

SALVAGE EXCAVATIONS AT NESHER-RAMLÄ QUARRY

VOLUME I

Shlomo Kol-Ya'akov

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PREFACE

SHLOMO KOL-YA'AKOV

This volume presents the results of the 2006–2007 seasons of excavations, which were carried out at the site of El-Khirbe, in the quarry of the Nesher–Ramla cement plant. The excavations commenced prior the season under discussion, and continue, even as this volume is being compiled.

The volume consists of two parts, which include independent chapters that present the various finds with cross references to provide the reader with complete data. Part I deals with the earliest finds at the site—burials from Early Bronze I. It includes a chapter describing the excavations and a discussion of the ceramic and other finds; a chapter on the petrographic study that contributes to an understanding of the Egyptian context of the vessels; and a chapter on the archaeozoological finds. The anthropological discussion is integrated into Chapter 16, which studies the complete skeletal remains from the season.

Part II presents the finds from the Hellenistic through the medieval periods. It includes two chapters on the finds from the end of the Second Temple period, ritual baths (*miqva'ot*) and hiding complexes, and a chapter that deals with burials from the Hellenistic through the Early Islamic periods. Other chapters study the ceramics, inscriptions, metal tools, bone

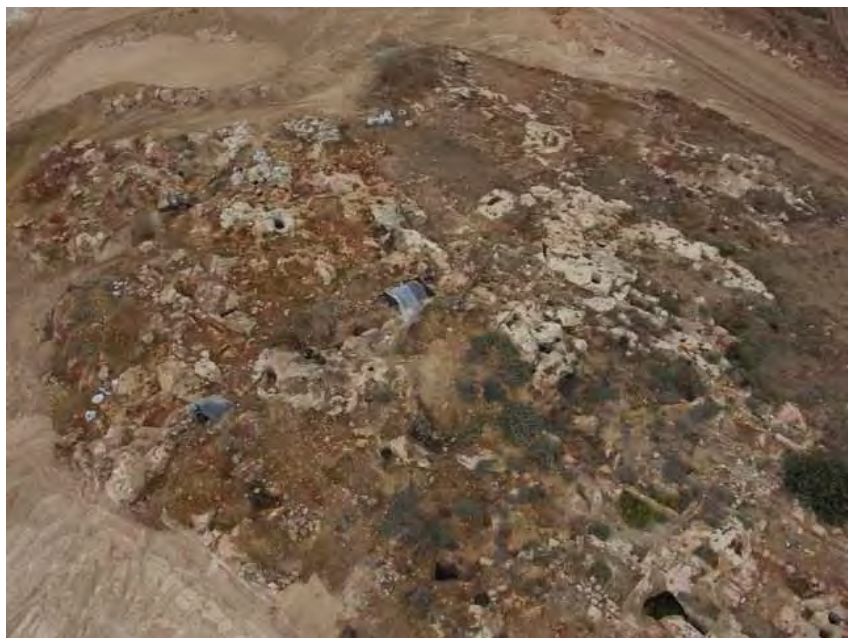
implements, stone objects, glass and coins, and there is a chapter that summarizes the human skeletal remains found during this season.

It is our pleasure to express our gratitude to the many individuals and organizations that supported the excavations at Nesher–Ramla Quarry. Thanks to those at Nesher Israel Cement Enterprises LTD, who financed the dig and provided us with valuable technical assistance during the seasons of excavations: the director general, Mr. David Bar-On; former quarry director Mr. David Sofer; and our dear friend Ben-Zion Ehrenliev. Special thanks to Mr. David Toker, director of the 'gravel section' of Ta'avura Company within Nesher Quarry, for his warm and personal attention.

We are grateful to the Zinmann Institute of Archaeology at Haifa University; the Head of the Institute Prof. Arthur Segal; former Head of the Institute Prof. Mina Evron; and Institute Director, Dr. Michael Eizenberg. Thanks to our colleagues, who visited the site and offered their insights: Prof. Ronny Reich, Prof. Amos Klöner, Dr. David Amit, Yigal Teper, Dr. Boaz Zisso, Dr. Mordechai Aviam, Dr. Yuval Shahar, Yotam Teper, Dr. Zvi Gal, Dr. Yehiel Zelinger, Dr. Peter Gendelman, Hagit Torge, and many others who supported us along the way.



The Nesher–Ramla quarry, view from the south. October 2010.



The Nesher–Ramla site, aerial view, 2006.

CHAPTER 1

INTRODUCTION

SHLOMO KOL-YA'AKOV

The Site and Its Location

The site of El-Khirbe is located within the boundaries of the Nesher–Ramla cement plant (map ref. 192848–646196/193777–646876) in the Lod valley, 5 km northeast of Ramla, 5 km southeast of Lod and 7 km north of Tel Gezer (Plan 1.1). It is delimited by Nahal Ayalon on the west, Highway 1 on the east-northeast and Highway 431 on the south. The site extends over two hills, 110–125 m above sea level, and includes the existing quarry on its south with the valley below it, where the ancient Lod–Emmaus road passed.

This is a rocky area covered by poor vegetation, consisting of low bushes and few trees. The rock formation comprises a layer of red soil blanketing a *nari* limestone layer that varies in width. Below the *nari* is a layer of soft Cenozoic-era limestone. Exposed *nari* rock surfaces are visible at several locations, where signs of human activity such as rock-cuttings and openings into subterranean installations hewn in the soft limestone, can be observed. Usually, the archaeological remains accumulated on rock surfaces to a height of 0.7–1.0 m. Thus, the foundations of the walls are usually preserved to a height of one or two courses.

History of Research

During the last decades, the site was damaged by activity at the quarry. Salvage excavations have been conducted since the extension of the quarry in the mid-1990s. These excavations concentrated mainly on the eastern and western hills. The expedition directed by Hirschfeld and Shapira (1999) on behalf of the Hebrew University excavated the eastern hill in 1996. The suburbs of the settlement, including agricultural installations and a cemetery dated to the end of the Second Temple and the Byzantine periods, were then exposed. In 2000–2001, the excavation of that cemetery was completed by the Hebrew University

expedition directed by Kol-Ya'akov, when more tombs from the Early Roman and Byzantine periods were found, as well as an EB I burial cave. It seems that the cemetery and the agricultural installations on the eastern hill belong to another settlement, to the north of the excavated settlement.¹

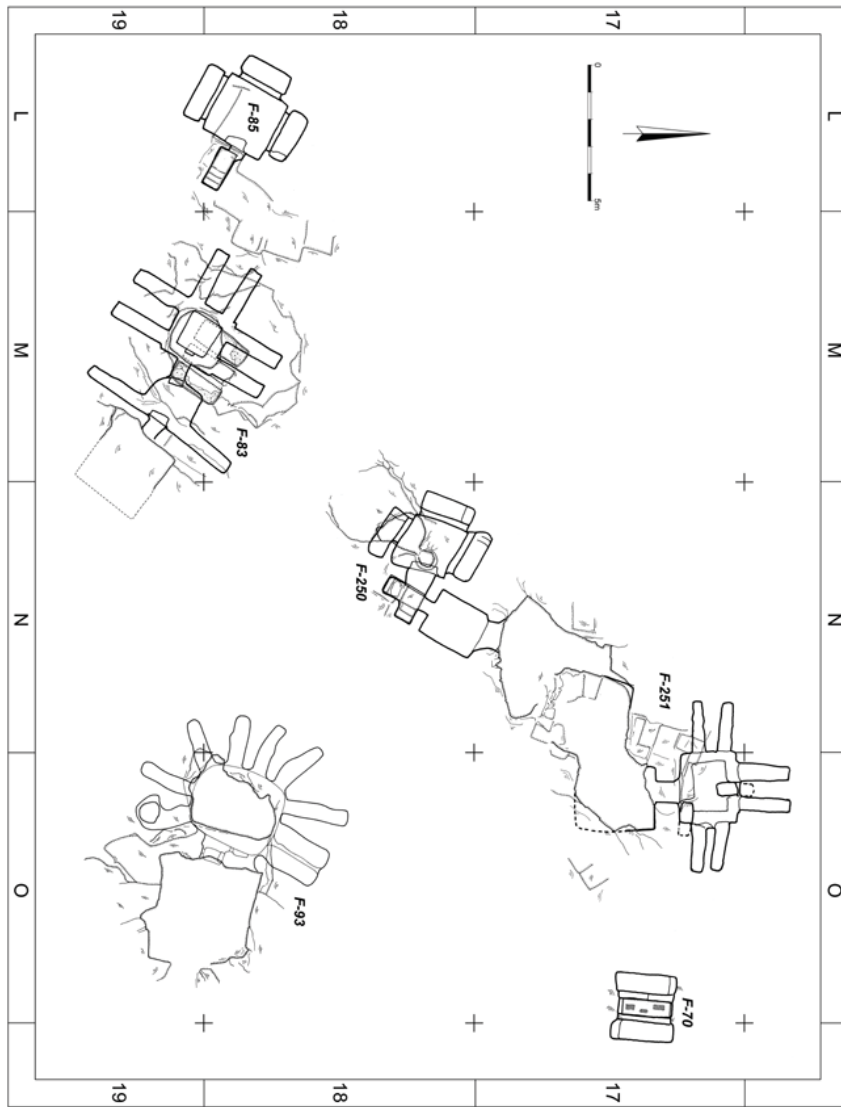
Salvage excavations carried out between 1997 and 2003 on behalf of the Hebrew University were directed by Kol-Ya'akov, with Wienblat-Kraus as co-director in 2003. Several tombs were excavated; excavations of a few tombs, discontinued by order of the Ministry of Religion, were completed in the present season. Also found were water systems that included collecting surfaces, cisterns and connecting channels, as well as Mamluk-period wood-burning charcoal installations located in ancient subterranean spaces such as ritual baths, cisterns and burial caves. In addition, many quarries and stone terraces were revealed (Kol-Ya'akov 2000).

Two salvage excavations were conducted in 2004–2005, directed by Gendelman and Zelinger (2005; IAA archive) on behalf of the Israel Antiquities Authority. Remains of two ritual baths and quarries from the Second Temple period were exposed, as well as a fourth-century CE church with an inscribed mosaic floor (Zelinger and Di-Segni 2006). In addition, remnants of Byzantine storerooms and domestic structures, cisterns, agricultural installations, including a large winepress, and various tombs, were found (Zelinger and Di-Segni 2006).

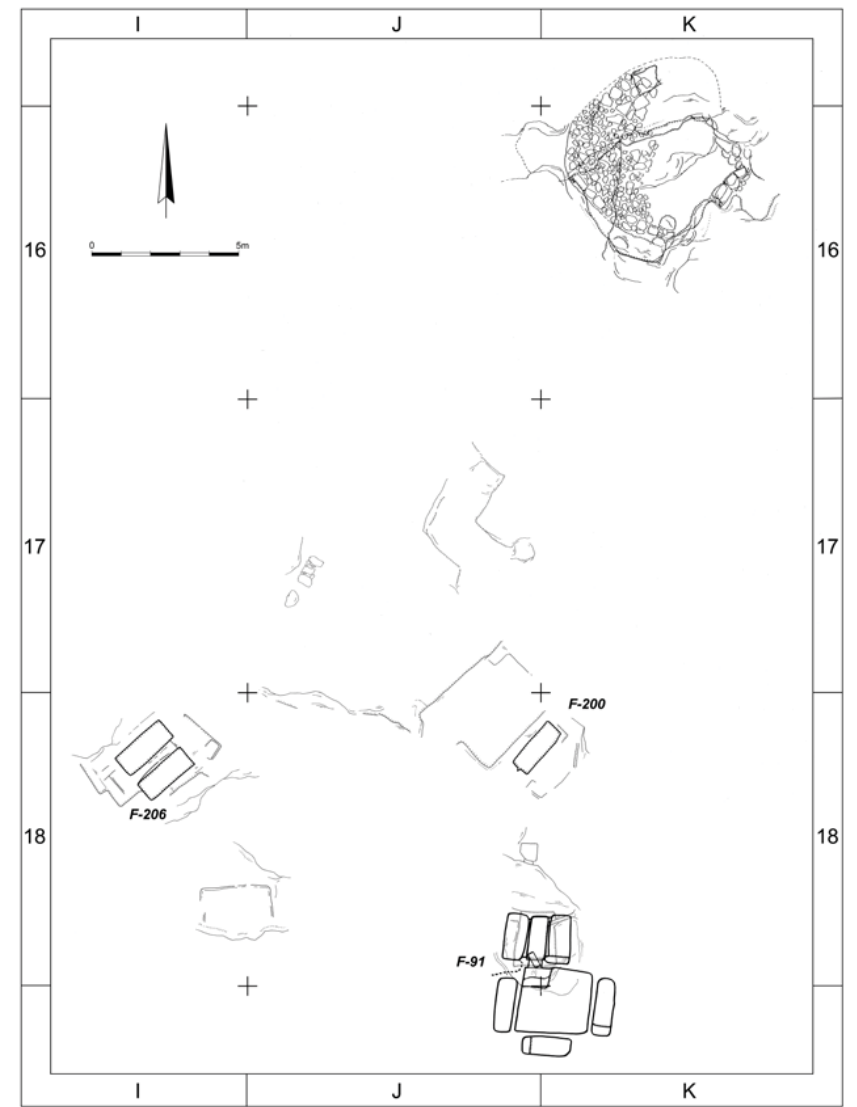
The 2006–2007 Excavations

Following the previous excavations, this season lasted for 21 successive months on behalf of the Zinmann Institute of Archaeology at Haifa University.²

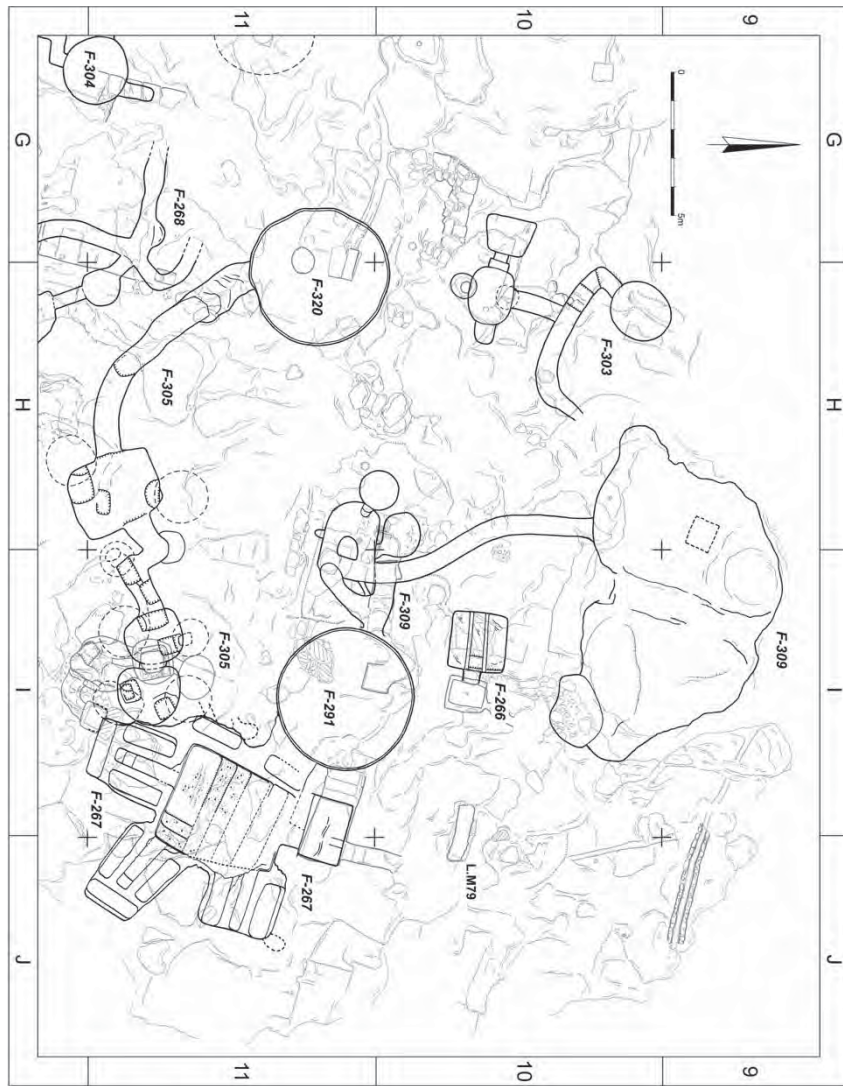
We continued to use the area subdivisions used in the Hebrew University excavations of 1997–2003³ (Plan 1.2). This approach enabled the connection between the data from both excavations.⁴ The dig



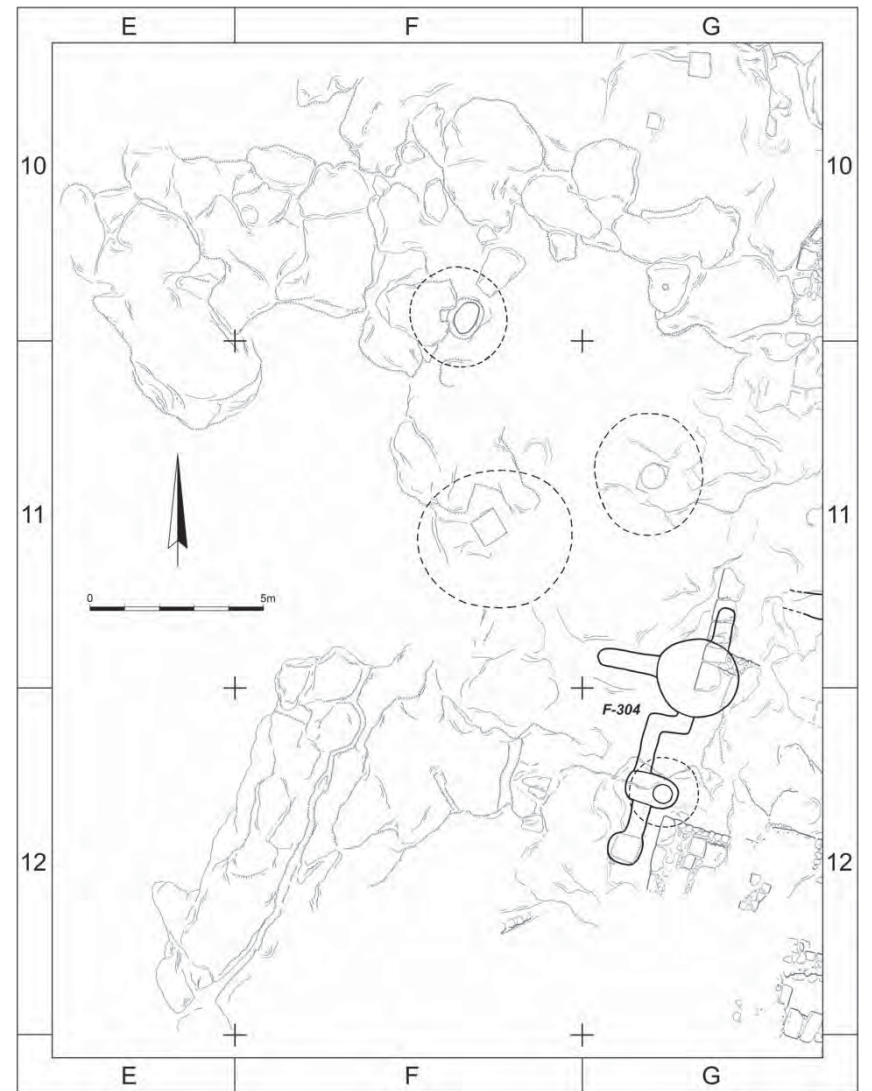
Plan 1.4. Area G. The eastern section.



Plan 1.5. Area G. The western section.



Plan 1.6. Area H. The northeastern section.



Plan 1.7. Area H. The northwestern section.

PART I

CHAPTER 2

EXCAVATIONS OF BURIAL CAVE F-55 AND BURIAL F-257

VLADIMIR WULF AVRUTIS

During the salvage excavations conducted at Neshër–Ramla two burials were revealed that date back to the Early Bronze Age I.¹ The remains were seriously damaged by intensive settlement activity at the site from the Late Hellenistic to the Byzantine periods (see Melamed, Chapters 5, 6 this volume and Kol-Ya'akov, Chapter 7 this volume). Nevertheless, these EB I burials are extremely important and reveal new evidence of the material culture, burial customs and extra-regional interconnections of the Early Bronze Age.

Methods and Terminology

To avoid annoyance to the reader, no statistics and graphs were included. In most cases, the accompanying discussion is quite limited, except for a number of specific vessel types. The selective parallels follow the particular discussion and sites are presented in geographical order from north to south. Preference was given to burial assemblages in the geographical vicinity of the Neshër–Ramla site and to recent publications.

Burial Cave F-55

Burial F-55 is a natural karst cave hollowed out in the soft local limestone, minimally hewn and worked to convert it into a tomb (Plan 2.1). The burial cave, shaped in a manner typical of burial structures from this period, which vary mainly in their natural dimensions, consisted of a single irregularly shaped chamber (L. 326; 7.88 × 5.23 m). The bone and artifact deposits were up to 0.4–0.5 m thick. Due to the collapse of the cave's roof, the human remains were found in pulverized condition. In addition, the calcite and the moist environment made osteological data unavailable. The estimated number of the deceased interred in the cave, based on a skull count, was 8–10 individuals.

The archaeological remains included 49 ceramic vessels, 4 flint tools (2 blades, a point and a scraper) and a copper spearhead (Fig. 2.1). Because of the condition of the cave, it was impossible to ascribe particular finds to a particular burial. Therefore, there is no data about burial offerings, rites or customs. Some of the pottery vessels have soot stains, mainly on their exterior, but sometimes also on the interior. However, the soot spots are relatively small and local, and therefore do not reveal anything about the actual burial customs and processes.

Pottery

Bowls (Pl. 2.1)

The burial offerings included 13 bowls and a platter, all handmade. There are many variations in shape and form among the bowls from the burial cave under discussion. As will be shown below, the bowl assemblage fits well into the EB IB horizon.

Hemispherical Bowls. The small hemispherical bowls (Pl. 2.1:1–4) have incurved or simple upward tapering rims. Four of them (Pl. 2.1:2–4) and a similar bowl (not illustrated) are red slipped. An uneven black core indicates that the bowls were fired at a non-uniform moderate temperature. On the rim of the only undecorated hemispherical bowl (Pl. 2.1:1) appear traces of soot, which indicates that the vessel served as an oil lamp. One bowl (Pl. 2.1:2) has a single, horizontally pierced lug handle, positioned below the rim. Another hemispherical bowl (Pl. 2.1:5) is much larger than the previous four; the rim is out-turned, and decorated on its exterior with a red slip and radial burnish. The bowl was well fired at a high temperature. This type of vessel has a characteristically rounded base. Hemispherical bowls are very basic in shape. They were introduced in the earliest stages of EB I and continued to appear without considerable



Fig. 2.1. Burial cave F-55. Selective funeral assemblage.

change throughout the period. Thus, this type cannot serve for dating purposes.

Shallow Bowls. One of the shallow bowls (Pl. 2.1:6) is thick-walled and exhibits red slip on the external side. Some of the wet slip dripped inside the vessel. The bowl has a plain, tapering rim and a flat base. Two other shallow bowls (Pl. 2.1:7, 8) have much thinner walls than the first example. The out-turned walls of those vessels make a sharp carination with the base. One bowl (Pl. 2.1:7) is decorated by external and internal red slip and radial burnish. Carinated bowls of this kind began to make an appearance in the most advanced stage of EB I and became more frequent in early EB II.

"V-Shaped" Bowls. Four different bowls are ascribed to this category (Pl. 2.1:9–12). This type of bowl features a flat base, straight wall and a simple or sometimes incurved rim. It should be mentioned that the name of this type is misleading and confusing. One of the bowls differs from the others in having a rounded base and a basket handle (Pl. 2.1:12). The vessels were fired at relatively high temperatures. These bowls continue the Chalcolithic pottery tradition and were not produced in EB II.

Shallow Carinated Bowl (Pl. 2.1:13). This large bowl has a flat base and a slight carination just below

the plain inverted rim. The vessel is decorated with red slip and a diagonal pattern burnish. The vessel has a single semicircular horizontal ledge handle with two vertical pierced holes. These bowl types are known as the "Aphék family" and appear in the latter phases of EB I, and continue into EB II–III. The geographical distribution is concentrated mainly in the south, although some northern examples have been recorded (Beck 1985). The type may be derived from the widely distributed EB IB carinated bowls and seems to be a predecessor of the typical EB II platters.

Juglets (Pl. 2.2:1–8)

Eight juglets, all featuring high loop handles, were found in the burial cave. Among the juglets are four small globular vessels with high loop handles and untreated surfaces (Pl. 2.2:1–4). Their bases are flat or slightly rounded. Another juglet (Pl. 2.2:5) has a globular body and a concave base. This vessel has a red slip on its exterior. The exterior slip of two additional juglets (Pl. 2.2:6, 8) continues on the interior of the rim. The high loop handles of the juglets are attached to the rim and to the body's point of carination (Pl. 2.2:2–8) or to the lowest point of the body (Pl. 2.2:1). In section, the handles are usually flat, although one juglet (Pl. 2.2:3) features a double handle. The juglets were processed at moderate to high firing temperatures. The high loop handles are very characteristic of EB I and did not continue into

EB II, a feature that restricts the date of the burial cave to EB I.

Amphoriskoi (Pl. 2.2:9–18)

The pottery assemblage included 15 amphoriskoi of different sizes. The amphoriskoi presented here have narrow funnel necks and globular bodies and feature two horizontally pierced lug handles attached at the shoulder. The bases can be flat (Pl. 2.2:14, 17, 18), rounded (Pl. 2.2:9, 10–13) or concave (Pl. 2.2:15, 16). One amphoriskos (Pl. 2.2:11) is noteworthy because of its very wide funnel-shaped neck. Another vessel (Pl. 2.2:18) should be mentioned owing to its relatively large size. Four additional amphoriskoi very similar to the one illustrated in Pl. 2.2:14, and another, similar to Pl. 2.2:12, were not drawn. The vessels were fired in a moderate and mostly non-uniform firing process. This type of vessel is common in burial contexts within the early phases of EB I and has a wide geographical distribution.



Fig. 2.2. Burial cave F-55. Jug with additional lug handle.

Jugs (Pl. 2.3; Fig. 2.2)

Four jugs were recovered from Burial Cave F-55. The jugs feature a simple rim, a high narrow neck, a bag-shaped body and a flat base. A high, flat loop handle descends from the rim to the vessel's shoulder. The vessels were fired at a moderate firing temperatures.

One jug (Pl. 2.3:4) differs in shape from the others, having a trefoil mouth. This vessel is the only decorated jug in the assemblage. It bears a painted line, a group of painted decorations or "Pajama Style", which appeared in EB IA, became very popular in EB IB, and continued to be produced well into EB II (Braun 1996:214–216). One jug is noteworthy because of the additional lug handle attached to the vessel's shoulder opposite the main loop handle (Pl. 2.3:3; Fig. 2.2). The lug handle is small, almost vestigial. Jugs with a squat body and an additional large handle (relative to the Nesher–Ramla jug) are dated to the middle phase of EB IB (Gophna and van den Brink 2003:281). This jug type has some parallels with those of Egypt and Lower Nubia, which exhibits the interconnections and inter-influences of the material culture (*idem.*). However, the jug under discussion has a slightly different shape from those mentioned above. The shape of the body is more elongated and is a precursor of the so-called "Abydos" jugs. Another difference, already mentioned here, is the vestigial lug handle. This, in comparison with the entire Cave F-55 ceramic assemblage, suggests dating

the Nesher–Ramla double-handled jug to a very late phase of EB IB.

Storage jars (Pl. 2.4; Fig. 2.3)

Storage jars are uncommon in EB I burial assemblages. Four large storage jars were uncovered of the following types: a small jar, a pillar-spout jar, and an imported Egyptian storage jar. The large storage jars (Pl. 2.4:1–4) are of typical EB I form. The vessels are handmade of coarse clay with many inclusions. In some cases, the rim is wheel-made and attached to the body in the "dual-mode" production technique (Pl. 2.4:1, 3). The storage jars feature a flaring bow-rim and a flat base. Most of them (Pl. 2.4:2–4) are red slipped. All jars have ledge handles attached immediately below the vessel's shoulder or slightly lower. There is a certain degree of diversity in the ledge handles (Pl. 2.4:1–4), which are either plain or thumb-indented. It should be mentioned that the storage jars in Cave F-55 are smaller and of better quality than those in Burial F-257 (below). An additional, incompletely preserved storage jar features rope-like plastic decoration. The potsherd is not available, but it should be mentioned that its shape and decoration are very similar to the vessels from nearby Burial F-257 (Pl. 2.9:3).

There are three additional vessels ascribed to the jar category. The small jar (Pl. 2.4:5) has a simple pointed rim, a globular body and a massive flat base and features a double handle. It is preserved

in fragmentary condition. The vessel exhibits the characteristic “dual-mode” production technique mentioned above.

The pillar-spout jar (Pl. 2.4:6) is unslipped, with a high flaring rim, two opposing ledge handles and two knobs opposite the pillar. The pillar is in the form of a stand (spout) and was formed separately and attached to the jar in “leather-hard” condition. Vessels with pillar-spouts first appear in EB IB and continue into EB II, although they become relatively rare. In the course of time, the pillar lost its function as a spout and became a solid post. This kind of vessel is more prevalent in assemblages from sites in southern Israel than in northern Israel (Braun 1996:222–223, Tab. VI.E.1.f). However, in some cases these vessels were produced in the north and imported into the region under discussion (van den Brink and Grosinger 2004:93).

One intact storage jar (Pl. 2.4:7; Fig. 2.3) deserves particular attention. The storage jar is purely Egyptian in shape and petrographic examination revealed the vessel to be of Egyptian origin (see *Tsatskin, this volume, Chapter 4*), made of mixed Nile clay processed under high firing temperatures. This imported artifact is new evidence for the intensive connections between the Southern Levant and Egypt during EB I. In addition, the presence of this vessel



Fig. 2.3. Burial cave F-55. Imported Egyptian storage jar.

limits the date of the burial to up until EB II, when connections between the regions were discontinued.

Flint Tools (Pl. 2.5:1–4; Fig. 2.4)

The flint tool assemblage included two blades, a point and a tabular scraper. The blades (Pl. 2.5:1, 2) are typical Canaanite sickle blades with trapezoidal sections. These blades are characteristic of the EB I period (Rosen 1983) and seem to have been in continual use further down the timeline. The blades were uncovered in fragmentary condition. Gloss appears on the surface of both tools, indicating their actual usage before they were placed in the burial tomb.

The point (Pl. 2.5:3), retouched on both sides, was found intact (length 124 mm, maximal width at base 27 mm; gradually thinner toward the point). The production technique used to form the point is similar to those used for the sickle blades. This tool seems to be part of the southern subculture (Ben-Tor 1975:24).

The tabular scraper (Pl. 2.5:4) was also found intact. This massive tool (58 × 124 mm) bears a cortex on most of its dorsal side. Tabular scrapers are extremely rare in the north of the country, but their distribution becomes more frequent toward the south. It should be mentioned that the sickle blade (Pl. 2.5:1) and the point (Pl. 2.5:3) are of the same hard gray limestone, whereas the other sickle blade (Pl. 2.5:2) and the tabular scraper (Pl. 2.5:4) are made of the same light brown flint. In light of the above discussion, it should be assumed that the flint assemblage in Cave F-55 belongs to the southern EB I subculture.

Copper Spearhead (Pl. 2.5:5; Fig. 2.5)

This long (239 mm) and heavy (159.7 g) copper spearhead shows excellent workmanship (Fig. 2.5). The blade (151 mm) is triangular with curved shoulders (max. width 33 mm) and reinforced by a pronounced raised mid-rib that runs from its point to its base. The massive tang (88 mm) has a round section and ends in a hooked tip. The ratio between the blade and tang is almost 2:1. Heavy hammering is evident on the surface of the spearhead. The alloy consists of almost pure copper without natural or manmade additions.²

The ends of the spearhead and the javelin tangs were turned back to prevent the splitting of the haft upon impact. The haft was then hardened by rope loops. The problem of breakage at the adjusting point was not solved until the introduction of socket



Fig. 2.4. Burial Cave F-55 Burial stone tool assemblage.



Fig. 2.5. Burial Cave F-55. Copper spearhead.

projectile heads in the late third–early second millennia BCE (Philip 1989:100). The Neshër–Ramla spearhead from Cave F-55 is the earliest stratified tang copper spearhead.

The importance of this artifact cannot be overestimated. Moreover, the Neshër–Ramla spearhead can serve as a dated typological parallel to similar objects from the same period deriving from a doubtful or problematic stratigraphic context. The first objects that should be mentioned are the spearheads from the Kefar Monash hoard (Hestrin and Tadmor 1963:279–282, Figs. 10:3; 11:1–3; Pl. 29:A–D). As the main datable objects, the spearheads now have a strong parallel to which they can be dated. This strengthens the late EB I date of the hoard already given by the researchers (Hestrin and Tadmor 1963:286) and revised many times later (e.g., Ben-Tor 1971; Watkins 1975). Those spearheads belong to Philip’s Type 14 (1989:80–81).

In addition to the Kefar Monash Hoard are two finds from Megiddo. The first is a weapon with a central ridge and curved projections at the base of the blade near the tang. The object is extremely long

and hence, was interpreted as a “ceremonial sword”. The core of the object consists mainly of copper (Cu = 99.94%) with no tin. The metallic additions on the surface of the curved projections near the tang are silver (Loud 1948: Pl. 283:1). It should be mentioned that the object’s proportions bar it from affixing and holding it at the end of a pole. Thus, the interpretation of the object as a sword is more reasonable than that as a spearhead. This example as well is similar to the Neshër–Ramla spearhead in the metallurgical technology and the weapon’s shape. The provenance as well as the date of the object from Megiddo is problematic. The object was found in a circular mud-brick structure, Building 4034 (NW) (2.25 m in diameter and 10 m high), which is interpreted as a pit or bin from Stratum XVIII. The stratigraphic ascription of this structure is difficult because it partly overlaps a section of Pavement 4118 from Stratum XIX for a considerable distance but is below the floor levels of the nearby rooms from Stratum XVIII. The existing upper surface of the wall as well as the floor of this structure is covered with lime (Loud 1948:66). Recently, the stratigraphic data of the features ascribed them to Stratum XIX, which is dated to late in EB I (Finkelstein 2000).

The other find from Megiddo is a spear representation incised into Pavement 4118 of the Megiddo temple court, mentioned above. There is a very schematic picture of a standing figure holding a spear. The pictured spearhead has a central ridge and a straight base (Loud 1948: Pl. 273:7 [c=311]), making it very similar to the Neshër–Ramla and Kefar Monash spears.

Throughout the urban phases of the Early Bronze Age, the spear does not seem to have been a popular weapon in Canaan, although this is a difficult conclusion to make based on negative evidence. During the Intermediate Bronze Age, spears made a “comeback”, preserving the exact form of the EB I prototype (e.g., Yadin et al. 1961: Pls. CXXLIV:23, CCCXLII:3; Gophna 1969:50, first on left; Hess 1980: Fig. 1:7; Getzov 1995:12*–13*, Ill. 9:1; Yannai and Rochman-Halperin 2008:3*, Fig. 3:1). At some stage of the Intermediate Bronze Age, the tang was replaced by a socket, which improved the joining of the blade and the haft. In rare cases, use of tanged spearheads continued into the early phases of LB I (e.g., Yadin et al. 1961: Pls. CXXLII:11; CXXLIV:24), when they were occasionally reinforced by spear butts (Yadin et al. 1961: Pl. CXXLII:10).

In conclusion, the reinforced central ridge was introduced as early as the end of the fourth millennium BCE. Tanged spearheads were in use from EB I until the Intermediate Bronze Age, when the tang was replaced by a socket (although the tang remained in the arrowheads, javelin heads, knives and daggers). As in all technological innovations, this was a gradual process and tanged spearheads were still found in the early phases of LB I.

Summary of the F-55 Burial Cave Assemblage

Cave F-55 was probably in use for a period of more than one generation, perhaps two or three. The overall artifact assemblage from the Cave F-55 burial indicates a very late phase of EB I. Evidence for this late dating is provided by the appearance of the carinated slipped and burnished bowls and the platter, the typological shape of the pillar jars, the precursors of the so called "Abydos" jugs, and especially, the double-handled jug. Perhaps the absence of the teapots has a certain degree of chronological importance. Nevertheless, some features, such as the high loop-handled juglets and the "V"-shaped bowls, and the presence of the imported Egyptian jar, restrict the assemblage to EB I.

In regional terms, the material culture revealed from the objects in Cave F-55 places it in the southern subculture. This observation is attested mainly by the presence of the pillar-spout jar, the flint point and the tabular scraper. The presence of the imported



Fig. 2.6. Burial F-257. General view.

Egyptian storage jar seems to point to connections between Egypt and the Southern Levant.

Burial F-257

Bell-shaped Burial F-257 is hewn in the soft local limestone (Plan 2.2), forming an almost perfect circle at its base (4.25–30.00 m in diameter) (Fig. 2.6). The remains of the entrance were exposed at the southeastern end of the installation (L. O99). A projection of stone was left intentionally 0.53 m above the floor level (Fig. 2.7). This could have served as a shelf, or, more plausible, as a step. This EB I burial was partly disturbed by the Hellenistic burials. The Hellenistic tomb builders damaged mainly the southwestern part of the installation (L. M87) and the pottery vessels unearthed during the process were piled outside the tomb (L. N83 and L. N96) by the builders. Some of the vessel fragments were re-assembled. The anthropological data is derived from the report by Deutsch (see this volume, Chapter 16).

There were two distinct EB I burial phases. The first, main burial phase included about a dozen deceased individuals. At a slightly later stage, a child burial and a dog burial were added. The disturbed southern part of the burial contained bones and pottery fragments in disarray. At least six adults were buried in the preserved northern part of the installation. The deceased were placed on a beaten



Fig. 2.7. Burial F-257. Step (?).

fill of soil that showed traces of organic materials of unclear nature (see below). One of the deceased was placed on a rectangular pebble-made surface at the northeastern edge of the tomb (L. M96). This was an adult male of 30–35 years, lying on his right side in a semi-articulated position. The special position may indicate the special status of the deceased. The other individuals were laid to rest on their sides in a contracted position.

The later EB I burial contained the skeletons of a child aged 5–9 years buried without funerary gifts, and a canine in a bad state of preservation. The dog was covered with a flat, circular stone (0.36 m in diameter) carved from the soft local limestone. The canine remains were of a pre-adult domestic dog (*canis familiaris*), estimated age 6–7 months (see Horwitz, Chapter 3, this volume), though much smaller than the primitive Epi-Paleolithic Natufian dogs. The presence of a dog burial in a human tomb is noteworthy. The importance of this find and the possible origins of the tradition will be discussed in the conclusions of this chapter.

As mentioned above, the interred individuals in the main burial phase were not placed on the floor but on a 2–5 cm layer fill of dark earth containing organic material. The floor of Burial F-257 (L. N44; 114.16 m asl) was hewn and smoothed to make it extremely flat. This investment of effort was not expended on the walls, which remained rough-hewn. The unusual form of the installation, the perfect semi-hemispherical proportions, the smoothness of the hewn floor, and the presence of organic materials on the floor raise the

possibility that this was an earlier storage installation (silo) in secondary use. A similarly shaped (but half as small) bell-like storage installation was found at the Halif Terrace "Silo Site" and dated to the Chalcolithic period (Alon and Yekutieli 1995:158).

Most of the deposited burial assemblage of Burial F-257 was discovered in broken and fragmentary condition, mainly due to later Hasmonean intrusions. It should be mentioned that the objects revealed and represented here are only part of the original assemblage. The F-257 burial assemblage included pottery vessels, two fragmentary flint sickle blades, a hematite macehead, and a cone-shaped stone object, probably a weight.

Beside the above-mentioned *in situ* artifacts, the soil accumulation that filled the installation space contained a considerable amount of flint flakes and debris. This material is ascribed to the Chalcolithic and Neolithic periods.³ These items cannot be related to any specific tool and/or industrial assemblage, and therefore, may merely indicate human activity in the area during those periods.

Pottery

Bowls (Pl. 2.6:1–5)

Only five bowls were complete enough to be drawn. The shallow bowl (Pl. 2.6:1) exhibits a red slip and net-pattern burnish and was fired at a high temperature, although the strong black core indicates an uneven process. The deep, hemispherical bowl (Pl. 2.6:2) is red slipped and finished by external radial burnish. Another deep hemispherical bowl (Pl. 2.6:3) is larger than Pl. 2.6:2 and its walls are much thinner. One bowl with a flat base, upward-turned walls and a slightly out-turned rim, is wheel-made (Pl. 2.6:4), an extremely rare technique in the period under discussion. The vessel was formed at a moderate firing temperature. A ledge-rim bowl (Pl. 2.6:5) is one of the variations on the elaborate-rim bowls. This vessel exhibits a thick, dark-red slip, well preserved due the strong firing. This type seems to have been introduced relatively late in the EB I sequence. The type became very common in EB IB and continued into EB II (frequently in metallic ware).

Holemouth Vessels (Pl. 2.6:6–8)

Merely three holemouth vessels could be illustrated from Burial F-257. The large, well-fired holemouth in Pl. 2.6:6 exhibits a thickened rim and rope-like plastic

decoration. This rim is characteristic of the developed phases of EB I (Alon and Yekutieli 1995:179, Fig. 25). A similar vessel (Pl. 2.6:7) is decorated with thick dark-red slip and flat-molded decoration. Molded rope decorations reflect the Chalcolithic and EB IA pottery traditions. The third holemouth jar presented here (Pl. 2.6:8) has a relatively narrow body and a beveled, upward-pointed rim. The shape of the vessel and its rim indicates a relatively early date in comparison with that of the whole assemblage.

Juglet (Pl. 2.7:1)

The juglet has a high loop handle and exhibits red slip, which also covers part of the exterior of the neck. Another two juglets were not drawn due to their poor state of preservation. Both feature a high loop handle and are decorated with red slip. It is noteworthy that one of the juglets was made of so-called “cooking pot material”. Juglets with a high loop handle are characteristic of EB I and do not continue into the next phase of the period, EB II.

Amphoriskoi (Pl. 2.7:2–10)

The amphoriskoi represented in Burial F-257 are typically pear-shaped with rounded and slightly flattened bases. Some of the vessels are finished with red slip, and, less frequently, with burnish. The amphoriskoi from this burial feature bear an irregular burnish that is absent in Burial Cave F-55. They have antithetic horizontally (Pl. 2.7:2–6, 9, 10) or vertically (Pl. 2.7:7–9) pierced lug handles. The shape of the handles and the overall form of this type of vessels suggest that they could have been hung. It should also be mentioned that amphoriskoi are the most frequent, common vessel in burial assemblages of the EB I period.

Jugs (Pl. 2.7:11–14)

The jug illustrated in Pl. 2.7:14 is the only example typical of the type found in the F-257 assemblage. It is characterized by a simple out-turned rim, high narrow neck and a flat base. The vessel features dark-red slip and vertical burnish. A flat, high loop handle is attached from the rim to the shoulder of the vessel. The other jug fragments (Pl. 2.7:11–13) are of common shapes that fit all phases of EB I.

Storage Jars and Pithoi (Pls. 2.8; 2.9:1–3)

A large quantity of large-sized storage jars and pithoi were found, mostly in disarray and in fragmental

condition. The vessels feature short flared rims, low necks and flat bases. Some vessels have ledge handles, which are plain (Pl. 2.8:9), thumb-indented (Pl. 2.9:1) or slightly folded (Pls. 2.8:7; 2.9:3). The upper third and rarely, the lower sections, are occasionally decorated with a plastic rope-pattern (Pls. 2.8:8, 9; 2.9:3). The low neck of the jars is more characteristic of the relatively early phases of the EB I ceramic sequence (Alon and Yekutieli 1995:179, Fig. 25). The plastic decorations also reflect previous stages of the ceramic sequence (relative to the entire assemblage). It seems that the Burial F-257 storage jars and pithoi assemblage are “foreign” to the burial offerings, and may belong to the previous usage of the installation as a silo.

Churn (Pl. 2.9:4)

The upper part of this vessel is preserved in very fragmentary condition. The thick-walled shard exhibits an incised “hydra” (“fishbone”) decoration applied when the vessel was “leather-hard”. The massive lug handle (probably double antithetic in its original state) is near the shoulder of this short vessel. The preserved joining point of the neck and shoulder indicates a “double-mode” production. The type is variable in its forms and is characteristic of the EB I pottery horizon.

Flint Tools and a Stone Object

(Pl. 2.10:1–3; Fig. 2.8)

Flint Tools

The flakes and cores found in all the upper levels of the burial installation fill related to a variety of periods and cultures from the Paleolithic to the Chalcolithic periods. Among the 67 recovered flints, there was not a single tool; thus, the flints were regarded as production waste. The mixed elements originate from prehistoric activity in the area. The EB I burial contents are explained by the collapse of the installation’s roof. In view of this, the intrusive flint “assemblage” was not drawn and properly studied.

The three flint tools ascribed to the EB I burial were found in the entrance to the burial installation (L. O99). The two sickle blades were in fragmentary condition, whereas the tabular scraper was intact. The sickle blade (Pl. 2.10:1; Fig. 2.8:A) was made of grayish-brown flint with gray veins. Only the rearmost part was preserved of the additional blade (Pl. 2.10:2), made of a light brown flint. Both blades



Fig. 2.8. Burial F-257. Canaanite blade (A) and tabular scraper (B).

are of a typical shape characteristic of EB I (Rosen 1983).

The tabular scraper (Pl. 2.10:3; Fig. 2.8:B) was found intact. The tool is fan-shaped and bears cortex on most of its dorsal side. Made of light brown flint, this object is of the same material as Blade Fragment 2.10:2 and the sickle blade and tabular scraper found in Cave F-55 (Pl. 2.5:2, 4). As mentioned above, tabular scrapers are more common and characteristic of the southern part of the country than the northern part.

The cone-shaped object (Pl. 2.10:4) is made of local limestone (170.2 g), the sides bear signs of chipping and smoothing. The stone was shaped by human hands and may have served as a weight. This object was found just above the pebble surface (L. M96), and should therefore be viewed in the context of the burial deposition.

Macehead (Pl. 2.10:5; Fig. 2.9)

The macehead was found in L. O99 in broken condition. This pear-shaped object made of hematite (48 mm high, maximum diameter 38 mm and minimum diameter 22 mm) was perforated at both ends (perforations 9 mm in diameter). The break in the object passed directly along the axis of the perforation, dividing it in two halves. As the part found weighs 63 g, the original mass of the macehead should be estimated at about 126 g. The macehead was crudely made, some cutting traces were not smoothed, and as mentioned above, the drilled perforation was the “fatal” weak point of the object. All these indicate

the relatively low skill of the craftsman. In view of the non-local origin of the hematite, it could also be speculated that the local craftsman used imported luxury stone.

The hematite macehead is somewhat surprising in an EB IB assemblage, and thus, deserves particular attention. Similar maceheads are known from many sites, mainly from the Chalcolithic to the EB I periods. There is variety in the material, such as copper, hematite, limestone and basalt. Most of them are characterized by ~ 8–11 mm bipolar drilling. It should be mentioned that in most cases, the hardest local stone was used, so that in the region under discussion this would be limestone (Table 1). It seems that copper and hematite were preferred due to their natural hardness (we should also mention their expensive production, which is non-local and therefore of imported origin, and their prestige as status symbols). The appearance of this hematite object in EB I is worth noting because this not local material, it is relatively frequent in the Chalcolithic period, but rare in EB I.

Summary of the F-257 Burial Assemblage

The burial took place in the bell-shaped installation, hewn in soft local limestone. The shape, the quality and other details described above lead us to assume that the burial reused an earlier installation, apparently for storage purposes—probably an underground silo.

In spite of the poor, fragmentary condition of the finds, it was possible to build a partial picture about the nature and provenance of the material culture of the burial. The pottery assemblage dates to the stage of the main burial deposit, in EB IB. The late date in the EB I ceramic sequence is indicated by the carinated shape of the bowls, the ledge rim bowl, the



Fig. 2.9. Burial F-257. Hematite macehead.

Slip/Burnish. Calcareous-whitish in color on both sides.
Identification. Calcareous marl-based paste with straw and grog. The firing temperature was c. 800°C due to calcination of calcareous clay and marl, and browning of hornblende.



Fig. 4.1. Elongated pores (a larger one in the center) from burnt out straw in calcareous silty clay matrix incorporating quartz and opaque minerals, as well as few grog (center below) and rounded micritic limestone (upper left corner). Width of field 2.4 mm. Plain polarized light (PPL).

2. Bowl (Pl. 2.3:2)

Fabric. A sherd in thin sections is yellowish gray in PPL (Fig. 4.2) with a relatively homogeneous grayish core (zoning), clayey and anisotropic in XPL, speckled and occasionally with areas of striated birefringence. The texture contains coarse/fine silt of calcite, sometimes filling spheres of foraminifera and charred particles. In contrast to No. 1, no quartz silt and hornblende were found.

Inclusions. Abundant crushed euhedral or subhedral crude calcite of elongated outline; rendzina soil aggregates with foraminifera enriched with OM, rendering the mass isotropic in XPL; isotropic clay (mudstone?); few microsparitic limestone particles of ~1 mm; opaques of ~0.5 mm.

Vegetal matter. Common fine charred particles.

Porosity. Euhedral pores—probably pseudomorphs of dissolved(?) minerals. Because the outline of some crude temper of crushed calcite is still in place, a much higher percentage of calcite temper is tentatively suggested; tiny vughs and vesicles (less than 20%) and a few shrinkage cracks within the otherwise dense fabric.

Slip/Burnish. Very thin brownish slip (Fe oxides) on the surface.

Identification. A base of mixed calcareous marly clay with some non-calcareous clay (shale or soil?) and crushed calcite temper, rendzina soil fragments and opaques; firing temperature substantially less than that of No. 1.

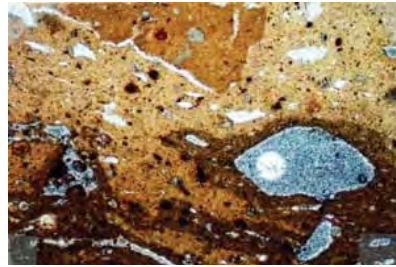


Fig. 4.2. Non-calcareous clayey matrix, clearly zoned, with shrinkage cracks and larger cavities, probably from dissolved mineral temper. A larger ferruginized calcareous clay (upper center) embedded in the noncalcareous matrix. Width of field 2.4 mm, PPL.

3. Bowl (Pl. 2.3:8)

Fabric. A sherd in thin sections is grayish brown in PPL, homogeneous and undifferentiated birefringence in XPL (Fig. 4.3). Contains minerals of both sand and coarse/fine silt, the former are probably temper, and hence, described as inclusions. The matrix is silty clay with some quartz and brown-colored mafic minerals and opaques of reddish color.

Inclusions. Marine sand (20–30%) ~0.05 mm of angular outline, poorly sorted (unevenly), composed of quartz and some microcline and a few shells up to 0.05 mm. The grains have either a ferruginous or a calcareous coating, probably suggesting an origin from hamra soil. In addition, one strongly ferruginized marl piece of 1.5 mm with abundant reddish stripes of Fe oxides, resembling the material that forms the slip on the sherd.

Vegetal matter. None.

Porosity. Very dense with few vughs 0.1 mm and less whose walls are lined with micrite calcite.

Slip/Burnish. Very thin, strongly red and isotropic (identical to the material constituting the aggregate

in the body of No. 2, suggesting that the marls were raw materials used for the paint).

Identification. Calcareous marl-based fossiliferous clay with quartz sand temper. A high firing temperature.

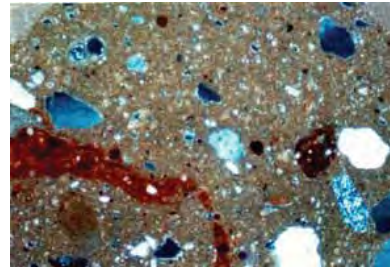


Fig. 4.3. Sand-sized coastal quartz, chert, few grog, a shell (upper left) and ferruginous red stripe embedded in the silty clay calcareous marl. Width of field 2.4 mm. Cross polarized light (XPL).

4. Juglet (Pl. 2.4:6)

Fabric. A sherd in thin sections is reddish brown in PPL (Fig. 4.4), heterogeneous, clayey, and strongly birefringent with striated b-fabric type in XPL, basically leached from carbonates, but in some areas contains microsparitic silt-sized crystals as inclusions.

Inclusions. Sand-sized inclusions of various characters (30–40%). No quartz sand as described above is present; instead, there are abundant calcareous allochems (biotic origin), usually strongly ferruginized, opaque black minerals with a sharp boundary and a rounded outline; all the inclusions are moderately sorted; few calcareous micritic aggregates of 0.8 mm. It is not clear whether inclusions of such size were intentionally added as a temper to the paste or constitute the pristine composition of this clayey material.

Vegetal matter. Tiny charred particles; no characteristic voids from straw as in No. 1.

Porosity. Although the fabric is dense, some shrinkage cracks that apparently formed from the surface to the interior during firing are filled in with micritic and microsparitic calcite precipitated from the calcareous slip (see below).

Slip/Burnish. Calcareous micritic inside and out.

Identification. A mixture of non-calcareous (shale-based) and calcareous clay containing abundant allochems and opaque concretions; probably made without the addition of a plastic component. Intermediate firing temperature (indicated by the preservation of calcareous skeletons of allochems).

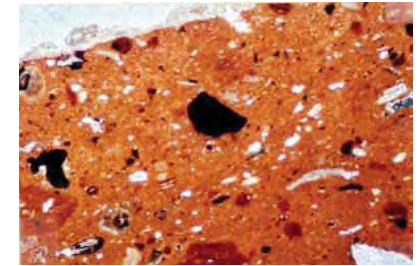


Fig. 4.4. Mixed non-calcareous and calcareous clay matrix incorporating abundant silt-sized quartz, sand-sized opaque minerals, limestone, grog, reddish iron oxides and few shells and bioclasts. Note micritic calcite burnished surface (upper left). Width of field 2.4 mm, PPL.

5. Bowl (Pl. 2.3:11)

Fabric. A sherd in thin sections is brownish gray in PPL, relatively homogeneous and clayey; undifferentiated birefringence in XPL (Fig. 4.5) due to massive calcareousness. Contains coarse/fine silt of quartz, opaque minerals, and bright orange brown sometimes pleochroic grains of colored minerals, most probably hornblende and biotite and abundant silt-sized strongly charred materials that can be confused with opaque minerals. Rounded foraminifera “ghosts” are still discernible, indicative of fossiliferous marly clay as the major component. The quartz (c. 10–20%) is well sorted of angular outline. Accessory minerals cannot be identified due to their apparently small size apart from those indicated above, which were subjected to high-temperature alteration (~800°C, see above).
Inclusions. Angular or sub-rounded muddy marl or mudstone unevenly mixed with the clayey paste; larger charred inclusions and strongly ferruginized grog particles of 0.5–1.0 mm; sand-sized rounded calcite.