

The Ottoman Ruralscape: New Data from Tell Zeyd (Iraq)

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Abstract

Tell Zeyd Archaeological Project is a recently launched programme of research that aims at exploring settlement, land use, and material culture in the rural world of the historical Mosul province in the long Islamic period (7th-early 20th c.) focusing on a highly representative site of the area, Tell Zeyd. Excavations carried out in 2022 and 2023 made it possible to acquire a rich documentation on the Ottoman period occupation, organised in a sequence that comprises four major Periods within this chronological horizon. Results concerning occupation patterns, material culture (pottery) and crops are offered in this paper. A rich picture of the Ottoman rural world emerges from this research; the study of the pottery finds makes it possible, for the first time, to establish a chrono-typology for a number of wares previously poorly understood in the area, thus creating new tools for further research.

Keywords

Ottoman archaeology, rural settlement, Ottoman agriculture, Ottoman pottery, nomadic settlement

1. Introduction: Tell Zeyd Archaeological Project (ZAP)

(C. Tonghini)

The site of Tell Zeyd is located in the Transtigrian high plains of northern Iraq, in the Kurdistan Autonomous Region (Fig. 1). It overlooks a wadi flowing south towards the Tigris river, and comprises a tell and lower mounds (Fig. 2). It is now surrounded by cultivated land, two farms nearby, and the modern village of Marani at 2.3 km to the north.

The survey of the site carried out in the framework of the *Land of Nineveh Archaeological Project* (LoNAP: Morandi Bonacossi, Iamoni 2015) gathered evidence of continuous occupation since the Late Calcolithic period, with a peak in the neo-Assyrian period, during which the site covered 8h; its extension fluctuates in the following period, shrinking to 0.26h in the Sasanian period, to enlarge again to 2.07h and 3.4h in the Early and Middle Islamic period respectively; the extension of the site in the Late Islamic period has been estimated at around 0.2h, but the difficulty of identifying diagnostic pottery for the Late Islamic period may have affected this estimate (Morandi Bonacossi, Tonghini forthcoming).

The remains of a watermill are still visible between the site and the wadi, and fragments of another mill can be seen on the opposite side of this watercourse. The presence of watermills at the site represents an exception in

the LoNAP survey area, where watermills are rarely found in proximity of settlements and usually stand in isolation, and it offers a unique opportunity to study them in context.

In consideration of the location of the site – an area that constituted the agricultural hinterland of Mosul in a *long-durée* perspective –, its continuous occupation in the long Islamic period, and the presence of watermills, Tell Zeyd can be regarded as an ideal observatory for studying the rural world of Mosul in the long Islamic period.

This area in fact played an important role in the supply of cereals in the Caliphate from its early days, when the new capital district of Mosul was created (Robinson 2000). The foundation of the new capitals of Baghdad and Samarra made this role even more crucial for the sustenance of a growing population (Robinson 2000; Heidemann 2011; Kennedy 2011). After the crisis caused by the Mongol invasions, the establishment of the Ottoman empire saw renewed interest in the agricultural exploitation of the area, with new investments that characterised certain phases of the long Ottoman period (Khoury 1997; Usta, Tonghini 2023; Usta forthcoming). In spite of its centrality for the economy of the Islamic period, archaeological research specifically aimed at investigating this long period has been very limited (Rousset 1992; Simpson 1997, 2011), and field-work has been especially concerned with multi-period surveys (Kopanias, Mac Guinnis 2016).

The *Tell Zeyd Archaeological Project* was thus created to gather new evidence on settlement, land use, and material culture in the rural world of the Mosul province in the Islamic period focusing on a site which is highly representative of the area.¹ Field strategy is based on the stratigraphic excavation of selected parts of the deposit to acquire data on settlement patterns and local material culture, hitherto scarcely documented and understood in the region, especially as far as the Late Islamic period is concerned (Tonghini *et al.* 2023: 41). The establishment of chrono-typologies of reference for pottery, clay pipes and glass is in fact among of the objectives of the project. The excavation of the deposit also makes it possible to acquire a rich repertoire of faunal and botanic remains that will shed light on crops, food production, and diet practices. Study of the written sources is also part of the project (Usta forthcoming), and results will be integrated with the archaeological

¹ This project is directed by C. Tonghini, Ca' Foscari University of Venice, in cooperation with the Dohuk Directorate of Antiquities and Heritage (Kurdistan Region, Iraq). It is supported by MAECI (Ministero degli Affari Esteri e della Cooperazione Internazionale) and funded by the Ca' Foscari University of Venice (Fondo di Ateneo per l'Archeologia), the Italian Ministry of the University (Prin 2022), and since 2023 by the Max van Berchem Foundation, Geneva. This foundation was established in 1973 in memory of Max van Berchem (1863-1921), the founder of Arabic epigraphy. Based in Geneva, the aim of the Foundation is to promote the study of Islamic archaeology, history, geography, art, epigraphy, religion and literature.

documentation to reconstruct the occupation history of the site and shed light on its economy and society.

So far, field-work has comprised two seasons of excavations that have made it possible to acquire evidence on the latest phases of occupation of the site, those that pertain to the Ottoman period.

Evidence for on-site production of clay smoking pipes emerged with the 2022 excavations, leading to the acquisition of a rich documentation on the various types produced and circulating in the region (Tonghini *et al.* 2023).

The present paper aims to summarize the results achieved so far in relation to the occupation sequence that emerged from the 2023 excavations, and it will discuss the data derived from the study of two groups of finds, pottery and archaeobotanical remains.

The Occupation Sequence of Area 1 (Season 2023)²

(J. Boschini, S. Palalidis)

This chapter will provide an overview of the results obtained with the excavation conducted at Tell Zeyd in the autumn of 2023.³

The aim of this excavation was to continue the exploration of the buried deposit by deepening and enlarging trench S1 excavated in the 2022 season; located at the south-west of the tell, this trench provided evidence of a workshop for the production of tobacco-smoking pipes (Tonghini *et al.* 2023). The new excavation was extended to the east and the south of the original trench creating a 13×13 m square (Area 1: Fig. 3).

The reconstruction of the stratigraphic sequence at Tell Zeyd follows established common practices: stratigraphic units are organized in a matrix and subsequently into activities/groups of activities; these are then ascribed to phases and finally attributed to periods (Harris 1989; Carandini 2000). Numbering does not follow a specific order in the case of stratigraphic units and activities/groups of activities, while phase numbers derive from their position in the stratigraphy, the sequence starting from the latest phase identified; periods are provided with letters of the alphabet, and they will be re-numbered once the entire occupation sequence has come to light. This chapter will provide only an

² The Introduction and Periods A-C are written by S. Palalidis, Period D by J. Boschini.

³ The excavation was supervised by Jacopo Boschini and Stefano Palalidis; two members of the Directorate of Antiquities of Dohuk, who worked jointly with the Italian team at the site: Mayyada Nafi and Rewar Sabah; Sebastiano Siviero was in charge of the UAV photogrammetry for the excavation; Salama Kassem, Lucrezia Gobbo, and Chiara Sisto occasionally took part in the excavation. Giacomo Patrucco, Enrico Reali, and Giulia Sammartano were in charge of geomatics, topography, and aerial photogrammetry at the site. Digging was carried out with the help of eight workers from the neighbouring villages: Sliman Habib, Ayyub Mohammad, Zakariya Mohammad, Hawar Ahmad, Muhammad Ahmad, Saman Daluqan, Serbist Nazar and Sa'ud Antar.

overview of the periods identified at Tell Zeyd; Period D, although not yet fully excavated, will also be included to complete the overall picture.

Period A – Contemporary agricultural activities

The excavation is located at the foot of the tell, in an area that is currently used for agricultural activities (Figs. 2-3).⁴ The upper deposit (approx. 10-15 cm in depth), corresponding to the layer of modern ploughing, revealed a compact layer of soil bearing the signs of ploughing oriented northwest-southeast.

Period B – Latest occupation (Late 19th-early 20th c.)

The first structural evidence in the new area, consisting of four wall fragments, three in the eastern sector and one in the south-western corner, emerged at a depth of 15-20 cm from the surface. One of these, SU 1004, precedes the other three, the foundations of which were at a deeper level. The stone wall located in the north-eastern sector (SU 1004) was erected on a hardened floor preparation made of trodden soil (SU 1003). The structure can be interpreted as the corner of a building extending almost entirely to the east of the investigated area and can be ascribed to the latest period of occupation of the site.

Oral and written sources refer to the presence of an Assyrian Christian community inhabiting the settlement from the late 19th century to its final abandonment, which followed the 1933 Simel massacre (Usta forthcoming). An association of Period B to this Assyrian community is highly plausible. In this period, the portion of the settlement currently being investigated is too limited to draw conclusions concerning its domestic or productive function.

Period C – Production activities (19th c.)

The deposit pertaining to Period C was identified at a depth of 30-40 cm from the surface. In the north-eastern sector of Area 1, a poorly preserved stone wall (SU 1056) came to light, oriented northeast-southwest, with a wall fragment running from its southern end towards the south-east, possibly separating two spaces. A small cluster of stones (SU 1057) identified east of the wall mentioned above can be interpreted as part of its collapse. The recovery of stone from abandoned structures and their re-use in the construction of new buildings is a well-attested practice, in this region as well as elsewhere, and this probably explains the poor preservation of the stone walls excavated at Tell Zeyd (Conti, Fiorina 1997: 65, 70). A small wall fragment built in stone (SU 1016) was intercepted in the south-western corner of Area 1 and it probably extends towards the south.

Near the eastern section of the excavation, three fragments of stone wall (SU 1005, 1007 and 1054) formed the orthogonal corner of a large building oriented northeast-southwest. The north-eastern corner, directly north of SU

⁴ The fields around Tell Zeyd are devoted to the cultivation of aubergines (2022-2023) and wheat (2024).

1005, and the broad area directly south of SU 1007 were covered by a layer of abandonment that features alterations in colour and composition of the soil. Reddish in colour and characterised by coarser grain-size, these layers (SU 1011 and SU 1017) are probably the result of the collapse and washing by weathering of the mudbrick and *pisé* portions of walls that were erected on top of the stone foundations (Conti, Fiorina 1997: 64-67).

Within the reddish layer, three fragments of a disc quern broken in half, made from porous basalt, were discovered.⁵ The same abandonment layer covered the remains of twelve ovens in different states of preservation.

Ten *tannurs* were aligned along the southern façade of the large building mentioned above and were arranged in two parallel rows.⁶ The first row, along the wall (SU 1007) includes *tannurs* 2, 5, 6 and a cluster of four ovens built one inside the other indicating successive reconstructions (T8, T9, T10, T12); the second row, south of the first one, includes *tannurs* 7, 11 and 16.

Two more ovens were discovered below the reddish layer west of the main installation (T4 - SU 1023; T15 - SU 1071), while the remains of two destroyed ovens were documented north of it (T13 - SU 1064; T14 - SU 1068). Finally, a large *tannur* emerged north of the SU 1056 structure (T1 - SU 1009) and a small semi-ellipsoidal oven (T3 - SU 1019) was unearthed in the north-western corner of Area 1 (Fig. 4).

Based on their size and construction features, it was possible to distinguish three types of oven:

Oven type 1: ten large ovens,⁷ in the form of a truncated cone, belong to this *tannur* type; Type 1 has been the prevailing oven type in Iraq and Kurdistan from prehistory to modern times (Ali 2009: 12; Rova 2014: 125; Masek, Mordovin 2016: 278, 280). Wider at the base, with a diameter of 50-65 cm, this type is generally built on top of a ring-shaped stone foundation, possibly combining structural and heat retention functions (Rova 2014: 123, 128); it is generally preserved to a height of 25-65 cm (Fig. 5a). An insulating function can also be recognised in the outer coating of stones and *tannur* fragments documented in most of the ovens (Rova 2014: 129). Three *tannurs* (T1, T6 and T11) present a standard-sized (10×10 cm) square hole at the base for ventilation and ash removal (Van der Steen 1991: 135; Mulder-Heymans 2002: 199, 215; Rova 2014: 123-24; Masek, Mordovin 2016: 280). The filling of the *tannurs* is generally composed of two layers: an upper one of greyish sandy matrix mixed with ash, and a lower one of light grey ashy matrix mixed with burnt remains of bones, wood and charcoal. The rims were never preserved *in situ* and no lids

⁵ Two of the fragments match and form a complete quern-stone.

⁶ T2 - SU 1013; T5 - SU 1026; T6 - SU 1029; T7 - SU 1032; T8 - SU 1035; T9 - SU 1038; T10 - SU 1041; T11 - SU 1048; T12 - SU 1051; T16 - SU 1080.

⁷ T1 - SU 1009; T2 - SU 1013; T4 - SU 1023; T5 - SU 1026; T6 - SU 1029; T8 - SU 1035; T9 - SU 1038; T10 - SU 1041; T11 - SU 1048; T12 - SU 1051.

nor covers could be identified. A cluster of four *tannurs* cutting into one another provides evidence for the life cycle of an oven,⁸ reflecting the abandonment and partial destruction of damaged ovens and the subsequent reconstructions of new ones in their place (Fig. 5b).⁹ Primarily, *tannurs* are well known in the Near East and India for baking bread but they can also serve for cooking and warming up food on top of the opening (Van der Steen 1991: 135; Mulder-Heymans 2002: 199; Rova 2014: 124).

Oven type 2: five smaller ovens¹⁰ featured the same truncated cone shape of the *tannurs* (Type 1) but were less imposing in size, with a base diameter of 30-45 cm and preserved to a height of ca. 15 cm (Fig. 5c). These ovens did not present any of the features recognised in the *tannurs* but shared the same upper greyish sandy filling mixed with ashes. The rims were never preserved *in situ* and no lids nor covers could be recognised. This type of installation can possibly be ascribed to the smaller type of *tannur*, sometimes even described as portable (Ali 2009: 15; Rova 2014: 125), or, more generally, to a type of oven primarily used for cooking and warming up food. Four of these ovens (T13, T14, T15 and T16) either fell apart over time or were intentionally destroyed, and only the bottom and few centimetres of the walls were preserved *in situ*.

Oven type 3: one installation (T3 - 1019), isolated from the others in the north-western corner of Area 1, differed in shape and filling from the other ovens. Stuck in the profile and thus not entirely excavated, it appears to be D-shaped, with one side a curved semi-ellipsoid and the other straight and with a major axis of 38 cm (Fig. 5d). The walls are preserved in their entirety up to the rim but differ in height and width: the curved ones are taller (14 cm) and thinner (2 cm), while the straight one is shorter (7 cm) and thicker (6.5 cm). The filling did not contain ashes but a few burned bones and the bottom of a ceramic vessel. This installation was preliminarily and tentatively interpreted as a brazier.

The fabric does not differ significantly from the first two types of ovens; it is made of clay tempered with quartz, chaff and other organic materials; the thickness of the walls generally measures between 1.5 and 3 cm.

All ovens appeared to have been mounted directly at floor level and are free-standing, as there was no recognisable evidence of a plastered structure built around them. Since it was not possible to identify any structure or light cover protecting the ovens from the elements (in particular the large installation

⁸ The life span of *tannurs* is generally estimated between 2-20 years depending on various factors including protection from the elements and maintenance (Van der Steen 1991: 141; McQuitty 1994: 265; Rova 2014: 124).

⁹ In the 2023 campaign at Tell Zeyd, T9 (SU 1038) was built on the cut remains of two older installations, T10 and T12 (SU 1041 and 1051 respectively) and was subsequently cut by the last *tannur* in the sequence T8 (SU 1035). Similar occurrences have been attested in Tell Beydar (Rova 2014: 131, 163, fig. 13, 165, fig. 22, 166, fig. 26), Grd-iTle (Masek, Mordovin 2016: 286, figs. 7-8) and Aqaba/Ayla (McQuitty 1994: 64-65, figs. 9-10).

¹⁰ T7 - SU 1032; T13 - 1064; T14 - 1068; T15 - 1071; T16 - SU 1080.

located south of the large building), the possibility of an open-area or so-called “summer tannurs” related to nomadic communities should be taken into consideration (Mulder-Heymans 2002: 215; Parker 2011: 619; Rova 2014: 130). In an open-air scenario, the direction of the prevailing wind is relevant for ventilation purposes (McQuitty 1994: 142). Lastly, the dense concentration of ovens in the area and their stratigraphic connection with quern-stones seem to suggest an organised productive destination of the facility, possibly a communal bakery and kitchen responsible for the food production for a large community of individuals rather than for a single household (Rova 2014: 124).

Period C at Tell Zeyd provides evidence for communal food production together with evidence for the production of clay smoking pipes, identified in the 2022 season. At this time, thus, Tell Zeyd housed a well-organised productive centre for the Kurdish communities of the Ottoman Empire. The analysis of the ceramic assemblage (Ch. 3) and the presence of Sebiel pipes suggest a 19th century date (Tonghini *et al.* 2023).

Period D – Nomadic frequentation (early 19th, 18th c. and/or earlier)

Two homogenous layers of abandonment (SU 1053 and SU 1082) came to light, covered by the evidence of the public bakery and characterised by the absence of structural evidence. The evidence provided by analysis of the botanical samples support the interpretation of these as layers of abandonment, as almost exclusively wild herb residues were identified (Ch. 4). From this level downwards, the excavation extended to comprise the unexcavated parts of Trench 1.

Under the abandonment layers, seven subcircular pits for the disposal of waste were discovered (P1 - SU 1084; P2 - SU 1090; P3 - SU 1094; P4 - SU 1091; P5 - SU 1093; P6 - SU 1096; P7 - SU 1099). They generally have a diameter of over 1 m and they are less than 0.5 m deep; their fill consists of ashy sand with a few pottery and bone fragments. Only Pit 16 (SU 1141, Fig. 6) seems to differ from the others: cut by the eastern section of the excavation, it has a diameter of approximately 2.50 m, a depth of 80 cm and it is filled with irregular alternating layers of grey to red waste plant material and black burnt plant material, with a few ceramic fragments and a few bone fragments. This type of pit may be associated to the dumping of waste for the entire village, as it occurs at other sites of the area (Conti, Fiorina 1997: 70). This group of pits belong to a phase of occupation of the settlement (Phase 8), and served as a waste dumping zone for a domestic neighbourhood.

These pits are excavated in a layer of abandonment (SU 1087), which presents the same absence of structural evidence and the same variety of botanical samples as the layers covering Phase 8, and it obliterates a series of fragmented structures and another series of pits belonging to an earlier phase of the settlement (Phase 10). The fragmentation of the walls (SU 1103; SU 1105; SU 1129; SU 1106; SU 1107; SU 1109 and SU 1110), cut by the pits of the previous phase, makes it impossible to make a hypothesis in relation to the

building they pertained to. Only SU 1103, located in the eastern part of the excavation area, presents a distinguishable shape, consisting in the corner of a building and a related collapse (SU 1104). This group of structural evidence is completed by another oven of Type 1 for bread baking (T17 - SU 1101), located in the northern part of the excavation area. Contemporary to these structures, there are five pits for the disposal of waste in the southern area (P8 - SU 1117; P9 - SU 1116; P10 - SU 1119; P11 - SUs 1120, 1121, 1125, 1126; P12 - SU 1124) and a further pit with the same function was found in the north-east corner (P13 - SU 1131). They generally have a diameter of over 1 m, and they are less than 0.5 m deep; their fill consists mainly of ashy sand with a few pottery and bone fragments; P11 is an exception, with its four different cuts referring to four different activities that reveal the functional continuity of this area for waste disposal. The stratigraphic data that emerged during the excavation of Phase 10 led to an interpretation of the area as a marginal zone of the settlement with structures with an unknown function, abandoned and subsequently destroyed several times by pits from this phase and from the previous Phase 8.

Prior to Phase 10, two other phases (12 and 14) were identified (Fig. 7), separated from each other and from the previous phase by abandonment layers (SU 1114, 1115 and SU 1132, 1137). These two phases consist of a series of waste pits and do not present structural evidence; again they reveal that this area, presumably located on the outskirts of the settlement, had a waste disposal function. Phase 12 consists of three pits (P14 - SU 1134; P15 - SU 1136; P18 - SU 1148, 1150), while Phase 14 consists of six pits (P17 - SU 1143; P19 - SU 1140; P20 - SU 1152; P21 - SU 1154; P22 - SU 1157; P23 - SU 1159). The pits in these phases all have a circular shape and a fill consisting of ashy sand with a few pottery and bone fragments; exceptions are P18, P19 and P20, which revealed evidence of different cutting activities but with the same type of filling.

The pits found in the various phases of Period D are circular, with a diameter of about 1m and a depth of about 50cm, with the exception of three groups, (P11, P18, P19 and P20). Likewise, the filling of the pits is similar in all phases of Period D: ashy sand with little material, but very rich in botanical residues, identified as vegetable waste for animal sustenance (barley and grass in most cases) and animal dung (Ch.4). The only exception in terms of shape and filling is P16, described above.

Period D is difficult to interpret due to the strong stratigraphic upheavals created by the numerous pits and the fragmented state of the structural remains. However, the data analysed so far seems to indicate a phase (Phase 8) of construction or displacement of the settlement, followed by an expansion (Phase 10) followed in turn by a further contraction (Phases 12 and 14). These four phases are separated by a series of layers interpreted as moments of abandonment of the area. The remarkable quantity of animal-related botanical remains found in the pits reveals that the main economic activity in Period D was very likely related to animal breeding, while the scarcity of finds in the pits

and the paucity of structures suggest a limited and sporadic human presence at the site. However, the high number of pits also indicates that the frequentation of the site may have been fairly regular, although limited in time, and that this alternated with periods of total abandonment. This pattern makes it possible to associate Period D with a nomadic pastoral frequentation.

Collapsed structures came to light at the bottom of at least five of these pits (P18, P20, P21, P22, P23), suggesting the presence of an occupation phase beneath the layer of abandonment.

Analysis of the pottery and of the smoking pipes suggests an 18th-early 19th century date, but the possibility that period D extends beyond this time-frame remains open.

3. The Pottery: Towards a Chrono-typology for the Ottoman Period¹¹

(C. Tonghini, V. Vezzoli)

The recent interest in the study of the material culture of the long Ottoman period has been seriously impeded by the lack of reliable research tools, such as regional chrono-typologies of reference for ceramic production, and especially at the margins of the empire, as it is the case with northern Iraq. The paucity of data from excavated finds undoubtedly constitutes a major obstacle within this stream of research.

The establishment of a reference typology for the Late Islamic period is therefore one of the objectives of the Tell Zeyd Project. Two seasons of excavations have enabled some steps forward to be made, and some diagnostic wares have been identified and organised into a relative sequence according to the stratigraphy. Results contribute to formulating an absolute chronology framework established on the basis of data from contextual finds, such as tobacco pipes, and through parallels with selected publications.

An overview of the wares that at this stage of our research can be regarded as diagnostic for the Ottoman period is offered here. These results derive from the study of the assemblage excavated in the 2023 season and are based on pottery from the better-preserved chronological horizons, Periods C and D; Period A pertains to the contemporary use of the land for agriculture, while Period B, very close to the surface, is seriously deteriorated and much disturbed by contemporary activities and it is difficult at this stage of our research to distinguish residual pottery from that in use in this period.

¹¹ Study of the Ottoman pottery in the region is a long-term research project that its two authors have been pursuing since 2015 in the framework of the LoNAP project. The results discussed here derive from a joint study of the pottery assemblage from Tell Zeyd, seasons 2022 and 2023, assisted by students L. Lazzaro, L. Gobbo, C. Sisto, C. Stancanelli. For this paper, Tonghini is the author of the “Glazed Wares” and the “Buff Wares” chapters, Vezzoli of the “Kitchen Wares” chapter.

Since Tell Zeyd is a multi-phase site, occupied since the Late Calcolithic period, residual pottery occurs in remarkable quantity. Pre-Islamic productions are in general fairly well known, but the situation differs in the case of the Islamic period (Tonghini, Vezzoli 2020). In the case of the Ottoman period, it is especially our very limited understanding of Middle Islamic productions in the area that makes it difficult to differentiate residual pottery, especially in the case of buff wares, kitchen wares and hand-made wares, as noted by a number of scholars (Ball, Tucker, Wilkinson 1989: 38-39; Vezzoli forthcoming *a* and *b*).

The wares that have been recognised as diagnostic for a specific span of time within the Late Islamic period are discussed below, grouped as Glazed Wares, Buff Wares, Kitchen Wares; the group of Hand-Made Wares also pertains to this chronological horizon, but is not discussed here for the paucity of data available at this stage. The fragments collected are not significant in terms of quantity, and consist in body sherds in most cases.

A quantitative overview of the whole excavated assemblage from Periods C and D is offered in the graphic (Fig. 8); this also reports the quantity of pre-Islamic residual pottery and the quantity of unidentified sherds.

Glazed Wares (Figs. 8-9)

The Glazed Ware assemblage from Tell Zeyd comprises different wares classified according to the ceramic body, type and colour of glaze and decoration. As the purpose of this paper is to offer elements for the identification of Late Islamic pottery, only types that have been recognised as diagnostic will be discussed here. All glazed types are wheel-thrown.

The largest group of glazed wares at Tell Zeyd is the non-diagnostic Ware 101; this group comprises body sherds that are covered by a green glaze that presents no other diagnostic features, as well as body sherds, handles, rims and bases with poorly preserved glaze.

Fragments of porcelain also appear in the assemblage, in Period D; they do not present diagnostic features and thus are not discussed here.

Two types can be regarded as highly diagnostic for the Late Islamic period, or, more likely, for part of it: Monochrome Turquoise Glazed Ware (W39) and Yellow Glazed Green Painted Ware (W27). Forms and size indicate that these constituted the table ware of the period.

A further type, the Late Green Glazed Ware (W26) is also discussed here: although it is little represented in the Tell Zeyd assemblage studied so far, it seems to be a good indicator for the last part of the Late Islamic Period.

The Monochrome Turquoise Glazed Ware (W39) features a pink or reddish yellow body, with some very fine organic temper and mineral inclusions, including mica; it is hard and compact; it is covered by an opaque thick glaze of good quality applied directly on the surface of the vessel. Open forms only have been identified, and the glaze is applied on the interior, and on the very upper part of the external rim, with frequent glaze drips on the external walls, probably the result of glaze splashing when the glaze was being applied. The

downward flow of the glaze indicates that vessels were fired in an upright position. A rim sherd shows the remains of another vessel stuck to its external wall (ZD.1114.18), indicating contact among vessels in the kiln. The fragments of this type are fairly large, and make it possible to identify the form associated with this ware: a bowl with a flat everted rim and a diameter of 20-25cm, provided with a ring base (Fig. 9.E-G).

This type W39 can be distinguished from earlier types – such as the Early Islamic and Middle Islamic Turquoise glaze – because of the colour, thickness and quality of the glaze. The shape of the rim is also fairly characteristic. W39 occurs in Period D (Phases 5, 8-9, 11, 13: 11 fragments, constituting 9.5 % of the glazed pottery assemblage) and in Period C (Phase 4: 5 fragments constituting 11.9 % of the glazed pottery assemblage); quite revealing is the presence of a rim fragment with repair holes in Period C, Phase 4 (Fig. 9.E).

The larger and better preserved fragments all come from Period D, indicating that they were produced and consumed in this period; the occurrence suggests that production may also have continued in Period C, although the presence of repair holes in one of the samples mentioned above should be also taken into account.

The Yellow Glazed Green Painted Ware (W27) features a pink or reddish yellow body, hard and compact, with infrequent, very fine, inclusions, including mica; it is covered by an opaque, bright yellow glaze and presents a green decoration painted in-glaze. Fragments of this ware are fairly small in most cases, and do not facilitate the identification of specific vessels. This ware is certainly associated with open forms, as can be seen from two fragments of ring base (Fig. 9.C-D); the fragment of a bowl with flared sides and a simple rim was also found (Fig. 9.A). A fragment of a thickened rim indicates that this ware was also used for closed forms (Fig. 9.B).

The brightness and quality of the glaze and the painted decoration make it possible to distinguish this ware from earlier types that employ similar colours, such as Abbasid splash wares.

W27 occurs in Period D (Phases 5, 7-11, 13: 21 fragments, 18.1% of the glazed pottery assemblage) and in Phase C (Phase 4: 7 fragments, 16.7 % of the glazed pottery assemblage); as it was the case with W39, the larger and better-preserved fragments all come from Period D; production and use of W27 can certainly be ascribed to Period D; it may have continued in Period C, although the state of preservation of the sherds is compatible with residuality.

Green Glazed Ware of the Late Islamic Period constitutes a large group that comprises different varieties, as documented in the detailed study by Simpson (1997). Only two sherds that can be associated with a very specific type within this larger group have been identified at Tell Zeyd, and classified as Ware 26. Ware 26 features a buff body with some very fine inclusions, and it is covered by a thick, dark green glaze that shows irregular darker and/or reddish-

purple areas. The thickness of the walls indicates that this ware is associated with jars. The two sherds both appear both in Period C.

Glazed Wares: chronology

A strong element for dating derives from the ceramics excavated at the citadel of Damascus: here Ware 27 is found in 18th century contexts (François 2008, “Vaisselle de table à pâte rouge peinte en vert absinthe sur glaçure jaune”).

Absolute dating elements can also be obtained by comparison with the pottery assemblage from Hatara Saghi, ascribed to a period between the late-18th and the mid-19th centuries on the basis of travellers’ accounts and of contextual clay pipes for smoking (Simpson 1997: 112-13); this site seems to have been abandoned in the second half of the 19th century (*Id.*: 87-88). The repertoire of glazed wares at Hatara Saghi does not include the Monochrome Turquoise Glazed Ware (W39) as defined at Tell Zeyd, and neither is the Yellow Glazed Green Painted Ware (W27) clearly represented.

On the contrary, the glazed assemblage from Hatara Saghi is rich in various Green Glazed Wares, that are scantily represented at Tell Zeyd; they constitute 71% of that glazed pottery assemblage (*Id.*: 95-96, Type 2). Late Green Glazed Wares seem to characterise the final part of the Late Islamic period as appears from the ethnographic documentation discussed by Simpson (*Id.*: 94-95). Varieties of a Late Green Glaze Ware have been identified in the context of surveys in the area (Wilkinson, Tucker 1995: 107-8; Vezzoli forthcoming *b*) and it is also well represented in the collections of ethnographic museums, such as that of al-Qosh (personal observation).

In the light of this, Ware 39 and Ware 27 may be earlier than the assemblage from Hatara Saghi, and pertain to the 18th century, while Ware 26 may relate to the 19th centuries. This confirms the dating independently offered by W27 in Damascus.

W27 is also represented in the assemblage from the Erbil citadel (Nováček *et al.* 2008, Type EC411: 290-92, fig. 24.20-39), where it seems to be associated to both open and closed forms; the analysis of a sample from this assemblage provides relevant information on this ware: the source of the clay constituent is compatible with the Mosul area, and the glaze has a lead-silica composition and is opacified with tin (Petřík *et al.* 2020: sample 3, 19, tables 1-2, 4, 6; body: petrofabric Arbil 3 in figs. 3b, 4-5; glaze INGYY, table 4).

Buff Ware (Figs. 8, 10-12)

To identify diagnostic types for the Ottoman period within the large group of wheel-thrown Buff Wares is a very challenging task. The scarcity of *comparanda* for the Ottoman period in the area (Simpson 1997; Vezzoli forthcoming *b*), and our limited knowledge of Middle Islamic Buff Wares in the region (Vezzoli, forthcoming *a*) suggests a very cautious, step-by-step procedure, especially at a multi-phased site such as Tell Zeyd.

Buff Wares that were recognised as non-residual were initially classified as Ware 100, and, subsequently, recurring types were identified only if represented by rims, bases or distinctive decorations associated to a specific body; undecorated body sherds have not been further dealt with at this stage of the research. The whole group of Buff Wares is wheel-thrown.

Light Yellow/Green Buff Ware (W40)

This group features a light yellowish or greenish buff body, often lighter on the surface, characterised by the presence of large calcareous grains that can be clearly detected by the naked eye and create irregularities on the surface; some organic temper and medium-frequency fine mineral inclusions are also present; temper is not homogeneously distributed in the body. A pinkish variety of the body has also been noted.

The surface is not finished with great care: final surface finishing is irregular and seems to have been executed on a surface that was already too dry: irregular wheel marks and other traces, such as accidental incisions, are visible; when present, the combed decoration is also irregular, the result of a variation in the pressure of the tool on the surface. The surface is also often pitted by carbonate burn-out holes.

This ware is associated with small/medium size jars very likely used to store liquids and/or dry food. An almost entirely reconstructed jar (Fig. 11.A) presents a ring base (diam. 9 cm), an ovoidal profile, and two handles; the rim is missing, and the total height of the object is now 30 cm; the decoration consists of a horizontal combed band on the shoulder. Two similar vessels appear, one in the same Phase 9 (Fig. 11.B), the other in Phase 11, all in Period D. The assemblage from Tell Zeyd features a variety of rims pertaining to bottles and medium-size jars, with handles, and different ring bases (Fig. 10). No specific parallels have been identified in publications for this ware and the related shapes.

A zig-zag pattern obtained with a roulette appears on a number of body fragments that feature the same body as W40, but no forms have been identified so far (Fig. 12); these sherds have been preliminarily associated to this ware in consideration of the diagnostic potentials of their decoration (W40D). The decoration is often barely visible, as if it were incised by a worn tool; it has been suggested that a wooden tool may have been used (Simpson, Watkins 1995: 180).

Pinkish-brown Buff Ware (W38)

This group features a pinkish-brown body with rare, very fine mineral temper and some vegetable temper. The surface is carefully finished, often when still quite moist. This ware presents a combed decoration in horizontal bands associated with short oblique strokes. No complete forms have been identified, but only body sherds from medium-large closed forms with handles.

Buff Wares: chronology

The finds from Tell Zeyd makes it possible to identify a specific buff ware (W40) for the Ottoman period; it only appears in Period D. Decorated body sherds related to this ware, W40D, appear in both Periods C and D, but quantity may indicate that these are residual in Period C.¹²

The apparent absence of Ware 40 from the Hatara Saghi assemblage may confirm what had already been concluded in the case of glazed Wares 27 and 39: that Ware 40 is earlier than the Hatara Saghi assemblage. Such a hypothesis finds some support in the absence of buff wares that are generally ascribed to the last part of the Ottoman period, such as so-called *hub* (Simpson 1997: 101-2) and other very late Ottoman wares (Vezzoli forthcoming *b*).

It can also be concluded that a similar chronological horizon should be ascribed to the decorated Ware 40D, but only when associated with the Ware 40 fabric as described here. In fact, it was suggested (Simpson 2011: 25) that this decoration can be considered as a good indicator for the Ottoman period, but a more refined classification is necessary to identify wares and variants and that chronology be better defined.

As to Ware 38, the evidence from Tell Zeyd indicates that this is later than Ware 40, as it appears in Period C only. A similar decorative pattern was found at Kharabeh Village (Simpson, Watkins 1995: fig. 62.15) and at 'Ana (Northedge, Bamber, Roaf 1988: fig. 51.1), but the wares cannot be conclusively compared.

Kitchen Wares (Figs. 8, 13)

The group of kitchen wares identified at Tell Zeyd includes objects specifically employed for cooking or for food processing. The morphological repertoire is limited to closed forms (jars or pots), which are often characterised by burn marks caused by contact with the hearth flame.

As already noted for other productions, Kitchen Wares that were recognised as non-residual were at first classified as Ware 102; at a later stage, types characterised by specific morphological and surface treatment features, including decoration, and specific manufacturing techniques were identified as diagnostic.

It is certainly interesting to note that different manufacturing techniques associated with this repertoire can be identified: some may be hand-made, some are wheel-thrown, and others may feature a combination of different techniques.

The scarcity of *comparanda* for the Ottoman period in the area (Simpson 1997; Vezzoli forthcoming *b*) and the absence of reference chrono-typologies even for earlier periods makes it impossible to provide more precise data regarding their chronology.

Kitchen Ware (W35)

¹²No quantitative assessments are offered at this stage since only diagnostic sherds were identified as W40; body sherds of W40 have so far been counted as undiagnostic Ware 100, and only at a later stage of the research will a full quantitative reassessment be carried out.

This group presents an orangish to greyish fabric, with a darker section, characterised by the presence of medium to abundant mineral inclusions of variable size and color, and medium frequency of horizontal voids. Some of the inclusions have sharp edges, possible evidence of intentional grinding.

The colour of the surface can vary considerably on the same object, the result of both exposure to fire and of uneven firing conditions in the kiln.

The outer surface is frequently smooth and can present a very distinctive incised decoration featuring wavy or combed lines, running around the body or the neck of the objects. The bases show traces of fire contact and are therefore frequently blackened. These traces are not always identified on the bottom but can appear on the lower part of the body, suggesting that the object was placed close to fire for cooking or heating its content and not directly on the flame.

The bases seem to present regular traces compatible with the use of the wheel for manufacturing. Nevertheless, at the junction between the base and the body, there is often a peculiar attachment reminiscent of the use of coils. A combination of techniques (coiling technique and wheel) cannot be ruled out, also given the fact that the wall thickness of these objects is not regular.

Complete profiles have not been identified among the excavated finds, but partial forms including quite narrow, everted or slightly bulging necks (Fig. 13.B), belonging to single-handled jugs. The handles are quite distinctive, small and circular section in section (diam. 1.5 cm). Separate spouts, probably related to these jugs, also occur (Fig. 13C). Several distinctive flat bases have been identified in association with this fabric (diam. 8-12 cm; Fig. 13.E). The outer surface of the base is not smooth, and is generally quite rough.

A globular jar with a short neck and simple or grooved rim and circular handle has been also identified (diam. 8-13 cm) in Period D (Fig. 13.A, D).

W35 occurs in Period D (Phase 5, 7-14: 133 fragments, constituting 40% of the Kitchen Ware assemblage of this period) and Period C (Phase 3 and 4: 17 fragments, constituting 15%). Except for the above-mentioned globular jar (Fig 13.A, D), which appeared only in Phase D (Phase 8-9 and Phase 13), the rest of the morphological repertoire is attested in both Periods; in the light of the evidence available at present, no differences have been observed in the Kitchen Ware repertoire to distinguish Period C from Period D.

Chronology

References to kitchen or cooking wares in the scientific literature of the region are quite rare, especially for the Late Islamic period. The globular jar described above (Fig. 13.A, D) is not attested at Hatara Saghi in a fabric comparable with W35,¹³ but appears in a fabric similar to W37 described below (Simpson 1997: 109-12, fig. 5: 2-6). The circular handles associated to jugs are also attested at various sites in the area surveyed by *LoNAP* (Vezzoli

¹³ Simpson (1997: 16, fig. 2) identified flat bases with uncertain fabric, which he ascribes to the group of "Plain wares" and which could be related to Type W35 described here.

forthcoming *b*). In the Al-Qosh Heritage Museum, which depicts household life in the region during the 18th and early 19th centuries, complete objects presenting the same morphological and technical features as W35 have been identified. The keeper of the al-Qosh Heritage Museum reports that these containers were traditionally used for the preparation of cheese.

Burnished Cooking Ware (W37)

This type is characterised by an orange-reddish coloured surface, with a dark grey section and a compact fabric with abundant mineral inclusions of various types, predominantly medium-to-large and elongated. The outer surface frequently shows scorch marks. The treatment of the surface is characteristic; it is in fact burnished, with parallel lines executed with a tool, probably a pebble¹⁴.

This type is essentially attested with a specific shape, a globular pot; it has a short, flared neck, a simple rim (diam. 12-20) and a slightly flattened handle going from the rim to the shoulder of the object (Fig. 13.F-G). Walls measure between 0.6 cm and 1 cm.

W37 occurs in Period D (Phase 3 and 4: 13 fragments, accounting for 28% of the kitchen assemblage) and Phase C (Phase 5, 7-11 and 13-14: 13 fragments, 11%). The identified form, the globular pot with handles, is present in both Period C and Period D, with no discernible morphological or technical differences.

Chronology

As observed elsewhere, also from the Middle Islamic period, these cooking wares were executed using the coiling technique. Handmade cooking ware seems, in fact, to be the most commonly attested in the region during the Middle and Late Islamic periods. As mentioned before, this globular pot is the main shape attested in Hatara Saghi, in the Late Ottoman period, with the same surface treatment as that observed in Tell Zeyd (Simpson 1997: 109-12, fig. 5: 2-6). In Northern Iraq, this type has been widely attested in surveys and excavations, also from earlier contexts. In Kani Shaie excavations, for example, handmade globular cooking pots with a burnished surface have been dated to the 11th-12th century (Ahmad 2021: pl. 14: 1-2); in the area of the LoNAP project, this was the most common cooking ware attested in the region surveyed during the Middle and Late Islamic Period (Tonghini, Vezzoli 2020: fig. 9; Vezzoli forthcoming *a* and *b*).

As also demonstrated by the stratigraphy of Tell Zeyd, which did not reveal any morphological or technological changes between Period C and Period D, kitchen wares are shown to be standardized productions that remained in use over a long period; ethnographic analysis indicates they were used in different ways for cooking or heating food.

¹⁴ Although several tools could have been used for the burnishing, natural pebbles are most common in the region and also attested in ethnographic studies (Simpson 1996: 109). MANCA IN BIBLIOGRAFIA

4. The Study of Archaeobotanical Remains

(R. Dal Martello)

Bulk soil samples were collected during excavation at Tell Zeyd following a targeted sampling strategy, with samples being collected from relevant features with a high potential yield of botanical remains. These include *tannur* fillings, soil deposits immediately above ancient floors, fillings of refuse pits, et cetera. In the autumn season, 2023, over 72 litres of soil from 38 individual stratigraphic units (SU) were collected for flotation, resulting in 66 individual flotation samples. These were floated at the Archaeological Mission House with the use of a flotation machine, purposely built for this campaign following specifications outlined in Pearsall (2016). A 2mm mesh was placed in the main tank to collect the poured soil (and the derived heavy fraction), and the float (light fraction) was collected on a 0.3mm fine chiffon fabric placed over geological sieves, labelled, and allowed to dry in the shade. Heavy fraction samples were entirely processed during fieldwork shortly after flotation. The light fraction samples were exported to Ca' Foscari University in Venice where they were analysed at the Archaeological Sciences Laboratory of the Department of Humanities by the present writer.¹⁵ All samples have been fully analysed, except for FL19, for which only 1/3 of the larger remains were studied, due to the extreme richness of the sample and time constraints.

The analyses revealed a high level of preservation of charred plant remains, with a weighted average density of over 50 identifiable items recovered per litre of soil floated. So far, only 1 sample had a high level of intrusive material, mostly insects (Flotation sample 2, US 1087 S.30). Other samples were rich in charred plant remains, wood charcoal fragments, and numerous samples had dung pellets.

A total of 6854 remains have been extracted and identified. Flotation remains recovered at Tell Zeyd include (Fig. 14):

- domesticated cereal grains and other possible crops, representing. 8% of the identified remains;
- chaff remains and *Cerealia* grains (cereal grains too badly damaged to be successfully identified) (31%);
- legumes, fruits, and seeds of other economic species, such cotton and tobacco (see below; less than 1%);
- seeds of field weed species (c. 56%);
- unidentified seeds, including legume fragments (2%).

In addition to the above material, about 257 fragments of unidentifiable charred organic fragments, and some non-plant material were also retrieved, mostly dung both in pellet and fragment form. Some of the dung pellets were

¹⁵ We are very grateful to the Directorate of the Antiquities and Museums of Kurdistan, and especially to Dr. Keyfi Ali and to Dr. Bekas Hasan for permission to export them and for their help in the process.

fragmented and seeds were visible on the inside. These non-plant materials are present in the majority of the samples, but have been excluded in quantitative analyses.

Barley (*Hordeum vulgare*) and free-threshing wheat (*Triticum aestivum/durum*) are the main domesticated cereals found in the 2023 archaeobotanical assemblage at Tell Zeyd. Of the two, barley is the dominant species, with both hulled and naked varieties of grain, 6-row and 2-row rachises present, indicating that several varieties of the crop were simultaneously present at the site. Wheat grains included some of very compact morphotype, and some immature grains. Compact grains have been associated to water input, either better watering practices, possibly through irrigation or inversely to water stress (Miller 1999; Miller, Spengler, Frachetti 2016). The high number of barley and wheat rachises is a strong indication of the local cultivation of these crops. Rachises are in fact the by-product of grain processing after harvest, they are often fed to animals or used for fuel and other purposes. The high presence of rachises and dung in the samples suggest that the plant material retrieved in the samples may derive from dung burning and therefore from herbivore feeding habits rather than human consumption, an issue which has long been debated among scholars (i.e., Miller 1984, 1996; Smith *et al.* 2019; Spengler 2019). Regardless of how the plant material entered the archaeobotanical assemblage, such a high presence of remains indicates an important role of the crops in the economy of ancient Tell Zeyd.

Other possible crops found in the samples include buckwheat (*Fagopyrum esculentum*), sorghum (*Sorghum bicolor*), foxtail millet (*Setaria italica*), and rice (*Oryza sativa*; Table 1). However, these have been retrieved in extremely low numbers and at present their role at Tell Zeyd remains unclear. For rice, possible silicified rice glumes have also been recovered, further suggesting that the absence of grains for this species does not negate the presence of the plant at the site, but further data is needed to clarify the role of this crop in Tell Zeyd's economy.

Although low in numbers (Table 1), several species of legumes have been recovered, including lentils (*Lens culinaris*), peas (*Pisum sativum*), beans (*Vicia* cf.), and possibly horsegram (*Macrotyloma* cf.).

Important fruit species recovered include 1 seed of grape (*Vitis vinifera*), 1 seed of date palm (*Phoenix dactylifera*), 1 seed of sorbus (*Sorbus* sp.), 1 seed of possible basil (*Ocimum* cf. *basilicum*), 1 seed of an unidentified Cucurbitaceae fruit, 3 seeds of mulberry type fruits (*Morus* sp.), and shells of pistachio (*Pistacia* sp.).

Other species found that have economic value include cotton (*Gossypium herbaceum/arboreum*), and 1 tobacco seed (*Nicotiana tabacum*). Tobacco seeds were also reported in the previous season of excavation and flotation study at Tell Zeyd. The retrieval of more tobacco seeds would further support the possible introduction of this species into the Ottoman Empire after the 16th

century (Guest 1953), as was previously suggested by the recovery of smoking pipes.

Over half the archaeobotanical assemblage consists of seeds of wild species, many of these most likely are either seeds of field weeds or wild species naturally occurring in the habitat of the region. The high numbers of weedy species from at least 18 different families, and the presence of dung, both fragmented and as whole pellets, further suggest that much of the content of these samples may come from dung burning, possibly used as fuel at the time of occupation at the site. Weedy species include seeds from the (in order of prominence) Poaceae, Fabaceae, Malvaceae, Asteraceae, Amaranthaceae, Cyperaceae, among other botanical families (Table 1).

Integrating the results of this analysis into the stratigraphic sequence, some observations can be offered:

- 1) The proportion of barley and wheat fluctuates over time, but barley remains the predominant crop throughout the occupation of the site, with the exception of phase 8 and 10 when wheat is slightly more prevalent than barley. This is supported both by finds of grains and rachises.
- 2) The majority of cotton seeds (16 out of 17 seeds) have been found in one especially rich sample dated to phase 4 (Flotation sample 19, US 1075 S.20), while the single tobacco seed retrieved comes from Flotation sample 10, US 1100 S.36, belonging to phase 10.
- 3) Samples derived from abandonment phases contained almost exclusively wild remains, with especially high prominence of *Onopordium* seeds. This clearly supports the reconstructed chronological sequence of abandonment.

Moreover, when analyzing the current assemblage from the perspective of the two main periods of occupation (Periods C and D) the most notable difference is an overall decrease in the proportion of cereal (or domesticated) remains as opposed to a doubling of the presence of wild species (Fig. 15). The decrease in cereals is particularly evident in the halving of the chaff remains, which could indicate a change in either cultivation or crop processing practices, meaning that in Period D, cereals were either not locally cultivated or post-harvest processing was undertaken away from the site.

Finally, the variety of species recovered in the 2023 archaeobotanical assemblage indicates a diversity of cultivation and trading practices taking place at ancient Tell Zeyd. The presence of crop-processing by-products hints at the fact that at least the main crops retrieved were cultivated on-site; whether the other species were cultivated or traded needs to be further clarified with future work.

The number of unidentified remains is rather low and constant through the phases; these most likely represent local wild species from the local flora, a more representative reference collection may aid in their identification in the future.

5. Conclusion

(C. Tonghini)

The Tell Zeyd Archaeological Project so far provided a whole set of new data that contribute to a better understanding of the rural world in the Mosul hinterland for the Ottoman period. As is well known, the material culture of the Ottoman period has only attracted the attention of archaeologists in recent decades, and, as a consequence, is poorly known and understood; this lack of documentation concerns in particular the provinces of the empire, such as it is the case of the area of Tell Zeyd.

The stratigraphic approach of the excavation has so far made it possible to isolate three different periods of occupation (B, C, D) featuring different patterns related to both settled (Periods B, C) and nomadic communities (Period D). Although the character of the occupation cannot be established on the basis of the data so far recovered for Period B, evidence of productive activities has come to light in relation to Period C, a commercial bakery (Ch. 2) and a workshop for the production of pipes (Tonghini *et al.* 2023).

Period D revealed a complex stratigraphy of abandonments alternating with a number of phases pertaining to a nomadic frequentation of the area, but also to its use as a dumping space; the presence of nomads is rarely attested archaeologically, and only a careful, stratigraphic approach such as that adopted by ZAP makes it possible to intercept the traces of this kind of occupation.

The study of the pottery excavated at Tell Zeyd from Periods C and D has led to the identification of a number of diagnostic wares for the Ottoman period. Differences in the pottery assemblage of the two Periods has made it possible to propose a chronological distinction supported by the evidence from other sites and by the study of specific contextual finds, such as clay pipes for smoking.

Period D is characterised by the contextual presence of Yellow Glazed Green Painted Ware (W27), Monochrome Turquoise Glazed Ware (W39), and Light Yellow/Green Buff Ware (W40 and its decoration W40D). A distinctive form of Kitchen Ware W35 also seems to be diagnostic for Period D (Fig. 13, A, D). A dating to the 18th century is supported by the date of W27 at the citadel of Damascus, and by the absence of these wares from the assemblage of Hatara Saghi, ascribed to the late-18th and the first half of the 19th c. (Simpson 1997).

Period C at Tell Zeyd seems to correspond to the period of occupation of Hatara Saghi, and can thus be ascribed to a late-18th and 19th century period; only Green Glazed Ware (W26) has been identified as diagnostic for this period.

Kitchen Wares W35 and W37, and Hand-Made Ware W24, are present in both Period C and Period D, and, apart from a specific W35 form mentioned above, no clear differences have been detected in this repertoire to differentiate the two periods.

The dating framework that has emerged from the study of the pottery finds support in the study of clay pipes excavated at Tell Zeyd. Two different production phases were identified with the 2022 excavation: a later Phase 2 that corresponds to Period C, and an earlier Phase 3 that corresponds to a part of Period D (Tonghini *et al.* 2023).¹⁶ Phase 2 was characterised by the contextual presence of smoking pipes of the Sebiel type together with the poppy-head type; in Phase 3 only the poppy-head type was found. This pattern was confirmed by-and-large by the finds of 2023: the sequence of Phases ascribed to Period D illustrates the gradual disappearance of the Sebiel type in the earlier phases of Period D.

The study of the pipes thus confirms a chronological difference between Periods C and D, and identifies the Sebiel and the poppy-head types as good chronological markers.

As to later Periods, Period A corresponds to the contemporary use of the area for cultivation, while Period B can very likely be associated to a period that pre-dates the Simel massacre of 1932 on the basis of the information collected through oral interviews; this indicates the presence of an Assyrian community (Usta forthcoming); the completion of the analysis of archaeozoological remains may provide further data in this respect in terms of diet practices.

Archaeobotany plays a major role in a project such as ZAP, which focuses on the rural word and aims at finding evidence of land use. Study of the botanical residues confirmed the general trend in the occupation patterns between sedentarism and nomadism summarized above, and made it possible to associate specific cultivations to Period C, while no evidence of locally cultivated species derived from Period D, but only remains of wild plants. Evidence for the local cultivation of specific crops such as varieties of barley and wheat, came to light; most probably, cotton and tobacco were also cultivated. This picture will be enriched with the completion of the study of archaeozoological remains.

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¹⁶ The reconstruction of the stratigraphy followed a more simplified system in the first season of excavation, 2022; with the continuation of the excavation, the entire sequence will be entered using the same uniform system.

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