

The Dynamics of State Development and Imperialization at Third Millennium Tell Leilan, Syria

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The May-June 2002 excavations at Tell Leilan (Figure 1) revealed evidence for the trajectory of 3rd millennium urbanization and state development in Northern Mesopotamia: the excavation at the Leilan City Gate produced information regarding the construction date and function of the City Wall during the mid- to late third millennium B.C., while the Acropolis excavation revealed the Akkadian administrative center's main street, with the Akkadian schoolhouse on the south side of the street and opposite, on the north side of the street, the Akkadian Administrative Building.

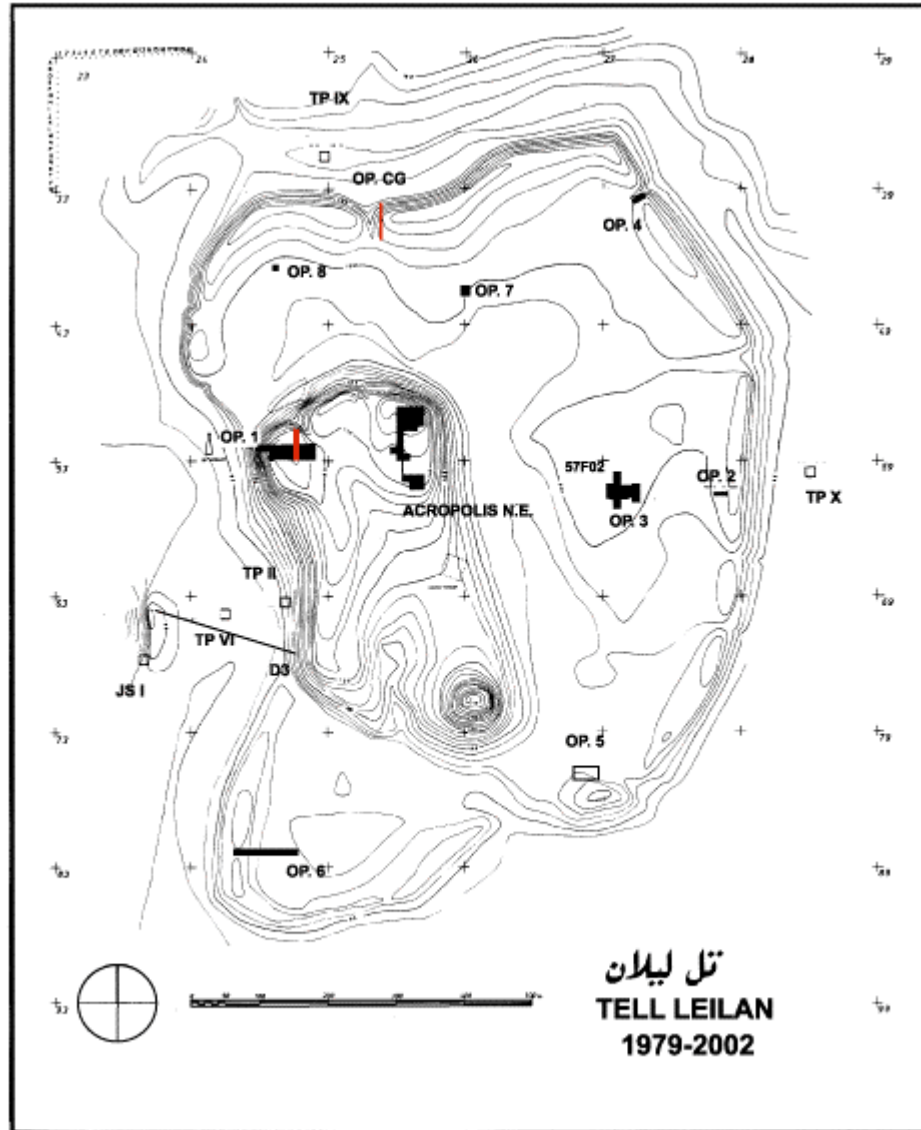


Figure 1. Topographic map of Tell Leilan indicating 2002 excavations.

Operation CG

Previous excavations adjacent to the eastern City Wall had suggested that the Leilan city wall was built ca. 2300 B.C and was an Akkadian imperialization project (Weiss and Courty 1993). Excavation at Operation CG in 2002, however, revealed that the City Wall was built at the same time that the site expanded from a 15 ha town to a 90 ha city, around 2600 BC, and was a feature of region-wide urbanization and state formation (Weiss 1986; Lebeau 1997; Pfälzner 1997: 224).

Bulldozer damage to the Northern city wall, in the course of Spring 2002 repaving of the modern state road, provided the opportunity to investigate the accidental City Wall section. The bulldozer cut of the west-facing section spanned approximately 30 meters in length (north-south), of which our excavations systematically studied 24 meters. The phasing and stratigraphy of the operation derives from the central exposed area, 9 meters long, 1 meter wide, and more than 3 meters in height. Before excavation, the section was mapped using a total station and then sequenced as 47 stratigraphic units of which 23 were floors, associated ash deposits, fire-installations, or deposits thick with burnt barley seeds. All material recovered from these deposits was either floated or dry-sieved to recover botanical materials and small remains respectively. Additionally, soil micromorphology samples were taken from each construction phase. A GIS which is currently under-construction will incorporate all elements of the excavation and subsequent analysis.

The initial stage of this fortification system was characterized by a set of earthworks situated on a slight N-S slope. These earthworks were originally at least 4m wide and 3m high. Wall A—the 3m wide, 2 meter tall massive northern mudbrick fortification wall for the city and its gate complex—was cut into these mounds. Wall A was carefully constructed of alternating red and black bricks, probably made from the red calcic soil of the surrounding plains and from the black mud of the wadi Jarrah respectively. This was the main north wall of the city gate area for approximately three centuries from ca. 2600-2300 B.C.—until Wall-B, a 1 meter wide, buttressed wall, was constructed adjacent to it during the Akkadian rebuilding project. On the southern side of the city wall mound, 20 meters to the south, a similar type of construction can be observed, which probably reveals the southern limits of these fortifications. An E-W wall (W-K), 3 meters wide, delimits the apparent southernmost extent of the City Gate complex. W-K was built of red calcitic bricks similar to those used for W-B and can be stratigraphically dated to phase 7, the Akkadian phase (Leilan IIb). Between these two large walls lay a series of spaces, alternately roofed and open air, which formed the administrative quarter of the city gate complex during the third millennium.

Tell Leilan 2002
Op. CG - High Control Area - Western section

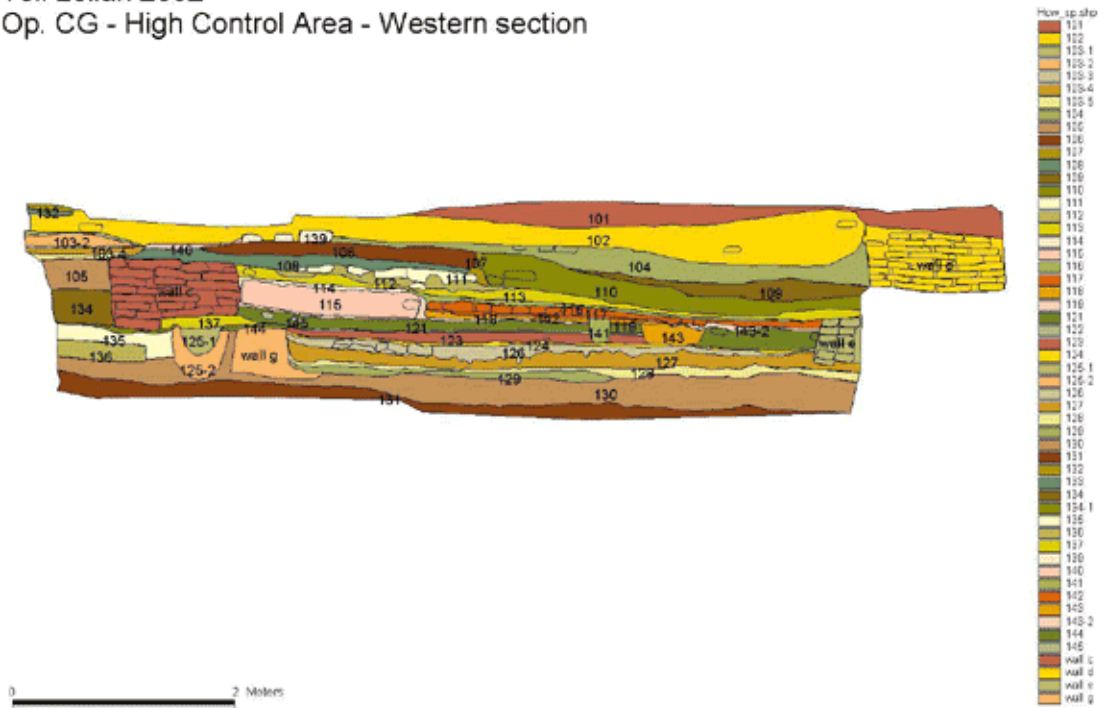


Figure 2. L 02 Op. CG. Western section, high-control area.

Excavation revealed 9 phases of the city gate complex, dating from the mid-third (Period IIIId, terminal Ninevite 5) to the early 2nd millennium (Period I, Habur ware) (Figure 2). The first six (2600-2200 BC) were examined in our central exposed area, while the last three (2200-1700 B.C) were identified in section, with only limited excavation.

Phase 1 (Leilan IIIId) dates to the building of the wall complex and is characterized by a few small and scattered fireplaces. Associated artefacts include animal bones, late Ninevite 5 cups, and broken container sealings with reverse impressions.

Phases 2-3 (Leilan IIIId-IIa) saw the conversion of this area into administrative space following the completion of the northern fortification wall. Internal structures, related to a series of concentrated ash deposits and tanours, were built to partition the space between the two fortification walls. During phase 2, these low-dividing walls were

made of pisé, while in phase 3, they were made of one row of mudbrick. Gray and black ash floor deposits for these phases contained fifteen sealings bearing designs similar to late Early Dynastic iconography elsewhere on the Habur Plains. Nearly all of the sealings fastened leather bags, baskets, or other types of rope-tied containers. One small tablet fragment, and a balled strip of sealing clay, also suggest that the administration of goods entering the city was performed in the vicinity.

These two phases are also characterized by a restricted pottery assemblage of very few types of fine-ware cups; the illustrated base and rim types, make up 72%-83% of these assemblages (figure 3). During phase 2, a few of these sherds were decorated with Ninevite V excising, but by phase 3, this element had almost entirely disappeared, though rim and base forms were static. These cup types are a common element of Presargonic pottery assemblages across northern Mesopotamia (Oates 1984): 206; Kuhne 1976: Abb. 101-141), and particularly at Leilan ((Weiss 1990; Calderone and Weiss 2003: 15). The restricted types of these sherds coincides with the non-domestic nature of the City Gate occupation: almost no sherds made of cooking ware, or medium and coarse ware that could be related to cooking or storage vessels were unearthed. Similarly, animal bones, pottery slag, and kiln wasters were absent from this level—despite the presence of two fire-installations.

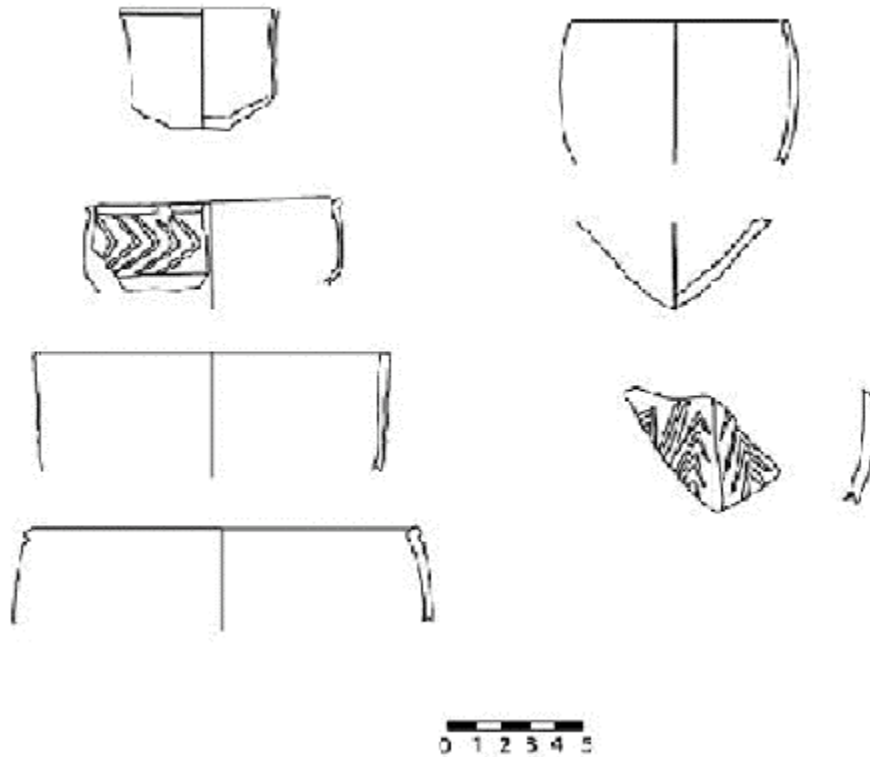


Figure 3. L02 Op. CG. Ceramics of phases 2-3.

Phase 4 (Leilan IIa) saw construction of a large northern wall and floor. This area's function had changed slightly, but a sealing and two clay tokens indicate continued administrative use. Two rounded basalt sling pellets suggest a new defensive function for the precinct.

Phase 5 (Leilan IIa) shifted the function of this area with the construction of two features: a 4 meter wide fireplace in the north, and a baked-brick platform to the west and south. Both features suggest that this area was now open-air. The baked bricks of this platform were heavily worn by considerable traffic. This platform may have formed the surface of the road entering Tell Leilan, or at least the City Gate, while the fireplace may have served as a signalling device. Following this phase, the city gate was abandoned for an unknown period of time, allowing rubbish to accumulate on the baked brick platform.

Phases 6 and 7 (Leilan IIb) witnessed the rebuilding of this precinct: a new northern defensive wall and a new southern dividing wall were constructed, while three

floors were laid adjacent to this new city wall. **s i l a** - bowls and the typical Leilan IIb ceramic assemblage were found on the floors, along with a simple stamp sealing. This evidence suggests that this reconstruction may be attributed to Akkadian imperialization activities.

Following Akkadian use of this space, the area was abandoned and naturally filled with a meter-thick dust deposit. This phase was intensively sampled for micromorphological and geochemical analysis. Stratigraphic analysis suggests that it is equivalent to hiatus deposits previously sampled in the Leilan Lower Town (Weiss et al. 1993).

Phase 9 dates to the resettlement of Tell Leilan during the early second millennium B.C (Period I), when a final set of earthworks, redeposited from red calcic soil from the surrounding plain, capped the earlier construction phases. A few scattered sherd concentrations of Habur ware pottery date this construction.

Six grain samples from the central excavation area of Op. CG were selected for AMS radiocarbon dating. Each sample was sub-divided into three sub-samples analyzed individually. The sub-samples allow for the weighted averages that reduce the sample standard deviation (Long and Rippeteau 1974). The weighted averages in the following table were calculated using Oxcal 3.9 (Ramsey 2002).

CAMS No.	Sample	14C age bp	±	cal BC ±1σ wgted. avg
94319	L02 CG lot 110 no1	3970	30	
94320	L02 CG lot 110 no2	4010	30	2502-2472
94321	L02 CG lot 110 no3	3940	30	
94322	L02 CG lot 124 no1	4045	35	
94323	L02 CG lot 124 no2	4090	30	2585-2500
94324	L02 CG lot 124 no3	4070	30	
94325	L02 CG lot 126 no1	4085	30	
94326	L02 CG lot 126 no2	4030	30	2580-2470
94327	L02 CG lot 126 no3	4025	30	
94328	L02 CG lot 127 no1	4040	30	
94329	L02 CG lot 127 no2	4045	30	2620-2490
94330	L02 CG lot 127 no3	4085	35	
94331	L02 CG lot 128 no1	4070	30	
94332	L02 CG lot 128 no2	4065	30	2618-2578
94333	L02 CG lot 128 no3	4040	30	
9434	L02 CG lot 130 no1	4045	30	
94335	L02 CG lot 130 no2	4145	35	2650-2590
94336	L02 CG lot 130 no3	4065	35	

The Acropolis Northwest

In 2002 we explored the levels immediately beneath 44W16 and 44X16, two 10X10 squares first excavated in 1999 (Ristvet and Weiss 2000; Weiss et al 2002). Excavations here focused on retrieving the earliest IIb floors in the “Akkadian House”, along with the latest IIa phases immediately beneath this house and “The Unfinished Building”. Additionally, three new squares were opened up immediately north of the Akkadian House, exposing 300 m² to the edge of the Acropolis. Excavations in these squares revealed part of a large massive IIb Akkadian Administrative Building.

In 44X16, traces of The Unfinished Building were removed and the phase beneath this construction was exposed: the IIa building which had been levelled to construct The Unfinished Building. Few artifacts were in the room fill beneath The Unfinished Building, suggesting that the infilling may have occurred as part of The Unfinished Building’s construction.

In 44W16, to the north, the remaining floors of the Akkadian house were retrieved. In the western half of 44W16 an earlier IIb phase of this building, a bathroom installation, was uncovered. The floor was heavily plastered, and a bowl with a diameter of 0.7 meters was sunk into it, possibly as a lustration basin. A series of baked-brick pipes drained water from this room into the street to the north (figure 4). A series of boulders demarcated this early construction from the northern street. This 2 meter wide street was covered with large pottery sherds and a set of the ubiquitous Leilan IIb flat-based **s i l a**-bowl kiln wasters, perhaps used for paving.



Figure 4. Northwest corner of schoolhouse, and northeast drainage installation for the Unfinished Building, and bath facility, with arrow at sila-bowl waster in the street.

In the eastern half of 44W16 a one-room house was uncovered with a doorway to the street. Most of this house was destroyed by a large modern pit, rendering excavation difficult. In the northwestern corner of the room a stack of fragmented Akkadian school texts and one administrative text (studied by L. Milano) was on the floor.



Figure 5. L02-15a. Akkadian school tablet, obv.

To the north of these rooms, across the street, three ten by ten squares exposed of the large Akkadian Administrative Building, dubbed the “Dudu Palace”. Five rooms in the northernmost-squares were recovered and excavated to their uppermost floor deposits.



Figure 6. L02, Beakers and Cups from Terminal Floor, Dudu Palace.

The ceramic assemblage of this building is Leilan IIb, but with few cooking ware vessels and a high percentage of whole cups and beakers. The next to last floor of the central court (44S16 lot 33) was covered with carbonized grain. Four samples (lot 33, nos. 1a, 1b, 2a, 2b) from this grain were run at the Center for Accelerator Mass Spectrometry (CAMS nos. 104154-57). The weighted average of the dates is 3755 ± 18 bp, which Oxcal 3.9 calibrates to 2200-2135 B.C. at 1σ . A one-meter wide sondage along the western edge of this excavation links stratigraphically the “Dudu Palace” with the Akkadian street and the Akkadian schoolhouse.



Figure 7. L02 Acropolis Northwest. “Dudu Palace,” courtyard and adjacent doorways and rooms, terminal occupation. scale = 2 meters. Left background, stratigraphic sounding linking palace to Akkadian street and schoolhouse. Foreground, carbonized grain on next to last floor (44S16 lot 33 ¹⁴C samples 1a, 1b, 2a, 2b).

This excavation clarifies previous interpretations of third millennium dynamics at Tell Leilan in four research directions:

1. The City Gate excavation provides a ca. 2600 BC date for the construction and administration of this defensive precinct, 300 years earlier than previously known, and provides new linkages between circumvallation and state formation at Tell Leilan.
2. The period IIa two large rooms excavated under The Unfinished Building and the last Akkadian House emphasize the scale of pre-Akkadian public architecture adjacent to the cultic platform that was excavated in 1993.
3. The schoolhouse and school texts enlarge the administrative arena of the Akkadian imperialization and extend its goals.
4. The Akkadian Administrative Building, mounted on the northwestern edge of the Acropolis and overlooking the northern approach to the city, may have been the administrative center for Akkadian grain harvest shipments, as large as 29 metric tons, to Nagar, and then to Sippar (King 1896, 1b).

Bibliography

- Calderone, L and H. Weiss 2003 The End of the Ninevite 5 Period at Tell Leilan *in* E. Rova and H. Weiss, eds., The Origins of North Mesopotamian Civilization: Ninevite 5 Chronology Economy, Society. Turnhout, Brepols. Subartu IX. pp. 593-624.
- King, L.W. 1896 Cuneiform Texts, 1. London: British Museum.
- Kühne, H. 1976 Die Keramik vom Tell Chuera und ihre Beziehungen zu Funden aus Syrien-Palästina, der Türkei und dem Iraq. Berlin, Gebr. Mann.
- Lebeau, M. 1997 La situation géographique, la topographie et les périodes d'occupation de Tell Beydar. *in* A. Suleiman, et al., eds., Tell Beydar, Three Seasons of Excavations (1992-1994): A Preliminary Report. Turnhout, Brepols. Subartu III, pp. 7-20.
- Long, Austin, and Rippeteau 1974 Testing Contemporaneity and Averaging Radiocarbon Dates American Antiquity 39: 205-215.
- Oates, J. 1984 Some Late Early Dynastic Pottery from Tell Brak Iraq 44.
- Pfälzner, P. 1997. "Wandel und Kontinuität im Urbanisierungsprozess des 3 Jtsds. v. Chr. in Nordmesopotamiens," *in* Wilhelm, G. (ed.) Die Orientalische Stadt: Kontinuität, Wandel, Bruch, (Saarbrücken: Saarbrückische Drückerei und Verlag), pp.239-265.
- Ramsey, C. Bronk 2002 Oxcal 3.9. Oxford University.
- Ristvet, L. and H. Weiss 2000 Imperial responses to environmental dynamics at late Third Millennium Tell Leilan Orient-Express 4: 94-99.
- Weiss, H. 1986. The Origins of Tell Leilan and the Conquest of Space *in* H. Weiss, ed., The Origins of Cities in Dry-Farming Syria and Mesopotamia. Guilford, CT, Four Quarters Press. pp. 71-108.
- Weiss, H. 1990 Tell Leilan 1989: New Data for Mid-Third Millennium Urbanization and State Formation MDOG 122.
- Weiss, H. and M.-A. Courty 1993 The genesis and collapse of the Akkadian empire: The accidental refraction of historical law. *in* M. Liverani, ed., Akkad: The First World Empire. Padua: Sargon. pp. 131-155.
- Weiss, H., M.-A. Courty, W. Wetterstrom, F. Guichard, R. Meadow, L. Senior, A. Curnow 1993 The genesis and collapse of third millennium north Mesopotamian civilization Science 261: 995-1004.
- Weiss, H., F. deLillis, J. Eidem, D. deMoulins, U. Kasten, A. McCarthy, L. Mori, L. Ristvet, W. Wetterstrom 2002 Revising the contours of history at Tell Leilan Annales Archéologiques Arabes Syriennes, Cinquantenaire.

Figures

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