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The Hābūr Region in the Late Third and Early Second Millennium BC

LAUREN RISTVET, HARVEY WEISS

Introduction

The past twenty-five years have produced eight archaeological surveys of the Hābūr Plains, eight excavations at late third and early second millennium settlements (Fig. 1 and 2), the retrieval of Old Babylonian archives at T. Leilān (Šehna/Šubat-Enlil) and Šaġir Bāzār,¹ the publication of related letters and administrative texts from T. Hariri (Mari),² and long-sought paleoenvironmental data for the third and second millennium BC in West Asia. These data provide new perspectives on long-standing early historic archaeological problems. Two settlement hiatuses frame the Hābūr region in this period and suggest an innovative but failed experiment in regional resettlement.

"...seven generations since the collapse of Akkad..." (Grayson 1987, 53)

The global cooling and aridification event at 4.2 kaBP is recorded in more than forty paleoclimate proxies from Kilmanjaro, Tanzania to Rajasthan, India and extending to East Asia (Wang et al. 2005), North America (Schwalb and Dean 2002) and South America (Thompson 2000) (Fig. 3). This event abruptly diminished West Asian precipitation from ca. 2200-1900 BC by ca. 30% (Bar-Matthews et al. 2001; Cullen et al. 2000; Wick et al. 2003), forcing societal adaptations constrained by local environmental and politico-economic forces.

The late third millennium imperialized agriculture of the Akkadian period on the Hābūr Plains was bordered by the 450 mm isohyet at the foothills of the Tur 'Abdin and the 250 mm isohyet to the south. Both the Akkadian and indigenous populations responded to the abrupt climate change with habitat-tracking and abandonment, seen archaeologically as collapse. Some agriculturalists adopted pastoral nomadism, the low-energy alternative to agriculture. In northeastern Syria, and adjacent plains to the east and southeast, the failure of rain-fed agriculture at this time interrupted Akkadian imperial revenues and forced the collapse of the empire shortly after 2200 BC (Weiss et al. 1993).

Most Akkadian imperialized settlements across the Hābūr region were abandoned during the abrupt climate change, while remnant settlers stayed at Brak (Oates et al. 2001, p. 170-177), Šaģir Bāzār (McMahon and Quenet n.d.), Arbīd (Rukowski 2004) and Mozan (Dohmann-Pfälzner and Pfälzner 2002). In the Leilān survey region, a 30 km transect of 1900 sq kms spanning the Hābūr triangle from the Turkish to the Iraqi borders, total population fell dramatically: 74% of sites were abandoned and total area occupied declined by 93% (Fig. 4, 5, 6). Among urban sites T. Leilān (no. 1) and T. Farfara (no. 186) were abandoned entirely, while the occupied area of T. 'Aid (no. 90) was halved. The average size of settlements decreased from 11.17 has in the Leilān IIb period to 2.92 has during the post-Akkadian, post-4.2kaBP event period. The remnant settlements in the Leilān region lay along wadis above the modern 400 mm isohyet or along the edges of the wadi Radd's unique marsh resources and high water-table. Survey of the regions of T. Brak (Eidem and Warburton 1996, p. 55),

¹ For the Leilan tablets see Eidem 1990; Eidem 1991a; Eidem 1991b; Ismail 1991; Eidem 1991c; Vincente 1992; Mieroop 1995; Vincente 1995; Eidem n.d.; for the Šaģir Bāzār tablets see Tunca and Lacambre 2002. 2 Charpin and Ziegler 2003, pp.4-7 provide a bibliography.



T. Baidar (Wilkinson 2000, p. 11), the Ğebel 'Abd-al-Azīz (Hole and Kouchoukos n.d., p. 6) and the western Hābūr Plains between the Ğaġğaġ and Rās al-'Ain (Lyonnet 1997), show that settled area decreased substantially from the third to the second millennium BC.

The entire Akkadian period residential area of Brak's Lower Town was abandoned (J. Ur, p.c., 2005), leaving remnant administrative buildings on the Acropolis (Oates, Oates and McDonald 2001). Synchronously, the area of public buildings on the Acropolis at Mozan was substantially reduced (Dohmann-Pfälzner and Pfälzner 2002, p. 190). Nevertheless, these two sites reorganized themselves briefly as the Kingdom of Urkeš and Nagar (Salvini 1998). Similar abandonments and political collapse, alongside habitat-tracking to perennial water sources, occurred throughout Mesopotamia (Weiss et al. 1993), the Levant (Palumbo 1990), the Aegean (Jameson et al. 1994; Watrous 1994) and Transcaucasia (P'yankova 2000).

Nomads and Villages

"This town indeed belongs to Shubran, and from of old it was duly assigned to the inheritance of the Hana" ARM 28, 95: 29-30; Fleming 2004, p. 90.

By 1900 BC, the cooler and windier conditions that had prevailed in Western Asia during the previous three centuries began to ameliorate, but precipitation never returned to its pre-4.2kaBP level (Lemcke and Sturm 1997). Surface reconnaissance across areas east and west of the Ğaġğaġ define the divergent resettlement dynamics that ensued.

In the east, settlements around Leilān rose twenty-fold from the post-Akkadian period IIc, but the average settlement size of 4.89 has was a third less than the Akkadian period's 7.2 has. The Leilān period I resettlement is the largest recorded in the Leilān survey, with 157 sites occupying 767.2 hectares (Fig. 4, 5, 6). The majority of these settlements (72%) were both founded and abandoned during the three or four century span of Hābūr ware. The instability of this population, however, is quite marked. Correction for site contemporaneity (Dewar 1991; Dewar 1994) suggests that 15 sites, totaling 204.5 has, were synchronously occupied during Leilān period I. While 58% of settlements which had been occupied during IIa remained occupied during IIb, only 17% of the settlements which were occupied during to the following Mitanni period (Donella 2002).

Comparing Leilān period IIb and period I settlement underscores the unique nature of this settlement phase. During the Akkadian Leilān IIb there were 48 sites; in Period I there were 157 sites, while total IIb settlement was 46% of the second millennium values. Average site size decreased by a third from 7.2 ha in period IIb to 4.89 ha in period I (fig. 7). These statistics underline the instability of early second millennium settlement in contrast to settlement stability and growth during the second and third quarters of the third millennium BC.

A second settlement feature was a new system of urban-village dependency that emerged in the early second millennium and which was characterized by a large number of satellite villages located adjacent to urban sites. During the Akkadian imperialization of Leilān IIb, only two small sites were located in this area of presumably intensively cultivated fields, while during the early second millennium BC 11 villages occupied this zone, suggesting a new settlement density or a new urban dependence upon village agricultural production (Fig. 6). Other surveys undertaken in the Syrian and North Iraqi Ğezīra reveal a similar pattern. The area 5 km around Hamūkār, for instance, had eight small-medium sites for this period (Ur 2002, Fig. 14). In Iraq, the North Ğezīra survey also shows the proliferation of small sites around T. al-Hawa, reduced in size from its third millennium sets the first extensive settlement around the wadi ar-Radd marsh, in the North Ğezīra the dry, southwestern region, previously unsettled, is occupied by small, perhaps transient, villages (Wilkinson and Tucker 1995, fig. 37)



In the portion of the Hābūr Plains west of the Ğaġğaġ, settlements show robust nucleation in Period I. Populations are concentrated in towns like Šaġir Bāzār, surrounded by plains empty of villages, but full of nomads. There is no early second millennium settlement around the Ğebel 'Abd-al-Azīz, where the abandoned *Kranzhűgeln* were not reoccupied (Hole n.d.). Similarly, T. Ta'aban may have been the only settlement along the Middle Hābūr, a region which was probably now dominated by pastoralists (Monchambert 1983; Monchambert 1984a; Monchambert 1984b). The scant Hābūr ware recovered from the large tells along the Hābūr River from Rās al-'Ain to Hassake has been explained as pastoral campsite residue rather than permanent settlement remains (Lyonnet 1996: 371-72). Similarly, in the survey of 12 km around T. Baidar, only two sites had major early second millennium BC occupations and two sites had possible occupations (Fig. 8). As often noted, the western Hābūr was uninhabited or only lightly inhabited during the early second millennium BC.

The two regions, east and west, correspond roughly to two lands (*mātum*), which together comprise much of the area known as Šubartum in the Mari epigraphic documentation (Guichard 2002, pp. 134-136). To the east, Apum, the "land of reeds" beyond the wadi Radd, was controlled by Šubat-Enlil/Šehna (Charpin 1987; Charpin 1990, pp. 117-118). To the west, Ida-maraş was a rough coalition of kinglets along the Ğaġğaġ and in the western Hābūr Triangle (Joànnes 1996, pp. 344-345).

Old Babylonian sources suggest that differing land tenure regimes and land use practices prevailed in the two lands. The grazing lands of the Sim'alites, one of the major tribal divisions recognizable from the Mari letters, were located in Ida-maraş (Charpin and Durand 1986, pp. 155-6; Durand 2004, pp. 120-121, citing A.2730). One letter (A.1098) from the time of Yahdun-Lim, speaks of the "fathers" of this land—using the tribal title attested for Sim'alite leaders—rather than "kings", which is generally reserved for sedentary rulers (Fleming 2004, 126). The archaeological evidence for a number of medium-size towns that were likely the fractious kingdoms of the Ida-maraş and for wide-stretches of open pasture, corresponds to the epigraphic evidence.³ The residents of Apum, however, did not consider themselves Sim'alites. Although the Leilān treaties emphasize both the mobile and settled components of this kingdom (Eidem n.d.), the local tribe(s) probably had a distinct identity from the Sim'alite confederation to the west (Fleming 2004, pp. 90-91, citing ARM 28: 95; Ristvet 2005, pp.163-165).

Why are these two neighboring regions dominated by opposing settlement patterns? What explains the great increase in the number of sites (and population) in the Eastern Hābūr triangle and the concomitant decrease in the west? The answer probably lies in the intersection between Northern Old Babylonian society and its natural environment. Although all the small kingdoms of the Hābūr Plains practiced a combination of dry- farming and stock-raising, usually in the form of semi-sedentary agriculture,⁴ the different micro-environments of the plain and the diverse social framework in which these practices were embedded produced different settlement patterns. Computer modeling suggests that by 1900 BC humid winds from southern Iraq might have traveled along the Tigris to provide extra spring moisture to the area east of the Ğağğağ (Evans and Smith 2005). As a result, the inhabitants of the drier Ida-maraş emphasized pastoralism, while the people of Apum emphasized dry-farming.

The agricultural resettlement in Apum did not, however, recreate earlier patterns of land management. Unlike the long-lived villages of the later third millennium, the small-size and short life of most settlements suggest that the resettlement accompanied transformed concepts of ownership and agricultural practices. In the third millennium BC, the long time-span of village occupation probably strengthened agricultural property institutions. Leilān data also suggest that Leilān IIb settlements focused on intensive agriculture, not pastoralism: 1) possible use of the Garra for irrigation, 2)

³ See ARM 28 20, ARM 28 126 and the unpublished texts: M.5777 (Durand 2004, p. 129), A.915 (Durand 2004, pp. 142-144).

⁴ For a summary of the paleobotanical, faunal and textual evidence for second millennium BC agriculture, see Ristvet 2005.



paleobotanical evidence of farming less-desirable, possibly former pasture, lands (Wetterstrom in Weiss et al. 1993) and 3) high ratios of pig to sheep amongst rubbish deposits in the Leilān Lower Town (Zeder 1998).

By contrast, in the early second millennium BC, land may have been held communally by tribe, enabling villages to relocate when water or soil became exhausted.⁵ This strategy was well adapted to the drier climatic conditions of the early second millennium. Evidence for changing pastoral and agricultural practices in the Hābūr region encourage us to explore how these changes interacted with changing social, political and economic institutions. Textual and ethnographic evidence for semi-mobile and semi-sedentary communities, which emphasize a fluid economy within a tribal structure, may explain some details of the archaeological record.

Hollow Cities, Vibrant Towns

"Zuzu... fell from the top of the city wall and a stone broke his nose. He was carried while hemorrhaging and died in transit...."(Charpin 1990)

At first glance, the extension of settled hectares in the Eastern Hābūr triangle and the Northern Iraqi Ğezīra suggests phenomenal population growth in the early second millennium BC. The number of settlements and their sizes seem far denser than during the late third millennium BC.

Yet excavations at several sites during this period indicate that intra-site settlement diverged from the late third millennium patterns.

1. Excavations east of the Ğaġğaġ suggest that many early second millennium capital cities were "hollow," containing administrative buildings but little domestic architecture (Oates 1982; Akkermans and Weiss 1991; Weiss 1985a).

2. Excavations west of the Ğaġğaġ reveal another trend, with evidence for closely packed domestic quarters at Šaġir Bāzār, perhaps ancient Ašnakkum (fig.9) (McMahon et al. 2001, p. 214), Mozan (Urgiš) (Dohmann-Pfälzner and Pfälzner 2000) and Arbīd (Bielínski 1998).

3. Urban planning for sites along the Ğaġğaġ is harder to interpret, as only very small soundings have been excavated for this period at Brak (McDonald and Jackson 2003) and Barri (Pecorella 1998), while Old Babylonian levels have not been reached at Hamidiya.

In general, these trends suggest the opposite of what we often assume, namely high population densities in small towns, contrasted to low population densities at the largest sites. In the Eastern Hābūr triangle, excavations indicate that the major capital cities were essentially administrative shells, lacking the close-packed urban neighborhoods of the late third millennium cities.

- (1) Eight seasons of excavations at T. Leilān have uncovered several administrative complexes: the Acropolis temple, two palaces in the lower town and traces of another non-domestic building on the acropolis, but only a few traces of domestic buildings adjacent to the city wall.⁶ Associated epigraphic evidence dates the construction of the spiral column-ornamented Acropolis Temple (Fig. 10) and the Eastern Lower Town Palace (Fig. 11) to Šamši-Adad's reign and the construction of the Northern Lower Town Palace to Qarni-Lim's reign (Pulhan 2000; Mieroop 1995; Akkermans and Weiss 1991; Weiss et al. 1990). Only the sparse domestic remains along the eastern city wall may pre-date Šamši-Adad's building project (Stein 1990). The evidence thus indicates that T. Leilān was purposefully re-created as an administrative center, a disembedded capital (Weiss 1985a).
- (2) Excavations at T. ar-Rimah in Iraq also suggest that this city was a hollow capital, with administrative buildings separated by open space, devoid of domestic occupation (Oates 1982).

⁵ On tribal ownership in Apum, see ARM 28 95, for collective land ownership in the Mari juridical texts, see ARM 7, Charpin 1997 and the commentary in Durand 1998: 519,

⁶ For Period I Leilan excavations see (Weiss 1983; Weiss 1985a; Weiss 1985b; Weiss 1990; Akkermans 1991; Akkermans and Weiss 1991; Weiss 1991; Weiss 1997; Pulhan 2000).



(3) Survey and excavations at the site of T. al-Hawa in the Iraqi Northern Ğezīra in the 1980s suggest a similar pattern of dispersed urban settlement (Ball et al. 1989, p. 35).

Outside of the Hābūr Triangle, Mari may also have been hollow (Aynard and Spycket 1987-90; Fleming 2004, p. 2).

Excavations at Mohammed Diyab, perhaps ancient Azamhul, the 43 hectare site only seven kilometers from T. Leilān, reveal the dense spatial organization of this dependent town (Durand 1990; Durand 1992; Durand and Nicolle 1999). A long-occupied domestic quarter and simple temple filled the south lobe of the Acropolis. Five closely packed houses ranged along alleyways (Castel 1996, pp. 275-277). Similar dense neighborhoods dominated sites west of the Ğaġğaġ:

- (1) Šaģir Bāzār had a crowded domestic quarter (Area G) and two administrative precincts (I and A) that confirm the initial crowded plan presented by Mallowan (McMahon et al. 2001, pp. 210-219);
- T. Arbīd was leveled and *pisé* retaining walls were built to maximize space. A neighborhood of attached houses was then constructed (Bielínski 1998, pp. 211-213);
- (3) Mozan sounding C2 had a dense domestic quarter during the early second millennium BC (Dohmann-Pfälzner and Pfälzner 2000, p. 209).

Outside of the Hābūr region, at Hammam et-Turkman on the Balih, this general pattern also obtains (Loon 1988).

Hābūr Period Collapse and the Establishment of Hanigalbat

The early second millennium *oecumene* was short-lived throughout the Hābūr triangle. Neither the eastern nor the western settlement systems continued in use into the later second millennium BC. East of the Ğaġğaġ, this meant that the pattern of shifting villages and empty centers characteristic of the Old Babylonian period collapsed with the abandonment of much of the Leilān survey area. Conversely, west of the Ğaġğaġ and along the Middle Hābūr, the Mitanni and Middle Assyrian periods saw a resettlement and an expansion of settlement to new, lower sites, a trend which presaged Iron Age settlement choices (Wilkinson and Barbanes 2000; Wilkinson 2003).

Our lack of a fine periodization of the period under question complicates efforts to pinpoint the date of the collapse of this system The only useful temporal distinction for analyzing survey data remains that between "early" and "late Hābūr ware⁷. Only 57 late Hābūr ware sherds, occurring on 22 sites, retrieved in the T. Leilān survey—as opposed to more than 5000 general diagnostics from this period (Fig. 12). This regional settlement collapse corresponds with the almost complete abandonment of both Leilān (following its destruction in 1728 BC at the hands of Samsuiluna) and Mohammed Diyab. Period "0" at both sites is characterized by isolated graves and pottery kilns, (Akkermans 1991; Castel 1996, 274; Durand and Nicolle 1999; Pulhan 2000). No sites dating to this period were located in the northern and northeastern area of the Leilān region. While some sites to the west and south may have remained inhabited, the small amount of late Hābūr ware suggests that occupation was sparse.

The last half of the second millennium BC (Mitanni and Middle Assyrian periods) witnessed a recovery in settlement numbers, with 33 Mitanni and 32 Middle Assyrian sites, although site density did not approach the levels of the early second millennium BC (Donella 2002). The abandonment of Leilān encouraged the reorganization of this region around the 164-hectare occupation at Farfara, probably the Mitanni capital, Waššukanni (Fig. 13).

West of the Ğaġğaġ, the earlier pattern of Hābūr period rigid nucleation yielded to Middle Assyrian-Mitanni dispersion. In the Baidar survey area, occupation ceased at both T. Hanū and Seqar Fōqāni; new settlements were built atop two large tells, and four new villages were either established on low prehistoric mounds or on virgin soil (Wilkinson 2000, fig. 12, p. 32-37). Farther west, along the

⁷ A MBA ceramic sequence has been published for T. Rimah (Postgate et al. 1997) and Mohammed Diyab (Faivre 1992; Faivre 1999). Brak and Leilan also define the ceramics of this period (Frane 1996; Oates et al. 1997). Previously published materials have also recently been analyzed (Oguchi 1997; Oguchi 2000; Hrouda 2001).



Balih, the Late Bronze Age also witnessed a sudden dispersal of villages following a period of strong MBA centralization (Wilkinson 1998, p. 72). This evidence suggests that LBA economic organization, particularly land tenure, was unlike that of the early second millennium BC.

A failed experiment?

The three-century 4.2ka BP drought episode generated the break between the social and political institutions of the late third millennium Akkadian imperialization and the early second millennium Amorite resettlement.

From 2600-2200 BC, the Leilān survey region show a stable, expanding settlement system based upon urban growth at Leilān and Farfara and the growth of numerous smaller town sites and sizable villages. Most sites were occupied for several centuries; and settlement continuity was high, while rates of both settlement creation and abandonment were low (Ristvet 2002). A comparable situation emerges from surveys across the Hābūr plains and in the Iraqi Ğezīra. This late third millennium pattern of long occupied sites within a settlement hierarchy contrasts with the early second millennium model of small, constantly shifting settlements of the East Hābūr triangle as well as the lightly populated, town dominated model reconstructed for the West Hābūr triangle. Although ceramic differences—as well as differences in site morphology—exist throughout this area (Lebeau 2000; Milano and Rova 2000), the basic pattern of urbanization and secondary state development remains the same. Excavation of both *Kranzhügeln* like Baidar and Huwēra, as well as other urban settlements, like Mozan, Brak and Leilān, show that these third millennium BC (Pfälzner 2001).

There is also no evidence for widespread, tribally organized pastoralism during the third millennium BC in the rain-fed Hābūr plains—at least not above the 250 mm precipitation isohyet. Neither the texts from Ebla nor those from Baidar contain evidence for tribal herds as opposed to state-controlled herds (Buccellati 1992, p. 94; Pruss and Sallaberger 2004). There is no mention of nomads (*hanû*), pastoral encampments (*nawû*), tribes (*līmû*) or tribal divisions (*gayû*)—nor is there a parallel Eblaitic vocabulary for these institutions.

Although there is evidence for continuity, particularly in toponym survival (Eidem 2000, pp. 262-63; Heimpel 2003; Fleming 2004, pp. 38-39), the Amorite resettlement of the Hābūr plains differed significantly from the third millennium settlement, and may represent tribal habitat-tracking and sedentarization under post-4.2 ka BP event conditions. These new third-early second millennium data for dynamic settlements and environments suggest revision of static, functionalist, explanations of nomad-sedentary interaction in West Asia (Barth 1961; Rowton 1974; Liverani 1995).

Three research efforts may provide further understanding of these historical processes. Stratigraphic excavation and ceramic quantification must break this period into shorter ceramic assemblage periods to define intra-period settlement patterns. Second, the chronology and dynamics of the Amorite resettlement require contextualization within the agricultural-pastoral continuum. How did land use shift during this period? How was the distinctive Leilān region period I settlement pattern the result of political and environmental forces? How can we recognize pastoral settlement on the Hābūr plains? Finally, the collapse of the flexible Amorite resettlement should be reexamined in light of the Mitanni emergence, requiring further stratigraphic excavation of Late Bronze Age settlements in the Hābūr Triangle.



Figures

Fig. 1: Northern Mesopotamia, late third - early second millennium BC (adapted from Joannès 1996, P. 325).

Fig. 2: Hābūr plains, with sites and survey areas discussed in the text.

Fig. 3: Paleoclimate proxies from lake, marine and speleothem cores record the 4.2ka BP event

linked to the Leil $\ensuremath{\bar{a}}$ n archaeological evidence for Akkadian empire collapse by

tephrochronostratigraphy and radiocarbon dating (after Weiss et. al. 1993; Lemcke and Sturm 1997; Bar-Matthews et al. 1999; Cullen et al. 2000; Weiss 2000;).

Fig. 4: Leilan Region Survey Period IIb (ca. 2300-2200 BC)

Fig. 5: Leilān Region Survey Period IIc (ca. 2200-1900 BC).

Fig. 6: Leilān Region Survey Period I (ca. 1900-1728 BC).

Fig. 7: Leilan Region Survey Histogram of Settlement/Ceramic Periods (L.Ristvet, E.Rova, H. Weiss)

Fig. 8: Tell Taya acropolis stratigraphy; strata 6 and 5 = post-Akkadian, stratum 4 = $H\bar{a}b\bar{u}r$ ware

Fig. 9 Šaģir Bāzār Old Babylonian closely packed domestic quarters (McMahon et al. 2001)

Fig. 10: West Hābūr plains survey map, indicating early second millennium settlements and possible nomadic camps (adapted from Lyonnet 1996, Fig. 5).

Fig. 11: Baidar Survey, indicating possible early second millennium settlements (adapted from Wilkinson 2002).

Fig. 12: T. Leilān Acropolis Period I Building Level II, spiral column north façade (H. Weiss).

Fig. 13: The T.Leilān Lower Town East Palace (H.Weiss).

Fig. 14: Leilān Region Survey Period 0 (ca.1728-1500 BC).

Fig. 15: Leilān Region Survey 186, T. Farfara, 2 m intervals, a.s.l.

Tables

	IIb (Akkadian)	IIc (4.2 ka BP hiatus)	I (Hābūr ware)
Number of Sites	48	13 (-73%)	157 (+1208%)
Occupied Hectares	353	64 (-82%)	767 (+1199%)
Mean Site Area	7.2	4.45 (-38%)	4.88 (+109%)
Percentage of new sites	42%	0%	92%
Percentage of sites	58%	100%	8%
previously occupied			
Percentage of sites	73%	8%	83%
subsequently vacated			

Table 1: Settlement Statistics for T. Leilān Region Survey, Period IIb - I

Leilan Region Survey

Hectares Occupied



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