

THE BAQ'AH VALLEY PROJECT 1987 KHIRBET UMM AD-DANANIR AND AL-QEŞİR

by
Patrick E. McGovern

Introduction

The archaeological work begun in 1977 by the University Museum of the University of Pennsylvania under the direction of Dr. Patrick E. McGovern in the Baq'ah Valley completed its fifth campaign between June 13 and July 13, 1987. Staff members with their institutional affiliations included the following: Dr. Ilene Nicholas (William Smith College), associate director of the al-Qeşir excavations; Dr. Elizabeth Henrickson (Royal Ontario Museum, Toronto), area supervisor and photographer; Laner De-Polacky (University of Jordan), architect; Kathleen Baker (Association of Archaeological Illustrators and Surveyors in Great Britain), artist; Cathleen Villas (Liesch Associates, Minneapolis), geologist; Charles LeQuesne (Edinburgh University) and Gillian Flynn (State University of New York at Binghamton), area supervisors; and Peter Jarrett (Great Britain), Elizabeth Platt and Natalie Streeter (William Smith College), and Wa'el Mefleh (University of Jordan), assistant area supervisors, along with one volunteer. A staff of eleven workmen was employed from the Abu Orabi family of Umm ad-Dananir and the Baq'ah camp. Ali Sa'idi served as departmental representative.

The project's primary base of operations was the American Center of Oriental Research, but about half the staff lived at the nearby British Institute at Amman for Archaeology and History, which also kindly supplied additional equipment. The project was funded by the University Museum, William Smith College, and the Royal Ontario Museum. Travel grants were provided by the American Schools of Oriental Research, Edinburgh University, William Smith College, and SUNY-Binghamton. The Ministry of Tourism

through the generous auspices of its Director-General, Dr. Nasri 'Attallah, made available a vehicle.

The former Director of the Department of Antiquities, Dr. Adnan Hadidi, and his staff, are especially to be thanked for their on-going support and encouragement. Consultation with geologists and soil scientists at the University of Jordan, the Royal Geographic Center, and the Agricultural Research Station in the Baq'ah also provided important data and assistance in the geological survey.

Goals of the 1987 Season

The 1987 season had three primary goals, which were largely accomplished: (1) continue excavation at Khirbet Umm ad-Dananir, where work was begun in 1981, in order to recover a stratigraphic sequence and to provide more evidence for the connection between this settlement site and the series of burial caves from the Late Bronze (LB) and early Iron Ages (see McGovern 1986: 9-11, 61-63, 335-44); (2) begin excavation at the Early Bronze (EB) site of al-Qeşir (McGovern 1980); and (3) critically evaluate the hypothesis that a lake filled the Baq'ah in the late Pleistocene period by sampling sediments throughout the valley (McGovern 1985a).

Khirbet Umm ad-Dananir

Khirbet Umm ad-Dananir (Fig. 1; Pl. IX, 1) is strategically located to guard the northwestern pass of Wadi Umm ad-Dananir into the Baq'ah, and directly above a very strong, perennial spring (McGovern 1986: 9-11, Fig. 1, Pls. 3b, 4a, 5b, 6a). Exterior walls of uncertain date enclose an area of about two and a half hectares. The site is unusual in being essentially a tell (build-up of multiple

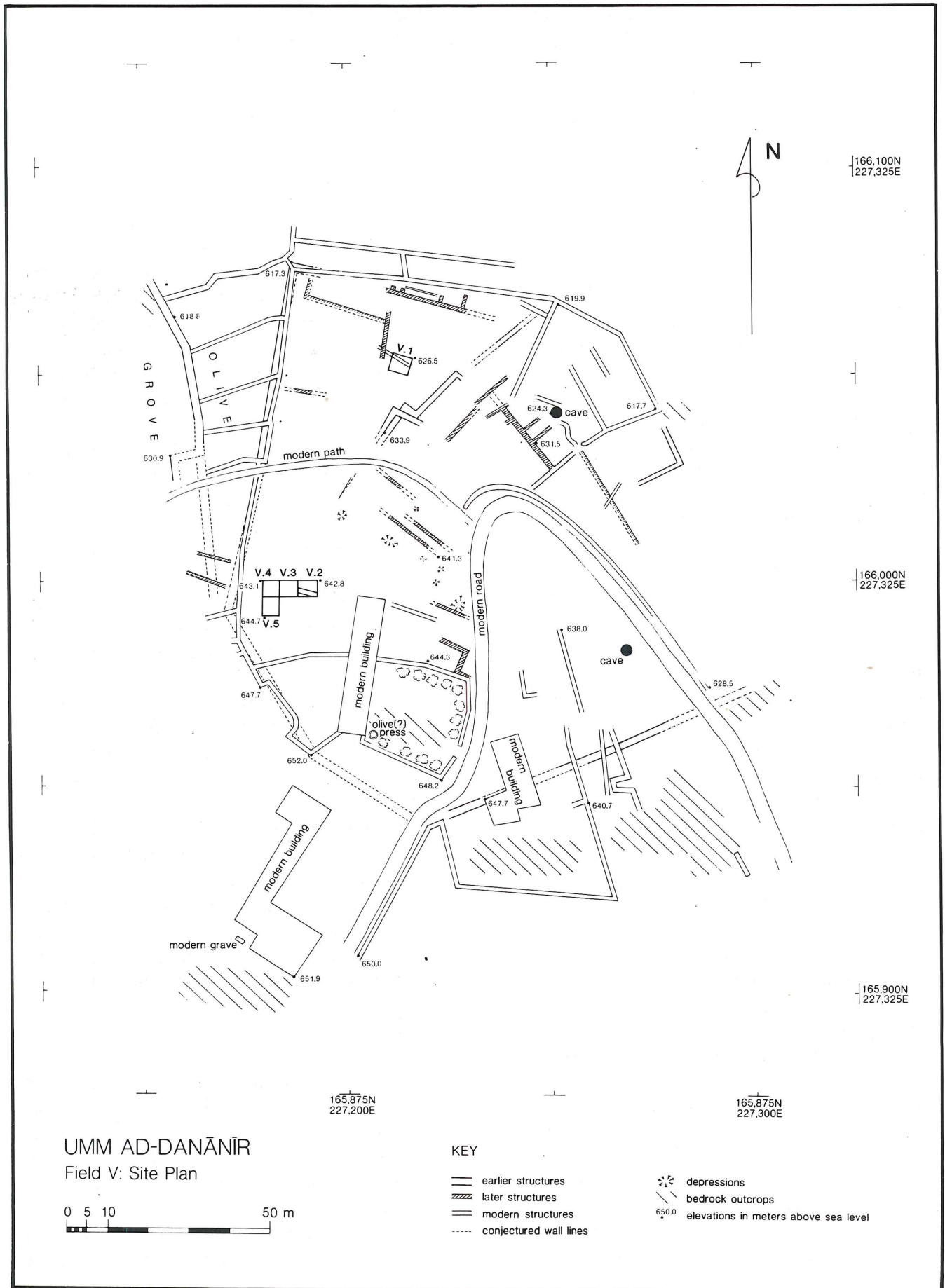


Fig. 1. Khirbet Umm ad-Danānir: Plan of surface features.

levels) on the side of a steep hill (Pl. IX, 2). Occupation was concentrated on at least five terraces with a total change in elevation of approximately 50 m.

Excavation focused on an upper terrace of Khirbet Umm ad-Dananir (Fig. 1; Pl. IX, 1), where four 4 x 4 m squares had been opened in 1981. An additional three squares were opened in 1987, and excavation reinitiated in the 1981 squares, once a common elevation was reached in all the squares.

On the western side of the ca. 15 x 15 m area of excavation, a well-preserved Herodian building (Early Roman III — 4 B.C.-A.D. 73) was exposed just below the surface. An intriguing line of seven squared-off orthostats divided one room of the structure (Pl. X,1). Two of the orthostats had opposing holes. A stone channel or trough ran along one side of the orthostats and continued along two adjoining walls. A small oven (*ṭabun*) was placed between one end of the channel and a well-cut doorway, which opened inwards and led to a large courtyard on the south. The orthostat room and its features might suggest a stable for animals, but no evidence of animals or their trappings was found. The artifacts from the building, including more than twenty-five limestone measuring cups and bowls (the principal types are illustrated in Fig. 2), a complete iron sickle (Pl. X, 2), glass vessel fragments, numerous basalt grinding stones and mortars, etc., instead point to domestic and/or industrial functions. Besides the pottery dating evidence, a copper-base coin of mid-first century A.D. date was found below the beaten earth floor of the adjacent courtyard.

The terrace appears to have been abandoned for some time after the Early Roman III period. Late Roman and Byzantine sherds were found in upper soil layers, but they probably had washed in from higher ground. Built up against an exposed part of the eastern wall of the Early Roman building were two Mamluk rooms (Pl. XI,1) in the next important period of occupation. The entrances to the rooms from the south and east were similar

in design to the doorway into the Early Roman orthostat room, but the stones were smaller and less well cut; the former were also at surface level, whereas the latter was one and a half meters below the surface. The two rooms were divided by a thin curtain wall into which a basin with a drain had been built. Only scattered Mamluk sherds were found on the beaten earth floor.

Approximately 15 cm below the floor of the southern Mamluk room, an Early Roman III beaten earth floor in association with a large oven was uncovered. Smashed whole vessels (storage jars and cooking pots) were found on the floor, which apparently belonged to a room, as yet undefined, attached to the orthostat room and courtyard on the east. A coin in the foundational make-up of the floor belonged to the mid-first century A.D.

The Early Roman orthostat building was built directly on top of late Iron (IIC/Persian — ca. 650-400 B.C.) walls, a major period of occupation elsewhere in the valley (McGovern 1983; 1985a; 1986: 8-9, 17). A courtyard with a plaster floor, underlaid by cobbles, was bordered by a large oven and pithos. Imported Hellenistic pottery (Fig. 3) from near the oven may indicate that the late Iron period extended down into the Greek period. Along with massive quantities of pottery and horse figurine fragments (e.g., Fig. 4:2), a notable discovery was an inscription (Fig. 4:1), very deeply incised on the side of a storage jar before firing. It reads *shema'* ("to hear"), a common name element in early Semitic script, although, before this find was made, not yet represented in the Ammonite onomasticon (personal communication from L.G. Herr). Other evidence of writing was confined to potter's marks on the sides and handles of vessels. A well-cut seal (Fig. 4:3), of a non-local red and white stone (possibly jasper), shows an antelope or gazelle eating from a tree or bush.

East of the courtyard, only scattered late Iron installations were uncovered, probably as a result of intrusive Early Roman building activity. A pithos, similar

Fig. 2. Limestone vessels from Khirbet Umm ad-Dananir

1. Cup fragment. Ext. vertical fluting. Field no. B78.S3B-7. University Museum.
2. Cup base fragment. Ext. vertical fluting. Field no. V.16. University Museum no. P. 81-6-239.
3. Handle fragment from cup, Notched. Field no. V.4-7. University Museum no. P. 81-14-332.
4. Handle fragment from cup. Notched. Field no. V.4-22. University Museum no. P. 81-14-339.
5. Handle fragment from cup. Field no. V. 5-33. University Museum no. P.81-14-383.
6. Spout fragment. Semi-circular section. Field no. V.5-39. University Museum no. P. 81-14-388.
7. Bowl rim and body fragment. Roughly chiseled ext., smoothed int. Field no. V.5-50. University Museum no. P.81-14-398.
8. Bowl rim and body fragment. Ext. groove. Field no. V.20. University Museum no. P. 81-6-247.
9. Bowl rim and body fragment. Two horizontal ext. grooves. Field no. V.27. University Museum no. P.81-14-305.
10. Bowl base fragment. Field no. V.18. University Museum no. P.81-6-240.
11. Bowl base fragment. Drilled biconical perforation. Field no. V.5-14. University Museum.
12. Bowl rim and body fragment. Field no. V.4-15. University Museum no. P.81-14-335.
13. Bowl rim and body fragment. Two horizontal grooves. Field no. V.19. University Museum no. P.81-6-246.
14. Bowl rim and body fragment. Field no. V.4-37. Polished ext. University Museum no. P. 81-14-353.
15. Base fragment. Stepped int. Field no. V.12. University Museum no. P.81-6-238.

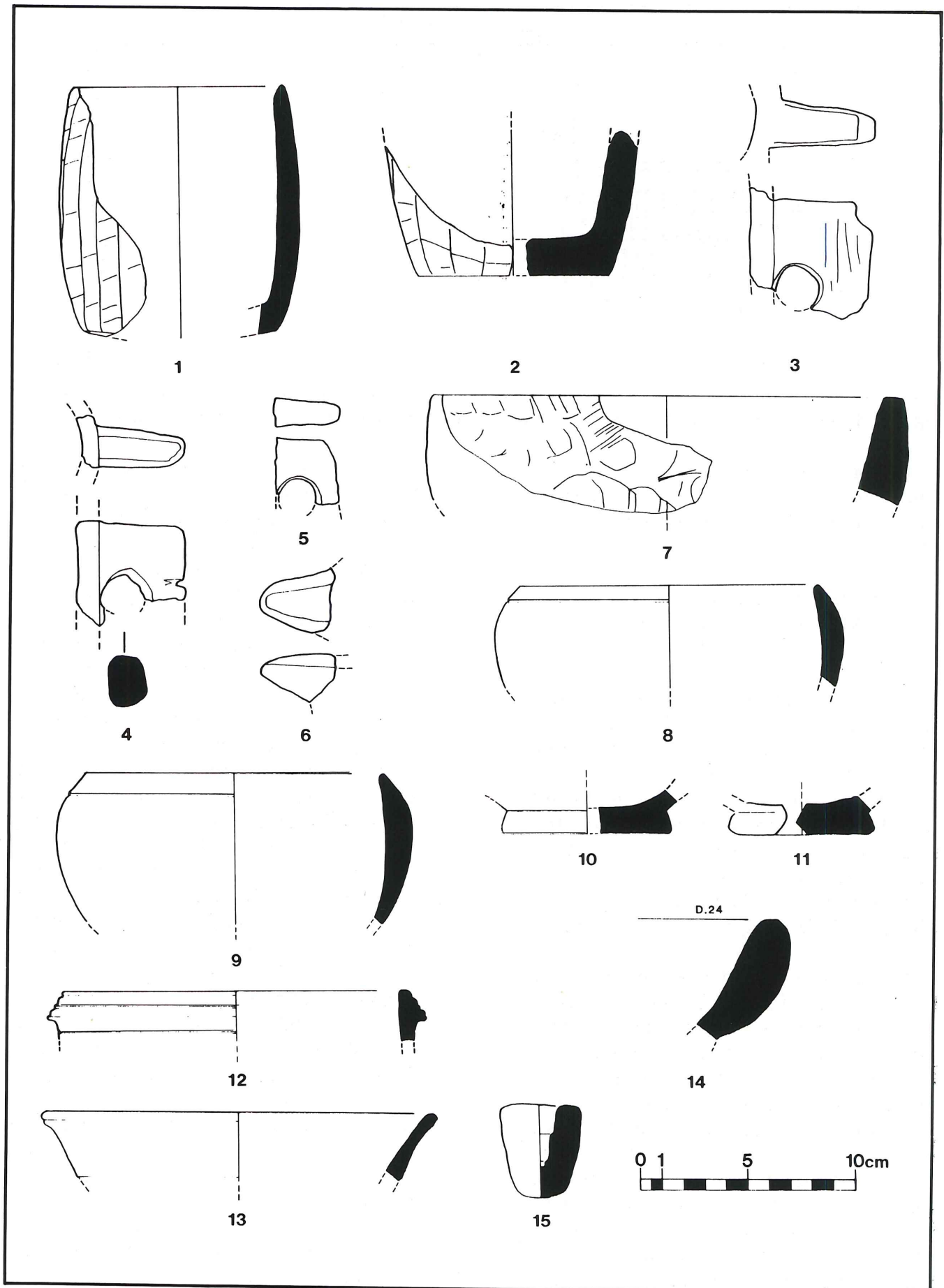


Fig. 2

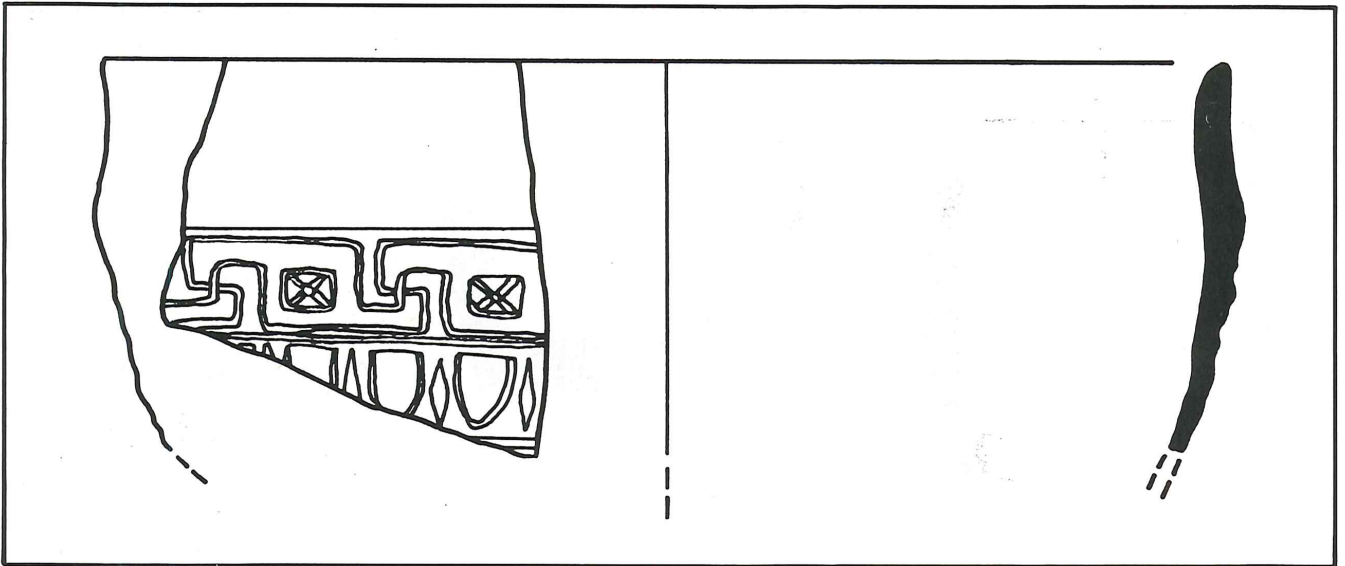


Fig. 3. Hellenistic bowl. Raised relief decoration. Field no. V.4.46-10. University Museum.

to the one on the edge of the plastered courtyard, had been placed in a narrow cubicle formed by two walls meeting at an acute angle.

A LATE BRONZE ARCHITECTURAL ANALOGUE TO THE AMMAN AIRPORT BUILDING

The late Iron walls were built on top of a building dating to the LB IB-II periods (ca. 1500-1200 B.C.), which was the most significant and exciting discovery of the season. To the extent that it has been revealed (only about a quarter of the structure thus far), the architectural plan is very similar to the contemporaneous Amman Airport Building (Hennessy 1966: Figs. 1-3, Pl. 32A), approximately 15 km to the southeast, in having a narrow (2 m wide) northern room defined by walls over a meter thick (Pl. XI, 2) and a centrally located room with a massive column comprised of three drums, the upper two measuring ca. 1 x 1 x 0.7 m and the lowest one a hewn ca. 1 m wide, 1 m high outcrop of bedrock (Pl. XII, 1; cf. Hennessy 1966: Pl. 33B). The three doorways opening from the northern room to the south are spaced approximately the same distance apart (4.5 and 2.5 m) as those between the comparable doorways in the northern room of the Airport Building (3.5 and 2.5 m). Both structures were approximately

oriented north-south and constructed on bedrock; boulders, overlaid by multiple clay layers, were used at Khirbet Umm ad-Dananir for levelling up in places.

An even more remarkable analogy exists between the two buildings: while few artifacts were found on their floors, beneath the floors were layers of bones and artifacts, which apparently had been intentionally laid down over bedrock (Hennessy 1966: 157). Although the rich deposits at the Amman Airport Building (including antique Egyptian and Minoan stone vessels, Mycenaean and Cypriot pottery imports, gold jewelry, etc. — see Hennessy 1966 and Hankey 1974) are yet to be equalled in the Khirbet Umm ad-Dananir building, the finds from the latter definitely point to similar special activities, probably related to the cult. The 60 cm thick “dedicatory fill” below the plaster floor at Khirbet Umm ad-Dananir included the burnt and unburnt remains of numerous domesticates (cattle, donkey, and sheep/goat) and a non-domesticated carnivore and herbivore of uncertain species (possibly mountain lion and gazelle, which no longer live in the region). Whole body parts — heads and torsos, legs — were common, and intermixed with broken whole pottery vessels. The greatest accumulation of bones and pottery, however, was in the foundation trenches of the walls of the building, which had been dug out to

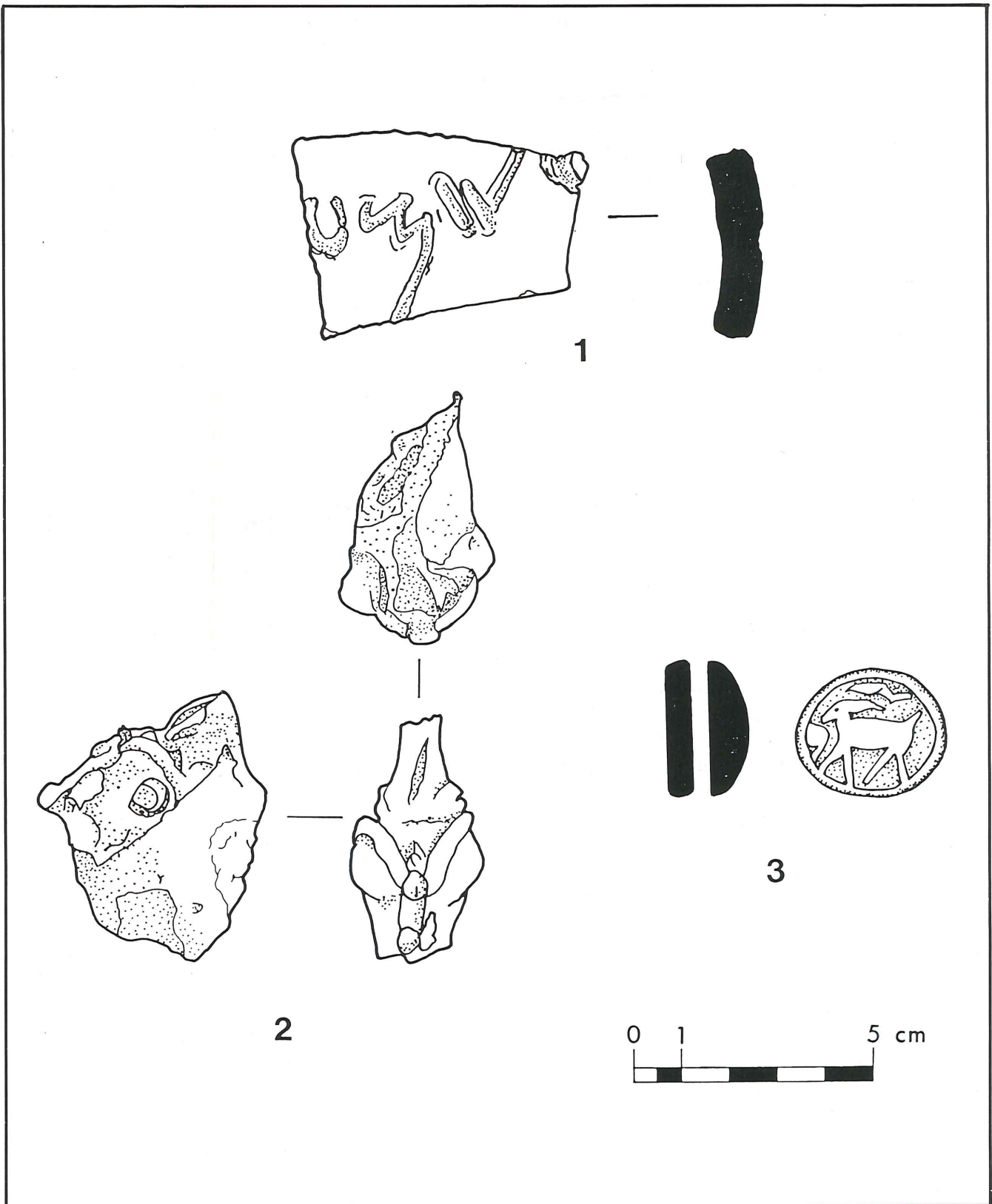


Fig. 4. Iron IIC/Persian special objects from Khirbet Umm ad-Dananir

1. Inscribed storage jar sherd with early Semitic inscription — *shema'*. Ware: 5YR 7/6. White slip. Field no. V.6/3-104. University Museum no. P.87-9-138.
2. Horse figurine fragment. Incised eyes. Applied headress and harness. Ware: 2.5YR 6/6. Thick core. Field no. V.6/3-116. University Museum no. P.87-9-48.
3. Stamp seal. Drilled and incised decoration, showing gazelle or goat before tree or bush. Banded red and white stone. Field no. V.6/3-102. University Museum no. P.87-9-43.

lay the walls *after* the layer of bones had been deposited over the terrace (a similar procedure was followed in constructing parts of the Amman Airport Building — *cf.* Hennessy 1966: 157). The fact that the layer over bedrock was not extensively distributed, in places was underlaid by boulders, and contained pottery of the same date (LB IB-IIA) as that in the foundation trenches points to a deliberate sequence of building operations spaced closely together in time. In addition to whole and partial animal remains of the same species as those found in the layer over bedrock, the foundation trenches yielded whole pottery vessels (Fig. 5:1-3), as well as miniatures of a unique Cypriot-type shaved juglet (Fig. 5:4; *cf.* Dothan and Ben-Tor 1983: 69-89, Figs. 25-27, *passim*) and a Palestinian-type lamp (Fig. 5:5). Jewelry included glass and Egyptian Blue frit beads (Figs. 6:1-2) and an elongated drop pendant (Fig. 6:3) of a red stone. The pottery and jewelry types, apart from the miniatures, are quite comparable to artifacts from LB burial caves in the region (McGovern 1986: 68-70, 73-75, 83-84, 202-32, 242-43; Figs. 17.1; 24.14-15, 16-18; 25.5; 29.8-9; 34.2-4; 61.8; 62.42; 74.2).

The center pillar in the Amman Airport Building has been the focus of much speculative comment (Campbell and Wright 1969; Hennessy 1970; Herr 1983), because it was surrounded by burnt human bones. Although no human bones have been identified as yet from the Khirbet Umm ad-Dananir structure, built up against the pillar here in a cavity in the bedrock was a large fireplace (Pl. XII, 2), below the plaster floor. It was evidently used to roast some of the animals that went into the layer over bedrock; it was full of ashes and animal remains were found on the bedrock close by. On the opposite side of the fireplace from the pillar, built on bedrock but rising above a floor section of especially thick plaster, was a free-standing structure, measuring 60 x 60 x 60 cm, which had a white limestone capstone (Pls. XII, 1 and 2). Nothing was found on top of the stand, but its probable location near the

back middle wall of the structure is in accord with the location of altars in Late Bronze Age cultic installations (Ottosson 1980).

The “dedicatory fill,” the miniature vessels and jewelry, the fireplace and probable altar, as well as the close analogies with the contemporaneous Amman Airport Building, are all indicators that the Khirbet Umm ad-Dananir building was not an ordinary residence, but rather the locus of special activities, most likely associated with the cult (see Coogan 1987, especially regarding miniature vessels and architectural parallels). Contemporaneous texts and biblical tradition attest to the importance of animal sacrifices in the Canaanite cult.

Unlike the Amman Airport Building whose superstructure had been destroyed, the walls of the Khirbet Umm ad-Dananir building are preserved up to 2 m high (see Pl. XI, 2). Carbonized roof beams were found on the floor of the building — an upper perpendicular group had squared-off beams *ca.* 20 x 20 cm in section, with mortise joints still visible, and a smaller lower group ran parallel to each other between the two walls. The building was probably destroyed sometime in LB IIB (*ca.* 1300-1200 B.C.), like the Amman Airport Building, based on the pottery types (Fig. 7; McGovern 1986: 75, 77, 83, Fig. 48, Pl. 21c) found in pits dug into the destruction debris. The pits also contained animal bones of the same species as those in the “dedicatory fill”/foundation trenches and some special artifacts, e.g. a pottery bull rhyton similar to that from an LB burial cave (Pl. XIII, 1; McGovern 1986: 268-69, Fig. 88, Pl. 35). The bull, as a manifestation of the storm or weather god, has obvious associations in Canaanite mythology and cult practice.

Scant evidence for a permanent settlement in the vicinity of the Amman Airport Building (Hennessy 1966: 159-61) suggested to some scholars that it was constructed and used exclusively by nomadic groups for their covenant ceremonies (Wright and Campbell 1966). Although wider exposure is required to determine

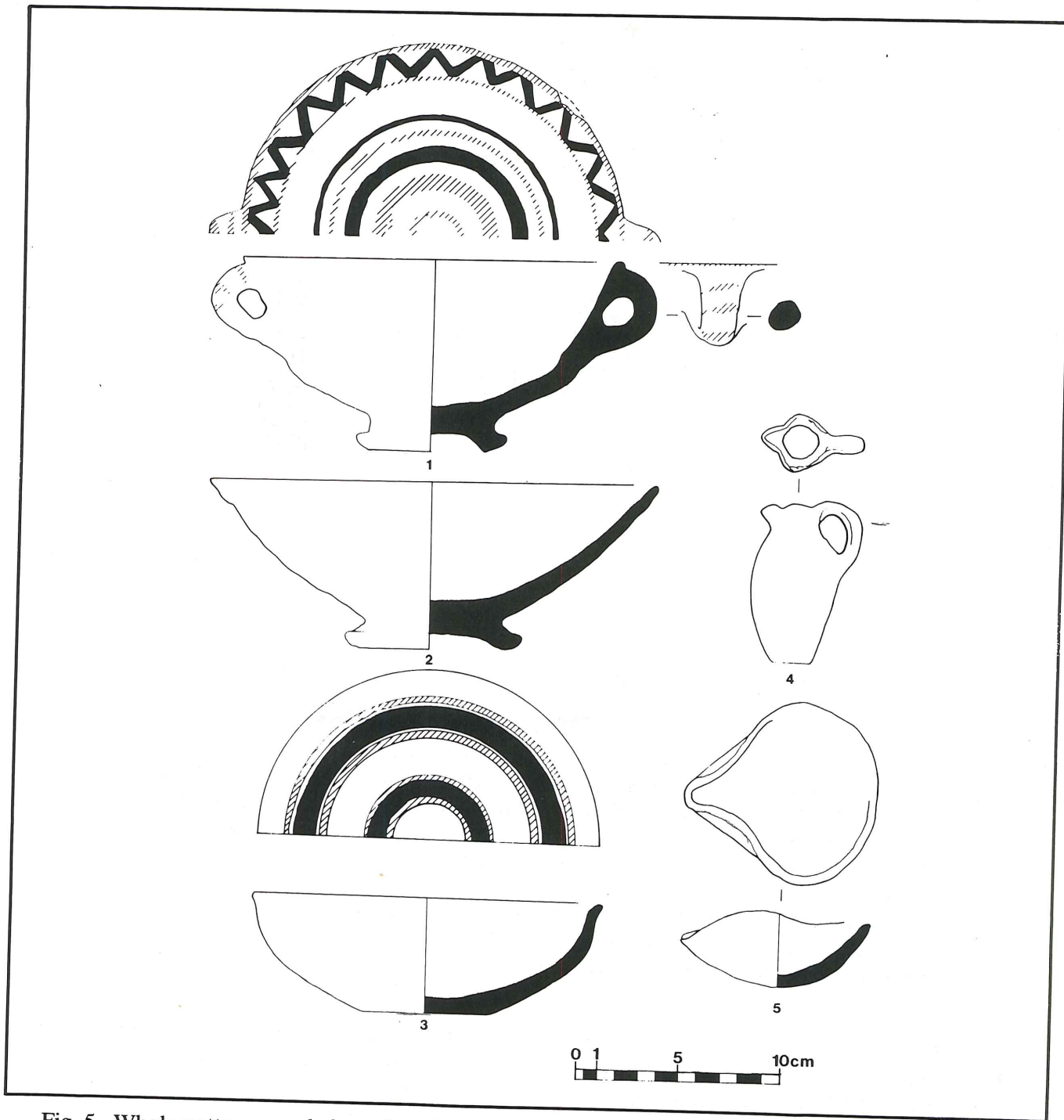


Fig. 5. Whole pottery vessels from the “dedicatory fill” of the Late Bronze building at Khirbet Umm ad-Dananir

1. Krater. Ware: 2.5YR 6/6. Slip (int., ext.): white. Paint: 10R 4/8. No core. Field no. V.7/2-9. University Museum no. P.87-9-108.
2. Rounded bowl. Ware: 2.5YR 6/6. Slip (int., ext.): white (streaky). Medium thick core. Field no. V.7/2-10. University Museum no. P.87-9-109.
3. Small rounded, flat-based bowl. Ware: 5YR 7/6. Slip: white. Paint: 10R 4/8, black. Medium thick core. Field no. V.7-15. University Museum no. P.87-9-114.
4. Miniature juglet. Handmade. Ext. vertical shave marks. Lower handle does not penetrate body. Ware: black throughout. Numerous variously sized inclusions and voids (mostly a result of calcite decomposition). Ext. surface: white, gray. Field no. V.7/2-6. University Museum no. P.87-9-105.
5. Miniature lamp. Carbon-blackened spout. Ware: 5YR 7/6, 7.5YR 8/4, gray. Thick core. Field no. V.7/2-13. University Museum no. P.87-9-112.

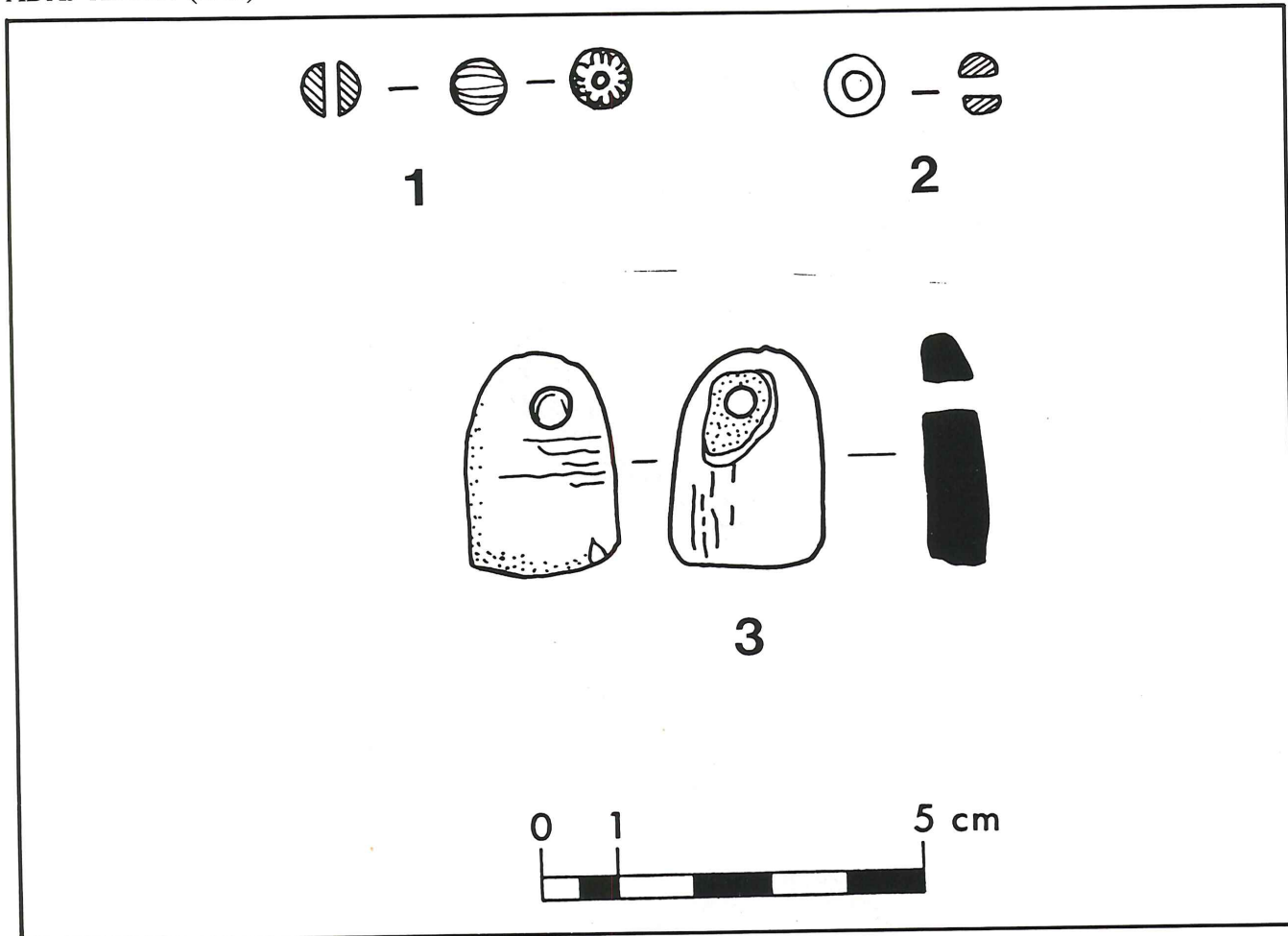


Fig. 6. Jewelry from the "dedicatory fill" of the Late Bronze building at Khirbet Umm ad-Dananir
 1. Bead. Beck (1973) type XXIII.A.2.a (fluted spheroid), I.B.1.a (circular oblate) — small, VIa. Egyptian Blue frit. Field no. V.6/3-120. University Museum no. P.87-9-50.
 2. Bead. Beck (1973) type I.B.1.a (circular oblate) — small, VIa. Iridescent greenish-white glass. Field no. V.7/2-78. University Museum no. P.87-9-89.
 3. Pendant. Elongated drop type (McGovern 1985b: type VI.F.2). Off-center, conical perforation. Horizontal striations on one side, vertical striations on other side. Red stone. Field no. V.7/2-80. University Museum no. P.87-9-91.

the extent of occupation at Khirbet Umm ad-Dananir, it is interesting to note that large numbers of LB sherds were found on the highest terrace of the site. They were not associated with any visible surface architectural features, and may represent evidence of encampments. On the other hand, the nearby large burial caves of standard LB type, in which hundreds of well-made, locally manufactured vessels and imported artifacts had been deposited, and the evidence for domestication of plants and animals point to a well-established sedentary community (McGovern 1986: 335-37).

The Khirbet Umm ad-Dananir build-

ing and the Amman Airport Building belong to a larger group of buildings of similar architectural type, denoted *Quadratbau* (Wright 1966, 1968, 1971a, 1971b). As the name implies, these structures are generally square in plan, although rectangular layouts are sometimes included in the category. An important feature of the type is a central unit ("courtyard"), which is surrounded by outer rooms. Close to Khirbet Umm ad-Dananir in the center of the Baq'ah at Rujm al-Henū East, another probable building (Pl. XIII, 2) of this type was investigated in earlier seasons (McGovern 1980; 1983; 1986: 11-13, Fig. 2). It was built on a bedrock outcrop, and

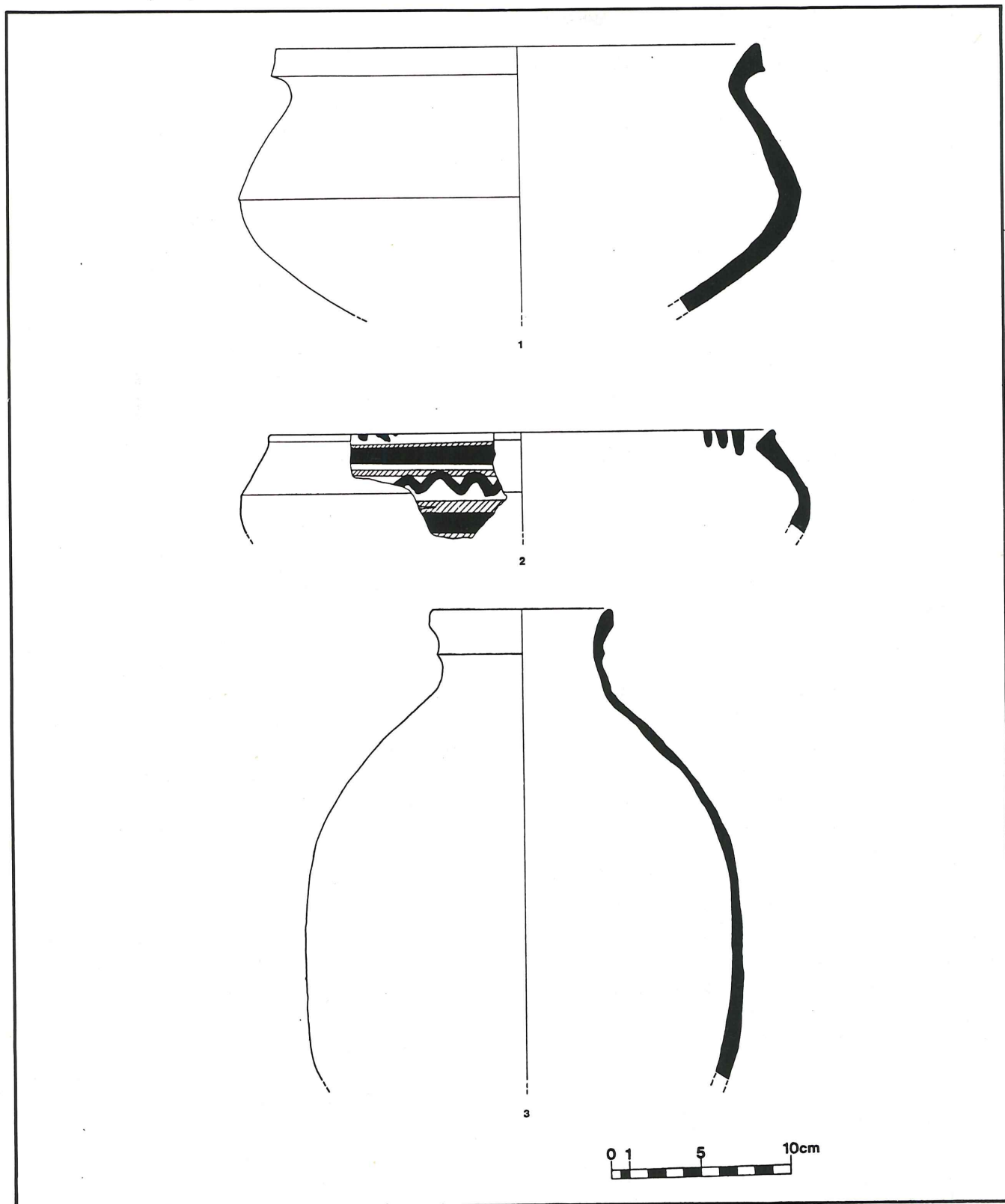


Fig. 7. Pottery vessels from pit dug into destruction debris of Late Bronze building at Khirbet Umm ad-Dananir
1. Cooking pot. Ware: 7.5YR 5/4. Thick core. Field no. V.23.56-1. University Museum no. P.81-14-638.
2. Krater. Ware: 2.5YR 6/6. Slip (int., ext.): 7.5YR 8/4. Thick core. Field no. V.2.56-2. University Museum no. P.81-14-636.
3. Jug. Ware: 5YR 6/2. Slip (int., ext.): white. Field no. V.2.55-4. University Museum no. P.81-14-637.

the earliest pottery evidence from the building, belonging to LB I, suggests that it was constructed during this period. If so, both it and the Khirbet Umm ad-Dananir building would have been built at approximately the same time.

West of the Jordan River, other examples of the architectural type have been found on Mount Gerizim, near Shechem (Boling 1975) and at Hazor (remnants only; Yadin 1972; 98-100), dating respectively to MB III-LB I and LB I. Although there need not be a fixed relationship between architectural layout and function (McGovern 1983; Yassine 1983), it is of interest to note that the Mount Gerizim buildings were built on bedrock and contained miniature vessels and other special artifacts (scarab, alabaster vase, etc.). What is suggested by the buildings at the Amman Airport Building, those at the intermediary sites of Rujm al-Henū East and Khirbet Umm ad-Dananir (probably situated along an ancient route descending to the Jordan Valley through Wadi Umm ad-Dananir) and at Shechem (at the western terminus of a probable ancient route reascending to the watershed west of the Jordan through Wadi el-Far'ah) is that of a related group of cultic structures in the Highlands of Transjordan and Samaria in the terminal phase of the Middle Bronze Age, continuing into the Late Bronze Age. Later biblical tradition, as reflected in the Jacob-Laban cycle, the Israelite settlement narratives, and the story of the sacrifice of Jephthah's daughter, possibly reflect reminiscences of similarly close ties during a later period between Gilead, where Khirbet Umm ad-Dananir/Rujm al-Henū East (Mizpah Gilead?) is located, and Israel, where Shechem is located (Ottosson 1969).

The destruction and abandonment of both the Amman Airport Building and the Khirbet Umm ad-Dananir building sometime near the end of the Late Bronze Age pose another enigma. Are the histories of these buildings to be connected with the turbulent events around 1200 B.C. that led to the emergence of new political forces (Ammonites, Israelites, etc.) by 1000

B.C.? More specifically, how is the destruction and abandonment of the LB building at Khirbet Umm ad-Dananir to be explained in light of the very strong evidence of a relatively peaceful transition in the Baq'ah from the LB into the Iron IA period (McGovern 1986: 338-44), based on technological continuity (especially for the pottery and iron/steel industries) and cultural continuity (same settlement site and cemetery)? Complete excavation of the well-preserved Khirbet Umm ad-Dananir building provides a unique opportunity possibly to answer this and other problems related to this architectural type, especially now that the Airport Building has been covered over by a runway.

Early Bronze al-Qeşir

At the EB II-IV (*ca.* 2900-1950 B.C.) site of al-Qeşir (McGovern 1986: 8), atop the same hill on which Khirbet Umm ad-Dananir is located, results were less definitive but very provocative. The site covers about 3.5 hectares, and commands a sweeping view over the Baq'ah Valley. It is completely surrounded by a substantial fortification wall; a double wall on the southeast side appears to be associated with a gateway. Numerous stone features — rectangular buildings (Pl. XIV) and circular "hillocks" — are visible inside the wall on the surface.

The most numerous features on the site have been designated "hillocks". These features, which number about 45, are generally oval or circular in plan, and range in size between *ca.* 2.5 to 16 m in diameter. Most of the hillocks fall in the middle of this size distribution. Most of the hillocks rise *ca.* 0.75 to 1.5 m above the surrounding bedrock.

Excavation of one of the medium-sized (*ca.* 8 m diameter) hillocks eliminated the possibility that it was a "beehive house", because no walls were discovered. Rather, it proved to be a mound of earth and variously sized stones. A concentration of large boulders toward the center covered smashed whole vessels of EB II-III types and grinding stones and pounders,

inside and near a large solution cavity in the bedrock.

A sounding was also carried out in one rectangular room, which was denoted the "gatehouse" because it was built up against the fortification wall in the vicinity of the supposed gateway. A 2.4 m thick fill was excavated, without reaching the floor of the room.

The uniqueness of al-Qeşir as an Early Bronze hilltop site in central Transjordan demands that it be further investigated. Many questions are posed by its features, as well as its size and defensive location. The development of early urbanism in Jordan may well be elucidated by more excavation here.

Lake Hypothesis

The geological survey of the Baq'ah Valley to test the "lake hypothesis" concentrated on coring and sampling exposed

sections of wadis, quarries, and ditches. The Baq'ah was formed at the junction of three flexures in the earth's crust (McGovern 1986: Pl. 1), and in very recent times was just the opposite of its appearance today, viz., it was a dome of Cenomanian-Turonian limestone that then collapsed along fault planes, the limestone being totally eroded out down to Nubian sandstone, to form a valley (graben). Analysis of soil samples for sedimentation, plant remains, etc. is now being carried out in the U.S., on the basis of which it should be possible to trace the recent history of the valley more exactly.

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