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## TAYMA, SAUDI-ARABIA

### An Early Bronze Age Domestic Context in the Center of the Settlement



Season 2022

**Orient Department of the German Archaeological Institute**

by Sebastiano Lora



e · FORSCHUNGSBERICHTE DES DAI 2023 · Faszikel 1

*Im Rahmen der Aufarbeitung des Langfristprojektes (DFG) der Abteilung in der Oase von Tayma (Saudi-Arabien) werden die archäologischen Kontexte der frühen Bronzezeit (3. Jt. v. Chr.) im Zentrum der Siedlung untersucht und zur Publikation vorbereitet. Dieser Beitrag befasst sich mit Resten der häuslichen Architektur. Die erzielte chronostratigraphische Sequenz bietet wichtige Hinweise zur Keramikabfolge von Tayma, so wie zur Lebensweise im Zusammenhang mit der frühen Oasenkultivation. Die Arbeiten wurden durch ein Forschungsstipendium des DAI gefördert.*

*As part of the publication of the results of the long-term project (DFG) of the Orient Department in the Tayma Oasis (Saudi Arabia), the archaeological contexts of the Early Bronze Age (3<sup>rd</sup> millennium BCE) in the centre of the ancient settlement are reviewed and prepared for publication. The contribution deals with architectural contexts of domestic character. The reconstructed stratigraphic sequence offers important clues to the pottery chronology of*

**Cooperation partner:** Heritage Commission at the Ministry of Culture, Riyadh (Saudi Arabia).

**Financial support:** DAI Forschungsstipendium 2021.

**Head of project:** A. Hausleiter.



- 1 Tayma, Saudi Arabia. Plan of the Early Bronze Age remains identified in the center of the ancient settlement (Area E). The reconstruction of the E-b14:r1 corner in E-b14:a is not displayed. (Graphic: Sebastiano Lora, DAI)

*Tayma and to the way of life at the time of early oasis cultivation. The work was supported by a research grant from the DAI.*

## Introduction

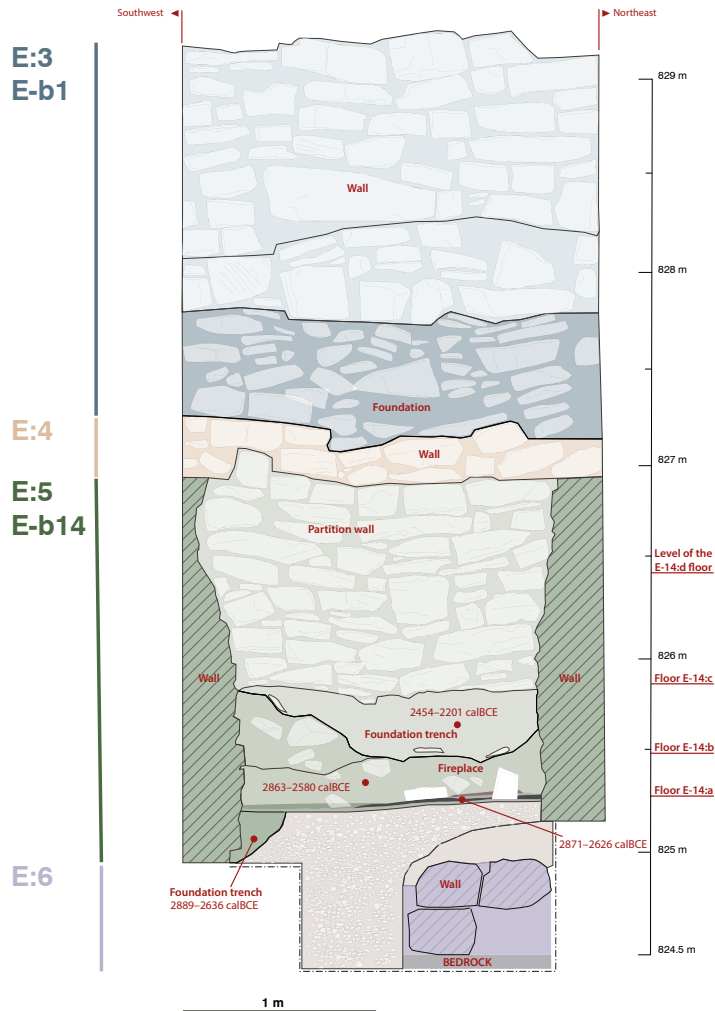
- 1 Archaeological research of the Orient Department (DAI) and the then Saudi Commission for Tourism and National Heritage (SCTH) at the oasis of [Tayma](#)<sup>7</sup> identified a substantial Early Bronze Age occupation in the centre of the ancient settlement, today known as Qrayyah [1] (Fig. 1). Next to a monumental building (E-b5), probably serving as a communal storage unit [2], and a partly discovered multi-phase building (E-b15) south of it, architectural remains of domestic character have been discovered in a deep sounding beneath a late 1<sup>st</sup> millennium BCE temple (E-b1; [3]), dominating this part of the settlement (and impacting excavation strategy in this area). Though limited in their extension, the remains have been interpreted as part of a domestic architectural unit (Building E-b14). Excavations provided a stratigraphic sequence from the early 3<sup>rd</sup> to 2<sup>nd</sup> millennia BCE. Materials (pottery, botanical and faunal remains) and <sup>14</sup>C dates from this sequence allowed to establish the chrono-typology of the Early Bronze Age ceramic production at Tayma [4], which has now become significant for other sites in the entire Hejaz region currently under excavation. Botanical macro-remains from associated contexts substantially added to the knowledge of Bronze Age oasis cultivation at Tayma, characterized by horticulture. The Early Bronze occupation of Tayma fuels the debate about the urbanization of Arabian oases.

## Tayma's permanent settlement at Qrayyah

- 2 While the Neolithic presence and the occupation of Tayma before the Bronze Age have been identified next to the ancient palaeolake of Tayma (today a *sabkha*), both probably of non-permanent nature [5], from the Early Bronze Age onwards, the ancient settlement's core developed over a natural outcrop at a certain distance to the palaeolake north of it. This elevated area of approx. 3 ha size appears to have maintained a central role for over

**TAYMA**

Saudi German Joint Archaeological Project

**Sounding E11 West, Northwestern section**

2000 years until its abandonment in Late Antiquity [6]. Terminologically, the local stratigraphies of the occupation at the oasis have been labelled »Occupation Levels«, added by the letter defining the excavation area, in this case OL E:6, OL E:5, and following.

**Building E-b14 (OL E:5)**

- 3 Although hampered in visibility by the remains of much younger temple E-b1, remains of a masonry building (E-b14) have been identified in a deep sounding within Square E11 (E11 West), located in Area E, partly overlapping the 1979 trench in this area [7]. The southeastern part of a room (E-b14:r1), defined by three walls, was discovered. With its southwestern wall continuing southeastwards, it appears possible that there was a second room adjacent to the former.
- 4 In its oldest stage (E b14:d), E-b14:r1 had a paved floor with a fireplace installed over it. Three major changes have been identified based on as many superimposed trodden floors, the addition of an inner wall, and the partial reconstruction of the northeastern corner (E b14:c-a). Remains of an older structure, built over the bedrock, have been discovered beneath the first floor, indicating the existence of an earlier occupation (OL E:6, Fig. 2), which was filled with a deposit of small stones possibly in preparation for the construction of E-b14. Further remains of contemporary architecture have been identified in other soundings of Area E (E2, E11 East, E13). However, their relation to E-b14 needs further study.

*The oldest Building Stage: E-b14:d*

- 5 The original layout of room E-b14:r1 is that of a square or rectangular northeast-southwest oriented room of which excavation exposed an area of 1,9 x 0,9 m (Fig. 3). Its walls have been either set on the older remains or into two foundation trenches filled with small stones and sediment. From these fills originates a rim fragment of a sandstone mortar with a round knob handle; charred seeds of barley and grape pips of *Vitis vinifera* (identified by Reinder Neef) have been dated to a period of 2889 to 2636 calBCE, providing a *terminus ante quem non* for the construction of the walls. The latter



3



4

3 Tayma, Saudi Arabia. Room E-b14:r1 at the end of the excavation. (Photo: Irmgard Wagner, DAI)

4 Tayma, Saudi Arabia. The fireplace on the first floor of Room E-b14:r1. (Photo: Sebastiano Lora, DAI)

consist of two lines of reddish sandstone blocks of different sizes bonded with mortar in uneven courses. Larger stones are used at their base, and progressively thinner stones towards the top. The wall thickness has been identified in one location only ranging from 0,4 m to 0,5 m. The preserved height of the walls is 1,9 m. There is no evidence of a door in the excavated part of the room.

- 6 The original floor of E-b14:r1 is composed of a layer of yellowish clay and pieces of broken mudbricks. Next to the northern wall, a fireplace was set onto this first floor, comprising two squared stones of similar height (0,17 m) placed opposite each other and 0,2 m apart (Fig. 4). Superimposed lenses of fired sediment and ashes between and around the two stones suggest a prolonged use of this installation.
- 7 This floor was re-levelled at least once, and a calibrated  $^{14}\text{C}$ -date (2871–2626 calBCE) of grape pips (*Vitis vinifera*, identified by Reinder Neef) from the first operation corresponding to that from the foundation pit suggests chronological proximity. While a thin layer of charred remains and sediment was spread over the room's northern half, filling two small pits along the southeastern wall, loose greyish sediment and small cobbles were added to the southern half. The floor was paved with a 2 to 4 cm thin layer of reddish-brown silty sediment. As its two stones emerged 12 to 14 cm above floor level, the fireplace may still have been in use. A flat stone (8 cm thick) placed at the southern limit of the fireplace on this floor may have belonged to the latter. No assemblage related to the use of the fireplace was discovered on the floor, suggesting that the room may have been emptied before the following stage. A yellowish-green disc-shaped bead of quartz was found in the deposits associated with the re-levelling, while a perforated shell (*Conidae*) originates from the repaving of the floor.

#### *Changing function: E-b14:c*

- 8 Room E-b14:r1 underwent a significant change when the E-b14d-floor level was raised by 0,2 m, resulting in the filling of the room with clayish sediment and stones of different sizes; in the northeastern corner of the room, there was an accumulation of ashes and dark soil, probably dumped. A layer of



5 Tayma, Saudi Arabia. Remains of the massive stone fill sealing room E-b14:r1, partially removed by the 1979 sounding. (Photo: Sebastiano Lora, DAI)

yellowish clay and broken mudbricks sealed all preceding deposits, including the fireplace, suggesting a change in the function of the room. A further 0,2 m thick layer of friable sediment with occasional inclusions of flat stones stretched over the entire room and may have been used as a floor – according to a <sup>14</sup>C-date from a charcoal fragment (populus/salix, identification by Reinder Neef) not before the mid-3<sup>rd</sup> millennium BCE (2863–2580 calBCE).

*A new plan: E-b14:b*

- 9 A partition wall approx. 1 m in front of the southeastern wall of room E-b14:r1, most probably divided the original space into two smaller units. For its construction (stone rubble of different shapes and dimensions bonded with mortar), a foundation trench was excavated from the last E-b14:c-floor removing most of it. The trench was filled with flat stones (at its bottom), hardened clay, and mudbrick fragments. A <sup>14</sup>C-date obtained from a piece of charred wood (populus/salix, identification by Reinder Neef) suggests a date in the later part of the 3<sup>rd</sup> millennium BCE (2454–2201 cal-BCE).

*Final stage: E-b14:a*

- 10 A partial reconstruction of the northeastern corner of the room with stones of different sizes characterizes the last stage of E-b14:r1. Approx. 0,2 m above floor level, a niche (0,5 m wide, 0,2 m long, at least 0,85 m high) was created into the southeastern wall. A new clay floor was laid over the older one raising the level by almost 0,5 m.

**After the use of E-b14 (OL E:4 and OL E:3)**

- 11 Room E-b14:r1 was filled with discarded building blocks, stones and sediment, indicating that Building E-b14 ceased to be used (Fig. 5). At the same time, large-scale construction activities were carried out. Walls of at least one new building were erected over the older architecture of OL E:5, these often set directly over the older masonry, although with slightly different orientations. Currently, neither the (last) filling of E-b14:r1 nor the building of the new walls can be dated precisely. They were, however, almost

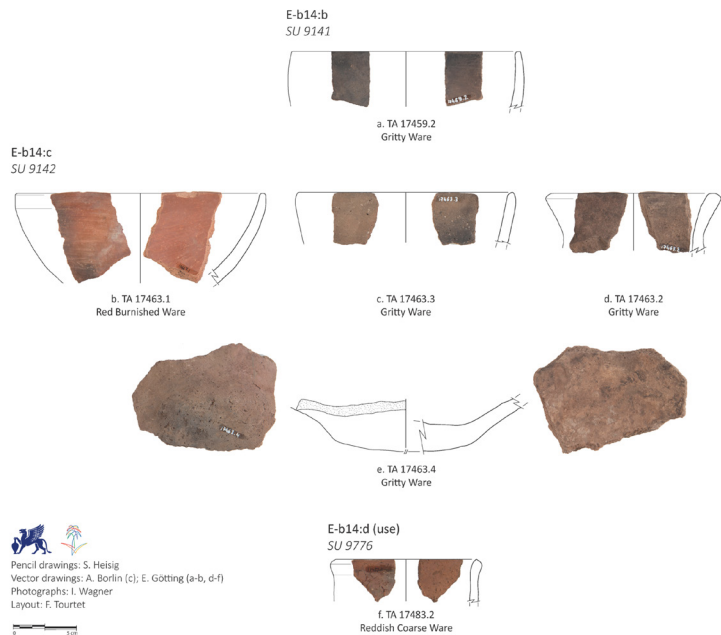
completely removed for the construction of Building E:b1 in the 2<sup>nd</sup> half of the 1<sup>st</sup> millennium BCE (OL E:3) and during its subsequent modifications.

### Pottery sequence from within E-b14

12 132 out of the 142 pottery sherds excavated in sounding E11 West could be attributed to three specific wares attested in the settlement of the oasis of Tayma [8]: Reddish Coarse Ware (RCW), Gritty Ware (GW), and Red Burnished Ware (RBW) (Figs. 6. 7. 8). The latter two are now known also from other sites in Northwest Arabia. All sherds have been found in secondary deposition; nevertheless, a consistent sequence and a clear trend could be observed. While RCW open vessels are only attested in layers predating Building E-b14 (OL E:6), the deposits associated with the construction and the first use of room E-b14:r1 (E-b14:d) feature, for the first time, GW open vessels, RCW remaining the most frequently attested ware. In E b14:c layers, RCW is not attested anymore, except for a few sherds in the levelling fill, and the pottery collection from the older floor is composed exclusively of GW. GW is also most frequently represented in the younger E-b14:c-floor; this time, however, associated with a small quantity of RBW open-mouth bowls anticipating the trend of E-b14:b-a, where GW and RBW open forms have been recorded. GW is again exclusively attested in the massive stone fill that marked the end of Building E-b14.

### Chronology

13 Both radiocarbon dates and the pottery record from Building E-b14 consistently coincide. The exclusive presence of RCW vessels in the layers predating E-b14 (OL E:6), characterized by a wall built directly on the bedrock, resembles that of the southern part of the oasis wall with a late 4<sup>th</sup> to early 3<sup>rd</sup> millennium BCE *terminus post quem* [9]. Deposits associated with the construction and use of E-b14 provide early to mid-3<sup>rd</sup> millennium BCE dates from short-living botanic samples for the oldest dated context of Gritty Ware (next to RCW sherds). The dating evidence from the remaining E-b14:c-a is instead less clear. GW sherds, clearly in secondary deposition, suggest a tentative 2<sup>nd</sup> half of the 3<sup>rd</sup> millennium BCE date for these contexts. The



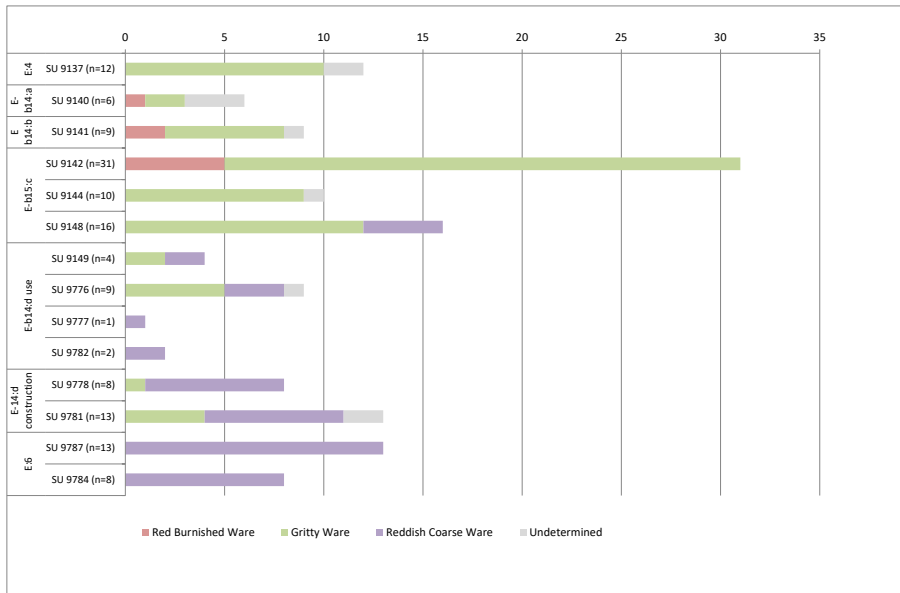
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7

6 Tayma, Saudi Arabia. Bronze Age pottery from room E-b14:r1, Reddish Coarse Ware (f), Gritty Ware (a, c, d, e), Red Burnished Ware (b). (Photos: Irmgard Wagner; Layout: Francelin Tourtet)

7 Tayma, Saudi Arabia. Bronze Age Pottery assemblages from room E-b14:r1, stages E-b14:d-a. (Photos: Irmgard Wagner; Layout: Francelin Tourtet)



8 Tayma, Saudi Arabia. Diachronic distribution of Pottery Wares from Sounding E11 West. (Graphic: Francelin Tourtet)

appearance of early to mid-2<sup>nd</sup> millennium BCE RBW at the end of this stage, although from a context of uncertain interpretation, contrasts, at first glance, the mid-3<sup>rd</sup> millennium BCE radiocarbon date obtained from the same layer. It may though coincide with an already suggested older dating of RBW [10]. Similar observations have been made in E-b14:b and a, the latter, however, datable to the late 2<sup>nd</sup>/early 1<sup>st</sup> millennium BCE, if considering the pottery evidence.

### Conclusion

- 14 While at Tayma first activities related to the establishment of a permanent occupation may have started at the turn of the 3<sup>rd</sup> millennium BCE, a functionally differentiated settlement comprising a probable storage building and a multi-unit masonry building of smaller dimension appears to characterize the early 3<sup>rd</sup> millennium BCE core of the oasis. The discovery of a rectangular room (E b14:r1) with a fireplace of limited extension may point to a domestic context in this part of the site. Stratigraphic observations and the pottery sequence indicate the close connection of these occupational remains with a pottery-producing community involved in oasis cultivation [11]. It is expected that the combined study of the archaeological evidence from within the central part of the oasis settlement of Tayma at the site of Qrayyah, including the evidence from the other soundings, will shed new light on the emergence of complex societies in Northwest Arabia, at the same time connecting the hypotheses emerging from this region with established models of urbanization.

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*Endnotes*

[1] Hausleiter – Eichmann 2018.

[2] Hausleiter 2019.

[3] Lora 2017.

[4] Tourtet – Hausleiter 2018; Tourtet et al. 2021.

[5] Purschwitz 2017.

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[10] Hausleiter – Zur 2016.

[11] Hausleiter 2019.



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