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The Institute of ARCHAEOLOGY Siegfried H. Horn Museum



Khirbat Safra 2022

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The fourth season of excavations at Khirbat Safra was conducted by Andrews University between May 11- June 7, 2022. The excavations on the site were directed by Paul Z. Gregor of the Institute of Archaeology at Andrews University, with Constance Gane, Robert Bates and Trisha Broy being Field Supervisors. Dr. Abdullah al Labaddah and Yasser Hashem Salem served as representatives for the Department of Antiquities of Jordan.

In previous seasons, parts of a casemate-type fortification wall system, surrounding the site, has been excavated. The site was occupied beginning in Iron Age I and was inhabited into early Iron Age II, after which it was abandoned until the Byzantine period, at which time it was lightly occupied. Excavations on the site took place in three fields (A, C and E) this season.

Field A lies on the western edge of the site and was supervised by Constance Gane. The excavation in this field began in 2018 and focused on Squares A1 and A3. After a hiatus of two seasons, two new squares (A5, A6) were opened in 2022. Bedrock was reached in both squares. Based on the findings from 2018, which were confirmed by this season’s results, the initial occupation of this part of the site began in Early Iron Age I and continued through Iron Age I. Followed by a long period of abandonment, it was then reoccupied in the Early Byzantine period.

The casemate fortification wall system, uncovered in Square A1 in 2018, was built directly upon bedrock. Uneven portions of the bedrock were leveled using densely packed, red-bricky material. The outer wall is two-rows thick, built with large field stones. The inner wall, which was only partially exposed, is one row thick. A one-row thick, east-west cross wall connected the outer and inner casemate walls, creating two rooms, without a discernable doorway between them. Early Iron Age I ceramics were found directly upon the bedrock in Square A1, upon which beaten-earth

(cont'd on p. 2)

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Paul Gregor (second right) reads Khirbat Safra pottery, with Triha Broy (far right) recording.

surfaces were found in both rooms, with ceramics dating to early Iron Age I. Above this surface in both rooms is a mix of Iron Age I, Iron Age II and Byzantine-period ceramics among what appears to be a mudbrick superstructure collapse, indicating a violent disruption, probably by an earthquake.

Square A3, provided a clearer occupational history. Approximately half of the square was excavated in 2018. At least three phases of occupation are discernable in the two, partially excavated rooms. A doorway provided access between the rooms. Once again, red-bricky material was used to even the bedrock surface. In the southern room, Early Iron Age I ceramic remains were found in this material, below a plaster floor. Early Iron Age I diagnostic sherds were found imbedded in the plaster floor, providing a reliable date. Above this level, a thick (up to 50 cm) ashy lens covered most of the two rooms, indicating a conflagration of the Iron Age I habitation, including the tops of its walls. Post-occupational debris suggests a period of abandonment. Above this, was a beaten earth surface that dates to the Byzantine period. At this time, substantial Byzantine-period walls were built; at least one built upon an earlier Iron Age I wall. A later beaten earth surface also dates to the Byzantine period.

During the 2022 excavation season in Field A, two new squares (A5, A6) were opened. A substantial wall, over 10.0 m in length, went through both squares. To the north of this wall there is a large, open (western) room, also running through Square A5 and part of A6, its exact dimensions unknown at this point. Just above bedrock and the typical red-bricky material is a hard-packed earth surface. The date of this surface, based on the ceramic finds, is Early Iron Age I. Above this surface, was post-occupational debris covered by a second Iron Age I hard-packed earth surface. As elsewhere in the Field, this surface was disturbed by seismic activity, with mixed debris and tumble from the surrounding walls, including an assortment of Early and Late Iron Age I and Byzantine-period ceramics.

In the eastern half of Square A6 there is a N-S two-phased wall. The first course of massive field stones, dating to Iron Age I, is topped by another course, dating to the Byzantine period. East of this wall there were three surfaces all dating to Iron Age I, with the earliest dating to Early Iron Age I. Two *tabuns* were found against the east face of this wall. These installations were associated with a smooth and level plaster floor, only portions of which are preserved. The pottery found associated with the plastered floor dates to Early Iron Age I, the same as the plaster floor in Square 3. Above this floor is a shallow lens of post-occupational debris and a heavy deposit of ash, topped by a second Iron Age I surface. A third Iron Age I surface of hard-packed earth represents the final discernable occupation of this East Room.

An entirely different scenario is presented by the area occupied just south of the long E-W wall. To the east, in Square A6, a hard-packed surface was found just above bedrock, above which was a thick post-occupational deposit that included ceramics from both the Iron Age I and Byzantine periods. To the west, in Square A5, a large room is bound by walls on the north, south and west. Two surfaces were found in this room, both dating to the Byzantine period. The earliest surface is a hard-packed earth layer, upon which is a stone installation in the southeast corner, next to what appears to be a stone “table,” and a tall central, stone pillar possibly connected with a single course wall that abuts the southern wall at the eastern end of the square. A relatively thick post-occupational deposit covered this entire area. Later a second Byzantine-period hard-packed earth surface indicates another occupational level. Several worked stone beads were found randomly distributed in the debris.

To understand the ephemeral western wall, a 1.0 x 2.0 m exploratory trench was excavated just west of it. It contained nothing but post-occupational debris, except at the very bottom, where an Early Iron Age I hard-packed earth surface was found, under which was only Early Iron

Age I pottery. While the top of the western wall, which is small and very poorly built, dates to the Byzantine period, it is built on top of an earlier Early Iron Age I wall that is much more substantial, possibly the continuation of the inner casemate wall found in Square A1.

In Field C, on the northeastern corner of the site, three new squares (C5, C6, C7) were opened this season, with bedrock reached in Squares C5 and C7. The earliest floor was left intact in Square C6.

Supervised by Trisha Broy, excavation in Field C during the 2018 and 2021 seasons focused on portions of three buildings incorporated into the fortification system. These buildings each have a rear room, formed by the casemate walls. The two-rowed outer casemate wall, consisting of five extant courses, is ca. 90 cm wide, and built directly on bedrock. It was leveled by the original builders, with a red-bricky material with gravel inclusions, and is composed of unworked field stones varying in size from 40-60 cm in width. The inner fortification wall is a single row wall, also built directly on prepared bedrock, and is ca. 55 cm wide, composed of unworked field stones 40-60 cm in width. Single row walls divide the space between the casemate walls into rear rooms that extend into the associated building via doorways.

In the 2022 season, operations in Field C concentrated on exposing the interior rooms as well as further illuminating the building’s relationship to adjacent structures. A new structure, designated Building 4, was opened in Square C5, southwest of Building 1. The shared exterior wall of Buildings 1 and 4 runs from the south-east to the north-west. It is a single-row wall with four extant courses. No doorways were found between the two buildings in its excavated length. Two other walls were excavated in Building 4. These were the inner casemate wall, running perpendicular to the shared wall, and one of the building’s interior walls, running parallel to the shared wall from the inner casemate wall, to the north-west, before disappearing into the west balk.

These three walls characterized the only room excavated in Building 4 this season.

The architecture of Building 1 is more complex and was excavated in both Squares C6 and 7 this season. The building's south-western exterior wall is shared with Building 4 as described above. More of its north-eastern exterior wall was exposed in Square C7 this season, extending from Squares C1 and 2. The interior space of the building consists of two long rooms divided down their length by a wall punctuated in the middle by a series of four pillars. The northern and southern-most of these pillars are connected to low, single-row walls that further divide the south-western long room (Room B). During a second phase of Building 1, a wall was built to connect the two northern pillars, further enclosing this subdivided space. The north-eastern long room of Building 1 (Room C) has no exposed divisions and continues along the full length of the building. At its northern end, a small wall extends from the central dividing wall toward the north-eastern exterior wall, forming a door.

Two use layers were discovered this season, one dating to the early Iron Age I and the later to the early Iron Age II. The first occupation layer consisted of bedrock with leveling fill in the low areas of the bedrock to create an even surface. In Building 1, this floor is consistently covered with an ash layer, sealed under the second occupation floor. The early Iron Age I floor in Building 1 incorporated two installations. In the south-western corner of Room B is a *tabun*. In Room C a semi-circular installation was uncovered in the space between and against the walls subdividing Rooms B and C. While the exact function of this feature is unknown, it is surrounded by a partial pavement, contemporaneous with the original construction of the walls. The interior of the installation itself, is also plastered and may have been used to contain a small pool of water. An Egyptian figurine portraying a seated, cloaked male figure was also found in this part of Room C. Above the second occupation surface, wall tumble and fill continue to indicate the prob-



Egyptian Statue.

ble destruction from an earthquake in early Iron Age II.

In Building 4, both the first and second occupational surfaces likewise ended in destructions.

In 2022, excavations in Field E, supervised by Robert Bates, opened two new squares (E3 and E4) and continued work in Square E1 from the 2021 season.

Square E1 consisting of a narrow building, ca. 1.8 x 4.6 m, divided into two rooms, was opened briefly to remove the northern part of the east balk which obscured the relationship between the northern and eastern walls. A small triangular-shaped area was removed, systematically connecting each soil layer with those found in the 2021 season. The eastern wall is ca. 1.4-1.5 m high and made up of eight courses, the northern wall being ca. 1.3 m high with six courses. Both walls consist of two rows of partially faced hard limestone boulders between 0.30-0.45 m x 0.20-0.30 m in size, built on bedrock. However, these walls were not bonded together.

Excavations in Square E3 focused on its southern half where the eastern wall of Square E1 continues northward, passing through the eastern side of the square. The east wall in Square E3 was built during the earliest phase of occupation and continued in use until a final wall collapse resulted in its abandonment. This north-south wall was built on bedrock, using hard packed clay and small cobbles to fill in the unevenness of the surface. It is oriented 35 degrees and made of two rows

of partially-faced hard limestone boulders, ranging between 0.30-0.45 m x 0.20-0.30 m in size. A surface consisting of hard-packed soil and flat lying pottery sealed against both this wall and another, east-west wall which abutted it further north. This wall divided the area into two living spaces (Rooms A and B, north and south of the wall respectively). Only a single foundation course of this wall was found. The eastern portion of the wall was removed during a later phase and sealed with a new floor. In this later phase, the wall was extended westward ca. 10.0 m, into the currently unexcavated Square E2.

Square E4 is located north of Square E3 but is not connected to the main N-S wall that passes through Squares E1 and E3. This square consists of three walls, dividing it into three rooms. The main wall is 3.4 m long and is oriented 45 degrees northeast. The secondary walls abut it and are oriented 49 degrees northwest and 125 degrees southeast, respectively. All three walls consist of two rows of 0.30-0.40 m of unhewn partially faced hard limestone and chert boulders. Room A, on the north, is the largest, and consists of five hard packed floors, one on top of the other, with flat lying pottery, dating to the Early Iron Age I. Room B, on the east, was filled with wall stones that had collapsed into the area. A third room (C), on the southwest, consists of a single hardpacked floor, sealed against the walls.

Thanks to a faculty research grant from Andrews University, for a second season in a row, the team was able to collect botanical samples from the excavation fields, run them through the flotation tank and prepare them to send to the laboratory of Annette Hensen, in the Netherlands, for analysis and species identification. This season Robert Bates was able to integrate the botanical collection process into the excavation database, with the botanical data from the field able to be sent directly to Annette. (Paul Gregor, Robert Bates, Constance Gane, Trisha Broy, and Paul J. Ray, Jr.)



RANDOM SURVEY

Place of Breached Walls?

Recent excavations by the Israel Antiquities Authority have located what is believed to be the probable location of the Roman Artillery during the siege of Jerusalem in AD 70, at Cat's Square, in the center of the modern city, with the Russian Compound being the likely location of the breach of the Third Wall (the outermost line of defense of the city according to the Jewish historian Josephus). At this spot, remnants of the Third Wall, along with hundreds of ballista (or catapult) stones have been found.

Ancient Branch of the Nile Discovered:

Using sediment cores and archaeological finds scientists have recently modeled water level changes of an ancient branch of the Nile River that allowed access to the Giza Plateau. In addition, papyri from the Wadi al-Jarf Harbor, on the Red Sea, mention a harbor near Khufu's pyramid and the use of boats taking limestone from Toura, 16 km (10 mi) away, to the harbor.

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Mosaic Found:

An intact 120 sq m (1,291 sq ft) Roman-period mosaic has recently been found in the town of Rastan, Syria. The mosaic portrays the Amazon warriors of Roman mythology. The ancient Greeks and Romans utilized the Amazon mythology, whose beings were viewed as personifications of nature and religion, as an artistic and literary means to unite against commonly held enemies. In this mythology, the demigod Hercules killed Hippolyta, the queen of the Amazons, in one of his 12 labors. The mosaic also portrays Neptune.

Fall of Civilizations?

Researchers have recently discovered *Yersinia pestis* and *Salmonella enterica* infectious diseases in recovered DNA in teeth from a number of burials from Bronze Age Crete. While it is unlikely that ancient pathogens were the sole culprits for societal changes observed around the Mediterranean at the end of the 3rd millennium BC, infectious diseases should certainly be considered a contributing factor, along with climate and migration.

Head of Hercules Found:

Since its discovery off the island of Antikythera, Greece, in 1900, the wreck of an ancient cargo ship has slowly revealed its contents. The most recent find, is a marble head of Hercules, likely belonging to the headless statue originally found on the ship in 1900.

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