

encountered in square B2 at the west end, 3) clarify the secondary defensive line that abuts the northwest corner bastion, and 4) continue the geomorphological survey of the vicinity of Khirbet Iskander.

This short report summarizes the new discoveries in the EB IV phase A settlement and will discuss the urban structures in relation to the fortifications. A new tier of 6 squares was opened on the south, bringing the total to 18 (5 × 5 m) squares. Complete architectural units were excavated as well as what appeared to be a cobbled street, both of which illuminate the overall plan of the neighborhood. Excavation uncovered a multiroomed house with two doorways, both of which opened into a kitchen area. The latter comprised a tabun, an associated mortar and working slab/bench, and a bin area.

In a courtyard at the east end, a 2.5 m wide stone-lined silo or well came to light. The bottom had not been reached by the end of the season, although the depth was ca. 3 m. A possible second such silo or well began to appear in a courtyard at the west end. This season's work confirmed that the western perimeter wall dictated the orientation of houses in that area, since it served as their back wall. It is this perimeter wall that Glueck observed on the west. We have previously reported that this wall did not appear to be the original defensive line because it abuts and is at a much higher founding level than the northwest corner tower.

This information, along with a newly discovered house wall built up against the outer fortification on the north, represents the first evidence that the latest EB IV phase utilized sections of the rebuilt fortifications. This new evidence makes the phase A area C gateway more comprehensible. The evidence for the EB IV phase B use of the fortifications has always been clear.

The project exposed, in three squares, the urban phase C layers first discovered in square B2 in 1997. In square B1, beneath whole mudbricks, detritus, and much ash, a cache of vessels was discovered on a surface that included pillar bases. Once restored, these vessels should greatly clarify the date of this destruction layer, whether EB II or EB III.

A section through the western stone perimeter wall mentioned above has confirmed the lateness of this wall. It was found lying on top of a destroyed mudbrick and stone defensive wall that was found in two squares. The construction history of the fortifications is gradually coming into sharper focus. It is now evident that the founding of the fortifica-

tions must date to the urban EB II–III periods and that in the EB IV period, the defenses had been reused and rebuilt.

Zahrat adh-Dhra'. Steven Falconer and Patricia Fall, Arizona State University, and Phillip Edwards, La Trobe University, report:

The sites of Zahrat adh-Dhra' 1 and 2 (ZAD 1 and 2) lie at approximately 180 mbsl amid the badlands of the Plain of Dhra' overlooking the Lisan Peninsula. Both sites were discovered in 1989 and included in the 1994 archaeological survey by P.C. Edwards, P.G. Macumber, and M.K. Green.⁴ ZAD 1 features visible stone architecture over 6 ha along a ridge bounded by wadis to the north and south. Truncated buildings along the ridge's southern face and across the Wadi adh-Dhra' to the south imply that ZAD 1 originally extended over perhaps 12 ha of plain that was incised 25 m deep by subsequent downcutting of the Wadi adh-Dhra'. Boulder alignments at both ends of the site may mark Pleistocene beach lines of Lake Lisan.

Excavations in winter 1999–2000 investigated the eastern boulder alignment, several nonarchitectural locations, stratified organic deposits on a lower terrace in the Wadi adh-Dhra', and a variety of one and two room rectilinear structures, some with attached curvilinear courtyard or enclosure walls (fig. 14). Interior floors were excavated below wall founding levels similar to EB II pithouses in the Sinai. Stratified floors separated by noncultural sediments suggest annual or seasonal disuse or abandonment.

ZAD 1 ceramics, being studied by Ilya Beralov, appear to be Middle Bronze II A and B, including abundant flat-bottomed cooking pots, storage jars with frequent drilled mend holes and no handles, and very few fine ware forms. One jar features incised ibexes, similar to an example from Bab edh-Dhra. Botanical remains, under study by Cathryn Meegan, include cultivated barley, wheat, legumes, grapes, and figs. Wild taxa include *Chenopodium*, *Amaranthus*, and various grasses. Animal bones identified by Mary Metzger are entirely domesticated sheep/goat (*Ovis aries/Capra hircus*), except for one domesticated pig (*Sus scrofa*).

ZAD 2 is a Pre-Pottery Neolithic A (PPNA) settlement situated only 200 m from ZAD 1. The site is a low, circular mound about 2 m thick and 2,000 m² in area. Numerous ground stone artifacts on the site's surface are intermingled with the remains of an extensive flaked stone industry.

⁴Edwards et al. 1998.



Fig. 14. A rectilinear structure with attached curvilinear courtyard or enclosure walls at ZAD 1, Zahrat adh-Dhra'

Of the 17 curvilinear walls emerging through topsoil, excavations into three were begun in 1999. Structure 1, which was truncated by a gully, represented a semicircular walled dwelling built of stone fragments set into lime mortar. Excavation of structure 2 yielded a three-coursed section of curved stone walling associated with a floor and interior hearth set with stones and plaster (fig. 15). A second wall curved away in the opposite direction, and a human skull was placed in the interstices between the two walls. Charcoal samples from succeeding phases of occupation in structure 3 yielded three radiocarbon dates between 9490 and 9400 uncal. B.P.

Obsidian flakes, fragments of green copper ore, a second green mineral, and marine *Dentalium* shells suggest long-range contacts. The most notable piece of *art mobilier* was a limestone plaque from structure 2, incised with a geometric pattern. A large quantity of lithics, being analyzed by Ghattas Sayej, include many tool types, such as sickle blades, picks, adzes, Hagdud truncations, borers/drills, and scrapers—but surprisingly few projectile points.

Animal bone fragments include wild goat and cattle, a possible badger, and a crab claw. Many larger fragments could belong to gazelle. Plant remains, being studied by John Meadows, include barley and wheat, fig, lentil, *Pistacia atlantica* shell fragments, and a spherical pulse similar to a small pea. Most of the barley and grain fragments are wild, but some are large enough to be domesticated, and one grain apex was

identified as probable domestic einkorn wheat.

Jabal Hamrat Fidan. Thomas E. Levy (tlevy@weber.ucsd.edu), University of California, San Diego, Russell B. Adams, University of Bristol, and Mohammad Najjar, DAJ, report:

During July and August 2000, the University of California, San Diego, University of Bristol, and the DAJ carried out excavations at the site of Khirbet Hamra Ifdan (KHI) in southern Jordan. As part of the Jabal Hamrat Fidan (JHF) Regional Archaeology Project, the excavations at KHI aimed at studying the role of early ore procurement and metallurgy on social evolution in the southern Levant.

In addition to the excavation, a number of research activities took place. These included: (1) geophysical surveys at the closest copper mines to KHI, (2) a botanical survey in the JHF region, (3) geomorphological surveys along the Wadi Fidan, (4) biological anthropological studies of the Iron Age human remains recovered in earlier excavations, (5) archaeozoological studies of the KHI fauna remains, as well as material from the 1999 excavations at the PPNB site of Wadi Fidan 001 (WFD 001), (6) lithic analyses of the KHI and WFD 001 stone tool assemblages, (7) digital photography of the 2000 KHI artifact assemblages, (8) archaeometallurgical identification of the 1999 and 2000 assemblages, (9) GIS linkages of all data sets (architecture and artifacts) from the KHI excavations, and (10) the placement of signage and the