GHAWR AŞ-ŞĀFĪ EXCAVATIONS 2016

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Archaeological excavations were conducted in Ghawr aṣ-Ṣāfī by the Hellenic Society for Near Eastern Studies (HSNES) from December 2015 to January 2016 under the direction of Dr. Konstantinos Politis (MoTA-DoA permit number 2015/68). The project was supported by the Sustainable Cultural Heritage through Engagement of Local Communities Project (SCHEP) funded by USAID. Additional support came from Macquarie University, Sydney, Australia. The team consisted of Jordanian, Greek, Australian, American and French members under the supervision of Mr. Mohamed Al-Zahran of the Department of Antiquities of Jordan (DoA).

Excavations

Area TeS (Tawāhīn as-Sukkar)

A main focus of the season's work was revealing more of the functioning of the sugarcane factory, *Maṣna' as-Sukkar* (formerly called *Tawāhīn as-Sukkar*), to the north.

Approximately 382 cubic metres of wind-blown sand was removed in an area measuring 17×15m. At a depth of 1.5m, a clear - though disturbed - surface with plaster remnants was found, which was originally paved with sand-stone slabs. Beneath these was a well-plastered conduit that continued from the bridge connecting the channels from the pressing chambers (**Figs. 1** and **2**).

This led north-east to an area with ashy deposits where a test trench revealed an arched structure over a circular plastered collecting basin with an outlet above, which presumably carried the pressed sugarcane juice (Figs. 3 and 4).

A probe inside the conduit exposed the lead piping which must have covered the entire extent from the pressing chambers and was removed for its value as metal once the sugar factory was abandoned (Fig. 5). A late Mamluk-period hand-made and painted pot, tightly lodged into the conduit, dated this event to the 15th century AD (Fig. 6).





- 1. South-west view of sugar-cane juice conduit (K.D. Politis).
- 2. North-east view of sugar-cane juice conduit (P. Edwell).

Area KSI (Khirbat ash-Shaykh 'Īsā)

Excavations begun in 2015 continued in Trenches IX, X and XI.

Trench IX

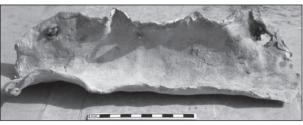
Trench IX was excavated from Avvubid-Mamluk and Abbasid levels down to the remnants of the mosaic floor of the church of Byzantine Zoara (Figs.7, 8, 10 and 11). Unfortunately, part of this was disturbed by a modern artesian well, and the pavement was not in very good condition as much had been disrupted during the Abbasid-period occupation. A door opening was revealed, as were some geometric patterns on the mosaic, but no dedicatory inscription was evident though the beginnings of letters were discerned going into the western unexcavated section (Fig. 9). Documentation (photographic and 1:1 copy on polythene sheets), stabilisation and conservation were carried out following excavation (Figs.12a, b) The pavement was then entirely covered with openweave plastic sacks (restricting condensation over the mosaics) and backfilled with soil from recent excavations.



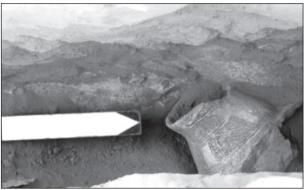
3. Pressed sugar-cane juice outlet (P. Edwell).



4. Circular plastered collecting basin with an outlet above (Y. Dray).



5. Lead piping section (Y. Dray).



6. Mamluk-period pot in situ (K.D. Politis).



7. General view of Trench IX from west showing the mosaic floor and east wall of the church (R. Schick).



8. West half of the north section of Trench IX, showing the level of the adobe brick wall and top plaster floor a third of the way down; the lower adobe brick layer is visible at the top of the small section in the north-west corner (R. Schick).

Trench X

During the December 2015-January 2016 season, excavation in Trench X continued in the north-east part of the trench, north of Wall 02, in order to determine the sequence of layers down to the level of the mosaic floor in the adjacent Trench IX. Excavation proceeded down from the top of Wall 10 (Wall 26 of Trench IX), the post-church wall built above the west wall of the narthex (Locus 74 of Trench IX) and blocking the original Byzantine-period door.

In Locus 12, storage-jar sherds were found which proved to be from a large *in situ* circular storage jar in the south-east corner next to Wall 02, the E-W south wall, and Wall 10, the N-S late-phase wall. The storage jar, which was



9. West section of Trench IX, showing the original west wall of the church, the later-phase wall built on top of it, blocking the west doorway from the outside (R. Schick).



The mosaic floor in the south-west corner of Trench IX (R. Schick).

first detected *in situ* at the bottom of Locus 12, was assigned Locus 15. The top of Locus 17 is probably the surface associated with the Locus 15 storage jar. The jar was later reassembled in a conservation training session (see below) (**Fig. 13**).

Trench XI

The aim of the 2015-2016 season in Trench XI was to continue excavations undertaken in the 2013 season. It was hoped that the area of Trench XI might be the location of an industrial pottery kiln where the settlement's inhabitants were producing sugar pots on a large scale in the Ayyubid-Mamluk period, given the presence of some 'kiln-wall lining' (some a metre wide) and pottery-waster chunks in Trenches IX, X and XI.

Part of a room was excavated which revealed six complete pots *in situ* belonging to the 12th-14th centuries AD. Two were sugar-molasses pots; when emptied, actual sugar crystals were found inside (**Figs. 14a, b**).



11. The mosaic floor in the doorway in the eastern wall of the church (R. Schick).





12. (a), (b) Extent of mosaic pavement uncovered in Area IX, documented and stabilised (K.D. Politis).



13. Trench X. View to east showing the top of the Locus 15 storage jar and the Locus 13 soil inside it three-quarters excavated. The hole at the bottom of the storage jar is clearly visible. Around the north and east side of the storage jar is the bottom of Locus 12 and top of Locus 14, while on the west side is the higher level of the bottom of Locus 14 and top of Locus 17, with the lower level of the bottom of Locus 14 at the extreme bottom of the photograph (R. Schick).

Although there were more finds to support the existence of a pottery kiln in the immediate vicinity, the excavations in this area were inconclusive and were therefore terminated once the top of the Abbasid level was reached (**Fig. 15**).

Conservation

As part of the SCHEP support, training in archaeological conservation was conducted with a number of pots being restored during the season's work in the Museum at the Lowest Place on Earth at aṣ-Ṣāfī. This greatly facilitated their documentation and study (**Figs. 16a, b**).

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14. (a), (b) In situ pots belonging to the 12th-14th centuries AD (A. Ariotti); sugar crystal found in molasses pot 2 (P. Edwell).



15. Top of Abbasid layer in Area XI.41 (A. Ariotti).





16. (a), (b) In the course of restoring pot from KSI.X.15 in the Museum at the Lowest Place on Earth at aṣ-Ṣāfī (K.D. Politis).