Iron Age Towers and the Middle Bronze Age Fortifications of Lachish: A Reply to Vaknin et al.'s Archaeomagnetic Study

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Abstract

A recent article presenting the results of paleomagnetic dating conducted at Tell ed-Duweir (ancient Lachish) indicates that a burnt Iron Age tower was destroyed by Sennacherib in 701 BCE, verifying earlier observations that are not under debate. However, the article's caption suggests that the 2 km-long stone fortification dubbed the *Revetment* or the *Mid-slope City Wall* should also be dated to the Iron Age. However, this claim ignores the stratigraphically complicated relationship between the tower and the Mid-Slope City Wall and the date of the city wall itself, questions that are examined in the current paper. The paper ends with a discussion of the Assyrian use of fire during the siege of Lachish.

Keywords: Revetment; Mid-Slope City Wall; Assyrian fire warfare; burnt tower; site formation processes

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1. Introduction: The Mid-Slope City Wall

A recent article presenting the results of paleomagnetic dating at Tell ed-Duweir (ancient Lachish) dated a burnt Iron Age tower to 701 BCE (Vaknin et al. 2024). The destruction of this massive 7 m-wide brick structure had already been dated to Sennacherib's siege and destruction of Lachish in 701 BCE (Ussishkin 2004: 701–707; Garfinkel 2024). Thus far, the study verifies earlier observations that are not under debate. However, the article's caption, which does not cite the tower but Tel Lachish's fortification, suggests that this date also applies to the 2 km-long stone fortification, known as the *Revetment* or *Mid-Slope City Wall*. While this agrees with the fortification's traditional dating, it contradicts my recent suggestion that it dates from the Middle Bronze Age. The paleomagnetic study is contentious on two points: the stratigraphic connection between the tower and the Mid-Slope City Wall and the date of the city wall itself. Additionally, I consider the use of fire as an efficient Assyrian war strategy during the Lachish siege.

The Mid-Slope City Wall is a massive stone construction that encircled almost the entire circumference of Tel Lachish, apart from a 50 m-long gap near the northeast corner. During two excavation seasons in 1932–1933 and 1933–1934, the first expedition to Lachish, directed by J. L. Starkey, exposed the fortification's entire length of nearly 2 km. Significantly, Starkey only excavated the wall from the outside, and it is unclear which levels from inside the city relate to it.

A recently published article that was not available to the authors of the paleomagnetic study analyzed this monumental construction in detail (Garfinkel 2024). It scrutinized 21 points along the Mid-Slope City Wall (Fig. 1) and concluded that this monumental construction, which gave Lachish its squarish shape, was built in the Middle Bronze Age. Here, I will only review the points relevant to dating the Mid-Slope City Wall. But first, it is important to understand how Starkey's expedition reached an Iron Age date in the first place.

The first mention of the Mid-Slope City Wall is found in a letter Starkey sent from London to H.-L. Vincent in Jerusalem on October 18th, 1932, before the excavation had started (British Museum Corresponding Files 47–63, Lachish, Identification of). In the early days of research, it was commonly accepted that Tell el-Hesi was ancient Lachish (Petrie 1891); only some forty years later, it was suggested that Lachish should be identified with Tell ed-Duweir (Albright 1929). Based on the famous relief of Sennacherib that depicts the Assyrian siege of Lachish (Ussishkin 1982), Starkey supported the new identification. He argued that Lachish is depicted on the relief with two city walls and that the lower one is visible at the site. Hence, the Mid-Slope City Wall was dated in London before the excavation had even begun.

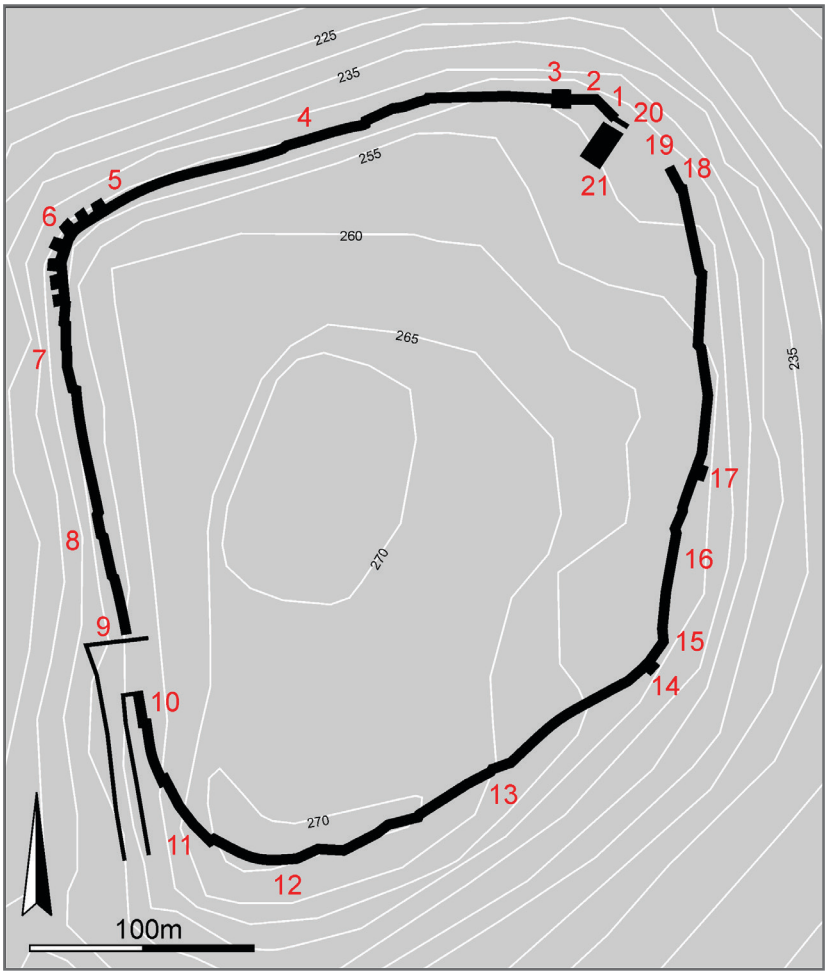

Fig. 1. Tel Lachish and the 21 points of interest along the Mid-Slope City Wall (Garfinkel 2024).

A few months later, in accordance with this approach, an artistic reconstruction of the city of Lachish presented the Mid-Slope City Wall as abutting the Iron Age city gate (Fig. 2). This was before the Mid-Slope City Wall's meeting point with the gate had been exposed. At the end of the season, Starkey (1933: 197–198) described the Mid-Slope City Wall thus: "It forms a junction at the southwest corner with the great 'bastion,' which, as mentioned previously, held the gateway." Later artistic reconstructions of the Iron Age city of Lachish followed the first one in depicting the Mid-Slope City Wall as abutting the Iron Age gate (Torczyner 1938: 8; Ussishkin 1982: Fig. 9).

Fig. 2. A 1933 pencil (pre-excavation) artistic reconstruction of the Iron Age city of Tel Lachish, featuring two walls: one at the top of the mound and the other further down the slope. Note that the Mid-Slope City Wall abuts the Iron Age gate (after Starkey 1933: Pl. III; courtesy of the Wellcome Trust archive, London).

2. The Relations between the Tower and the Mid-Slope City Wall

The paleomagnetic study took for granted that the mudbrick tower was built on top of the Mid-Slope City Wall and that they are elements of the same fortification system. However, the excavation at this spot (Area R) did not reach very deep, and the brick tower's base was not exposed (Figs. 3, 4:2; Ussishkin 2004: Figs. 13.6, 13.7). Consequently, the stratigraphic relationship between the tower and the Mid-Slope City Wall remains indeterminate, and the dating of one does not implicate the other. Moreover, it is unclear why Fig. 3 depicts the Mid-Slope City Wall with intensely recessed outlines, a construction not published by the first expedition (Tufnell 1953: Pl. 108).

3. The Mid-Slope City Wall and the Iron Age Gate

The relationship between the Mid-Slope City Wall and the Iron Age gate is critical. Ussishkin's expedition reexamined the gate complex of Levels IV–III, which is composed of three units: an outer gate, a large open courtyard, and an inner gate. In an attractive graphic reconstruction, a buttress of the gate abuts the Mid-Slope City Wall (Ussishkin 1982: Fig. 9). However, the area plans (Ussishkin 2004: Figs. 10.1, 10.3, 11.43, 11:63) and a field photograph (Ussishkin 2004: Fig. 11:66; 2014: Fig. 12.9) depict a different situation. An

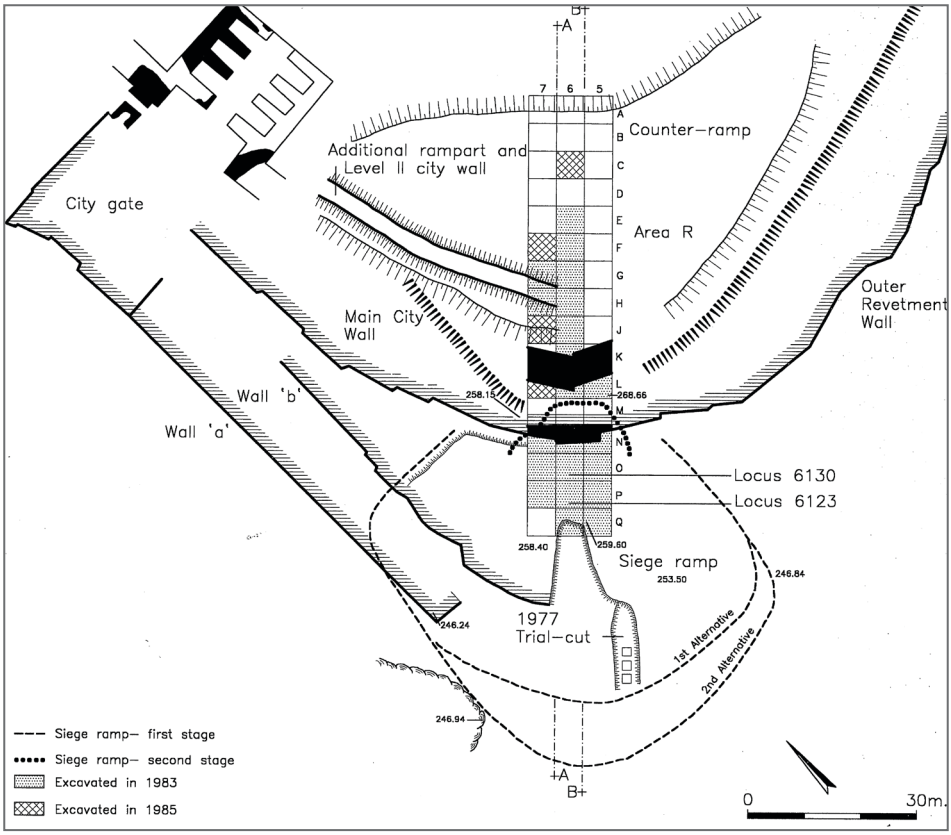

Fig. 3. The excavation plan of Area R in the southwest corner of Tel Lachish (Ussishkin 2004: Fig. 13.6, courtesy of David Ussishkin).

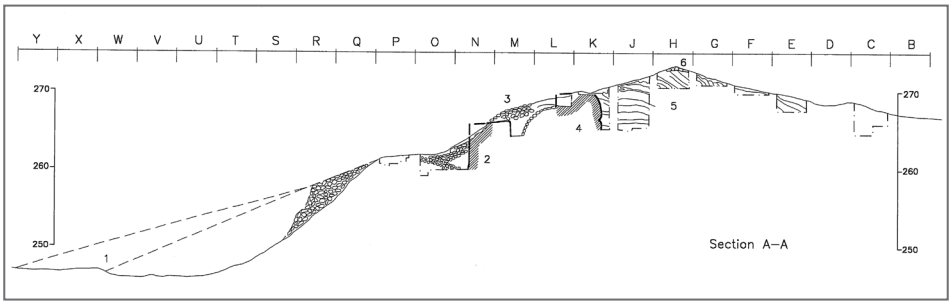

Fig. 4. A section through Area R on the southern slope of Tel Lachish (Ussishkin 2004: Fig. 13.7, courtesy of David Ussishkin). The burnt tower is marked as No. 2; No. 4 is the Iron Age mudbrick city wall (Levels IV–III).

illustration published in a popular book lays out the relationship more clearly (Ussishkin 2014: Fig. 12.9), presenting the massive Mid-Slope City Wall as stopping a few meters before the gate's northern wall. The foundation trench between the two walls is filled with earth and small stones (Fig. 5), and Ussishkin writes that "the three meters of the revetment nearest the northern wall of the courtyard was different from the rest of the wall, showing inferior workmanship and built of smaller stones" (Ussishkin 2004: 578). This foundation trench apparently belonged to the Iron Age gate and was overlooked by the earlier expeditions. The implication of this new observation is clear: the Mid-Slope City Wall is earlier than the fortifications of Level IV.

4. The Gap and Middle Bronze Age Citadel near the Northeast Corner

The most enigmatic component of the Mid-Slope City Wall is the 50 m gap between Points 1 and 18 (Fig. 1). Above this gap, a three-room citadel was uncovered, approximately 8 × 14 m in size, with massive up to 2 m-thick and 4.4

Fig. 5. The Mid-Slope City Wall on the left with the standing figure below and the Iron Age gate of Levels IV–III on the right. Note the earth and stone-filled gap between them (after Ussishkin 2014: Fig. 12.9, courtesy of David Ussishkin).

m-high brick walls. This building met its end in a fierce conflagration attested by thick accumulations of ash, charcoal, and burnt mudbrick debris. Four scarabs and close to 30 impressed sealings, all typical of the end of the Middle Bronze Age (ca. 1550 BCE), were found in the deposits, providing a date supported by radiometric dating (Garfinkel et al. 2019; 2021b). This is clearly a gate fortress. It is similar to contemporary fortresses at Jericho, Gezer, and Ebla, which are located adjacent to the city wall, often near the city gate (Kempinski 1992; Matthiae 2001; Nigro et al. 2011: 573–577; de Miroschedji 2018: Fig. 21). At Lachish, the fortress' position near the gap suggests that the Middle Bronze Age city gate was in this location. Significantly, no Iron Age remains are associated with this gap.

5. Towers in the Corners of Tel Lachish

Fortified sites' corners are defensively weak points, a strategic problem discussed by Eph'al (1984; 2013). Indeed, the Assyrians attacked Lachish and built the siege ramp at the mound's southwest corner. The topography of Lachish did not change between the Middle Bronze Age and the Iron Age: In both periods, the site's corners were precisely in the same location. Consequently, in both periods, Points 3 and 12 required towers for protection, and the builders of the Iron Age city reused the stone foundations of the earlier Middle Bronze Age towers.

Point 3. About 10 m from the northeast corner of Tel Lachish, the stone construction of the Mid-Slope City Wall widens outwardly and inwardly, pointing to the existence of a tower. The mudbricks on the stone foundation contained Iron Age pottery, indicating that the tower's superstructure was renewed in the Iron Age, nearly a thousand years after the original construction (Fig. 6).

Point 12. Another brick tower is located in the mound's southwest corner. It was partly excavated from its outer side as Area R, exposing a portion of a heavily burnt mudbrick tower. It was constructed in the Iron Age and went out of use in 701 BCE, as indicated by the Assyrian siege ramp that abuts it from the outside to a considerable height (Ussishkin 2004: Fig. 13.7). Unfortunately, the base of the mudbrick tower was not reached in this location, rendering its stratigraphic relationship with the Mid-Slope City Wall indeterminate.

Point 3 clearly shows that the constructors of the Iron Age fortifications of Levels IV–III at Lachish reused the millennium-old tower foundations in the site's northeast corner. This might well be the case in Point 12 as well, but further excavation in Area R is required to verify this hypothesis. In any case,

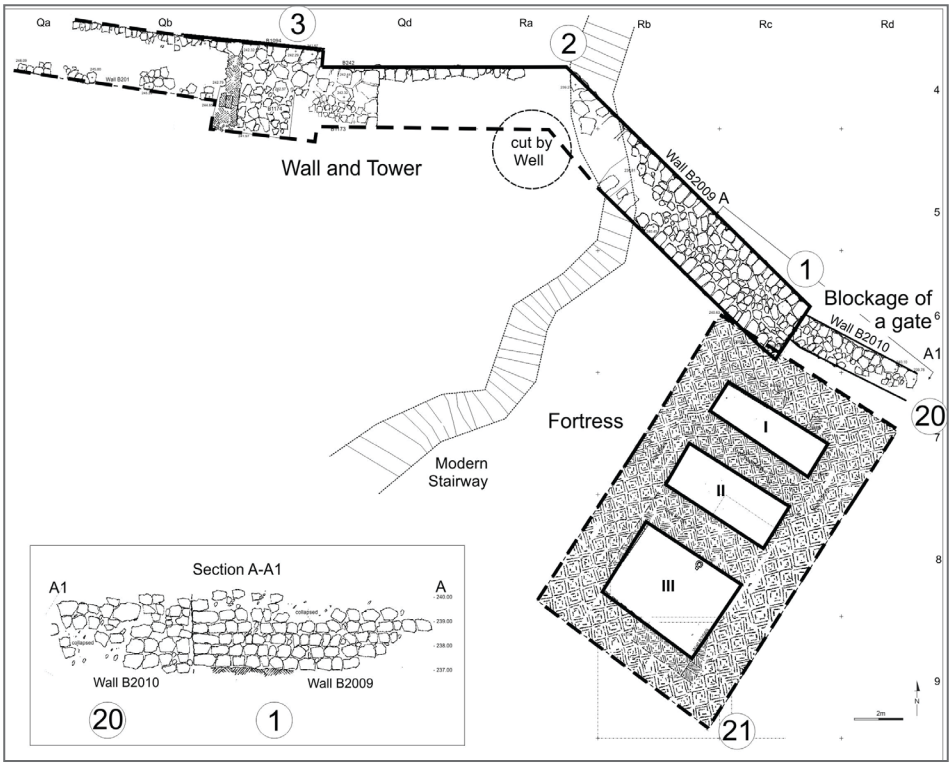

Fig. 6. Plan of the northeast corner of Tel Lachish, showing the following points: (1) one end of the Mid-Slope City Wall, (2) the wall's northeast corner, and (3) a tower of the Mid-Slope City Wall, reused during the Iron Age II by the builders of Level IV.

dating the Iron Age brick superstructure does not date the stone foundations below it. We witness here a complicated site formation process, in which late activities partly reused earlier constructions.

6. The Burning of the Tower Adjacent to the Assyrian Siege Ramp

Until recently, no special attention was paid to the destruction of the tower in Point 12, and I assumed that it was torched by the Assyrians together with the entire city. However, the Assyrian siege ramp covers the tower, which would have denied the fire the oxygen it required. Consequently, the tower must have burnt during the siege before being buried by the ramp.

Vaknin et al. (2024: 88–91) have dealt comprehensively with the burning of the tower, the use of fire during the siege of Lachish, and the use of fire by the Assyrian army elsewhere. Their examination shows that the towers' bricks were fired *in situ* to at least 600°–700° C. They suggested that either the people of

Lachish or the Assyrians could have set the fire. It seems to me, however, that they missed a critical point concerning the quantity of wood needed to burn the tower.

Unlike a potter's kiln, in which small quantities of pottery vessels are fired, the tower was a large construction, and heating it to the high temperature noted above would have needed a huge fire to burn at the base for a day or more. The torching of mudbrick structures or entire cities is a complicated matter that requires much fuel. The fuel's location in the roofs (as beams) or on the floors affects the final results (Kreimerman and Shahack-Gross 2019; Kreimerman 2022; Kreimerman et al. 2022). Vaknin et al. (2024: 88–91) suggested three possible sources:

1. Torches dumped by the defenders from the top of the city wall, as depicted in the Sennacherib relief (Ussishkin 1982: Fig. 68);
2. Wooden constructions on the city's fortifications, such as balcony-like embattlements (Eph'al 2013: 89); and
3. Wood from the ramp or the siege engines. The ramp, however, is constructed of stones, and no wood was found inside it. Wood for smoothening the top of the ramp or constructing siege engines would have been introduced only at the final stage of the siege (Garfinkel et al. 2021a).

Torches or wooden constructions on the city's fortifications would not suffice for burning the brick tower. Initiating and maintaining the fire for a day or two would have required tons of wood. This wood would have had to be gathered from orchards around the city, which seems to agree with the considerable number of trees depicted in the relief (Ussishkin 1982: 94).

There is an interesting biblical tradition relating to the burning of a tower by the attackers during a siege (Jud 9:48–49, NRSV):

> So Abimelech went up to Mount Zalmon, he and all the troops who were with him. Abimelech took an ax in his hand, cut down a bundle of brushwood, and took it up and laid it on his shoulder. Then he said to the troops with him, "What you have seen me do, do quickly, as I have done." So every one of the troops cut down a bundle and following Abimelech put it against the stronghold, and they set the stronghold on fire over them, so that all the people of the Tower of Shechem also died, about a thousand men and women.

Since fortifications are unknown in the Iron Age I, this biblical text is likely anachronistic. It is important because it indicates that burning towers was a siege tactic used in the ancient Near East.

A recent analysis of the construction of the Assyrian siege ramp suggested that it was initiated some 80 m away from the city and built higher and higher as it advanced toward the city wall. Only after the ramp was completed were the siege engines pushed up to face the city wall (Garfinkel et al. 2021a). While still some distance from the city, the ramp could have been protected by massive L-shaped shields; however, as it progressively approached the city wall, the defenders' activities became more effective. A tall and massive tower near the ramp would certainly have impeded the Assyrian attack, and its elimination would have removed a major obstacle. In this vein, the tower must have been set on fire more or less when the siege ramp reached the base of the mound (Fig. 7).

7. Conclusions

The brick tower cannot be used to date the 2 km-long stone Mid-Slope City Wall, as no stratigraphic relationship has been established between the two. The date of the Mid-Slope City Wall should be established on the basis of the relevant data, which include the observation that it was cut by the foundation trench of the Iron Age gate. The Mid-Slope City Wall was constructed in the Middle Bronze Age and gave Lachish the geometric shape, which is so typical of major sites of this era.

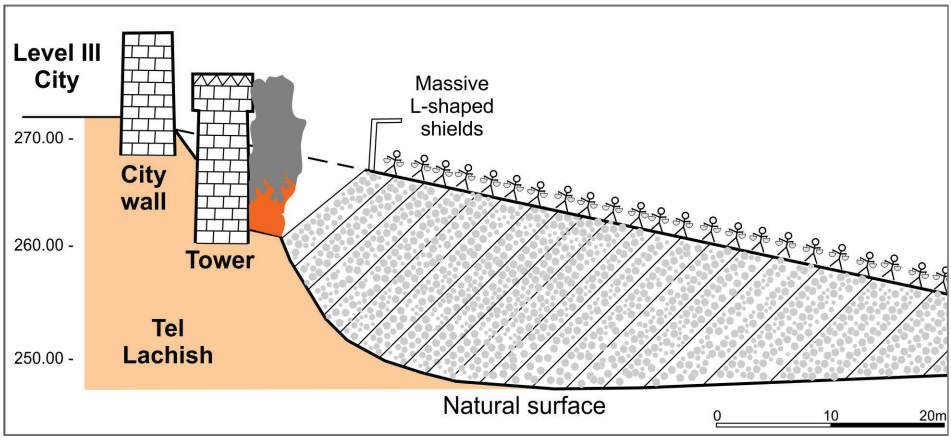

Fig. 7. Schematic reconstruction of the burning of the tower as the siege ramp approached the city; the wood needed to feed the long hours of burning could have been dumped from the top of the ramp at this stage.

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