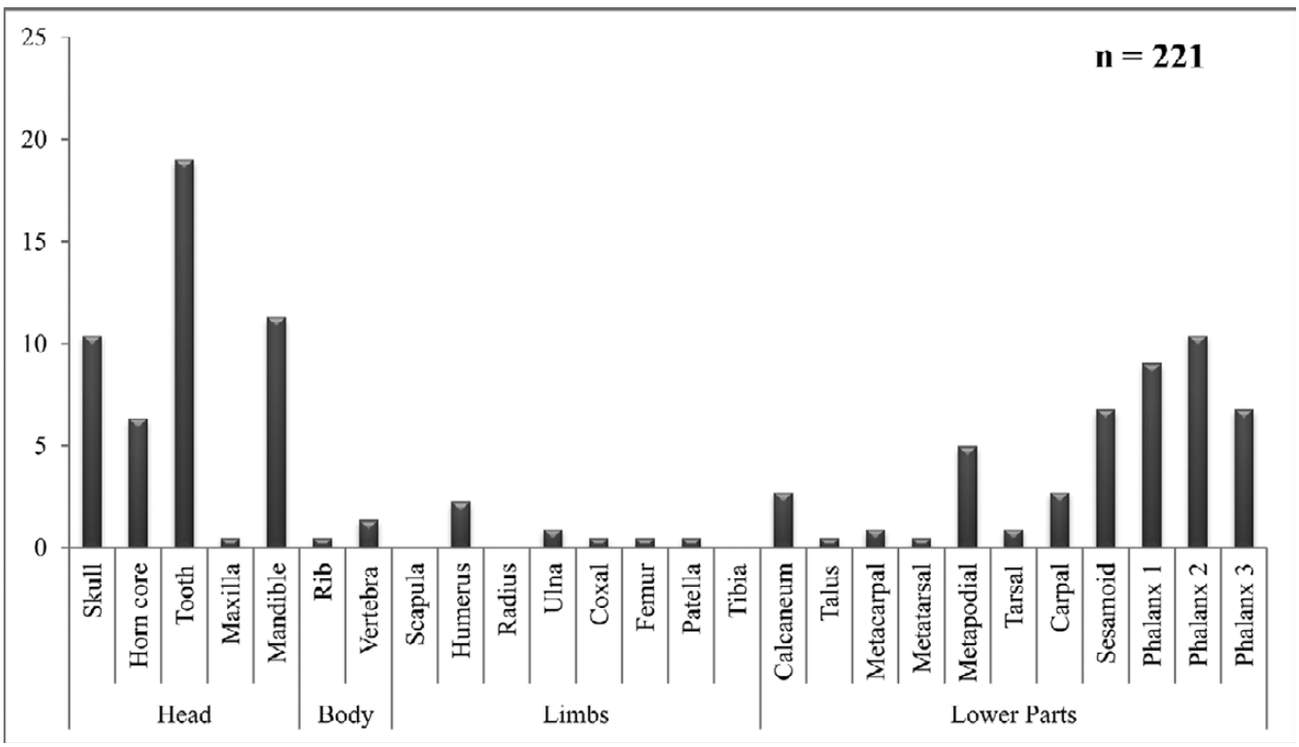

Figure B17. Frequency of skeletal parts of Bovinae in the Late Susa II phase.

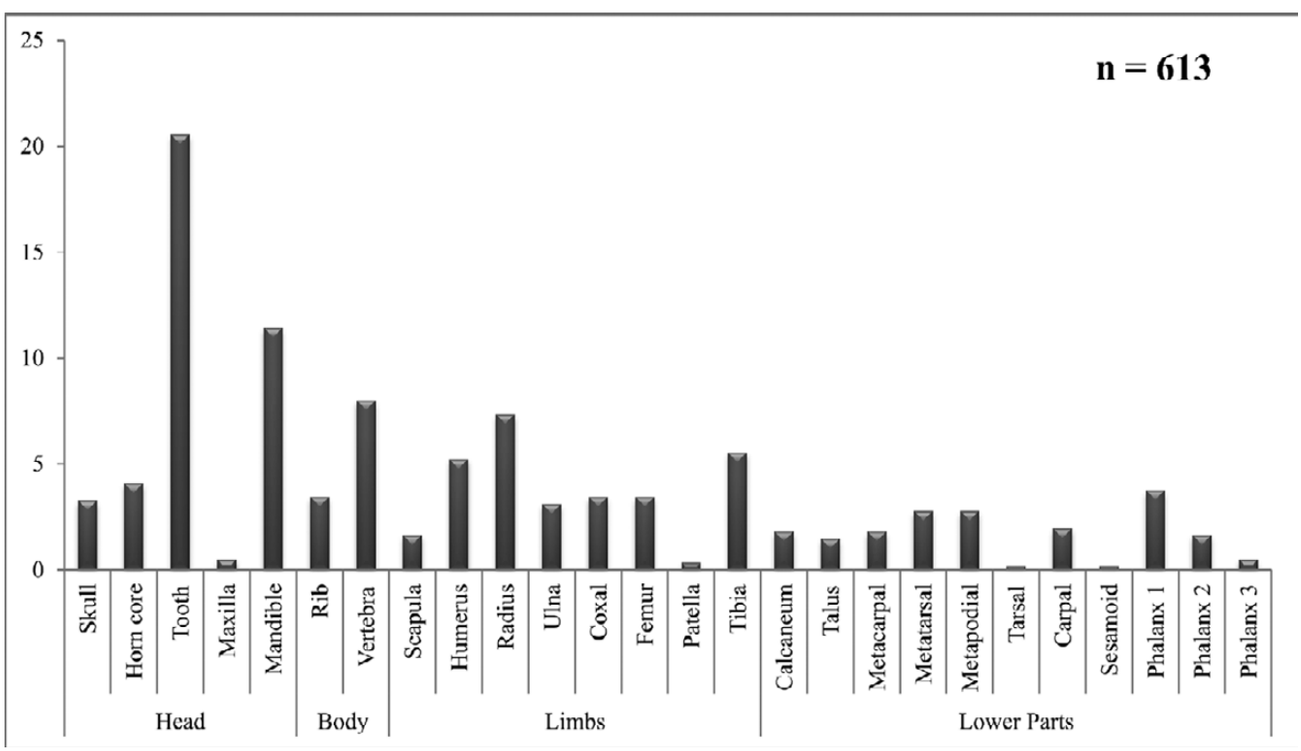

Figure B18. Frequency of skeletal parts of Caprinae in the Late Susa II phase.

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Table B8. Fusion sequence and age (in months) for sheep and goats.

Age at fusion	Fusion stage	Element	*Capra hircus*		*Ovis aries*		Caprinae		Total	
			Fused	Unfused	Fused	Unfused	Fused	Unfused	Fused	Unfused
<6 mos.	I	Atlas						1		1
		Px radius	3		2		3		8	
6–12 mos.	II	Ds humerus		1	3		7	1	10	2
		Scapula			2	1	1		3	1
		Acetabulum					9	4	9	4
12–18 mos.	III	Ph1	2	1	6	1	2	5	10	7
		Ph2		1	2	2	1	3	3	6
18–30 mos.	IV	Mc	1		2	2		2	3	4
		Mt								
		Mp					5	2	5	2
		Ds tibia	1			1	7	4	8	5
30–48 mos.	V	Calcaneum	3				3	3	6	3
		Px femur		1	1		3	5	4	6
		Ds femur					1	3	1	3
		Ds radius	1			2		9	1	11
		Px tibia					3	6	3	6
>48 mos.	VI	Px humerus						5		5

Note: Standard after Zeder 2006, fig. 15. Ds = distal; Mc = metacarpal; Mp = metapodial; Mt = metatarsal; Ph = phalanx; Px = proximal.

we can note that the goat population of Abu Fanduweh is intermediate and relatively close in average size to those at Malyan and Mehr Ali (4000–3000 BCE) and smaller in body size/bones/skeleton than that at Qabrestan (3700–2500 BCE; fig. B19). This circumstance may be due to regional differences in goat populations on the Iranian Plateau, with smaller breeds in the south. Regarding sheep, the sites in southern Iran compare closely and very differently from Qabrestan, which in addition has a high contribution of wild specimens.

BOS POPULATION

The LSI analysis of the *Bos* population at Abu Fanduweh was performed using a modern domesticated breed of small cattle for the standard population.[31] The analysis indicates a generally similar average size in all four of the compared populations used here. The *Bos* population of Abu Fanduweh, however, shows a split into two clusters, and this split should be carefully

31 See Helmer 1992.

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Table B9. Metric data for scapulae, forelimbs (humerus, radius, ulna, metacarpus, and scaphoid), and hindlimbs (femur, tibia, metatarsus, and talus) of Caprinae and Bovidae at Abu Fanduweh.

					Measurement (mm)					
Context	**Period**	**Code**	**Species**	**Bone**	**Glp**	**LG**	**BG**	**SLC**	**LCG**	**—**
Sq. 822 L 35 / F 44 (pit)	LSu II	#53	*Ovis aries*	Sc	33.1	22.6	21.8	18.9		
Probe 9, −150 cm (living surface)	LSu II	#46	*Ovis aries*	Sc		25.1	22.9	20.6	24.7	
Sq. 822 L 10 / F 15 (pit)	LSu II	#106	*Ovis aries*	Sc	36.4	25.4	22.3	20.9	22.3	
					Bd	**Dd**	**Bt**	**HT**	**—**	**—**
Sq. 822 L 6 / F 8 (pit)	LSu II	#84	*Ovis aries*	Hm			29.1	18.3		
Sq. 822 L 6 / F 8 (pit)	LSu II	#159	*Ovis aries*	Hm	30.5	25	28	17.3		
Sq. 822 L 34 (floor)	LSu II	#12	*Bos* cf. *taurus*	Hm	80	75	78	42		
					Bp	**Dp**	**Bd**	**Dd**	**—**	**—**
Probe 9, −150 cm (living surface)	LSu II	#42	*Ovis aries*	Rd	37.2	20				
Sq. 822 L 10 / F 15 (pit)	LSu II	#62	*Ovis aries*	Rd	33	17.7				
Sq. 822 L 6 / F 8 (pit)	LSu II	#82	*Ovis aries*	Rd	14.9	19.6				
Sq. 822 L 10 / F 15 (pit)	LSu II	#100	*Ovis aries*	Rd			30.1	22.2		
Sq. 822 L 10 / F 15 (pit)	LSu II	#140	*Ovis aries*	Rd			27.7	19.8		
					SDO	**DPA**	**—**	**—**	**—**	**—**
Sq. 822 L 6 / F 8 (pit)	LSu II	#157	*Bos* cf. *taurus*	Ul	34.7	48.5				
					Bp	**Dp**	**Sd**	**DD**		**—**
Probe 9, −150 cm (living surface)	LSu II	#43	*Ovis aries*	Mc	26.8	18.7	13.6	11.2		
Sq. 822 L 10 / F 15 (pit)	LSu II	#126	*Ovis aries*	Mc			12.8	11.3		
Sq. 822 L 10 / F 15 (pit)	LSu II	#96	*Bos* cf. *taurus*	Mc	56.5	33.5	32.4	24.1		
					Bd	**Dd**	**3M**	**4M**	**3L**	**4L**
Sq. 822 L 6 / F 8 (pit)	LSu II	#161	*Ovis aries*	Mc	28	19.5	13.7	14.5	13.2	13.4
Sq. 822 L 6 / F 8 (pit)	LSu II	#162	*Ovis aries*	Mc	26.5	17.5	12.5	12.4	12.1	11.6
Sq. 822 L 35 / F 44 (pit)	LSu II	#55	*Ovis aries*	Mp	27.2	17.6	12.1	11.6	11.1	11.3
Op.1, 73.80–73.53 m ASL (living surface)	LSu 1	#3	*Bos* cf. *taurus*	Mc	57.2	31.2		24.4	28.2	23.4
Sq. 822 L 6 / F 8 (pit)	LSu II	#156	*Bos* cf. *taurus*	Mp	58.7	34	28.3	25.3	26.9	23.9
					GD	**—**	**—**	**—**	**—**	**—**
Sq. 822 L 7 / F 12 (pit)	LSu II	#123	*Bos* cf. *taurus*	Scph	63.7					
Sq. 822 L 6 / F 8 (pit)	LSu II	#158	*Bos* cf. *taurus*	Scph	48.7					
					Dc	**—**	**—**	**—**	**—**	**—**
Sq. 822 L 6 / F 8 (pit)	LSu II	#75	*Ovis aries*	Fm	22.6					

(*continued*)

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Table B9. Metric data for scapulae, forelimbs (humerus, radius, ulna, metacarpus, and scaphoid), and hindlimbs (femur, tibia, metatarsus, and talus) of Caprinae and Bovidae at Abu Fanduweh *(continued).*

					Measurement (mm)					
Context	**Period**	**Code**	**Species**	**Bone**	**Glp**	**LG**	**BG**	**SLC**	**LCG**	**—**
					Sd	**DD**	**—**	**—**	**—**	**—**
Probe 9, −150 cm (living surface)	LSu II	#44	*Ovis aries*	Tb	15.4	12.3				
					Bp	**Dp**	**—**	**—**	**—**	**—**
Probe 9, −150 cm (living surface)	LSu II	#45	*Ovis aries*	Mt	22	21.9				
					GLl	**GLm**	**Dm**	**Dl**	**Bd**	**—**
Probe 9, −150 cm (living surface)	LSu II	#34	*Ovis aries*	Tls	35.4	33.8	20.3	19	22.1	
Probe 9, −150 cm (living surface)	LSu II	#35	*Ovis aries*	Tls	30.4	29.8	17.7	16.8	18.1	
Probe 9, −150 cm (living surface)	LSu II	#36	*Ovis aries*	Tls	35.5			19.6		
Sq. 822 L 10 / F 15 (pit)	LSu II	#117	*Ovis aries*	Tls	30.5	29.2	17.8	17.3	19.3	
Probe 9, −100 cm (living surface)	LSu II	#22	*Capra hircus*	Tls	33.7	32.3	19	17.3	21.2	
Sq. 822 L 6 / F 8 (pit)	LSu II	#135	Caprinae	Tls		30.2	19.1		20.9	

Note: Measurements after von den Driesch 1976. Fm = femur; Hm = humerus; LSu II = Late Susa II; Mc = metacarpal; Mt = metatarsal; Rd = radius; Sc = scapula; Scph = scaphoid; Tb = tibia; Tls = talus; Ul = ulna.

Table B10. Metric data for phalanges 1–3 of Caprinae and gazelles at Abu Fanduweh.

					Measurement (mm)						
Context	**Period**	**Code**	**Species**	**Bone**	**GL**	**Bp**	**Dp**	**Bd**	**Dd**	**Sd**	**DD**
Sq. 822 L10 / F 15 (pit)	LSu II	#74	*Ovis aries*	Ph1	37.6	12.8	15.1	9.7	8.9	11.3	11.9
Sq. 822 L 6 / F 8 (pit)	LSu II	#83	*Ovis aries*	Ph1		13	14.6				
Sq. 822 L 10 / F 15 (pit)	LSu II	#115	*Ovis aries*	Ph1	40.1	12.1	14.8	11.3	10.6	9.6	9.2
Sq. 822 L 10 / F 15 (pit)	LSu II	#129	*Ovis aries*	Ph1	40.1	15.5	15.5	12.1	12.3	10.4	10.6
Sq. 822 L 10 / F 15 (pit)	LSu II	#145	*Ovis aries*	Ph1	42.6	13.5	16.1	12.4	12.5	10.7	10.1
Sq. 822 L 6 / F 8 (pit)	LSu II	#165	*Ovis aries*	Ph1				11.4	11.3		
Sq. 822 L 10 / F 15 (pit)	LSu II	#79	*Ovis aries*	Ph1				11.5	10.9		

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Table B10. Metric data for phalanges 1–3 of Caprinae and gazelles at Abu Fanduweh (*continued*).

					Measurement (mm)						
Context	**Period**	**Code**	**Species**	**Bone**	**GL**	**Bp**	**Dp**	**Bd**	**Dd**	**Sd**	**DD**
Sq. 822 L 2 (wall collapse)	LSu II	#10	*Ovis aries*	Ph1	35.8	12.5	13.9	11.8	11.3	9.8	9
Sq. 288 L 5, 70.08 m ASL (open space)	LSu II	#15	*Ovis aries*	Ph1	39.3	12.9	15.5	10.7	10.1	9.4	10.1
Sq. 822 L 10 / F 15 (pit)	LSu II	#66	*Capra hircus*	Ph1	35.7	12.3	14.8	12.4	10.9	9.8	
Sq. 822 L 10 / F 15 (pit)	LSu II	#73	*Capra hircus*	Ph1	36.2	12.3	15.2	11.8	12	9.9	
Sq. 822 L 10 / F 15 (pit)	LSu II	#116	*Capra hircus*	Ph1	37.4	13.3	15.8	13	11.3	11.6	
Sq. 822 L 10 / F 15 (pit)	LSu II	#101	*Capra hircus*	Ph1				11.7	10.2	9.5	
Op. 4 L 1 (mixed)	Sukkalmakh	#17	Caprinae	Ph1	30.7	11.2	12.6		10.9		
Sq. 822 L 2 (wall collapse)	LSu II	#9	Caprinae	Ph1	42.9	15.1	16.7	13.1	12.3	11.1	
Sq. 822 L 10 / F 15 (pit)	LSu II	#72	Caprinae	Ph1		13.6	14.7				
Sq. 822 L 6 / F 8 (pit)	LSu II	#89	Caprinae	Ph1		10.7	13				
Sq. 822 L 10 / F 15 (pit)	LSu II	#143	Caprinae	Ph1				8.3	8.3	6.6	
Sq. 822 L 10 / F 15 (pit)	LSu II	#131	Caprinae	Ph1				9.2	8.2	8	
Sq. 822 L 35 / F 44 (pit)	LSu II	#169	Small ruminant	Ph1				9.5	9		
Sq. 822 L 10 / F 15 (pit)	LSu II	#109	*Gazella* sp.	Ph1	41	13	15.4	12.1	10.6	9.8	
Probe 9, −150 cm (living surface)	LSu II	#47	*Gazella* sp.	Ph1	42.3	12.8	14.9	11.6	10.7	9.8	
Sq. 822 L 6 / F 8 (pit)	LSu II	#91	*Gazella* sp.	Ph1	44.8	13	16.7	11.7	10.4	9.8	
Sq. 822 L 2 (wall collapse)	LSu II	#19	*Gazella* sp.	Ph1	42	12.8	16	12	10.4	9.8	
Sq. 822 L 10 / F 15 (pit)	LSu II	#67	*Ovis aries*	Ph2	25.8	14.1	15	10.7	12.9	10.6	10.9
Sq. 822 L 10 / F 15 (pit)	LSu II	#102	*Ovis aries*	Ph2	23	12.4	13.5	9.99	13.2	9.2	9.9
Sq. 822 L 10 / F 15 (pit)	LSu II	#146	*Ovis aries*	Ph2				9.7	11.5	8	7.6
Sq. 822 L 6 / F 8 (pit)	LSu II	#167	*Ovis aries*	Ph2				8.8	12.3	8	9.7

(continued)

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Table B10. Metric data for phalanges 1–3 of Caprinae and gazelles at Abu Fanduweh (*continued*).

					Measurement (mm)						
Context	**Period**	**Code**	**Species**	**Bone**	**GL**	**Bp**	**Dp**	**Bd**	**Dd**	**Sd**	**DD**
					DLS	**LD**	**MBS**	—	—	—	—
Sq. 822 L 6 / F 8 (pit)	LSu II	#69	*Ovis aries*	Ph3			6				
Sq. 822 L 10 / F 15 (pit)	LSu II	#68	*Ovis aries*	Ph3	34.6	22.9	6.2				

Note: Measurements after von den Driesch 1976. LSu II = Late Susa II; Ph = phalanx.

Table B11. Metric data for phalanges 1–3 of cattle (*Bos* cf. *taurus*) at Abu Fanduweh.

					Measurement (mm)						
Context	**Period**	**Code**	**Species**	**Bone**	**GL**	**Bp**	**Dp**	**Bd**	**Dd**	**Sd**	**DD**
Sq. 822 L 29 (room)	LSu II	#16	*Bos* cf. *taurus*	Ph1		25.9					
Sq. 822 L 2 (wall collapse)	LSu II	#20	*Bos* cf. *taurus*	Ph1	63.1	29.2	34.3	28.3		25.4	23
Probe 9, −150 cm (living surface)	LSu II	#24	*Bos* cf. *taurus*	Ph1	67.4	35.2	35.7	34.6	25.7	29.9	26.3
Probe 9, −150 cm (living surface)	LSu II	#25	*Bos* cf. *taurus*	Ph1	74.7	34.3	38.1	33.1	23.9	28.1	24.6
Probe 9, −150 cm (living surface)	LSu II	#26	*Bos* cf. *taurus*	Ph1	66	35.6	35	32	24.8	29.7	24.5
Probe 9, −150 cm (living surface)	LSu II	#27	*Bos* cf. *taurus*	Ph1	68.8	35.2	35.4	33.3	24.1	30.3	25
Sq. 822 L 10 / F 15 (pit)	LSu II	#59	*Bos* cf. *taurus*	Ph1			26.8				
Sq. 822 L 10 / F 15 (pit)	LSu II	#71	*Bos* cf. *taurus*	Ph1	75			30.8	23.7		
Sq. 822 L 10 / F 15 (pit)	LSu II	#103	*Bos* cf. *taurus*	Ph1		25.3	26.5				
Sq. 822 L 10 / F 15 (pit)	LSu II	#118	*Bos* cf. *taurus*	Ph1	71.2	32.9	36.7	33.9	23.8	29.4	28.7
Sq. 822 L 10 / F 15 (pit)	LSu II	#119	*Bos* cf. *taurus*	Ph1	73.9	33.9	36.4	31.5	23.4	27.8	26.9
Sq. 822 L 10 / F 15 (pit)	LSu II	#120	*Bos* cf. *taurus*	Ph1	68.4			33.3	24.8	31.5	24.5
Sq. 822 L 10 / F 15 (pit)	LSu II	#153	*Bos* cf. *taurus*	Ph1	63.6			27.8	21.8	24	23.5
Sq. 822 L 10 / F 15 (pit)	LSu II	#154	*Bos* cf. *taurus*	Ph1				22.9	18.8	20.5	18.3

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Table B11. Metric data for phalanges 1–3 of cattle (*Bos* cf. *taurus*) at Abu Fanduweh (*continued*).

					Measurement (mm)						
Context	**Period**	**Code**	**Species**	**Bone**	**GL**	**Bp**	**Dp**	**Bd**	**Dd**	**Sd**	**DD**
Sq. 822 L 10 / F 15 (pit)	LSu II	#155	*Bos* cf. *taurus*	Ph1				22.1	19.1	20.3	18.6
Sq. 822 L 6 / F 8 (pit)	LSu II	#166	*Bos* cf. *taurus*	Ph1	64.8	28.2	31.9	27.7	20.3	24	23
Sq. 822 L 2 (wall collapse)	LSu II	#21	*Bos* cf. *taurus*	Ph2	44.3	32.9	35.7	26	27.8	24.2	26.2
Probe 9, −150 cm (living surface)	LSu II	#28	*Bos* cf. *taurus*	Ph2	48.1	34.7	36	29.4	34.1	27.8	26.5
Probe 9, −150 cm (living surface)	LSu II	#29	*Bos* cf. *taurus*	Ph2	44.3	33.8	36.7	31.5	37.3	28.7	30.2
Probe 9, −150 cm (living surface)	LSu II	#30	*Bos* cf. *taurus*	Ph2	45.6	34.8	35.6	29.8	32.9	29.1	26.2
Probe 9, −150 cm (living surface)	LSu II	#31	*Bos* cf. *taurus*	Ph2	47.2	32.9	33.8	28.8	29.4	27.1	25.4
Op. 1 73.53 m ASL (living surface)	LSu 1	#58	*Bos* cf. *taurus*	Ph2	41.1	29.3	30.3	25.1	22.9	26.2	28
Sq. 822 L 10 / F 15 (pit)	LSu II	#70	*Bos* cf. *taurus*	Ph2		33.4	35		31.6	27.1	26.3
Sq. 822 L 6 / F 8 (pit)	LSu II	#95	*Bos* cf. *taurus*	Ph2	39.2	28.3	28.6	26.1	30.7	23.4	22.6
Sq. 822 L 10 / F 15 (pit)	LSu II	#97	*Bos* cf. *taurus*	Ph2		24.4	25				
Sq. 822 L 10 / F 15 (pit)	LSu II	#104	*Bos* cf. *taurus*	Ph2				21	26.7	19	21.6
Sq. 822 L 10 / F 15 (pit)	LSu II	#105	*Bos* cf. *taurus*	Ph2					24	18.5	20.4
Sq. 822 L 10 / F 15 (pit)	LSu II	#121	*Bos* cf. *taurus*	Ph2	47.1	34.4	38.5	28.3	35	27.2	27.4
Sq. 822 L 6 / F 8 (pit)	LSu II	#124	*Bos* cf. *taurus*	Ph2						24.1	24.7
Sq. 822 L 10 / F 15 (pit)	LSu II	#151	*Bos* cf. *taurus*	Ph2	48.8	34	34.4	26.8	31.4	27.5	25.3
Sq. 822 L 10 / F 15 (pit)	LSu II	#152	*Bos* cf. *taurus*	Ph2	46.5	31.9	35.2	26.6	30	25.5	24.4
Sq. 822 L 6 / F 8 (pit)	LSu II	#163	*Bos* cf. *taurus*	Ph2	51.3	35.6	37.4	35.5	40.1	29	28
Op. 1, 73.53 m ASL (living surface)	LSu 1	#58	*Bos* cf. *taurus*	Ph2	41.1	29.3	30.3	25.1	22.9	26.2	28
					DLS	**LD**	**MBS**	—	—	—	—
Probe 9, −150 cm (living surface)	LSu II	#32	*Bos* cf. *taurus*	Ph3	76.1	60	24.8				
Probe 9, −150 cm (living surface)	LSu II	#33	*Bos* cf. *taurus*	Ph3			26.1				

(continued)

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Table B11. Metric data for phalanges 1–3 of cattle (*Bos* cf. *taurus*) at Abu Fanduweh (*continued*).

					Measurement (mm)						
Context	**Period**	**Code**	**Species**	**Bone**	**GL**	**Bp**	**Dp**	**Bd**	**Dd**	**Sd**	**DD**
Sq. 822 L 10 / F 15 (pit)	LSu II	#122	*Bos* cf. *taurus*	Ph3			26.3				
Sq. 822 L 10 / F 15 (pit)	LSu II	#147	*Bos* cf. *taurus*	Ph3			27.1				
Sq. 822 L 10 / F 15 (pit)	LSu II	#148	*Bos* cf. *taurus*	Ph3			28.4				
Sq. 822 L 10 / F 15 (pit)	LSu II	#149	*Bos* cf. *taurus*	Ph3	62.2	50.4	19.8				
Sq. 822 L 10 / F 15 (pit)	LSu II	#150	*Bos* cf. *taurus*	Ph3	72.8	56.5	24.4				

Note: Measurements after von den Driesch 1976. LSu II = Late Susa II; Ph = phalanx.

observed in future analysis of this region. Perhaps the split indicates the presence of two breeds in this area (fig. B20).

DISCUSSION AND CONCLUSION

Study of the faunal assemblage from KS-59 provided a set of new data on the subsistence economy in southwestern Iran, especially during the second half of the fourth millennium BCE. As mentioned earlier, the faunal material is most abundant in the Late Susa II (Late Uruk) phase at the site. Domesticates, including sheep, goats, and cattle, were the most exploited animals, while wild mammals played a marginal role in the subsistence economy. Sheep and goats were the most important domestic animals, with sheep outnumbering goats. The site is surrounded by permanent and seasonal water sources and is thus suitable for both cattle and sheep/goat herding and agricultural activities. But no direct evidence, such as typical pathologies on bones, was found to support the use of cattle in agricultural activities. Seal impressions from the same period in the region depict agropastoral activities and the use of cattle in transportation and plowing (fig. B21:1–5). On the other hand, the high proportion of sheep and cattle utilized by Late Susa II residents indicates sedentary local management of these herds. While different herding systems have been proposed for other urban centers in the highlands of southwestern Iran,[32] these new data tend to demonstrate a more settled management strategy in lowland Susiana. Recent isotopic investigations at the nearby site of Tepe Sohz suggest a more local system of herding.[33]

The subsistence economy and herding pattern at KS-59 during the second half of the fourth millennium BCE are comparable to those at contemporaneous sites in southwestern Iran and other regions. In Khuzestan, during the Middle and Late Uruk phases, sheep and goats were the predominantly managed and exploited species, while cattle and other animals were rare within the assemblages of Sharafabad (73 percent),[34] Farukhababd (85 percent),[35] and Chogha Mish (>70 percent).[36] In Fars, during the fourth millennium BCE in Mehr Ali (Lapui phase), sheep and goats represent more than 80 percent of the remains, while a large variety of other domestic and wild species are also present.[37] In Malyan during the Banesh period, 97.5 percent of the remains are allocated to sheep and goats.[38] In southeastern Iran, in Tappeh Yahya,

32 Zeder 1991, 161–62.

33 Majid Sheikhi et al., personal communication.

34 Wright, Redding, and Pollock 1989.

35 Redding 1981b.

36 Alizadeh 2008, table 14; Lev-Tov et al. 2017, table 1.

37 Sheikhi, Mashkour, and Sardari 2011.

38 Zeder 1991.

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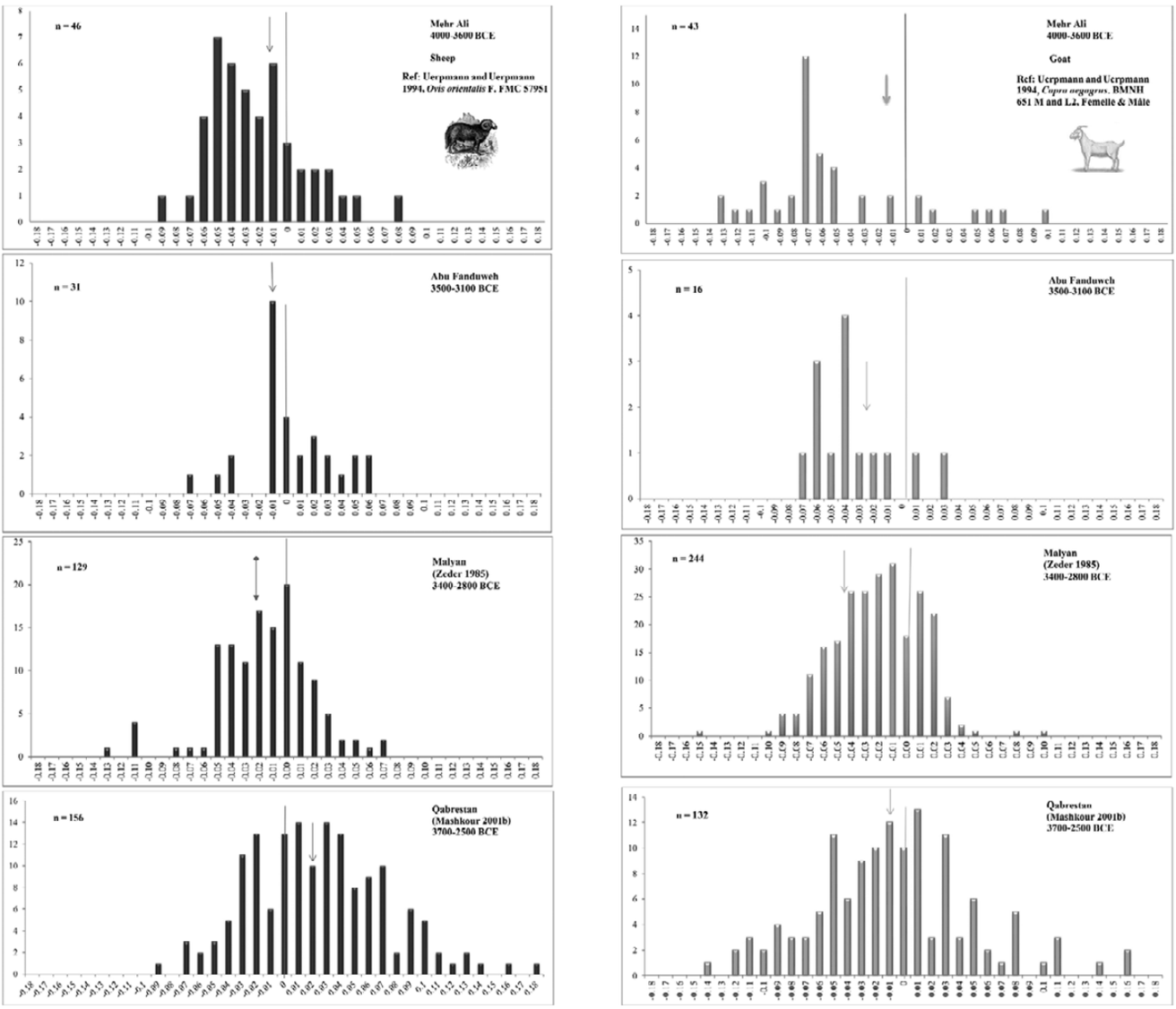

Figure B19. Size variation in the *Ovis* and *Capra* populations at KS-59 in the Late Susa II phase.

the situation is similar: sheep and goats are the most exploited species during periods V (75 percent) and IVc (93 percent).[39] The same pattern is observed in the Central Plateau of Iran on the Kashan Plain in period IV of Sialk South Mound (78 percent)[40] and at Godin[41] and in the recently excavated Qale Gap in the Central Zagros region (>80 percent).[42]

The very low quantity of suid remains is remarkable, and the herding of suids is unfamiliar in the geographical region of KS-59, as it is at the other cited contemporaneous sites in Iran. It is notable that suids, and the domestic pig in particular, represent an important part of the subsistence economies at sites in the neighboring Mesopotamian Plain.[43] Archaeozoological studies at three Early to Late Uruk–period sites excavated by Johnson in Susiana Plain (KS-34, KS-54, and KS-76) indicate pig breeding in the Late Uruk period.[44] The low number of suids in general in all the settlements of the Iranian Plateau before the Iron Age calls into question their wild or domestic status.[45] Today, the boar populations in Khuzestan are abundant and may have been even more so in the past. It is therefore interesting to note the very low contribution of this animal to

39 Meadow 1986.

40 Mashkour 2002b.

41 Gilbert 1979.

42 Amiri et al. 2019.

43 Bökönyi 1978; Dahl 2006; Mudar 1982.

44 Mudar 1988.

45 Mashkour 2006.

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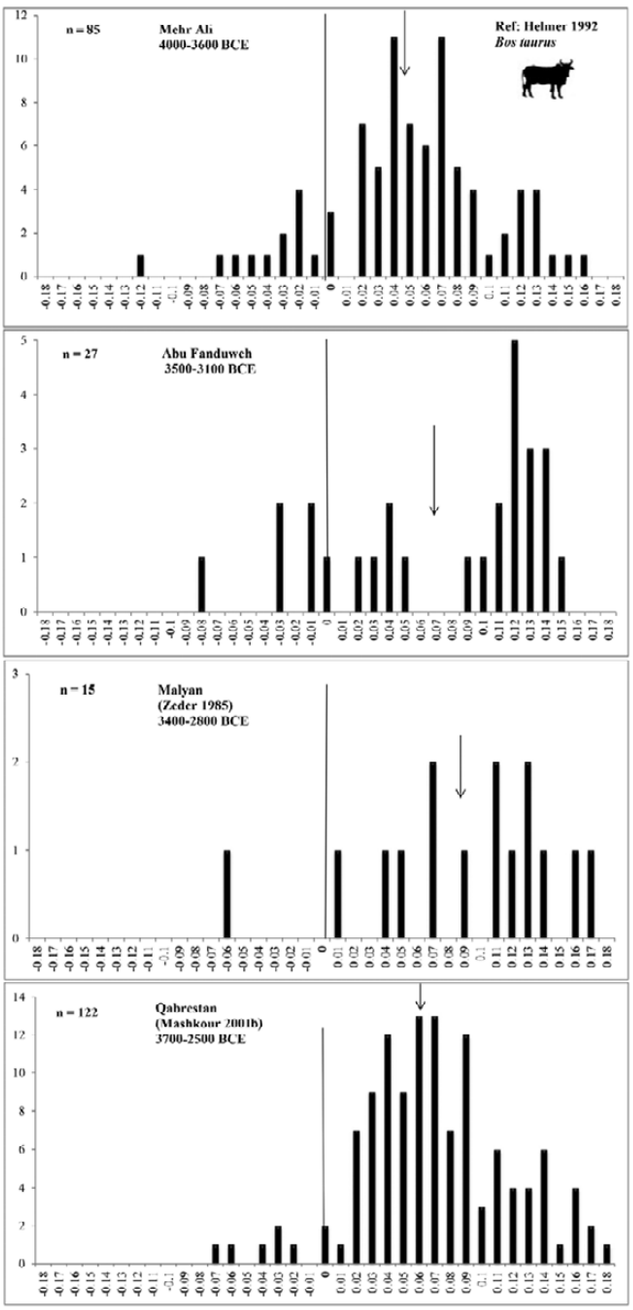

Figure B20. Size variation in the *Bos* population at KS-59 in the Late Susa II phase.

the diet of the Abu Fanduweh people. Also noteworthy is the fact that several seal impressions bear scenes of boars and other hunted animals, while only a few seals show herds of pigs (fig. B21:6–7). The case of the Iranian Plateau seems to be different from that of the rest of the Near East. Based on Proto-Elamite tablets, Dahl notes: "It is perhaps less surprising that we have not been able to identify the signs for pigs and pig-herding, since the pig is poorly attested in excavations from Iran."[46] Generally, pig consumption was important from the fifth to the second millennium BCE.[47]

The absence of equids in the Late Susa II phase at KS-59 is curious, since they existed there prior to that phase. The fact that the pits from which most of the Late Susa II remains were collected contained consumption refuse suggests that equids were not consumed. Without more details about the equid remains, we cannot further determine the wild or domestic status of the equids found in KS-59. Hemiones were exploited for their meat, and not much is known about horses and donkeys in these periods.

Finally, the study of fish remains, though they are small in volume, has shown the great potential of such material for generating a better understanding of the diversity of the subsistence economy in lowland Susiana during the fourth millennium BCE, the existence of a rich environment, and the presence of wetlands (fig. B21:8).

In summary, this study has provided the opportunity to raise some key questions regarding animal exploitation and herding strategies in lowland Susiana during the fourth millennium BCE. It is hoped that the addition of future assemblages will contribute to a deeper knowledge of the status of equids during the Late Susa II phase and the question of boar/pig consumption. Finally, the herding of sheep/goats and cattle is quite diversified on the Iranian Plateau because of the variety of landscapes and hydrologic resources. A clearer view of herding strategies may be gained from biochemistry and stable-isotope analyses of the archaeozoological material and with the integration of other bioarchaeological and ecological disciplines, such as archaeobotany and palynology.

ACKNOWLEDGMENTS

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46 Dahl 2019, 89.

47 See the papers in Lion and Michel 2006.

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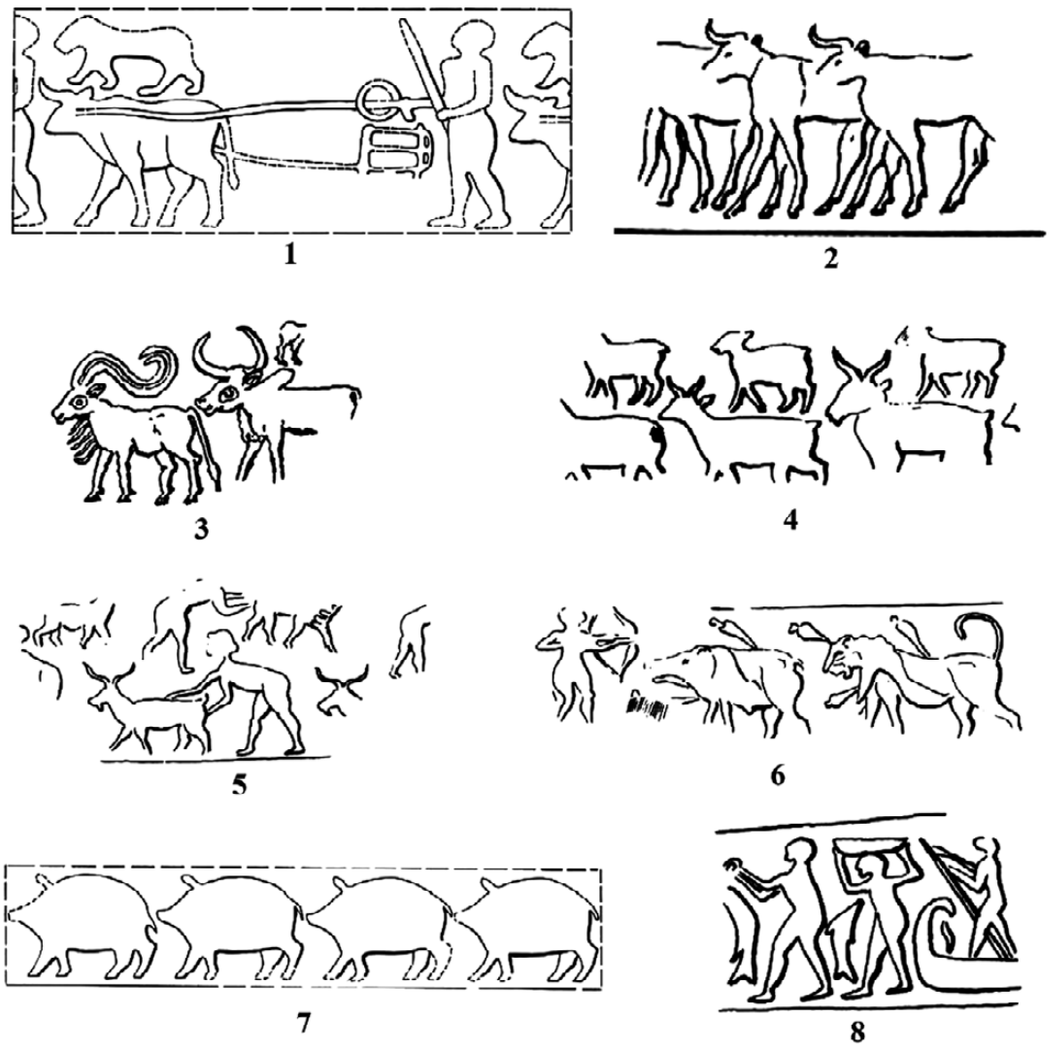

Figure B21. Some animals in seal impressions: (1) agricultural activities with cattle, Chogha Mish, Late Susa II; (2) cattle herd, Susa, Late Susa II; (3) zebu and goat, Susa, Susa III / Proto-Elamite; (4) goat herd, Susa, Late Susa II; (5) shepherds, Susa, Late Susa II; (6) hunting of boar and lion, Susa, Late Susa II; (7) pig herd, Chogha Mish, Late Susa II; (8) fishing, Susa, Late Susa II. Designs respectively after Roach 2008, 2:72, 28, 155, 32, 32, 74, 30, and 73.

for providing access to his comparative osteological collection of Persian Gulf fish at the Muséum national d'Histoire naturelle. Finally, thanks to Karyne Debue (UMR 7209, Muséum national d'Histoire naturelle / Centre national de la recherche scientifique) for the identification of the bird bones using the modern osteological collections of the Muséum national d'Histoire naturelle in Paris.

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Appendix C

Existing Fauna of Northern Khuzestan

Mohammad Reza Rokni

Note: The following tables were compiled by Mohammad Reza Rokni, a talented local faunal specialist. An animal lover and self-taught faunal expert, he has traveled to every corner of the province of Khuzestan, especially the area of riparian forest on the banks of the Dez River. He has assembled an impressive archive of the resident and migratory animals in Khuzestan and kindly provided the following tables for specialists and others interested in the fauna of the region. Mr. Rokni is now an archaeologist and GIS specialist at the Iranian Center for Archaeological Research.

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Table C1. Local major animals of northern Khuzestan.

	Binomial name	Common name	Persian name
1	*Dama mesopotamica*	Persian fallow deer	گوزن زرد
2	*Sus scrofa*	Wild boar	خوک وحشی
3	*Felis silvestris*	Wild cat	گربة وحشي
4	*Canis aureus*	Golden jackal	شغال
5	*Vulpes vulpes*	Common fox	روباه معمولي
6	*Herpestes edwardsii*	Indian gray mongoose	موش خرما
7	*Hystrix indica*	Indian crested porcupine	تشي
8	*Hemiechinus auritus*	Long-eared hedgehog	خارپشت گوش بلند
9	*Rattus rattus*	Black rat	موش سياه
10	*Rattus norvegicus*	Brown rat	موش قهوه‌اي
11	*Rhombomys opimus*	Giant gerbil	جربيل بزرگ
12	*Lepus capensis*	Cape hare	خرگوش قهوه‌اي

Table C2. Bird species of Khuzestan.

	Binomial name	Common name	Presence	Persian name
1	*Tachybaptus ruficollis*	Little grebe	Native	كشيم كوچك
2	*Phalacrocorax carbo*	Cormorant	Migratory	باكلان
3	*Ardea cinerea*	Gray heron	Migratory	حواصيل خاكستري
4	*Egretta alba*	Great white heron	Migratory	حواصيل سفيد بزرگ
5	*Egretta garzetta*	Little egret	Native	اگرت كوچك
6	*Bubulcus ibis*	Cattle egret	Native	گاو چرانك
7	*Nycticorax nycticorax*	Night heron	Native	حواصيل شب
8	*Ixobrychus minutus*	Little bittern	Native	بوتيمار كوچك
9	*Botaurus stellaris*	Bittern	Native	بوتيمار
10	*Ciconia ciconia*	White stork	Native	لك لك
11	*Anas strepera*	Gadwall	Migratory	اردك اردهاي
12	*Scolopax rusticola*	Woodcock	Migratory	ابيا
13	*Larus argentatus*	Herring gull	Migratory	كاكايي نقره اي
14	*Larus genei*	Slender-billed gull	Native	كاكايي صورتي
15	*Columba livia*	Rock dove	Native	كبوتر چاهي
16	*Columba palumbus*	Wood pigeon	Native	فاخته
17	*Tyto alba*	Barn owl	Native	جغد انبار
18	*Athene noctua*	Little owl	Native	جغد كوچك
19	*Apus melba*	Alpine swift	Native	پرستوي شكم سفيد

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Table C2. Bird species of Khuzestan (*continued*).

	Binomial name	Common name	Presence	Persian name
20	*Ceryle rudis*	Pied kingfisher	Native	ماهي خورك ابلق
21	*Alcedo atthis*	Common kingfisher	Native	ماهي خورك
22	*Halcyon smyrnensis*	White-breasted kingfisher	Native	ماهي خورك سينه سفيد
23	*Anas crecca*	Teal	Migratory	خوتكا
24	*Anas clypeata*	Shoveler	Migratory	اردك نوك پهن
25	*Gyps fulvus*	Griffon vulture	Migratory	كركس
26	*Circus aeruginosus*	Marsh harrier	Native	سنقر تالابي
27	*Buteo rufinus*	Long-legged buzzard	Migratory	سارگپه پا بلند
28	*Falco tinnunculus*	Kestrel	Migratory	دليجه
29	*Falco cherrug*	Saker falcon	Migratory	بالابان
30	*Falco Peregrinus*	Peregrine falcon	Migratory	شاهين
31	*Ammoperdix griseogularis*	See-see partridge	Native	تيهو
32	*Francolinus francolinus*	Black francolin	Native	دراج
33	*Rallus aquaticus*	Water rail	Native	يلوة آبي
34	*Gallinula chloropus*	Moorhen	Native	چنگر نوك سرخ
35	*Fulica atra*	Coot	Native	چنگر
36	*Chlamydotis undulata*	Houbara bustard	Migratory	هوبره
37	*Himantopus himantopus*	Black-winged stilt	Native	چوب پا
38	*Burhinus oedicnemus*	Stone-curlew	Temporary	چاخ لق
39	*Vanellus vanellus*	Lapwing (northern lapwing)	Migratory	خروس كولي
40	*Vanellus leucurus*	White-tailed plover	Temporary	خروس كولي دم سفيد
41	*Hoploterus indicus*	Red-wattled plover	Native	ديدومك
42	*Numenius arquata*	Curlew	Native	گيلانشاه
43	*Merops superciliosus*	Blue-cheeked bee-eater	Temporary	زنبور خوار گلو خرمايي
44	*Coracias garrulous*	European roller	Temporary	سبز قبا
45	*Upupa epops*	Hoopoe	Temporary	هدهد
46	*Galerida cristata*	Crested lark	Native	چكاوك كاكلي
47	*Motacilla citreola*	Citrine wagtail	Migratory	دم جنبانك زرد
48	*Motacilla alba*	White wagtail	Migratory	دم جنبانك ابلق
49	*Pycnonotus leucogenys*	White-eared bulbul	Native	بلبل خرما
50	*Lanius excubitor*	Great gray shrike	Native	سنگ چشم خاكستري
51	*Erithacus rubecula*	Robin	Migratory	سينه سرخ
52	*Luscinia svecica*	Bluethroat	Migratory	گلو آبي
53	*Cercotrichas galactotes*	Rufous bush robin	Temporary	دم چتري

(*continued*)

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Table C2. Bird species of Khuzestan (*continued*).

	Binomial name	Common name	Presence	Persian name
54	*Phoenicurus Phoenicurus*	Common redstart	Temporary	دم سرخ
55	*Saxicola torquata*	Stonechat	Native	چك
56	*Oenanthe alboniger*	Hume's wheatear	Native	چكچك سياه شكم سفيد
57	*Turdus merula*	Blackbird	Migratory	توكاي سياه
58	*Turdoides caudatus*	Common babbler	Native	ليكو
59	*Acrocephalus scirpaceus*	European reed warbler	Temporary	سسك نيزار
60	*Carduelis Carduelis*	Goldfinch	Migratory	سهرة طلايي
61	*Passer domesticus*	House sparrow	Native	گنجشك خانگي
62	*Sturnus vulgaris*	Starling	Native	سار

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Appendix D

Existing Flora of Northern Khuzestan

Noshad Rokni

Note: The following table was painstakingly composed by Noshad Rokni, a talented florist from the city of Dezful in Khuzestan. Mr. Rokni, who is now a curator at the Malek Museum in Tehran, intended to write an introduction to this impressive table of the existing flora of Khuzestan, but the large volume of his responsibilities at the museum prevented him from doing so. Nevertheless, this table should be self-explanatory for botanists and archaeobotanists interested in the flora of Khuzestan.

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Table D1. Flora species of northern Khuzestan.

	Family	Species	Persian name
1	Aizoaceae	*Aizoon hispanicum*	علف فرش
2	Amaranthaceae	*Amaranthus albus*	تاج خروس سفيد
3	Amaranthaceae	*Amaranthus graecizans*	تاج خروس هرز
4	Amaranthaceae	*Amaranthus viridis*	تاج خروس سبز
5	Amaryllidaceae	*Ixiolirion tataricum*	خيارك
6	Apocynaceae	*Catharanthus roseus*	پريوش
7	Apocynaceae	*Nerium oleander*	خرزهره
8	Asclepiadaceae	*Calotropis procera*	استبرق
9	Boraginaceae	*Arnebia decumbens*	گل عسلي
10	Boraginaceae	*Echium khuzistanicum* (found only around Susa)	گل گاو زبان خوزستاني
11	Boraginaceae	*Cordia crenata delile*	ليم،چسب
12	Boraginaceae	*Cordia myxa*	سپستان
13	Boraginaceae	*Heliotropium europaeum*	آفتاب پرست اروپايي
14	Boraginaceae	*Heliotropium noeanum*	آفتاب پرست مزرعه روي
15	Boraginaceae	*Heliotropium supinum*	آفتاب پرست خوابيده
16	Boraginaceae	*Heliotropium szovitsii*	—
17	Boraginaceae	*Onosma bulbotrichum*	زنگوله‌اي تيغالي
18	Caesalpiniaceae	*Bauhinia purpurea*	بهيمه
19	Caesalpiniaceae	*Caesalpinia gilliesii*	ابريشم مصري
20	Caesalpiniaceae	*Parkinsonia aculeata*	بابل،درمان عقرب
21	Capparidaceae	*Capparis spinose*	گَبَر،/گَوَر
22	Caryophyllaceae	*Silene conoidea*	سيلن هرز/مگس گير هرز
23	Caryophyllaceae	*Vaccaria pyramidata medicus* var. *grandiflora*	صابونك
24	Ceratophyllaceae	*Ceratophyllum demersum*	علف شاخي
25	Chenopodiaceae	*Beta vulgaris*	چغندر وحشي
26	Chenopodiaceae	*Chenopodium album*	سلمه تره سفيد
27	Chenopodiaceae	*Chenopodium murale*	سلمه تره
28	Cistaceae	*Helianthus salicifolium*	دانه گنجشكي،گل آفتابيِ برگ بيدي
29	Compositae	*Achillea wilhelmsii*	بومادران
30	Compositae	*Anthemis pseudocotula*	بابونه شيرازي
31	Compositae	*Anthemis susiana*	بابونه شوشي
32	Compositae	*Atractylis cancellata*	خار چرخه
33	Compositae	*Bellis annua*	مينا چمني يكساله
34	Compositae	*Carduus arabicus*	تاتاري عربي
35	Compositae	*Carthamus lanatus*	گلرنگ مقدس

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Table D1. Flora species of northern Khuzestan (*continued*).

	Family	Species	Persian name
36	Compositae	*Carthamus oxyacantha*	گلرنگ وحشي
37	Compositae	*Centaurea bruguierana*	گل گندم مهاجر
38	Compositae	*Centaurea hyalolepis*	گل گندم گوگردي، برکه شفاف
39	Compositae	*Centaurea iberica*	گل گندم چمنزار
40	Compositae	*Centaurea khuzestanica*	گل گندم خوزستاني
41	Compositae	*Cichorium intybus*	کاسني
42	Compositae	*Conyzanthus squamatus*	پير بهاركي
43	Compositae	*Dittrichia graveolens*	پير پاييزي
44	Compositae	*Echinops dichrous*	شکر تيغال جنوبي
45	Compositae	*Eclipta prostrate*	مستور خوابيده
46	Compositae	*Erigeron canadensis*	پير بهار
47	Compositae	*Gundelia tournefortii*	کنگر خوراکي
48	Compositae	*Hedypnois rhadioloides*	—
49	Compositae	*Matricaria aurea*	بابونه اروپايي
50	Compositae	*Matricaria recutita*	بابونه
51	Compositae	*Notobasis syriaca*	بادآورد
52	Compositae	*Onopordon leptolepis*	نوعي کنگر
53	Compositae	*Otreya carduiformis*	فرچه اي
54	Compositae	*Pentanema divaricatum*	—
55	Compositae	*Picnomon acorna*	خار زردك
56	Compositae	*Reichardia orientalis*	—
57	Compositae	*Scolymos hispanicus*	کنگر طلايي
58	Compositae	*Senecio vulgaris*	پيرگياه
59	Compositae	*Silybum marianum*	خارمريم
60	Compositae	*Sonchus asper*	شير تيغك
61	Compositae	*Urospermum picroides*	ريش ميش،شير تلخك
62	Compositae	*Xanthium strumarium*	طوق،زردان
63	Convolvulaceae	*Convolvulus arvensis*	پيچك صحرايي
64	Convolvulaceae	*Convolvulus pilosellifolius*	پيچك برگ کرکي
65	Cruciferaceae	*Biscutella diyma*	سپرسپري
66	Cruciferaceae	*Brassica nigra*	خردل سياه
67	Cruciferaceae	*Capsella bursa-pastoris*	کيسه کشيش
68	Cruciferaceae	*Diplotaxis erucoides*	درج سفيد
69	Cruciferaceae	*Diplotaxis harra*	درج

(*continued*)

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Table D1. Flora species of northern Khuzestan (*continued*).

	Family	Species	Persian name
70	Cruciferaceae	*Eruca sativa*	منداب
71	Cruciferaceae	*Erucaria hispanica*	منداپي
72	Cruciferaceae	*Erysimum oleifolium*	خاكشير تلخ
73	Cruciferaceae	*Euclidium syriacum*	سرگنجشكي
74	Cruciferaceae	*Hirschfeldia incana*	خردل كاذب
75	Cruciferaceae	*Lepidium sativum*	شاهي وحشي
76	Cruciferaceae	*Malcolmia africana*	شب بوي صحرايي
77	Cruciferaceae	*Matthiola longipetala*	چلپيا
78	Cruciferaceae	*Sinapis alba*	خردل سفيد
79	Cruciferaceae	*Sinapis arvensis*	خردل بري
80	Cruciferaceae	*Sisymbrium officinale*	خاكشير
81	Cucurbitaceae	*Citrullus colocynthis*	حنظل
82	Cucurbitaceae	*Cucumis melo*	خربزه وحشي
83	Cyperaceae	*Bolboschoenus maritimus*	بوريا
84	Cyperaceae	*Cyperus difformis*	—
85	Cyperaceae	*Cyperus rotundus*	اويار سلام
86	Dipsacaceae	*Scabiosa calocephala*	طوسك زيبا
87	Euphorbiaceae	*Euphorbia granulata*	فرفيون
88	Euphorbiaceae	*Euphorbia petiolata*	فرفيون
89	Euphorbiaceae	*Ricinus communis*	كرچك
90	Fumariaceae	*Fumaria parviflora*	شاه تره
91	Gentianaceae	*Centaurium pulchellum*	قنطوريون
92	Gentianaceae	*Centaurium spicatum*	قنطوريون
93	Geraniaceae	*Erodium ciconium*	نوك لكلكي دراز
94	Geraniaceae	*Erodium cicutarium*	نوك لكلكي هرز
95	Geraniaceae	*Erodium gruinum*	نوك لكلكي
96	Geraniaceae	*Erodium moschatum*	نوك لكلكي معطر
97	Geraniaceae	*Erodium oxyrrhynchum*	نوك لكلكي تيز
98	Geraniaceae	*Erodium pulverulentum*	نوك لكلكي گرد آلود
99	Geraniaceae	*Geranium collinum*	سوزن چوپان كوهسري
100	Geraniaceae	*Geranium rotundifolium*	سوزن چوپان برگ گرد
101	Gramineae/Poaceae	*Aegilops crassa*	چمن بزضخيم
102	Gramineae/Poaceae	*Aegilops umbellulata*	چمن بزچترکي
103	Gramineae/Poaceae	*Arundo donax*	قميش
104	Gramineae/Poaceae	*Avena ludvichiana*	يولاف ايراني،جو دوسر ايراني

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Table D1. Flora species of northern Khuzestan (*continued*).

	Family	Species	Persian name
105	Gramineae/Poaceae	*Avena fatua*	يولاف پوچ ،جو دوسر پوچ،گندم كاهو
106	Gramineae/Poaceae	*Avena sativa*	يولاف ،جو دوسر
107	Gramineae/Poaceae	*Bromus danthoniae*	جارو علفي طالشي، جارو علفي هرز
108	Gramineae/Poaceae	*Bromus scoparius*	جارو علفي بي برگ
109	Gramineae/Poaceae	*Cynodon dactylon*	مرغ
110	Gramineae/Poaceae	*Dichanthium annulatum*	چمن گره ريش
111	Gramineae/Poaceae	*Echinochloa crus-galli*	سوروف،برنج ارزني
112	Gramineae/Poaceae	*Eremopoa persica*	—
113	Gramineae/Poaceae	*Hordeum glaucum*	جو هرز
114	Gramineae/Poaceae	*Hordeum spontaneum*	جو وحشي
115	Gramineae/Poaceae	*Hordeum vulgare*	جو
116	Gramineae/Poaceae	*Imperata cylindrica*	حلفه،زلف شيطان
117	Gramineae/Poaceae	*Lolium rigidum*	چچم سخت، چچم شكننده
118	Gramineae/Poaceae	*Lophochloa phleoides*	دم روباهك
119	Gramineae/Poaceae	*Panicum repens*	ارزن جويباري، ارزن مردابي
120	Gramineae/Poaceae	*Paspalum paspaloides*	—
121	Gramineae/Poaceae	*Phalaris minor*	دانه قناري
122	Gramineae/Poaceae	*Phragmites australis*	ني، ني قلم
123	Gramineae/Poaceae	*Poa annua*	—
124	Gramineae/Poaceae	*Polypogon monspeliensis*	شال دم
125	Gramineae/Poaceae	*Saccharum officinarum*	نيشكر
126	Gramineae/Poaceae	*Setaria glauca*	گاورس، ارزني، اسب واش
127	Gramineae/Poaceae	*Sorghum halepense*	چاير
128	Gramineae/Poaceae	*Stipa capensis*	بهمن، استپي آفريقايي
129	Gramineae/Poaceae	*Taeniatherum crinitum*	گيسو چمن
130	Gramineae/Poaceae	*Zea mays*	ذرت
131	Iridaceae	*Gladiolus segetum*	گلايول صحرايي
132	Juncaceae	*Juncus acutus*	سازو
133	Juncaceae	*Juncus articulatus*	وزاس
134	Labiatae	*Lycopus europaeus*	فراسيون آبي، پاي گرگ
135	Labiatae	*Mentha longifolia*	پونه
136	Labiatae	*Salvia compressa*	مرمرشك، مريم گلي گرمسيري
137	Labiatae	*Salvia macrosiphon*	مريم گلي لوله اي
138	Labiatae	*Teucrium polium*	مريم نخودي، كلپوره، جز

(*continued*)

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Table D1. Flora species of northern Khuzestan (*continued*).

	Family	Species	Persian name
139	Liliaceae	*Allium atroviolaceum*	منگله، پیاز بنفش
140	Liliaceae	*Allium eriophyllum*	پیاز گل درشت
141	Linaceae	*Linum strictum*	كتان گرمسيري
142	Lythraceae	*Ammannia multiflora*	—
143	Lythraceae	*Lythrum hyssopifolia*	خون فام زوفايي
144	Lythraceae	*Lythrum salicaria*	خون فام
145	Malvaceae	*Hibiscus esculentus*	باميه
146	Malvaceae	*Hibiscus rosa-sinensis*	ختمي‌چيني
147	Malvaceae	*Hibiscus syriacus*	ختمي‌درختي
148	Malvaceae	*Malva parviflora*	پنيرك گل ريز
149	Mimosaceae	*Acacia farnesiana*	درخت عنبر،مشك،باور
150	Mimosaceae	*Albizia lebbeck*	برهان
151	Mimosaceae	*Prosopis stephaniana*	كهورك
152	Mimosaceae	*Prosopis juliflora*	كهور پاكستاني
153	Moraceae	*Ficus carica*	انجير
154	Moraceae	*Morus alba*	توت سفيد،توت هراتي
155	Myrtaceae	*Eucalyptus camaldulensis*	اكاليپتوس
156	Nyctaginaceae	*Bougainvillea spectabilis*	گل كاغذي
157	Oleaceae	*Olea europaea*	زيتون
158	Palmae	*Phoenix dactylifera*	خرما
159	Palmae	*Washingtonia filifera*	نخل بادبزني
160	Papaveraceae	*Hypericoum pendulum*	زرد شاه تره
161	Papaveraceae	*Papaver dubium*	شقايق
162	Papilionaceae	*Alhagi mannifera*	خار شتر
163	Papilionaceae	*Glycyrrhiza glabra*	شيرين بيان
164	Papilionaceae	*Hippocrepis bisliqua*	نعل اسبي
165	Papilionaceae	*Hymenocarpus cricinnatus*	يونجه سكه اي
166	Papilionaceae	*Lotus corniculatus*	آهو ماش زرد
167	Papilionaceae	*Medicago polymorpha*	يونجه خاردار
168	Papilionaceae	*Melilotus indicus*	شاه افسر
169	Papilionaceae	*Onobrychis crista-galli*	اسپرس تاج خروسي
170	Papilionaceae	*Scorpiurus muricatus*	دم عقربي
171	Papillionaceae	*Trigonella uncata*	شنبليله قلاب دار
172	Pedaliaceae	*Sesamum indicum*	كنجد
173	Plantaginaceae	*Plantago coronopus*	بارهنگ شاخ گوزني

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Table D1. Flora species of northern Khuzestan (*continued*).

	Family	Species	Persian name
174	Plantaginaceae	*Plantago boissieri*	—
175	Plantaginaceae	*Plantago indica*	بارهنگ پنجه غازي
176	Plantaginaceae	*Plantago lagopus*	—
177	Plantaginaceae	*Plantago lanceolata*	بارهنگ سر نيزه اي
178	Plantaginaceae	*Plantago ovata*	اسفرزه
179	Plantaginaceae	*Plantago psyllium*	بارهنگ كتاني
180	Podophyllaceae	*Leontice leontopetalum*	ترب شير
181	Polygonaceae	*Polygonum hydropiper*	كرگزنه
182	Polygonaceae	*Polygonum lapathifolium*	هفت بند ترشكي
183	Polygonaceae	*Polygonum persicaria*	هفت بند هلويي
184	Polygonaceae	*Polygonum patulum*	هفت بند گسترده
185	Polygonaceae	*Rumex crispus*	ترشك مواج
186	Portulacaceae	*Portulaca oleracea*	خرفه
187	Potamogetonaceae	*Potamogeton crispus*	بارهنگ آبي فردار
188	Potamogetonaceae	*Potamogeton nodosus*	بارهنگ آبي گره دار
189	Potamogetonaceae	*Potamogeton perfoliatus*	بارهنگ آبي
190	Primulaceae	*Anagallis arvensis*	آناغاليس
191	Punicaceae	*Punica granatum*	انار
192	Ranunculaceae	*Ranunculus arvensis*	أُلاله
193	Resedaceae	*Reseda aucheri*	ورث
194	Rhamnaceae	*Ziziphus nummularia*	رمليگ
195	Rhamnaceae	*Ziziphus spina-christi*	كنار
196	Rosaceae	*Rubus anatolicus*	تمشك درختي
197	Rubiaceae	*Galium setaseum*	پي تي راخ
198	Rutaceae	*Citrus aurantifolia*	ليمو ترش
199	Rutaceae	*Citrus aurantium*	نارنج
200	Rutaceae	*Citrus deliciosa*	نارنگي
201	Rutaceae	*Citrus limon*	ليمو عماني
202	Rutaceae	*Citrus paradisi*	گريپ فروت
203	Rutaceae	*Citrus sinensis*	پرتقال
204	Rutaceae	*Citrus unshiu*	نارنگي انشو
205	Salicaceae	*Populus euphratica*	پده
206	Sapindaceae	*Dodonaea viscosa*	ناترك
207	Scrophulariaceae	*Kickxia sieberi*	—

(*continued*)

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Table D1. Flora species of northern Khuzestan (*continued*).

	Family	Species	Persian name
208	Scrophulariaceae	*Scrophularia deserti*	ميموني بياباني
209	Solanaceae	*Datura stramonium*	تاتوره
210	Solanaceae	*Hyoscyamus tenuicaulis*	بنگ دانه
211	Solanaceae	*Lycium shawii*	سِريم،ديو خار
212	Solanaceae	*Physalis divaricata*	عروسك پشت پرده
213	Solanaceae	*Solanum nigrum*	سگ انگور
214	Sphenocleaceae	*Sphenoclea zeylanica*	ورث آبي
215	Tamaricaceae	*Tamarix aphylla*	گز شاهي
216	Tamaricaceae	*Tamarix arceuthoides*	گز
217	Tamaricaceae	*Tamarix leptopetala*	—
218	Tamaricaceae	*Tamarix passerinoides*	—
219	Tamaricaceae	*Tamarix tetragyna*	—
220	Tiliaceae	*Corchorus trilocularis*	چتايي سه حجره اي
221	Typhaceae	*Typha australis*	لويي جنوبي
222	Umbelliferae	*Ammi majus*	زنيان
223	Umbelliferae	*Anisosciadium orientale*	–
224	Umbelliferae	*Torilis leptophylla*	ماستونك برگ نازك
225	Umbelliferae	*Turgenia latifolia*	گيس چسبك
226	Urticaceae	*Urtica pilulifera*	گزنه
227	Verbenaceae	*Clerodendrum inerme*	شمشاد آباداني
228	Verbenaceae	*Lantana camara*	شاه پسند
229	Verbenaceae	*Phyla nodiflora*	توت پاياپي
230	Verbenaceae	*Vitex pseudo-negundo*	بنگله،بنگرو،جاز
231	Zygophyllaceae	*Tribulus terrestris*	خار خسك

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Plates

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Plate 1. Early Susiana pottery from KS-04 and KS-04B.

	Field no.	Provenience	Period	Description and comparisons
A	KS04B-P08	KS-04B surface	Early Susiana	Buff ware, gritty paste, brown paint, reserved wavy lines. Delougaz and Kantor 1996, pl. 197:D; Dollfus 1975, fig. 19:2 (Jafarabad phase)
B	KS04-P253	KS-04 Sq. O15 surface	Early Susiana	Buff ware, gritty paste, brown paint, reserved wavy lines. Delougaz and Kantor 1996, pl. 197:D
C	KS04B-P09	KS-04B surface	Early Susiana	Buff ware, dense, small dark grits in paste, granular black paint. Delougaz and Kantor 1996, pl. 201:G–H; Dollfus 1975, figs. 18:5 and 19:5 (Jafarabad phase)
D	KS04B-P10	KS-04B surface	Early Susiana	Buff ware, gritty paste, brown paint, reserved wavy lines
E	KS04B-250	KS-04B surface	Early Susiana	Buff ware, gritty paste, black paint, reserved wavy lines. Cf. Delougaz and Kantor 1996, pl. 196:K; Dollfus 1975, fig. 23:3–4 (Jafarabad phase)
F	KS04B-P11	KS-04B surface	Early Susiana	Buff ware, sandy paste, creamy buff slip, dark-brown paint. Alizadeh 2008, fig. 31:E; Dollfus 1975, fig. 28:13, 15 (Jafarabad phase)
G	KS04B-P12	KS-04B surface	Archaic Susiana 3 / Early Susiana	Buff ware, sandy paste, dark-brown paint, reserved wavy line. Delougaz and Kantor 1996, pl. 209:C–E; Dollfus 1975, fig. 25:4 (Jafarabad phase)
H	KS04B-P13	KS-04B surface	Early Susiana	Buff ware, gritty paste, dark-brown paint. Delougaz and Kantor 1996, pl. 198:B; Alizadeh 2008, fig. 56:B
I	KS04-P217	KS-04 Sq. M14 surface	Early Susiana	Reddish buff ware, gritty paste, gritty face. Delougaz and Kantor 1996, pl. 199:J–M
J	KS04-P14	KS-04 Sq. M14 surface	Early Susiana	Buff ware, dense, gritty paste, black paint
K	KS04B-219	KS-04B surface	Early Susiana	Buff ware, dense, gritty paste, black paint, excised triangles. Cf. Delougaz and Kantor 1996, pl. 197:J; Dollfus 1975, figs. 18:7 and 19:1 (Jafarabad phase)

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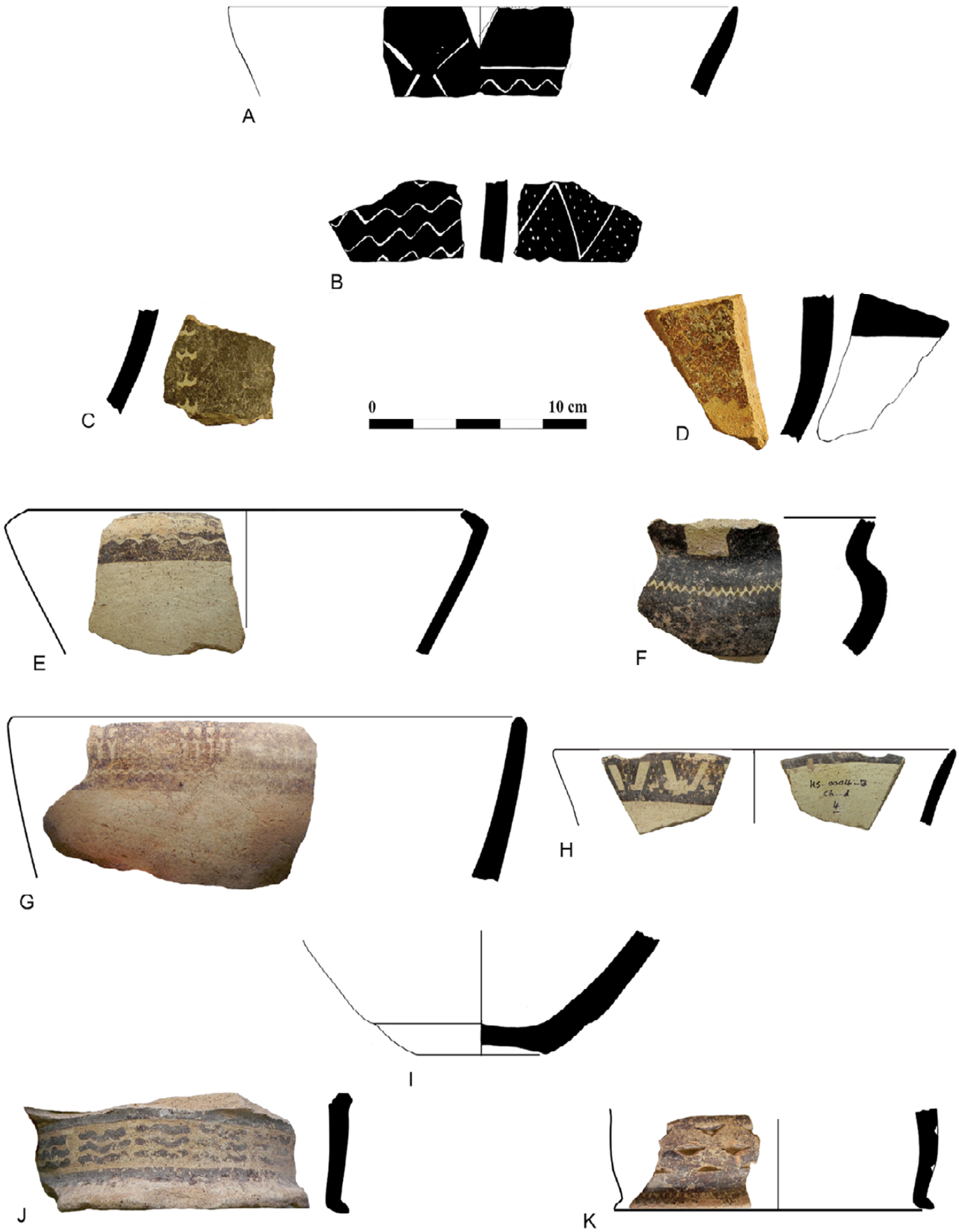

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Plate 2. Late Middle Susiana pottery from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-P223	Sq. M14 surface	Late Middle Susiana	Warm buff ware, some scattered sand in paste, probably slipped, brown paint
B	KS04-P286	Sq. N15 surface	Late Middle Susiana	Pale-grayish buff ware, no visible inclusion, slipped, brown paint
C	KS04-P84	Sq. S26 surface	Late Middle Susiana	Buff ware, some very fine sand in paste, yellowish buff slip, brown paint
D	KS04-P85	Sq. M14 surface	Late Middle Susiana	Greenish buff ware, scattered sand in paste, probably slipped, dark paint
E	KS04-P17	Sq. O16 surface	Late Middle Susiana	Square vessel; buff ware, scattered sand in paste, brown paint
F	KS04-P308	Sq. Q16 surface	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
G	KS04-P299	Sq. P15 surface	Late Middle Susiana	Pottery “stand” with central hole; buff ware, no visible inclusion
H	KS04-P90	Sq. R15-S L 2	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
I	KS04-P39	Sq. R15-N surface	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
J	KS04-P300	Sq. P15-N surface	Late Middle Susiana	Greenish buff ware, some scattered sand in paste, probably slipped, dark paint
K	KS04-P218	Sq. M14 surface	Late Middle Susiana	Creamy buff ware, no visible inclusion, brown paint

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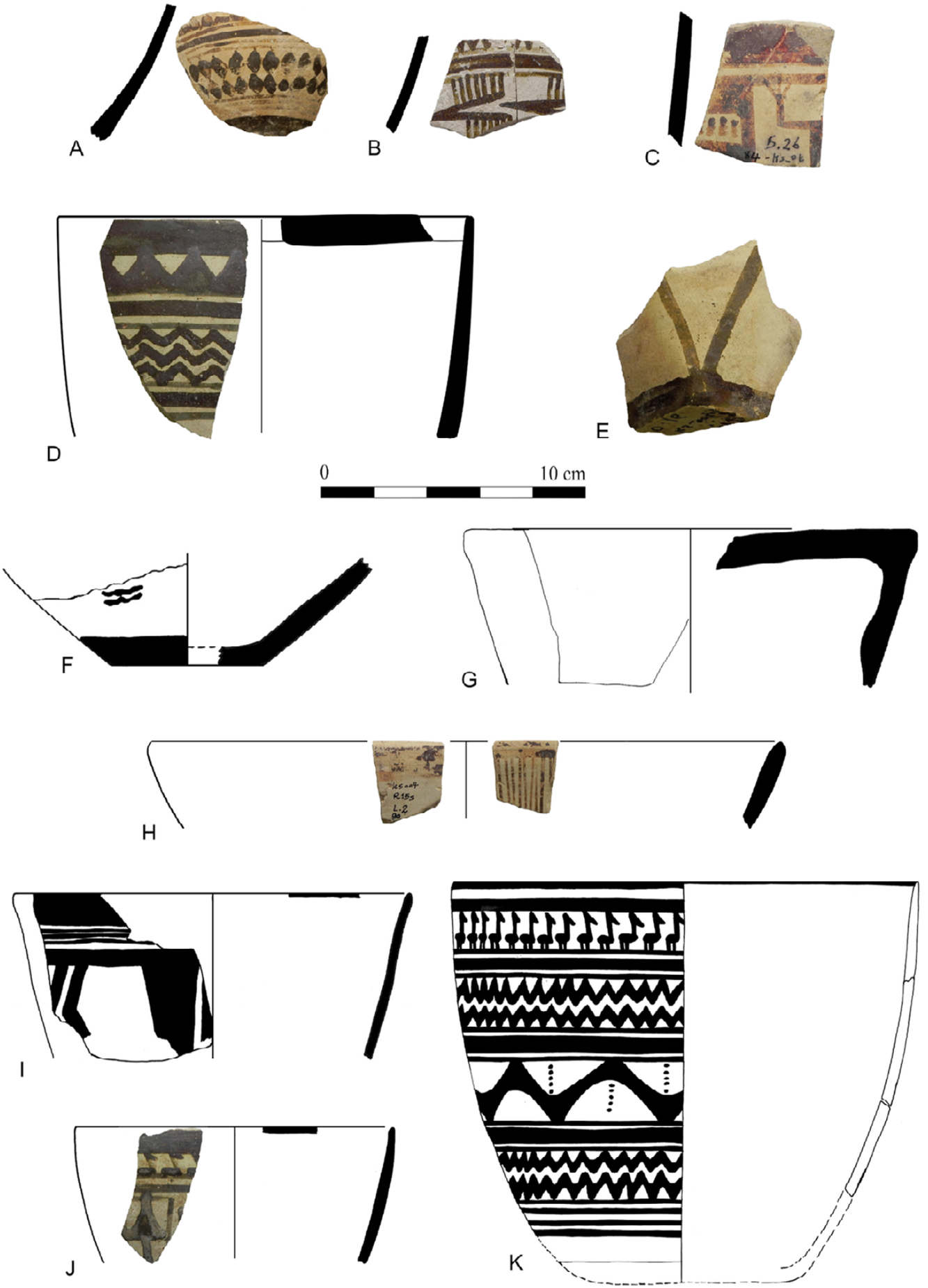

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Plate 3. Late Middle Susiana pottery from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-P166	Sq. P13 surface	Late Middle Susiana	Greenish buff ware, some scattered sand in paste, probably slipped, brown paint
B	KS04-P221	Sq. M14 surface	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
C	KS04-P92	Sq. R15-S surface	Late Middle Susiana	Buff ware, some very fine sand in paste, yellowish buff slip, brown paint
D	KS04-P228	Sq. R15-N surface	Late Middle Susiana	Greenish buff ware, some sand in paste, dark paint
E	KS04-P91	Sq. R15-S surface	Late Middle Susiana	Creamy buff ware, no visible inclusion, reddish-brown paint
F	KS04-P318	Sq. M14 surface	Late Middle Susiana	Buff ware, scattered sand in paste, brown paint
G	KS04-P167	Sq. P13 surface	Late Middle Susiana	Buff ware, no visible inclusion
H	KS04-P15	Sq. R20 surface	Late Middle Susiana	Creamy buff ware, small dark sand in paste, greenish-brown paint
I	KS04-P146	Sq. P12 surface	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
J	KS04-P179	Sq. R15 at 70.37	Late Middle Susiana	Greenish buff ware, some scattered sand in paste, probably slipped, dark paint
K	KS04-P180	Sq. M14 surface	Late Middle Susiana	Creamy buff ware, some sand in paste, brown paint
L	KS04-P37	Sq. R15-N surface	Late Middle Susiana	Pale-grayish buff ware, scattered sand in paste, dark paint

Note: Elevations are in m ASL.

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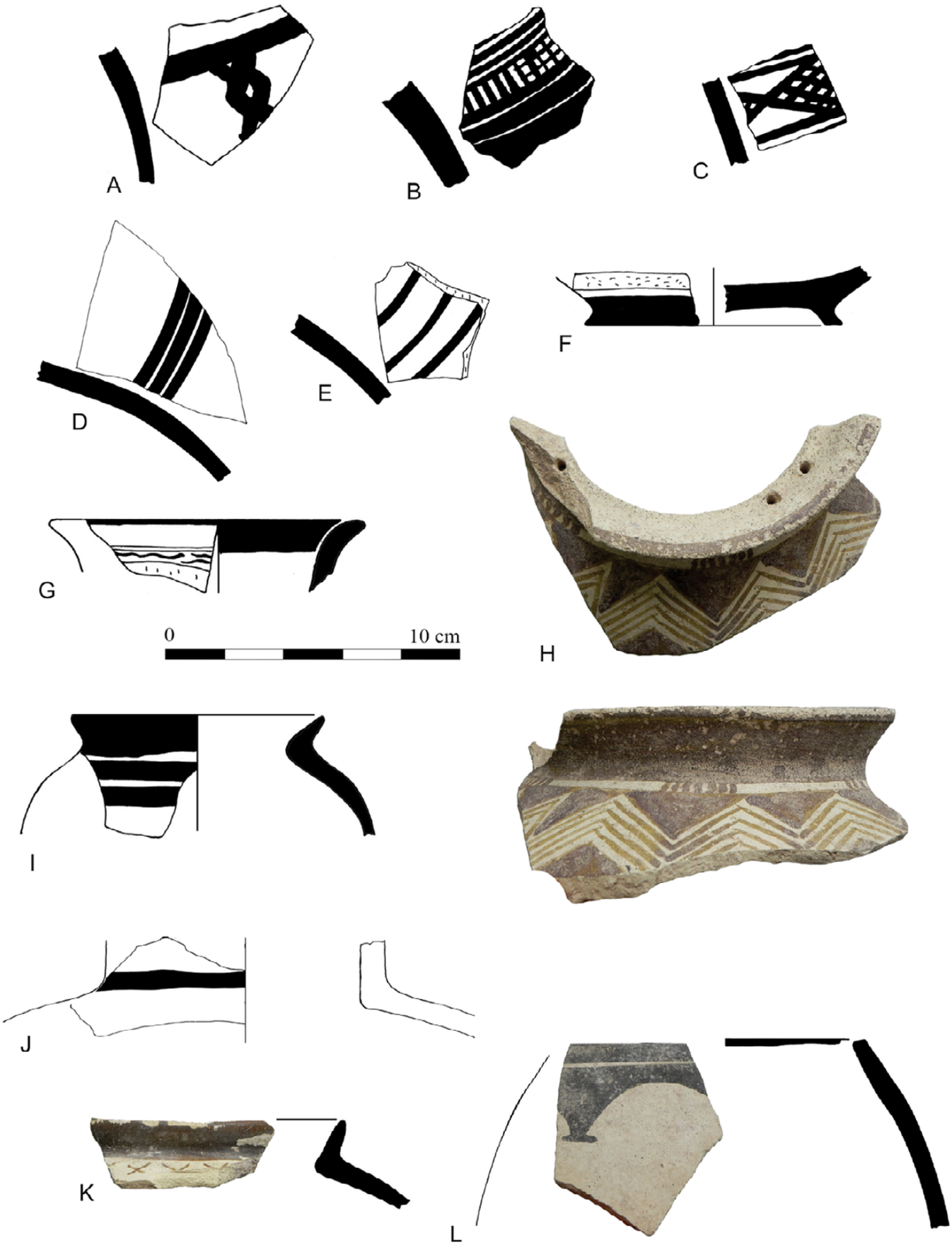

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Plate 4. Late Susiana 1 pottery from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-P38	Sq. R15-N surface	Late Susiana 1	Greenish buff ware, no visible inclusion, probably slipped, brown paint
B	KS04-P93	Sq. M14 surface	Late Susiana 1	Reddish buff ware, no visible inclusion, brown paint
C	KS04-P282	Sq. N15 surface	Late Susiana 1	Buff ware, no visible inclusion, yellowish buff slip, brown paint
D	KS04-P316	Sq. R15 surface	Late Susiana 1	Greenish buff ware, some sand in paste, shaved base
E	KS04-264	Sq. N15 L 2	Late Susiana 1	Creamy buff ware, no visible inclusion, reddish-brown paint
F	KS04-P175	Sq. R15 at 71.83	Late Susiana 1	Creamy buff ware, no visible inclusion, brown paint
G	KS04-P251	Sq. O15 surface	Late Susiana 1	Greenish buff ware, no visible inclusion, brown paint
H	KS04-P252	Sq. R20 surface	Late Susiana 1	Creamy buff ware, no visible inclusion, brown paint
I	KS04-P227	Sq. R15 at 70.57	Late Susiana 1	Buff ware, no visible inclusion, brown paint
J	KS04-P16	Sq. R15 at 70.37	Late Susiana 1	Greenish buff ware, no visible inclusion, probably slipped, dark paint
K	KS04-P18	Sq. U16 surface	Late Susiana 1	Pale-grayish buff ware, no visible inclusion, flaky dark-brown paint
L	KS04-P19	Sq. V14 surface	Late Susiana 1	Warm buff ware, no visible inclusion, brown paint
M	KS04-P317	Sq. S16 at 71.30	Late Susiana 1	Greenish buff ware, no visible inclusion, greenish-brown paint

Note: Elevations are in m ASL.

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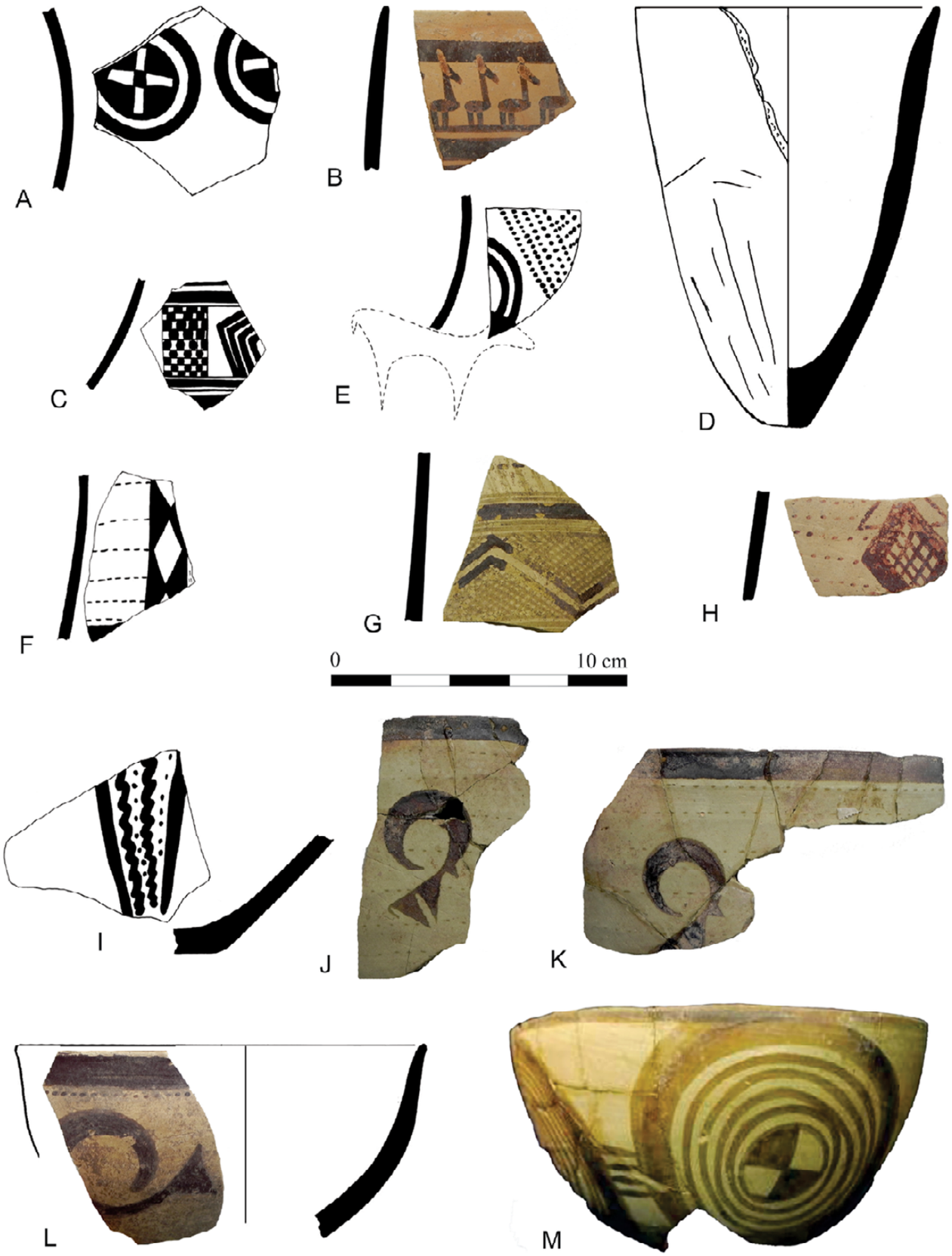

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Plate 5. Late Susiana 2 (Susa I) pottery from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-P258	Sq. O16 surface	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
B	KS04-P94	Sq. R15-N	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
C	KS04-P86	Sq. R15-N	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
D	KS04-P273	Sq. N16	Late Susiana 2	Pinkish buff ware, no visible inclusion, slipped, brown paint
E	KS04-P245, P257	Sq. O15 at 73.68	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
F	KS04-P176	Sq. R15 at 73.68	Late Susiana 2	Greenish buff ware, no visible inclusion, slipped, brown paint
G	KS04-P222	Sq. M14 surface	Late Susiana 2	Buff ware, no visible inclusion, slipped, brown paint
H	KS04-P20	Sq. R20 surface	Late Susiana 2	Buff ware, no visible inclusion, slipped, brown paint
I	KS04-P89	Sq. S19 at 69.70	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
J	KS04-P225	Sq. R15-N at 72.12	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
K	KS04-P35	Sq. R14 surface	Late Susiana 2	Buff ware, no visible inclusion, probably slipped, dark paint
L	KS04-P36	Sq. V18 surface	Late Susiana 2	Buff ware, no visible inclusion, probably slipped, dark paint
M	KS04-P32	Sq. R14 surface	Late Susiana 2	Buff ware, no visible inclusion, brown paint
N	KS04-P265	Sq. N15 surface	Late Susiana 2	Greenish buff ware, no visible inclusion, dark paint
O	KS04-P260	Sq. Q15 surface	Late Susiana 2	Buff ware, no visible inclusion, dark paint
P	KS04-P276	Sq. P15-N at 74.50	Late Susiana 2	Greenish buff ware, no visible inclusion, brown paint
Q	KS04-P134	Sq. P15-S surface	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint
R	KS04-P85b	Sq. R15-N at 72.16	Late Susiana 2	Creamy buff ware, no visible inclusion, slipped, brown paint

Note: Elevations are in m ASL.

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Plate 6. Terminal Susa / Early Susa II open-form pottery from KS-04.

	Field no.	Provenience	Period	Description and comparisons
A	KS04-P224	Sq. M14 L 1	Early Susa II	Buff ware, chaff tempered, pale-gray core. Neely and Wright 1994, fig. IV.44:d (Sargarab ware)
B	KS04-P247	Sq. O15 at 73.48	Terminal Susa–Early Susa II	Buff ware, no visible inclusion, probably slipped. Le Brun 1971, fig. 40:4–5 (Susa Acropole I); Neely and Wright 1994, fig. IV.44:a (Sargarab ware); Wright 2013, fig. 4:b
C	KS04-P131	Sq. P15-N surface	Early Susa II	Buff ware, chaff tempered, some calcite in paste, oxidized. Neely and Wright 1994, fig. IV.44:f (Sargarab ware)
D	KS04-P42	Sq. R15-N at 72.60	Early Susa II	Reddish buff ware, no visible inclusion
E	KS04-P182	Sq. R15-S at 73.90	Early Susa II	Pinkish buff ware, chaff tempered
F	KS04-P267	Sq. P13 at 73.02	Terminal Susa	Buff ware, no visible inclusion, probably slipped, regular striations inside
G	KS04-P283	Sq. N15 L 2	Early Susa II	Pale-brownish buff ware, chaff tempered
H	KS04-P149	Sq. P12 surface	Terminal Susa	Buff ware, no visible inclusion, probably slipped, regular striations inside
I	KS04-P297	Sq. P15-N at 74.50	Terminal Susa–Early Susa II	Pale-red ware, chaff with some calcite particles in paste, thin gray core. Neely and Wright 1994, fig. IV.44:d (Sargarab ware)
J	KS04-P256	Sq. O15 at 73.48	Early Susa II	Dark buff ware, chaff tempered
K	KS04-P95	Sq. U33 surface	Terminal Susa / Early Susa II	Buff ware, sandy paste, finger-impressed appliqué band. Johnson 1973, 63, Types 3 and 18, pl. II:b, d; Wright 2013, fig. 4.2:f–g. Such bowls have a variety of lips, including interior beveled, exterior beveled, round, and flat. For a round lip see the example in Canal 1978b, fig. 25:10 (Susa Acropole II, Level 7); also Neely and Wright 1994, fig. IV.45:d, g (Sargarab ware)
L	KS04-P244	Sq. O15 at 73.68	Terminal Susa	Buff ware, some sand in paste, probably slipped
M	KS04-P99	Sq. P21 surface	Terminal Susa	Pale-red ware, no visible inclusion, thin gray core
N	KS04-P100	Sq. R15 surface	Early Susa II	Pale-buff ware, chaff tempered

Note: Elevations are in m ASL.

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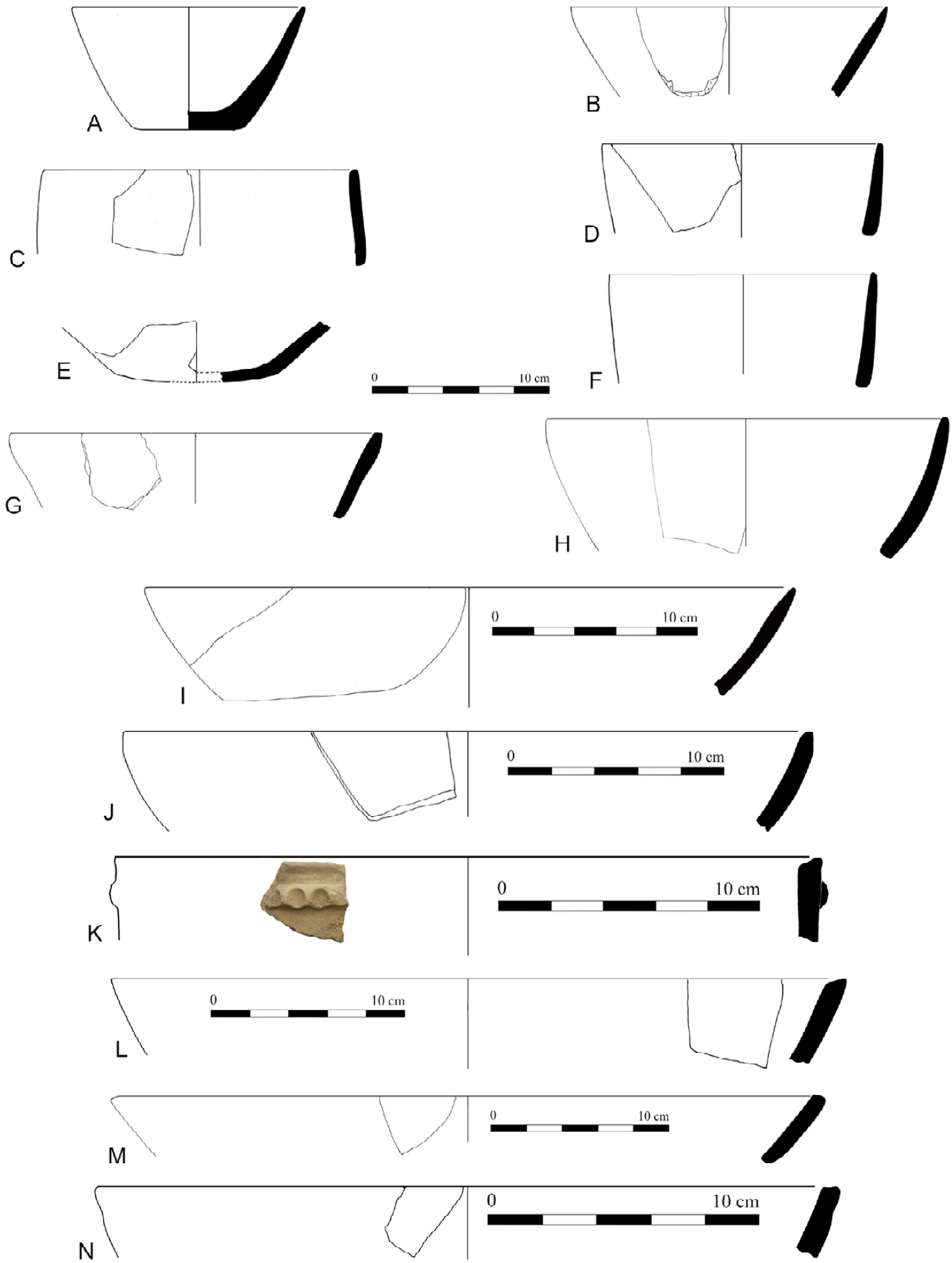

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Plate 7. Terminal Susa / Early Susa II closed-form pottery from KS-04.

	Field no.	Provenience	Period	Description and comparisons
A	KS04-P298	Sq. P15-N at 74.50	Terminal Susa	Buff ware, no visible inclusion, regular striations inside (wheel made). Le Brun 1971, fig. 40:9 (Susa Acropole I); Neely and Wright 1994, fig. IV.46:b (Sargarab ware); Wright 2013, fig. 4.2:k, n–o
B	KS04-P226	Sq. R15 surface	Terminal Susa	Creamy buff ware, no visible inclusion, probably slipped, regular striations inside (wheel made). See A for references
C	KS04-P262	Sq. N15 L 2	Terminal Susa	Creamy buff ware, no visible inclusion, probably slipped, regular striations inside (wheel made). See A for references
D	KS04-P271	Sq. P13 surface	Early Susa II	Reddish buff ware, chaff tempered. Johnson 1973, Type 19, pl. III:a (not dated); Wright 2013, fig. 4.7:m (Susa Acropole III)
E	KS04-P88	Sq. R15-S L 3	Early Susa II	Buff ware, chaff tempered
F	KS04-P150	Sq. P12 surface	Early Susa II	Buff ware, chaff tempered
G	KS04-P148	Sq. P12 surface	Early Susa II	Buff ware, chaff tempered
H	KS04-P101	Sq. O15 at 74.68	Early Susa II	Buff ware, chaff tempered. Similar to Neely and Wright 1994, fig. IV.45:i (Sargarab ware)
I	KS04-P236	Sq. P15-N L 1	Early Susa II	Pale-red ware, some sand in paste, pale-gray core

Note: Elevations are in m ASL.

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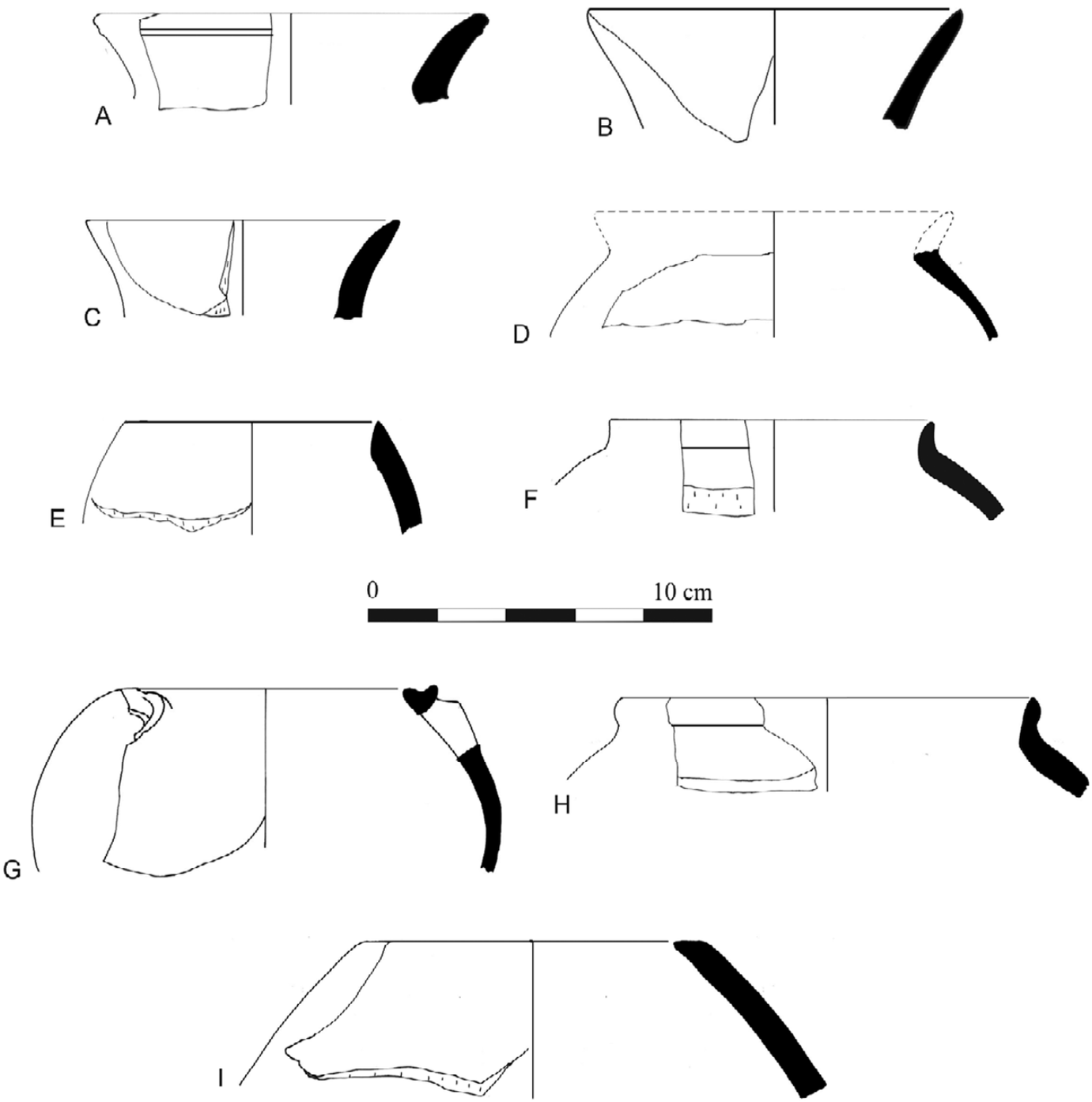

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Plate 8. Pottery from KS-59 South Mound Strip 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P701	Strip 1	Middle Susa II–Early Susa III	Pale-brown buff ware, straw tempered, oxidized. Johnson 1973, Type 6, pl. I:c (not dated). Like the BRB, shallow trays appear early in the Middle Susa II phase and continue into the Susa III (Proto-Elamite) phase. For pre–Susa III see Boese 1995, 84, fig. 21:e–g (Sheikh Hassan); Le Brun 1971, figs. 46:7–8 and 60:14–17; 1978a, fig. 23:7–10 (Susa Acropole I); Miroschedji 1976, fig. 3:12–14 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 18 (Habuba Kabira); Wright 2013, fig. 4.10:j–k (Sharafabad). For Susa III see Le Brun 1971, fig. 60:14–17 (Susa Acropole I); Mutin 2013, fig. 3.7 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan); Sumner 2003, fig. 23:a–e (Malyan)
B	KS59-P702	Strip 1	Sukkalmakh/Transitional	Warm buff ware, chaff tempered, medium to small dark grits in paste, gritty face, yellowish buff slip/wash on exterior. Miroschedji 1981, fig. 10:19 (Susa Apadana kiln)
C	KS59-P703	Strip 1	Sukkalmakh	Light-gray ware, chaff tempered, some fine grits in paste. Delougaz and Kantor 1996, pl. 77:C; Wright 1981, fig. 84:d (Farukhabad)
D	KS59-P704	Strip 1	Shimashki/Sukkalmakh	Buff ware, small and medium grits in paste, light buff slip. Wright 1981, fig. 84:c (Farukhabad)
E	KS59-P705	Strip 1	Sukkalmakh	Buff ware, chaff tempered, occasional dark and red grits in paste. Cf. Wright 1981, fig. 84:c (Farukhabad)
F	KS59-P706	Strip 1	Middle Susa II–Late Susa II	Yellowish buff ware, chaff tempered, some grits in paste, probably slipped. Delougaz and Kantor 1996, pl. 87:D–E; similar to Boese 1995, 226, fig. 12:j (Sheikh Hassan)

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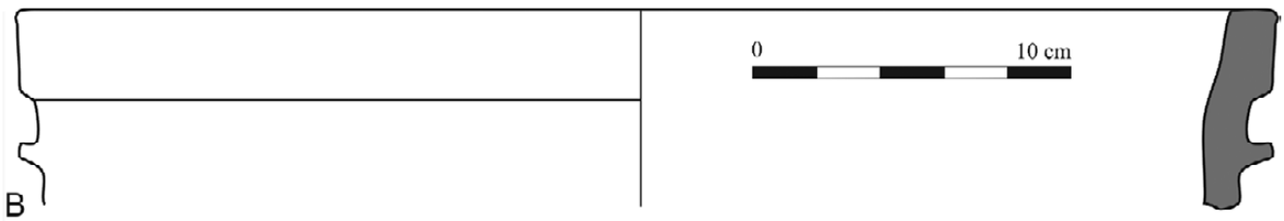

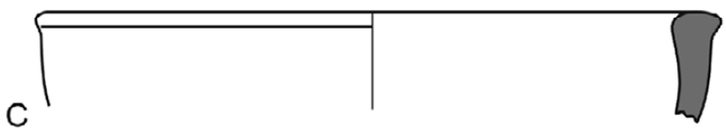

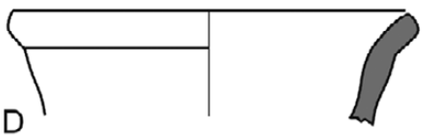

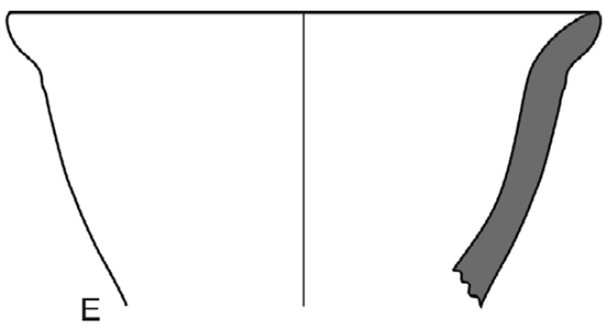

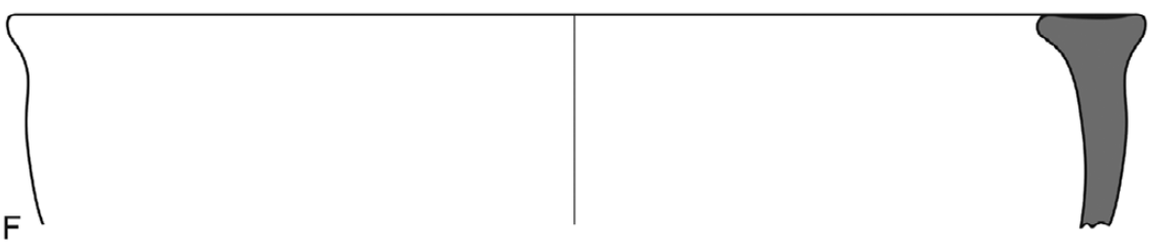

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Plate 9. Pottery from KS-59 South Mound Strip 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P707	Strip 1	Middle Susa II(?)–Late Susa II	Buff ware, small grits in paste, slipped. Johnson 1973, Type 7, pl. I:d (dated to Late Susa II). It occurs in late contexts at Susa (Le Brun 1971, fig. 52:5; 1978a, fig. 30:7–14), Chogha Mish (Delougaz and Kantor 1996, pl. 111:A–L), and Habuba Kabira with straight and drooping spouts (Strommenger, Sürenhagen, and Rittig 2014, pl. 51). At Farukhabad (Wright 1981, fig. 54:a–c) it occurs in both Middle and Late Susa II contexts. It also occurs with a drooping spout in a Middle Uruk context at Hacinebi (Wright and Rupley 2001, 107); nevertheless, elsewhere Wright (2013, fig. 14:h) dates this form to the Late Uruk phase
B	KS59-P708	Strip 1	Middle Susa II–Late Susa II	Buff ware, small grits in paste, probably slipped. Le Brun 1978a, fig. 31:6 (Susa Acropole I); Miroschedji 1976, fig. 7:6 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 30:G 460 and G 466 (Habuba Kabira). For Middle Susa II see Boese 1995, 83, fig. 20:j (Sheikh Hassan)
C	KS59-P709	Strip 1	Sukkalmakh	Pale buff ware, no visible inclusion, completely oxidized. Delougaz and Kantor 1996, pl. 78:I; Wright 1981, fig. 85:e–g (Farukhabad)
D	KS59-P710	Strip 1	Shimashki/ Sukkalmakh	Warm buff ware, chaff tempered, light buff slip on exterior. Wright 1981, figs. 84:i and 86:d (Farukhabad)
E	KS59-P711	Strip 1	Early Susa III(?)	Pale bricky red ware, chaff tempered, occasional large grits and calcite particles in paste, exterior beige slip
F	KS59-P712	Strip 1	Early Susa III(?)	Pale bricky red ware, chaff tempered, occasional large grits and calcite particles in paste, exterior beige slip
G	KS59-P713	Strip 1	Early Susa III(?)	Bricky buff ware, chaff tempered, some small grits in paste, pale-gray core, pale-brown buff wash on exterior and inner rim
H	KS59-P714	Strip 1	Late Susa II–Early Susa III	Pale bricky buff ware, some grits in paste, pale-gray core, red wash on exterior and inner rim. Le Brun 1971, pl. 48:9, 12 (Susa Acropole I, Level 17A)
I	KS59-P715	Strip 1	Sukkalmakh	Grayish-brown ware, some sand, medium to small red grits and calcite particles in paste, yellowish buff slip exterior
J	KS59-P716	Strip 1	Late Susa II–Early Susa III	Pale-brown ware, some sand and calcite particles in paste, oxidized, yellowish buff wash on exterior and inner rim. Le Brun 1971, pl. 48:9, 12 (Susa Acropole I, Level 17A)
K	KS59-P717	Strip 1	Early Susa III(?)	Pale-brown ware, chaff tempered, sand and calcite particles in paste, oxidized, brown wash on exterior

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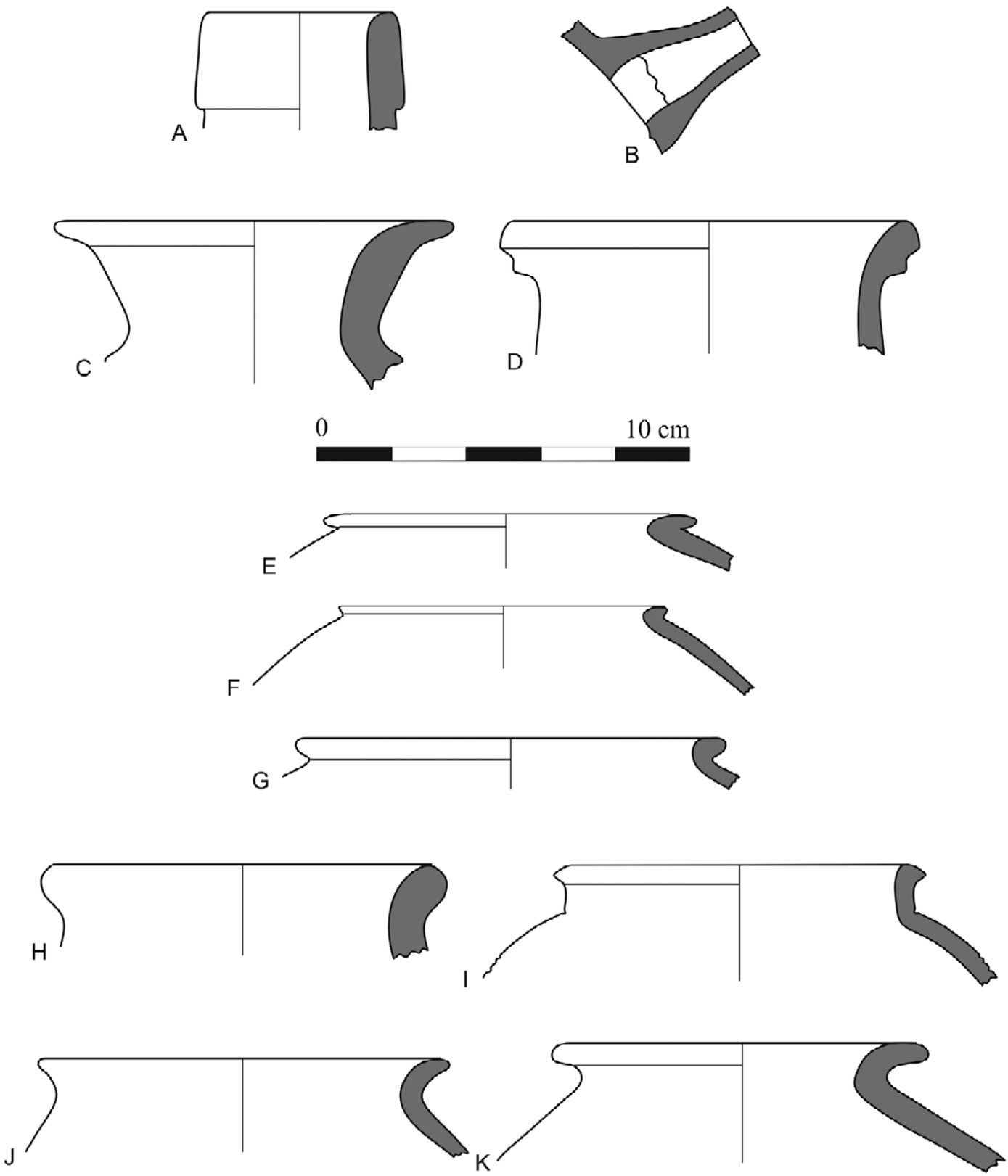

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Plate 10. Pottery from KS-59 South Mound Strip 2.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P21	Strip 2	Middle Elamite	Buff ware, some sand in paste. Miroschedji 1981, fig. 10:5–8 (Susa Apadana kiln)
B	KS59-P11a	Strip 2	Late Middle Susiana	Light-grayish buff ware, no visible inclusion, brown paint
C	KS59-P717	Strip 2	Late Middle Susiana	Buff ware, no visible inclusion, dark-brown paint
D	KS59-P718	Strip 2	Late Susa II–Early Susa III	Light-brown buff ware, sandy paste, brown wash on exterior and inner rim. Johnson 1973, Type 27, pl. III:i; Le Brun 1978a, fig. 25:4 (Susa Acropole I); Miroschedji 1976, fig. 6:1 (Susa Apadana kiln)
E	KS59-P719	Strip 2	Late Susa II–Early Susa III	Grayish-white ware, some medium to small grits in paste, light-gray core, gray wash on exterior and inner rim
F	KS59-P721	Strip 2	Late Susa II	Buff ware, dark gritty paste, finger-impressed appliqué band on shoulder. Delougaz and Kantor 1996, pl. 93:D
G	KS59-P722	Strip 2	Early Susa III	Buff ware, chaff tempered, some dark grits in paste, beige wash on exterior and inner rim. Carter 1980, fig. 7:5
H	KS59-P723	Strip 2	Early Susa III	Pinkish buff ware, chaff tempered, red-ochre wash on exterior and inner rim
I	KS59-P724	Strip 2	Early Susa II–Late Susa II	Warm buff ware, dark gritty paste, some fine grits in paste, yellowish buff slip. Johnson 1973, Type 30, fig. III:l (not dated); similar to Le Brun 1971, fig. 40:6 (Susa Acropole I). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab / Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
J	KS59-P725	Strip 2	Early Susa III	Red ware, chaff tempered, bricky red wash on exterior and inner rim. Mutin 2013, fig. 3.89:24 (Yahya)
K	KS59-P729	Strip 2	Late Sukkalmakh	Yellowish buff ware, gritty paste, buff slip on exterior
L	KS59-P730	Strip 2	Middle Elamite	Buff ware, gritty paste, buff slip on exterior. Miroschedji 1978, fig. 50:4; 1981, fig. 10:17 (Susa Ville Royale)

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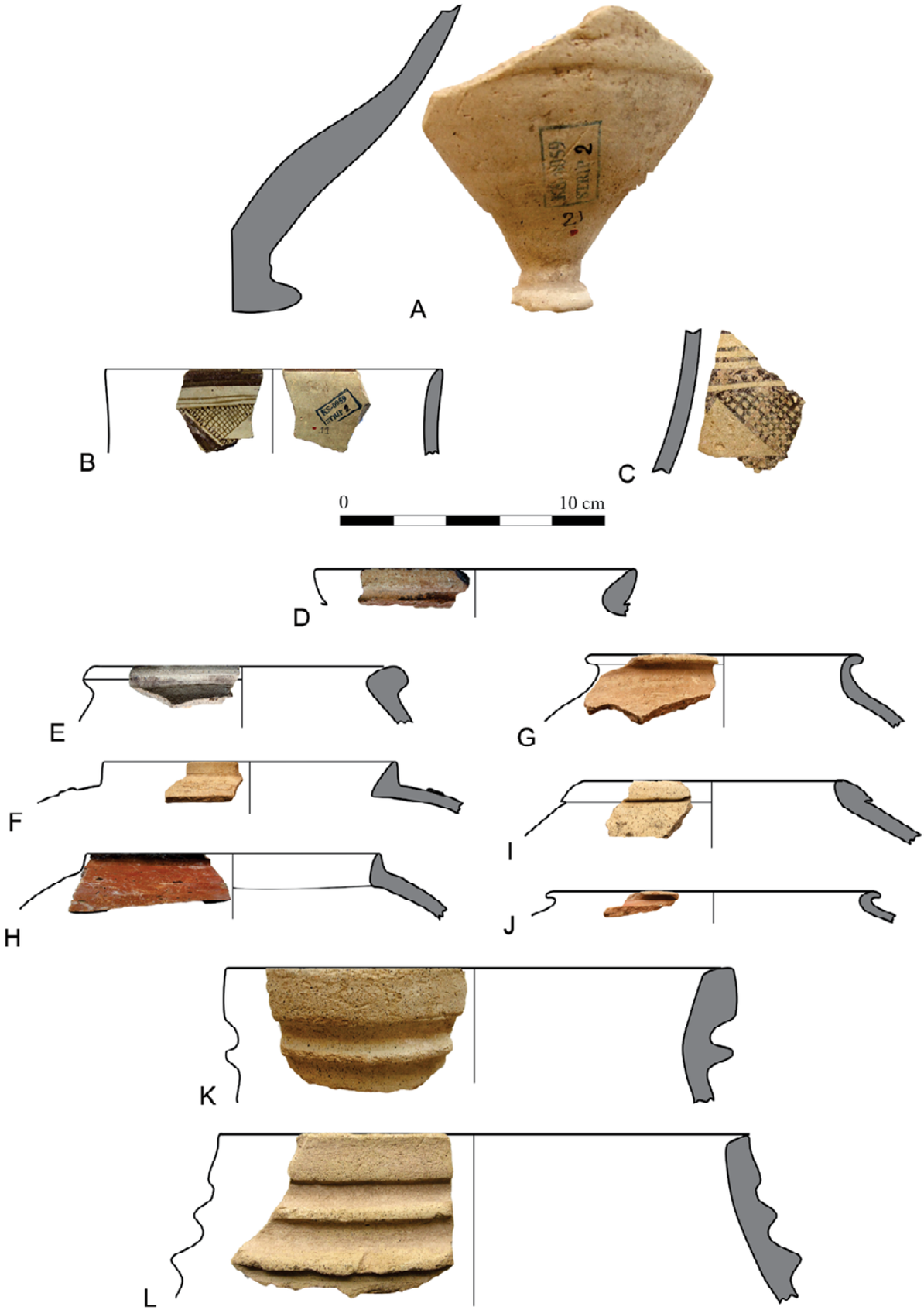

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Plate 11. Pottery from KS-59 South Mound Strip 3.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P612	Strip 3	Late Susiana 2	Buff ware, no visible inclusion, brown paint
B	KS59-P613	Strip 3	Sukkalmakh	Buff ware, sandy paste, completely oxidized, probably slipped
C	KS59-P614	Strip 3	Middle Susa II–Late Susa II	Buff ware, sandy paste, yellowish buff exterior. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I). For Middle Susa II see Wright 2013, fig. 4.11:b (Sharafabad)
D	KS59-P615	Strip 3	Early Susa II	Buff ware, fine sandy paste, completely oxidized, finger-impressed appliqué band. Johnson 1973, Type 13, fig. 7, pl. II:b; Canal 1978b, fig. 25:10 (Susa Acropole II, Level 7 = Acropole I, Level 23); Neely and Wright 1994, fig. IV.45:d, g (Sargarab ware); Wright 2013, figs. 4.2:f (KS-269) and 4.4:e (Sargarab ware)
E	KS59-P616	Strip 3	Middle Elamite	Buff ware, some fine sand in paste, thick outer surface whitish buff, prominent wheel striation inside and out. Gasche 1973, pl. 22:8 (Susa); Miroschedji 1981, fig. 10:6 (Susa Ville Royale); Schacht 1975, fig. 6:m (Sharafabad)
F	KS59-P617	Strip 3	Sukkalmakh/ Transitional	Light-brown buff ware, gritty paste and face, yellowish buff wash on exterior. Miroschedji 1981, fig. 13:1 (Susa Ville Royale); Schacht 1975, fig. 7:g (Sharafabad)
G	KS59-P618	Strip 3	Sukkalmakh	Buff ware, fine gritty paste, completely oxidized, probably slipped. Similar to Delougaz and Kantor 1996, pl. 79:J–K, N
H	KS59-P619	Strip 3	Early Susa III	Pale-brown buff ware, some sand in paste, dark-brown wash on exterior and inner rim. This type of rim appears in the Middle Susa II phase, but in the Early Susa III phase the vessel is covered with a wash. Mutin 2013, fig. 3.89:25 (Yahya); Nicholas 1990, pl. 18:i, k (Malyan)
I	KS59-P620	Strip 3	Early Susa III	Light-grayish buff ware, medium dark grits in paste, greenish-yellow wash on exterior and inner rim. This type of rim appears in the Middle Susa II phase, but in the Early Susa III phase the vessel is covered with a wash. See H for references
J	KS59-P621	Strip 3	Early Susa III	Yellowish buff ware, occasional dark grits in paste, red-ochre wash on exterior and inner rim. This type of rim appears in the Middle Susa II phase, but in the Early Susa III phase the vessel is covered with a wash
K	KS59-P622	Strip 3	Early Susa III	Grayish buff ware, dark gritty paste, probably slipped. Mutin 2013, fig. 3.33:3 (Yahya); Nicholas 1990, pl. 18:b (Malyan)
L	KS59-P623	Strip 3	Early Susa III	Yellowish buff ware, occasional dark grits in paste, red-ochre wash on exterior and inner rim. This type of rim appears in the Middle Susa II phase, but in the Early Susa III phase the vessel is covered with a wash. Mutin 2013, fig. 3.89:24 (Yahya)

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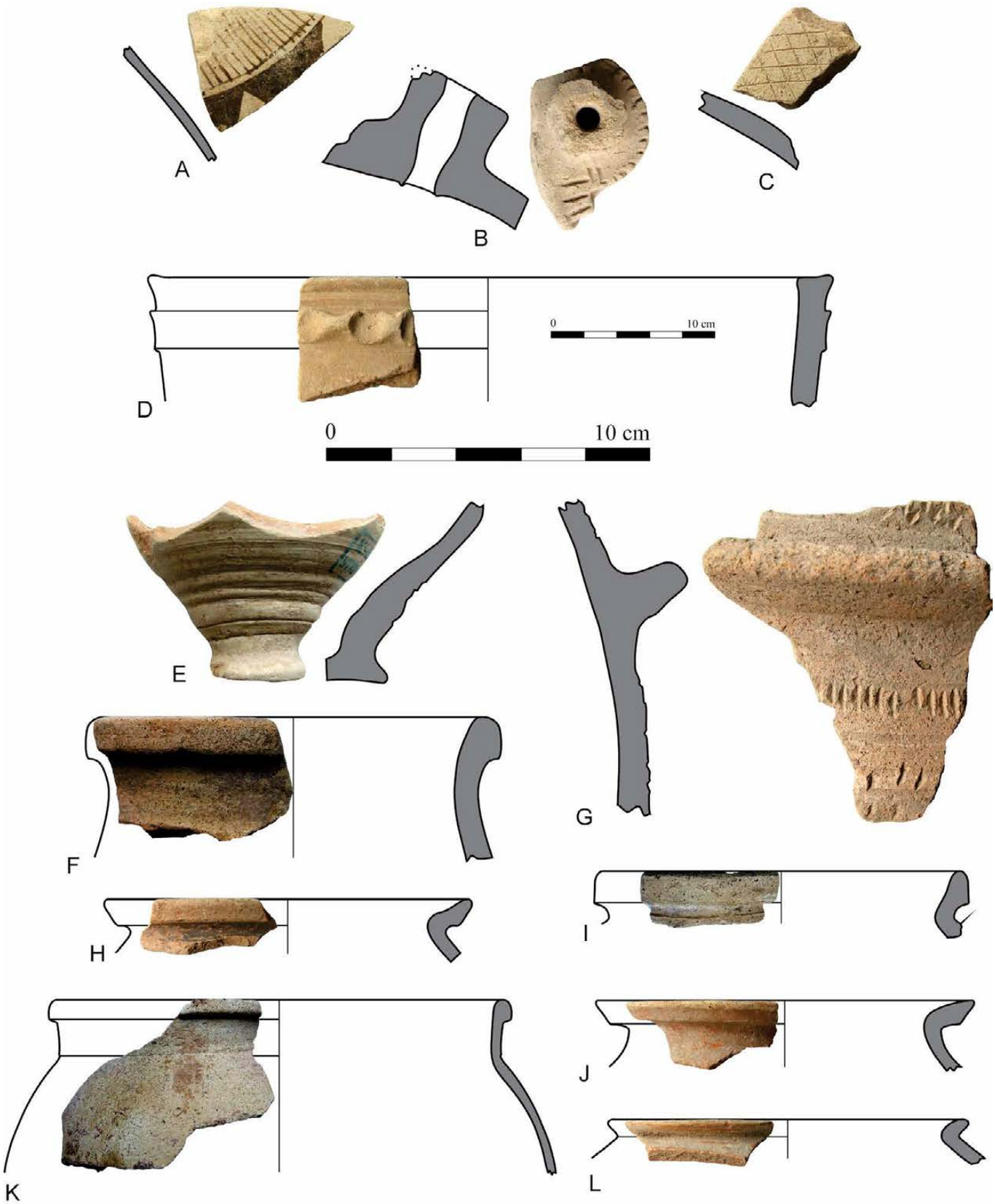

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Plate 12. Pottery from KS-59 South Mound Strip 4.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P378	Strip 4 / surface of Op. 1	Late Susiana 2	Buff ware, no visible inclusion, dark-brown paint
B	KS59-P379	Strip 4	Sukkalmakh–Transitional ca. 1500 BCE	Buff ware, chaff tempered, completely oxidized, yellowish buff slip on exterior. Miroschedji 1981, fig. 10:19 (Susa Ville Royale)
C	KS59-P380	Strip 4	Early Middle Elamite	Buff ware, chaff tempered, completely oxidized. Gasche 1973, pl. 44:2 (Susa); Miroschedji 1981, fig. 10:17 (Susa Ville Royale); Schacht 1975, fig. 7:u (Sharafabad)
D	KS59-P381	Strip 4	Early Susa II(?) Sukkalmakh(?)	Light-grayish buff ware, tempered with fine chaff, scattered small grits in paste, impressed finger appliqué band. Wright 2013, fig. 4.4:h. It is difficult to say whether this piece is Early Susa II or Old Elamite, as this form also occurs at Susa in Old Elamite levels. See Carter 1978, fig. 47:5 (Susa Ville Royale)
E	KS59-P382	Strip 4	Early Middle Elamite	Buff ware, some fine sand in paste, prominent wheel striation inside. Gasche 1973, pl. 22:8 (Susa); Miroschedji 1981, fig. 10:6 (Susa Ville Royale); Schacht 1975, fig. 6:m (Sharafabad)
F	KS59-P319	Strip 4	Sukkalmakh	Buff ware, chaff tempered, completely oxidized. Schacht 1975, fig. 7:q (Sharafabad); Wright 1981, fig. 86:i, k–l (Farukhabad)
G	KS59-P320	Strip 4	Early Middle Elamite	Light-brownish buff ware, large and medium brown grits in paste, yellowish buff slip. Miroschedji 1981, fig. 11:15 (Susa Ville Royale)
H	KS59-P321	Strip 4	Early Susa II	Light-grayish buff ware, tempered with fine chaff, scattered dark small grits in paste, impressed finger appliqué band. Johnson 1973, Types 13 and 18, pl. II:b, d; Wright 2013, fig. 4.4:h (Sargarab ware)
I	KS59-P322	Strip 4	Late Middle Susiana	Buff ware, medium grits in paste, light-brown paint
J	KS59-P323	Strip 4	Middle Susa II–Late Susa II	Buff ware, medium grits in paste
K	KS59-P324	Strip 4	Early Susa III	Light bricky red ware, medium and small brown grits in paste. Nicholas 1990, pl. 23:p (Malyan)
L	KS59-P325	Strip 4	Early Susa II–Late Susa II	Grayish-green ware, small dark grits in paste. Johnson 1973, Type 30, fig. III:l (not dated); from Susa Acropole I see Le Brun 1971, fig. 40:6 (similar). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab / Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
M	KS59-P326	Strip 4	Early Susa II–Late Susa II	Buff ware, chaff tempered, some small grits in paste. See L for references
N	KS59-P327	Strip 4	Early Susa II–Late Susa II	Pinkish buff ware, small grits and calcite particle in paste, gray core. See L for references

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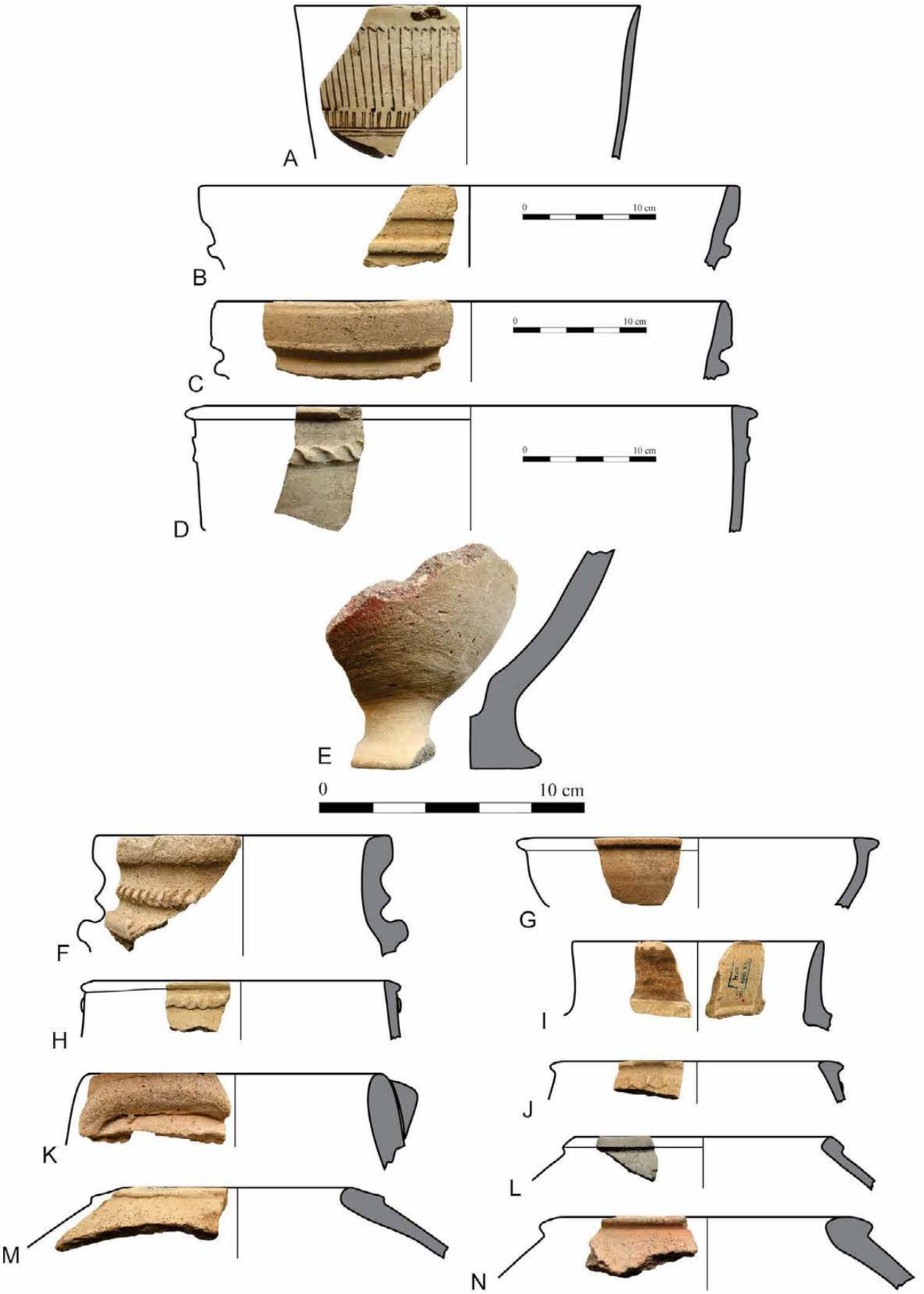

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Plate 13. Pottery from KS-59 South Mound Strip 5.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P328	Strip 5	Late Susiana 2	Buff ware, no visible inclusion, inner and outer surfaces whitish buff, dark-brown paint
B	KS59-P330	Strip 5	Sukkalmakh	Light-brown ware, chaff tempered, some large grits in paste
C	KS59-P331	Strip 5	Sukkalmakh–Middle Elamite	Buff ware, chaff tempered, gritty paste, greenish buff slip on exterior. Miroschedji 1978, fig. 50:8 (Susa Ville Royale); Nicholas 1990, pl. 18:h–i (Malyan); Wright 1981, fig. 84:m (Farukhabad)
D	KS59-P332	Strip 5	Sukkalmakh–Middle Elamite	Light-brown buff ware, chaff tempered, scattered grits in paste, light-grayish buff slip. Delougaz and Kantor 1996, pl. 78:M; Miroschedji 1978, figs. 50:9 and 51:10 (Susa Ville Royale); Schacht 1975, fig. 7:n–p (Sharafabad); Wright 1981, fig. 84:m (Farukhabad)
E	KS59-P334	Strip 5	Early Susa III	Buff ware, some fine chaff in paste, bricky red wash on exterior and inner rim. Similar to Mutin 2013, fig. 3.89:25 (Yahya); Nicholas 1990, pl. 18:i (Malyan)
F	KS59-P335	Strip 5	Late Susa II	Buff ware, large and medium grits in paste, gritty face. Johnson 1973, Type 53, pl. VIII:c; Delougaz and Kantor 1996, pl. 98:J–K; Miroschedji 1976, fig. 8:10 (Susa Apadana kiln); Nissen 1970, pl. 83:34/9 (Uruk K/L XII); Strommenger, Sürenhagen, and Rittig 2014, pl. 29:G 457 (Habuba Kabira); Wright 1981, fig. 55:i (Farukhabad)
G	KS59-P336	Strip 5	Middle Susa II–Late Susa II	Buff ware, fine-grit tempered, probably slipped. Similar to Johnson 1973, Types 26 and 27, pl. III:h–i. Delougaz and Kantor 1996, pl. 107:F; Boese 1995, 46, fig. 14:d, and 201, fig. 13:m (Sheikh Hassan); Strommenger, Sürenhagen, and Rittig 2014, pls. 45:G 598 and 52:G 725 (Habuba Kabira)
H	KS59-P337	Strip 5	Early Susa III	Buff ware, some fine sand in paste, red wash exterior and inner rim. This type of rim appears earlier but, with a wash, dates to the early Susa III phase. Nicholas 1990, pl. 18:f (Malyan)
I	KS59-P338	Strip 5	Middle Susa II–Late Susa II	Buff ware, some fine grits in paste, yellowish buff slip on exterior and inner rim. Similar to Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln). For Middle Susa II see Wright 2013, fig. 4.11:f (Sharafabad)
J	KS59-P716	Strip 5	Middle Susa II–Late Susa II	Light bricky red / buff ware, medium red grits in paste, probably slipped. Delougaz and Kantor 1996, pls. 95:N and 96:F; Le Brun 1971, fig. 49:1–6; 1978a, fig. 26:4; 1978b, fig. 34:12 (Susa Acropole I)
K	KS59-P340	Strip 5	Middle Susa II–Susa II	Buff ware, scattered medium red grits in paste, yellowish buff slip exterior and inner rim, reserved slip patterns on exterior. Delougaz and Kantor 1996, pl. 105:H. For the earlier occurrence see Boese 1995, 81, fig. 18:d (Sheikh Hassan)

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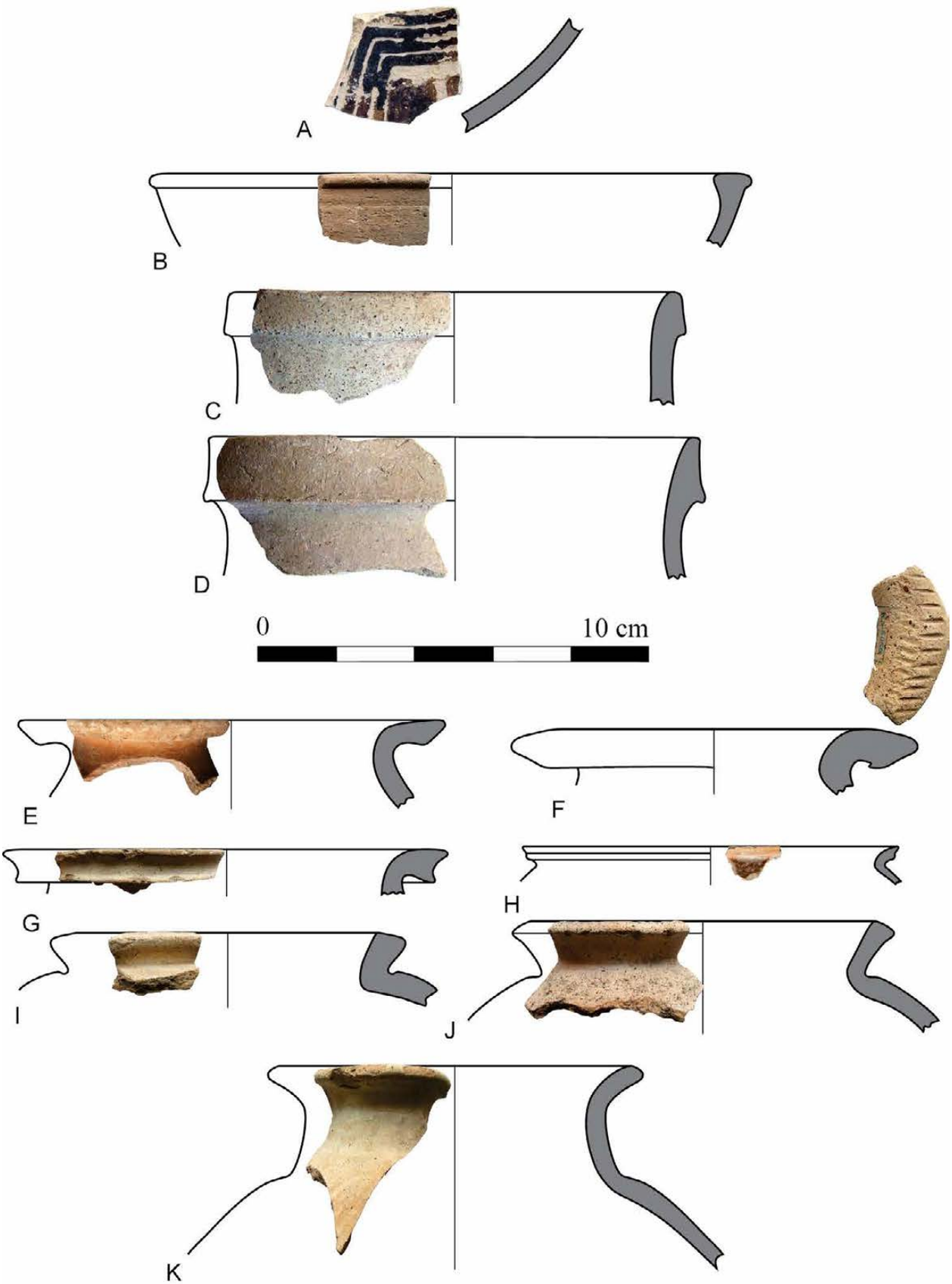

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Plate 14. Pottery from KS-59 South Mound Strip 6.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P341	Strip 6	Middle Susa II–Early Susa III	Pinkish buff ware, sandy paste, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P342	Strip 6	Middle Susa II–Late Susa II	Buff ware, some dark grits in paste. Delougaz and Kantor 1996, pl. 92:H; Boese 1995, 47, fig. 15:b, and 201, fig. 13:m (Sheikh Hassan)
C	KS59-P343	Strip 6	Early Susa II(?)	Pinkish buff ware, chaff tempered, gray core
D	KS59-P344	Strip 6	Early Susa II	Buff ware, straw tempered, gray core
E	KS59-P345	Strip 6	Sukkalmakh	Light-brown buff ware, chaff tempered, some dark grits in paste. Schacht 1975, fig. 7:n–p (Sharafabad)
F	KS59-P346	Strip 6	Early Susa II(?)	Grayish red ware, chaff tempered
G	KS59-P347	Strip 6	Middle Susa II–Late Susa II	Buff ware, some grits in paste, probably slipped. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Wright 2013, fig. 4.11:f (Sharafabad)
H	KS59-P348	Strip 6	Sukkalmakh	Buff ware, chaff tempered, scattered grits in paste, yellowish buff exterior. Schacht 1975, fig. 7:ee (Sharafabad)
I	KS59-P349	Strip 6	Sukkalmakh	Buff ware, chaff tempered, scattered grits in paste, light buff exterior. See H for reference
J	KS59-P350	Strip 6	Early Susa II(?)	Pinkish buff ware, chaff tempered
K	KS59-P351	Strip 6	Early Susa II–Late Susa II	Grayish red ware, medium dark grits in paste. Johnson 1973, Type 30, fig. III:l (not dated). For Susa Acropole I see Le Brun 1971, fig. 40:6 (similar); this type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab/Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
L	KS59-P352	Strip 6	Early Susa II(?)	Buff ware, chaff tempered

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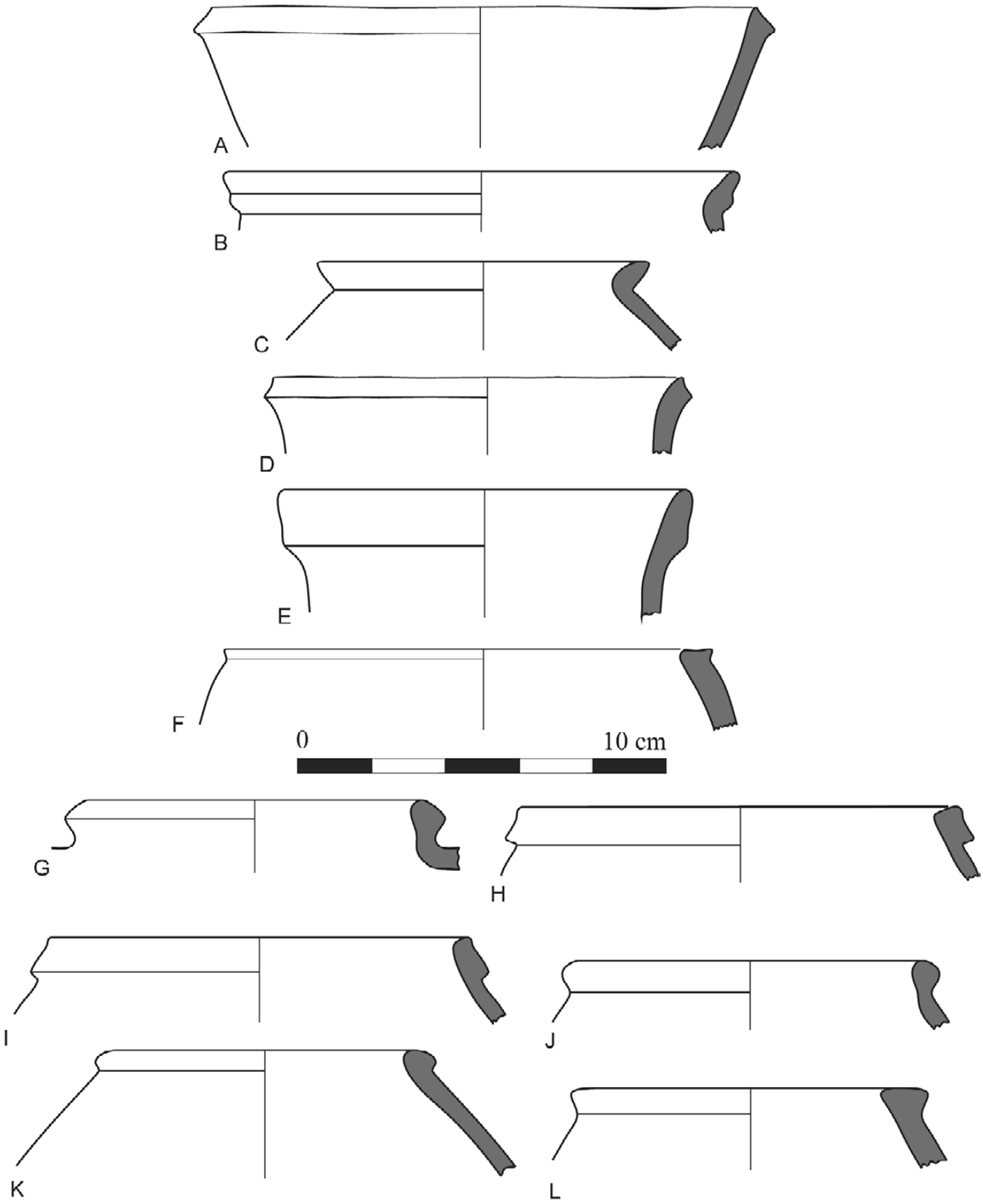

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Plate 15. Pottery from KS-59 South Mound Strip 7.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P353	Strip 7	Late Susa II	Buff ware, some chaff in paste. Similar to Le Brun 1971, fig. 45:9; 1978a, fig. 22:14–15 (Susa Acropole I); Miroschedji 1976, fig. 4:8 (Susa Apadana kiln); Wright 1981, fig. 43:c (Farukhabad)
B	KS59-P354	Strip 7	Early Susa II(?)	Red ware, chaff tempered, oxidized core
C	KS59-P355	Strip 7	Early Susa II(?)–Late Susa II	Red ware, scattered small grits in paste. Similar to Wright 2013, fig. 4.2:d. For Late Susa II see Alizadeh 2008, fig. 26:H
D	KS59-P356	Strip 7	Middle Susa II–Late Susa II	Buff ware, some sand in paste. Delougaz and Kantor 1996, pl. 87:E; Wright 1981, fig. 47:f (Farukhabad). For an earlier example see Boese 1995, 226, fig. 12:j (Sheikh Hassan)
E	KS59-P357	Strip 7	Middle Susa II–Late Susa II	Buff ware, gritty paste, oxidized core, smoothed face. Delougaz and Kantor 1996, pl. 87:H–I; Strommenger, Sürenhagen, and Rittig 2014, pl. 20:G 235 and G 239 (Habuba Kabira). For an earlier example see Boese 1995, 227, fig. 13:a–b (Sheikh Hassan)
F	KS59-P358	Strip 7	Early Susa II(?)	Buff ware, some medium to small dark grits in paste
G	KS59-P359	Strip 7	Terminal Susa	Yellowish buff ware, no visible inclusion, completely oxidized, probably slip. Le Brun 1971, fig. 40:9 (Susa Acropole I); Wright 2013, fig. 4.2:k, n–o (KS-269)
H	KS59-P360	Strip 7	Sukkalmakh/ Early Middle Elamite	Warm buff ware, chaff tempered, small dark grits in paste, yellowish buff slip/wash on exterior. Miroschedji 1981, fig. 10:19 (Susa Ville Royale)
I	KS59-P361	Strip 7	Sukkalmakh/ Early Middle Elamite	Buff ware, chaff tempered, yellowish buff slip/wash on exterior. Miroschedji 1981, fig. 10:17 (Susa Ville Royale)

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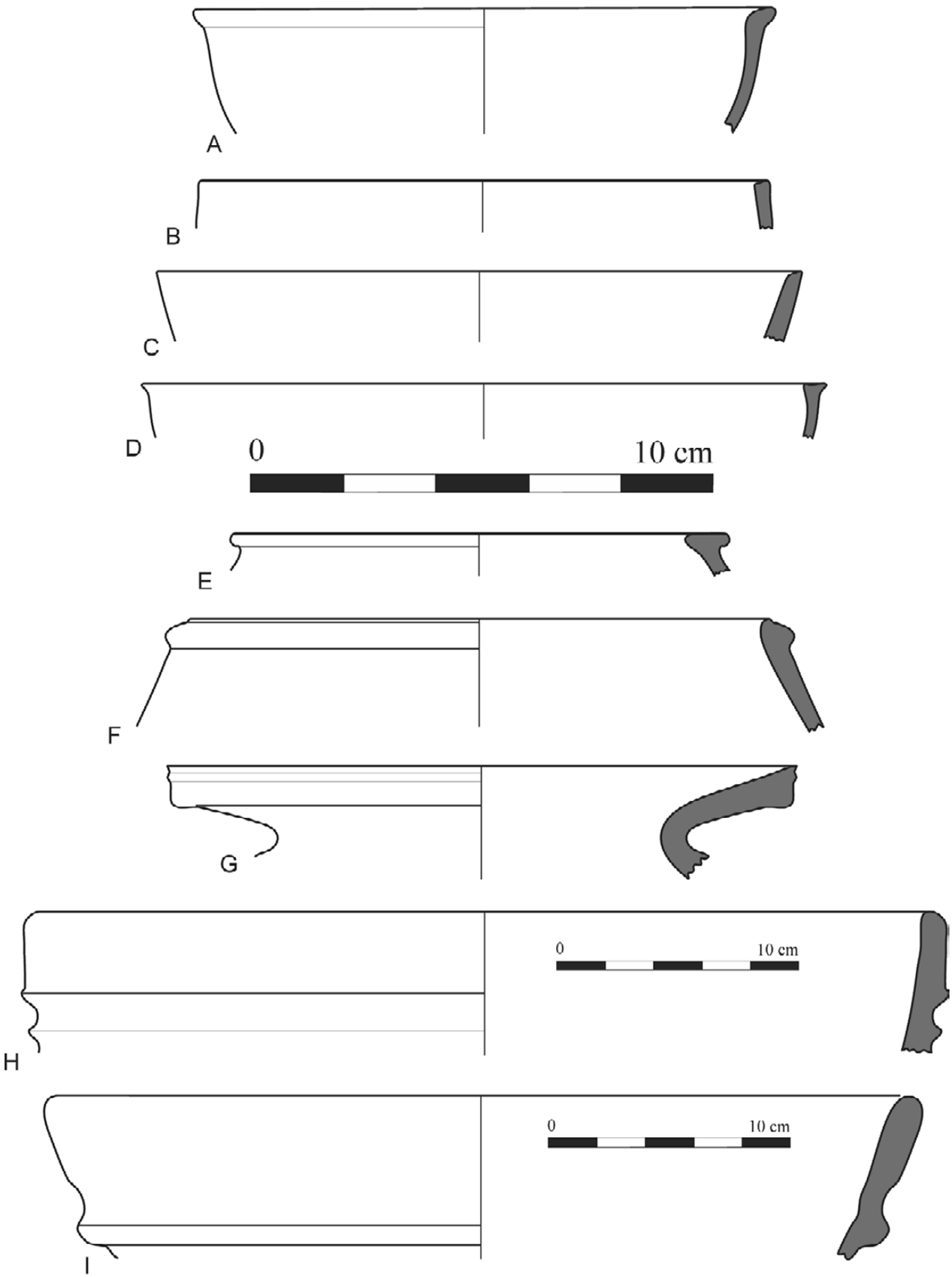

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Plate 16. Susiana sequence pottery from KS-59 Operation 1.

	Field no.	Provenance	Period	Description and comparisons
A	KS59-P05	At 74.05	Late Susiana 2	Buff ware, no visible inclusion, creamy buff slip, brown paint
B	KS59-P12	At 73.10	Late Susiana 2	Buff ware, warm buff interior and exterior, no visible inclusion, brown paint
C	KS59-P13	At 73.80	Late Susiana 2	Buff ware, pale-green buff exterior and interior, no visible inclusion, olive-brown paint
D	KS59-P20	At 74.08	Late Susiana 2	Buff ware, yellowish buff exterior, no visible inclusion, flaky brown paint
E	KS59-P714	At 73.50	Late Susiana 2	Buff ware, creamy buff exterior, no visible inclusion, olive-brown paint
F	KS59-P34	At 72.05	Late Susiana 1	Buff ware, no visible inclusion, brown paint
G	KS59-P35	At 71.80	Late Susiana 1	Buff ware, no visible inclusion, brown paint
H	KS59-P22	At 73.80	Late Susiana 2	Buff ware, pale-green buff exterior and interior, no visible inclusion, olive-brown paint
I	KS59-P23	At 69.35	Late Middle Susiana	Red ware, red wash on exterior and interior, some sand in paste, completely oxidized
J	KS59-P40	At 70.05	Late Middle Susiana	Buff ware, no visible inclusion, thick brown paint
K	KS59-P38	At 69.40	Late Middle Susiana–Late Susiana 2	Buff ware, yellowish buff exterior, brown paint. Le Brun 1971, fig. 37:1, 6 (Susa Acropole I, Level 27)
L	KS59-P41	At 69.80	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
M	KS59-P42	At 72.20	Late Susiana 2	Red ware, dense, no visible inclusion, completely oxidized. Le Brun 1971, fig. 37: 5 (Susa Acropole I, Level 27)
N	KS59-P44	At 70.20	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
O	KS59-P45	At 72.50	Late Susiana 2	Gray ware, dense, some calcite particles in paste
P	KS59-P56	At 69.70	Late Middle Susiana-Late Susiana 2	Buff ware, no visible inclusion, flaky brown paint. Le Brun 1971, fig. 37: 1, 6 (Susa Acropole I, Level 27)

Note: Elevations are in m ASL.

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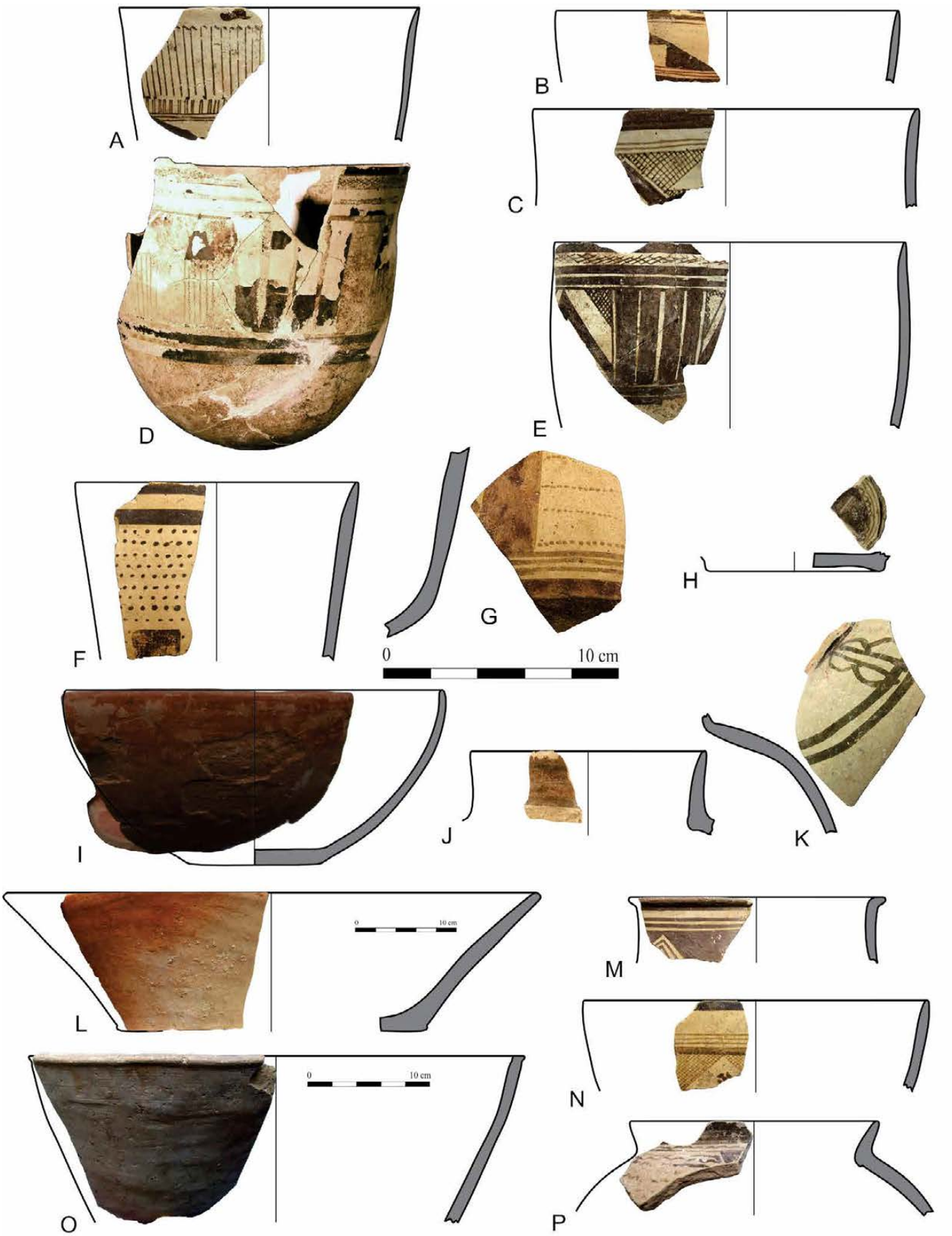

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Plate 17. Terminal Susa pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P70	At 74.25	Terminal Susa	Grayish buff ware, no visible inclusion, thumb-impressed appliqué band. Johnson 1973, Type 13, fig. 7, pl. II:b; Wright 2013, figs. 4.2:f (KS-269) and 4.4:e (Sargarab)
B	KS59-P71	At 74.30	Terminal Susa	Buff ware, no visible inclusion, completely oxidized, regular striations inside (wheel made). Le Brun 1971, fig. 40:9; Wright and Johnson 1975, fig. 9:o; Wright 2013, fig. 4.2:n–o (KS-269)
C	KS59-P98	At 74.40	Terminal Susa	Buff ware, pale-gray core grading to buff, some sand in paste, regular striations inside (wheel made). See B for references
D	KS59-P222	At 74.48	Terminal Susa(?)–Early Susa II–Late Susa II	Bricky buff ware, grit inclusion, pale-gray core abruptly changing to buff toward surface. Johnson 1973, Type 30, fig. III:l (not dated); similar to Le Brun 1971, fig. 40:6 (Susa Acropole I). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab/Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
E	KS59-P99	At 74.40	Terminal Susa	Buff ware, some scattered fine sand in paste, completely oxidized, probably slipped (wheel made)
F	KS59-P100	At 74.25	Terminal Susa	Buff ware, some scattered fine sand in paste, completely oxidized, probably slipped (wheel made). Wright and Johnson 1975, fig. 7:a; Wright 2013, figs. 4.2:b (KS-269) and 4.4:a (Sargarab)

Note: Elevations are in m ASL.

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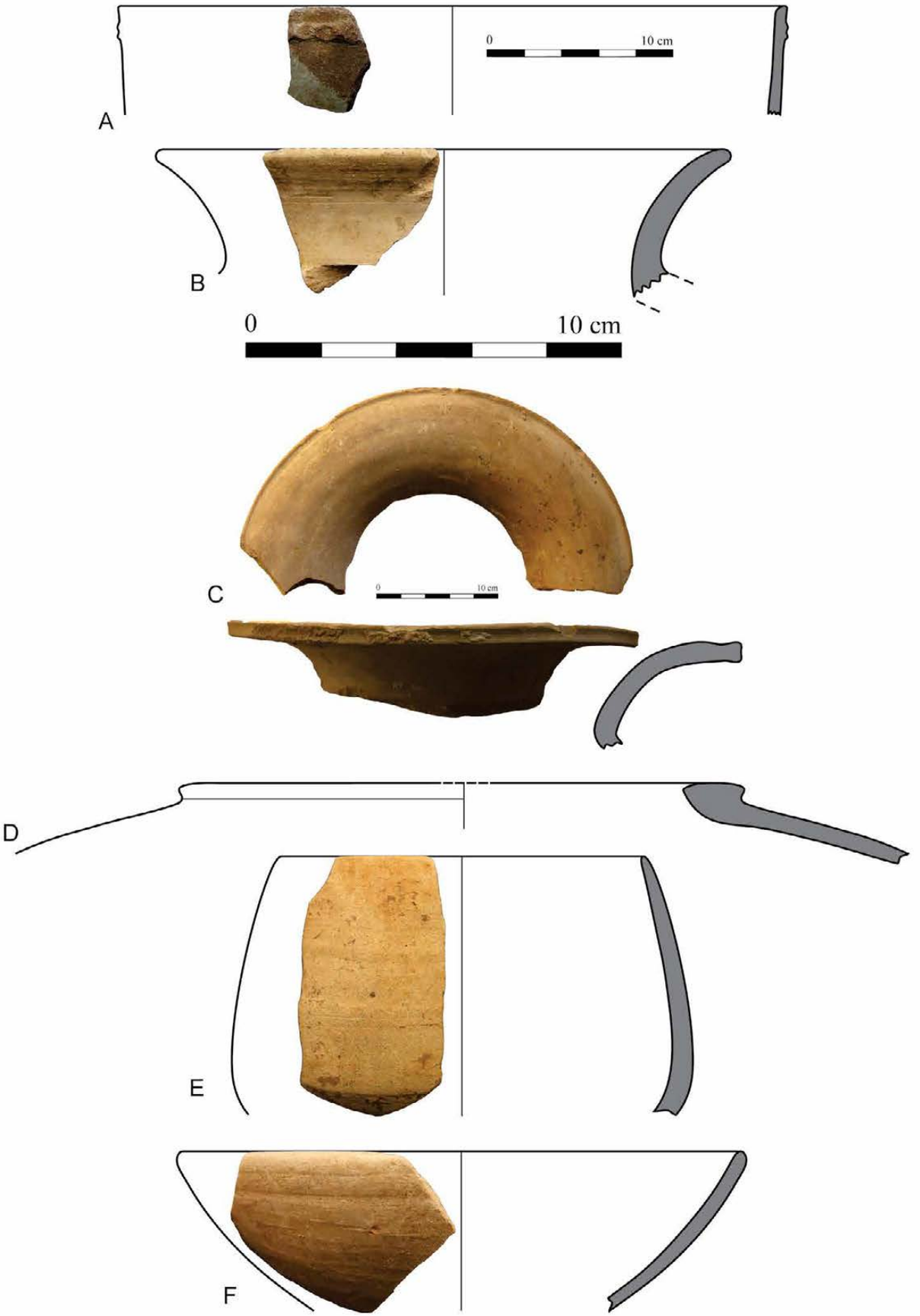

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Plate 18. Susa II pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P358	At 74.90	Early Susa II	Proto-BRB. Dark buff, straw tempered, dense, 18–20 cm diameter. Johnson 1973, Type 4, pl. I:b; Wright 2013, fig. 4.7:a–b (Susa Acropole III); see also Stève and Gasche 1971, pl. 86:3, 7 (Susa Acropole) and possibly the example in Le Brun 1971, fig. 40:5 (Susa Acropole I, Level 24)
B	KS59-P359	At 75.10	Early Susa II	Brownish buff ware, medium to small white/maroon/dark grits in paste, buff slipped exterior. Johnson 1973, Type 16, pl. II:g; Neely and Wright 1994, fig. IV.46:q (Sargarab); Wright 2013, fig. 4.4:d (Sargarab)
C	KS59-P257	At 74.95	Early Susa II	Buff ware, straw tempered, some grits in paste, pitted surface. Similar to Neely and Wright 1994, fig. IV.45:m (Sargarab)
D	KS59-P260	At 74.40	Early Susa II–Middle Susa II	Warm buff ware, scattered dark grits and some calcite particles in paste. Johnson 1973, Type 17, pl. II:h; Wright 2013, fig. 4.4:d (Sargarab)
E	KS59-P230	At 74.50	Early Susa II	Pale bricky ware, scattered dark grits in paste, gray core. Similar to Neely and Wright 1994, fig. IV.46:f (Sargarab)
F	KS59-P08	At 74.95	Terminal Susa/Early Susa II	Buff ware, some sand in paste, striation marks on interior, thumb-impressed appliqué band. Johnson 1973, Type 13, fig. 7, pl. II:b; Wright 2013, figs. 4.2:f (KS-269) and 4.4:e (Sargarab)
G	KS59-P09	At 74.80	Early Susa II–Late Susa II	Red ware, pale-gray core, straw tempered with medium to small grits in paste. Johnson 1973, Type 30, fig. III:l (not dated); similar to Le Brun 1971, fig. 40:6 (Susa Acropole I). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab/Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
H	KS59-P401	At 74.80	Early Susa II	Pinkish buff ware, thick gray core, dark medium grits and calcite particles in paste. See G for references
I	KS59-P261	At 74.70	Early Susa II	Creamy buff ware, occasional fine grits in paste. Johnson 1973, Type 43, pl. V:a–c; Wright 2013, fig. 4.5:d (Sargarab)
J	KS59-P262	At 74.70	Early Susa II–Middle Susa II(?)	Pinkish buff ware, dark-red grits in paste, gray core, regular striations inside. Johnson 1973, Type 22, pl. III:d; Wright 2013, fig. 4.5:j (Sargarab)
K	KS59-P109	At 74.65	Terminal Susa/Early Susa II	Brownish buff ware, occasional small grits in paste, cream slip. Johnson 1973, Type 43, pl. V:a–c; Wright 2013, fig. 4.5:d (Sargarab)

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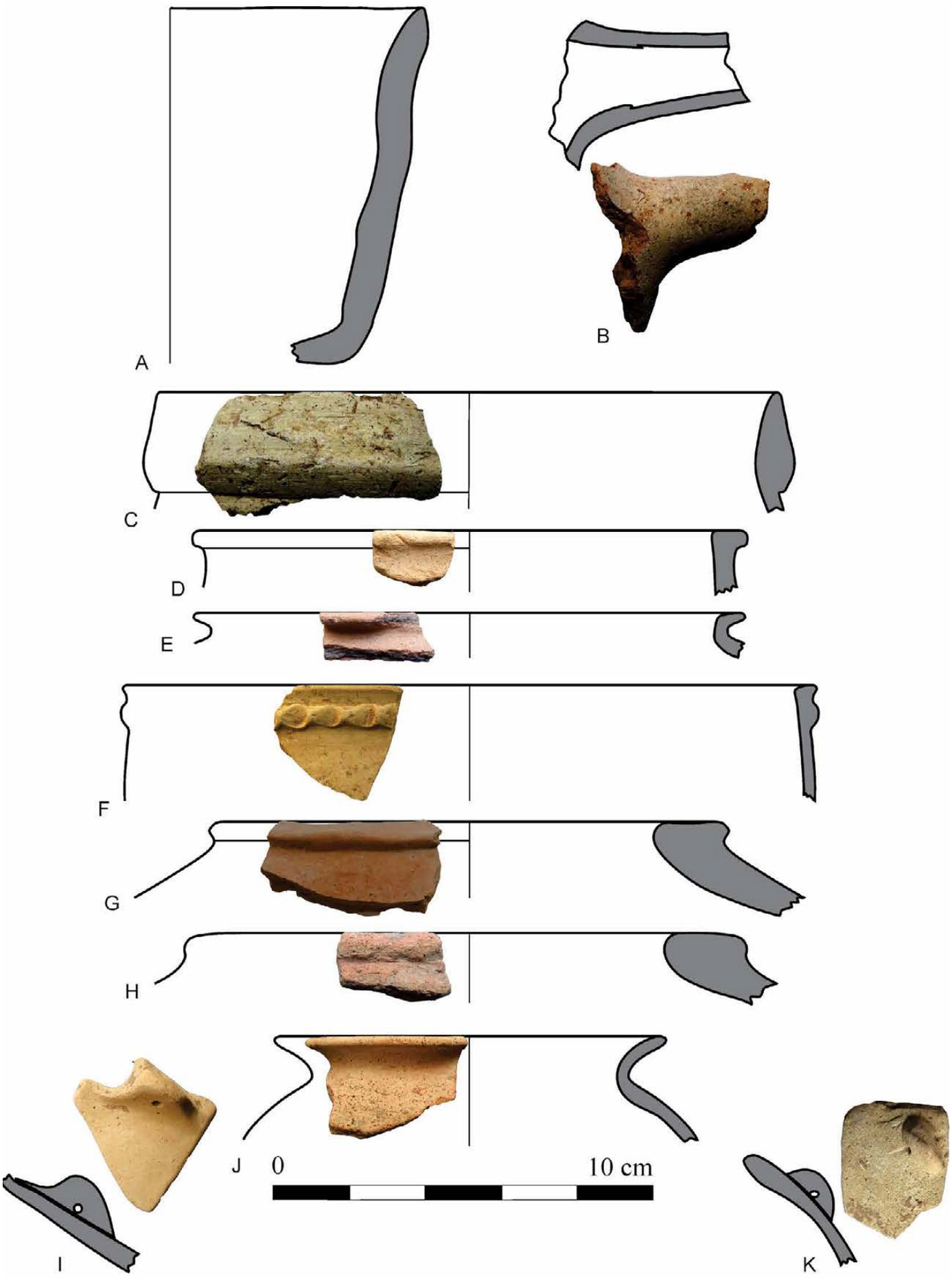

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Plate 19. Susa II pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P111	At 75.55	Middle Susa II–Early Susa III	Pinkish buff ware, sandy paste, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P155	At 75.55	Middle Susa II–Early Susa III	Light-brown buff ware, straw tempered, light-gray core. See A for references
C	KS59-P488	At 75.14	Middle Susa II–Late Susa II	Pale-brown buff ware, some fine dark grits in paste, creamy buff exterior. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For Middle Susa II see Wright 2013, fig. 4.11:b (Sharafabad); Boese 1995, 48, fig. 16 (Sheikh Hassan)
D	KS59-P495	At 74.90	Middle Susa II–Late Susa II	Buff ware, some grits in paste, creamy buff exterior. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
E	KS59-P156	At 75.00	Middle Susa II–Early Susa III	Light-brown buff ware, straw tempered, completely oxidized. See A for references

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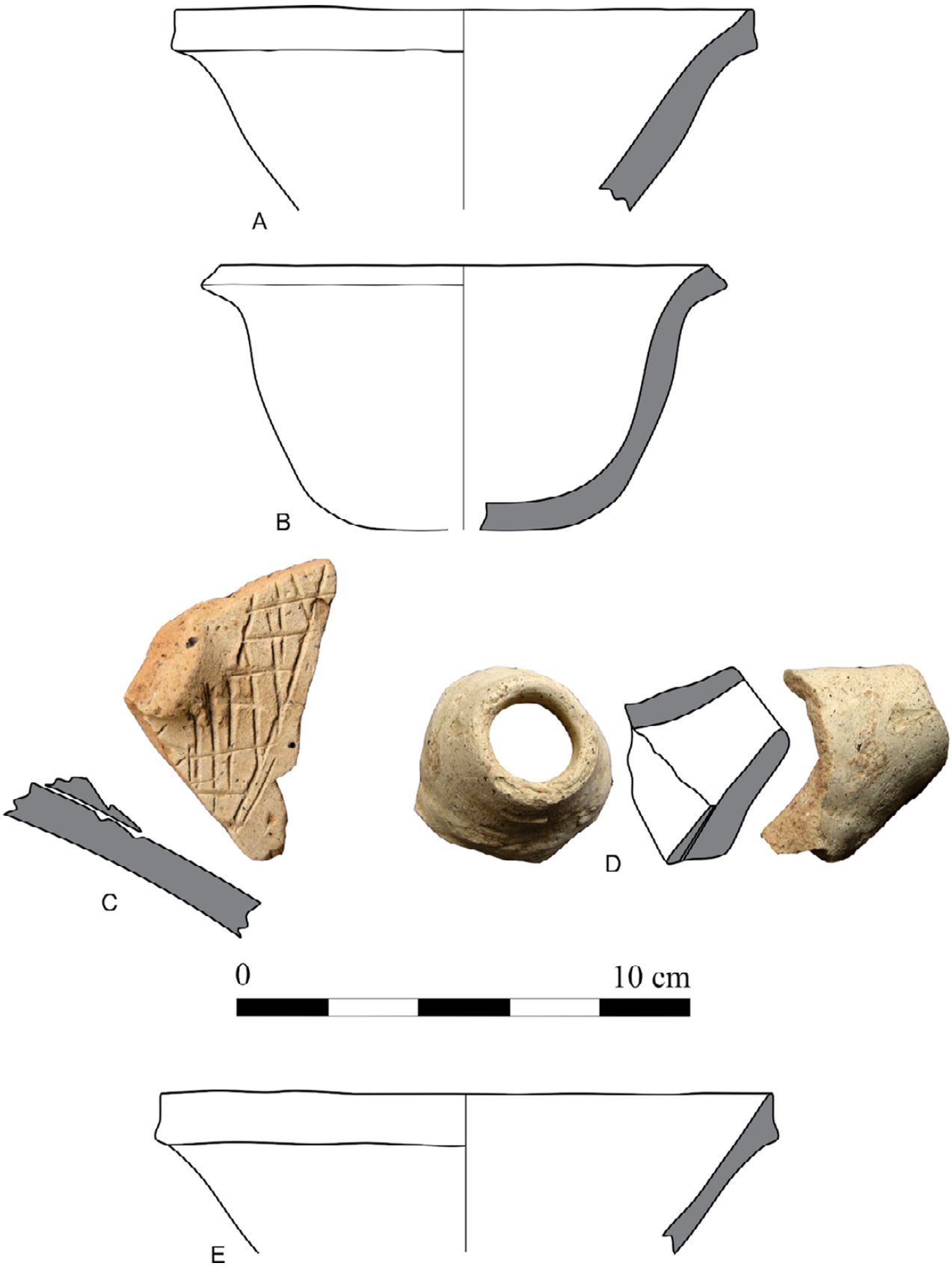

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Plate 20. Susa II pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P157	At 75.00	Middle Susa II–Late Susa II	Buff ware, sand in paste, pale buff core grading to pale pink toward surface. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
B	KS59-P47	At 75.10	Middle Susa II	Buff ware, small dark grits in paste, probably slipped. Boese 1995, 83, fig. 20:e (Sheikh Hassan)
C	KS59-P49	At 75.60	Middle Susa II	Pale-pink ware, dense, sand in paste. Similar to Wright 2013, fig. 4.11:a (Sharafabad); Boese 1995, 171, fig. 9:k–m (Sheikh Hassan)
D	KS59-P498	At 75.30	Middle Susa II–Late Susa II	Yellowish-green ware, some small dark grits in paste. Such globular jars with strap handles without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). They appear with grooves in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan)
E	KS59-P439	At 75.40	Early Susa II(?) Middle Susa II–Late Susa II	Light-grayish buff ware, medium grits in paste. Similar to Le Brun 1978b, fig. 36:8 (Susa Acropole I); Miroschedji 1976, fig. 6:11 (Susa Apadana kiln); Wright 1981, fig. 44:b–d (Farukhabad, Middle Susa II context); Boese 1995, 45, fig. 13:b, and 79, fig. 16:f (Sheikh Hassan)
F	KS59-P18	At 75.10	Middle Susa II–Late Susa II	Pale-pinkish buff ware, chaff tempered, occasional small grits in paste, red-ochre slip. Delougaz and Kantor 1996, pl. 95:G, I; Le Brun 1971, figs. 48:12 and 49:3 (with shoulder grooves); 1978b, fig. 36:1 (without shoulder grooves) (Susa Acropole I); Wright 2013, fig. 4.11:e (with strap handle) (Sharafabad)

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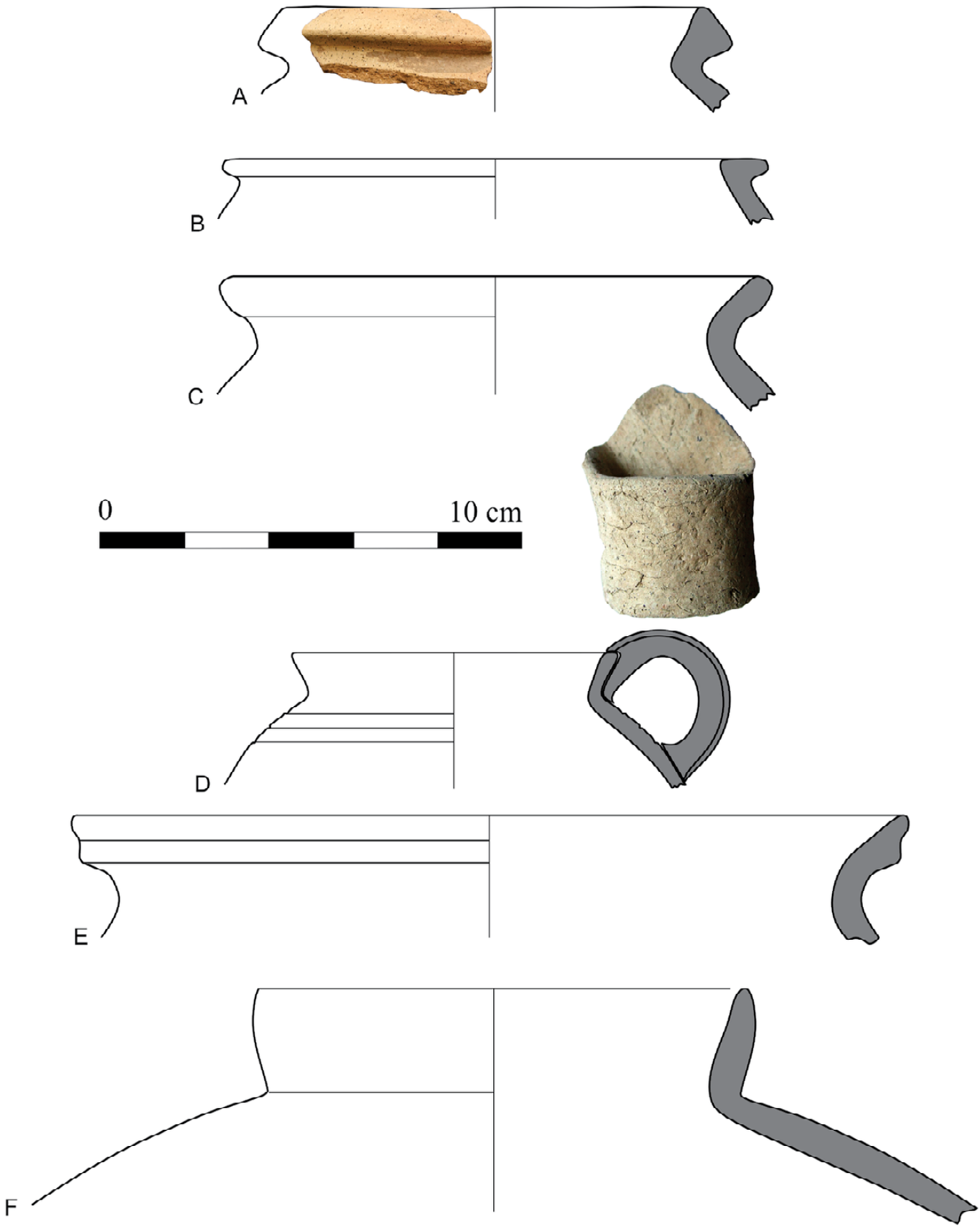

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Plate 21. Susa II pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P502	At 75.60	Middle Susa II–Late Susa II	Fine cup with pouring lip. Warm buff ware, no visible inclusion, slipped. Johnson 1973, Type 9, pl. I:g. For Middle Susa II see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
B	KS59-P72	At 76.10	Middle Susa II–Late Susa II	Pinkish buff ware, small grits in paste, pale-pinkish buff slip. Johnson 1973, Type 50, pl. VII:c. Such globular jars with strap handles and without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With the grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan)
C	KS59-P46	At 76.10	Middle Susa II	Buff ware, some sand in paste, dense. Boese 1995, 46, fig. 14:b (Sheikh Hassan)
D	KS59-P48	At 76.20	Early Susa II–Late Susa II	Buff ware, small grits in paste, dense. Johnson 1973, Type 30, fig. III:l (not dated); similar to Le Brun 1971, fig. 40:6 (Susa Acropole I). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab / Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
E	KS59-P101	At 76.15	Early Susa II–Late Susa II	Buff ware, medium dark grits in paste, gritty face, light buff exterior. This type is dated by Wright (2013, fig. 4.4:h) to the Sargarab / Early Uruk phase. The example comes from the surface collection of the Sargarab (DL-169) survey in the Deh Luran region; see Neely and Wright 1994, 130–38
F	KS59-P102	At 74.90	Middle Susa II(?)–Late Susa II	Creamy buff ware, small grits in paste
G	KS59-P103	At 75.05	Middle Susa II–Late Susa II	Buff ware, maroon grits in paste, gritty face, finger-impressed appliqué band. Wright 2013, fig. 4.10:h (Sharafabad). Such vessels also occur without the appliqué band; see Boese 1995, 49, fig. 17:e (Sheikh Hassan). See also the example without the appliqué decoration from Uruk (Nissen 1970, pl. 104:22)
H	KS59-P252	At 75.20	Middle Susa II–Late Susa II	Yellowish buff ware, small grits in paste, finger-impressed appliqué band, probably deformed in kiln. Similar to Delougaz and Kantor 1996, pl. 87:H–I; without the appliqué band see Boese 1995, 227, fig. 13:a–b (Sheikh Hassan)

Note: Elevations are in m ASL.

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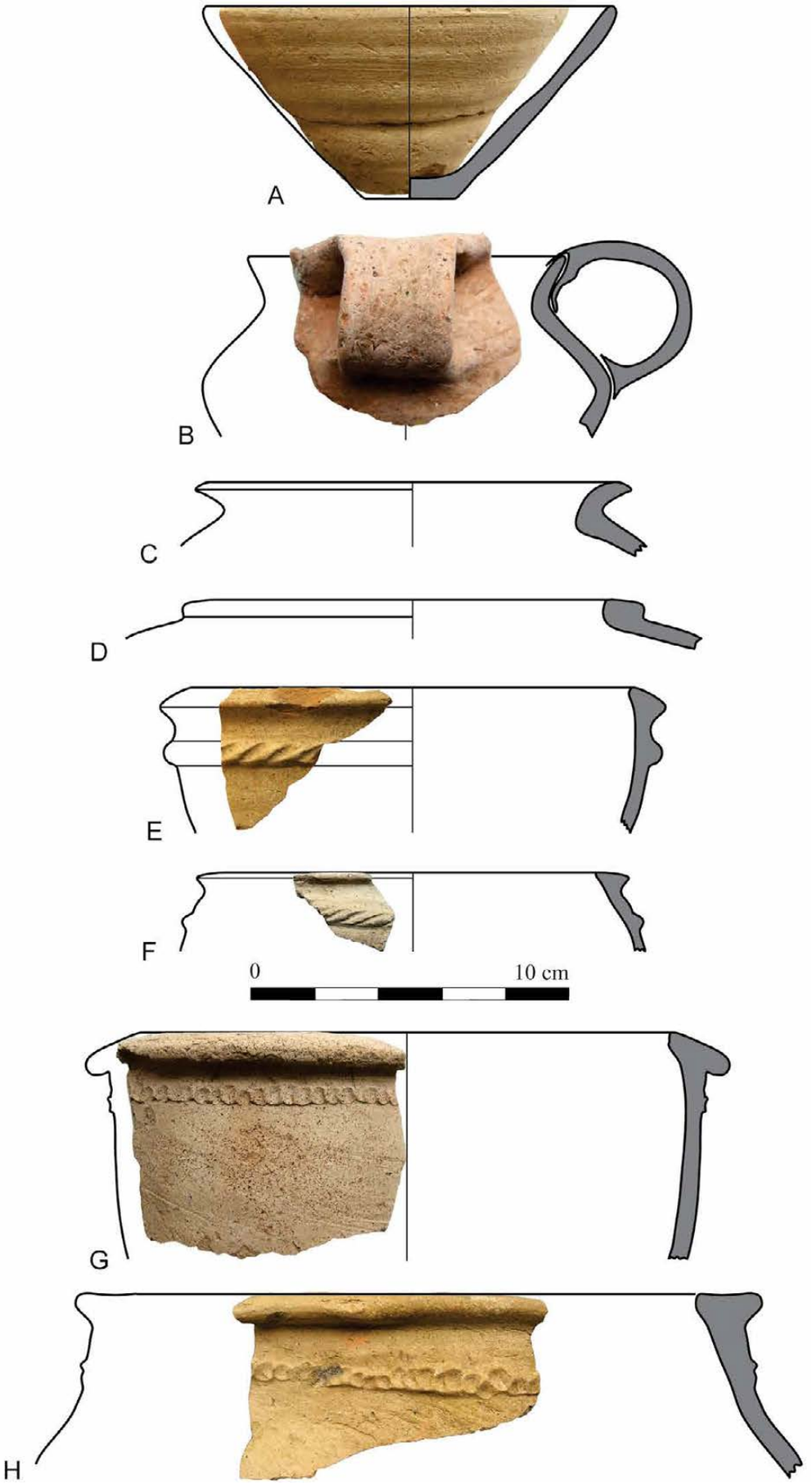

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Plate 22. Susa II pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P19	At 76.05	Middle Susa II–Late Susa II	Fine cup, string-cut base. Fine yellowish buff ware, no visible inclusion, creamy buff slip. See pl. 21:A for references
B	KS59-P24	At 75.10	Middle Susa II–Early Susa III	Pinkish buff ware, sandy paste, completely oxidized. See pl. 19:A for references
C	KS59-P73	At 75.15	Middle Susa II–Late Susa II	Warm buff ware, small grits in paste, light buff exterior. Johnson 1973, Type 46, pl. VI:a is dated to the Late Uruk phase but is also found in late Middle Uruk contexts; see Boese 1995, 174, fig. 12:a–b (Sheikh Hassan). It is also reported from a late Middle Uruk context from Hacinebi; see Wright and Rupley 2001, 107. For Late Susa II examples see Delougaz and Kantor 1996, pl. 102:G, J; Le Brun 1971, fig. 52:7–8; 1978a, fig. 30:6, 12, 14 (Susa Acropole I); Miroschedji 1976, fig. 7:3 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pls. 5152 (Habuba Kabira); Wright 2013, fig. 4.14:h (Farukhabad)
D	KS59-P25	At 76.40		Buff ware, some sand and small grits in paste, smoothed, probably slipped. Johnson 1973, Type 7, pl. I:d (dated to the Late Uruk phase). It occurs in late contexts at Susa (Le Brun 1971, fig. 52:5; 1978a, fig. 30:7–14), Chogha Mish (Delougaz and Kantor 1996, pl. 111:A–L), and Habuba Kabira with straight and drooping spouts (Strommenger, Sürenhagen, and Rittig 2014, pl. 51). At Farukhabad (Wright 1981, fig. 54:a–c) it occurs in both Middle and Late Susa II contexts. It also occurs with a drooping spout in a Middle Uruk context at Hacinebi (Wright and Rupley 2001, 107); nevertheless, elsewhere Wright (2013, fig. 14:h) dates this form to the Late Uruk phase; see also Nissen 1970, pl. 87:37/11 (Uruk K/L XII)
E	KS59-P26	At 76.10	Middle Susa II–Late Susa II and Early Susa III	Light-grayish buff ware, straw tempered, light-gray core. Johnson 1973, Type 6, pl. I:c (not dated). Like the BRB, shallow trays appear early in the Middle Susa II phase and continue into the Susa III (Proto-Elamite) phase. For pre–Susa III see Boese 1995, 84, fig. 21:e–g (Sheikh Hassan); Le Brun 1971, figs. 46:7–8 and 60:14–17; 1978a, fig. 23:7–10 (Susa Acropole I); Miroschedji 1976, fig. 3:12–14 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 18 (Habuba Kabira); Wright 2013, fig. 4.10:j–k (Sharafabad). For Susa III see Le Brun 1971, fig. 60:14–17 (Susa Acropole I); Mutin 2013, fig. 3.7 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan); Sumner 2003, fig. 23:a–e (Malyan)

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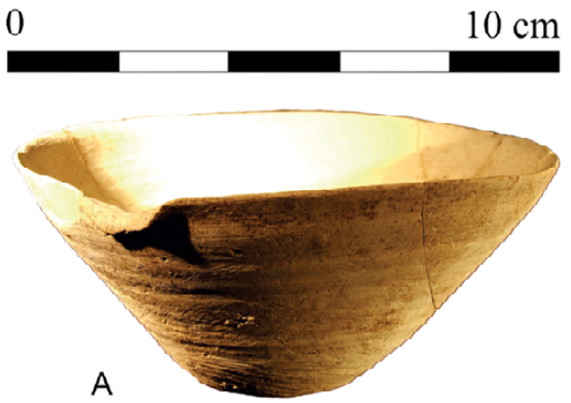

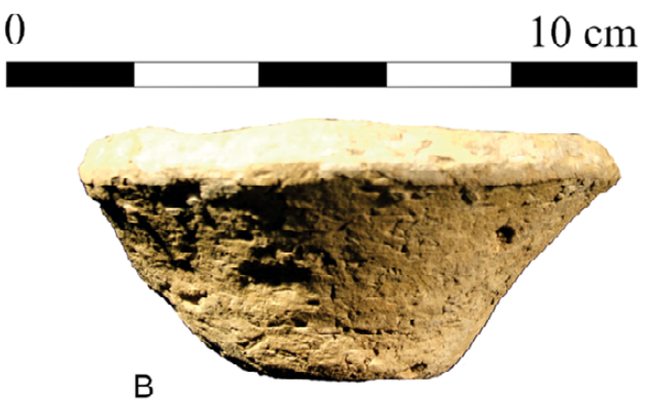

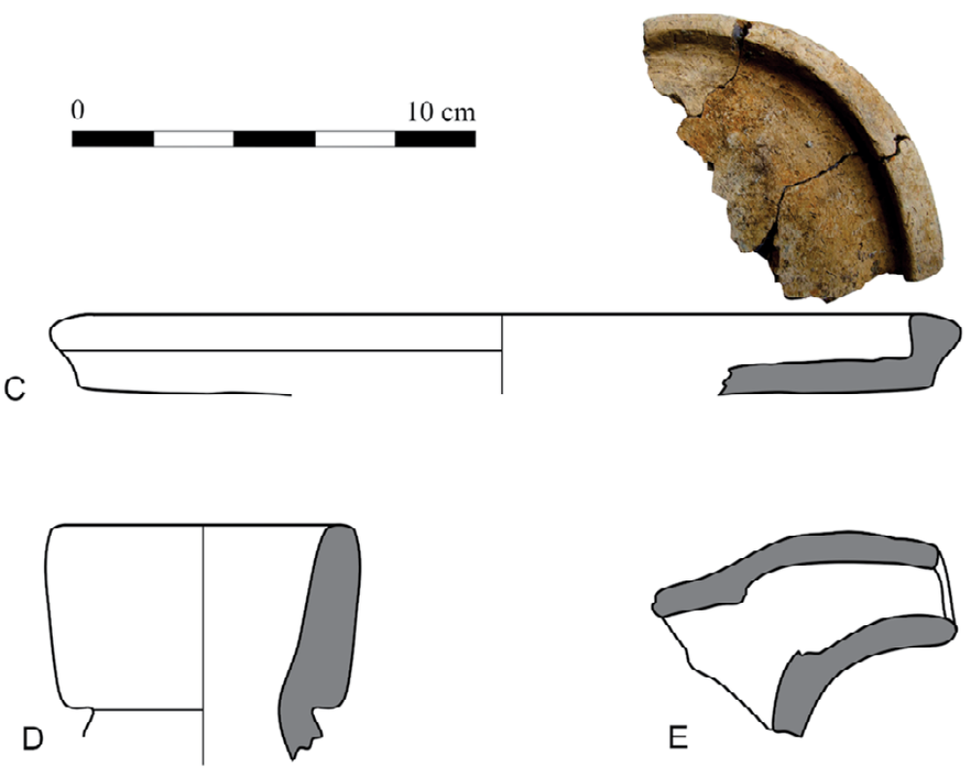

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Plate 23. Susa II pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P50	At 75.20	Middle Susa II–Late Susa II	Warm buff ware, medium to small grits in paste, finger-impressed appliqué band and lug handles, buff slip on exterior. Le Brun 1971, fig. 50:1 (Susa Acropole I). For an earlier example see Boese 1995, 126, fig. 7:b (Sheikh Hassan)
B	KS59-P51	At 76.20	Late Susa II	Buff ware, sandy paste, slipped. Canal 1978b, fig. 26:2; Le Brun 1978a, fig. 31:10 (Susa Acropole I, Level 17B)
C	KS59-P110	At 76.20	Middle Susa II–Late Susa II	Buff ware, mixture of sand and small grits in paste, yellowish buff slip
D	KS59-P74	At 75.40	Late Susa II–Early Susa III	Buff ware, large to medium dark grits in paste, gritty face, cream buff wash/slip on exterior and inner rim

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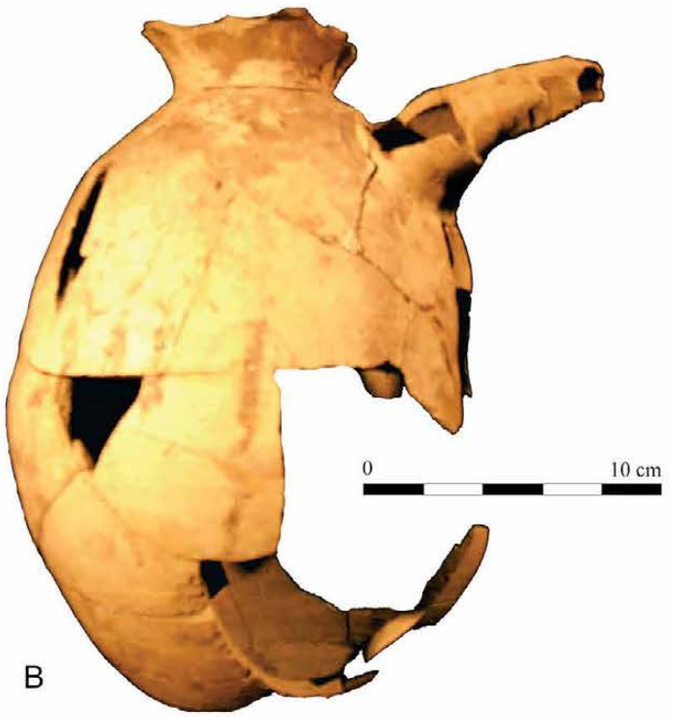

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Plate 24. Early Susa III (Proto-Elamite) pottery from KS-59 Operation 1.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P57	At 77.50	Early Susa III	Pinkish buff ware, chaff tempered, chaff face, dense, bricky red wash on exterior. Carter 1980, fig. 7:5 (Susa Ville Royale); Le Brun 1971, fig. 62:1, 4 (Susa Acropole I); Nicholas 1990, pls. 14:a and 19:s (Malyan); Sumner 2003, fig. 25:g (Malyan)
B	KS59-P58	At 77.55	Early Susa III	Pale-reddish buff ware, light-gray core grading to pink, small and occasional large dark grits in paste, yellowish buff wash on exterior. Carter 1980, fig. 8:2 (Susa Ville Royale); Le Brun 1971, fig. 63:11, 13–14 (Susa Acropole I); Nicholas 1990, pl. 18:h (Malyan); Sumner 2003, fig. 25:q (Malyan)
C	KS59-P27	At 76.30	Early Susa III	Pale bricky buff ware, dense, fine-chaff tempered, maroon wash on exterior extending below interior rim, white wash on interior. Nicholas 1990, pl. 17:j (Malyan)
D	KS59-P259	At 76.30	Early Susa III	Buff ware, occasional sand in paste, brown wash on exterior and inner rim. Mutin 2013, fig. 3.16:1 (Yahya)
E	KS59-P258	At 77.80	Early Susa III	Buff ware, occasional sand in paste, brown wash on exterior and inner rim
F	KS59-P263	At 77.00	Early Susa III	Lug handle. Creamy buff ware, occasional calcite particles in paste, yellow wash, red paint. Le Brun 1971, fig. 53:4 (decoration and wash) (Susa Acropole I)

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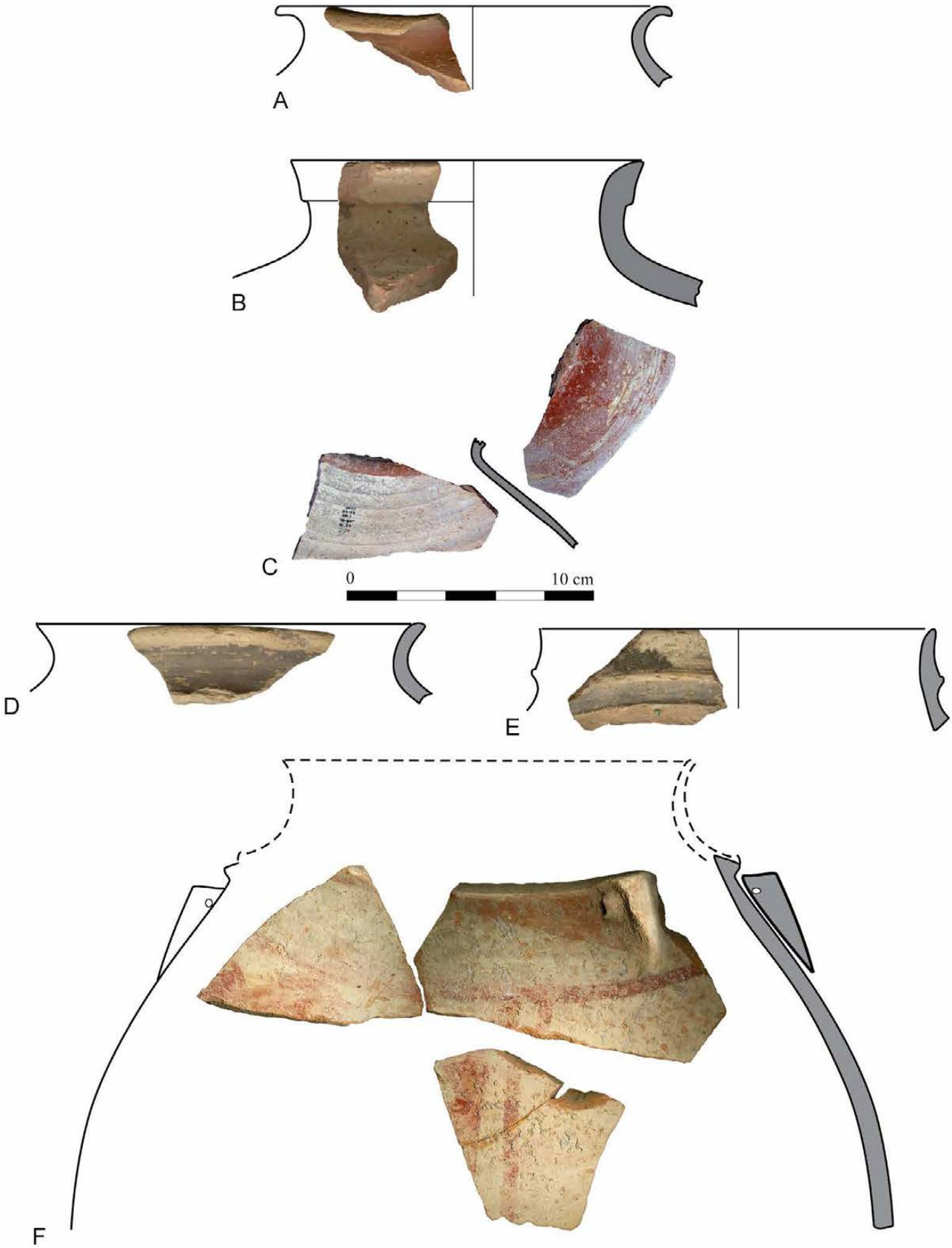

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Plate 25. Sukkalmakh pottery from KS-59 Operation 4.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P01	L 1	Sukkalmakh	Buff ware, small medium to dark grits in paste, creamy buff exterior
B	KS59-P521	L 1	Sukkalmakh(?)	Buff ware, chaff tempered, some fine grits in paste, light-gray core
C	KS59-P03	L 2	Sukkalmakh	Yellowish buff ware, chaff tempered, oxidized, buff wash exterior. Miroschedji 1978, fig. 50:12; 1981, fig. 11:2 (Susa Ville Royale)
D	KS59-P236	L 1	Sukkalmakh	Yellowish buff ware, small grits in paste, completely oxidized, buff slip exterior. Delougaz and Kantor 1996, pl. 79:T; Schacht 1975, fig. 7:s–t (Sharafabad)
E	KS59-P329	L 2	Sukkalmakh	Yellowish buff ware, small grits in paste, completely oxidized, buff slip exterior. See D for references
F	KS59-P14	L 1	Sukkalmakh	Yellowish buff ware, small grits in paste, completely oxidized, buff slip exterior
G	KS59-P15	L 1	Sukkalmakh	Bricky red ware, chaff tempered, some grits and calcite particles in paste, lower part shaved. Delougaz and Kantor 1996, pl. 77:C
H	KS59-P39	L 1	Sukkalmakh	Red ware, chaff tempered, some fine grits in paste, light-gray core grading to red toward surface
I	KS59-P545	L 2	Sukkalmakh	Pale-red ware, chaff tempered, some large and medium dark grits in paste, greenish-yellow wash on exterior and inner rim
J	KS59-P546	L 1	Sukkalmakh–Transitional	Buff ware, chaff tempered, some medium dark grits in paste, greenish-yellow wash on exterior and inner rim. Miroschedji 1978, fig. 50:4; 1981, fig. 10:17 (open form) (Susa Ville Royale)
K	KS59-P547	L 1	Sukkalmakh–Transitional	Buff ware, chaff tempered, some medium dark grits in paste, greenish-yellow wash on exterior and inner rim, gray core. Miroschedji 1978, fig. 50:4; 1981, fig. 10:19 (open form) (Susa Ville Royale)
L	—	L 1	Sukkalmakh–Transitional	Buff ware, chaff tempered, some medium dark grits in paste. Miroschedji 1978, fig. 50:12; 1981, fig. 10:17 (Susa Ville Royale)

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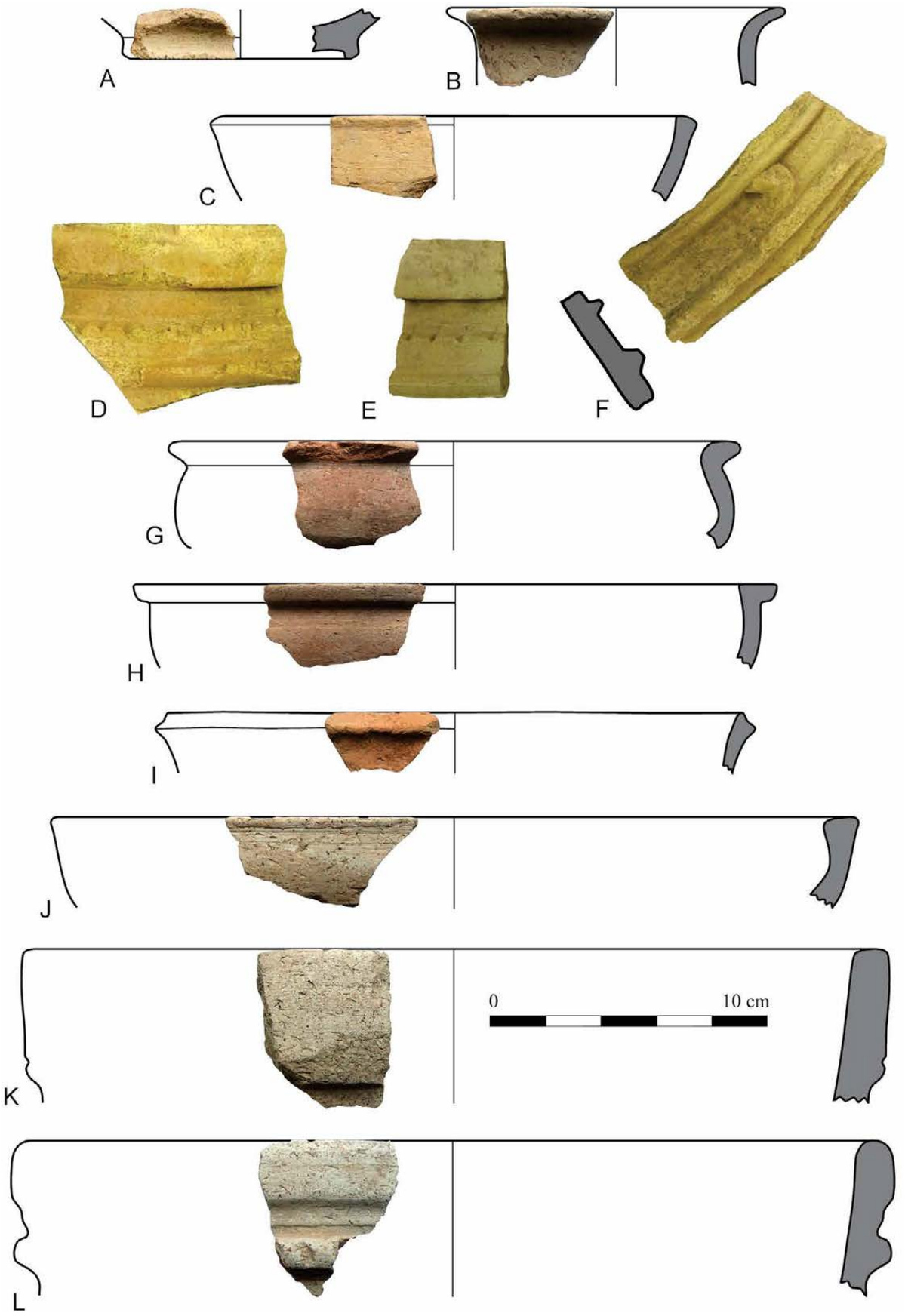

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Plate 26. Early Susa III (Proto-Elamite) pottery from KS-59 Operation 4.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P548	L 2	Early Susa III	Light-gray ware, some grits in paste, dark-gray wash on exterior and inner rim. Mutin 2013, fig. 3.33:1 (Yahya); Sumner 2003, fig. 25:b (Malyan)
B	KS59-P549	L 3	Early Susa III	Pale-red ware, chaff tempered, light-gray core abruptly changing to red, brown wash on exterior and inner rim. Carter 1980, fig. 8:1 (Susa Ville Royale); Le Brun 1971, fig. 63:14 (Susa Acropole I); Nicholas 1990, pl. 18:j (Malyan); Sumner 2003, fig. 25:q–r (Malyan)
C	KS59-P603	L 3	Early Susa III	Light-brownish buff ware, chaff tempered, some fine grits in paste, creamy buff wash on exterior and inner rim. Carter 1980, fig. 8:1–2 (Susa Ville Royale); Le Brun 1971, fig. 63:11 (Susa Acropole I); Sumner 2003, fig. 25:r (Malyan)
D	KS59-P604	L 2	Early Susa III	Jar shoulder fragment with appliqué snake. Pale-red ware, some fine grits in paste, traces of creamy buff wash on exterior. Such appliqué decorations were common in the early Susa III period; see Stève and Gasche 1971, pls. 15:1–5 and 78:10–11 (Susa). For an earlier example from Habuba Kabira see Strommenger, Sürenhagen, and Rittig 2014, pl. 86:G 541.4
E	KS59-P605	L 3	Early Susa III	Bricky red ware, chaff tempered, broad light-gray wash and dark band on maroon wash
F	KS59-P606	L 3	Early Susa III	Bricky red ware, chaff tempered, dark band on shoulder
G	KS59-P75	L 3	Early Susa III	String-cut base from a solid-footed goblet. Reddish buff ware, chaff tempered, some grits in paste. Le Brun 1971, fig. 60:1–4 (Susa Acropole I); Nicholas 1990, pl. 13:w–bb (Malyan); Stève and Gasche 1971, pl. 24:38–42 (Susa); Sumner 2003, fig. 22:s–ac (Malyan)
H	KS59-P76	L 3	Early Susa III	Buff ware, some grits in paste, yellowish slip on exterior, painted brown band
I	KS59-P77	L 3	Middle Susa II–Early Susa III	Reddish buff ware, straw tempered, porous, oxidized. In the Early Susa III (Proto-Elamite) phase the BRB becomes taller and slenderer (e.g., Le Brun 1971, fig. 65:7–8). Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For Middle Susa II see Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II examples see Delougaz and Kantor 1996, pl. 83 (Chogha Mish); Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
J	KS59-P78	L 3	Early Susa III	Light-gray ware, chaff tempered, some dark grits in paste, creamy buff wash on exterior and inner rim. Nicholas 1990, pl. 17:j (Malyan)

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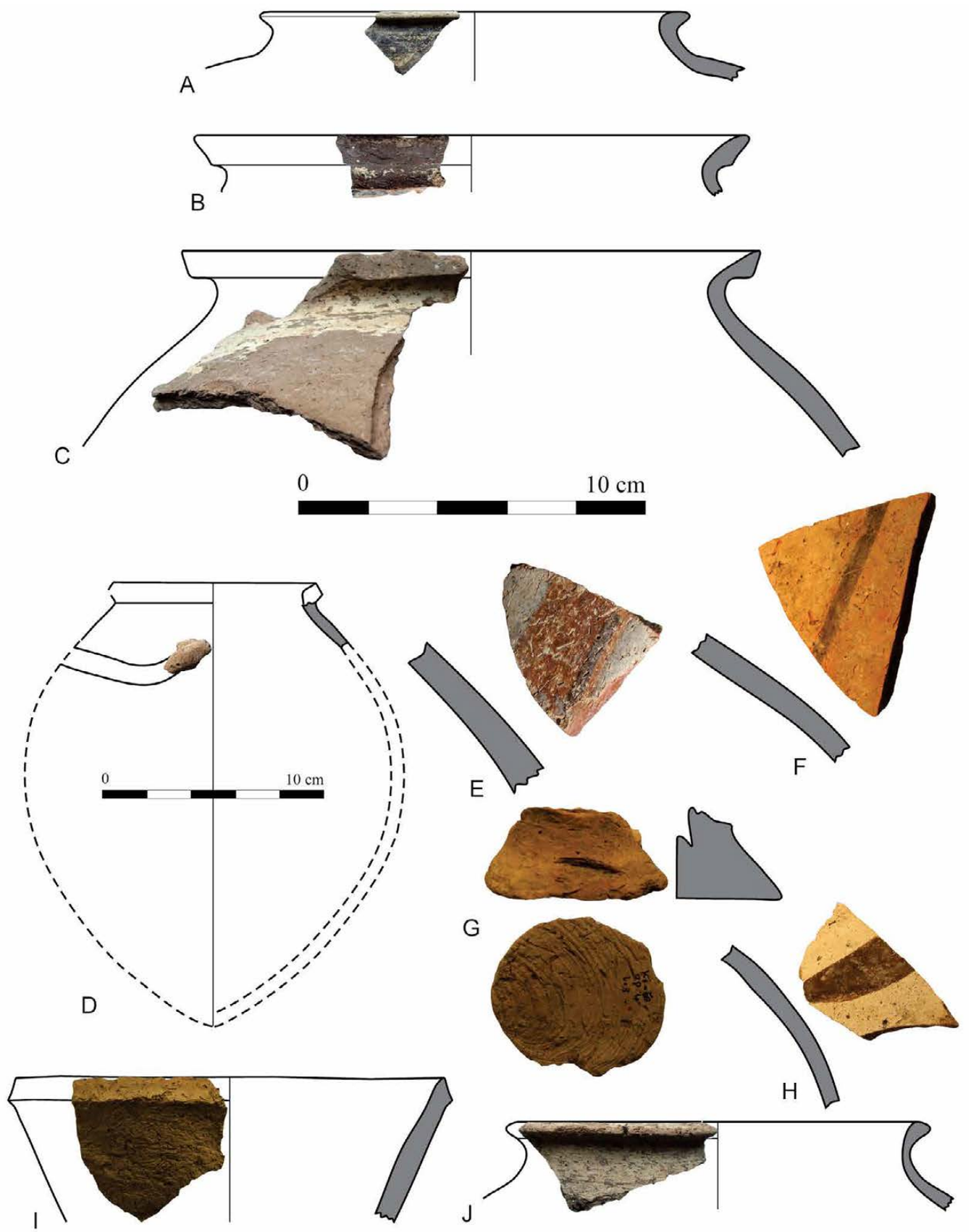

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Plate 27. Early Susa III (Proto-Elamite) pottery from KS-59 Operation 4.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P28	L 4	Early Susa III	Bricky red ware, chaff tempered, some fine grits in paste, light-gray core, string-cut base. Le Brun 1971, fig. 60:1–4 (Susa Acropole I); Nicholas 1990, pl. 13:w–bb (Malyan); Stève and Gasche 1971, pl. 24:38–42 (Susa); Sumner 2003, fig. 22:s–ac (Malyan)
B	KS59-P29	L 5	Middle Susa II–Early Susa III	Pinkish buff ware, straw tempered, dark core. In the Early Susa III (Proto-Elamite) phase the BRB becomes taller and slenderer (e.g., Le Brun 1971, fig. 65:7–8). Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For Middle Susa II see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan); Sumner 2003, fig. 22:k–n (Malyan)
C	KS59-P30	L 5	Early Susa III	Pinkish buff ware, chaff tempered, white bands on dark-brown wash
D	KS59-P490	L 5	Early Susa III	Pale buff ware, some fine grits in paste, creamy buff wash on exterior and inner rim. See pl. 26:B for references
E	KS59-P32	L 5	Middle Susa II–Early Susa III	Pinkish buff ware, chaff tempered, some fine grits in paste, dark core. See pl. 22:E for references
F	KS59-P33	L 4	Early Susa III	Light-red ware, fine grits in paste, light buff wash on exterior. Nicholas 1990, pl. 14:a (Malyan)
G	KS59-P53	L 4	Middle Susa II–Early Susa III	Yellowish buff ware, straw tempered, dark core. See B for references
H	KS59-P54	L 5	Early Susa III	Red ware, chaff tempered, some grits in paste, light-brown bands on buff wash
I	KS59-P55	L 4	Middle Susa II–Early Susa III	Pinkish buff ware, chaff tempered, some fine grits in paste, dark core. See E for references
J	KS59-P60	L 5	Early Susa III	Bricky red ware, chaff tempered, light-gray core
K	KS59-P61	L 4	Early Susa III	Warm buff ware, chaff tempered. Stève and Gasche 1971, pl. 13:8 (Susa Acropole)
L	KS59-P62	L 4	Early Susa III	Buff ware, chaff tempered, yellowish buff wash on exterior
M	KS59-P63	L 4	Early Susa III	Red ware, chaff tempered, oxidized. Carter 1980, fig. 9:4, 6 (Susa Ville Royale); Le Brun 1971, fig. 60:7–9 (Susa Acropole I); Sumner 2003, fig. 21:ar–av (Malyan)
N	KS59-P64	L 5	Early Susa III	Yellowish buff ware, no visible inclusion. See M for references

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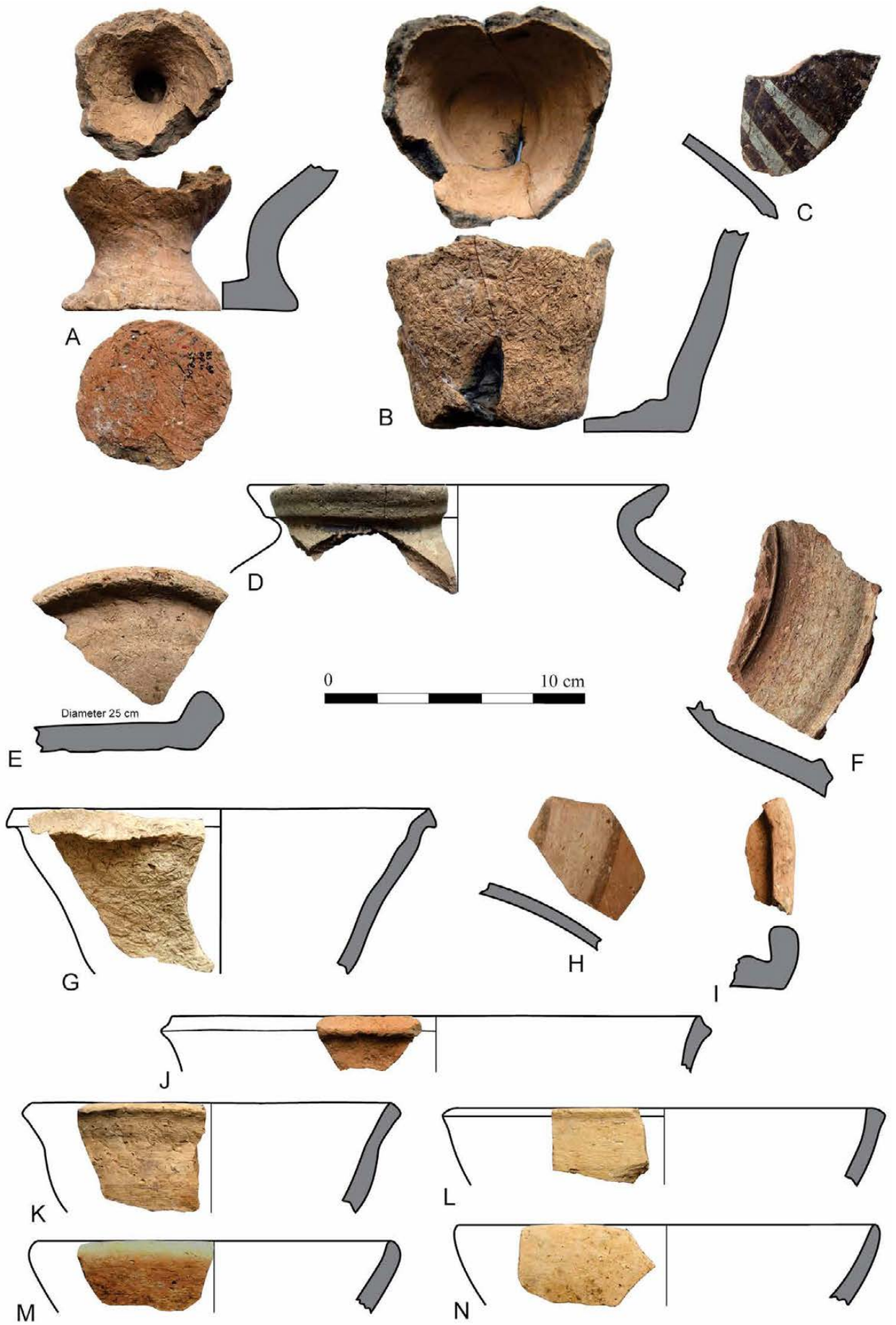

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Plate 28. Transitional Late Susa II–Early Susa III pottery from KS-59 Operation 4.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P80	L 6	Early Susa III	Pinkish buff ware, chaff tempered, some fine dark grits and calcite in paste, dense, gray core, brown paint on grayish buff wash
B	KS59-P81	L 6	Middle Susa II–Early Susa III	Pinkish buff ware, straw tempered, gray core. Johnson 1973, Type 6, pl. I:c (not dated). Like the BRB, shallow trays appear early in the Middle Susa II phase and continue into the Susa III (Proto-Elamite) phase. For pre-Susa III see Boese 1995, 84, fig. 21:e–g (Sheikh Hassan); Le Brun 1971, figs. 46:7–8 and 60:14–17; 1978a, fig. 23:7–10 (Susa Acropole I); Miroschedji 1976, fig. 3:12–14 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 18 (Habuba Kabira); Wright 2013, fig. 4.10:j–k (Sharafabad). For Susa III see Le Brun 1971, fig. 60:14–17 (Susa Acropole I); Mutin 2013, fig. 3.7 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan); Sumner 2003, fig. 23:a–e (Malyan)
C	KS59-P82	L 6	Early Susa III	Buff ware, gritty paste, dense, light bricky red wash on exterior
D	KS59-P83	L 6	Early Susa III	Buff ware, chaff tempered, very pale gray core, yellow wash on exterior and inner rim
E	KS59-P84	L 6	Early Susa III	Pinkish buff ware, straw tempered, gray core, traces of cream wash on exterior and interior. Carter 1980, fig. 9:4, 6 (Susa Ville Royale); Le Brun 1971, fig. 60:7–9 (Susa Acropole I); Sumner 2003, fig. 21:ar–av (Malyan)
F	KS59-P85	L 6	Early Susa III	Buff ware, chaff tempered, occasional dark grits in paste, creamy buff wash on exterior and inner rim. Le Brun 1971, fig. 61:12–13 (Susa Acropole I, Level 15)
G	KS59-P86	L 7	Middle Susa II–Early Susa III	Buff ware, gritty paste, reserved slip. Delougaz and Kantor 1996, pl. 92:B, D, G. Johnson (1973) does not date "reserved slip," but Wright (2013, fig. 4.11:h) (Sharafabad) dates the "reserved slip" decoration to the Middle Uruk phase. For Susa III see Le Brun 1971, fig. 62:10 (Susa Acropole I, Level 15B)
H	KS59-P87	L 7	Susa II–Early Susa III	Pale bricky ware, sandy paste, light brownish-gray core, white paint on brown wash. Le Brun 1971, fig. 62:3 (for the spout; Susa Acropole I, Level 14B)
I	KS59-P314	L 7	Middle Susa II–Early Susa III	Yellowish buff ware, straw tempered, gray core. See B for references
J	KS59-P315	L 6	Early Susa III	Pinkish red ware, some sand in paste, yellowish buff wash on exterior and inner rim
K	KS59-P316	L 7	Early Susa III	Yellowish buff ware, large grits in paste, gritty face. Le Brun 1971, fig. 61:1 (Susa Acropole I, Level 15)
L	KS59-P317	L 7	Middle Susa II–Early Susa III	Yellowish buff ware, straw tempered, oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For Middle Susa II see Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II examples see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
M	KS59-P318	L 7	Middle Susa II–Early Susa III	Pinkish buff ware, straw tempered, light-gray core. See L for references

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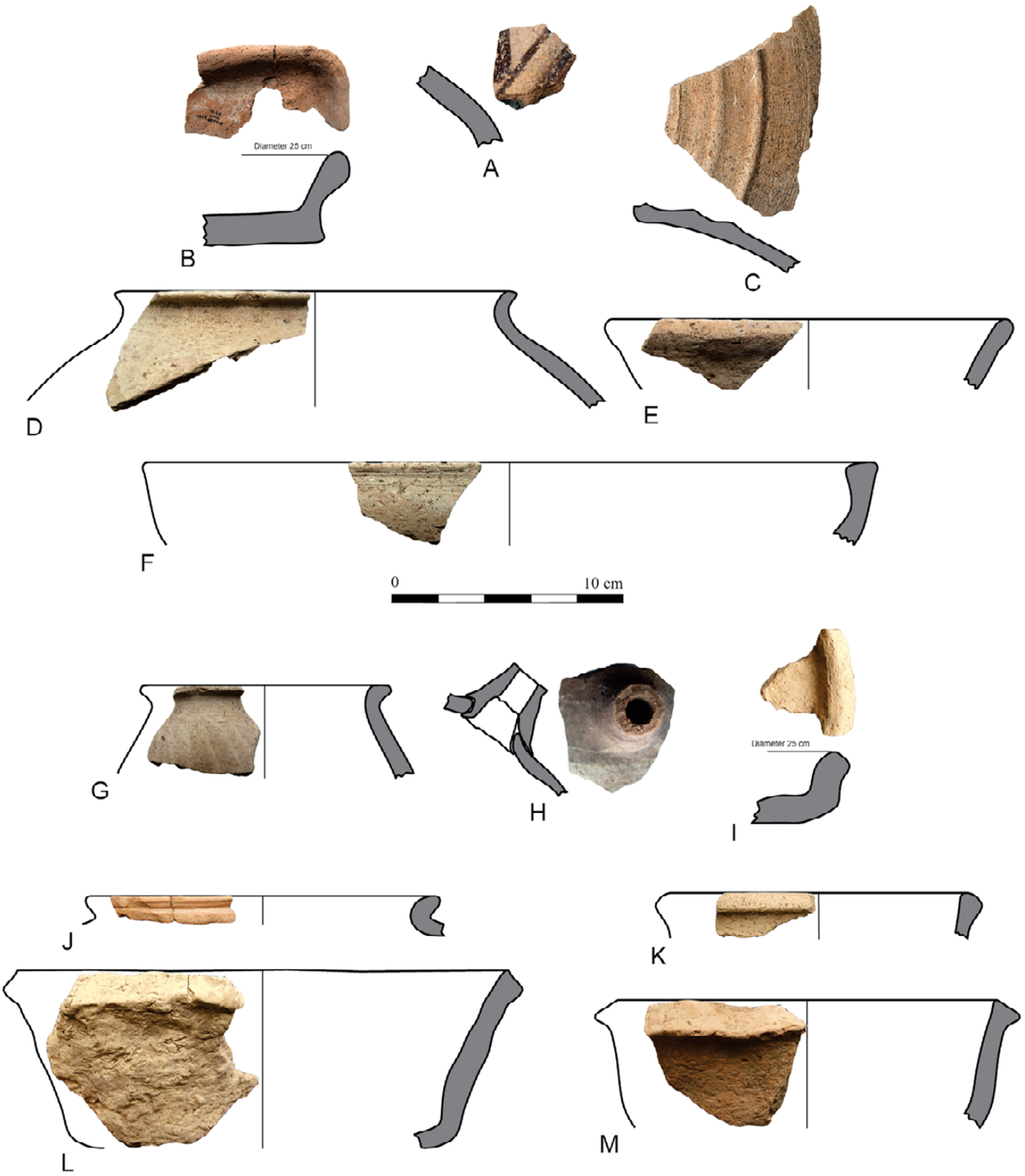

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Plate 29. Transitional Late Susa II–Early Susa III pottery from KS-59 Operation 4.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P88	L 8	Middle Susa II–Early Susa III	Buff ware, sandy paste, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle-Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For Middle Uruk see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P89	L 8	Middle Susa II–Early Susa III	Warm buff ware, straw tempered, completely oxidized. See A for references
C	KS59-P90	L 9	Middle Susa II–Early Susa III	Warm buff ware, straw tempered, completely oxidized. See A for references
D	KS59-P91	L 9	Early Susa III	Yellowish buff ware, some fine sand in paste, dense
E	KS59-P92	L 8	Early Susa III	Red ware, occasional fine grits in paste, grayish buff wash on exterior
F	KS59-P93	L 9	Late Susa II–Early Susa III	Buff ware, chaff tempered. For the rim see Carter 1980, fig. 8:1 (Susa Ville Royale); Le Brun 1971, fig. 62:9 (Susa Acropole I)
G	KS59-P94	L 8	Early Susa III	Bricky red ware, chaff tempered, black paint below carination
H	KS59-P95	L 9	Early Susa III	Warm buff ware, straw tempered. Carter 1980, fig. 9:4, 6 (Susa Ville Royale); Le Brun 1971, fig. 60:7–9 (Susa Acropole I); Sumner 2003, fig. 21:ar–av (Malyan)
I	KS59-P96	L 8	Early Susa III	Buff ware, pale-red core changing to buff toward surface, dark-brown wash
J	KS59-P97	L 9	Early Susa III	Buff ware, chaff tempered, some dark sand in paste, probably slipped
K	KS59-P65	L 9	Late Susa II–Early Susa III	Reddish buff ware, chaff tempered, sandy paste, traces of buff wash. For Early Susa III see Carter 1980, fig. 11:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:16 (Susa Acropole I, Level 13); Sumner 2003, figs. 21:ax and 24:ab–ac (Malyan)
L	KS59-P66	L 8	Middle Susa II–Early Susa III	Pinkish buff ware, gritty paste, yellowish buff wash on exterior and inner rim. For Susa III examples see Carter 1980, fig. 13:5 (Susa Ville Royale); Le Brun 1971, fig. 62:4 (Susa Acropole I, Level 16); Sumner 2003, fig. 25:s (Malyan)
M	KS59-P67	L 8	Early Susa III	Yellowish buff ware, some sand in paste, neck and upper body with dark-brown wash, lower shoulder painted with light-brown bands and triangles. Carter 1980, fig. 7:5 (for rim and wash) (Susa Ville Royale); Le Brun 1971, fig. 62:1 (Susa Acropole I, Level 16); Sumner 2003, fig. 25:b (Malyan)

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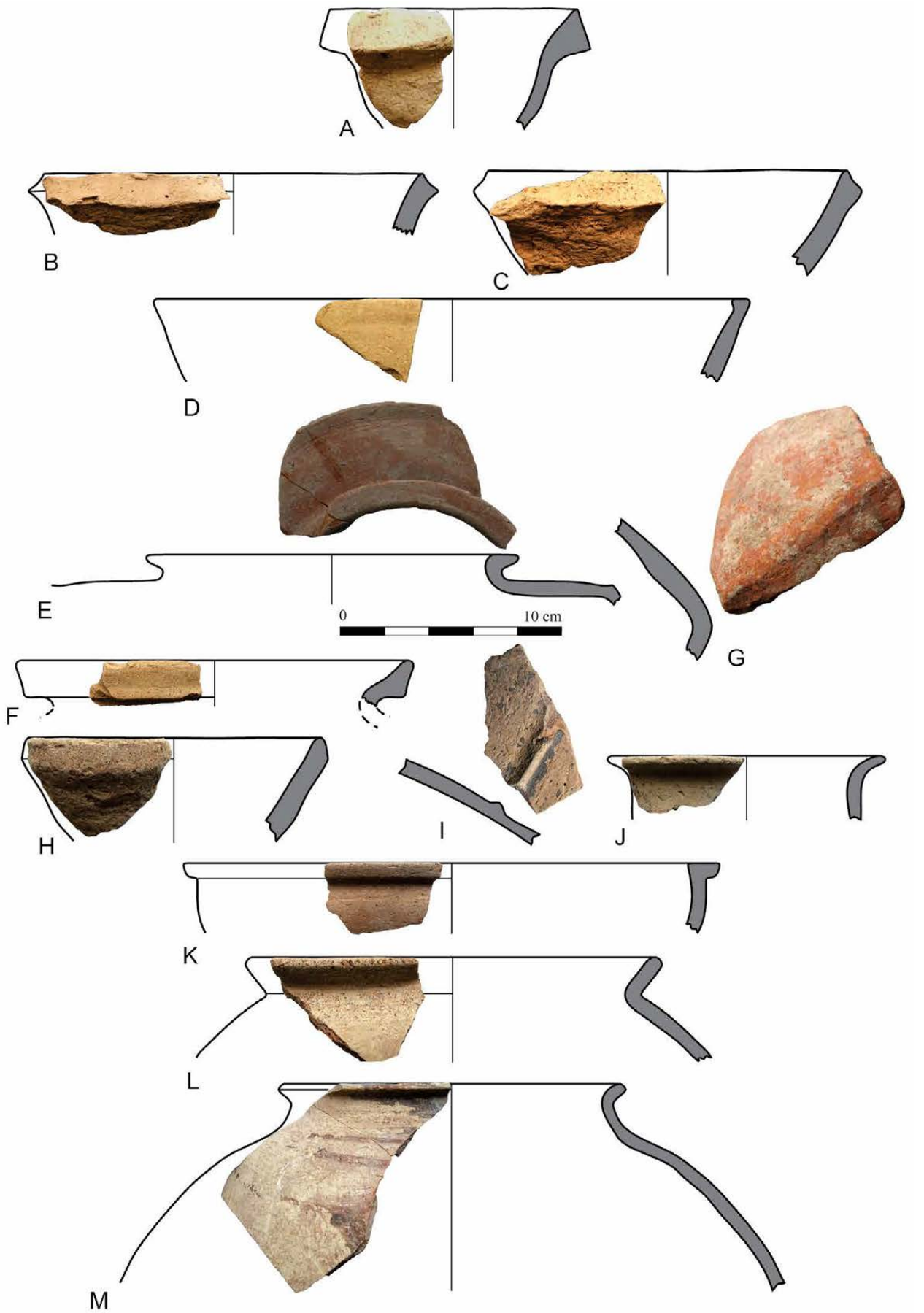

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Plate 30. Examples of Early to Late Susa II pottery from KS-59 various probes.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P362	Probe H	Middle Susa II–Early Susa III	Pinkish buff ware, sandy paste, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P363	Probe D	Middle Susa II–Late Susa II	Buff ware, chaff tempered, gray core. Delougaz and Kantor 1996, pl. 84:A, J; Le Brun 1978a, fig. 21:1–2 (Susa Acropole I); Boese 1995, 84, fig. 21:d (Sheikh Hassan)
C	KS59-P364	Probe D	Early Susa II	Pinkish buff ware, chaff tempered
D	KS59-P365	Probe K	Early Susa II	Buff ware, straw tempered, completely oxidized
E	KS59-P366	Probe K	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. See A for references
F	KS59-P367	Probe C	Middle Susa II–Late Susa II	Pinkish buff ware, straw tempered, gray core
G	KS59-P368	Probe H	Middle Susa II–Late Susa II	Pinkish red ware, medium red grits and calcite particles in paste, gritty face

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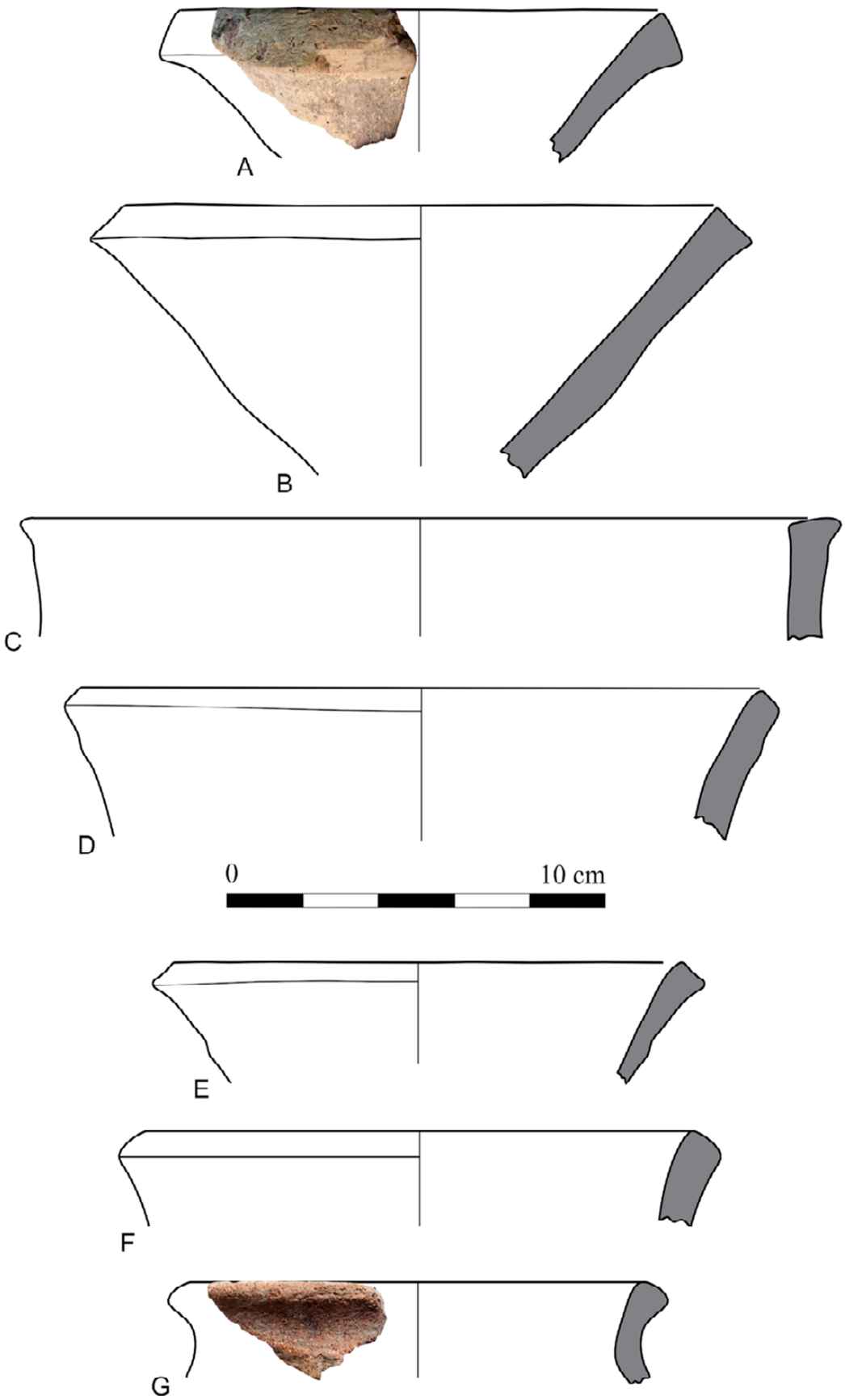

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Plate 31. Examples of Early to Late Susa II pottery from KS-59 various probes.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P369	Probe I	Middle Susa II–Late Susa II	Buff ware, some small grits in paste, slipped. Johnson 1973, Type 46, pl. VI:a is dated to the Late Uruk phase but is also found in late Middle Uruk contexts; see Boese 1995, 174, fig. 12:a–b (Sheikh Hassan). It is also reported from a late Middle Uruk context from Hacinebi (Wright and Rupley 2001, 107). For Late Susa II examples see Delougaz and Kantor 1996, pl. 102:G, J; Le Brun 1971, fig. 52:7–8; 1978a, fig. 30:6, 12, 14 (Susa Acropole I); Miroschedji 1976, fig. 7:3 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pls. 51–52 (Habuba Kabira); Wright 2013, fig. 4.14:h (Farukhabad)
B	KS59-P370	Probe I	Late Susa II	Buff ware, some small grits in paste. See A for references
C	KS59-P371	Probe I	Middle Susa II–Late Susa II	Yellowish buff ware, scattered small grits in paste, yellow slip on exterior. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
D	KS59-P372	Probe I	Late Susa II	Red ware, chaff tempered, gray core. Similar to Le Brun 1978a, fig. 24:14 (Susa Acropole I); Miroschedji 1976, fig. 6:9 (Susa Apadana kiln)
E	KS59-P773	Probe C	Late Susa II	Buff ware, chaff tempered. See D for references
F	KS59-P374	Probe I	Middle Susa II–Late Susa II	Buff ware, medium to small dark grits in paste. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
G	KS59-P375	Probe I	Middle Susa II–Late Susa II	Buff ware, some grits in paste
H	KS59-P776	Probe I	Middle Susa II–Late Susa II	Buff ware, scattered small grits in paste. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5–6 (Susa Apadana kiln)
I	KS59-P377	Probe K	Early Susa II(?)–Late Susa II	Reddish buff ware, chaff tempered, dark core

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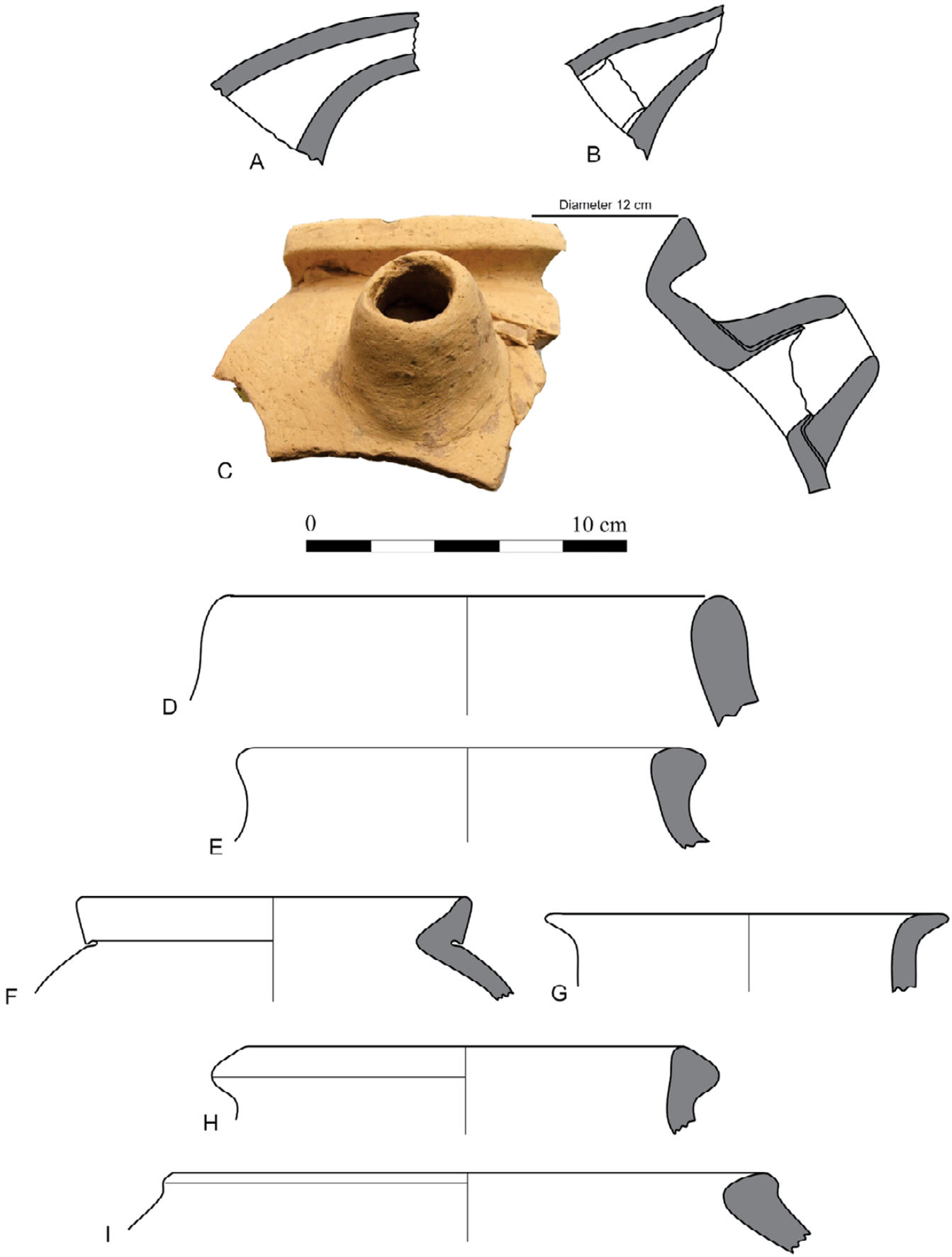

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Plate 32. Susa II pottery from KS-59 various probes.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P202	Probe 2	Middle Susa II–Late Susa II	Buff ware, some fine sand in paste, impressed appliqué band. Delougaz and Kantor 1996, pls. 25:B and 28:Q (with small knobs, Chogha Mish); Miroschedji 1976, fig. 8:5 (Susa Apadana kiln). For earlier examples see Boese 1995, 45, fig. 13:b–c, e; and 83, fig. 20:f, with knobs (Sheikh Hassan)
B	KS59-P204	Probe 6	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle-Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Susa II date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
C	KS59-P205	Probe 6	Middle Susa II–Late Susa II	Buff ware, fine sand in paste, cream slip on exterior and inner rim. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E (Chogha Mish); Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I). For Middle Susa II see Wright 2013, fig. 4.11:b (Sharafabad)
D	KS59-P206	Probe 6	Middle Susa II–Late Susa II	Buff ware, some small grits in paste, cream slip on exterior. See C for references
E	KS59-P207	Probe 6	Late Susa II	Buff ware, some fine grits in paste, slipped. Delougaz and Kantor 1996, pl. 104:F; Miroschedji 1976, fig. 7:8 (Susa Apadana kiln)
F	KS59-P208	Probe 6	Middle Susa II–Late Susa II	Buff ware, medium to large dark grits in paste, gritty face. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
G	KS59-P209	Probe 2	Middle Susa II–Late Susa II	Buff ware, medium to large dark grits in paste, gritty face. See F for references
H	KS59-P210	Probe 2	Middle Susa II–Late Susa II	Warm buff ware, medium grits in paste, probably slipped. Le Brun 1978a, fig. 29:7 (Susa Acropole I); Wright 1981, fig. 51:m (Farukhabad)
I	KS59-P211	Probe 6	Middle Susa II–Late Susa II	Buff ware, some sand in paste, smoothed surface. Johnson 1973, Type 19, pl. III:a (not dated); Le Brun 1978a, fig. 25:10 (Susa Acropole I); Miroschedji 1976, fig. 8:9, 12 (Susa Apadana kiln); Wright 2013, fig. 4.11:e (Sharafabad)
J	KS59-P212	Probe 6	Late Susa II	Buff ware, medium to large red and dark grits in paste, gritty face. Delougaz and Kantor 1996, 93:A (Chogha Mish); Wright 1981, fig. 52:e (Farukhabad)
K	KS59-P213	Probe 6	Late Susa II	Pale bricky red ware, medium to small dark and red grits in paste, gritty face, off-white wash on exterior, dark core

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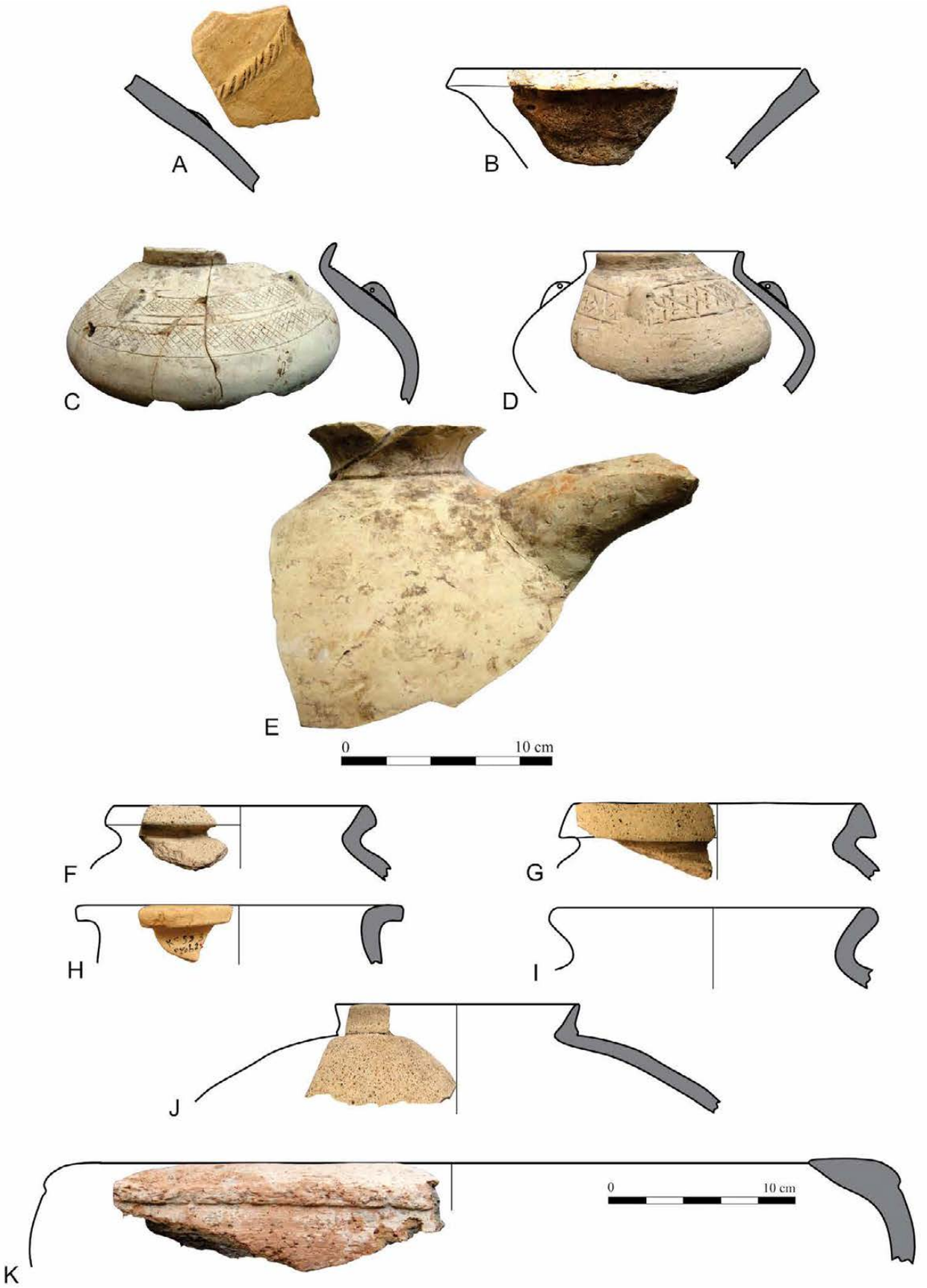

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Plate 33. Susa II pottery from KS-59 various probes.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P214	Probe 8	Late Susa II	Buff ware, some fine grits in paste, slipped, impressed appliqué bands. For similar band decoration see Delougaz and Kantor 1996, pls. 28:Q–S and 110:I
B	KS59-P215	Probe 8	Late Susa II	Pale-brownish buff ware, fine dark grits and calcite particles in paste, gritty face, orange wash/slip on exterior, impressed horizontal and vertical appliqué bands
C	KS59-P216	Probe 7	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Buff ware, no visible inclusion, slipped interior and exterior. Johnson 1973, Type 9, pl. I:g. For Middle Susa II see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
D	KS59-P217	Probe 7	Middle Susa II–Late Susa II	Buff ware, occasional grits in paste, slipped exterior and interior. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
E	KS59-P218	Probe 7	Middle Susa II–Late Susa II	Creamy buff ware, small grits in paste, slipped. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
F	KS59-P219	Probe 8	Middle Susa II–Late Susa II	Pinkish buff ware, some large and medium red grits in paste, gritty face, pale-gray core. Le Brun 1978a, fig. 25:10 (Susa Acropole I). For Middle Susa II cf. Wright 1981, fig. 43:i (Farukhabad)
G	KS59-P220	Probe 7	Late Susa II	Buff ware, scattered dark grits in paste, slipped. Delougaz and Kantor 1996, pl. 93:C
H	KS59-P221	Probe 8	Middle Susa II–Late Susa II	Buff ware, some fine grits in paste, gray core. Johnson 1973, Type 27, pl. III:i; Miroschedji 1976, fig. 6:7 (Susa Apadana kiln); Wright 2013, fig. 4.11:h (Sharafabad)

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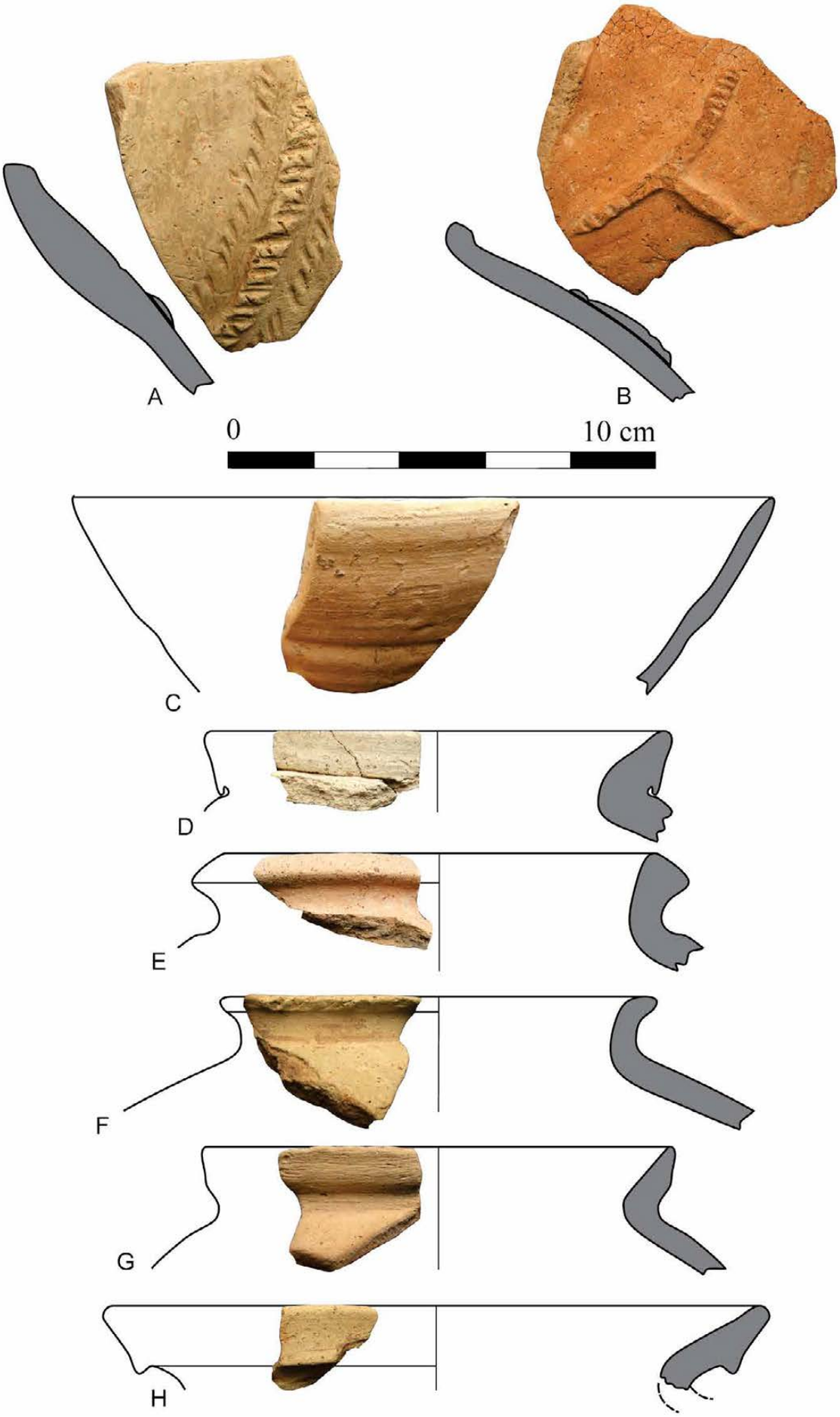

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Plate 34. Susa II pottery from KS-59 Probe 9.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P104	Probe 9	Middle Susa II–Late Susa II	Fine cup, string-cut base, pouring lip missing. Warm buff ware, no visible inclusion, slipped. Johnson 1973, Type 9, pl. I:g. For Middle Susa II see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
B	KS59-P105	Probe 9	Middle Susa II–Late Susa II	Pale bricky buff ware, small grits in paste, grayish buff core, yellowish buff slip exterior and inner rim. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
C	KS59-P106	Probe 9	Middle Susa II–Late Susa II	Yellowish buff ware, sandy paste, probably slipped. Le Brun 1978a, fig. 31:6 (Susa Acropole I); Miroschedji 1976, fig. 7:6 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 30:G 460 and G 466 (Habuba Kabira). For Middle Susa II see Boese 1995, 83, fig. 20:j (Sheikh Hassan)
D	KS59-P107	Probe 9	Middle Susa II–Late Susa II	Buff ware, medium red grits in paste, gritty face. Jars with everted rim and punctated shoulder are dated to the Early Uruk by Johnson (1973, Type 33, pl. III:n). Such jars without punctated shoulder are dated to the Late Uruk by Wright (2013, fig. 4.14:d) (Farukhabad). See also Delougaz and Kantor 1996, pls. 96–97; Le Brun 1971, fig. 48:5 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:b–c, and 86, fig. 86:e, g (Sheikh Hassan)
E	KS59-P108	Probe 9	Middle Susa II–Late Susa II	Warm buff ware, sandy paste, probably slipped. Such globular jars with strap handles without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With the grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan)

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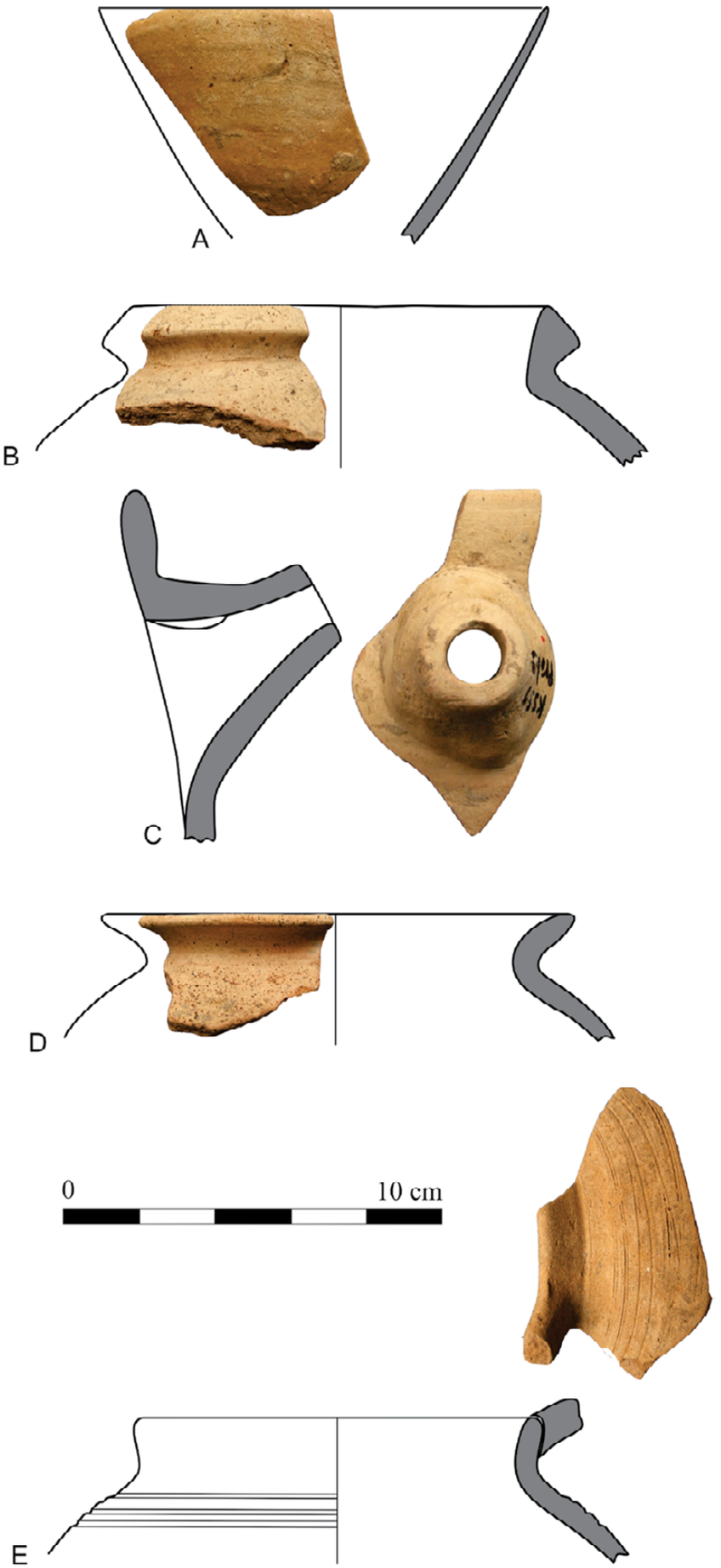

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Plate 35. Susa II pottery from KS-59 Probe 9.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P223	Probe 9	Middle Susa II–Late Susa II	Nose lug handle. Yellowish buff ware, scattered fine grits in paste, probably slipped. Similar to Delougaz and Kantor 1996, pl. 113; Le Brun 1971, fig. 50:3 (Susa Acropole I). For the earlier example see Boese 1995, 230, fig. 16:b (Sheikh Hassan)
B	KS59-P224	Probe 9	Middle Susa II–Late Susa II	Warm buff ware, fine dark and red grits in paste, gritty face, creamy buff slip on exterior, finger-impressed appliqué band. Delougaz and Kantor 1996, pl. 87:H (with reserved slip) and I; Miroschedji 1976, fig. 5:11–13 (Susa Apadana kiln). For an earlier example without appliqué band see Boese 1995, 227, fig. 13:b (Sheikh Hassan)
C	KS59-P225	Probe 9	Middle Susa II–Late Susa II	Pale bricky buff ware, medium to small dark grits in paste, gritty face, impressed appliqué band, creamy buff slip. Delougaz and Kantor 1996, pl. 25:B (with small knobs). For an earlier example see Boese 1995, 45, fig. 13:b–c, e; and 83, fig. 20:f, with knobs (Sheikh Hassan)
D	KS59-P226	Probe 9	Middle Susa II–Late Susa II	Yellowish buff ware, no visible inclusion, probably slipped. Delougaz and Kantor 1996, pl. 88:B, E–H, J; Miroschedji 1976, fig. 6:10 (Susa Apadana kiln). For an earlier example see Boese 1995, 149, fig. 8:i (Sheikh Hassan)
E	KS59-P227	Probe 9	Middle Susa II–Late Susa II	Nose lug handle. Pale bricky red ware, medium red grits in paste, gritty face. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For Middle Susa II see Wright 2013, fig. 4.11:b (Sharafabad); Boese 1995, 48, fig. 16 (Sheikh Hassan)

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Plate 36. Pottery from KS-59 Probe A.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P229	Probe A	Late Susiana 1	Buff ware, no visible inclusion, brown paint
B	KS59-P07	Probe A	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
C	KS59-P231	Probe A	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
D	KS59-P232	Probe A	Late Middle Susiana	Buff ware, no visible inclusion, brown paint
E	KS59-P233	Probe A	Late Susiana 2	Buff ware, no visible inclusion, brown paint
F	KS59-P235	Probe A	Late Susiana 2	Buff ware, no visible inclusion, brown paint
G	KS59-P237	Probe A	Late Middle Susiana	Buff ware, no visible inclusion, dark paint
H	KS59-P238	Probe A	Late Middle Susiana–Late Susiana 2	Buff ware, no visible inclusion, brown paint. Le Brun 1971, fig. 37:1, 6 (Susa Acropole I, Level 27)
I	KS59-P239	Probe A	Late Middle Susiana–Late Susiana 2	Pinkish buff ware, some fine dark grits in paste, completely oxidized, probably slipped. Le Brun 1971, fig. 38:6–8 (Susa Acropole I, Levels 25, 27)

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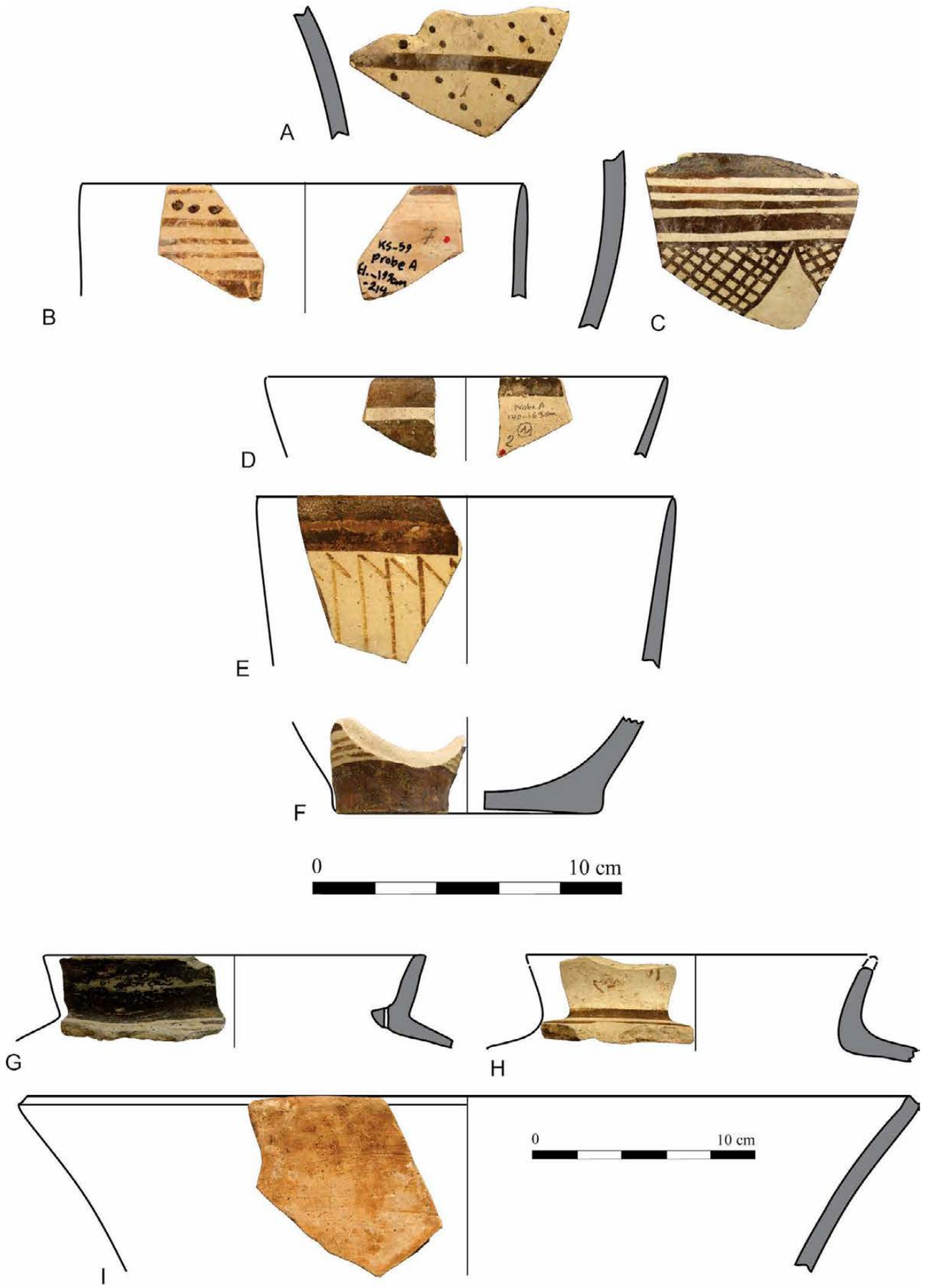

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Plate 37. Pottery from KS-59 various probes.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P240	Probe B	Terminal Susa	Shoulder knob. Light-gray ware, chaff tempered, chaff face. Le Brun 1971, fig. 39:6 (Susa Acropole I, Level 25)
B	KS59-P241	Probe 22	Middle Susa II–Late Susa II	Creamy buff ware, medium dark grits in paste, gritty face. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
C	KS59-P242	Probe 13	Middle Susa II–Early Susa III	Pinkish buff ware, sandy paste, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For Middle Uruk see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
D	KS59-P243	Probe L	Early Susa II	Light buff ware, fine grits in paste, probably slipped, gritty face. Johnson 1973, Types 16–17, pl. II:g–h; similar to Wright 2013, fig. 4.4:d (Sargarab)
E	KS59-P244	Probe 22	Middle Susa II–Late Susa II	Warm buff ware, gritty paste and face. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
F	KS59-P245	Probe B	Sukkalmakh	Pale-greenish buff ware, occasional straw and grits in paste. Wright 1981, fig. 84:m (Farukhabad)
G	KS59-P246	Probe B	Early Susa III	Whitish buff ware, chaff tempered, eroded brown wash on exterior. This type without a brown wash dates to the much-earlier Middle Susa II phase. Similar to Mutin 2013, fig. 3.89:25 (Yahya)
H	KS59-P247	Probe B	Early Susa II–Late Susa II	Pale-red ware, sandy paste, very light gray core. Johnson 1973, Type 30, fig. III:l (not dated); similar to Le Brun 1971, fig. 40:6 (Susa Acropole I). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab/ Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
I	KS59-P248	Probe B	Middle Susa II–Early Susa III	Whitish buff ware, chaff tempered, eroded brown wash on exterior. Johnson 1973, Type 25, pl. III:g. For Late Susa II see Le Brun 1978b, fig. 32:3 (Susa Acropole I); Miroschedji 1976, fig. 6:6 (Susa Apadana kiln); Boese 1995, 79, fig. 16:f, and 86, fig. 23:h (Sheikh Hassan)
J	KS59-P249	Probe B	Early Susa II(?)–Middle Susa II	Pale buff ware, medium to small red grits and scattered chaff in paste, gritty face
K	KS59-P250	Probe B	Late Susiana 2	Orange ware, scattered calcite particles in paste, brown wash interior and exterior. Le Brun 1971, fig. 38:5 (Susa Acropole I, Level 27)

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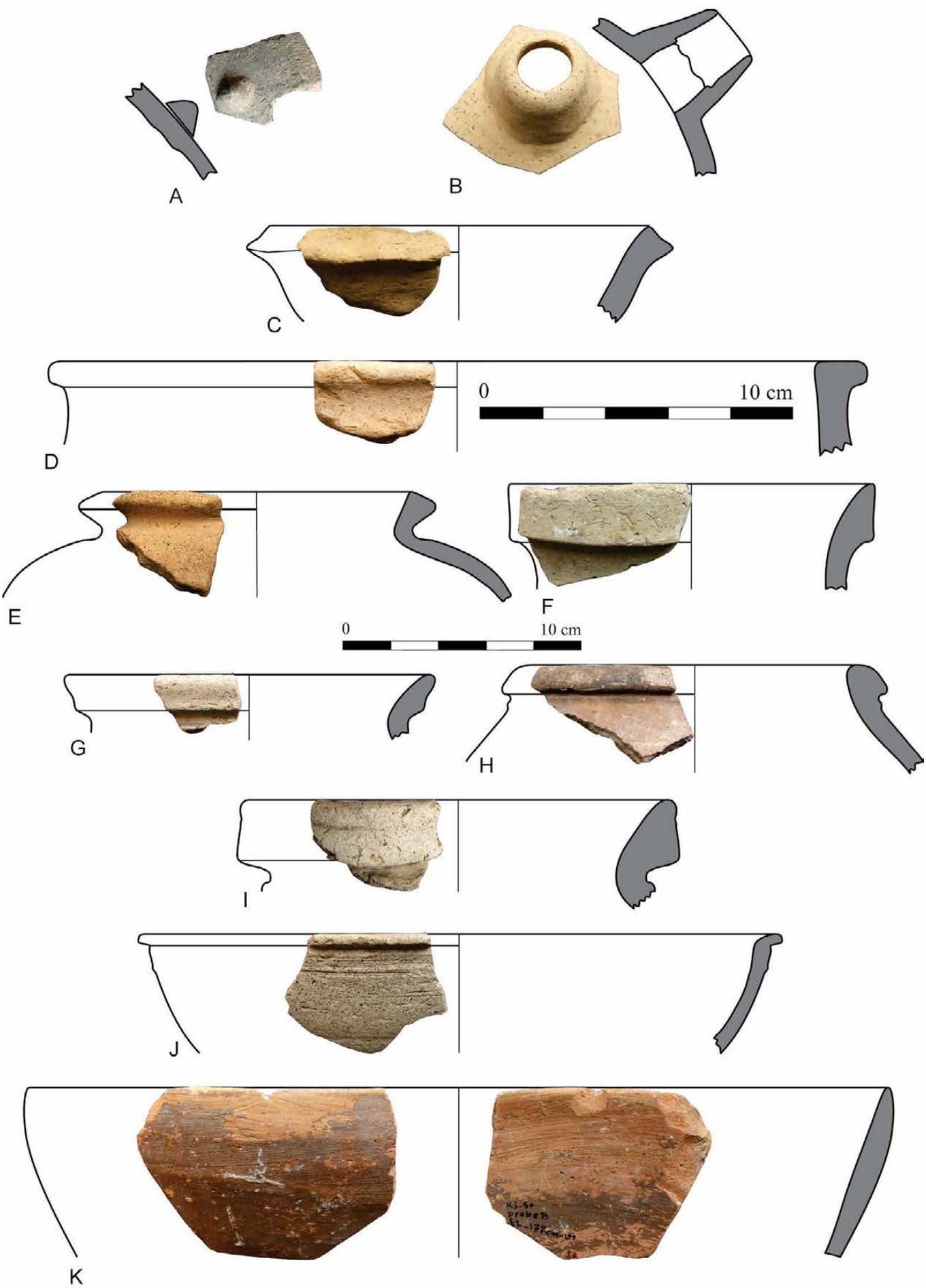

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Plate 38. Examples of pottery from KS-59 Probe F.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P264	Probe F	Early Susa II–Late Susa II	Buff ware, large and medium dark grits and calcite particles in paste. Johnson (1973, Type 33, pl. III:n) believes shoulder punctates date to the Early Uruk phase. But such decoration continues into the Late Uruk phase. For examples see Delougaz and Kantor 1996, pl. 23:D; Strommenger, Sürenhagen, and Rittig 2014, pl. 76 (Habuba Kabira); Boese 1995, 201, fig. 13:l–n (Sheikh Hassan)
B	KS59-P265	Probe F	Early Susa II	Proto-BRB fragment. Pale bricky buff ware, straw tempered, completely oxidized. Johnson 1973, Type 4, pl. I:b. Wright 2013, fig. 4.7:a–b (Susa Acropole III); see also Stève and Gasche 1971, pl. 86:3, 7 and possibly the example of Le Brun 1971, fig. 40:5 (Susa Acropole I, Level 24)
C	KS59-P266	Probe F	Early Susa II(?)	Warm buff ware, occasional chaff and fine grits in paste
D	KS59-P267	Probe F	Early Susa II–Late Susa II	Buff ware, large to medium dark grits in paste, gritty face. Johnson 1973, Type 30, fig. III:l (not dated); similar to Le Brun 1971, fig. 40:6 (Susa Acropole I); this type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab / Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (KS-269)
E	KS59-P268	Probe F	Early Susa II–Late Susa II	Buff ware, large to medium red grits and calcite particles in paste, gritty face. See D for references
F	KS59-P269	Probe F	Early Susa II–Late Susa II	Yellowish buff ware, large to medium dark grits in paste, gritty face. See D for references
G	KS59-P270	Probe F	Early Susa II–Late Susa II	Warm buff ware, large to medium dark grits in paste, gritty face, exterior heated to creamy buff. See D for references
H	KS59-P271	Probe F	Terminal Susa / Early Susa II	Yellowish buff ware, large to medium dark grits in paste, gritty face
I	KS59-P272	Probe F	Terminal Susa / Early Susa II	Yellowish buff ware, occasional fine dark grits and chaff in paste
J	KS59-P273	Probe F	Terminal Susa / Early Susa II	Buff ware, some sand in paste. Johnson 1973, Type 12, pl. II:a; similar to Wright 2013, fig. 4.7:f (Susa Acropole III)
K	KS59-P274	Probe F	Early Susa II	Yellowish buff ware, occasional fine dark grits in paste, impressed appliqué band. Johnson 1973, Type 13, fig. 7, pl. II:b; Neely and Wright 1994, fig. IV.45:g (Sargarab); Wright 2013, figs. 4.2:f (KS-269) and 4.4:e (Sargarab)
L	KS59-P275	Probe F	Early Susa II	Yellowish buff ware, occasional fine dark grits in paste, impressed appliqué band. Johnson 1973, Type 13, fig. 7, pl. II:b; Neely and Wright 1994, fig. IV.45:d (Sargarab)

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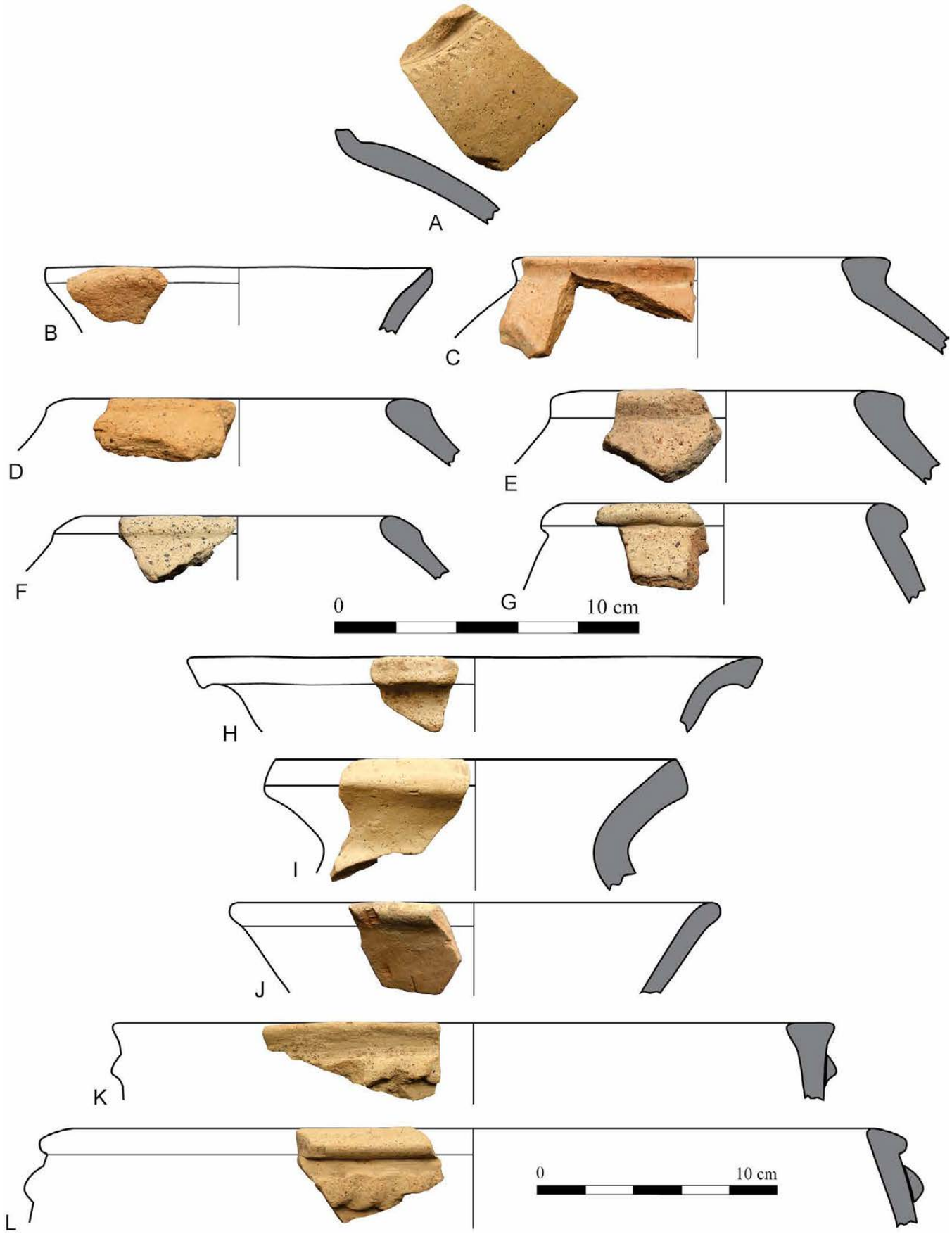

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Plate 39. Susa II pottery from KS-59 Square 288.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P400	L 2	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Orange buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For Middle Susa II see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
B	KS59-P10	L 2	Late Susa II	Yellowish buff ware, some small dark grits and chaff in paste. Delougaz and Kantor 1996, pl. 81:O–P; Strommenger, Sürenhagen, and Rittig 2014, pl. 9:G 8–9 (Habuba Kabira)
C	KS59-P402	L 8	Middle Susa II–Late Susa II	Pinkish buff ware, some chaff in paste. Delougaz and Kantor 1996, pl. 84:A. For earlier examples see Boese 1995, 40, fig. 8:g, and 41, fig. 9:b–c (Sheikh Hassan)
D	KS59-P403	L 8	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Buff ware, occasional small grits in paste, probably slipped. See A for references
E	KS59-P404	L 2	Middle Susa II–Early Susa III	Warm buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
F	KS59-P405	F 4	Middle Susa II–Early Susa III	Warm buff ware, straw tempered, completely oxidized. See E for references
G	KS59-P406	L 3	Late Susa II	Orange buff ware, fine grits in paste
H	KS59-P407	F 1	Late Susa II	Pale buff ware, orange surface, some fine grits in paste
I	KS59-P408	L 4	Middle Susa II–Early Susa III	Grayish buff ware, straw tempered, completely oxidized. See pl. 22:E for references
J	KS59-P409	L 8	Middle Susa II–Early Susa III	Warm buff ware, straw tempered, completely oxidized. See E for references
K	KS59-P410	L 8	Middle Susa II–Late Susa II	Buff ware, very few fine grits in paste, slipped. For Middle Susa II see Boese 1995, fig. 12:e (Sheikh Hassan). For Late Susa II see Delougaz and Kantor 1996, pl. 5:K–M; Le Brun 1978a, fig. 31:4 (Susa Acropole I, Level 17B); Strommenger, Sürenhagen, and Rittig pl. 16:G 156 (Habuba Kabira)
L	KS59-P43	L 4	Late Susa II	Buff ware, large to small dark grits in paste, gritty face

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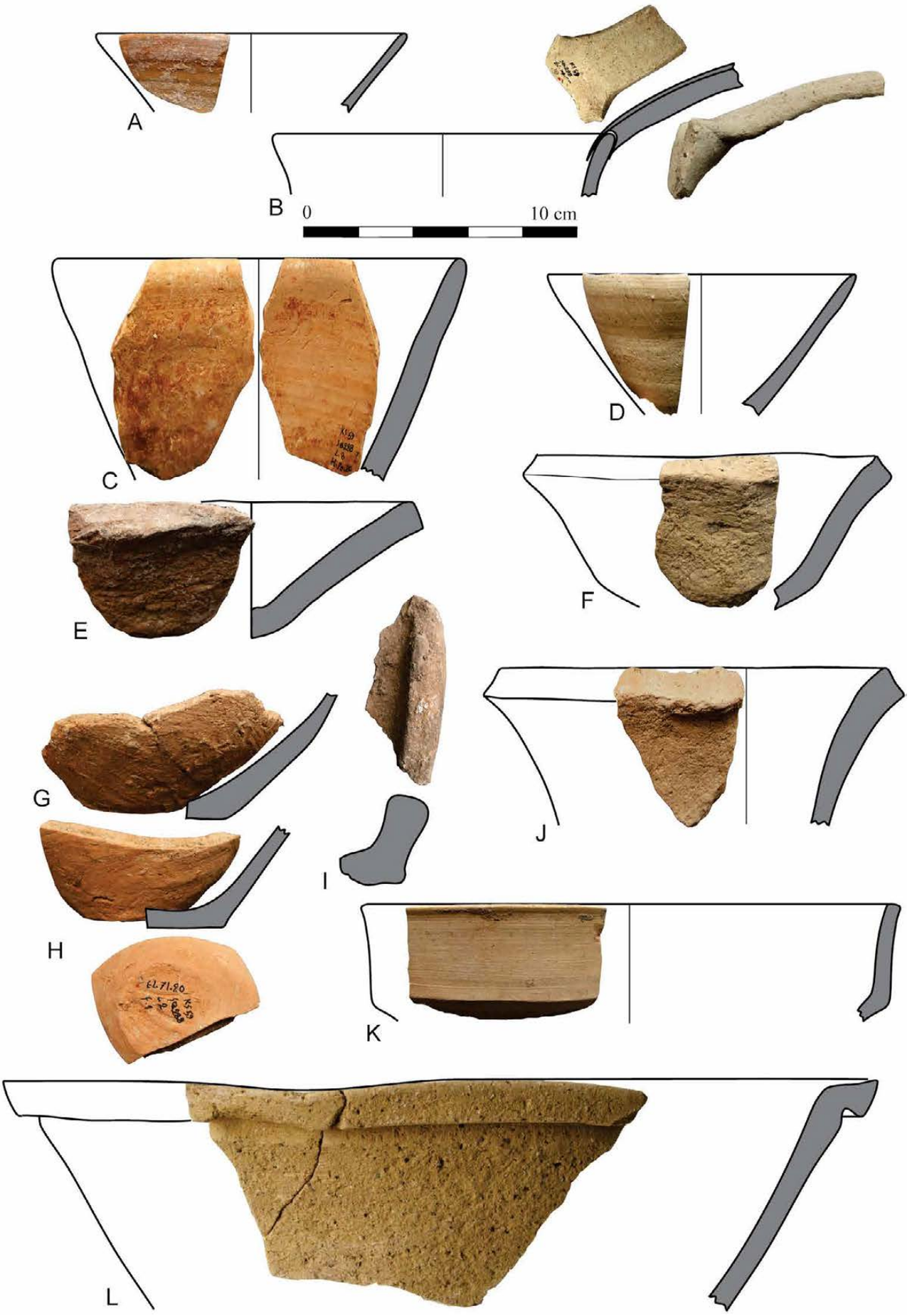

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Plate 40. Susa II pottery from KS-59 Square 288.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P411	L 2	Middle Susa II–Late Susa II	Buff ware, no visible inclusion, probably slipped. Boese 1995, 201, fig. 13:h (Sheikh Hassan). For late examples see Le Brun 1971, fig. 25:3 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pls. 31:G 474 and 50:G 681 (Habuba Kabira)
B	KS59-P412	L 2	Middle Susa II–Late Susa II	Buff ware, no visible inclusion, probably slipped
C	KS59-P413	L 3	Middle Susa II–Late Susa II	Buff ware, occasional small grits in paste, probably slipped. See A for references
D	KS59-P414	L 4	Middle Susa II–Late Susa II	Buff ware, medium to small red grits in paste, gritty face. Boese 1995, 78, fig. 15:g (Sheikh Hassan). For late examples see Le Brun 1971, fig. 27:7, 9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31:G 483 (Habuba Kabira)
E	KS59-P415	F 3	Middle Susa II–Late Susa II	Reddish buff ware, occasional large grits in paste. Boese 1995, 78, fig. 15:g (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pl. 95:N (with strap handle); Le Brun 1971, fig. 48:4 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 35:G 545 (Habuba Kabira)
F	KS59-P416	L 8	Middle Susa–Late Susa II	Buff ware, occasional small grits in paste, probably slipped. For Middle Susa II see Boese 1995, 78, fig. 15:d (Sheikh Hassan); Wright 1981, fig. 43:i (Farukhabad). For late examples see Delougaz and Kantor 1996, pls. 103:I, 104:H–I, and 105:G; Strommenger, Sürenhagen, and Rittig 2014, pl. 54
G	KS59-P417	L 3	Middle Susa II–Late Susa II	Reddish buff ware, occasional small grits in paste, probably slipped. Boese 1995, 172, fig. 10:d (Sheikh Hassan). For late examples see Miroschedji 1976, fig. 6:13–14 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 35:G 545 (Habuba Kabira)
H	KS59-P418	L 7	Early Susa II–Late Susa II	Pale-orange buff ware, some large to medium grits in paste, gritty face. For Early Susa II see Wright 1981, fig. 42:b. For Middle Susa II see Boese 1995, 173, fig. 11:a (Sheikh Hassan); Wright 1981, fig. 43:i (Farukhabad). For late examples see Le Brun 1971, fig. 25:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 313–14 (Habuba Kabira)
I	KS59-P419	L 4	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face, probably originally slipped. See F for references

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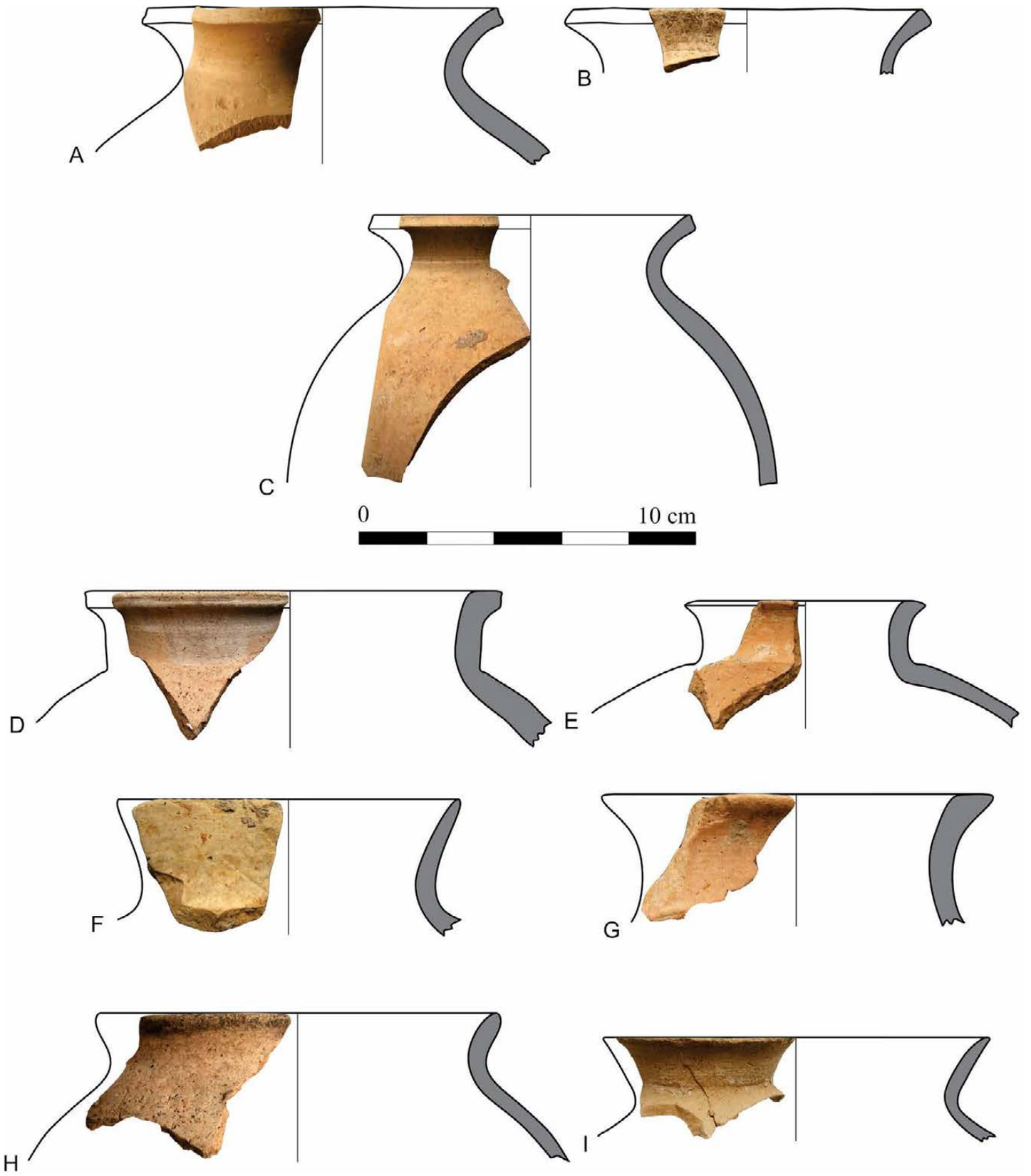

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Plate 41. Susa II pottery from KS-59 Square 288.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P420	F 4	Middle Susa II–Late Susa II	Yellowish buff, no visible inclusion, probably slipped. Boese 1995, 201, fig. 13:h (Sheikh Hassan). For late examples see Le Brun 1971, fig. 25:3 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pls. 31:G 474 and 50:G 681 (Habuba Kabira)
B	KS59-P421	F 4	Middle Susa II–Late Susa II	Pinkish buff ware, some scattered grits in paste, red wash on both surfaces. For Middle Susa II examples see Boese 1995, 78, fig. 15:d (Sheikh Hassan); Wright 1981, fig. 43:i (Farukhabad). For late examples see Delougaz and Kantor 1996, pls. 103:I, 104:H–I, and 105:G; Strommenger, Sürenhagen, and Rittig 2014, pl. 54
C	KS59-P425	L 3	Middle Susa II–Late Susa II	Light buff ware, no visible inclusion. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For Middle Susa II see Boese 1995, 48, fig. 16 (Sheikh Hassan); Wright 2013, fig. 4.11:b (Sharafabad)
D	KS59-P422	L 8	Middle Susa II–Late Susa II	Yellowish buff, some fine sand and occasional large grits in paste. See C for references
E	KS59-P423	L 8	Middle Susa II–Late Susa II	Buff ware, no visible inclusion. Boese 1995, 86, fig. 23:b (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pls. 88:N and 90:B; Strommenger, Sürenhagen, and Rittig 2014, pl. 23:G 332 (Habuba Kabira)
F	KS59-P426	L 3	Middle Susa II–Late Susa II	Buff ware, light buff surface, occasional small grits in paste, probably slipped. See B for references
G	KS59-P424	L 4	Middle Susa II–Late Susa II	Pinkish buff ware, small grits in paste, red wash on exterior and inner lip. Boese 1995, 86, fig. 23:a–b (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pls. 88:N and 96:A; Strommenger, Sürenhagen, and Rittig 2014, pl. 21 (Habuba Kabira)
H	KS59-P427	L 2	Late Susa II	Buff ware, light buff surface, occasional small grits in paste, probably slipped. Strommenger, Sürenhagen, and Rittig 2014, pl. 20:G 234 (Habuba Kabira)
I	KS59-P428	L 2	Late Susa II	Yellowish buff ware, large and medium dark grits in paste

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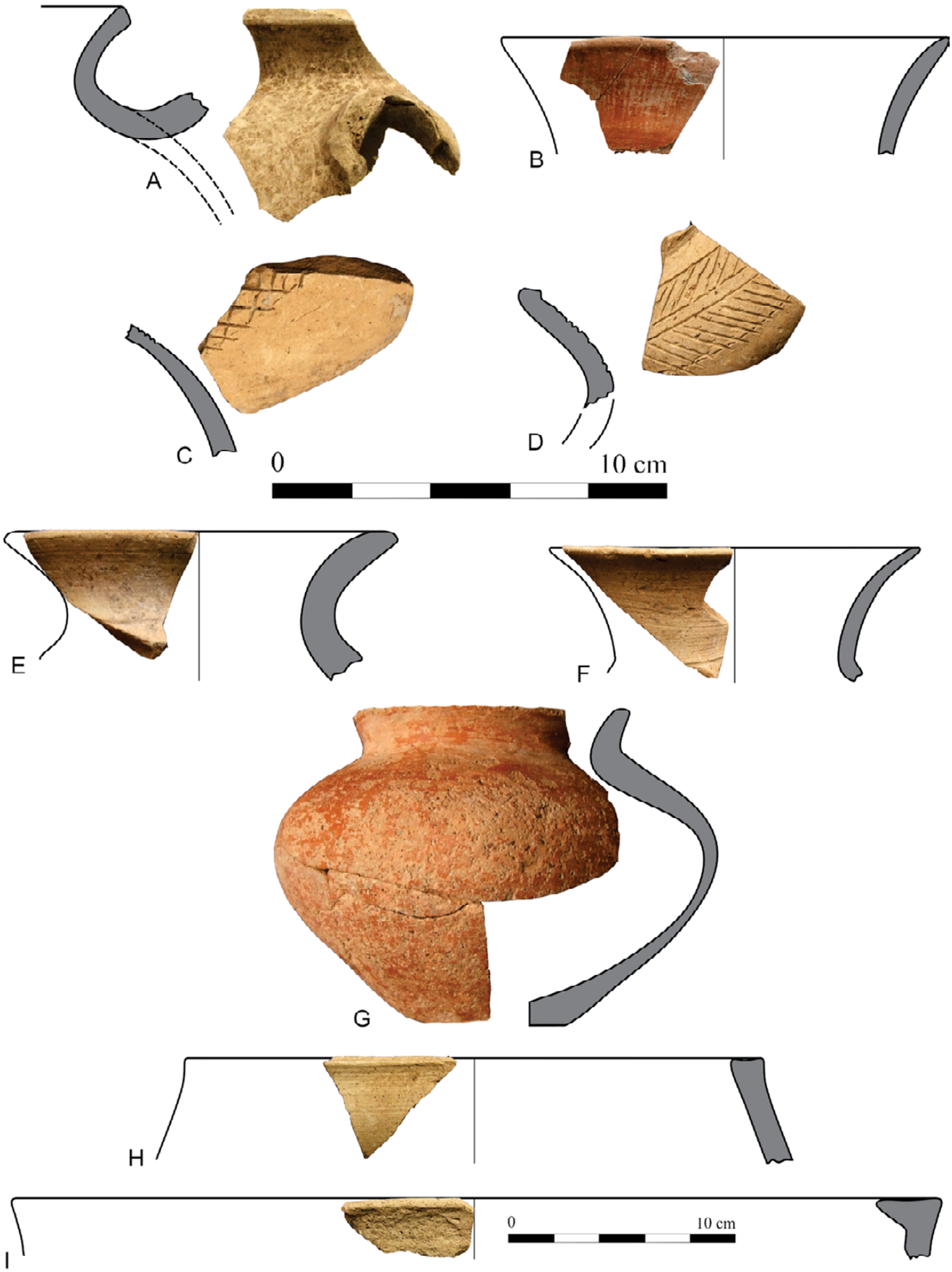

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Plate 42. Susa II pottery from KS-59 Square 288.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P429	L 7	Middle Susa II–Early Susa III	Buff ware, some sand in paste, probably slipped. Johnson 1973, Middle Uruk Type 27, pl. III:i; Boese 1995, 47, fig. 15:b (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pl. 93:B, F, H; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 30:G 462 (Habuba Kabira). At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). This type with a slight modification continues even into the Early Susa III (Proto-Elamite) phase; see Carter 1980, fig. 8 (Susa Ville Royale); Nicholas 1990, pl. 19:k (Malyan)
B	KS59-P430	L 4	Middle Susa II–Late Susa II	Warm buff ware, medium to small dark grits and calcite particles in paste, gritty face, finger-impressed appliqué band. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
C	KS59-P431	L 8	Middle Susa II–Late Susa II	Buff ware, no visible inclusion. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
D	KS59-P432	L 7	Middle Susa II–Late Susa II	Buff ware, medium dark grits in paste, gritty face. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
E	KS59-P433	L 7	Middle Susa II–Late Susa II	Warm buff ware, large and medium red grits in paste, gritty face, probably dark-pink wash on exterior, dark-gray core. See D for references
F	KS59-P434	L 8	Middle Susa II–Late Susa II	Yellowish buff ware, no visible inclusion, occasional chaff in paste. Johnson 1973, Type 26. This type was not included in Johnson's seriation and thus not dated. Boese 1995, 86, fig. 23:h–i (Sheikh Hassan); Delougaz and Kantor 1996, pls. 92:H and 93:C; Le Brun 1978a, fig. 25:4 (Susa Acropole I); Miroschedji 1976, fig. 6:7 (Susa Apadana kiln)
G	KS59-P435	L 7	Middle Susa II–Late Susa II	Buff ware, medium to small dark grits in paste, gritty face. See B and D for references
H	KS59-P436	L 3	Middle Susa II–Late Susa II	Creamy buff ware, some fine dark grits in paste, probably slipped. See C for references

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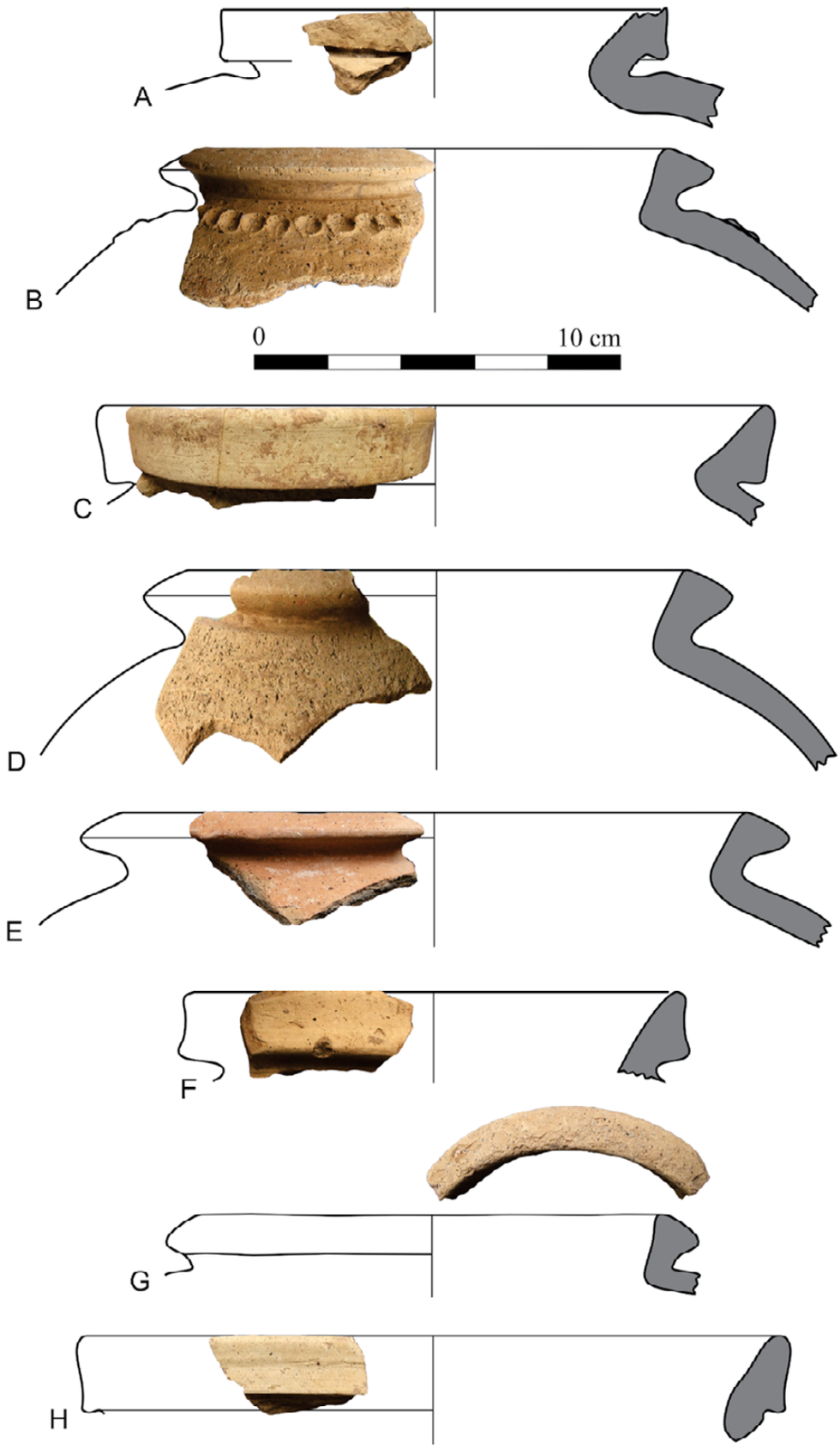

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Plate 43. Susa II pottery from KS-59 Square 288.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P437	L 6	Middle Susa II–Late Susa II	Nose lug handle. Warm buff ware, no visible inclusion. Johnson 1973, Type 36, pl. IV:b; Le Brun 1971, fig. 51:2, 9–10; 1978a, fig. 33:2, 7; 1978b, fig. 34:10 (Susa Acropole I). For Middle Susa II see Wright 2013, fig. 4.11:b, i (Sharafabad)
B	KS59-P438	L 4	Middle Susa II–Late Susa II	Orange buff ware, no visible inclusion, light-brown core, creamy buff surface. Boese 1995, 77, fig. 14:j–k (Sheikh Hassan). For late examples see Le Brun 1978a, fig. 25:2 (Susa Acropole I); Miroschedji 1976, fig. 6:9 (Susa Apadana kiln)
C	KS59-P17	F 3 (grave)	Middle Susa II(?)–Late Susa II	Yellowish buff ware, occasional grits in paste, slipped, scraped below carination. Alizadeh 2008, fig. 31:D; Delougaz and Kantor 1996, pl. 104:G; Le Brun 1978a, fig. 31:4 (Susa Acropole I)
D	KS59-P440	L 8	Middle Susa II–Late Susa II	Pinkish buff ware, occasional small to medium grits in paste. Such globular jars with strap handles without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With the grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan)
E	KS59-P441	L 4	Middle Susa II–Late Susa II	Pinkish buff ware, some medium grits and calcite particles in paste. Boese 1995, 228, fig. 14:b–c (Sheikh Hassan). For late examples see Le Brun 1971, fig. 48:4. For the rim see Le Brun 1978a, fig. 28:10–11 (Susa Acropole I)
F	KS59-P442	L 7	Middle Susa II–Late Susa II	Warm buff ware, large to medium maroon grits in paste, gritty face. See D for references

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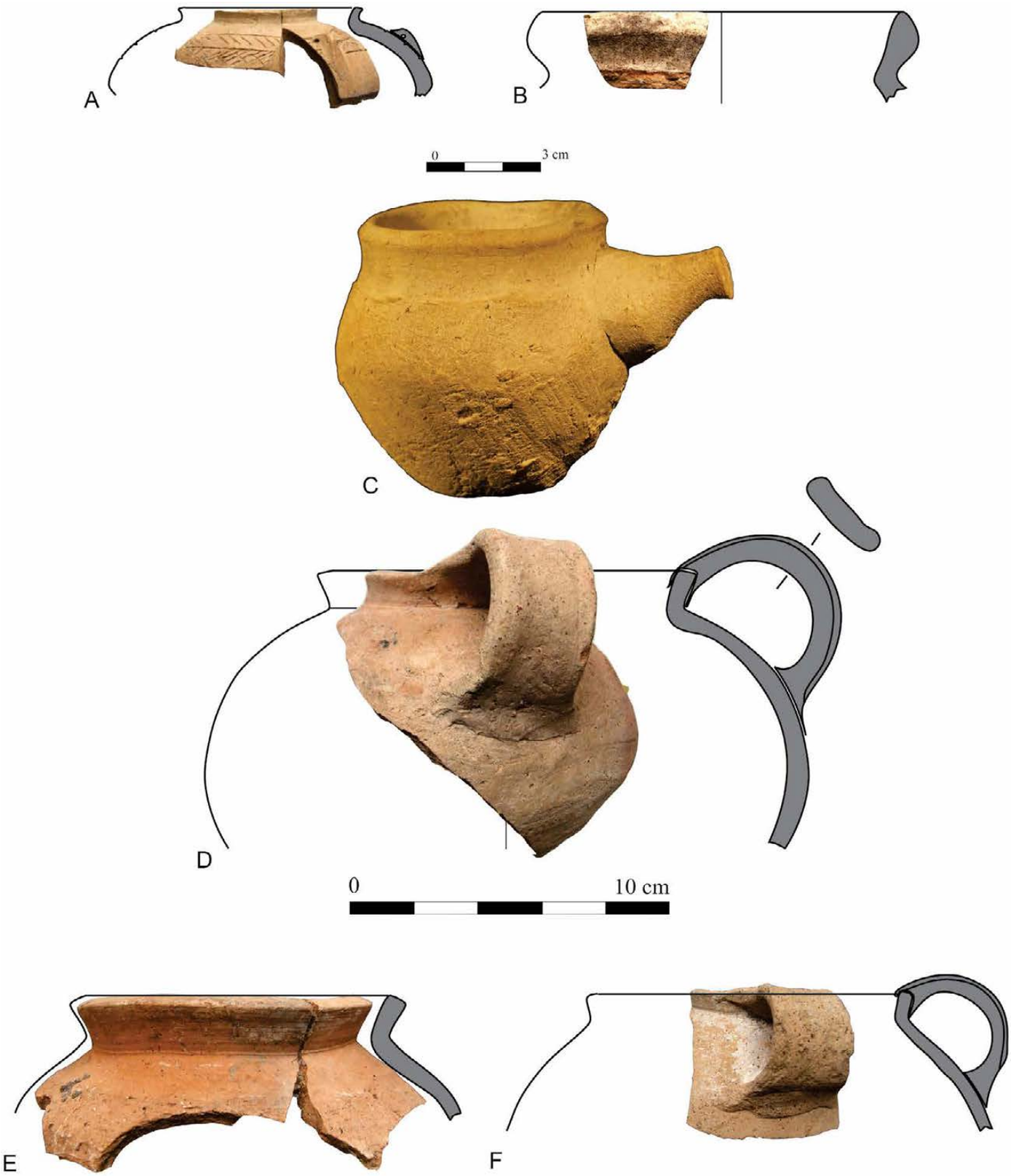

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Plate 44. Susa II pottery from KS-59 Square 1033.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P443	At 73.00	Late Susa II	Warm buff ware, small dark grits and calcite particles in paste, gritty face, false spout. For the shape with a regular spout see Alizadeh 2008, fig. 30:F; Strommenger, Sürenhagen, and Rittig 2014, pl. 59:G 874 (Habuba Kabira). For an example of the false spout see Delougaz and Kantor 1996, pl. 108:A; Strommenger, Sürenhagen, and Rittig 2014, pl. 59:G 874 (Habuba Kabira); Wright 1981, fig. 55:m (Farukhabad). See also Nissen 1970, pl. 98:39/102 (Uruk)
B	KS59-P444	At 72.60	Middle Susa II–Late Susa II	Warm buff ware, occasional grits in paste. Johnson 1973, Type 50, pl. VII:c. Delougaz and Kantor 1996, pl. 95:I; Le Brun 1978a, fig. 28:4 (Susa Acropole I); Miroschedji 1976, fig. 8:9 (Susa Apadana kiln). For an earlier example see Boese 1995, 78, fig. 15:d (Sheikh Hassan)
C	KS59-P445	At 72.07	Late Susa II	False spout or unintentional blockage. Buff ware, no visible inclusion. For examples of the false spout see Delougaz and Kantor 1996, pl. 108:A, C–D
D	KS59-P446	At 72.20	Late Susa II	False spout or unintentional blockage. Buff ware, some sand in paste. Delougaz and Kantor 1996, pl. 108:A
E	KS59-P447	At 73.10	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For Middle Susa II see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
F	KS59-P448	At 73.00	Middle Susa II–Late Susa II	Buff ware, sandy paste, creamy buff exterior. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
G	KS59-P449	At 72.60	Middle Susa II–Late Susa II	Yellowish buff ware, occasional grits in paste. Boese 1995, 77, fig. 14:j–k (Sheikh Hassan). For late examples see Le Brun 1978a, fig. 25:2 (Susa Acropole I); Miroschedji 1976, fig. 6:9 (Susa Apadana kiln)

Note: Elevations are in m ASL.

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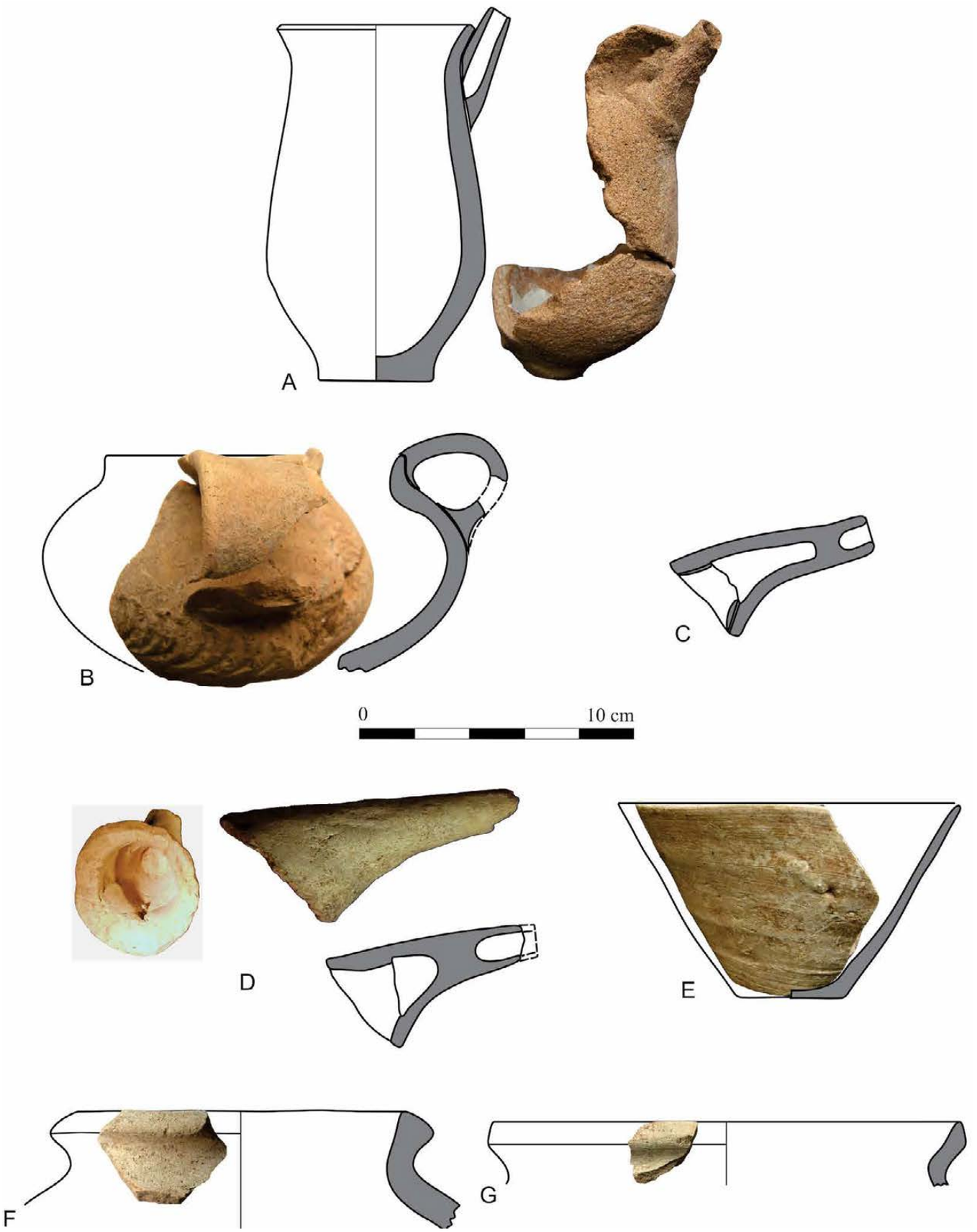

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Plate 45. Susa II pottery from KS-59 Square 1033.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P450	At 72.50	Middle Susa II–Late Susa II	Pale bricky red ware, some medium red grits and calcite particles in paste. Le Brun 1978a, fig. 26:4 (Susa Acropole I, Level 17B)
B	KS59-P451	At 72.30	Middle Susa II–Late Susa II	Orange red ware, no visible inclusion. Delougaz and Kantor 1996, pls. 88:E and 89:Q; Le Brun 1978a, fig. 26:1 (Susa Acropole I, Level 17B). For earlier examples see Boese 1995, 45, fig. 13:a, and 78, fig. 15:d (Sheikh Hassan)
C	KS59-P452	At 72.30	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
D	KS59-P453	At 72.30	Middle Susa II–Late Susa II	Buff ware, no visible inclusion, creamy buff exterior. Le Brun 1978a, fig. 27:7 (Susa Acropole I, Level 17B). For an earlier example see Boese 1995, 78, fig. 15:g (Sheikh Hassan)
E	KS59-P454	At 73.10	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. See C for references
F	KS59-P455	At 73.00	Middle Susa II–Late Susa II	Light-brown buff ware, some fine grits and calcite particles in paste, beige surface. For the rim see Le Brun 1978a, fig. 23:12 (Susa Acropole I). For an earlier example see Boese 1995, 80, fig. 17:j (Sheikh Hassan)
G	KS59-P456	At 72.90	Late Susa II	Buff ware, some fine dark sand in paste, probably slipped

Note: Elevations are in m ASL.

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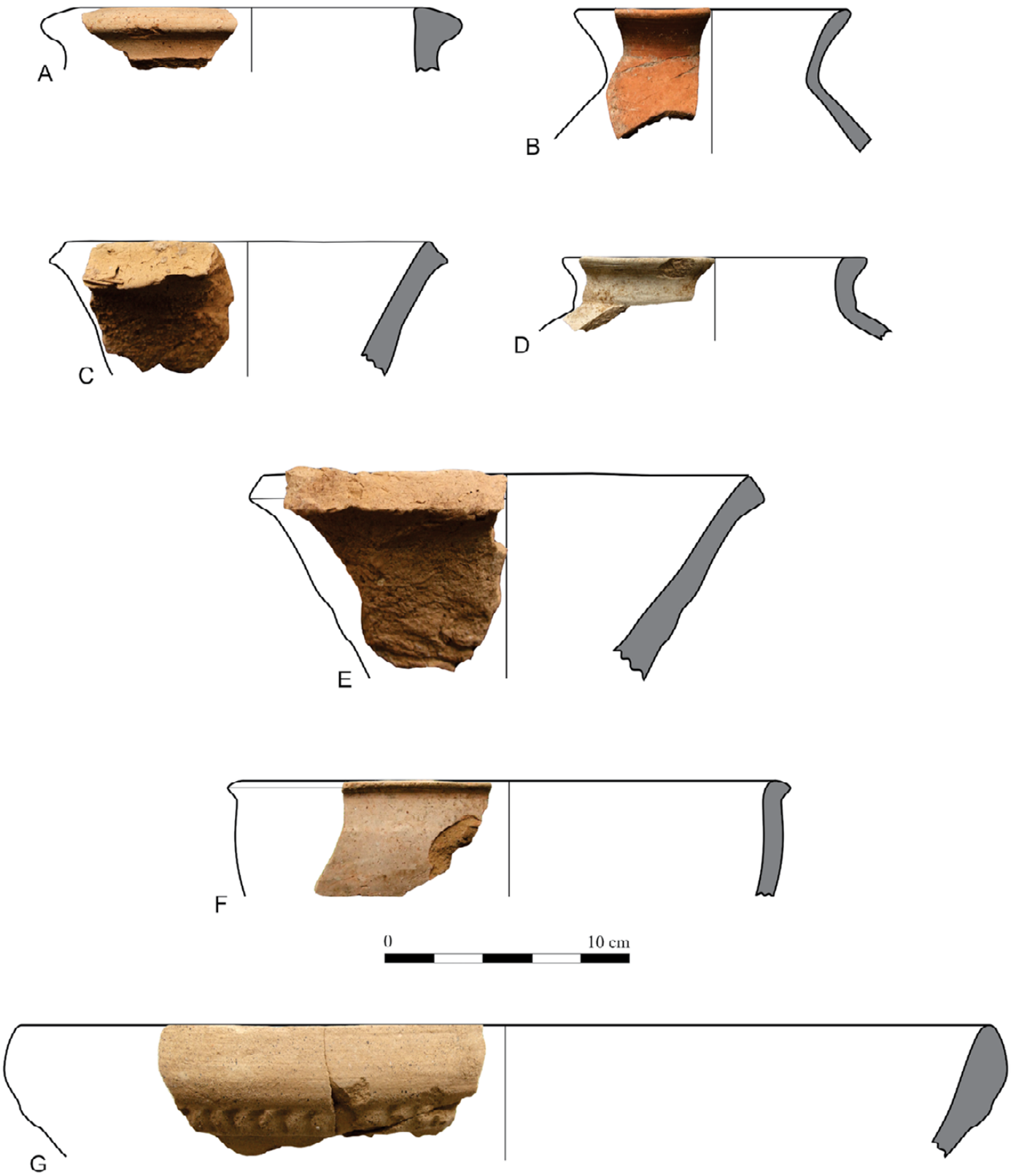

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Plate 46. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P457	L 4	Middle Susa II–Early Susa III	Buff ware, straw tempered, light-gray core. See pl. 45:C for date and references
B	KS59-P458	L 4	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
C	KS59-P459	L 3	Middle Susa II–Late Susa II	Buff ware, straw tempered, completely oxidized. For the Middle Susa II date see Boese 1995, fig. 10:b (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pl. 84:P; Strommenger, Sürenhagen, and Rittig 2014, pl. 11:G 85–86 (Habuba Kabira)
D	KS59-P460	L 1	Middle Susa II–Late Susa II	Orange buff ware, medium to small dark grits in paste. For Middle Susa II examples see Boese 1995, figs. 12:e and 13:g (Sheikh Hassan); Wright 2013, fig. 4.10:f (Sharafabad). For late examples see Delougaz and Kantor 1996, pl. 85:K–L; Strommenger, Sürenhagen, and Rittig 2114, pl. 78:G 40 (Habuba Kabira)
E	KS59-P461	L 4	Late Susa II	Buff ware, some sand in paste, light-orange buff exterior
F	KS59-P462	L 4	Late Susa II	Buff ware, occasional medium to small grits in paste
G	KS59-P463	L 1	Middle Susa II–Late Susa II	Buff ware, some small grits in paste
H	KS59-P464	L 3	Late Susa II	Light-brown buff ware, gritty paste. Delougaz and Kantor 1996, pl. 88:Z
I	KS59-P465	L 1	Middle Susa II–Late Susa II	Buff ware, some sand in paste. Such globular jars with strap handles without grooves on the shoulder are dated to the Middle Uruk (Wright 2013, fig. 4.11:e, Sharafabad); see also Boese 1995, 78, fig. 15:e (Sheikh Hassan). With the grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I)
J	KS59-P466	L 4	Middle Susa II–Late Susa II	Buff ware, occasional small grits in paste, probably slipped. Delougaz and Kantor 1996, pl. 109:D. For earlier examples see Boese 1995, 201, fig. 13:h (Sheikh Hassan); Stein 2001, fig. 8.7:L (Hacinebi)
K	KS59-P467	L 4	Middle Susa II–Late Susa II	Pinkish buff ware, gritty paste and gritty face. Johnson 1973, Type 25, pl. III:g; Delougaz and Kantor 1996, pls. 91:K and 101:A; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln). For earlier examples see Boese 1995, 201, fig. 13:k (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
L	KS59-P468	L 4	Middle Susa II–Late Susa II	Light-orange buff ware, some grits in paste. Similar to Le Brun 1978a, fig. 25:9 (Susa Acropole I). For an earlier example see Boese 1995, 77, fig. 14:j (Sheikh Hassan)

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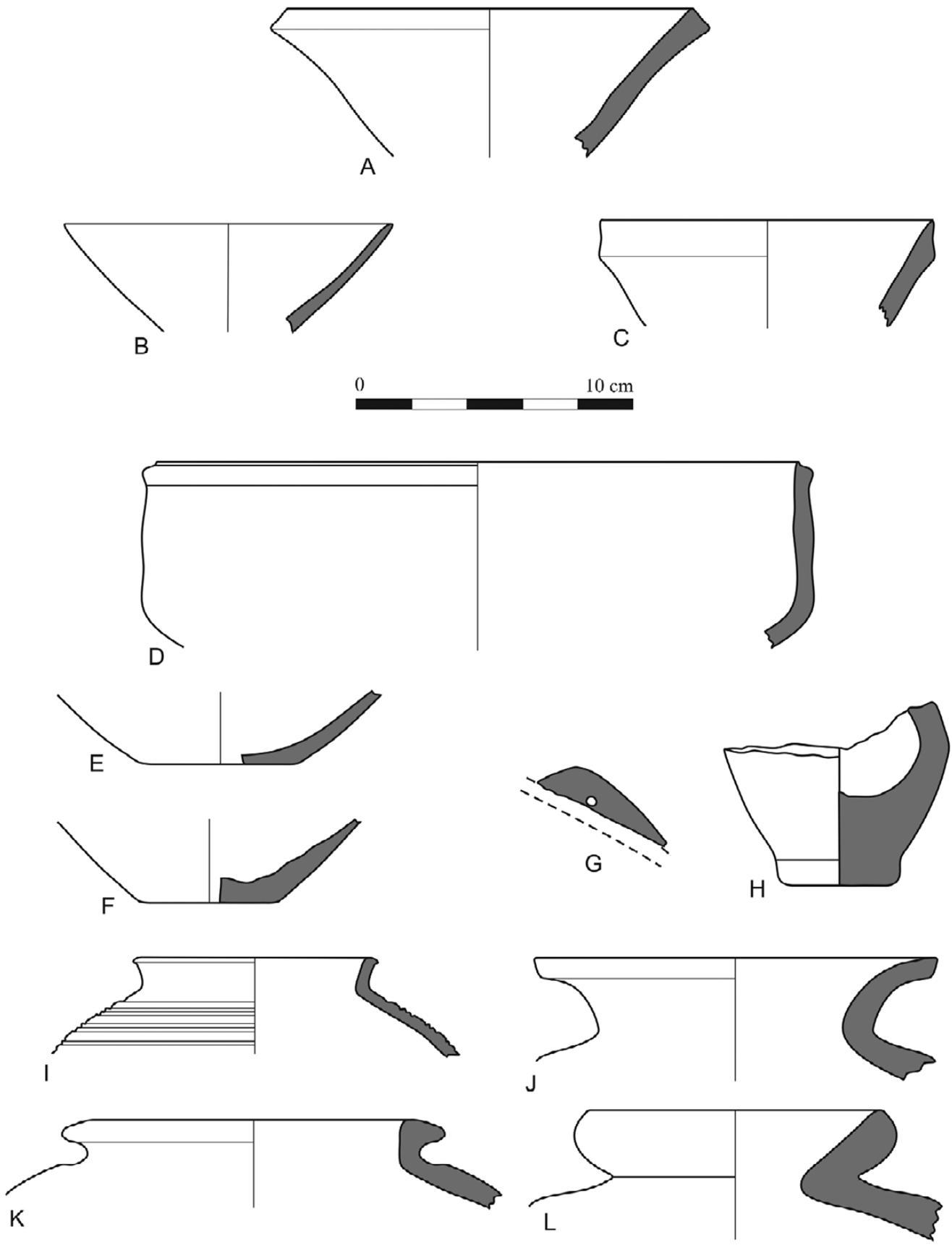

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Plate 47. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P469	L 8	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P470	L 6	Middle Susa II–Late Susa II	Fine cup with pouring lip. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
C	KS59-P471	L 6	Middle Susa II–Late Susa II	Buff ware, some small grits in paste. Le Brun 1978a, fig. 31:6 (Susa Acropole I); Miroschedji 1976, fig. 7:6 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 30:G 460 and G 466 (Habuba Kabira). For the Middle Susa II date see Boese 1995, 83, fig. 20:j (Sheikh Hassan)
D	KS59-P472	L 6	Middle Susa II–Late Susa II	Light-brown buff ware, some grits and calcite particles in paste. Delougaz and Kantor 1996, pl. 84:A–B; Le Brun 1978a, fig. 19:22 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 9:G 2–3 (Habuba Kabira). For an earlier example see Boese 1995, fig. 12:c (Sheikh Hassan); Stein 2001, fig. 8.6:N (Hacinebi)
E	KS59-P473	L 8	Late Susa II	Buff ware, occasional small grits in paste, probably slipped
F	KS59-P474	L 8	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Buff ware, no visible inclusion. Strommenger, Sürenhagen, and Rittig 2014, pl. 10:G 35 (Habuba Kabira). For a Middle Susa II example see Boese 1995, fig. 9:d; Stein 2001, fig. 8.6:I (Hacinebi)
G	KS59-P475	L 8	Middle Susa II–Late Susa II	Fine cup with pouring lip. Creamy buff ware, no visible inclusion. See B for references
H	KS59-P476	L 6	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Buff ware, no visible inclusion. See B for references

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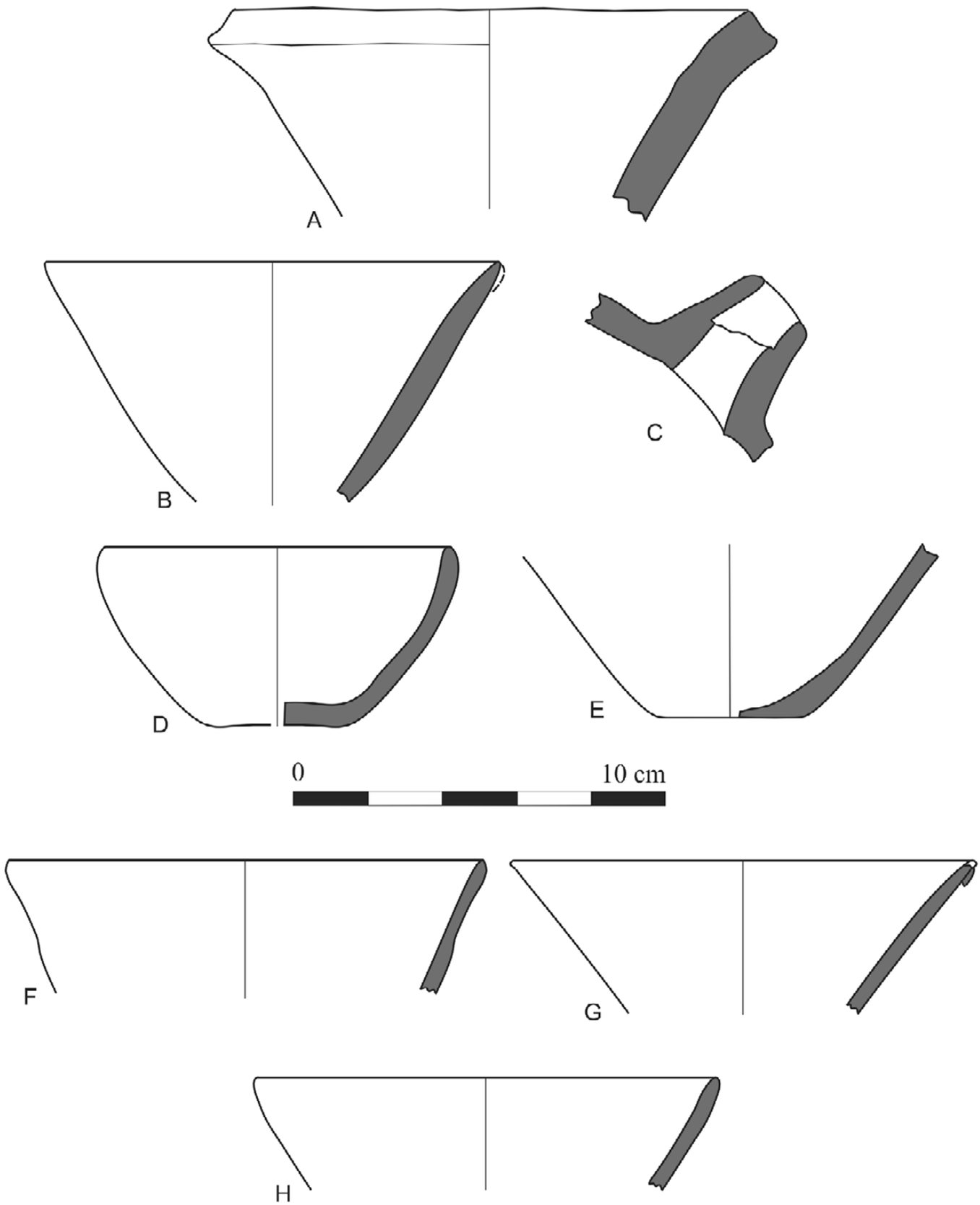

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Plate 48. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P477	L 8	Late Susa II	Dark buff ware, some medium grits and calcite particles in paste
B	KS59-P478	L 8	Middle Susa II–Late Susa II	Buff ware, some small grits in paste. Strommenger, Sürenhagen, and Rittig 2014, pl. 23 (Habuba Kabira). For earlier examples see Boese 1995, 46, fig. 14:e (Sheikh Hassan); Stein 2001, fig. 8.7:I (Hacinebi)
C	KS59-P479	L 6	Late Susa II	Pinkish buff ware, some small grits in paste
D	KS59-P480	L 6	Middle Susa II–Late Susa II	Pinkish buff ware, gritty paste and gritty face. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
E	KS59-P481	L 6	Middle Susa II–Late Susa II	Buff ware, gritty paste, probably slipped. Boese 1995, 171, fig. 9:i, k–m (Sheikh Hassan); Stein 2001, fig. 8.7:A (Hacinebi); Wright 2013, fig. 4.11:e (Sharafabad). For late examples see Delougaz and Kantor 1996, pls. 88:N and 95:K (with handle); Strommenger, Sürenhagen, and Rittig 2014, pl. 23:G 318 (Habuba Kabira)
F	KS59-P482	L 8	Middle Susa II–Late Susa II	Buff ware, some sand in paste. Delougaz and Kantor 1996, pl. 93:A; similar to Miroschedji 1976, fig. 6:1 (Susa Apadana kiln). For an earlier example see Boese 1995, 47, fig. 15:a (Sheikh Hassan)
G	KS59-P483	L 8	Middle Susa II–Late Susa II	Buff ware, some sand in paste, creamy buff surface. Boese 1995, 86, fig. 23:b (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pls. 88:N and 90:B; Le Brun 1971, fig. 25:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 23:G 332 (Habuba Kabira)

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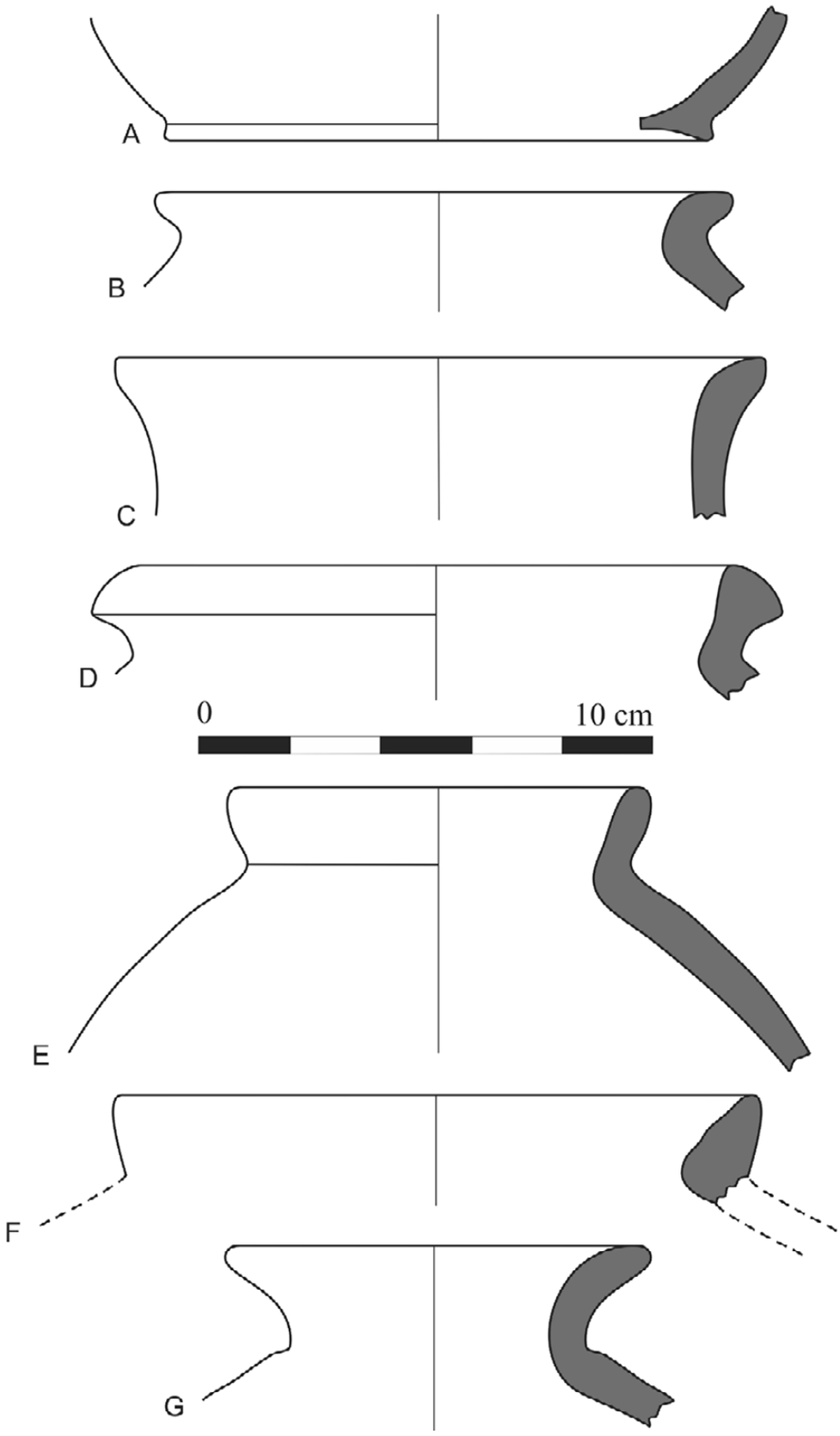

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Plate 49. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P484	L 10 / F 20	Late Susa II	Light-brown buff ware, small grits in paste, bricky red surfaces. Le Brun 1978a, fig. 22:8–9 (Susa Acropole I)
B	KS59-P485	L 10 / F 20	Middle Susa II–Late Susa II	Buff ware, straw tempered, completely oxidized. Boese 1995, 41, fig. 9:b–d (Sheikh Hassan); Stein 2001, fig. 8.6:G–I (Hacinebi). For a late example see Strommenger, Sürenhagen, and Rittig 2014, pl. 15:G 133 (Habuba Kabira)
C	KS59-P486	L 10 / F 20	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
D	KS59-P487	L 10 / F 20	Middle Susa II–Late Susa II	Fine cup with pouring lip. Creamy buff ware, no visible inclusion. See C for references
E	KS59-P489	L 10 / F 20	Middle Susa II–Late Susa II	Buff ware, large to medium dark grits in paste, light-grayish buff core. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For the Middle Susa II date see Wright 2013, fig. 4.11:b (Sharafabad); Boese 1995, 48, fig. 16 (Sheikh Hassan)
F	KS59-P31	L 10 / F 20	Late Susa II	Light-brown buff ware, fine dark grits in paste
G	KS59-P491	L 10 / F 20	Late Susa II	Buff ware, straw tempered
H	KS59-P492	L 10 / F 20	Middle Susa II–Early Susa III	Light buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
I	KS59-P493	L 10 / F 20	Middle Susa II–Early Susa III	Bricky red ware, chaff tempered, some small to medium maroon grits and occasional calcite particles in paste. See H for references

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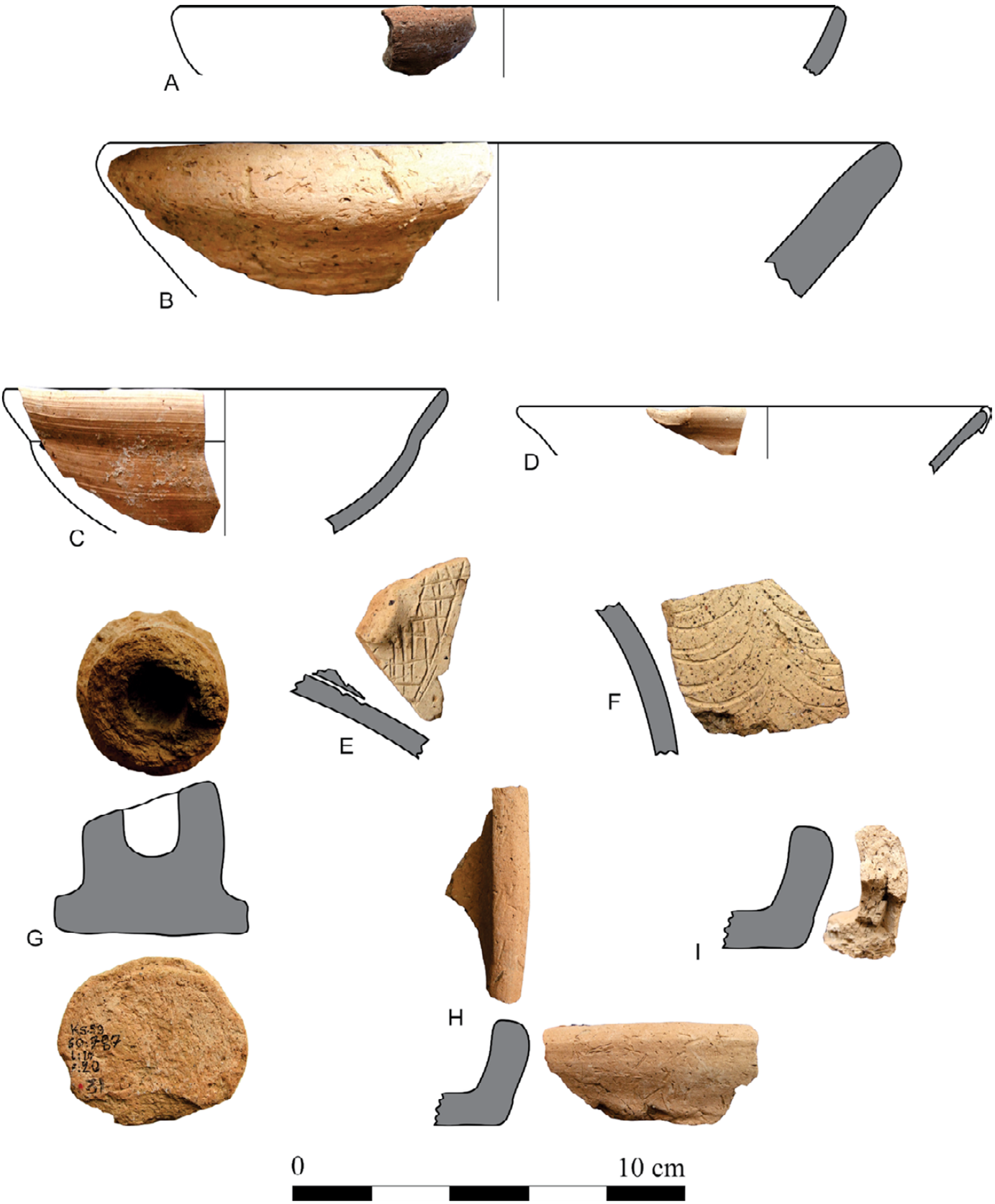

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Plate 50. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P494	L 10 / F 20	Middle Susa II–Late Susa II	Light-reddish buff ware, fine grits and calcite particles in paste, buff exterior. Boese 1995, 171, fig. 9:k (Sheikh Hassan). For late examples see Le Brun 1978a, fig. 25:10 (Susa Acropole I); Miroschedji 1976, fig. 6:8–9 (Susa Apadana kiln)
B	KS59-P496	L 10 / F 20	Middle Susa II–Late Susa II	Buff ware, some fine grits in paste, buff slip exterior. Le Brun 1978a, fig. 31:6 (Susa Acropole I); Miroschedji 1976, fig. 7:6 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 30:G 460 and G 466 (Habuba Kabira). For the Middle Susa II date see Boese 1995, 83, fig. 20:j (Sheikh Hassan)
C	KS59-P497	L 10 / F 20	Middle Susa II–Late Susa II	Reddish buff ware, small maroon grits and calcite particles in paste, gray core. Johnson 1973, Type 19, pl. III:a (not dated); Le Brun 1978a, fig. 25:10 (Susa Acropole I); Miroschedji 1976, fig. 8:9, 12 (Susa Apadana kiln). For earlier examples see Boese 1995, 173, fig. 11:a (Sheikh Hassan); Wright 2013, fig. 4.11:e (Sharafabad)
D	KS59-P499	L 10 / F 20	Middle Susa II–Late Susa II	Light-grayish buff ware, fine dark grits in paste, gritty face, light-gray core. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
E	KS59-P500	L 10 / F 20	Middle Susa II–Late Susa II	Pinkish buff ware, scattered maroon grits in paste, gray core. Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
F	KS59-P501	L 10 / F 20	Middle Susa II–Late Susa II	Buff ware, chaff tempered, probably slipped. Boese 1995, 171, fig. 9:h, j (Sheikh Hassan). For late examples see Le Brun 1978a, fig. 24:7 (Susa Acropole I, Level 17B)
G	KS59-P490	L 10 / F 20	Middle Susa II–Late Susa II	Buff ware, some fine grits in paint, yellowish buff slip on exterior, reserved slip with horizontal strokes. Boese 1995, 171, fig. 9:j. For late examples see Le Brun 1978a, fig. 24:6 (with incision) (Susa Acropole I, Level 17B)

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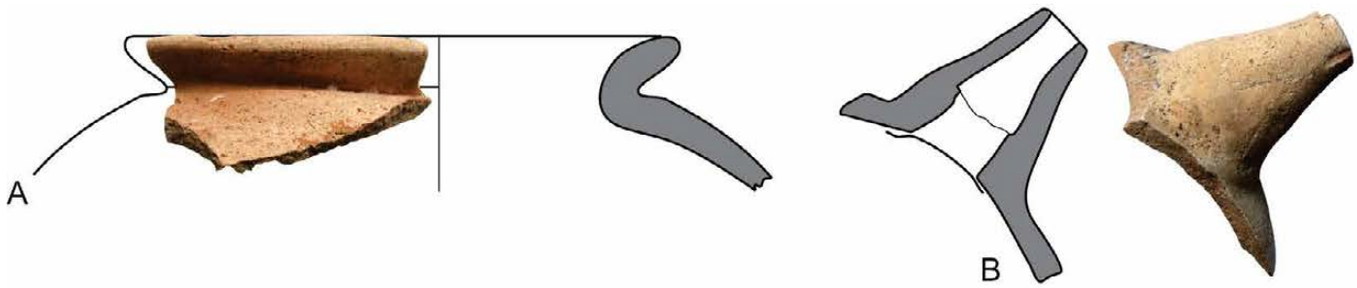

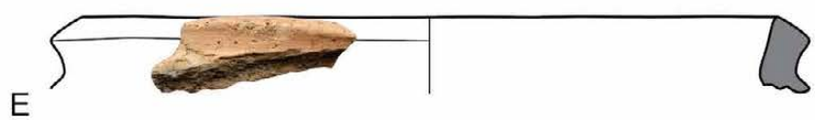

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Plate 51. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P503	L 22	Middle Susa II–Late Susa II	Light-orange buff ware, fine dark grits and calcite particles in paste, gritty face. For Middle Susa II examples see Boese 1995, figs. 12:e and 13:g (Sheikh Hassan); Wright 2013, fig. 4.10:f (Sharafabad). For late examples see Delougaz and Kantor 1996, pl. 85:K–L (Chogha Mish); Strommenger, Sürenhagen, and Rittig 2114, pl. 78:G 40 (Habuba Kabira)
B	KS59-P504	L 9	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
C	KS59-P505	L 22	Middle Susa II–Late Susa II	Yellowish buff ware, no visible inclusion. Johnson 1973, Type 46, pl. VI:a is dated to the Late Uruk phase but is also found in late Middle Uruk contexts; see Boese 1995, 174, fig. 12:a–b (Sheikh Hassan). It is also reported from a late Middle Uruk context from Hacinebi (Wright and Rupley 2001, 107). For Late Susa II examples see Delougaz and Kantor 1996, pl. 102:G, J; Le Brun 1971, fig. 52:7–8; 1978a, fig. 30:6, 12, 14 (Susa Acropole I); Miroschedji 1976, fig. 7:3 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pls. 51–52 (Habuba Kabira); Wright 2013, fig. 4.14:h (Farukhabad)
D	KS59-P506	L 9	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. See B for references
E	KS59-P507	L 13	Middle Susa II–Late Susa II	Yellowish buff ware, no visible inclusion. Boese 1995, 79, fig. 16:c (Sheikh Hassan); Wright 2013, fig. 4.11:g (Sharafabad). For late examples see Alizadeh 2008, fig. 31:C; Delougaz and Kantor 1996, pl. 103:I; Miroschedji 1976, fig. 7:7 (Susa Apadana kiln)
F	KS59-P508	L 21	Late Susa II	Buff ware, straw tempered, rough, uneven surface. This piece may also be a pipe. Delougaz and Kantor 1996, pl. 83:A–E; Le Brun 1971, pl. XVIII:4 (Susa Acropole I)

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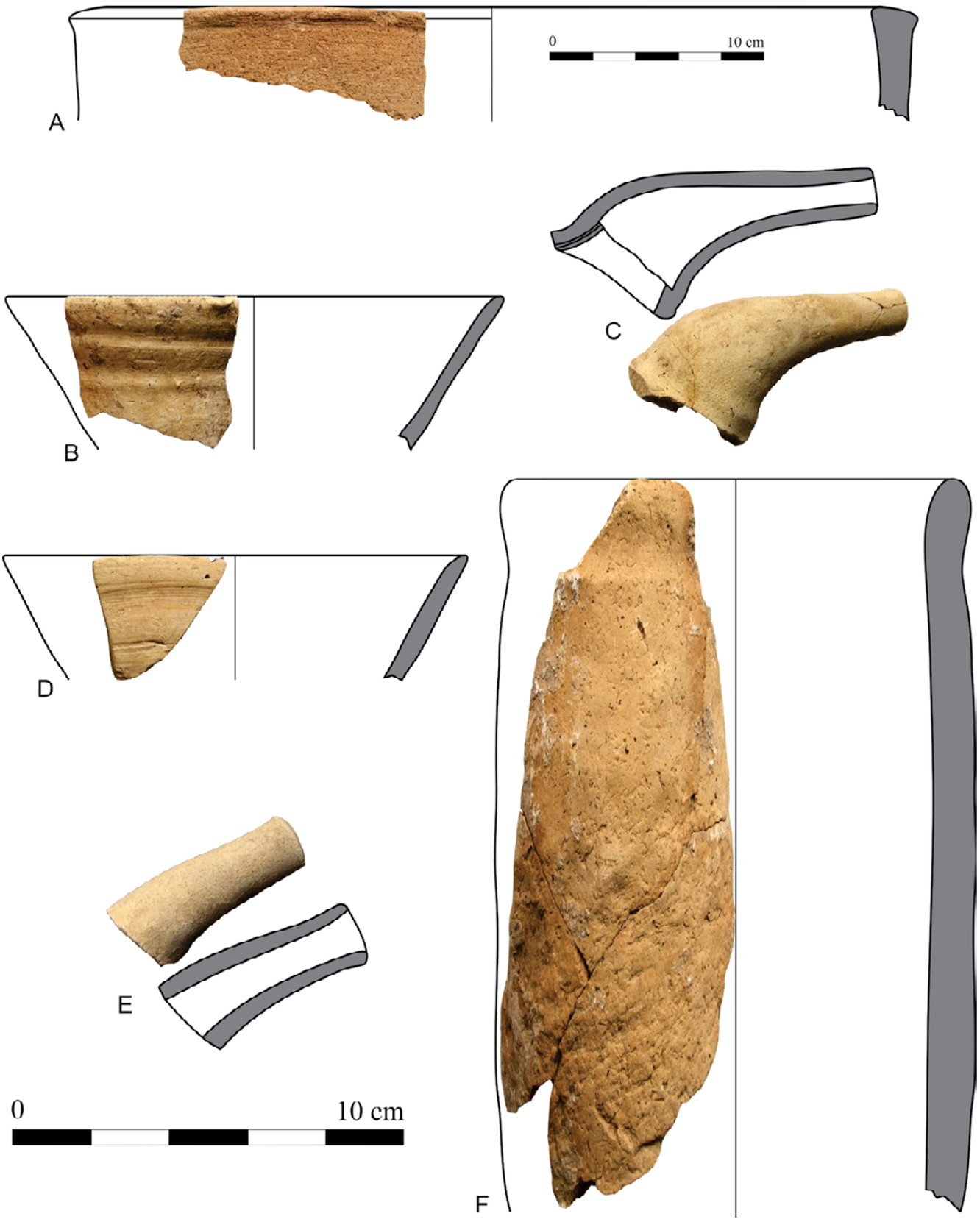

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Plate 52. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P509	L 9	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Susa II date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P510	L 13	Middle Susa II–Late Susa II	Buff ware, small grits in paste, creamy buff exterior. Shoulder decoration with incised horizontal and oblique grooves dated by Johnson (1973, Type 40, pl. IV:d) to the Late Uruk phase. Boese 1995, 171, fig. 9:g–j (Sheikh Hassan); Stein 2001, fig. 8.7 (Hacinebi). For late examples see Delougaz and Kantor 1996, pls. 21:C; 97:D; and 98:A, F, I–K; Wright 2013, fig. 4.14:g (Farukhabad)
C	KS59-P511	L 13	Middle Susa II–Late Susa II	Buff ware, fine grits in paste, light buff exterior. Wright 2013, fig. 4.11:a (Sharafabad)
D	KS59-P512	L 13	Middle Susa II–Late Susa II	Yellowish buff ware, medium to small grits in paste, occasional straw. For the Middle Susa II date see Boese 1995, 201, fig. 13:m (Sheikh Hassan); Wright 2013, fig. 4.11:h (Sharafabad). For Late Susa II see Le Brun 1978a, fig. 25:4; 1978b, fig. 32:3 (Susa Acropole I); Miroschedji 1976, fig. 6:7 (Susa Apadana kiln)
E	KS59-P513	L 11	Middle Susa II–Late Susa II	Pale-greenish buff ware, occasional medium dark grits in paste, yellowish buff exterior. Boese 1995, 78, fig. 15:g (Sheikh Hassan). For late examples see Le Brun 1971, fig. 27:7, 9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31:G 483 (Habuba Kabira)
F	KS59-P514	L 13	Middle Susa II–Late Susa II	Pale buff ware, small dark grits in paste. Delougaz and Kantor 1996, pl. 93:A; similar to Miroschedji 1976, fig. 6:1 (Susa Apadana kiln). For an earlier example see Boese 1995, 47, fig. 15:a (Sheikh Hassan)
G	KS59-P515	L 13	Middle Susa II–Late Susa II	Buff ware, fine chaff inclusion. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
H	KS59-P516	L 13	Middle Susa II–Late Susa II	Pale bricky red ware, no visible inclusion, scattered large grits in paste, light buff wash/slip on exterior. Johnson 1973, Type 25, pl. III:g; Delougaz and Kantor 1996, pls. 91:K and 101:A; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln). For earlier examples see Boese 1995, 201, fig. 13:k (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)

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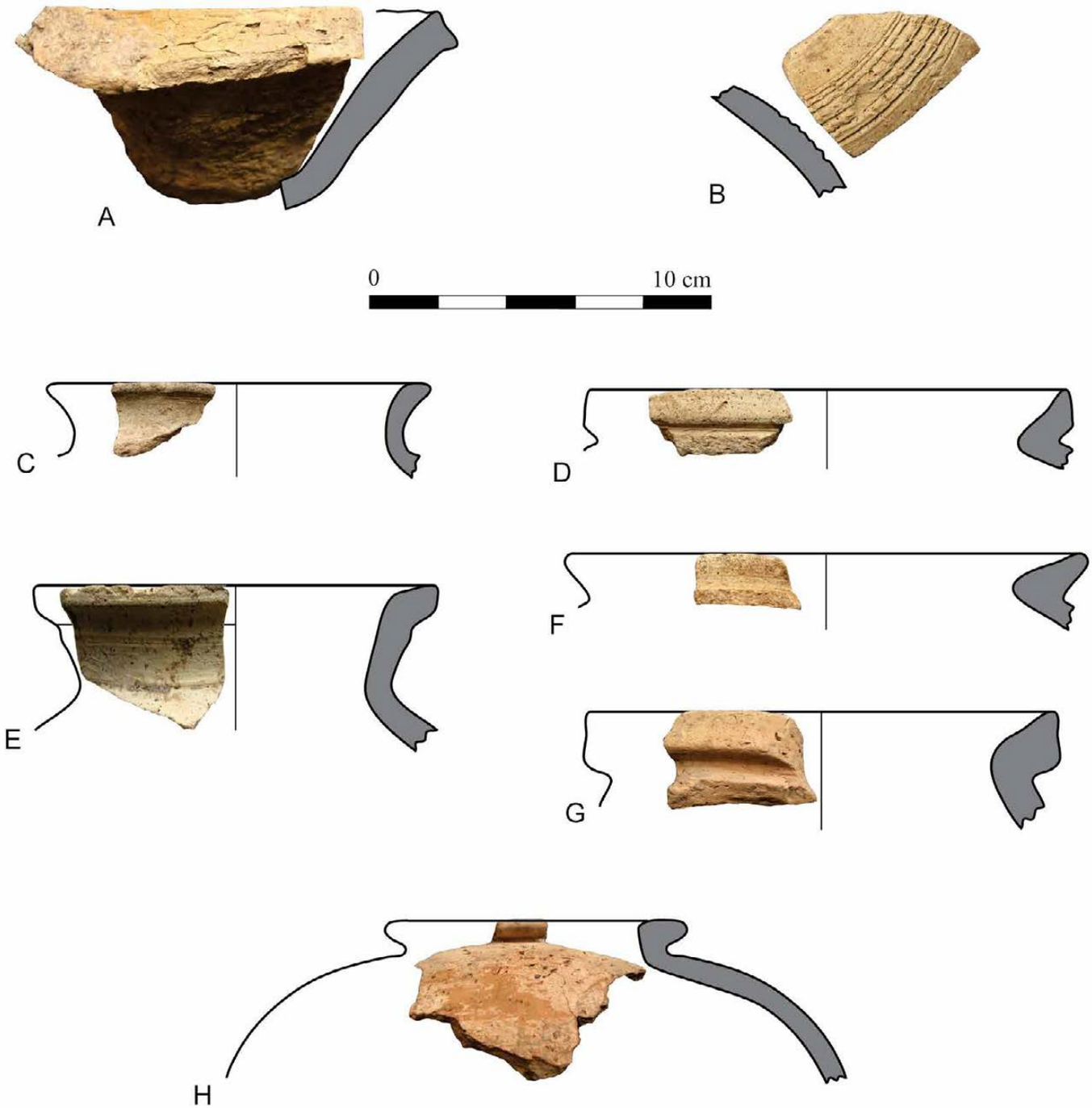

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Plate 53. Susa II pottery from KS-59 Square 787.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P517	L 24	Middle Susa II–Late Susa II	Fine cup with pouring lip. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
B	KS59-P518	L 24	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Buff ware, no visible inclusion. See A for references
C	KS59-P519	L 25	Late Susa II	Buff ware, no visible inclusion. Similar to Delougaz and Kantor 1996, pl. 85:O; Miroschedji 1976, fig. 4:13 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 13:G 114 (Habuba Kabira)
D	KS59-P520	L 24	Late Susa II	Fine cup. Buff ware, no visible inclusion. See A for references
E	KS59-P02	L 30	Late Susa II	Light-brown ware, straw tempered, creamy buff surfaces. This piece may also be a pipe. Delougaz and Kantor 1996, pl. 83:A–E; Le Brun 1971, pl. XVIII:4 (Susa Acropole I)
F	KS59-P523	L 30	Middle Susa II–Late Susa II	Light-brown ware, no visible inclusion, light buff exterior. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira). For earlier examples see Boese 1995, 202, fig. 14:c (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
G	KS59-P522	L 30	Late Susa II	Warm buff ware, no visible inclusion, creamy buff exterior. This type of stamp decoration is very rare. For an example see Delougaz and Kantor 1996, pls. 24:F and 121:A. For an example from Habuba Kabira see Strommenger, Sürenhagen, and Rittig 2014, pls. 90:G 823 and 91:G 823.1–2
H	KS59-P524	L 30	Middle Susa II–Late Susa II	Yellowish buff ware, fine dark grits in paste, impressed appliqué band on shoulder. Boese 1995, 78, fig. 15:g (Sheikh Hassan). For late examples see Le Brun 1971, fig. 27:7, 9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31:G 483 (Habuba Kabira)

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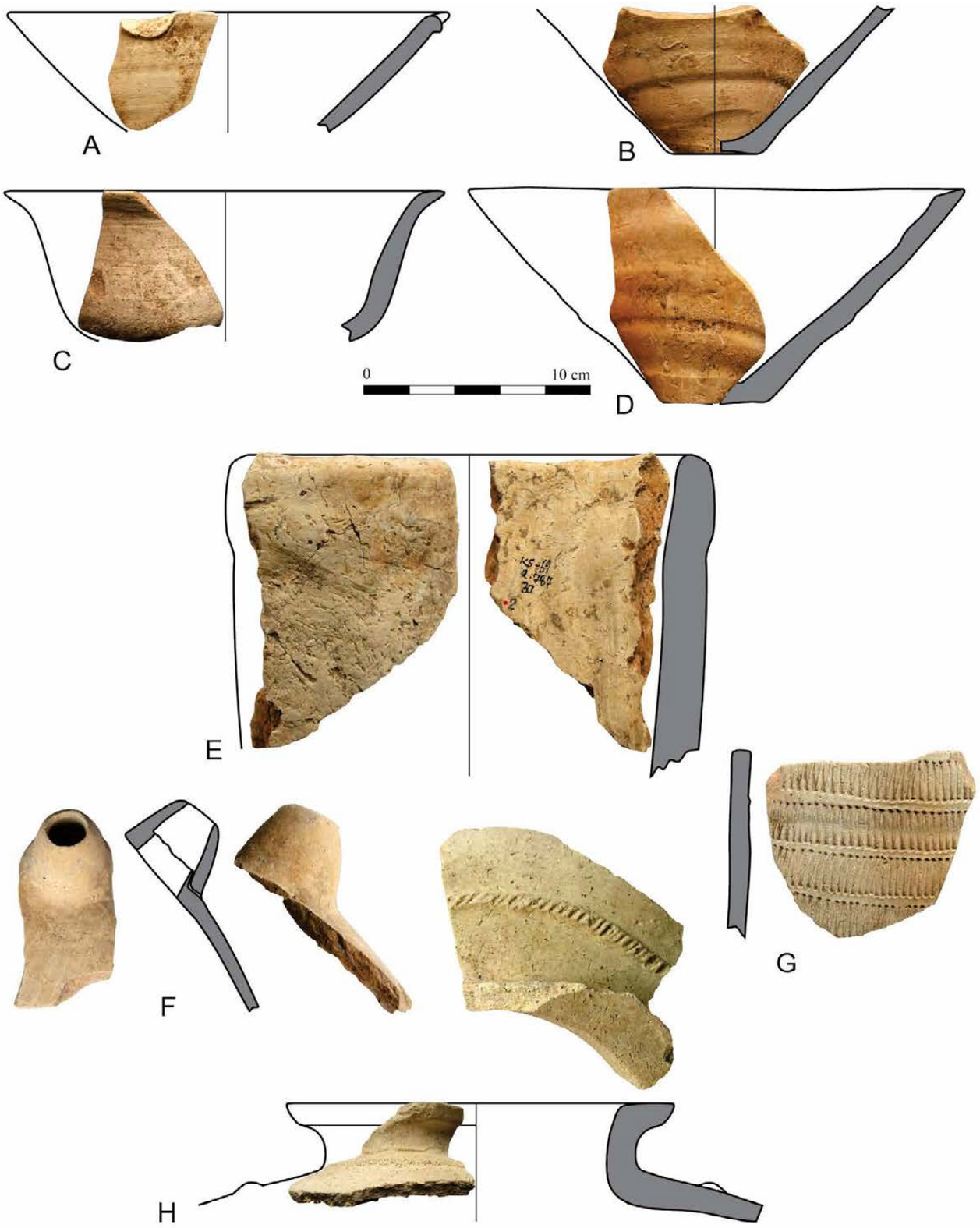

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Plate 54. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P525	L 1	Middle Susa II–Late Susa II	Pale-orange buff ware, sandy paste, completely oxidized. For Middle Susa II examples see Boese 1995, figs. 10:b and 18:e (Sheikh Hassan). For late examples see Alizadeh 2008, fig. 26:I; Delougaz and Kantor 1996, pl. 84:F–G, P (Chogha Mish); Le Brun 1978a, fig. 22:3 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 11:G 75 (Habuba Kabira)
B	KS59-P526	L 1	Middle Susa II–Late Susa II	Buff ware, scattered small dark grits in paste. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
C	KS59-P527	L 1	Middle Susa II–Late Susa II	Buff ware, large to medium dark grits in paste, probably slipped. Boese 1995, 78, fig. 15:g (Sheikh Hassan). For late examples see Le Brun 1971, fig. 27:7, 9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31:G 483 (Habuba Kabira)
D	KS59-P528	L 2	Late Susa II	Buff ware, gritty paste and face, attached horizontal twisted handle. Johnson 1973, Type 52, pl. VIII:b; Delougaz and Kantor 1996, pl. 101:A–I; Le Brun 1971, fig. 49:12; 1978a, fig. 28:8 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pls. 21:G 282 and 29:G 457–58 (Habuba Kabira)
E	KS59-P529	L 1	Middle Susa II–Late Susa II	Creamy buff ware, occasional dark grits in paste. Such globular jars with strap handles without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With the grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan). This type does not seem to be present at Habuba Kabira
F	KS59-P530	L 2	Middle Susa II–Late Susa II	Pale bricky red ware, small grits in paste, beige slip on exterior and inner lip. Delougaz and Kantor 1996, pl. 93:A; similar to Miroschedji 1976, fig. 6:1 (Susa Apadana kiln). For an earlier example see Boese 1995, 47, fig. 15:a (Sheikh Hassan)
G	KS59-P531	L 1	Late Susa II	Warm buff ware, scattered large and medium grits in paste, lighter-colored exterior. Similar to Delougaz and Kantor 1996, pl. 90:A (Chogha Mish)
H	KS59-P532	L 2	Middle Susa II–Late Susa II	Buff ware, small dark grits in paste, reserved slip. For the rim see F for references. “Reserved slip” is Johnson 1973, Type 34, pl. IV:a, and was excluded from Johnson’s seriation, but it is considered a Middle to Late Uruk type. He further believes that “horizontal reserve slip is generally earlier than diagonal reserve slip” (Johnson 1973, 58). Delougaz and Kantor 1996, pl. 93:A (for the rim), D; Wright 2013, fig. 4.11:h (Sharafabad). Reserved-slip decoration also occurs at Sheikh Hassan and Habuba Kabira

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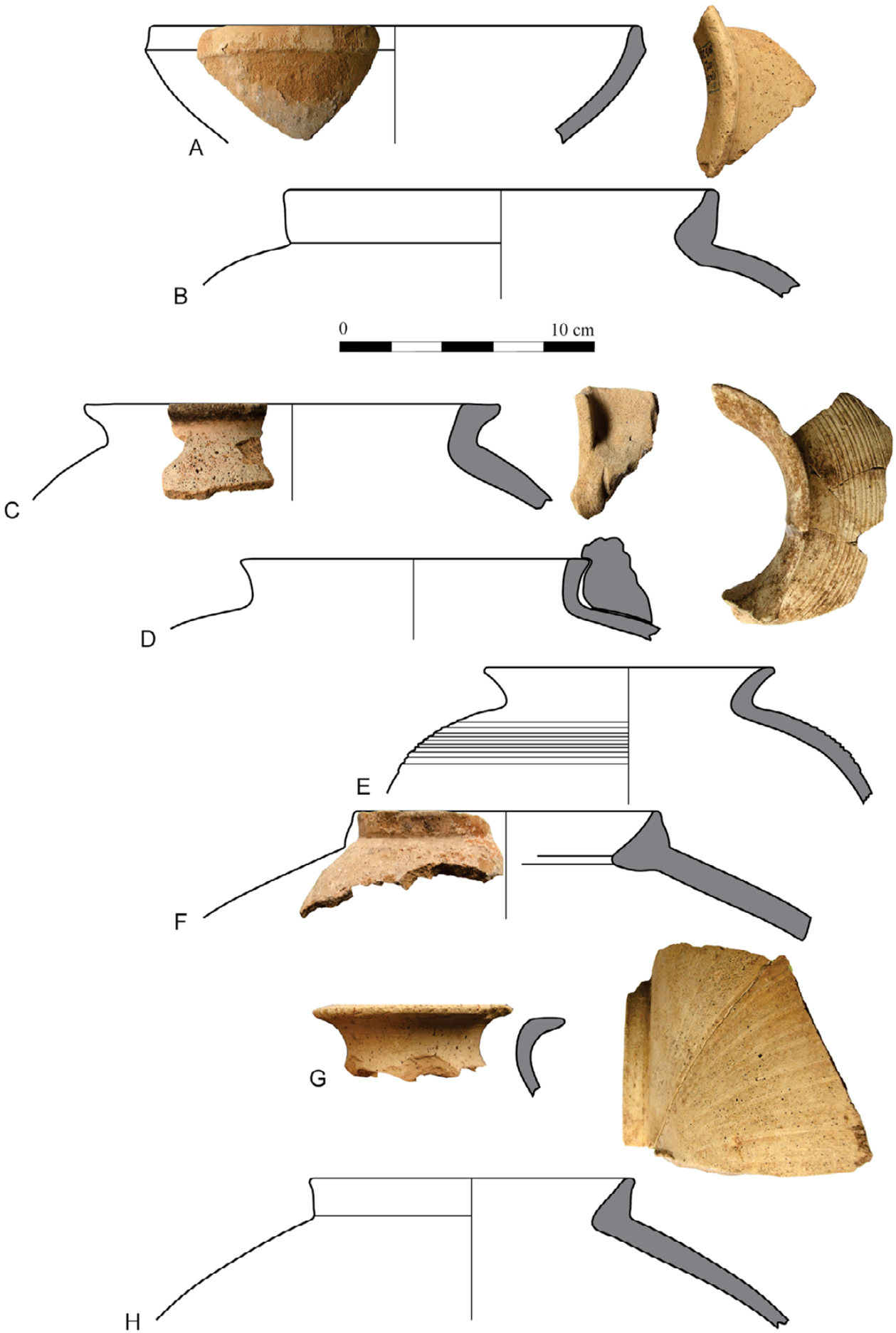

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Plate 55. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P533	L 3	Middle Susa II–Early Susa III	Light-brownish buff ware, straw tempered, light-gray core. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS59-P534	F 5	Middle Susa II–Early Susa III	Pinkish buff ware, straw tempered. See A for references
C	KS59-P535	L 4	Middle Susa II–Late Susa II	Buff ware, chaff tempered, completely oxidized. Delougaz and Kantor 1996, pl. 84:A–B; Le Brun 1978a, fig. 19:22 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 9:G 2–3 (Habuba Kabira). For an earlier example see Boese 1995, fig. 12:c (Sheikh Hassan)
D	KS59-P536	F 5	Middle Susa II–Early Susa III	Pinkish buff ware, straw tempered, completely oxidized. See A for references
E	KS59-P537	F 5	Middle Susa II–Early Susa III	Light buff ware, straw tempered, light-gray core. See A for references
F	KS59-P538	L 4	Middle Susa II–Late Susa II	Buff ware, some sand in paste. Delougaz and Kantor 1996, pl. 95:N; Le Brun 1971, fig. 48:4 (Susa Acropole I). For an earlier example see Boese 1995, 172, fig. 10:e (Sheikh Hassan)
G	KS59-P539	L 3	Late Susa II	Reddish buff ware, scattered grits in paste
H	KS59-P540	L 4	Late Susa II	Creamy buff ware, no visible inclusion
I	KS59-P541	L 4	Middle Susa II–Late Susa II	Buff ware, some small grits and calcite particles in paste. Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)
J	KS59-P542	F 5	Middle Susa II–Late Susa II	Warm buff ware, gritty paste. Such globular jars with strap handles without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With the grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan). This type does not seem to be present at Habuba Kabira
K	KS59-P543	L 3	Late Susa II	Buff ware, some small grits in paste. For the shape, Delougaz and Kantor 1996, pl. 90:D; similar to Strommenger, Sürenhagen, and Rittig 2014, pl. 28:G 432 (Habuba Kabira)

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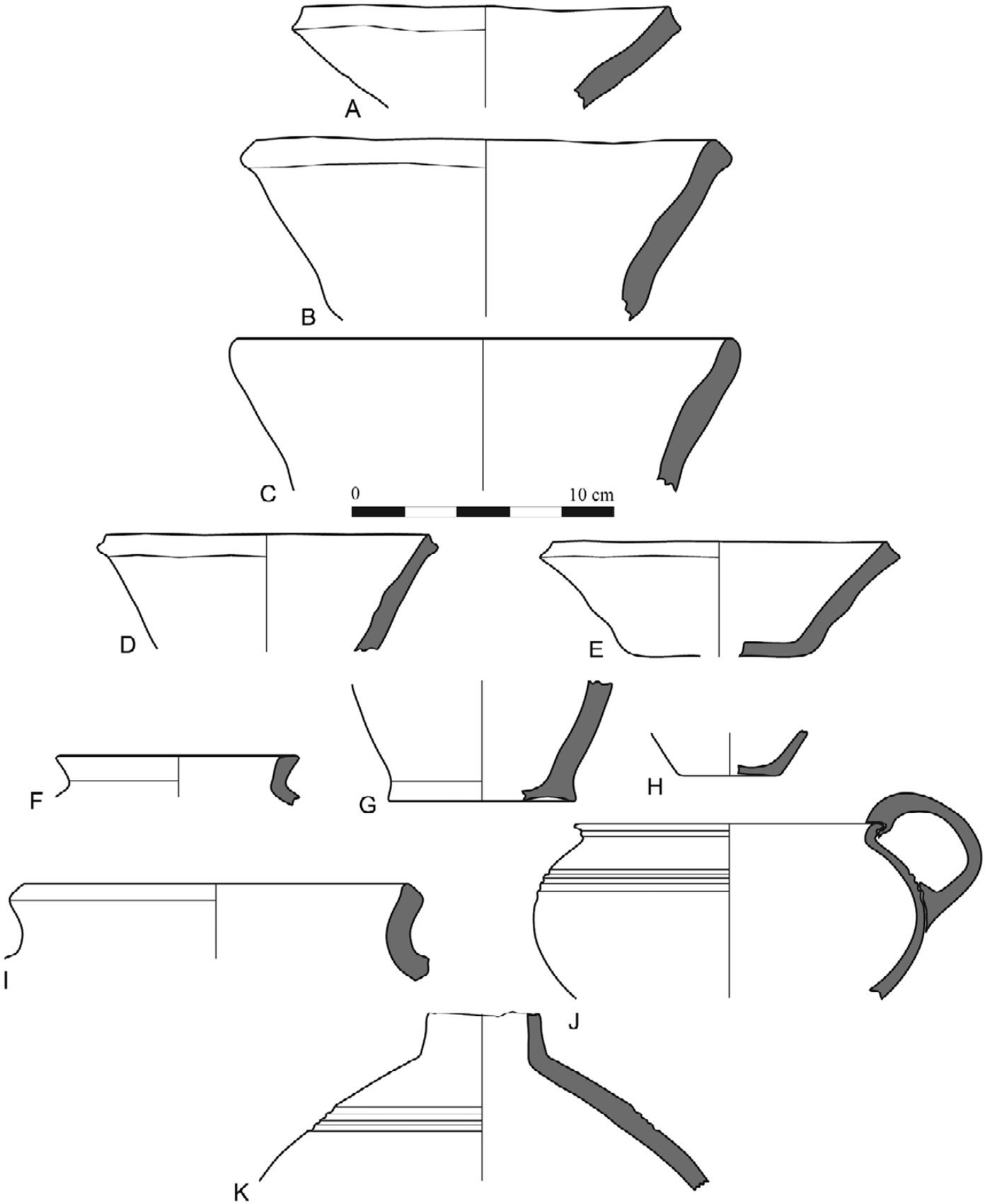

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Plate 56. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P544	F 15	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
B	KS59-P550	L 11	Late Susa II	Warm buff ware, small grits and calcite particles in paste. Similar to Alizadeh 2008, fig. 26:B; Delougaz and Kantor 1996, pl. 84:F–G (Chogha Mish); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 299 (Habuba Kabira)
C	KS59-P551	L 12	Middle Susa II–Late Susa II	Light bricky red ware, scattered maroon grits in paste, very pale gray core. Such globular jars with/without strap handles and without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan)
D	KS59-P552	F 15	Middle Susa II–Late Susa II	Buff ware, small grits in paste. See C for references
E	KS59-P553	L 6 / F 8	Middle Susa II(?)–Late Susa II	Buff ware, scattered medium maroon grits in paste, creamy buff slip. Delougaz and Kantor 1996, pl. 85:A (for the rim), 87:C–D; Le Brun 1987b, fig. 36:11 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 20:G 239 (Habuba Kabira). Similar to the late Middle Uruk example from Sheikh Hassan; Boese 1995, 80, fig. 17:k, and 226, fig. 12:j
F	KS59-P554	F 15	Middle Susa II–Late Susa II	Pale-reddish buff ware, scattered grits in paste, yellowish buff slip. Wright 2013, fig. 4.10:h (Sharafabad); Boese 1995, 49, fig. 17:e (Sheikh Hassan). For the type of lip in a late context see Miroschedji 1976, fig. 5:12 (Susa Apadana kiln)
G	KS59-P555	F 15	Late Susa II	Yellowish buff ware, small to medium dark grits in paste. Alizadeh, Ahmadzadeh, and Omidfar 2014, fig. 74:L (Geser); Delougaz and Kantor 1996, pl. 87:D–E; Miroschedji 1976, fig. 5:11, 13 (Susa Apadana kiln)

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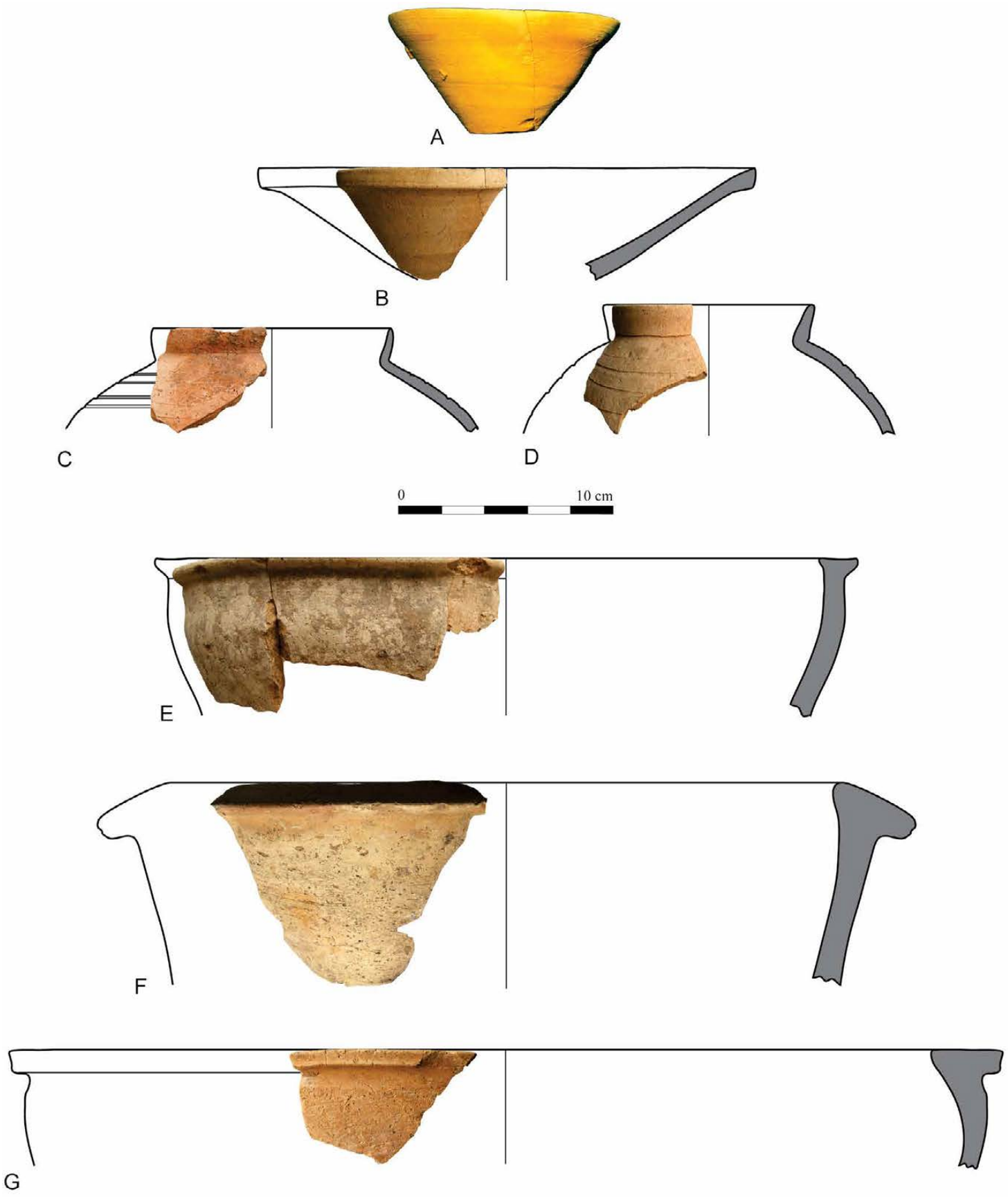

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Plate 57. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P556	L 15 / F 17	Middle Susa II(?)–Late Susa II	Pale-orange buff ware, small to medium dark grits in paste. Delougaz and Kantor 1996, pl. 85:A (for the rim), 87:C–D; Le Brun 1987b, fig. 36:11 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 20:G 239 (Habuba Kabira); similar to the late Middle Uruk example from Sheikh Hassan, Boese 1995, 80, fig. 17:k, and 226, fig. 12:j
B	KS59-P557	L 11	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such fine cups do not seem to occur at Habuba Kabira
C	KS59-P559	L 11	Middle Susa II–Early Susa III	Warm buff ware, straw tempered, completely oxidized. See pl. 47:A for references
D	KS59-P560	L 12	Middle Susa II–Late Susa II	Pinkish buff ware, scattered fine grits in paste. Johnson 1973, Type 19, pl. III:a (not dated); Le Brun 1978a, fig. 25:10 (Susa Acropole I); Miroschedji 1976, fig. 8:9, 12 (Susa Apadana kiln). For earlier examples see Boese 1995, 173, fig. 11:a (Sheikh Hassan); Wright 2013, fig. 4.11:e (Sharafabad)
E	KS59-P562	L 12	Middle Susa II–Late Susa II	Buff ware, some small grits in paste. Alizadeh 2008, fig. 28:E; Strommenger, Sürenhagen, and Rittig 2014, pl. 35:G 534–35 (Habuba Kabira). For an early example see Boese 1995, 172, fig. 10:a–b (Sheikh Hassan)
F	KS59-P561	L 12	Middle Susa II–Late Susa II	Buff ware, gritty paste, probably slipped. Delougaz and Kantor 1996, pl. 93:A; similar to Miroschedji 1976, fig. 6:1 (Susa Apadana kiln). For an earlier example see Boese 1995, 47, fig. 15:a (Sheikh Hassan)
G	KS59-P563	L 15 / F 17	Late Susa II	Warm buff ware, small grits scattered in paste, attached ledge handle. Johnson 1973, Type 53, pl. VIII:c; Delougaz and Kantor 1996, pl. 90:K–M; Le Brun 1971, fig. 49:8; 1978a, fig. 28:10–11 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 21:G 282 (Habuba Kabira)
H	KS59-P564	L 15 / F 17	Middle Susa II–Late Susa II	Light-brown buff ware, some grits in paste. Johnson 1973, Type 50, pl. VII:c; Alizadeh 2008, fig. 32:F–G; Delougaz and Kantor 1996, pl. 95; Le Brun 1971, fig. 49:9; 1978a, fig. 28:5 (Susa Acropole I); Miroschedji 1976, fig. 8:11 (Susa Apadana kiln). For earlier examples see Boese 1995, 78, fig. 15:e (Sheikh Hassan); Wright 2013, fig. 4.11:e (Sharafabad)
I	KS59-P565	L 12	Middle Susa II–Late Susa II	Light-brown buff ware, some grits in paste. Alizadeh 2008, fig. 32:F; Delougaz and Kantor 1996, pls. 96:A and 97:G; Boese 1995, 78, fig. 15:d–e (with shoulder grooves) (Sheikh Hassan)

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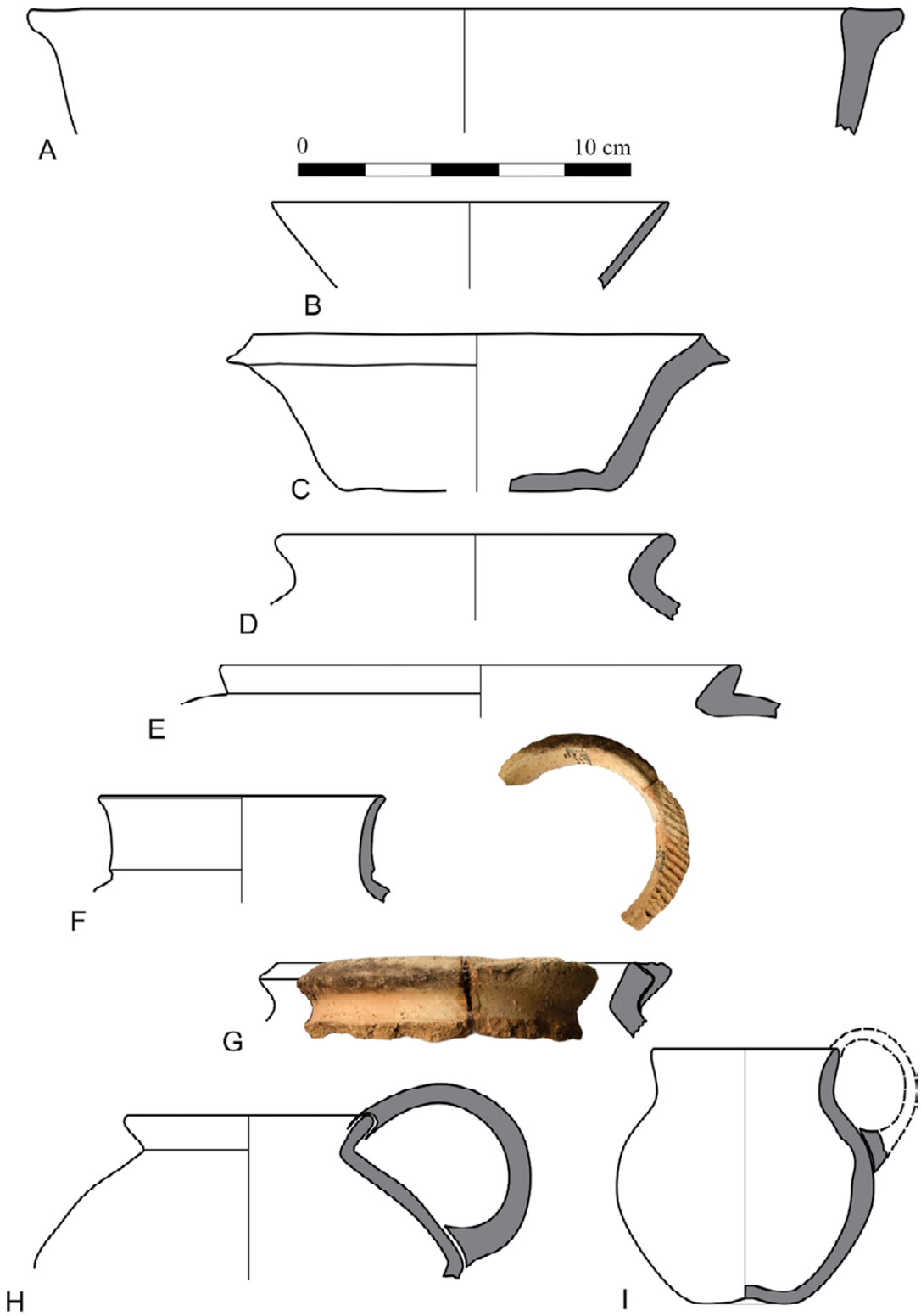

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Plate 58. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P566	L 14	Middle Susa II–Late Susa II	Buff ware, sandy paste. Delougaz and Kantor 1996, pl. 103:I; Le Brun 1971, fig. 52:1–4; 1978a, fig. 31:5 (Susa Acropole I); Miroschedji 1976, fig. 7:7 (Susa Apadana kiln). For earlier examples see Boese 1995, 79, fig. 16:c (Sheikh Hassan); Wright 2013, fig. 4.11:g (Sharafabad)
B	KS59-P567	L 14	Late Susa II	Flat twisted handle. Pale-beige ware, small to medium dark grits and calcite particles in paste. Johnson 1973, Type 51, pl. VII:e, to be differentiated from full twisted handle, Type 52, pl. VIII:a; Delougaz and Kantor 1996, pl. 100:A–G; Le Brun 1978a, fig. 28:2 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 290–91 (Habuba Kabira); Wright 1981, fig. 55:k (Farukhabad)
C	KS59-P568	L 14	Middle Susa II–Late Susa II	Warm buff ware, some sand in paste, yellowish buff exterior surface. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
D	KS59-P569	L 14	Middle Susa II–Late Susa II	Pale buff ware, some very fine sand in paste, strong wheel striations on interior. Le Brun 1978a, fig. 22:9–10 (Susa Acropole I); Miroschedji 1976, fig. 4:6 (Susa Apadana kiln); Boese 1995, 40, fig. 8:f–g (Sheikh Hassan)
E	KS59-P570	L 14	Late Susa II	Pale buff ware, small grits in paste, gritty face. Shoulder decoration with incised horizontal and oblique grooves dated by Johnson (1973, Type 40, pl. IV:d) to the Late Uruk phase. Delougaz and Kantor 1996, pls. 21:C, 97:D, and 98:A, F, I–K (Chogha Mish); Wright 2013, fig. 4.14:g (Farukhabad)
F	KS59-P571	L 14	Late Susa II	Buff ware, scattered medium to small dark grits in paste, off-white exterior surface. Delougaz and Kantor 1996, pl. 89:V

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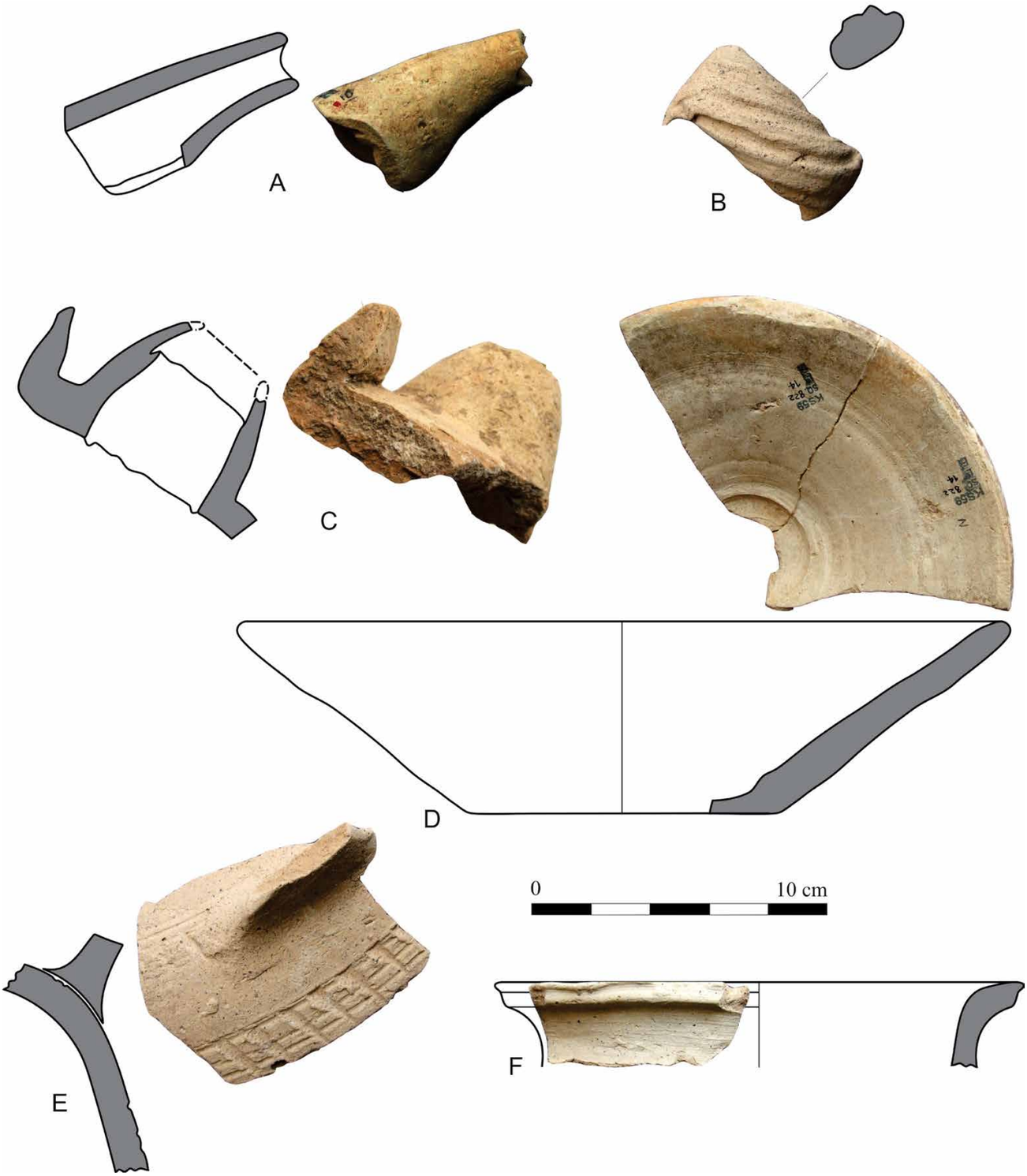

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Plate 59. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P572	L 14	Middle Susa II–Late Susa II	Pale buff ware, small grits in paste. Such globular jars with/without strap handles and without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For another earlier example see Boese 1995, 78, fig. 15:e (Sheikh Hassan)
B	KS59-P573	L 14	Middle Susa II–Late Susa II	Buff ware, small grits in paste, light-beige exterior surface, finger-impressed appliqué band. Delougaz and Kantor 1996, pl. 90:J, M; Le Brun 1978a, fig. 25:8, 12 (Susa Acropole I); Miroschedji 1976, fig. 8 (for the rim) (Susa Apadana kiln). This type is dated by Wright (2013, fig. 4.14:f) (Farukhabad) to the Late Uruk phase, but it occurs in a Middle Uruk context at Sheikh Hassan (Boese 1995, 45, fig. 13:f). This and similar types with finger-impressed appliqué band decoration are absent from Habuba Kabira
C	KS59-P574	L 14	Middle Susa II–Late Susa II	Pale bricky red ware, small to medium dark grits in paste. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I). For the Middle Susa II date see Boese 1995, 48, fig. 16 (Sheikh Hassan); Wright 2013, fig. 4.11:b (Sharafabad)
D	KS59-P575	L 14	Middle Susa II–Late Susa II	Pale-creamy greenish ware, small grits in paste, off-white exterior surface. Delougaz and Kantor 1996, pl. 93:A; similar to Miroschedji 1976, fig. 6:1 (Susa Apadana kiln). For an earlier example see Boese 1995, 47, fig. 15:a (Sheikh Hassan)
E	KS59-P576	L 14	Late Susa II	Yellowish buff ware, small to medium dark grits in paste, finger-impressed appliqué band. Delougaz and Kantor 1996, pl. 87:H (with reserved slip), I; Miroschedji 1976, fig. 5:11–13 (Susa Apadana kiln)

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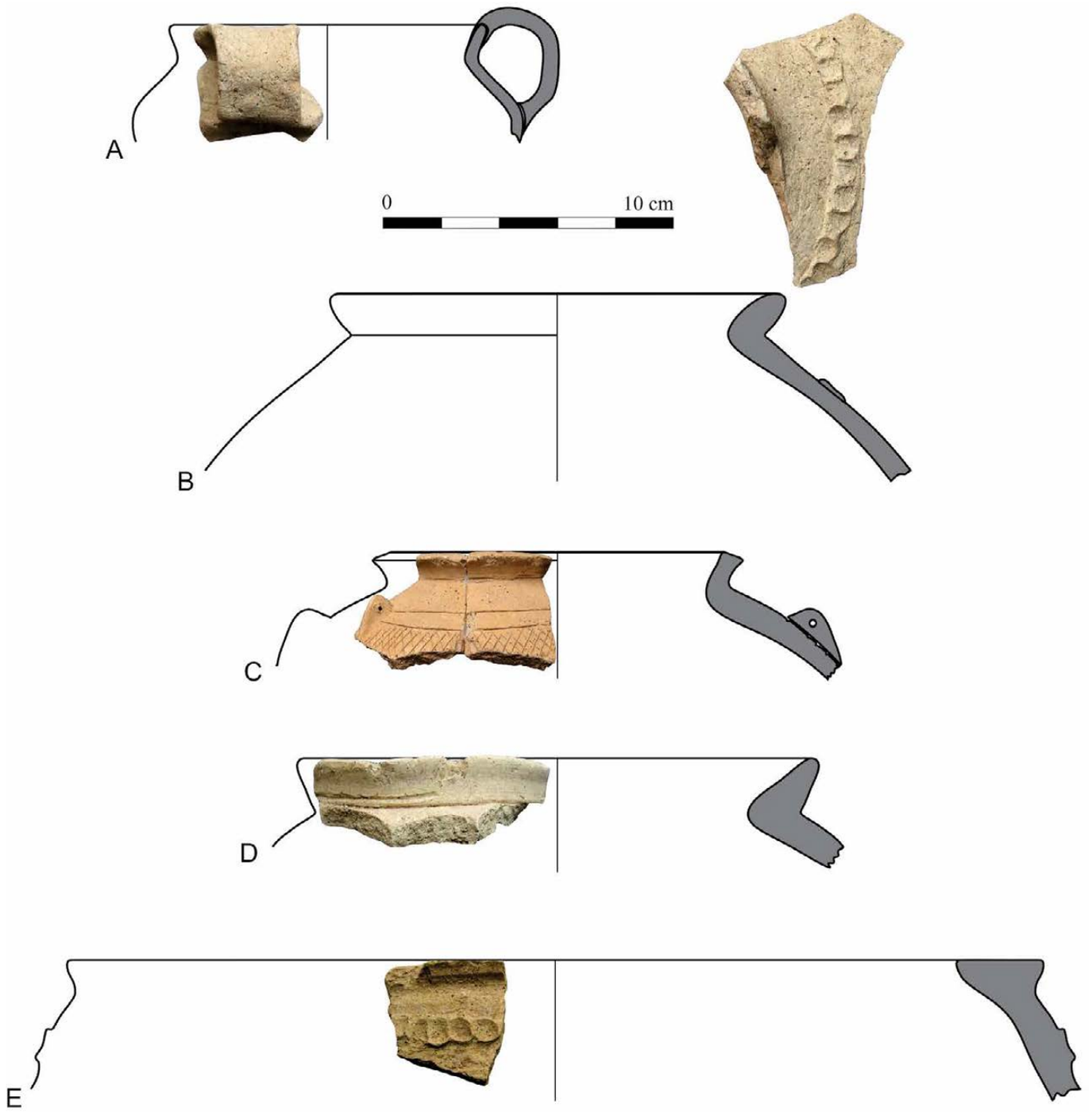

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Plate 60. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P577	L 19	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Yellowish buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such cups do not occur at Habuba Kabira
B	KS59-P578	L 16	Middle Susa II–Late Susa II	Buff ware, small dark grits and a few medium grits in paste, yellowish buff exterior surface. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
C	KS59-P579	L 19	Middle Susa II–Late Susa II	Buff ware, small grits in paste. Boese 1995, 78, fig. 15:g. For later examples see Delougaz and Kantor 1996, pl. 102:I; Strommenger, Sürenhagen, and Rittig 2014, pl. 30:G 466 (Habuba Kabira)
D	KS59-P580	L 15 / F 17	Middle Susa II–Late Susa II	Buff ware, small grits in paste, creamy buff exterior surface. Such globular jars with/without strap handles and without grooves on the shoulder are dated to the Middle Uruk; see Wright 2013, fig. 4.11:e (Sharafabad). With grooves they appear in Late Susa II contexts; see Delougaz and Kantor 1996, pl. 96:B, F–G; Le Brun 1971, fig. 49; 1978a, figs. 24:6 and 26:4, 8 (Susa Acropole I). For another earlier example see Boese 1995, 78, fig. 15:e (Sheikh Hassan)
E	KS59-P581	L 16	Middle Susa II–Late Susa II	Buff ware, small grits in paste. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
F	KS59-P582	L 16	Middle Susa II–Early Susa III	Pale bricky buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Susa II date see Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
G	KS59-P583	L 19	Late Susa II	Buff ware, small to medium grits in paste, appliqué knobs on neck. Delougaz and Kantor 1996, pl. 100:G
H	KS59-P584	L 15 / F 17	Late Susa II	Buff ware, small dark grits in paste, light buff exterior surface. Shoulder decoration with incised horizontal and oblique grooves dated by Johnson (1973, Type 40, pl. IV:d) to the Late Uruk phase. Delougaz and Kantor 1996, pls. 21:C and 97:D, 98:A, F, I–K; Wright 2013, fig. 4.14:g (Farukhabad)
I	KS59-P585	L 19	Middle Susa II–Late Susa II	Buff ware, small dark grits in paste, gritty face. See E for references

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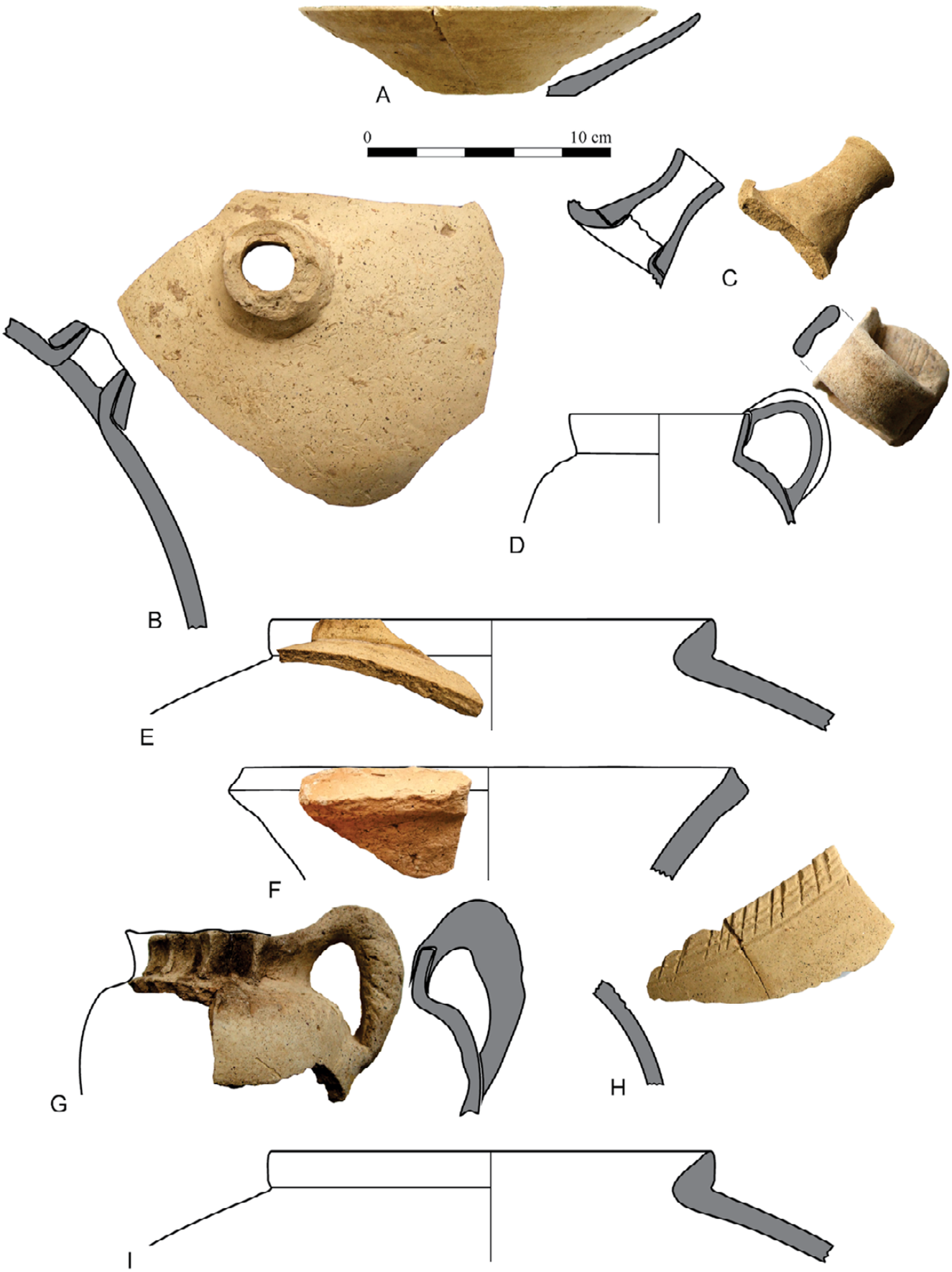

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Plate 61. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P586	L 21	Late Susa II	Reddish buff ware, some sand in paste
B	KS59-P587	L 17	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such cups are not reported from Habuba Kabira
C	KS59-P588	L 21	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion. See B for references
D	KS59-P589	L 21	Middle Susa II–Early Susa III	Pale bricky buff ware, straw tempered, light-gray core. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
E	KS59-P590	L 17	Middle Susa II–Early Susa III	Buff ware, straw tempered, gray core. See D for references
F	KS59-P591	L 21	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. See D for references
G	KS59-P592	L 27 / F 8	Middle Susa II–Late Susa II	Buff ware, small dark grits in paste, light buff exterior surface. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
H	KS59-P593	L 17	Late Susa II	Pale bricky ware, some sand in paste. Delougaz and Kantor 1996, fig. 92:B

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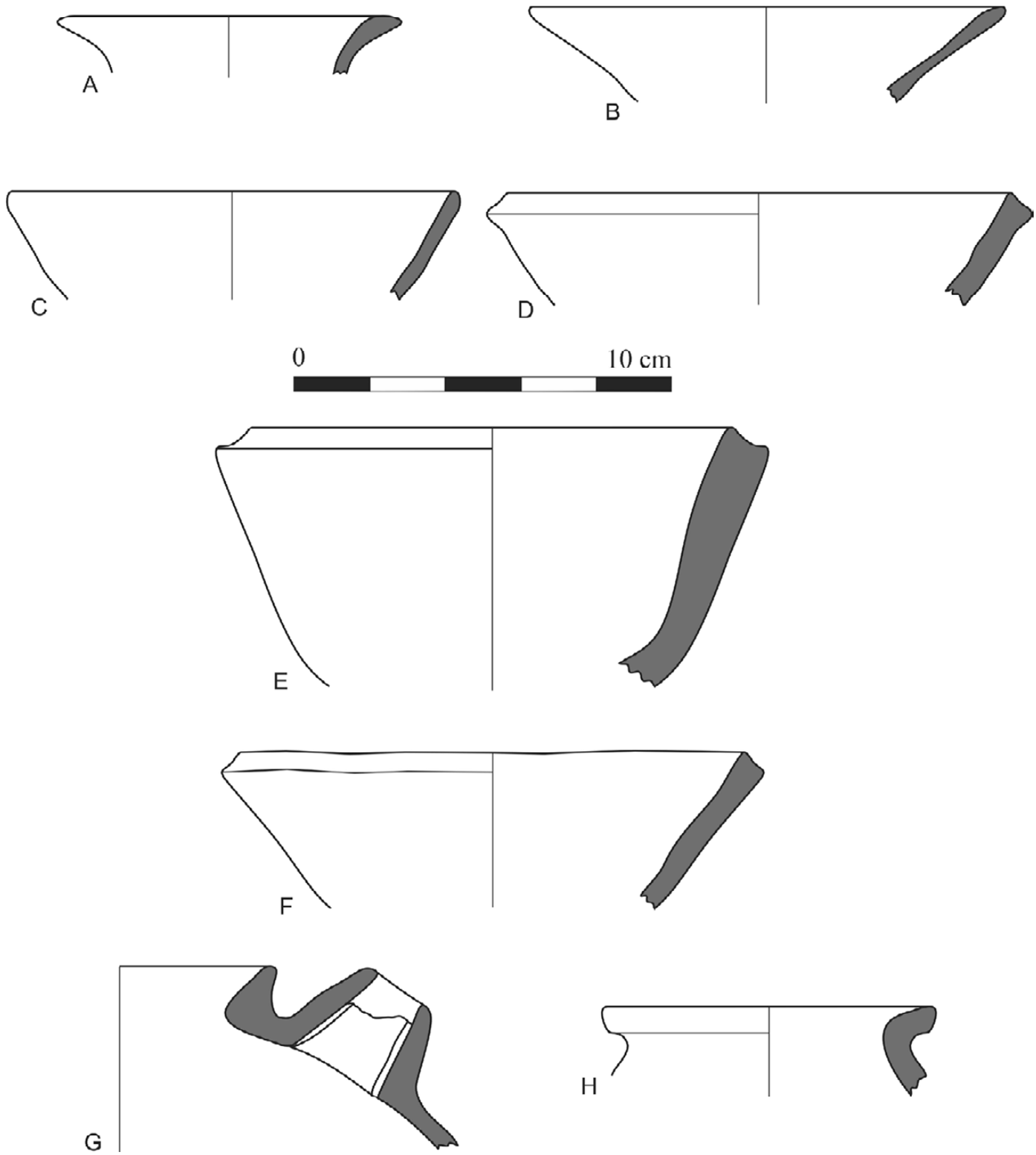

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Plate 62. Susa II pottery from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-P594	L 25	Middle Susa II–Late Susa II	Buff ware, fine dark grits in paste, yellowish buff exterior surface. Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I). For the Middle Susa II date see Wright 2013, fig. 4.11:b (Sharafabad)
B	KS59-P595	L 25	Middle Susa II–Late Susa II	Buff ware, small to medium grits in paste. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
C	KS59-P596	L 21	Middle Susa II–Late Susa II	Creamy buff ware, no visible inclusion. Strommenger, Sürenhagen, and Rittig 2014, pl. 10:G 35 (Habuba Kabira). For Middle Susa II examples see Boese 1995, fig. 9:d; Stein 2001, fig. 8.6:I (Hacinebi)
D	KS59-P597	L 21	Middle Susa II–Late Susa II	Buff ware, sandy paste. Delougaz and Kantor 1996, pl. 84:A–B; Le Brun 1978a, fig. 19:22 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 9:G 2–3 (Habuba Kabira). For an earlier example see Boese 1995, fig. 12:c (Sheikh Hassan)
E	KS59-P598	L 25	Late Susa II	Light buff ware, scattered small dark grits in paste. Delougaz and Kantor 1996, pl. 86:II–KK; Miroschedji 1976, fig. 8:3 (Susa Apadana kiln)

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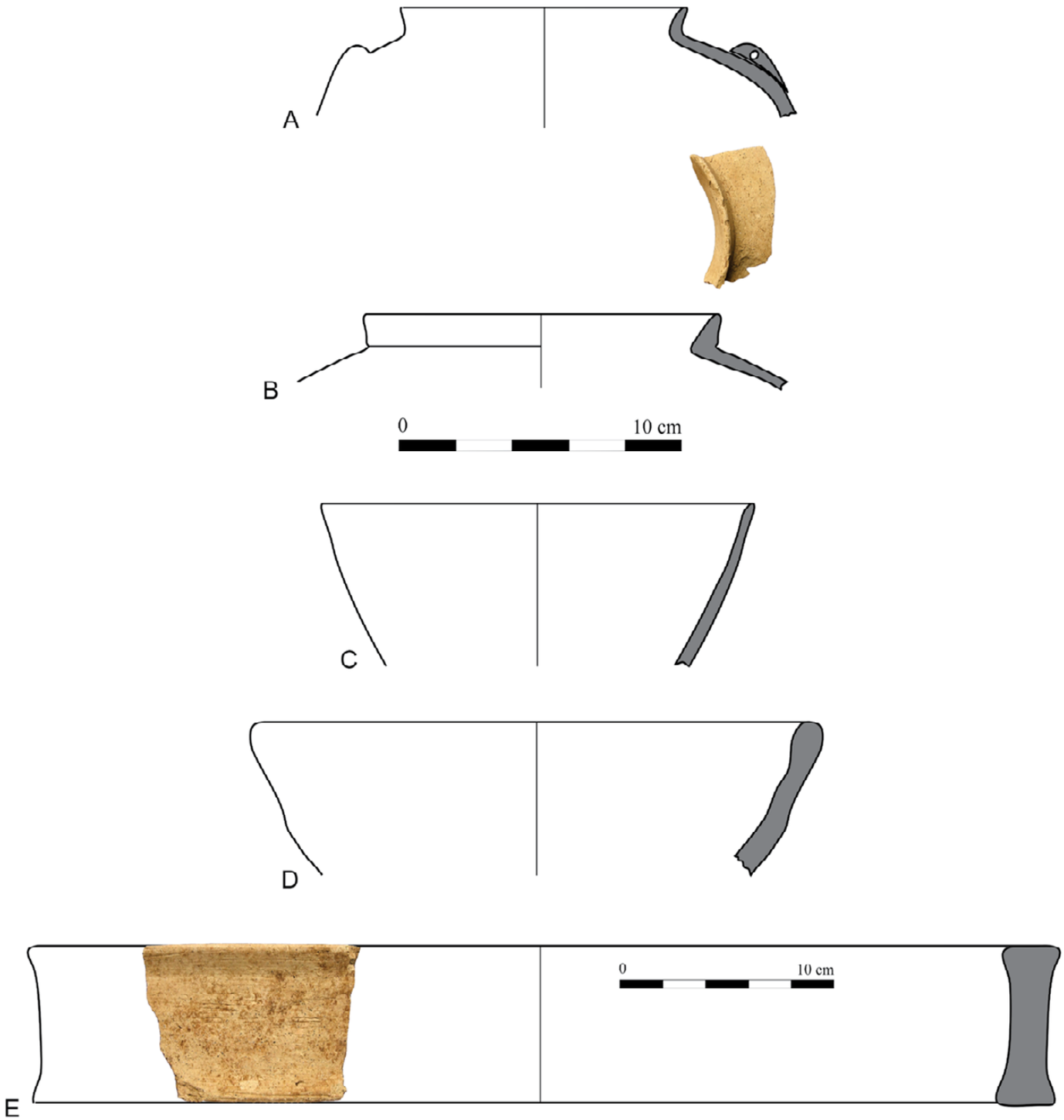

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Plate 63. Susiana sequence pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description
A	KS108-P599	L 6 at 78.82	Late Middle Susiana	Creamy buff ware, no visible inclusion, brown paint
B	KS108-P600	Surface	Late Middle Susiana	Greenish buff ware, some scattered sand in paste, greenish-brown paint
C	KS108-P601	Surface	Late Middle Susiana	Pale pink ware, no visible inclusion, brown paint
D	KS108-P602	L 6 at 78.90	Late Middle Susiana	Buff ware, same sand in paste, flaked-off brown paint
E	KS108-P607	L 6 at 78.90	Middle Susiana–Late Susiana	Buff ware, no visible inclusion, thick brown paint
F	KS108-P608	Surface	Late Middle Susiana	Buff ware, same sand in paste, flaky brown paint
G	KS108-P609	L 6 at 78.85	Late Middle Susiana	Creamy buff ware, no visible inclusion, brown paint
H	KS108-P610	L 6 at 78.85	Late Middle Susiana	Buff ware, same sand in paste, flaky brown paint
I	KS108-P611	L 6 at 78.80	Late Middle Susiana	Creamy buff ware, no visible inclusion, brown paint
J	KS108-P650	L 6 at 78.85	Late Middle Susiana	Buff ware, scattered sand in paste, dark paint
K	KS108-P651	L 6 at 79.00	Late Middle Susiana	Creamy buff ware, no visible inclusion, brown paint
L	KS108-P652	L 6 at 79.00	Late Middle Susiana	Greenish buff ware, scattered sand in paste, dark paint
M	KS108-P653	Surface	Late Middle Susiana	Buff ware, same sand in paste, flaky brown paint
N	KS108-P654	Surface	Late Middle Susiana	Buff ware, same sand in paste, flaky brown paint
O	KS108-P655	L 6 at 78.80	Late Middle Susiana	Creamy buff ware, same sand in paste, flaky brown paint

Note: Elevations are in m ASL.

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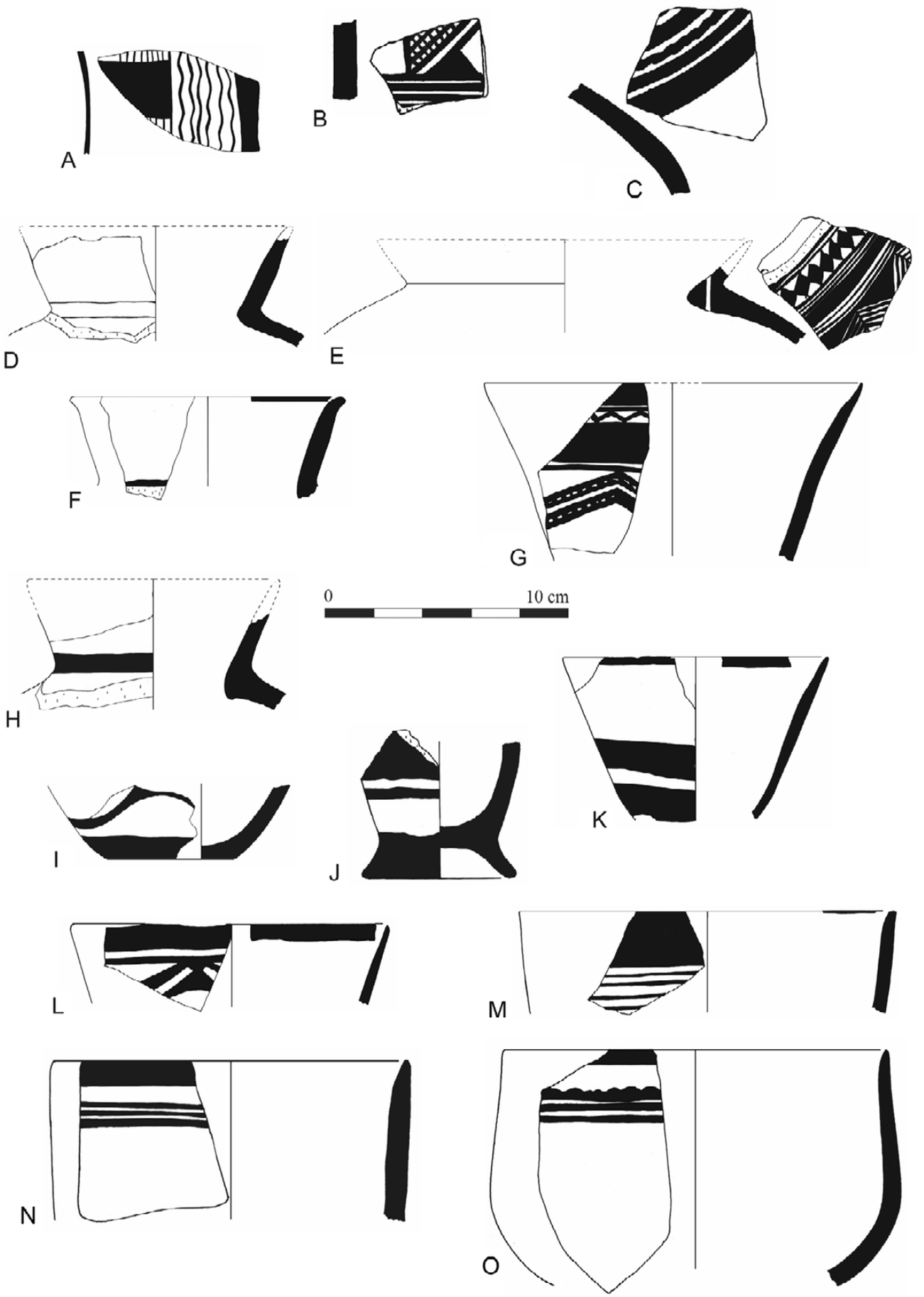

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Plate 64. Susiana sequence pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description
A	KS108-P656	L 4 at 79.60	Late Susiana 2	Light-greenish buff ware, no visible inclusion, thick flaky brown paint
B	KS108-P657	L 4 at 79.55	Late Susiana 2	Creamy buff ware, no visible inclusion, brown paint
C	KS108-P658	L 4 at 79.55	Late Susiana 2	Creamy buff ware, no visible inclusion, brown paint
D	KS108-P659	Surface	Late Susiana 2	Creamy buff ware, no visible inclusion, brown paint
E	KS108-P660	L 4 at 79.50	Late Susiana 2	Creamy buff ware, no visible inclusion, brown paint
F	KS108-P661	L 5 at 79.10	Late Susiana 1	Greenish buff ware, no visible inclusion, brown paint
G	KS108-P662	L 5 at 79.25	Late Susiana 1	Buff ware, no visible inclusion, brown paint
H	KS108-P663	L 5 at 79.40	Late Susiana 1	Buff ware, no visible inclusion, brown paint
I	KS108-P664	L 5 at 79.10	Late Susiana 1	Buff ware, no visible inclusion, brown paint
J	KS108-P665	L 5 at 79.20	Late Susiana 1	Buff ware, no visible inclusion, brown paint
K	KS108-P666	L 5 at 79.30	Late Susiana 1	Greenish buff ware, no visible inclusion, brown paint
L	KS108-P667	Surface	Late Middle–Late Susiana 1	Buff ware, no visible inclusion, brown paint

Note: Elevations are in m ASL.

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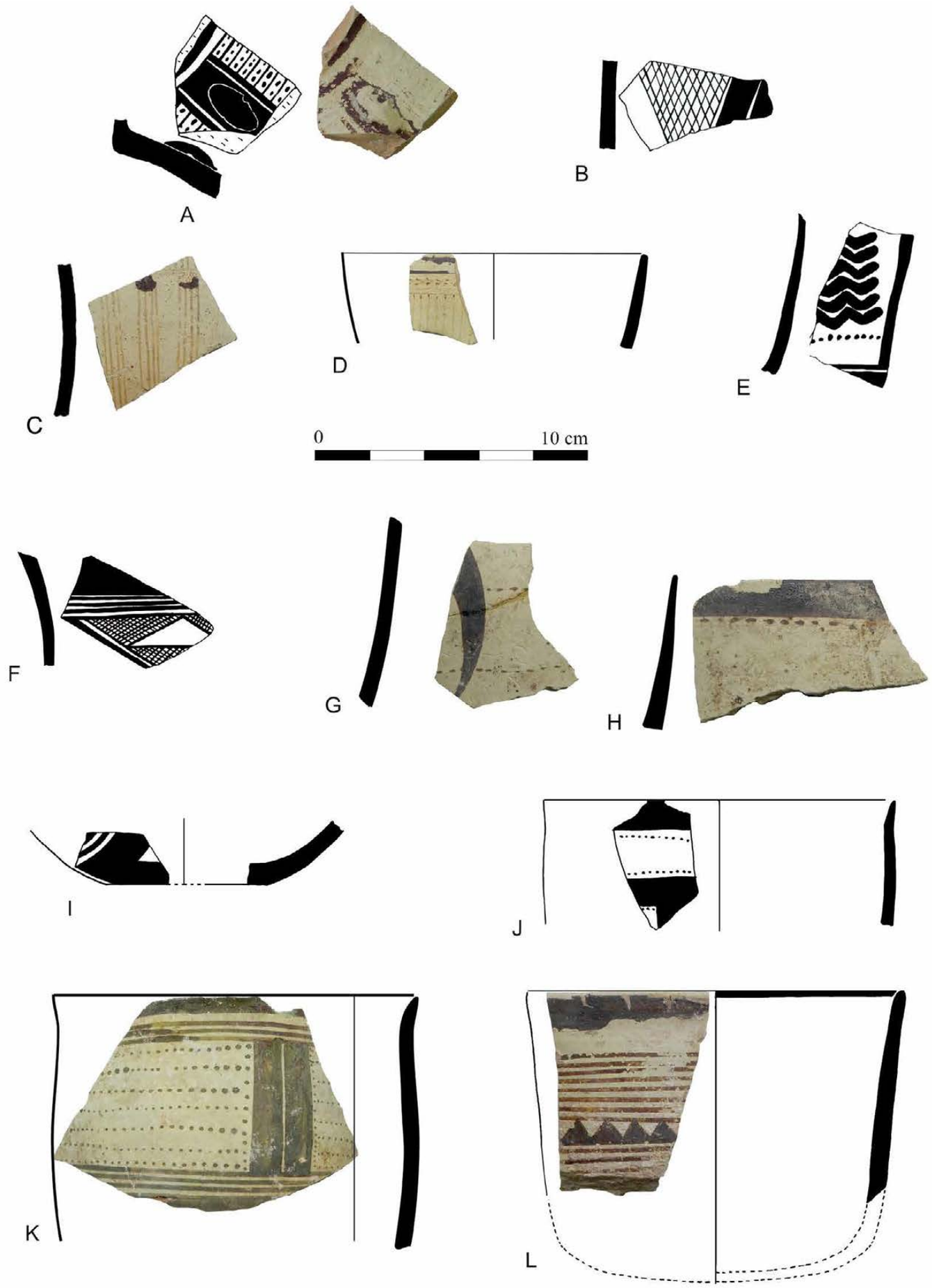

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Plate 65. Terminal Susa / Early Susa II pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P676	L 3 at 80.15	Terminal Susa(?)–Early Susa II	Proto–nose lug. Buff ware, some sand in paste. Johnson 1973, Type 43, pl. V:a–c; Wright 2013, fig. 4.5:d (Sargarab)
B	KS108-P668	Surface	Early Susa II	Proto-BRB. Buff ware, straw tempered, light-gray core. Johnson 1973, Type 4, pl. I:b; Wright 2013, fig. 4.7:a–b (Susa Acropole III); see also Stéve and Gasche 1971, pl. 86:3, 7 (Susa) and possibly the example of Le Brun 1971, fig. 40:5 (Susa Acropole I, Level 24)
C	KS108-P670	L 3 at 80.25	Early Susa II	Proto-BRB. Buff ware, straw tempered, light-gray core. See B for references
D	KS108-P726	L 3 at 80.35	Terminal Susa–Early Susa II	Pale buff ware, straw tempered, some fine sand in paste, no regular striations (handmade?). Wright 2013, fig. 4.5:b (Sargarab)
E	KS108-P671	L 3 at 80.25	Early Susa II	Bowl fragment with pinched base. Buff ware, straw tempered, gray core. Cf. Johnson 1973, pl. I:f (not numbered, not dated)
F	KS108-P673	L 3 at 80.40	Early Susa II–Late Susa II	Pinkish buff ware, sandy paste, straw tempered. Johnson 1973, Type 30, fig. III:l (not dated); Le Brun 1971, fig. 40:6 (Susa Acropole I, similar). This type was found on the surface of Tappeh Sargarab (DL-169) and is dated to the Sargarab / Early Uruk phase; see Neely and Wright 1994, 130–38, fig. IV.45:l–m; also Wright 2013, fig. 4.2:p (Sargarab)
G	—	L 3 at 80.10	Terminal Susa(?)–Early Susa II	Yellowish buff ware, no visible inclusion, regular striations inside (wheel made). Le Brun 1971, fig. 40:9 (Susa Acropole I, Level 23); Wright 2013, fig. 4.2:k–i, n–o (Sargarab)
H	KS108-P674	L 3 at 80.40	Terminal Susa(?)–Early Susa II	Light-brown ware, some sand in paste. Cf. Wright 2013, figs. 4.2:c (Sargarab) and 4.7:d (Susa Acropole III)
I	KS108-P677	L 3 at 80.20	Terminal Susa(?)–Early Susa II	Yellowish buff ware, no visible inclusion, regular striations inside (wheel made). Le Brun 1971, fig. 40:9 (Susa Acropole I, Level 23); Wright 2013, fig. 4.2:k–i, n–o (Sargarab)
J	KS108-P675	L 3 at 80.40	Early Susa II	Brownish buff ware, pale-gray core, chaff tempered, sandy paste
K	KS108-P695	L 3 at 80.50	Early Susa II	Greenish buff ware, gritty paste, gritty face
L	KS108-P681	L 3 at 80.50	Early Susa II–Late Susa II	Pinkish buff ware, sandy paste, straw tempered. Johnson 1973, Type 30, fig. III:l (not dated); Le Brun 1971, fig. 40:6 (Susa Acropole I); Wright 2013, fig. 4.2:p (Sargarab)

Note: Elevations are in m ASL.

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Plate 66. Susa II pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P718	Surface	Middle Susa II–Late Susa II	Buff ware, some sand in paste, probably slipped. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For the Middle Susa II date see Boese 1995, 48, fig. 16 (Sheikh Hassan); Wright 2013, fig. 4.11:b (Sharafabad)
B	KS108-P691	L 2 at 80.80	Middle Susa II–Late Susa II	Yellowish buff ware, some sand in paste. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
C	KS108-P678	L 2 at 80.75	Middle Susa II–Late Susa II	Buff ware, some fine grits in paste. Delougaz and Kantor 1996, pl. 103:I; Le Brun 1971, fig. 52:1–4; 1978a, fig. 31:5 (Susa Acropole I); Miroschedji 1976, fig. 7:7 (Susa Apadana kiln). For earlier examples see Boese 1995, 79, fig. 16:c (Sheikh Hassan); Wright 2013, fig. 4.11:g (Sharafabad)
D	KS108-680	L 2 at 80.95	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. See pl. 61:D for references
E	KS108-P681	L 2 at 80.90	Late Susa II	Pale red ware, scattered large to medium maroon grits in paste, probably slipped (eroded). Similar to Johnson 1973, Type 26, pl. II:h (not dated)
F	KS108-P688	L 2 at 80.80	Middle Susa II–Late Susa II	Buff ware, small to medium dark grits in paste, gritty face. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
G	KS108-P685	L 2 at 80.70	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. See D for references
H	KS108-P714	L 2 at 80.70	Middle Susa II–Late Susa II	Light buff ware, medium to small grits in paste. Delougaz and Kantor 1996, pl. 85:I–L; Strommenger, Sürenhagen, and Rittig 2014, pl. 16:G 145–67 (Habuba Kabira). For the Middle Susa II date see Boese 1995, 44, fig. 12:e; 85, fig. 22:g; and 171, fig. 9:a (Sheikh Hassan); Wright 1981, fig. 47:b (Farukhabad); Wright 2013, fig. 4.10:f (Sharafabad)
I	KS108-P715	L 2 at 80.70	Middle Susa II–Late Susa II	Dark buff ware, chaff tempered. Strommenger, Sürenhagen, and Rittig 2014, pl. 11:G 80–90 (Habuba Kabira). For earlier examples see Boese 1995, 43, fig. 11:a (Sheikh Hassan); similar to Wright 1981, fig. 54:h (Farukhabad)

Note: Elevations are in m ASL.

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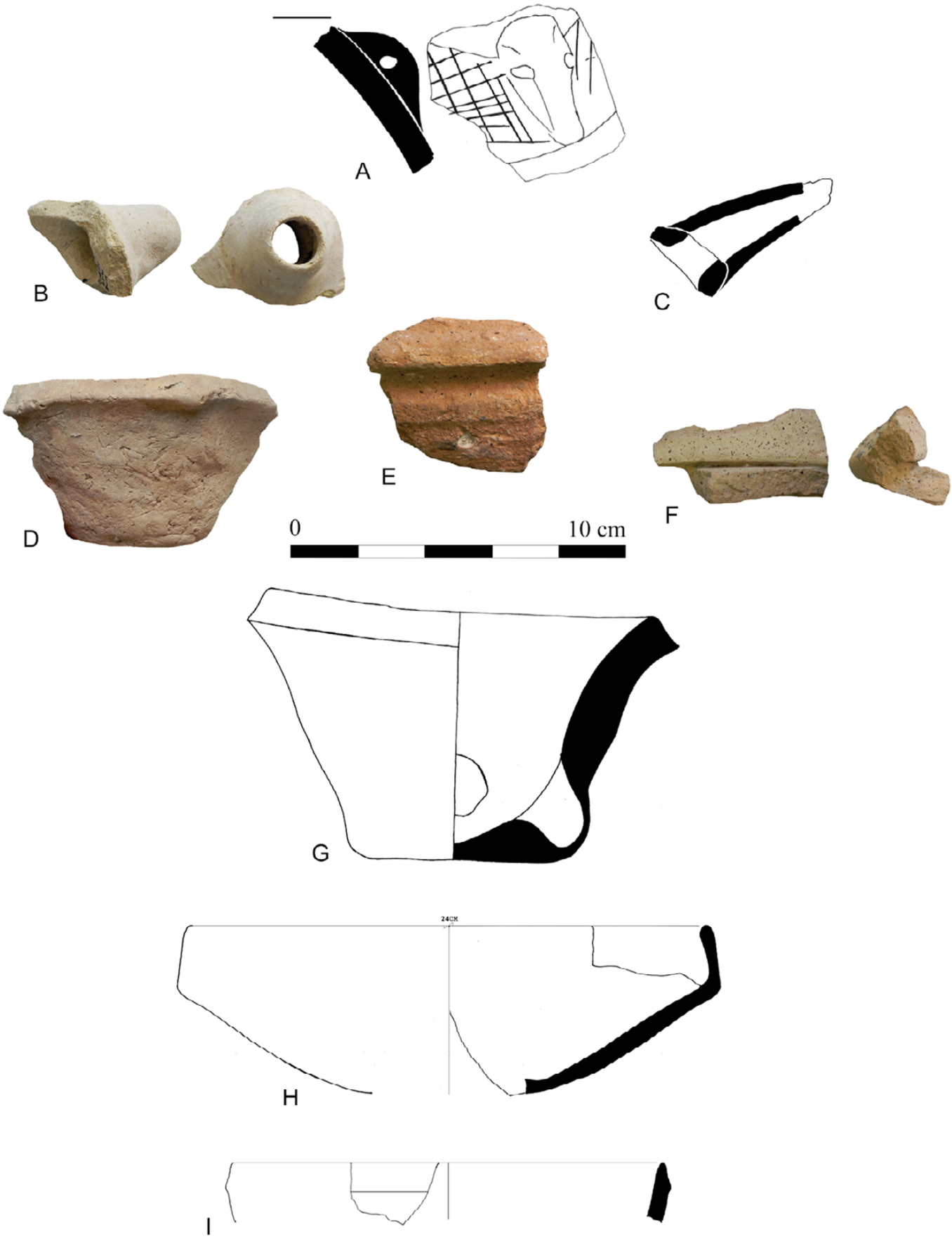

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Plate 67. Susa II pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P698	L 2 at 80.70	Middle Susa II–Late Susa II	Pale bricky red ware, some dark grits and calcite particles in paste. Jars with everted rim and punctated shoulder are dated to the Early Uruk by Johnson (1973, Type 33, pl. III:n). Such jars without punctated shoulder are dated to the Late Uruk by Wright, 2013, fig. 4.14:d (Farukhabad). See also Delougaz and Kantor 1996, pls. 96–97; Le Brun 1971, fig. 48:5 (Susa Acropole I)
B	KS108-P679	L 2 at 80.90	Middle Susa II–Late Susa II	Spout missing. Warm buff ware, small to medium grits in paste, greenish buff exterior surface. Delougaz and Kantor 1996, pl. 103:A; Le Brun 1978a, fig. 31:6, 10 (Susa Acropole I); Miroschedji 1976, fig. 7:7 (Susa Apadana kiln). For earlier examples see Boese 1995, 78, fig. 15:a, c, e (Sheikh Hassan)
C	KS108-P699	L 2 at 80.90	Middle Susa II–Late Susa II	Bricky red ware, some dark grits in paste. See A above
D	KS108-P696	L 2 at 80.75	Middle Susa II–Late Susa II	Light-brown buff ware, medium dark grits in paste. Delougaz and Kantor 1996, pl. 88:N, V; Le Brun 1978a, fig. 25:10 (Susa Acropole I). For the Middle Susa II date see Boese 1995, 45, fig. 13:d, f (Sheikh Hassan); Wright 2013, fig. 4.11:e (Sharafabad)
E	KS108-P716	L 2 at 80.85	Middle Susa II–Late Susa II	Buff ware, some grits in paste. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
F	KS108-P693	L 2 at 80.85	Middle Susa II–Late Susa II	Buff ware, some small grits in paste. Boese 1995, 46, fig. 14:e (Sheikh Hassan)
G	KS108-P672	L 2 at 80.85	Late Susa II	Pinkish buff ware, some grits in paste, finger-impressed appliqué band below rim. Delougaz and Kantor 1996, pl. 87:H (with reserved slip), I; Miroschedji 1976, fig. 5:11–13 (Susa Apadana kiln)

Note: Elevations are in m ASL.

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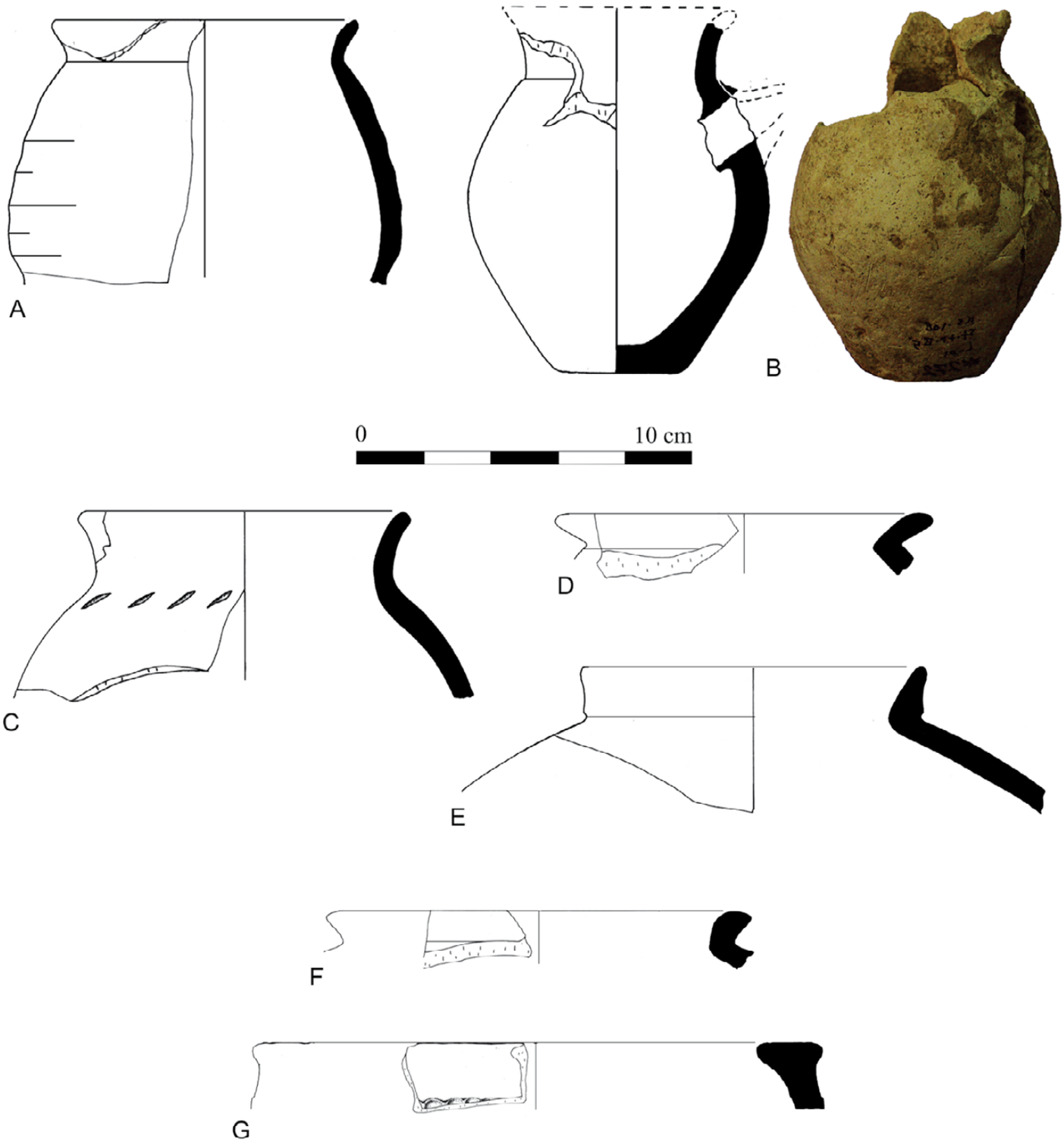

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Plate 68. Susa II pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P701	L 1 at 81.65	Middle Susa II–Late Susa II	Yellowish buff ware, scattered small grits in paste, slipped. Johnson 1973, Middle Uruk Type 27, pl. III:i. At Farukhabad this type is dated to the Early Uruk phase (Wright 1981, fig. 44:a). For a Middle Susa II example see Boese 1995, 201, fig. 13:n (Sheikh Hassan). For Late Susa II examples see Delougaz and Kantor 1995, pl. 92:G; Miroschedji 1976, fig. 6:2 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 297 (Habuba Kabira)
B	KS108-P726	L 1 at 81.65	Late Susa II	Shoulder fragment. Pinkish red ware, some small grits in paste, impressed appliqué bands. Impressed band decoration similar to Delougaz and Kantor 1996, pls. 23:C, 28:Q–S, and 110:I
C	KS108-P734	L 1 at 81.80	Late Susa II	Shoulder fragment. Buff ware, some small grits in paste, impressed appliqué bands above series of incised grooves. See B for references
D	KS108-P735	L 1 at 81.85	Middle Susa II–Late Susa II	Buff ware, some small grits in paste, incised cross-hatched band. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For the Middle Susa II date see Boese 1995, 48, fig. 16 (Sheikh Hassan); Wright 2013, fig. 4.11:b (Sharafabad)
E	KS108-P736	L 1 at 81.70	Late Susa II	Shoulder fragment. Pinkish red ware, some small grits in paste, impressed appliqué bands. See B for references
F	KS108-P737	L 1 at 81.65	Middle Susa II–Late Susa II	Buff ware, some small grits in paste, probably slipped. Delougaz and Kantor 1996, pl. 103; Le Brun 1971, fig. 52:1–4; 1978a, fig. 31:6; 1978b, fig. 32:12 (Susa Acropole I); Miroschedji 1976, fig. 7:6 (Susa Apadana kiln). For earlier examples see Boese 1995, 79, fig. 16:c (Sheikh Hassan); Wright 1981, fig. 40:b (Farukhabad)
G	KS108-P689	L 1 at 81.70	Late Susa II	True/full twisted handle. Pinkish buff ware, small dark grits and occasional calcite particles in paste. Johnson 1973, Type 51, pl. VII:e, to be differentiated from full twisted handle, Type 52, pl. VIII:a; Delougaz and Kantor 1996, pl. 100:A–G; Le Brun 1978a, fig. 28:2 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 290–91 (Habuba Kabira)

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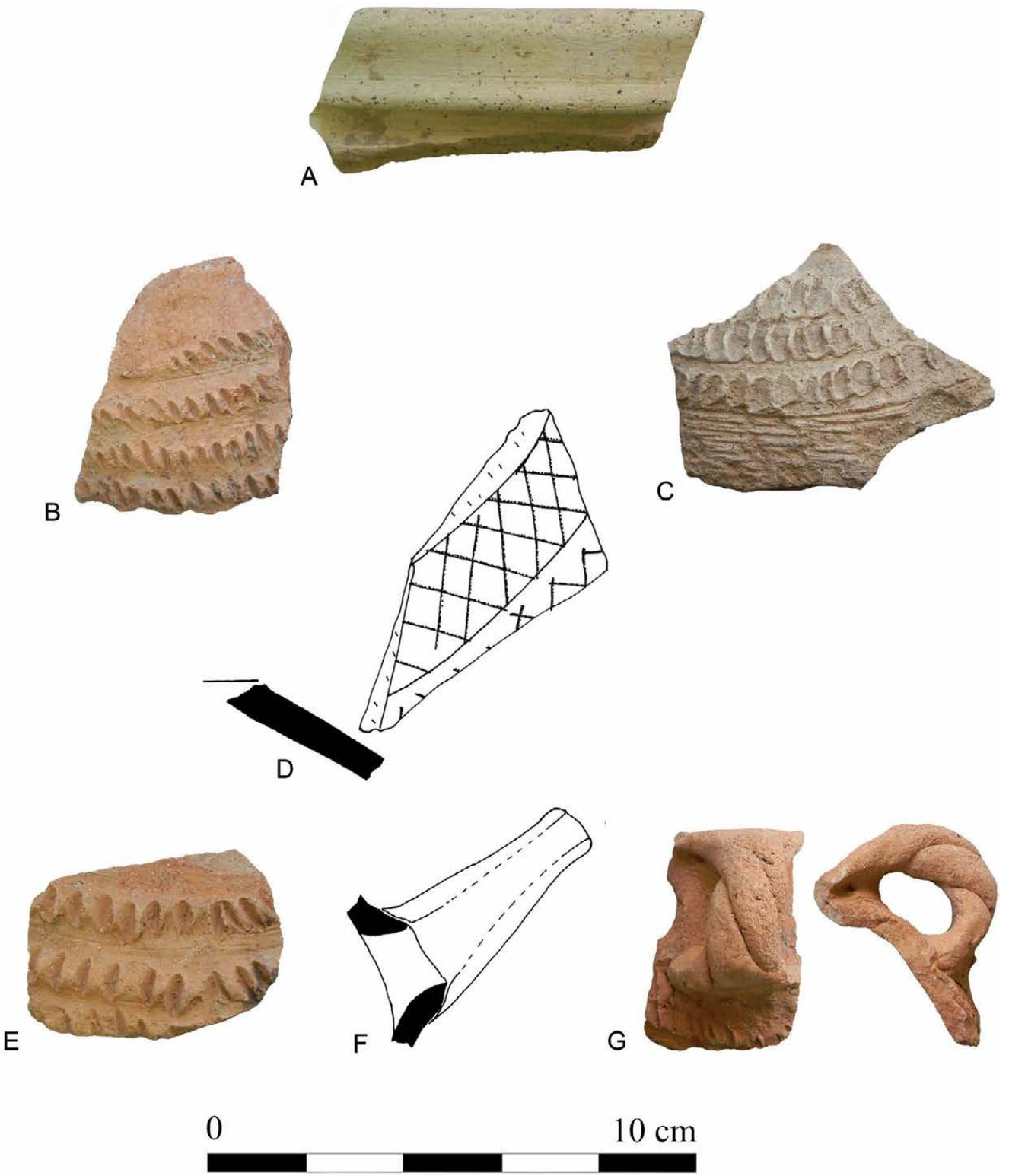

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Plate 69. Susa II pottery from KS-108 Square L4, stratigraphic trench.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P738	L 1 at 81.75	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Pale buff ware, no visible inclusion, slipped. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such cups are not reported from Habuba Kabira
B	KS108-P739	L 1 at 81.65	Middle Susa II–Late Susa II	Buff ware, some small grits in paste. Delougaz and Kantor 1996, pl. 88:N, V; Le Brun 1978a, fig. 25:10 (Susa Acropole I). For the Middle Susa II date see Boese 1995, 45, fig. 13:d, f (Sheikh Hassan); Wright 2013, fig. 4.11:e (Sharafabad)
C	KS108-P740	L 1 at 81.80	Middle Susa II–Early Susa III	Buff ware, scattered grits in paste. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
D	KS108-P702	L 1 at 81.65	Late Susa II	True/full twisted handle. Orange buff ware, small to medium grits in paste. Johnson 1973, Type 51, pl. VII:e, to be differentiated from full twisted handle, Type 52, pl. VIII:a; Delougaz and Kantor 1996, pl. 100:A–G; Le Brun 1978a, fig. 28:2 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 22:G 290–91 (Habuba Kabira)
E	KS108-P708	L 1 at 81.70	Middle Susa II–Late Susa II	Buff ware, scattered small grits in paste.
F	KS108-P712	L 1 at 81.00	Middle Susa II–Late Susa II	Pale bricky red ware, some fine grits in paste. Delougaz and Kantor 1996, pl. 95:N; Le Brun 1971, fig. 48:4 (Susa Acropole I). For an earlier example see Boese 1995, 172, fig. 10:e (Sheikh Hassan)
G	KS108-P741	L 1 at 81.50	Middle Susa II–Late Susa II	Buff ware, scattered small grits in paste, probably slipped. Delougaz and Kantor 1996, pls. 96–97; Le Brun 1971, fig. 48:5 (Susa Acropole I); Wright, 2013, fig. 4.14:d (Farukhabad). For an earlier example see Boese 1995, 172, fig. 10:c (Sheikh Hassan)

Note: Elevations are in m ASL.

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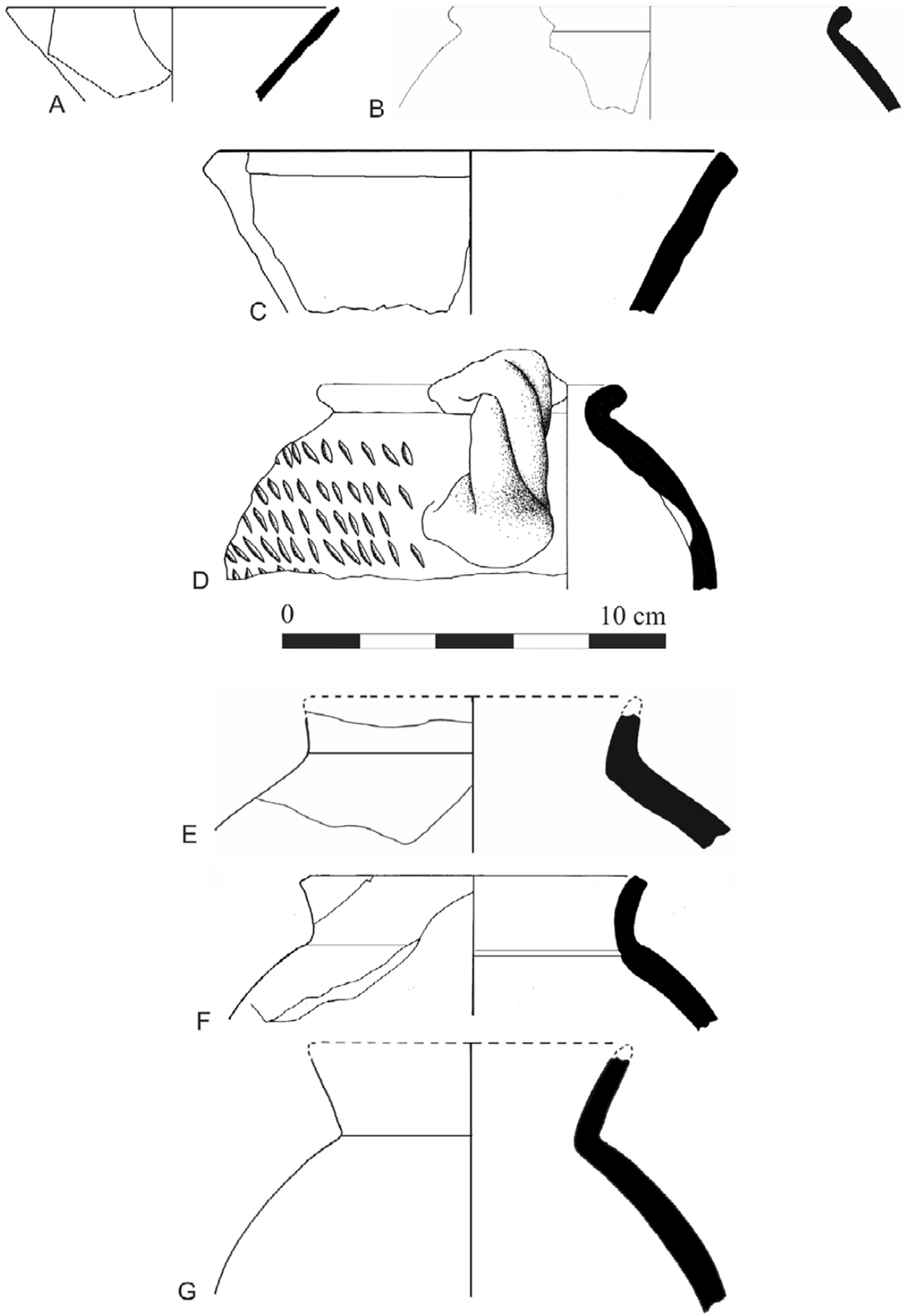

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Plate 70. Susa II pottery from KS-108 Squares B6 and C6-N.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P682	Sq. B6 L 1	Late Susa II	Light bricky-red buff ware, some small grits in paste, light buff exterior surface. Similar to Delougaz and Kantor 1996, pl. 28:H, J; Strommenger, Sürenhagen, and Rittig 2014, pl. 83:G 381.3 (Habuba Kabira)
B	KS108-P683	Sq. C6-N L 1	Middle Susa II–Late Susa II	Buff ware, some sand in paste. Delougaz and Kantor 1996, pls. 25:B and 28:Q (with small knobs); Miroschedji 1976, fig. 8:5 (Susa Apadana kiln). For earlier examples see Boese 1995, 45, fig. 13:b–c, e, and 83, fig. 20:f (with knobs) (Sheikh Hassan)
C	KS108-P684	Sq. B5 L 1	Middle Susa II–Late Susa II	Light buff ware, small grits in paste, light-gray buff exterior surface. See B for references
D	KS108-P685	Sq. C6-N L 4 / F 2	Late Susa II	Pinkish buff ware, small red grits in paste. Johnson 1973, Type 53, pl. VIII:c; Delougaz and Kantor 1996, pl. 90:K–M; Le Brun 1971, fig. 49:8; 1978a, fig. 28:10–11 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 21:G 282 (Habuba Kabira)
E	KS108-P686	Sq. C6-N L 12	Middle Susa II–Late Susa II	Pale bricky red/buff ware, small grits and occasional calcite particles in paste. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For the Middle Susa II date see Wright 2013, fig. 4.11:b (Sharafabad); Boese 1995, 48, fig. 16 (Sheikh Hassan)
F	KS108-P687	Sq. C6-N L 12	Late Susa II	Bricky red ware, small grits in paste, gritty face, light buff exterior surface. Johnson 1973, Type 50, pl. VII:d; Delougaz and Kantor 1996, pls. 95:H, 96:B, and 97:B, D; Le Brun 1978a, fig. 28:6 (Susa Acropole I)
G	KS108-P690	Sq. B6 L 1	Early Susa II–Late Susa II	Pale bricky red ware, sand in paste
H	KS108-P692	Sq. C6-N L 4 / F 2	Late Susa II	Yellowish buff ware, some sand in paste. Delougaz and Kantor 1996, pls. 103:I and 105:B
I	KS108-P693	Sq. C6-N L 12	Middle Susa II–Late Susa II	Warm buff ware, gritty paste. Alizadeh 2008, fig. 31:C; Miroschedji 1976, pl. II:g (Susa Apadana kiln). For the Middle Susa II date see Boese 1995, 86, fig. 23:c (Sheikh Hassan); Wright 1981, fig. 40:b (Farukhabad)

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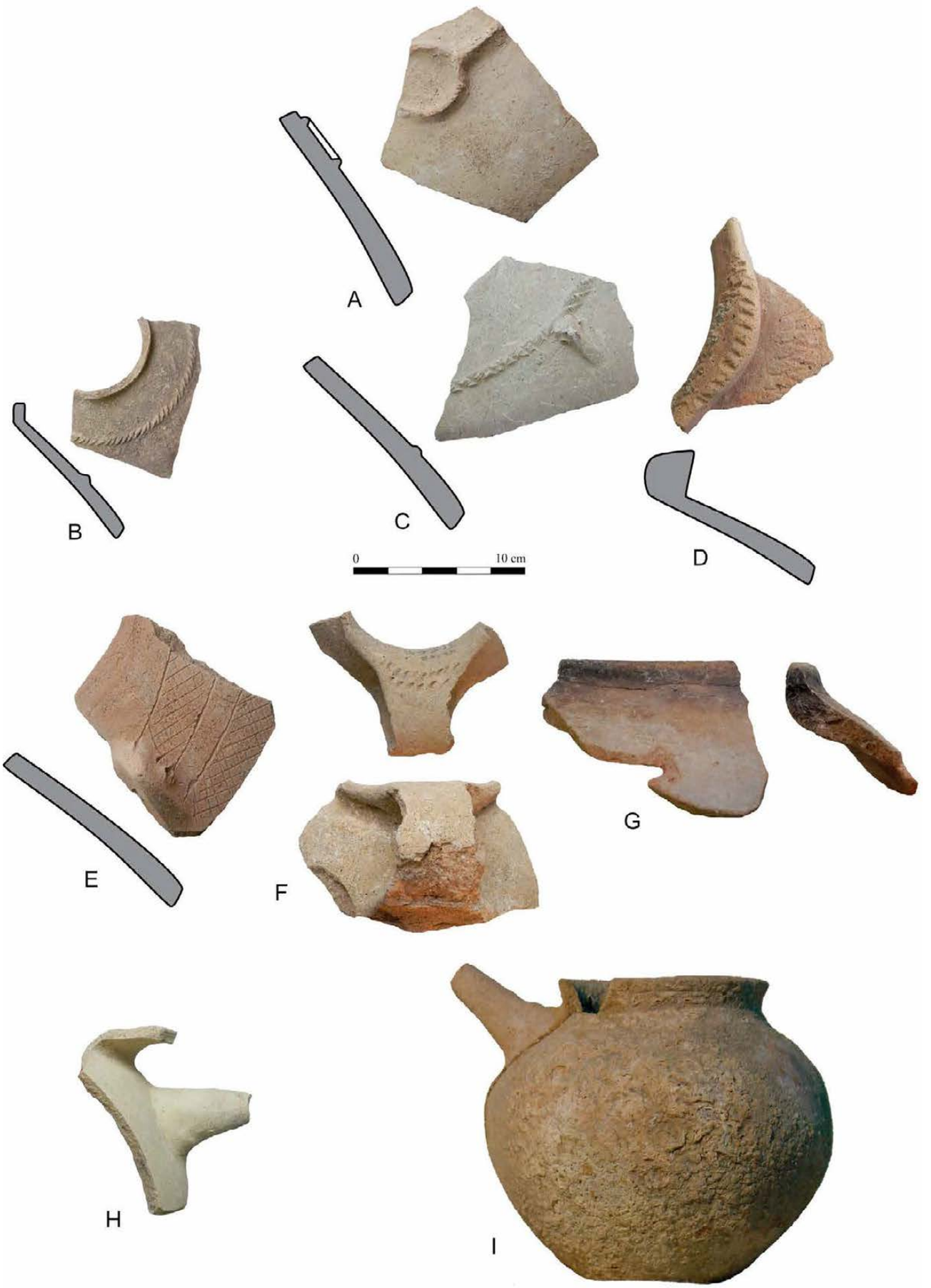

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Plate 71. Susa II pottery from KS-108 Squares C6-N, C6-S, and B5.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P717	Sq. C6-N L 12	Late Susa II	Fine bowl. Creamy buff ware, some sand in paste, probably slipped
B	KS108-P719	Sq. C5 L 2	Late Susa II	Fine bowl. Buff ware, no visible inclusion, probably slipped
C	KS108-P720	Sq. C5 L 2	Middle Susa II–Late Susa II	Light-brownish buff ware, chaff tempered with some sand in paste. For the Middle Susa II date see Boese 1995, fig. 10:b (Sheikh Hassan). For late examples see Delougaz and Kantor 1996, pl. 84:P; Strommenger, Sürenhagen, and Rittig 2014, pl. 11:G 85–86 (Habuba Kabira)
D	KS108-P721	Sq. C6-N L 4 / F 2	Late Susa II	Buff ware, some sand in paste, probably slipped. Strommenger 2014, pl. 10:G 34 (Habuba Kabira)
E	KS108-P722	Sq. C6-N L 1	Middle Susa II–Late Susa II	Fine cup, pouring lip missing. Creamy buff ware, no visible inclusion, slipped. Johnson 1973, Type 9, pl. I:g. For the Middle Susa II date see Wright 2013, fig. 4.10:e (Sharafabad); Boese 1995, 40, fig. 8:d–e (Sheikh Hassan); Stein 2001, fig. 8.6:J–L (Hacinebi). For Late Susa II see Delougaz and Kantor 1996, pl. 80:Y–FF; Le Brun 1978b, fig. 32:7 (Susa Acropole I); Miroschedji 1976, fig. 4:16–17 (Susa Apadana kiln); Wright 2013, fig. 4.14:b (Farukhabad). Such cups are not reported from Habuba Kabira
F	KS108-P723	Sq. C6-N surface	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face. Delougaz and Kantor 1996, pl. 87:B. For a Middle Susa II example see Boese 1995, 85, fig. 22:i (Sheikh Hassan)
G	KS108-P724	Sq. C6-S L 1	Late Susa II	Buff ware, fine sand in paste, probably slipped. Similar to Strommenger, Sürenhagen, and Rittig 2014, pl. 12:G 100 (Habuba Kabira)
H	KS108-P725	Sq. C6-S L 1	Middle Susa II–Late Susa II	Buff ware, sandy paste. Delougaz and Kantor 1996, pl. 83:V; Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 225 (Habuba Kabira). For early examples see Boese 1995, 85, fig. 22:e (Sheikh Hassan); Wright 1981, fig. 47:n (Farukhabad)

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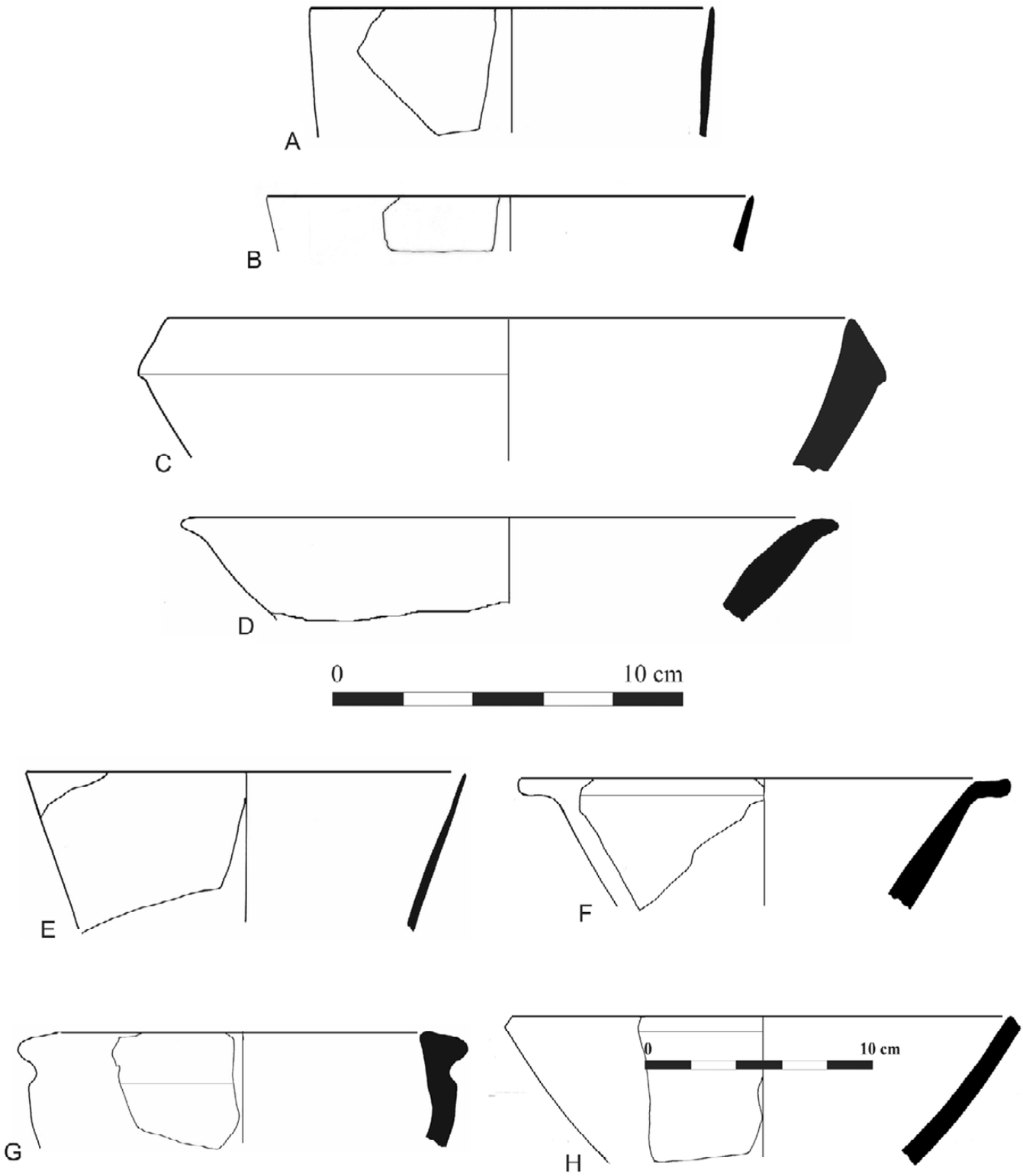

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Plate 72. Susa II pottery from KS-108 Squares C6-N, C6-S, and B5.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P727	Sq. B5 L 1	Middle Susa II–Early Susa III	Buff ware, straw tempered. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
B	KS108-P728	Sq. B5 L 1	Middle Susa II–Early Susa III	Buff ware, straw tempered. See A for references
C	KS108-P729	Sq. B5 L 1	Middle Susa II–Early Susa III	Buff ware, straw tempered. See A for references
D	KS108-P730	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, traces of chaff in paste, probably slipped. Delougaz and Kantor 1996, pl. 83:V; Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 225 (Habuba Kabira). For early examples see Boese 1995, 85, fig. 22:e (Sheikh Hassan); Wright 1981, fig. 47:n (Farukhabad)
E	KS108-P731	Sq. C6-N L 1	Middle Susa II–Late Susa II	Buff ware, some small grits in paste. Delougaz and Kantor 1996, pl. 85:I–L; similar to Strommenger, Sürenhagen, and Rittig 2014, pl. 16:G 166–67. For earlier examples see Boese 1995, 85, fig. 22:g (Sheikh Hassan); similar to Wright 1981, fig. 47:b (Farukhabad)
F	KS108-P732	Sq. C6-N F 5	Middle Susa II–Early Susa III	Brownish buff ware, straw tempered. Johnson 1973, Type 6, pl. I:c (not dated). Like the BRB, shallow trays appear early in the Middle Susa II phase and continue into the Susa III (Proto-Elamite) phase. For pre-Susa III see Boese 1995, 84, fig. 21:e–g (Sheikh Hassan); Le Brun 1971, figs. 46:7–8 and 60:14–17; 1978a, fig. 23:7–10 (Susa Acropole I); Miroschedji 1976, fig. 3:12–14 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 18 (Habuba Kabira); Wright 2013 fig. 4.10:j–k (Sharafabad). For Susa III see Le Brun 1971, fig. 60:14–17 (Susa Acropole I); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan); Sumner 2003, fig. 23:a–e (Malyan)
G	KS108-P733	Sq. C6-N F 5	Middle Susa II–Late Susa II	Buff ware, medium to small dark grits in paste. Alizadeh, Ahmadzadeh, and Omidfar 2014, fig. 74:L; Delougaz and Kantor 1996, pl. 87:D–E; Miroschedji 1976, fig. 5:11, 13 (Susa Apadana kiln). For an earlier example see Boese 1995, 49, fig. 17:e (Sheikh Hassan)

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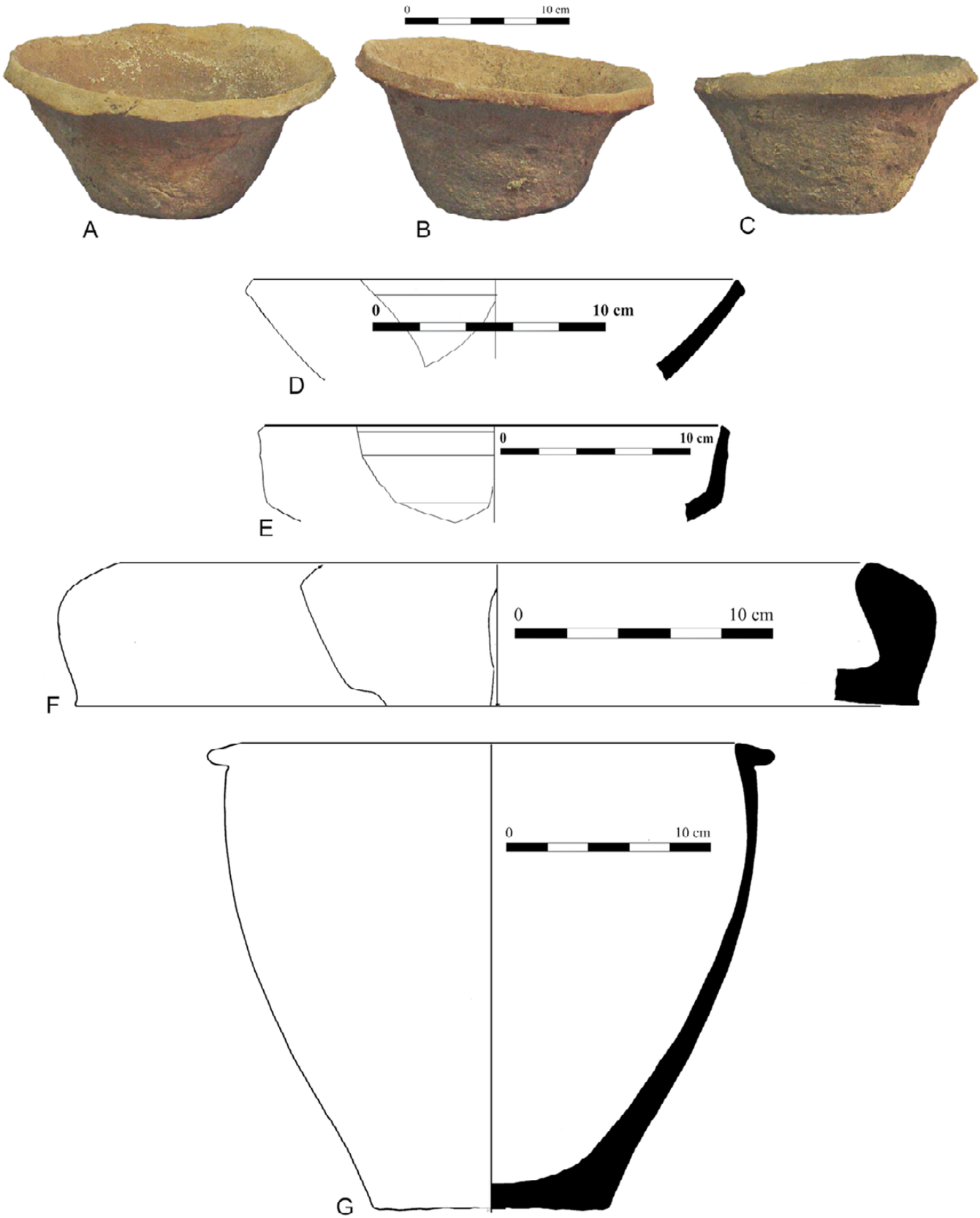

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Plate 73. Susa II pottery from KS-108 Squares B6, C5, and C6-N.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P694	Sq. C6-N F 5	Middle Susa II–Late Susa II	Buff ware, scattered small dark grits in paste, reserved slip. Delougaz and Kantor 1996, pl. 92:B, D, G. Johnson (1973) does not date the "reserved slip" decoration, but Wright (2013, fig. 4.11:h) (Sharafabad) dates it to the Middle Uruk phase
B	KS108-P697	Sq. C6-N F 8	Late Susa II	Buff ware, medium dark grits in paste. See Chogha Mish examples in Delougaz and Kantor 1996, pls. 92:F (two rows of punctates) and 97:B (five rows of punctates)
C	KS108-P700	Sq. B6 L 1	Middle Susa II(?)–Late Susa II	Buff ware, grits and calcite particles in paste
D	KS108-P701	Sq. C6-N L 4 / F 2	Middle Susa II–Early Susa III	Buff ware, straw tempered, completely oxidized. Johnson (1973, 129, pl. I:a) did not assign a type number to the BRB but dates it to the Middle–Late Uruk phases. Wright (2013, fig. 4.7:c) (Susa Acropole III) dates it to the Early Uruk. For the Middle Uruk date see Boese 1995, 40, fig. 8:a–c (Sheikh Hassan); Stein 2001, fig. 8.6:A–F (Hacinebi); Wright 2013, fig. 4.10:a–b (Sharafabad). For Late Susa II see Delougaz and Kantor 1996, pl. 83; Le Brun 1971, fig. 47; 1978a, fig. 20:8–9 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 19:G 224 (Habuba Kabira). For Early Susa III see Carter 1980, fig. 14:1–4 (Susa Ville Royale); Le Brun 1971, fig. 65:7–8 (Susa Acropole I, Level 14); Mutin 2013, fig. 3.3 (Yahya); Nicholas 1990, pl. 13:a–j (Malyan)
E	KS108-P284	Sq. C5 L 1	Middle Susa II–Early Susa III	Buff ware, straw tempered. See D for references
F	KS108-P704	Sq. B6 L 1	Middle Susa II–Late Susa II	Dark buff ware, medium to small dark grits in paste, probably slipped. For the Middle Susa II date see Wright 2013, fig. 4.11:g (Sharafabad)

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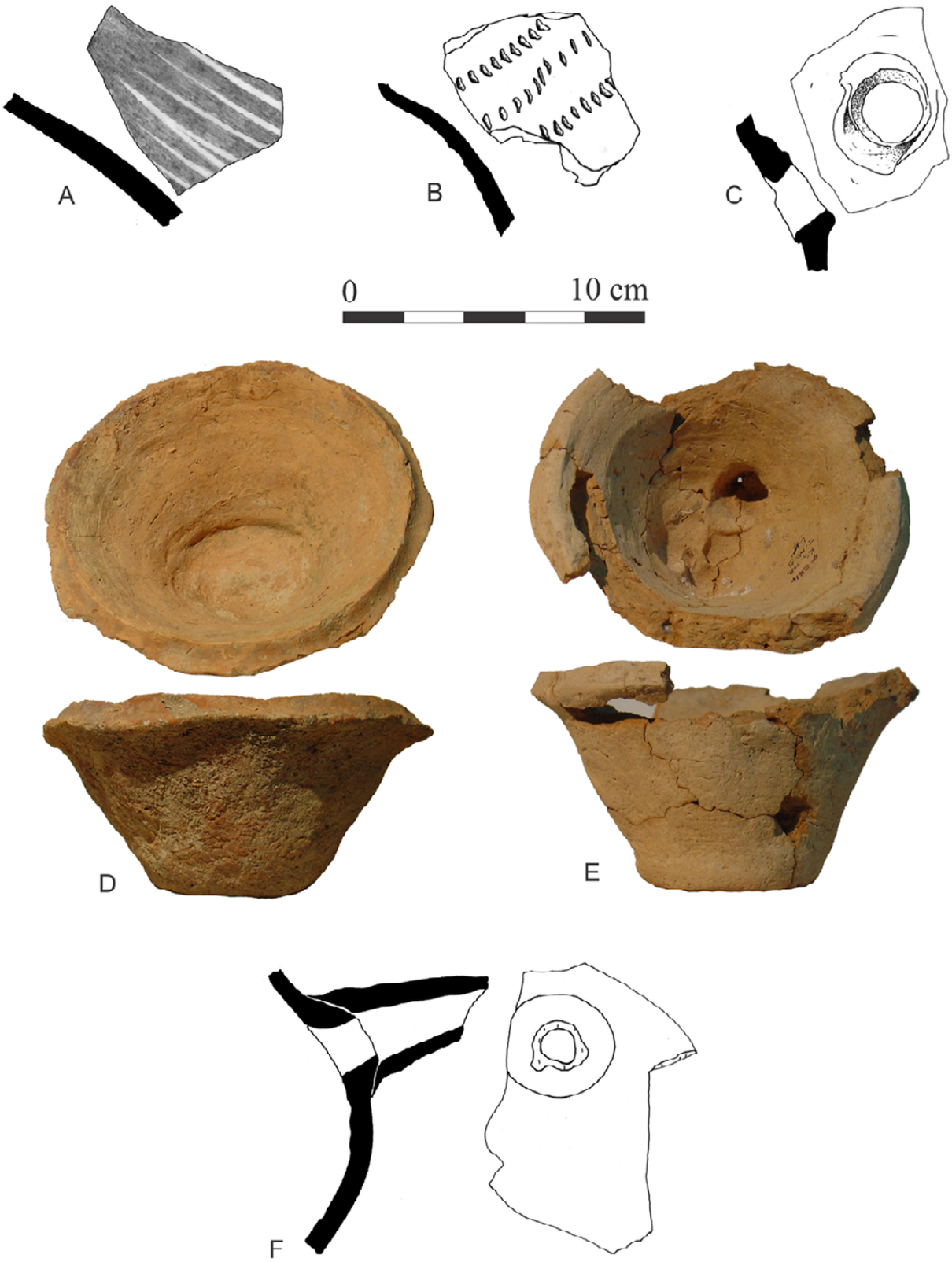

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Plate 74. Susa II pottery from KS-108 Squares B6, C5, and C6-N.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P705	Sq. C6-N L 1	Late Susa II	Buff ware, some grits in paste, yellowish buff exterior surface. Loop-handled ladles are not dated by Johnson (1973) or Wright (2013). They occur in Late Susa II contexts at Chogha Mish (Delougaz and Kantor 1996, pl. 82:A–G) and Susa Acropole I, Level 17 (personal observation); see also Miroschedji 1976, fig. 8:8 (Susa Apadana kiln). An elongated version occurs at Habuba Kabira (Strommenger, Sürenhagen, and Rittig 2014, pl. 9:G 8–9)
B	KS108-P742	Sq. C6-N L 3	Middle Susa II–Late Susa II	Buff ware, red wash, some fine sand in paste. Delougaz and Kantor 1996, pls. 25:B and 28:Q (with small knobs); Miroschedji 1976, fig. 8:5 (Susa Apadana kiln). For earlier examples see Boese 1995, 45, fig. 13:b–c, e, and 83, fig. 20:f (with knobs) (Sheikh Hassan)
C	KS108-P744	Sq. C6-N L 12	Middle Susa II–Late Susa II	Buff ware, some dark grits in paste, slipped. Johnson 1973, Type 36, pl. IV:b; Delougaz and Kantor 1996, pls. 112:D and 122:A, E; Le Brun 1978a, fig. 24:4; 1978b, fig. 34:10 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 31 (Habuba Kabira). For the Middle Susa II date see Wright 2013, fig. 4.11:b (Sharafabad); Boese 1995, 48, fig. 16 (Sheikh Hassan)
D	KS108-P745	Sq. C6-N L 12	Middle Susa II–Late Susa II	Buff ware, some fine grits in paste, slipped. Johnson 1973, Type 47, pl. IV:b (dated to the Late Uruk phase); Strommenger, Sürenhagen, and Rittig 2014, pl. 88:G 598 (Habuba Kabira); Wright 2013, fig. 4.11:f (dated to the Middle Uruk phase); see also Boese 1995, 202, fig. 14:c (Sheikh Hassan)
E	KS108-P746	Sq. C6-N L 12	Late Susa II	Fine buff ware, some sand in paste, probably slipped. Johnson 1973, Type 50, pl. VII:d; Delougaz and Kantor 1996, pls. 95:H, 96:B, and 97:B, D; Le Brun 1978a, fig. 28:6 (Susa Acropole I)
F	KS108-P748	Sq. C6-N L 12	Late Susa II	Pinkish buff ware, some fine grits in paste, probably slipped. Delougaz and Kantor 1996, pls. 23:A, 95:D–E, and 107:H–I

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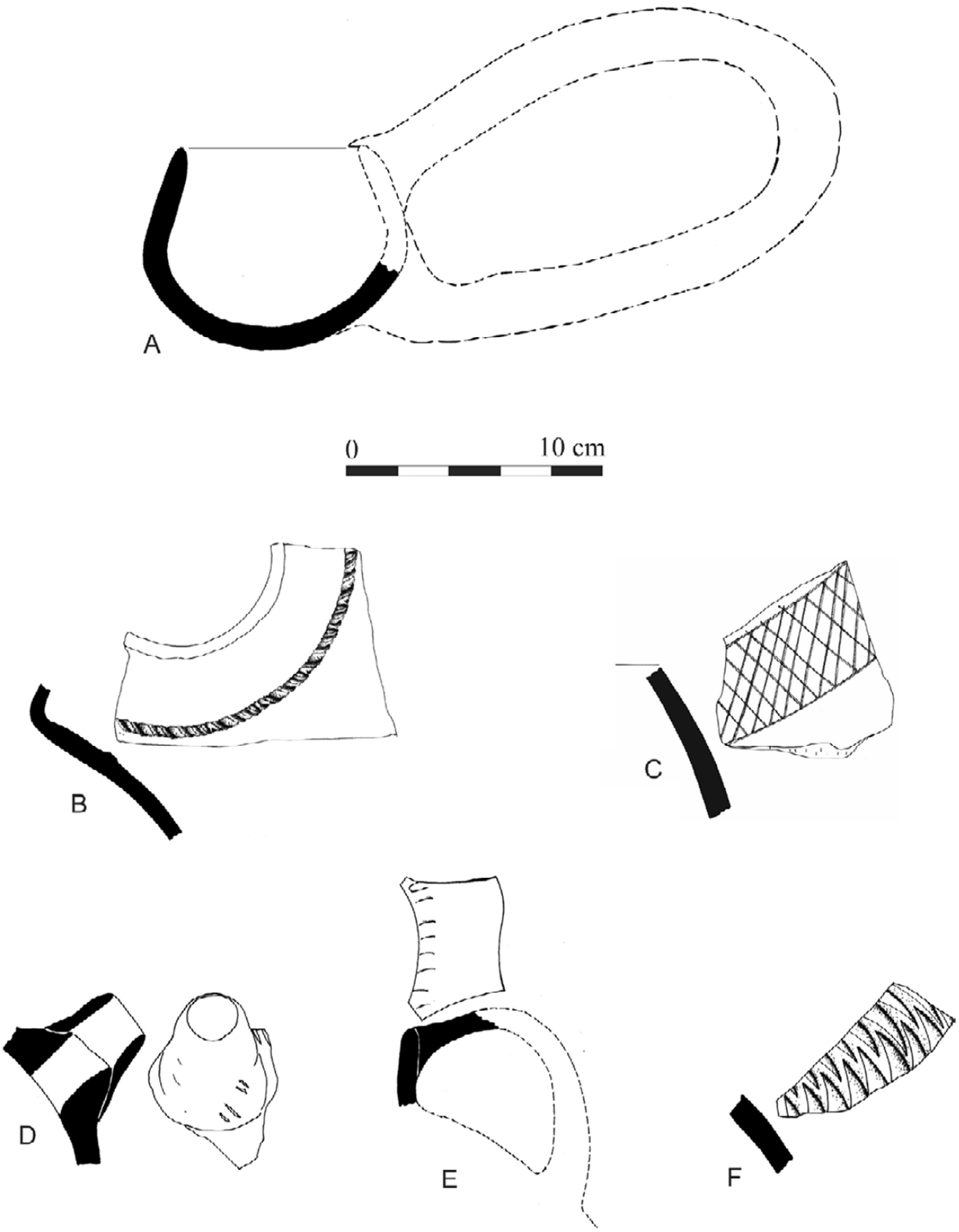

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Plate 75. Susa II pottery from KS-108 Squares B6 and C6-N.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P706	Sq. C6-N L 12	Late Susa II	Pinkish buff ware, small grits in paste. Alizadeh, Ahmadzadeh, and Omidfar 2014, fig. 74:L (Geser); Delougaz and Kantor 1996, pl. 87:D–E; Miroschedji 1976, fig. 5:11, 13 (Susa Apadana kiln)
B	KS108-P707	Sq. B6 surface	Late Susa II	Light-brownish buff ware, large to small dark grits and calcite particles in paste, grooved shoulder. Delougaz and Kantor 1996, pl. 97:C–D; Le Brun 1971, fig. 48:4; 1978a, fig. 25:3 (Susa Acropole I)
C	KS108-P709	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face. This type (Johnson 1973, Type 26, pl. III:h) was not included in Johnson's seriation and therefore tentatively dated to the Middle to Late Uruk phase (Johnson 1973, 58). Wright, based on an example from Tappeh Sharafabad (2013, fig. 4.11:h), has dated it to the Middle Uruk phase. For the late examples see Delougaz and Kantor 1996, pl. 109:E; Le Brun 1978a, fig. 25:4; 1978b, fig. 32:3 (Susa Acropole I); Miroschedji 1976, fig. 6:3–4 (Susa Apadana kiln)
D	KS108-P710	Sq. C6-N L 12	Late Susa II	Buff ware, scattered fine grits in paste
E	KS108-P711	Sq. B6 L 1	Middle Susa II–Late Susa II	Buff ware, small grits in paste. Delougaz and Kantor 1996, 93:A; Le Brun 1978a, fig. 25:7 (Susa Acropole I)
F	KS108-P713	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, some grits in paste. Boese 1995, 201, fig. 13:m (Sheikh Hassan); Wright 1981, fig. 44:a–b (Farukhabad). For late examples see Delougaz and Kantor 1996, pl. 94:D; Strommenger, Sürenhagen, and Rittig 2014, pl. 45:G 597 (Habuba Kabira)
G	KS108-P747	Sq. B6 L 1	Middle Susa II–Late Susa II	Buff ware, some small dark grits in paste. Delougaz and Kantor 1996, pl. 97:C–D; Le Brun 1971, fig. 48:4; 1978a, fig. 25:3 (Susa Acropole I). For earlier examples see Boese 1995, 128, fig. 9:c (Sheikh Hassan); Wright 1981, fig. 44:j (Farukhabad)

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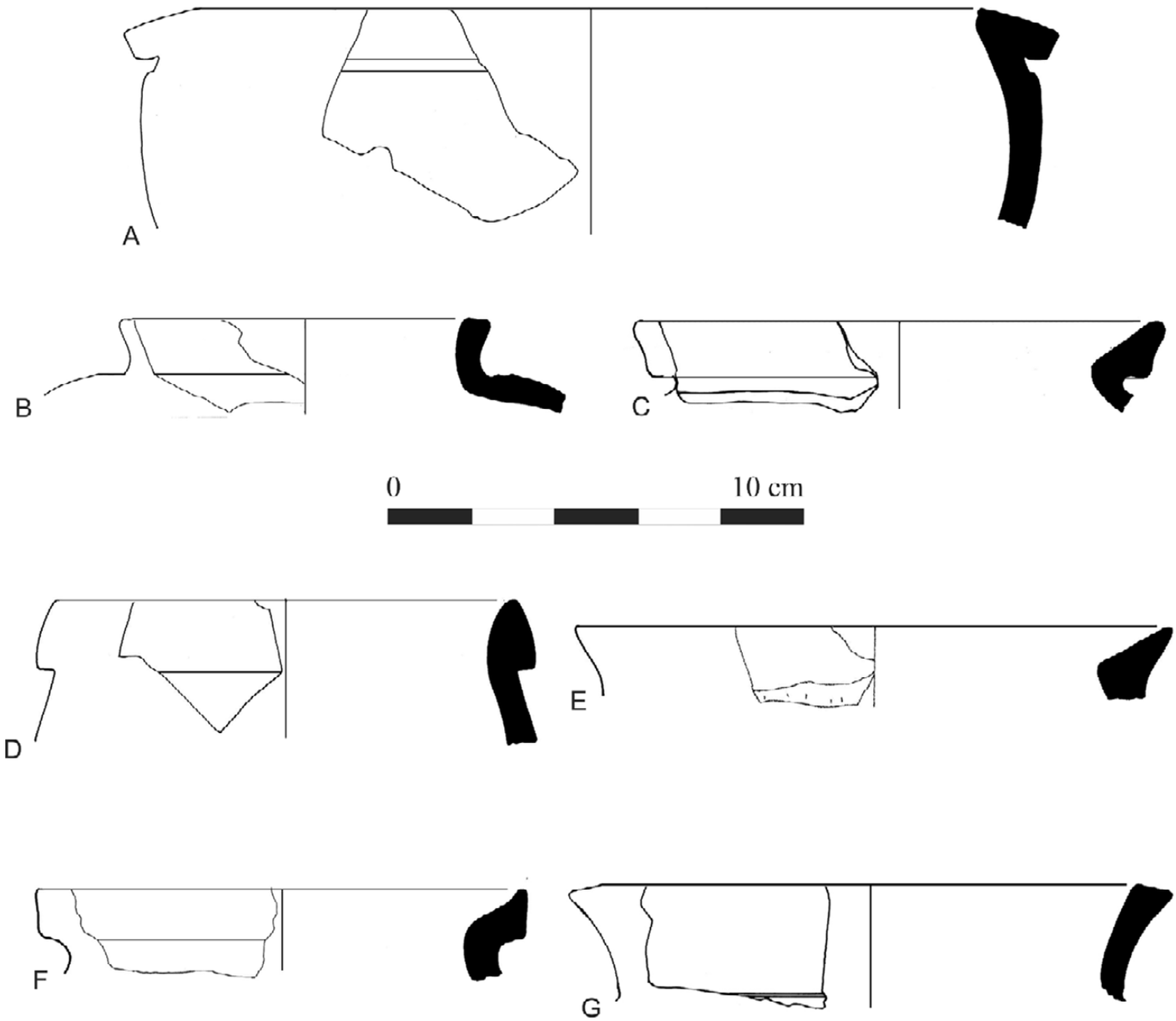

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Plate 76. Susa II pottery from KS-108 Squares B6 and C6-N.

	Field no.	Provenience	Period	Description and comparisons
A	KS108-P748	Sq. B6 surface	Middle Susa II–Late Susa II	Buff ware, some small dark grits in paste. Delougaz and Kantor 1996, pls. 95:F, I, K, 96:E, and 97:G; Le Brun 1971, fig. 48:5; 1978a, fig. 24:6 (with shoulder grooves) (Susa Acropole I). For earlier examples see Boese 1995, 171:g (Sheikh Hassan); Wright 1981, fig. 42:h (Farukhabad)
B	KS108-P749	Sq. C6-N L 12	Middle Susa II–Late Susa II	Buff ware, some small maroon grits in paste. Boese 1995, 171, fig. 9:i, k–m (Sheikh Hassan); Stein 2001, fig. 8.7:A (Hacinebi); Wright 2013, fig. 4.11:e (Sharafabad). For late examples see Delougaz and Kantor 1996, pls. 88:N and 95:K, with handle; Le Brun 1978a, fig. 24:7 (Susa Acropole I); Strommenger, Sürenhagen, and Rittig 2014, pl. 23:G 318 (Habuba Kabira)
C	KS108-P750	Sq. C6-N L 12	Late Susa II	Buff ware, some small grits in paste, probably slipped. Loop-handled ladles are not dated by Johnson (1973) or Wright (2013). They occur in Late Susa II contexts at Chogha Mish (Delougaz and Kantor 1996, pl. 82:A–G) and Susa Acropole I, Level 17 (personal observation); see also the example from Susa Apadana (Miroschedji 1976, fig. 8:8) and an elongated version from Habuba Kabira (Strommenger, Sürenhagen, and Rittig 2014, pl. 9:G 8–9)
D	KS108-P751	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face. Similar to Johnson 1973, Type 25, pl. III:g; Delougaz and Kantor 1996, pl. 101:A. For earlier examples see Boese 1995, 77, fig. 14:g (Sheikh Hassan); Wright 1981, fig. 51:b (Farukhabad)
E	KS108-P752	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face. Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln); Strommenger, Sürenhagen, and Rittig 2014, pl. 33:G 515 (Habuba Kabira). For earlier examples see Wright 2013, fig. 4.11:f (Sharafabad); Boese 1995, 77, fig. 14:i, and 79, fig. 16:f (Sheikh Hassan)
F	KS108-P753	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face. See E for references
G	KS108-P754	Sq. C6-N L 6	Middle Susa II–Late Susa II	Buff ware, gritty paste, gritty face. Similar to Johnson 1973, Type 25, pl. III:g; Le Brun 1978a, fig. 27:2 (Susa Acropole I); Miroschedji 1976, fig. 6:5 (Susa Apadana kiln). For earlier examples see Boese 1995, 201, fig. 13:k (Sheikh Hassan); Wright 2013, fig. 4.11:f (Sharafabad)

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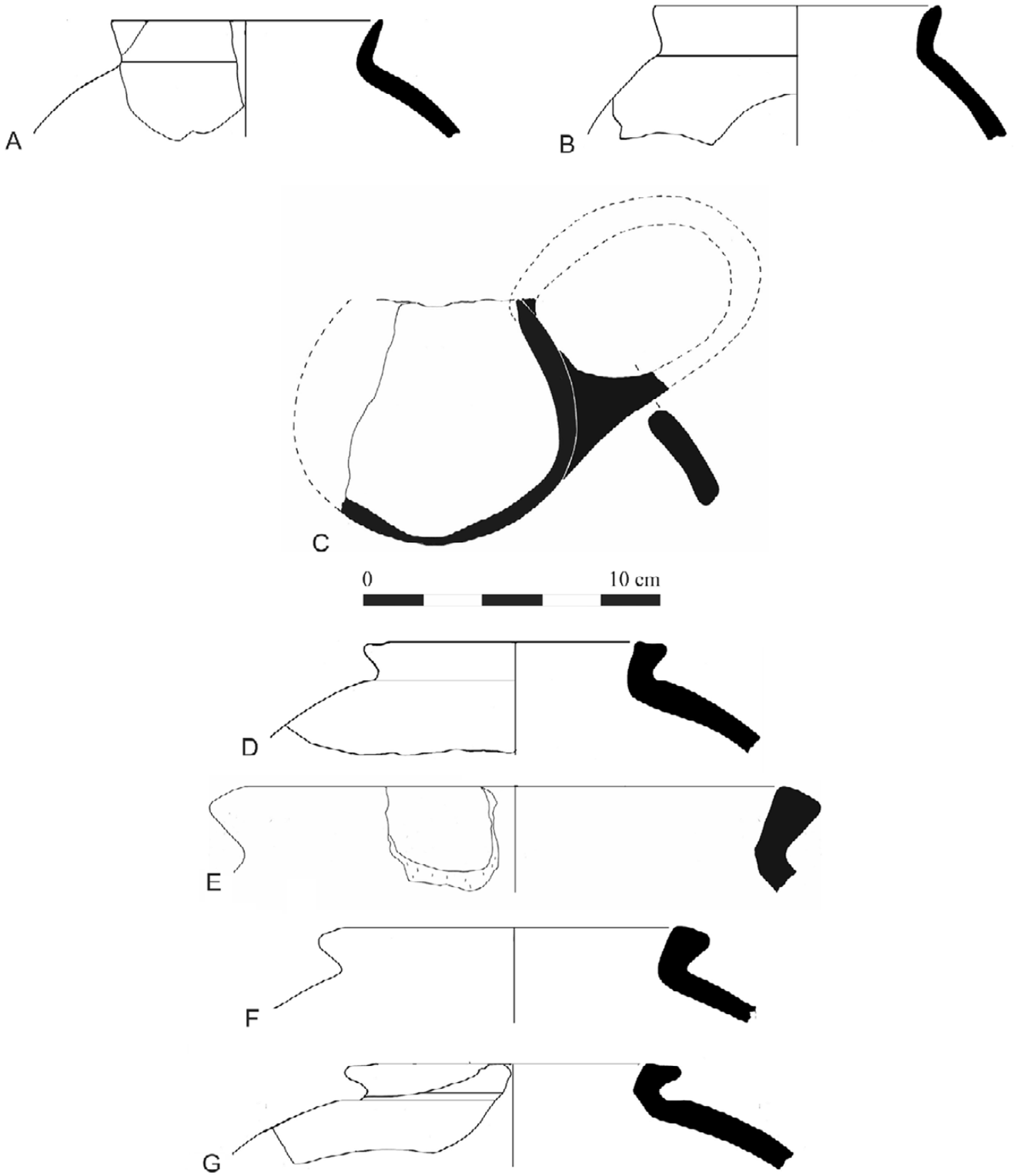

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Plate 77. Beveled-rim bowls of various shapes and sizes from KS-59. *A*, standard; *B*, proto-BRBs; *C*, BRB with meat offering.

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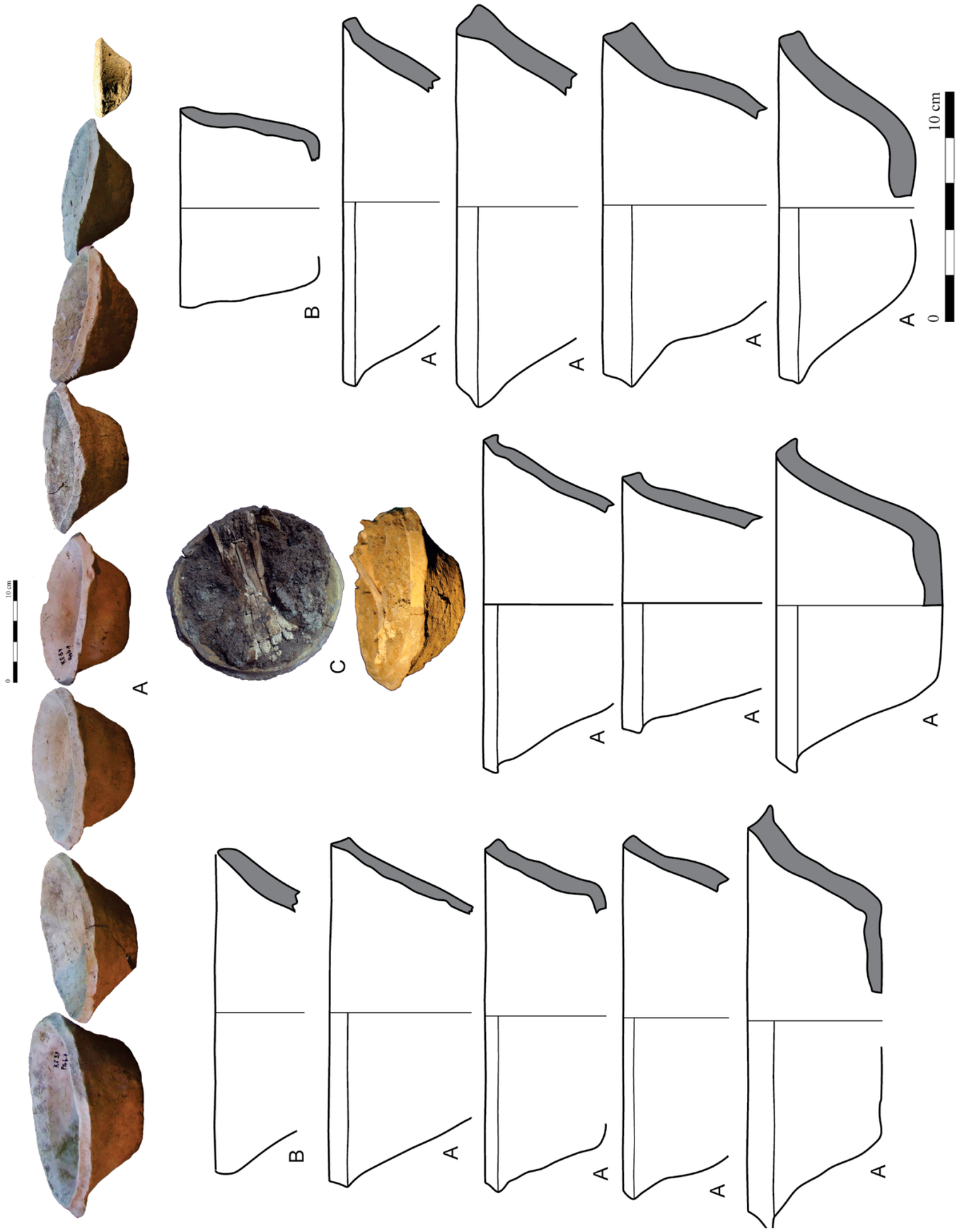

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Plate 78. Sealings from KS-59 Square 822.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-A01	Sq. 822 L 6 / F 8	Late Susa II	Bag sealing with impressions of sitting women with spouted vessels hovering in front of them. Cf. Heinrich and Andrae 1931, pl. 41:VA8881
B	KS59-A02	Sq. 822 L 6 / F 8	Late Susa II	Basket sealing with impressions of sitting women with spouted vessels hovering in front of them. See A for reference
B′	—	Sq. 822 L 6 / F 8	Late Susa II	Ink drawing of A and B
C	KS59-A03	Sq. 822 L 6 / F 8	Late Susa II	Bag sealing with impression of stamp seal with spider motif
D	KS59-A04	Sq. 822 L 6 / F 8	Late Susa II	Bag sealing with impressions probably of animals
E	KS59-A05	Sq. 822 L 6 / F 8	Late Susa II	Bag sealing with eroded impression of a cylinder seal
F	KS59-A06	Sq. 822 L 6 / F 8	Late Susa II	Bale sealing with eroded impression of a cylinder seal
G	KS59-A07	Sq. 822 L 6 / F 8	Late Susa II	Door sealing fragment with eroded impression
H	KS59-A08	Sq. 822 L 6 / F 8	Late Susa II	Door sealing fragment with eroded impression
I	KS59-A09	Sq. 822 L 6 / F 8	Late Susa II	Bag sealing with impression of a caduceus or snake
J	KS59-A10	Sq. 822 L 6 / F 8	Late Susa II	Door sealing fragment
K	KS59-A11	Sq. 822 L 6 / F 8	Late Susa II	Tablet with numerical impressions

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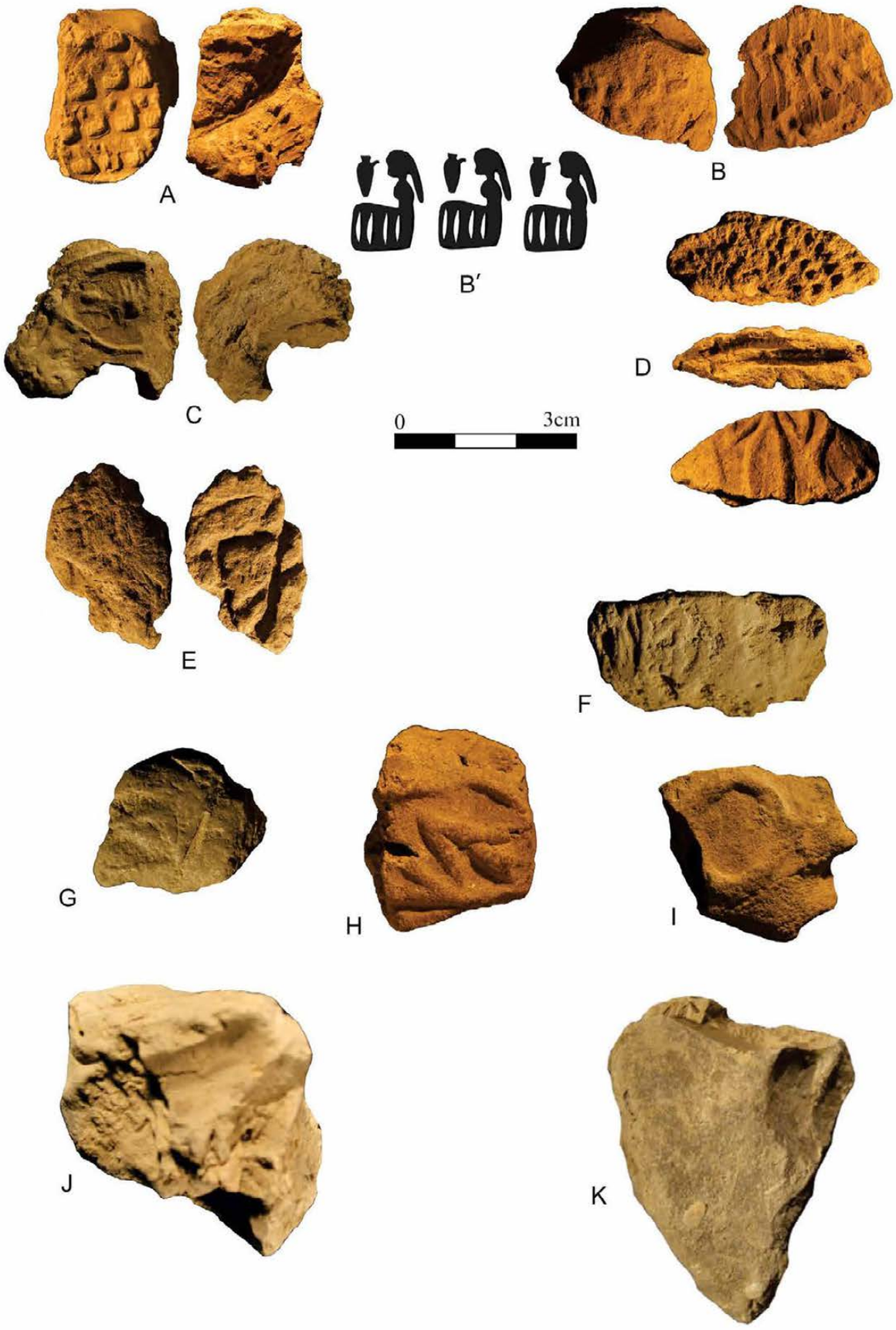

Plate 79. Stamp seals, tokens, sealings, tags, and numerical tablet from KS-59 Square 822.

	Field no.	Provenience	Period	Description
A	KS59-A12	Sq. 822 L 1	Late Susa II	Bone stamp seal with geometric design
B	KS59-A13	Sq. 822 L 6 / F 8	Late Susa II	Disk-shaped clay token
C	KS59-A14	Sq. 822 L 6 / F 8	Late Susa II	Disk-shaped clay token
D	KS59-A15	Sq. 822 L 6 / F 8	Late Susa II	Spherical clay token
E	KS59-A16	Sq. 822 L 6 / F 8	Late Susa II	Conical clay token
F	KS59-A17	Sq. 927 surface	Late Susa II	Pyramidal clay token
G	KS59-A18	Sq. 822 L 6 / F 8	Late Susa II	Conical clay token
H	KS59-A19	Sq. 822 L 6 / F 8	Late Susa II	Conical clay token
I	KS59-A20	Sq. 822 L 6 / F 8	Late Susa II	Fragment of bone stamp seal
J	KS59-A71	Sq. 822 L 25	Late Susa II	Numerical tablet
K	KS59-A174	Sq. 822 L 6 / F 8	Late Susa II	Bag sealing with impression and view of the back
L	KS59-A174	Sq. 822 L 6 / F 8	Late Susa II	Numerical tablet
M	KS59-A61	Sq. 822 L 10 / F 15	Late Susa II	Jar sealing with impression of a file of humans
N	KS59-A22	Sq. 822 L 10 / F 15	Late Susa II	Clay tag
O	KS59-A23	Sq. 822 L 10 / F 15	Late Susa II	Clay tag
P	KS59-A24	Sq. 822 L 10 / F 15	Late Susa II	Clay tag with seal impression

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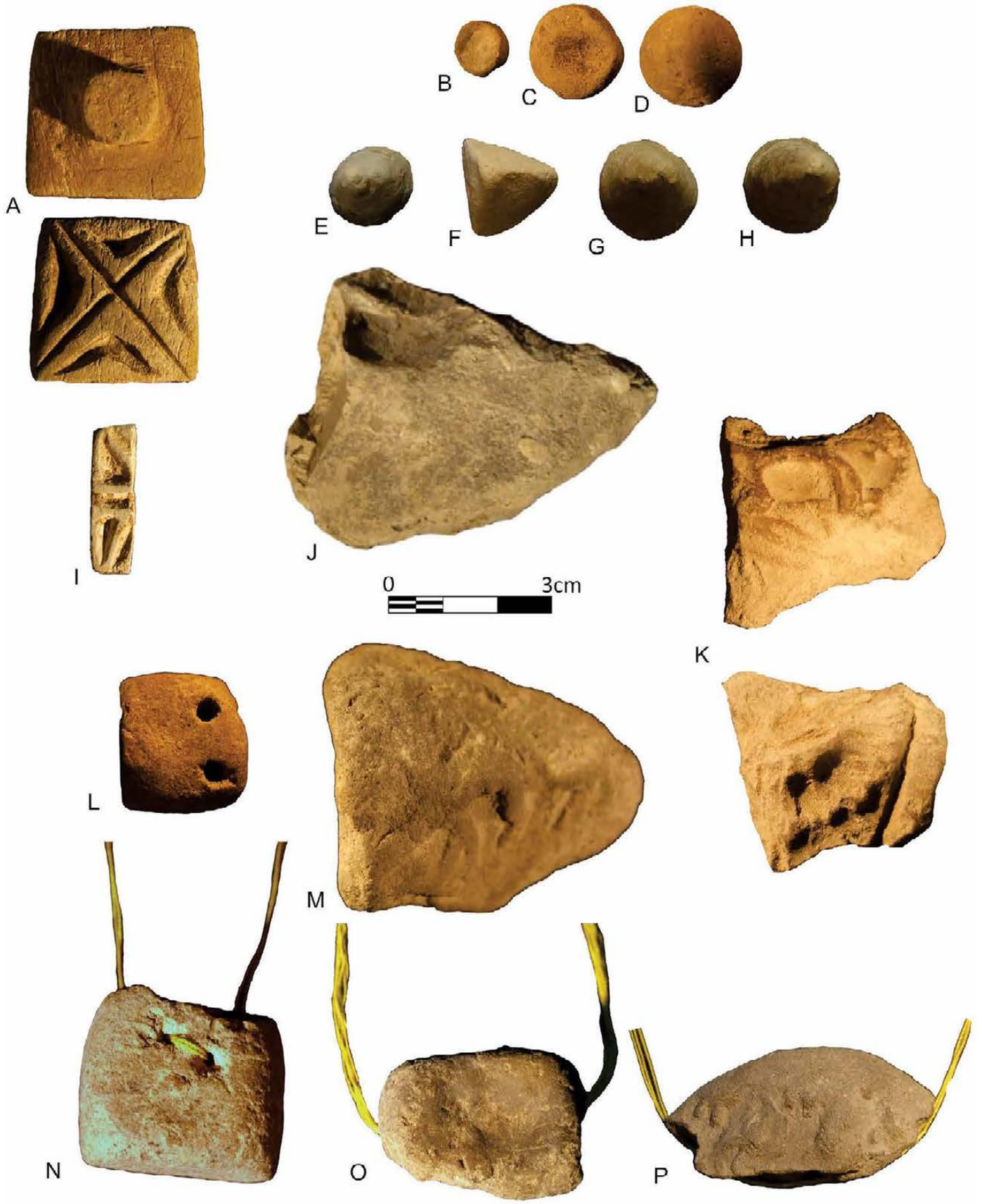

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Plate 80. Various stone objects and vessel from KS-59, North Mound.

	Field no.	Provenience	Period	Description
A	KS59-S12	Sq. 787 L 2	Late Susa II	Conglomerate grinding stone
B	KS59-S13	Sq. 822 F 11	Late Susa II	Conglomerate grinding stone
C	KS59-S17	Strip 3	Late Susa II	Sandstone loom weight/sinker
D	KS59-S18	Sq. 822 L 10 / F 15	Late Susa II	Stone weight
E	—	—	—	Hypothetical reconstruction of a scale
F	KS59-F01	Sq. 787 L 5	Late Susa II	Part of a flint sickle set in bitumen
G	KS59-S19	Sq. 787 topsoil	Late Susa II	Stone pounder
H	KS59-S04	Sq. 822 F 11	Late Susa II	Alabaster bowl fragment
I	KS59-S20	Op. 1 at 73.45	Late Susiana 2	Stone pounder
J	KS59-S02	Sq. 822 L 15	Late Susa II	Bird-shaped stone pendant
K	KS59-S03	Strip 2	Late Susa II	Stone pendant

Note: Elevations are in m ASL.

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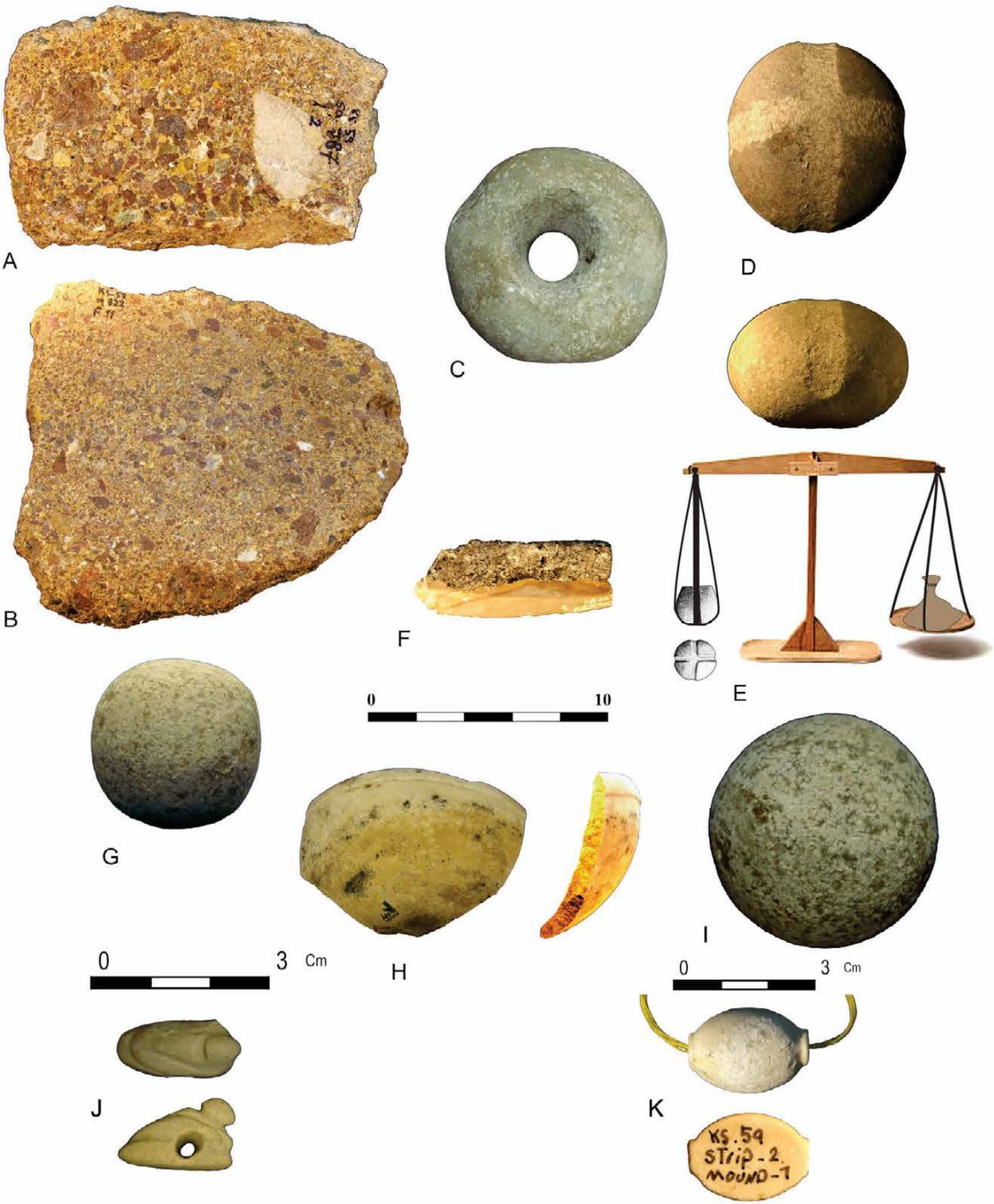

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Plate 81. Miscellaneous stone, clay, and glass objects from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-C18	Sq. N17 surface	Late Susa II	Clay sling shot
B	—	Sq. Q16 surface	Islamic	Glass bracelet
C	KS04-S55	Sq. M14 L 2	Late Susiana 2	Stone seal blank
D	KS04-C98	Sq. J7 surface	Late Susiana 2	Pottery muller
E	KS04-S165	Sq. R13 at 73.56	Late Susiana 2(?)	Malachite(?) button

Note: Elevations are in m ASL.

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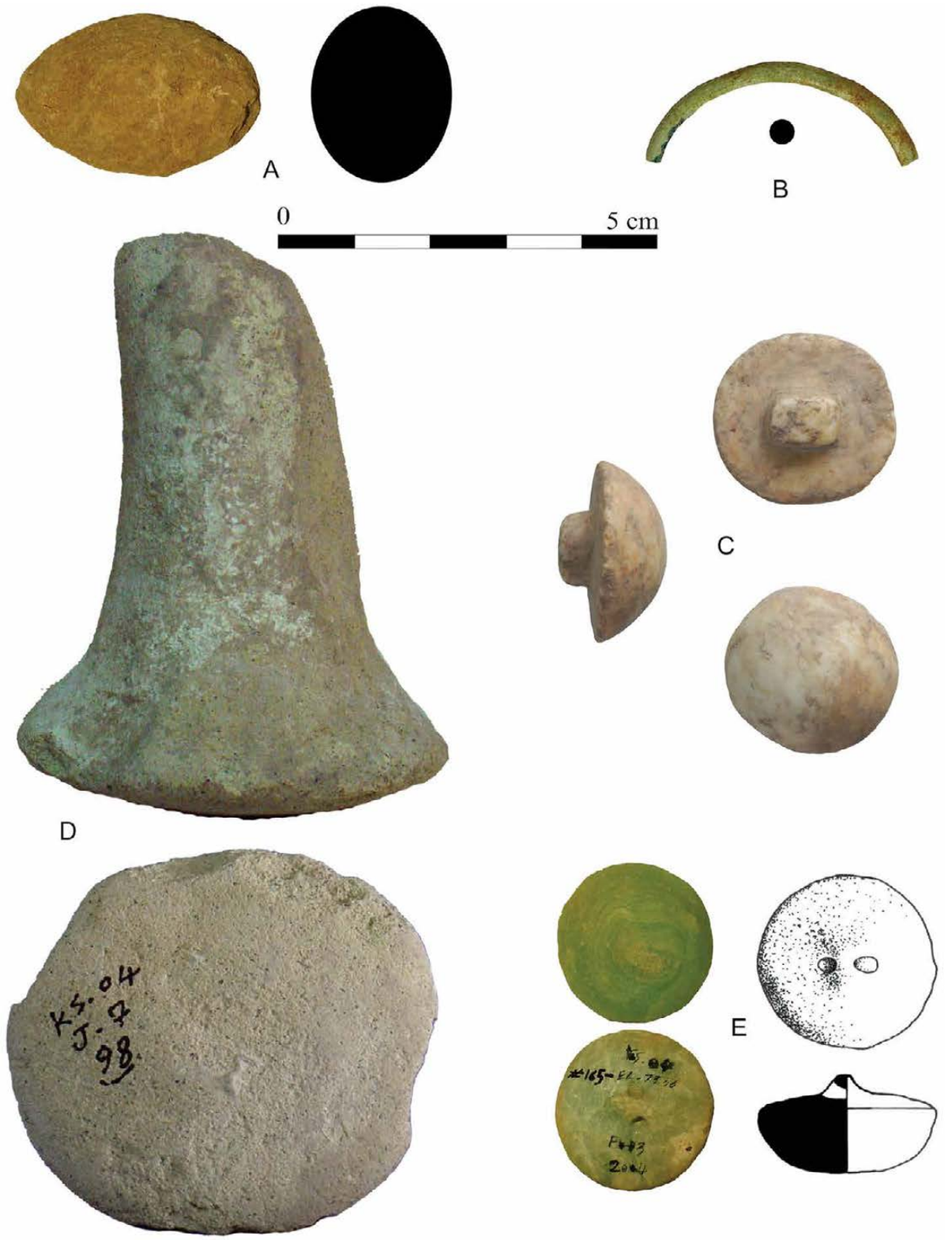

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Plate 82. Miscellaneous stone, clay, and metal objects from KS-108.

	Field no.	Provenience	Period	Description
A	KS108-S50	Sq. C6-N L 1	Late Susa II	Work stone
B	KS108-M312	Sq. N5 L 2	Achaemenid(?)	Bronze arrowhead
C	KS108-S51	Sq. C6-N L 1	Late Susa II	Loom weight / stone pounder
D	KS108-C313	Stratigraphic trench L 5	Late Susiana 1	Decorated baked-clay animal figurine
E	KS108-C318	Stratigraphic trench L 6	Late Middle Susiana	Probably the head of a baked-clay figurine
F	KS108-S52	Sq. M6 F 1	Early Islamic	Necklace with various semiprecious stones
G	KS108-C315	Sq. C6-N L 1	Late Susa II	Clay wall cone

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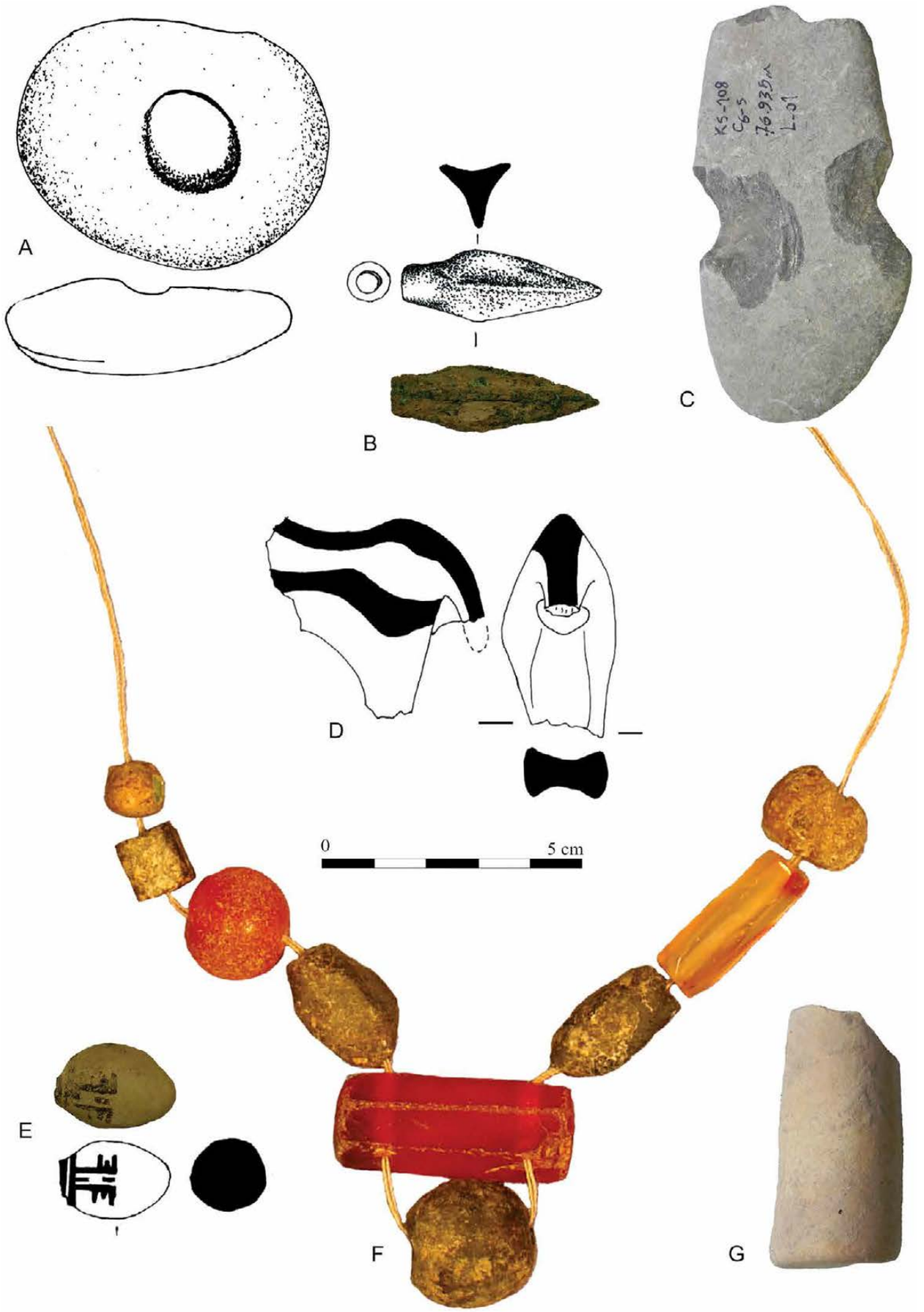

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Plate 83. Flint blades from KS-59.

	Field no.	Provenience	Period	Description
A	KS59-F13	Op. 1 at 74.68	Early Susa II	Sickle blade, one edge retouched, traces of bitumen on other edge, distal edge broken
B	KS59-F14	Sq. 822 L 2	Late Susa II	Sickle blade, both edges serrated
C	KS59-F28	Sq. 822 L 2	Late Susa II	Scraper, snapped backed blade, both edges serrated
D	KS59-F100	Op. 1 at 75.53	Middle Susa II	Scraper, backed blade, one edge serrated
E	KS59-F12a	Probe 9	Late Susa II	Cutter/scraper, backed blade
F	KS59-F145	Sq. 822 L 20	Late Susa II	Backed blade with serrated edges
G	KS59-F160	Op. 1 at 74.43	Early Susa II	Denticulate blade
H	KS59-F162a	Op. 1 at 76.94	Late Susa II	Retouched backed sickle blade
I	KS59-F05	Strip 2	?	Cutter/scraper
J	KS59-F170	Sq. 822 L 35 / F 44	Late Susa II	Scraper/borer, backed
K	KS59-F168	Sq. 822 L 27	Late Susa II	Cutter
L	KS59-F144	Sq. 822 L 20	Late Susa II	Truncated backed blade
M	KS59-F32	Sq. 787 L 3 / F 11	Late Susa II	Sickle blade, one edge serrated
N	KS59-F08	Probe 9	Late Susa II	Backed blade
O	KS59-F102	Sq. 787 L 30	Late Susa II	Double backed blade
A′–O′				Back views of A–O. These blades are usually long and show little variation. The dominant form consists of backed truncated segments that may have been used primarily as sickle blades, especially since pottery sickles are rare at KS-59. The edge retouch varies from a few serrated specimens to nibbled edges. The short, truncated pieces may also have been used as sickle blades in curved hafts.

Note: Elevations are in m ASL.

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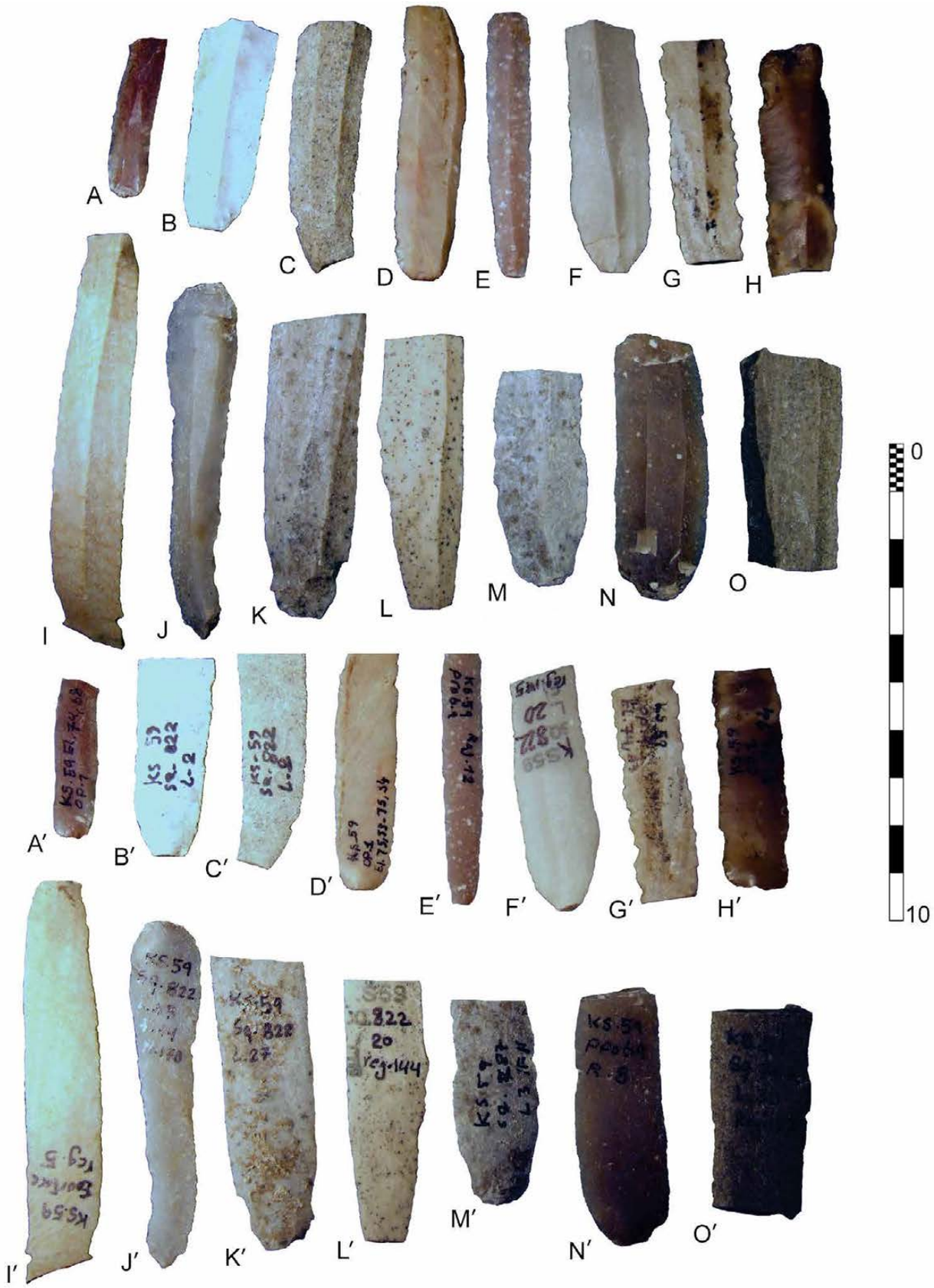

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Plate 84. Flint blades from KS-59.

	Field no.	Provenience	Period	Description
A	KS59-F10	Op. 4 L 2*	Early Susa III	Denticulate sickle blade
B	KS59-F17	Op. 4 L 7	Late Susa III	Denticulate sickle blade
C	KS59-F12b	Sq. 1033 at 72.07	Late Susa II	Serrated sickle blade
D	KS59-F105	Op. 4 L 2	Early Susa III	Sickle blade, one edge denticulated
E	KS59-F11	Sq. 1033 at 72.07	Late Susa II	Serrated sickle blade
F	KS59-F16	Sq. 1033 at 71.40	Late Susa II	Serrated sickle blade
G	KS59-F165	Sq. 822 L 27 / F 8	Late Susa II	Cutter/scraper
H	KS59-F162b	Op. 1 at 77.94	Early Susa III	Cutter/scraper, one edge serrated
I	KS59-F05	Sq. 1033 at 77.90	Late Susa II	Sickle blade, one edge denticulated
J	KS59-F09	Sq. 1033 at 72.07	Late Susa II	Sickle blade, one edge denticulated
K	KS59-F30	Sq. 1033 at 72.07	Late Susa II	Sickle blade, both edges serrated
L	KS59-F164	Sq. 822 L 27 / F 8	Late Susa II	Sickle blade, one edge serrated
M	KS59-F33	Op. 4 L 2	Early Susa III	Cutter/scraper
N	KS59-F167	Sq. 822 L 33	Late Susa II	Cutter/scraper
A′–N′				Back views of A–N

Note: Elevations are in m ASL.

* Layer 1 in Operation 4 was reassigned as L 2.

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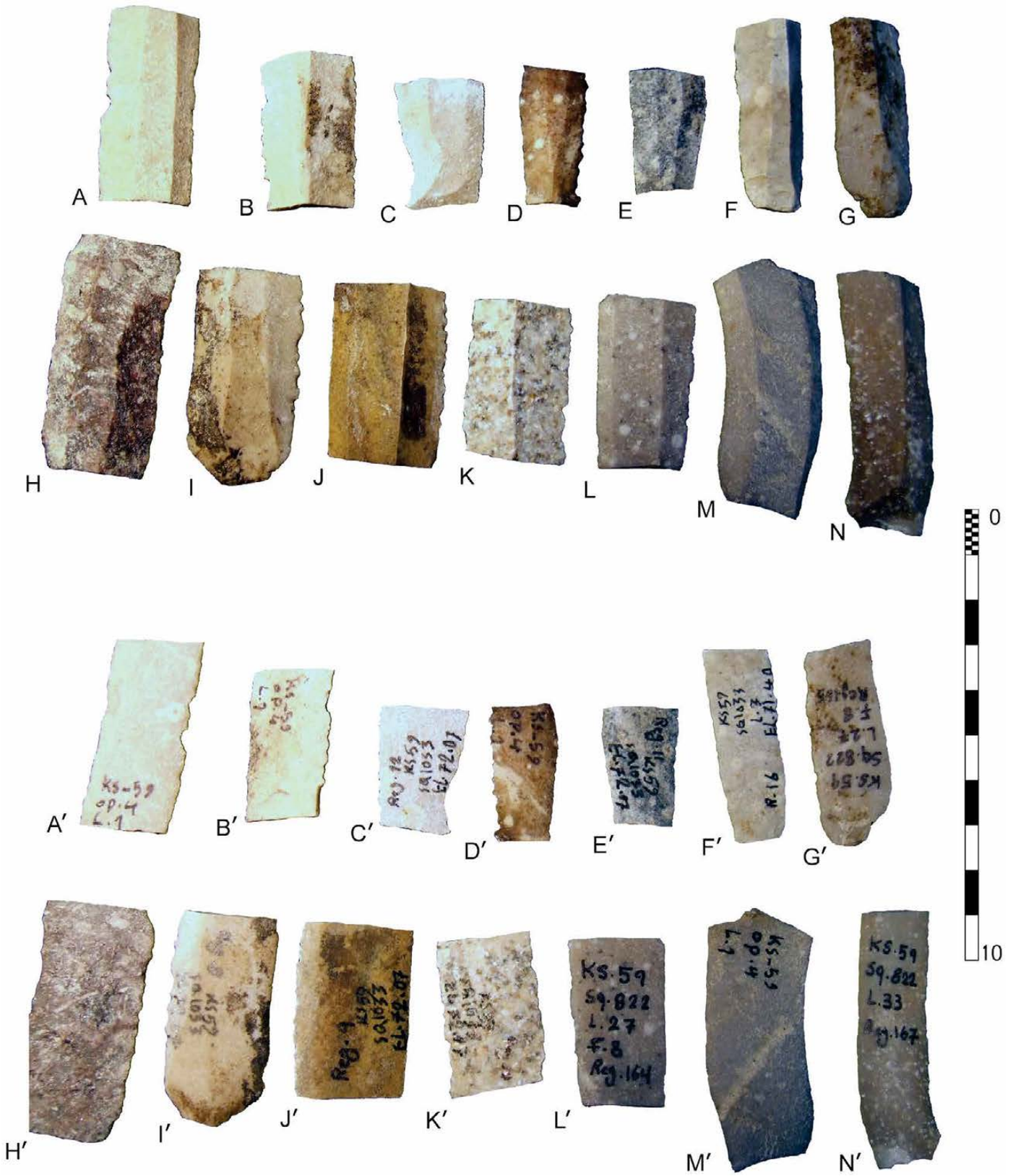

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Plate 85. Flint blades from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-F28a	Sq. R15-N at 73.90	Late Susiana 2	Fine-grain light-brown backed scraper
B	KS04-F26	Sq. R15-N at 73.10	Late Susiana 2	Fine-grain grayish-green blade, one edge denticulated
C	KS04-F72	Sq. Q16 L 2	Late Susiana 2	Medium-grain beige sickle blade fragment
D	KS04-F59	Sq. R14 L 5	Late Susiana 2	Speckled pinkish-brown borer
E	KS04-F73	Sq. R15-S L 4	Late Susiana 2	Coarse grayish-green backed scraper
F	KS04-F67	Sq. S19 L 1	Late Susiana 2	Medium-grain gray truncated sickle blade
G	KS04-F66	Sq. S19 L 2	Late Susiana 1	Medium-grain light-brown truncated tool
H	KS04-F50	Sq. S19 L 2	Late Susiana 1	Coarse-grain gray scraper
I	KS04-F70	Sq. R15-S L 4	Late Susiana 2	Fine-grain pinkish-brown serrated sickle blade
J	KS04-F80	Sq. R15-N topsoil	Early Susa II	Medium-grain light-brown backed blade, both edges serrated
K	KS04-F52	Sq. R15-N at 74.30	Late Susiana 2	Medium-grain light-brown backed blade, both edges serrated
L	KS04-F19	Sq. R15-N at 73.10	Late Susiana 1	Fine-grain gray denticulated sickle blade
M	KS04-F23	Sq. R15-N at 72.50	Late Middle Susiana	Fine-grain dark-gray serrated sickle blade
N	KS04-F68	Sq. S19 L 2	Late Susiana 1	Medium-grain light-brown denticulated blade
O	KS04-F58	Sq. R15-N at 73.40	Late Susiana 1	Coarse-grain gray denticulated blade
P	KS04-F82	Sq. S19 L 3	Late Susiana 1	Coarse-grain light-brown backed scraper
Q	KS04-F61	Sq. S19 L 1	Late Susiana 2	Coarse-grain gray backed scraper
R	KS04-F69	Sq. R15-S L 4	Late Susiana 1	Coarse gray retouched blade
S	KS04-F57	Sq. R14 L 5	Late Susiana 1	Medium-grain pinkish-gray backed blade
T	KS04-F28b	Sq. R14 L 3	Late Susiana 1	Fine-grain light-brown truncated blade, one edge denticulated
U	KS04-F64	Sq. S19 L 1	Late Susiana 2	Medium-grain light-brown serrated scraper

Note: Elevations are in m ASL.

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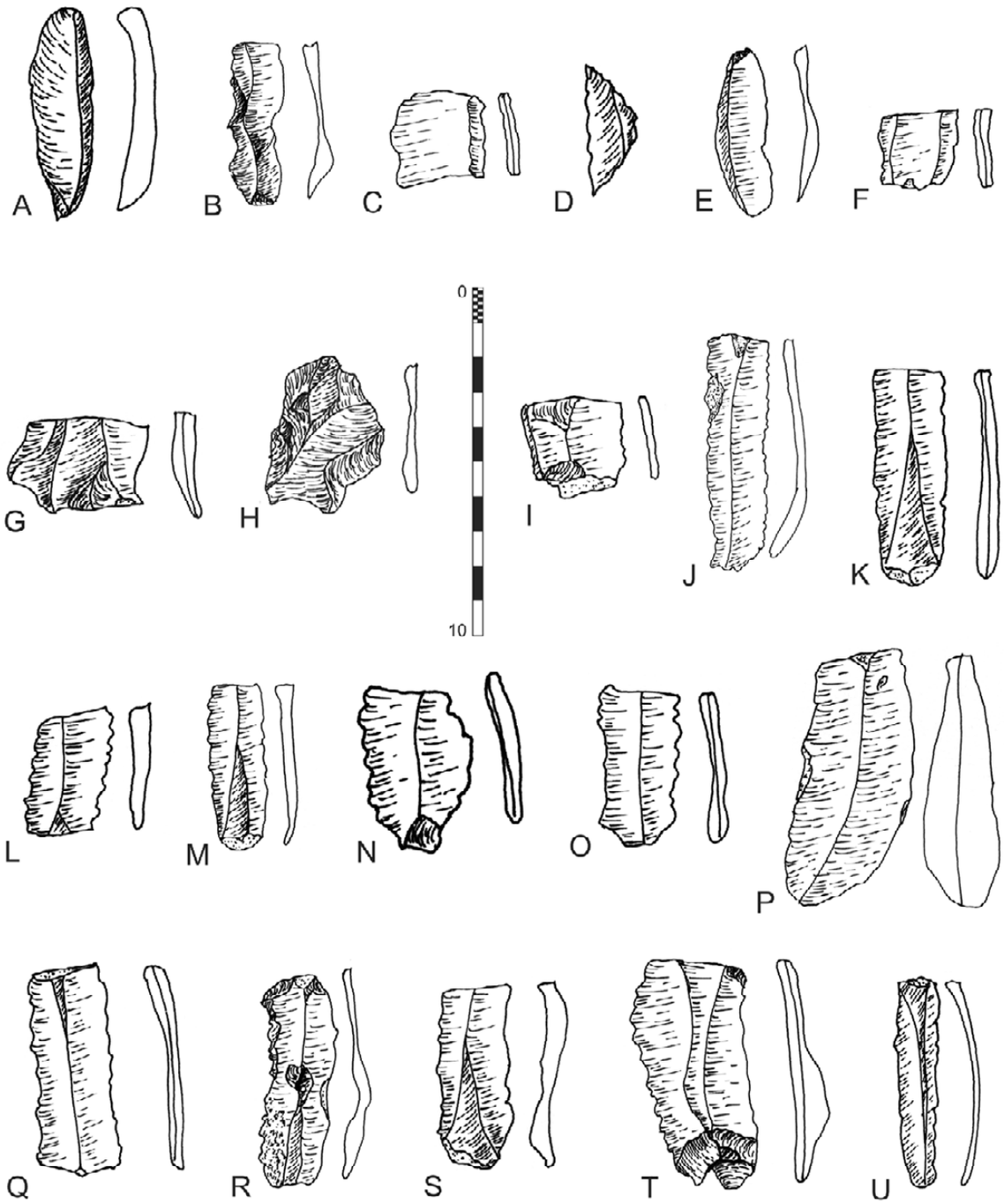

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Plate 86. Flint blades from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-F53	Sq. R15-N at 74.30	Early Susa II	Medium-grain gray serrated blade
B	KS04-F54	Sq. R15-N at 72.30	Late Middle Susiana	Fine-grain pinkish-buff sickle blade
C	KS04-F55	Sq. Q15 surface	Early Susa II	Fine-grain gray serrated backed blade
D	KS04-F63	Sq. R14 L 5	Late Susiana 1	Fine-grain gray serrated sickle blade
E	KS04-F74a	Sq. R15-S L 4	Late Susiana 1	Medium-grain light-brown serrated sickle blade
F	KS04-F81	Sq. R15-N topsoil	Early Susa II	Coarse-grain light-brown serrated scraper
G	KS04-F74b	Sq. R15-S L 4	Late Susiana 1	Fine-grain gray serrated sickle blade
H	KS04-F18	Sq. R15-N at 72.50	Late Middle Susiana	Medium-grain light-brown serrated sickle blade
I	KS04-F20	Sq. P15-N surface	Early Susa II	Medium-grain greenish-buff serrated sickle blade
J	KS04-F75	Sq. R15-S L 4	Late Susiana 1	Coarse-grain gray retouched backed scraper
K	KS04-F25	Sq. R15-N at 72.35	Late Middle Susiana	Medium-grain gray serrated sickle blade
L	KS04-F71	Sq. R15-S L 3	Late Susiana 1	Coarse-grain dark borer
M	KS04-F56	Sq. S16 L 5	Late Susiana 1	Coarse-grain beige retouched backed scraper
N	KS04-F21	Sq. R14 L 4	Late Susiana 1	Medium-grain gray scraper / sickle blade
O	KS04-F22	Sq. N15 L 2	Late Susiana 2	Medium-grain light-brown serrated sickle blade
P	KS04-F17	Sq. R15-N at 72.45	Late Middle Susiana	Coarse-grain light-brown retouched backed scraper
Q	KS04-F24	Sq. R15-N at 72.70	Late Middle Susiana	Medium-grain gray serrated sickle blade
R	KS04-F62	Sq. S16 L 1	Late Susiana 2	Fine-grain light-brown serrated sickle blade
S	KS04-F51	Sq. S16 L 2	Late Susiana 1	Medium-grain dark-gray retouched serrated sickle blade

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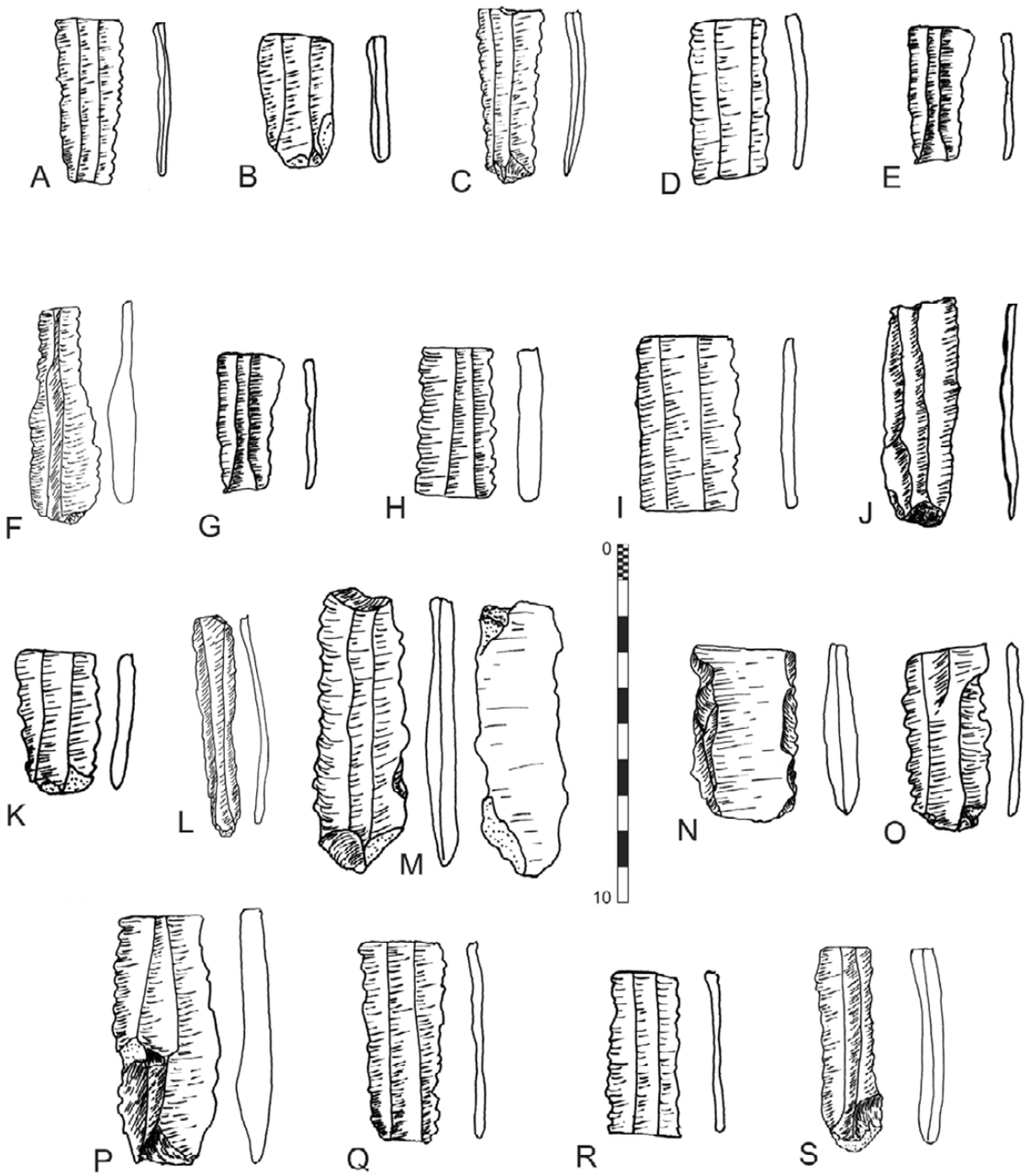

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Plate 87. Flint blades from KS-108.

	Field no.	Provenience	Period	Description
A	KS108-F07	Sq. C6-N L 2	Late Susa II	Fine-grain light-gray serrated sickle blade
B	KS108-F11	Sq. C6-N L 1	Late Susa II	Fine-grain light-brown serrated sickle blade
C	KS108-F43	Sq. N5 L 1	Late Susa II	Fine-grain beige serrated sickle blade
D	KS108-F40	Sq. N5 L 1	Late Susa II	Medium-grain gray serrated sickle blade
E	KS108-F37	Sq. N5 L 1	Late Susa II	Fine-grain light-brown serrated sickle blade
F	KS108-F16	Sq. C6-N L 1	Late Susa II	Medium-grain greenish-gray serrated sickle blade
G	KS108-F79	Stratigraphic trench L 3	Early Susa II	Coarse-grain speckled scraper
H	KS108-F29	Sq. N5 L 1	Late Susa II	Medium-grain greenish-buff scraper
I	KS108-F05	Sq. C6-N L 2	Late Susa II	Medium-grain light-brown serrated sickle blade
J	KS108-F13	Sq. C6-N L 1	Late Susa II	Coarse-grain gray truncated scraper
K	KS108-F30	Sq. N5 L 1	Late Susa II	Medium-grain speckled serrated sickle blade
L	KS108-F42	Sq. N5 L 1	Late Susa II	Medium-grain gray serrated sickle blade
M	KS108-F33	Sq. N5 L 1	Late Susa II	Medium-grain light-brown serrated/notched blade
N	KS108-F76	Stratigraphic trench L 5	Late Susiana 1	Fine-grain off-white serrated sickle blade
O	KS108-F03	Sq. C6-N L 1	Late Susa II	Medium-grain gray denticulated scraper
P	KS108-F08	Sq. C6-N F 3	Late Susa II	Fine-grain light-brown serrated blade
Q	KS108-F35	Sq. N5 L 1	Late Susa II	Fine-grain gray serrated sickle blade
R	KS108-F32	Sq. N5 L 1	Late Susa II	Fine-grain gray serrated blade
S	KS108-F04	Sq. C6-N L 1	Late Susa II	Medium-grain light-brown serrated blade
T	KS108-F14	Sq. C6-N L 1	Late Susa II	Medium-grain greenish-gray serrated sickle blade
U	KS108-F01	Sq. C6-N L 1	Late Susa II	Medium-grain gray scraper
V	KS108-F09	Sq. C6-N L 1	Late Susa II	Coarse-grain light-brown scraper
W	KS108-F39	Sq. N5 L 1	Late Susa II	Medium-grain light-brown serrated blade
X	KS108-F34	Sq. N5 L 1	Late Susa II	Medium-grain brown serrated sickle blade
Y	KS108-F31	Sq. N5 L 1	Late Susa II	Medium-grain light-brown serrated blade
Z	KS108-F06	Sq. C6-N L 2	Late Susa II	Fine-grain gray serrated sickle blade
AA	KS108-F77	Stratigraphic trench L 6	Late Middle Susiana	Medium-grain light-gray serrated scraper
BB	KS108-F15	Sq. C6-N L 1	Late Susa II	Medium-grain light-gray serrated scraper
CC	KS108-F44	Sq. N5 L 1	Late Susa II	Medium-grain light-brown serrated sickle blade
DD	KS108-F41	Sq. N5 L 1	Late Susa II	Fine-grain light-brown serrated sickle blade
EE	KS108-F12	Sq. C6-N L 1	Late Susa II	Fine-grain gray serrated sickle blade
FF	KS108-F02	Sq. C6-N L 1	Late Susa II	Fine-grain gray serrated sickle blade
GG	KS108-F10	Sq. C6-N L 1	Late Susa II	Fine-grain light-brown serrated sickle blade
HH	KS108-F36	Sq. N5 L 1	Late Susa II	Medium-grain gray serrated sickle blade

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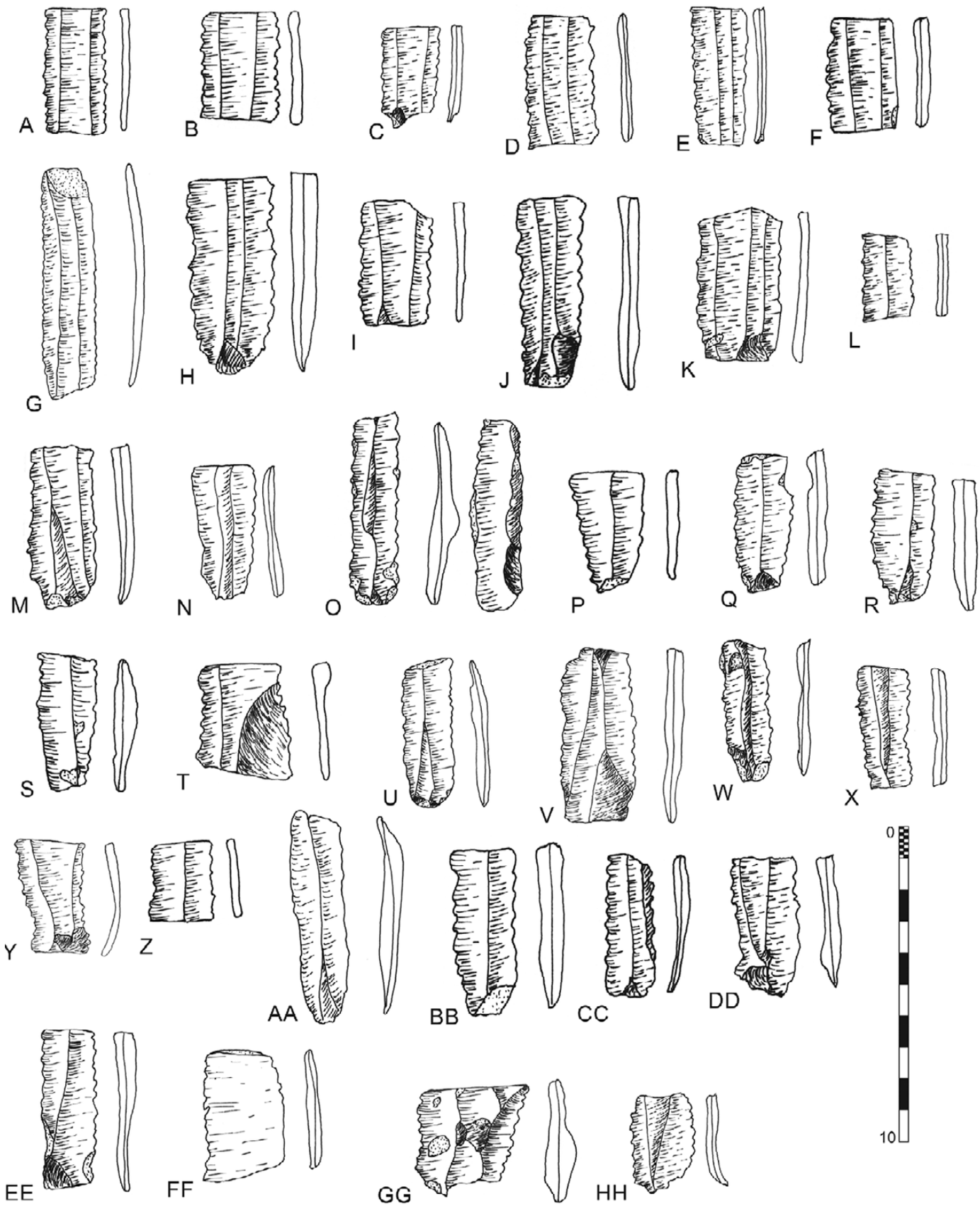

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Plate 88. Stone hoes and adze from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-S165	KS-04B surface	Early Susiana	Stone hoe
B	KS04-S166	Sq. R15 surface	Early Susiana	Stone hoe
C	KS04-S167	Sq. R15 topsoil	Early Susa II(?)	Stone adze
D	KS04-S168	Sq. R15 topsoil	Early Susa II(?)	Stone hoe

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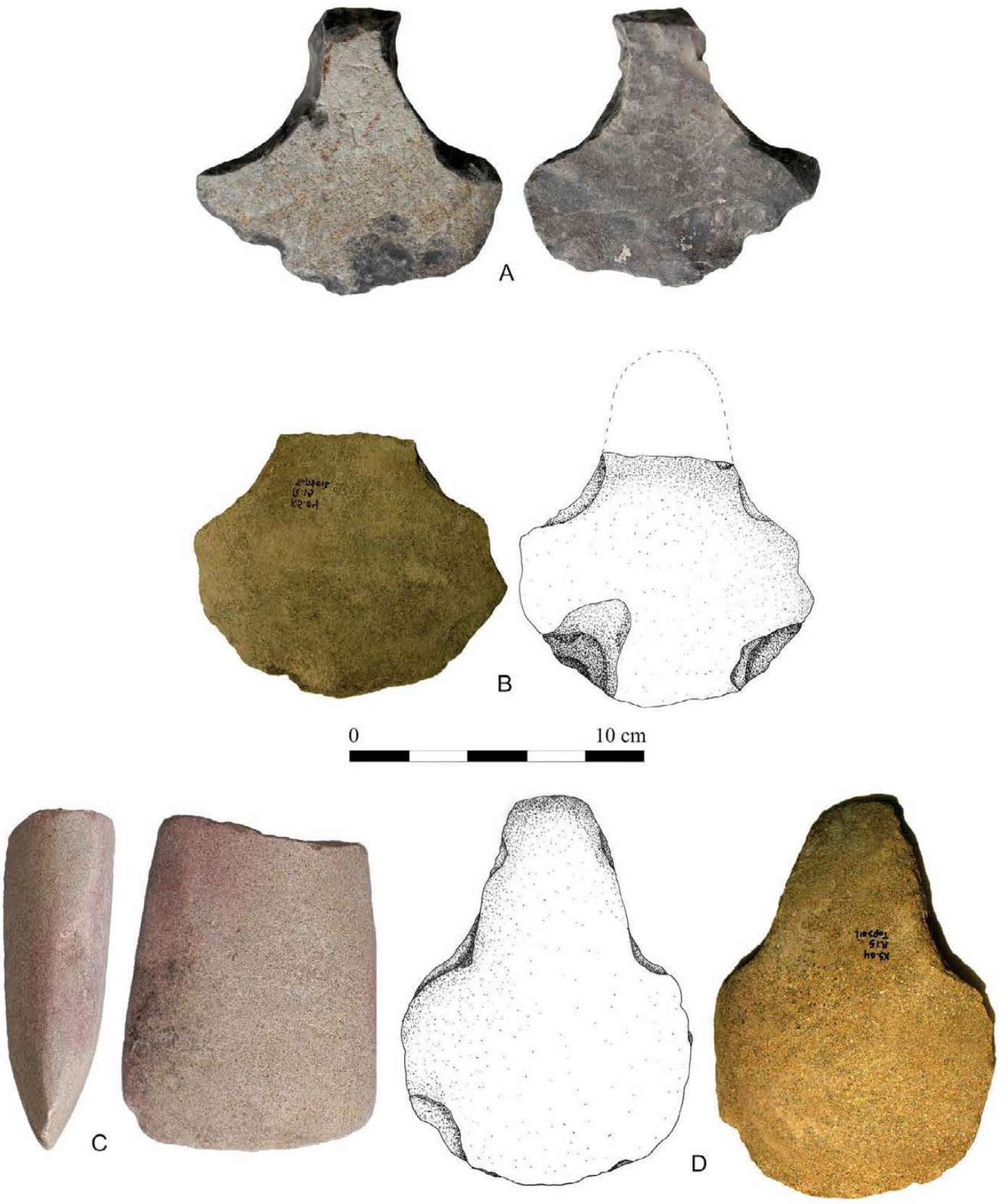

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Plate 89. Stone and clay spindle whorls from KS-59.

	Field no.	Provenience	Period	Description
A	KS59-C106	Sq. 787 L 10	Late Susa II	Potsherd shaped into a spindle whorl
B	KS59-C107	Op. 1 topsoil	Late Susa II(?)	Clay spindle whorl
C	KS59-C04	Probe B	Late Susa II	Stone spindle whorl
D	KS59-C113	Op. 4 L 8	Late Susa II / Early Susa III	Clay spindle whorl
E	KS59-S21	Sq. 822 L 28	Late Susa II	Stone spindle whorl
F	KS59-C114	Op. 1 at 76.10	Late Susa II	Clay spindle whorl
G	KS59-S22	Op. 1 at 76.00	Late Susa II	Clay spindle whorl

Note: Elevations are in m ASL.

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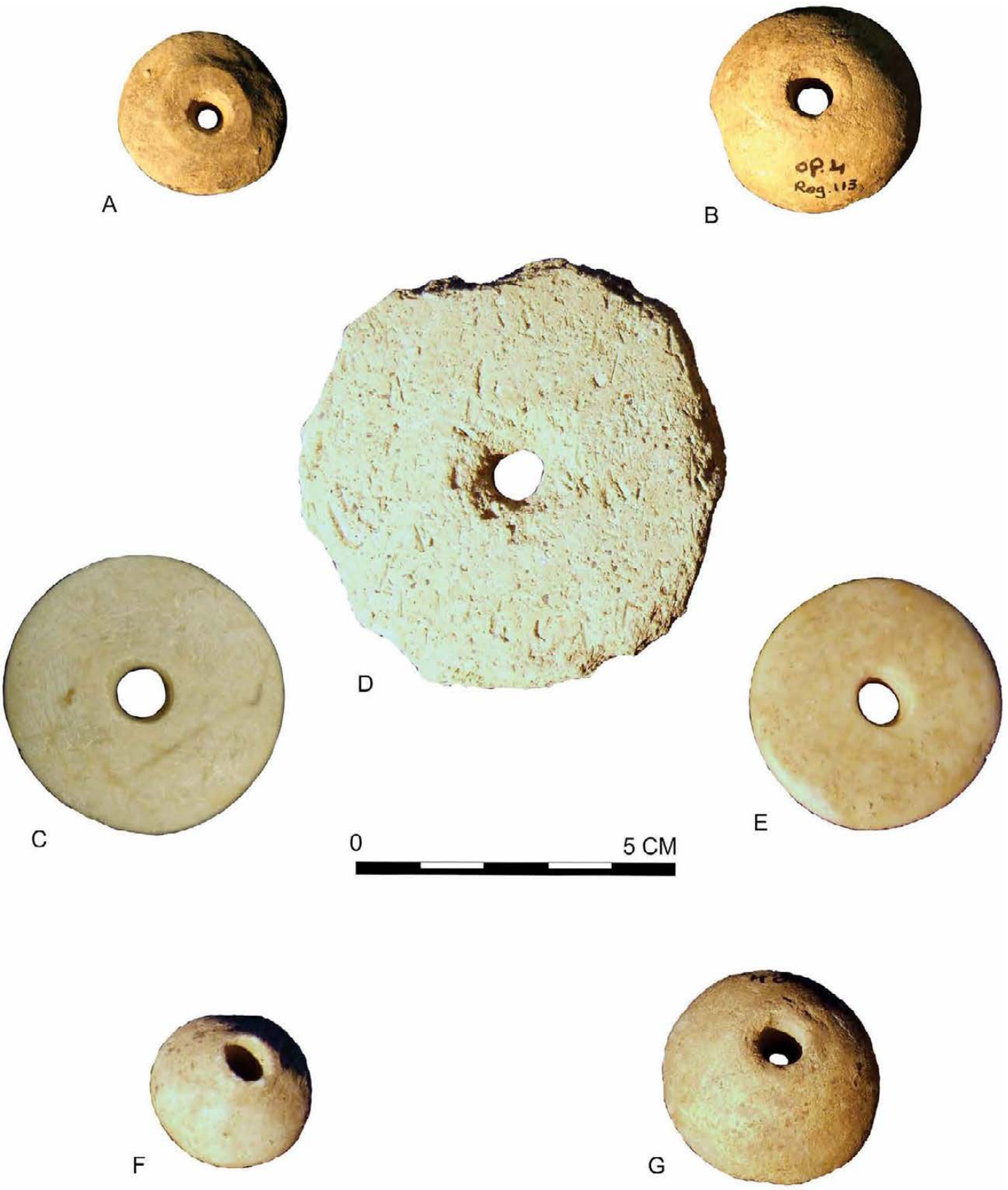

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Plate 90. Clay spindle whorls from KS-04 and KS-108.

	Field no.	Provenience	Period	Description
A	KS04-C90	Sq. U33 surface	Late Susiana 1–Susa II	Clay spindle whorl
B	KS04-C93	Sq. U15 surface	Late Susiana 1–Susa II	Clay spindle whorl
C	KS04-C92	Sq. T19 surface	Late Susiana 1–Susa II	Clay spindle whorl
D	KS04-C97	Sq. U15 surface	Late Susiana 1–Susa II	Clay spindle whorl
E	KS04-C96	Sq. T19 surface	Late Susiana 1–Susa II	Clay spindle whorl
F	KS04-C135	Sq. P15 surface	Late Susiana 1–Susa II	Clay spindle whorl
G	KS04-C94	Sq. U33 surface	Late Susiana 1–Susa II	Clay spindle whorl
H	KS04-C275	Sq. M10 surface	Late Middle Susiana	Clay spindle whorl
I	KS108-C314	Sq. F6 surface	Late Middle Susiana	Clay spindle whorl
J	KS04-C274	Sq. M18 surface	Early Susiana	Clay spindle whorl

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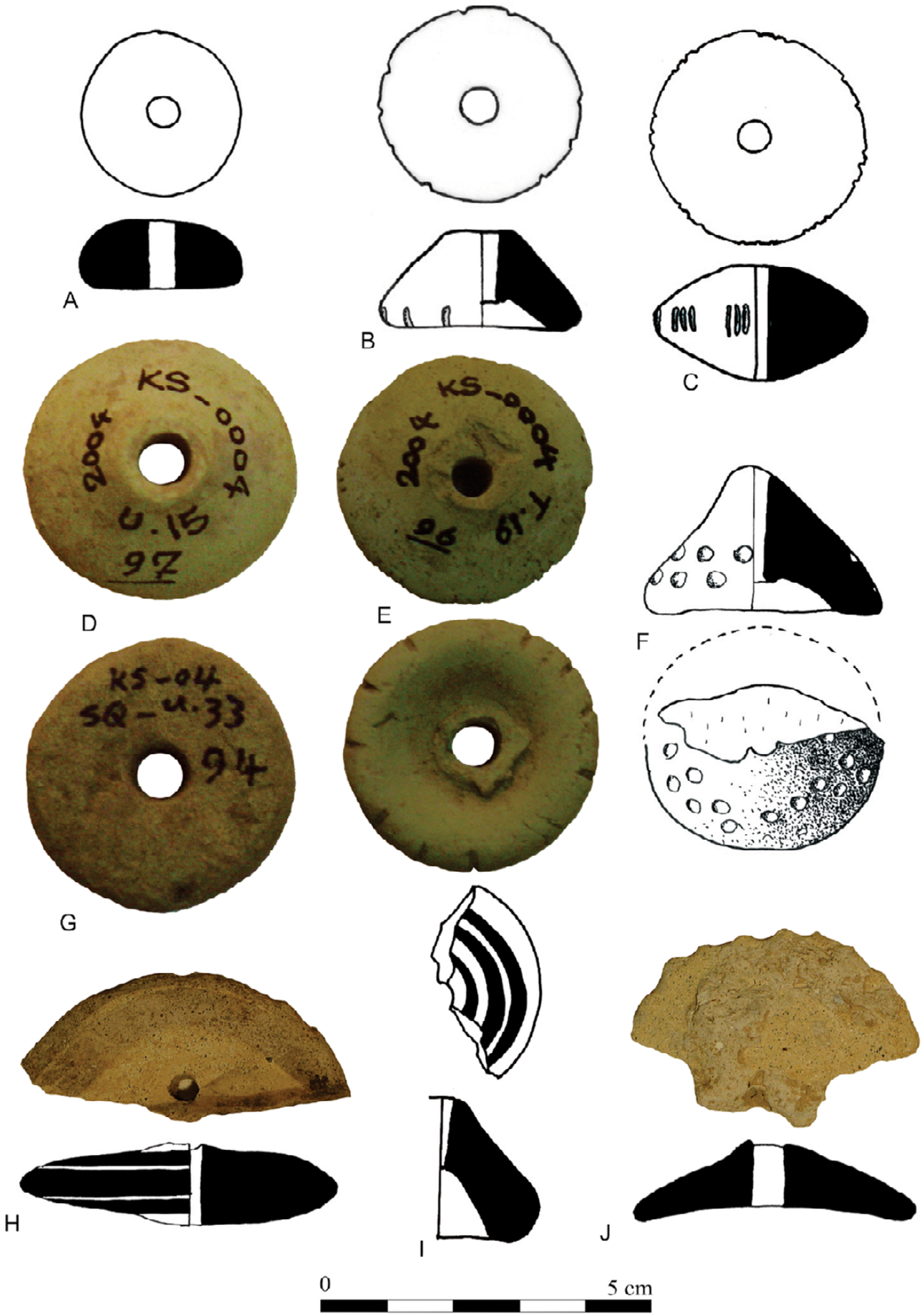

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Plate 91. Miscellaneous clay objects from KS-04.

	Field no.	Provenience	Period	Description
A	KS04-C95	Sq. R15-S topsoil	Middle Susiana(?)	Clay animal figurine(?)
B	KS04-C98	Sq. M14 topsoil	Early Susa II	Baked-clay sickle fragment
C	KS04-C99	Sq. Q16 L 2	Late Susiana 2	Decorated clay animal figurine
D	KS04-C100	Sq. R15 surface	Late Susiana 2	Baked brick with central hole for decorative clay cone
E	KS04-C101	Sq. R15 surface	Late Susiana 2	Baked brick

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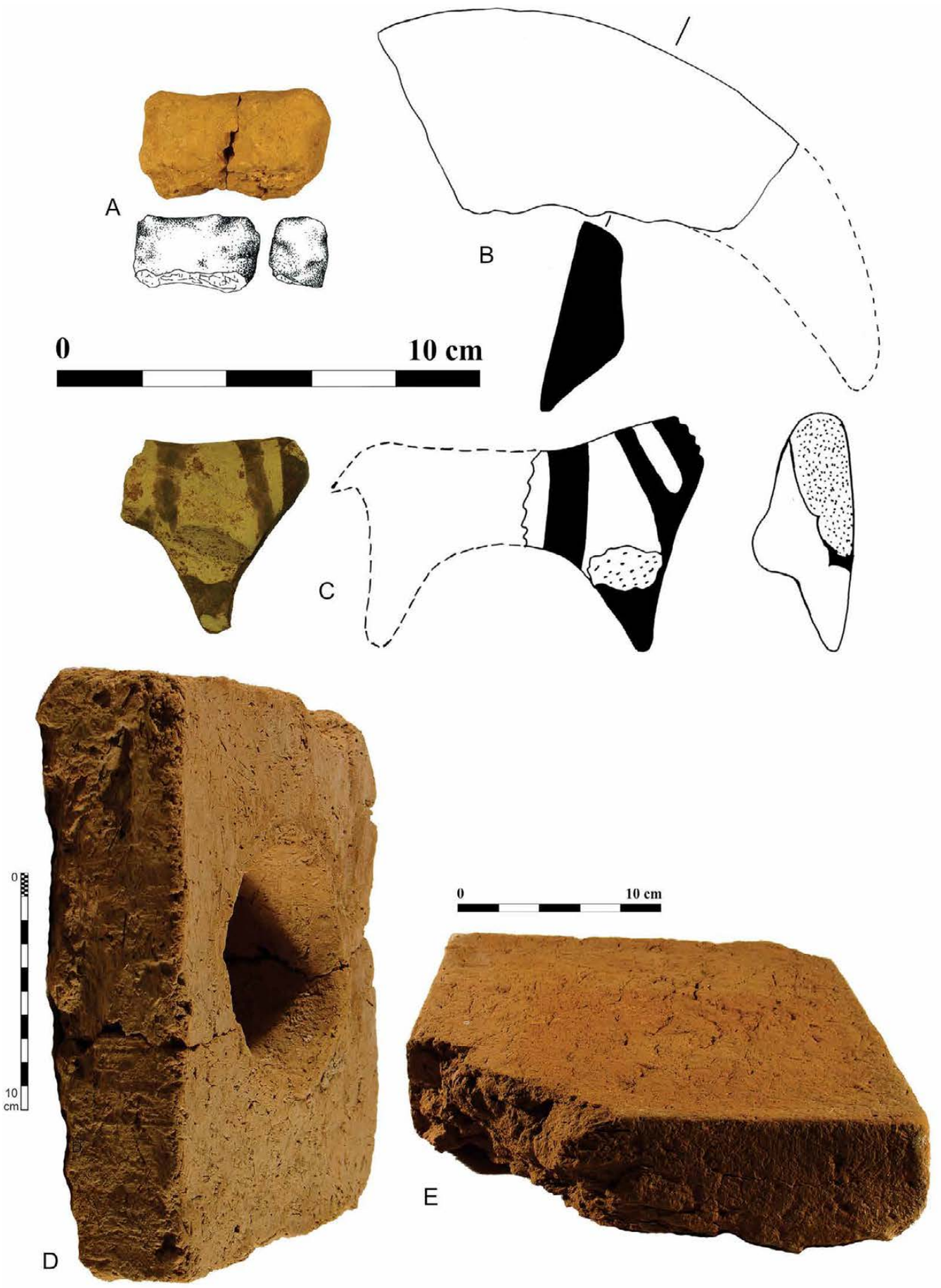

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Plate 92. Various clay objects from KS-59, North and South Mounds.

	Field no.	Provenance	Period	Description
A	KS59-C17	Sq. 1033 L 7	Late Susa II	Baked-clay sickle handle fragment
B	KS59-C23	Sq. 288 L 8	Late Susa II	Baked-clay sickle fragment
C	KS59-C09	Probe 6	Late Susa II	Baked-clay sickle blade fragment
D	KS59-C03	Op. 1 at 76.10	Late Susa II	Baked-clay loom weight
E	KS59-C10	Sq. 787 L 30	Late Susa II	Baked-clay loom weight/sinker
F	KS59-C04	Op. 1 at 76.10	Late Susa II	Pottery "spout" with finished openings, the wider one with parallel narrow grooves
G	KS59-C12-17	Op. 1 at 76.20	Late Susa II	Clay sling shots
H	KS59-C20	Sq. 822 L 18	Late Susa II	Clay jar stopper, top view
I	KS59-C20	Sq. 822 L 18	Late Susa II	Clay jar stopper, bottom view
J	KS59-C21	Sq. 822 L 18	Late Susa II	Clay jar stopper, top view

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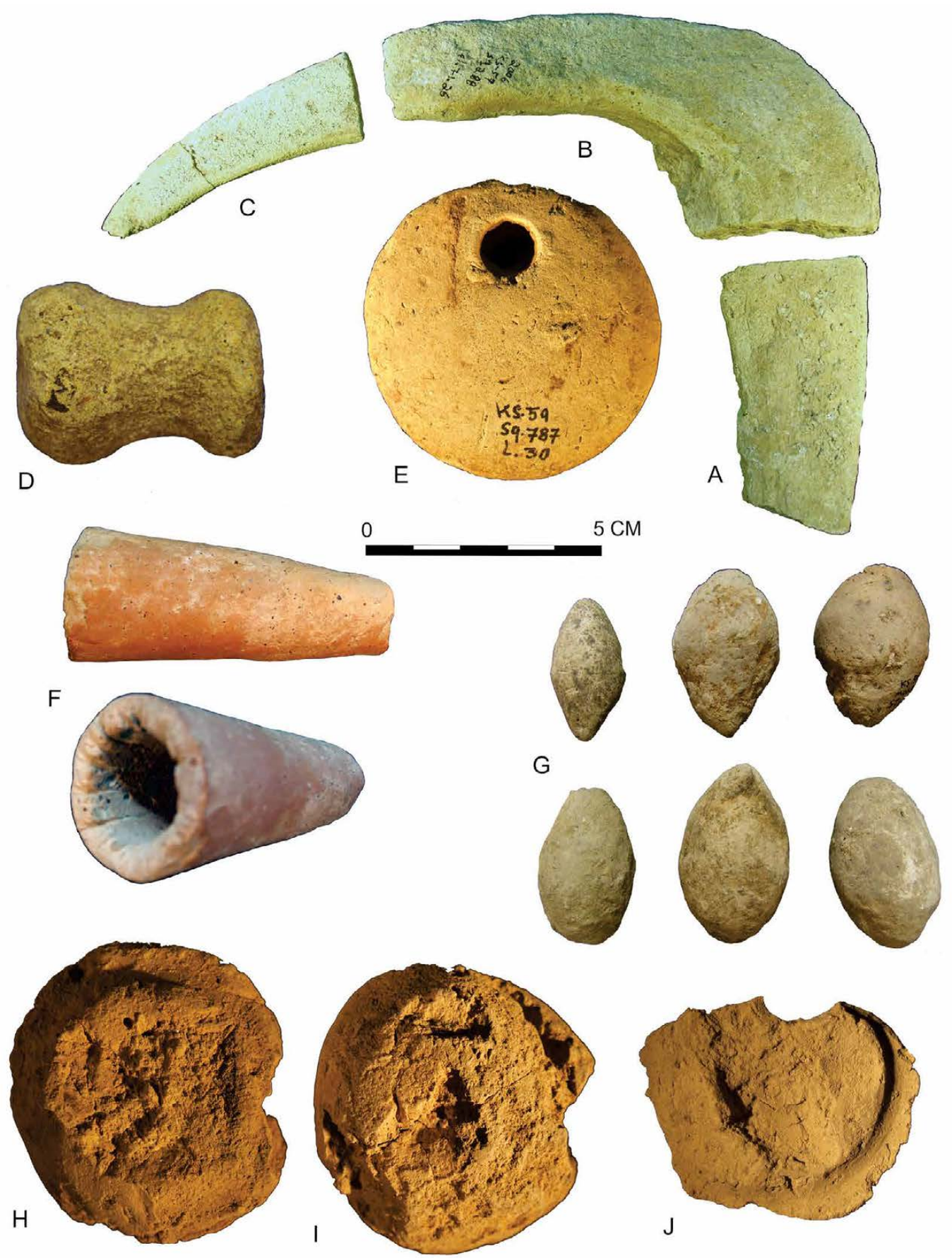

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Plate 93. Human and animal clay figurines from KS-59.

	Field no.	Provenience	Period	Description and comparisons
A	KS59-C170	Sq. 288 L 4	Late Susa II	Clay animal figurine
B	KS59-C171	Sq. 822 L 36 / F 45	Late Susa II	Clay animal figurine
C	KS59-C172	Sq. 822 F 5	Late Susa II	Clay animal figurine
D	KS59-C173	Strip 3	Middle Elamite	Head of a clay human figurine. Spycket 1992, pl. 123:1073
E	KS59-C174	Op. 3 tomb	Middle Elamite	Head of a clay human figurine. Spycket 1992, pl. 113:966
F	KS59-C176	Strip 3	Middle Elamite	Torso of a clay human figurine. Spycket 1992, pl. 117:1007
G	KS59-C177	Op. 1 topsoil	Middle Elamite	Torso of a clay human figurine. Spycket 1992, pl. 122:1059
H	KS59-C178	Strip 4	Sukkalmakh	Head of a clay human figurine. Spycket 1992, pl. 66:488
I	KS59-C104	Op. 4 surface	Sukkalmakh(?)	Clay animal figurine fragment
J	KS59-C05	Probe F	?	Clay animal figurine fragment
K	KS59-C179	Strip 2	Middle Elamite	Clay figurine of a musician. Spycket 1992, pl. 141
L	KS59-C180	Strip 2	Middle Elamite	Legs of a clay female figurine. Spycket 1992, pl. 125:1100
M	KS59-C181	Strip 3	Middle Elamite	Clay animal figurine fragment
N	KS59-C182	Strip 2	?	Clay animal figurine fragment

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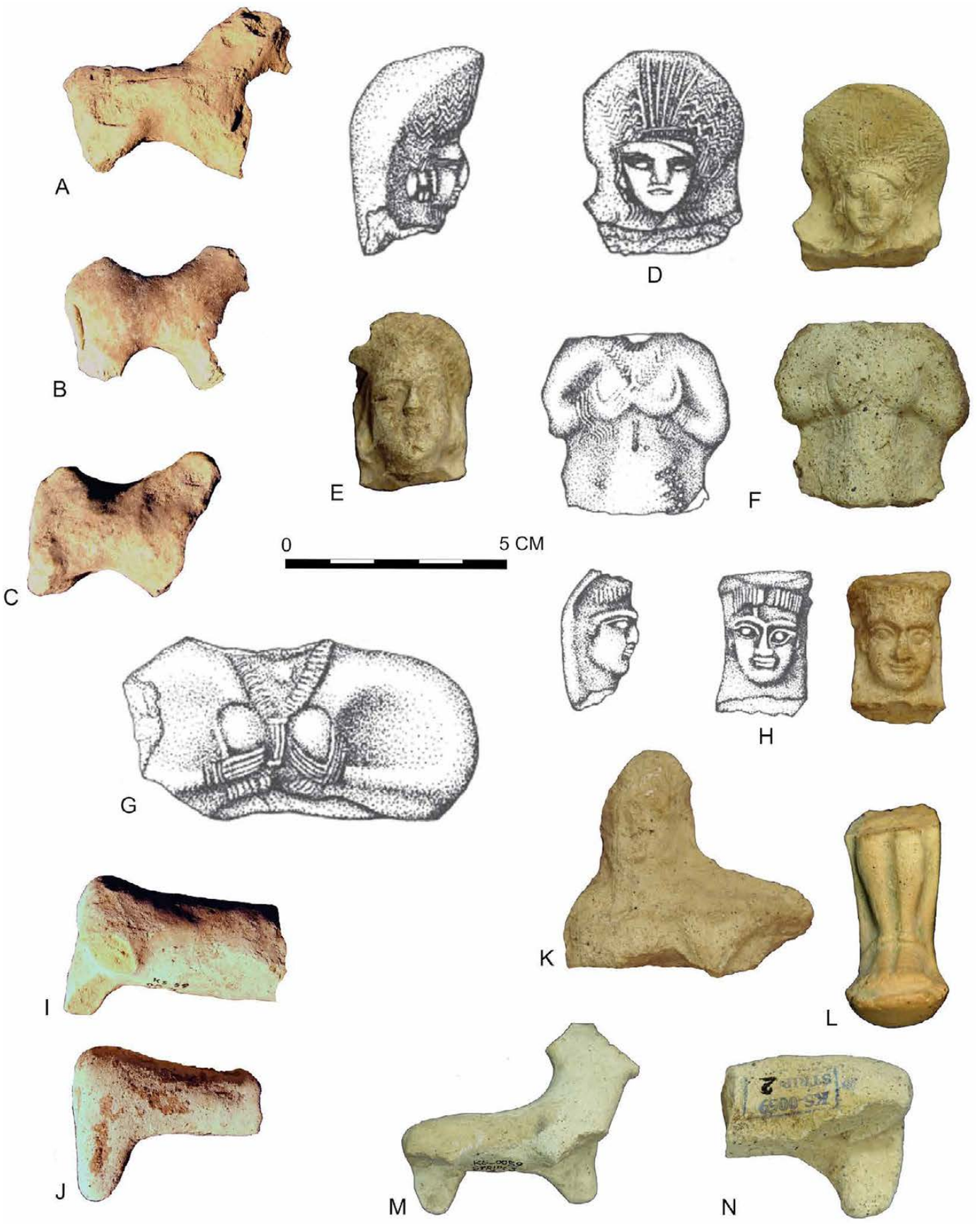

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Plate 94. Copper/bronze objects from KS-59.

	Field no.	Provenience	Period	Description
A	KS59-M04	Sq. 787 L 2	Late Susa II	Copper/bronze pin
B	KS59-M05	Sq. 822 L 1	Late Susa II	Copper/bronze pin
C	KS59-M08	Sq. 822 L 24 / F 29	Late Susa II	Copper/bronze pin
D	KS59-M09	Sq. 822 L 6 / F 8	Late Susa II	Copper/bronze pin
E	KS59-M02	Sq. 822 baulk cleaning	Late Susa II	Copper/bronze pin

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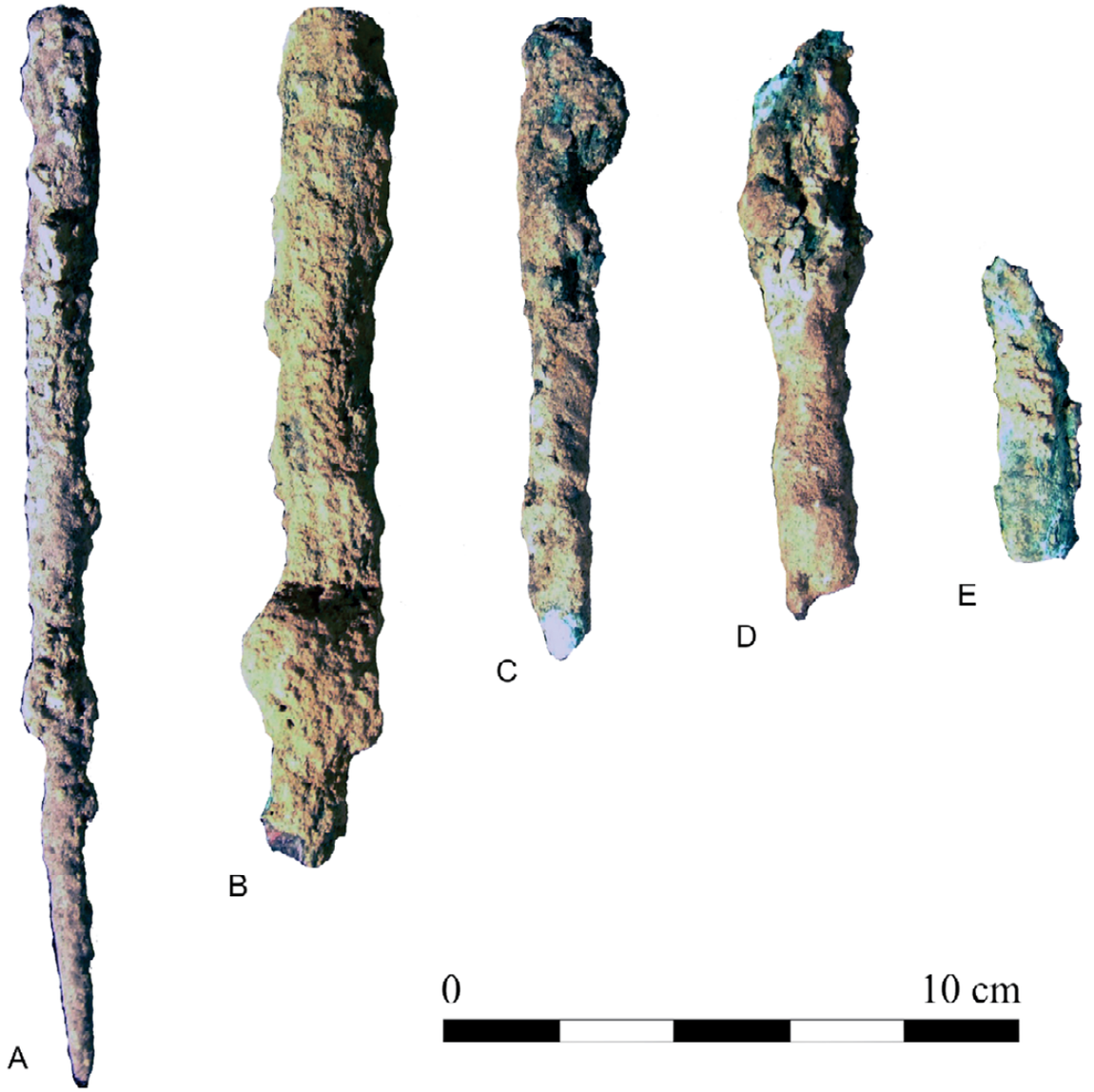

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