

## SUMMARIES



## PART I

# The Main Features of Tell Hazna I: cultural levels, stratigraphy, plans, and architecture

The main object of the investigations of the Russian archaeological expedition to Syria from 1988 till today is Tell Hazna I — a large tell 150 m in average diameter and 17 m high. 12 m of its 16 m thick cultural deposit belong to the Early Dynastic I–II Periods, and its lower 4 m to the Uruk and Ubaid Periods. The efforts of the Russian mission have been mainly concentrated on the first or upper Early Dynastic Period: the remains of the religious and administrative center.

An area of more than 2000 m<sup>2</sup> has been uncovered on the tell's southern slope. The densely concentrated buildings follow a general plan. The principal structures here are monumental, not domestic dwellings that form an arch. Besides them, there have been unearthed over 250 other structures, all of which not inhabited, set on artificial platform-terraces. At present, no less than three, or perhaps, four such platforms, containing such constructions, have been recognized.

The expedition uncovered 40 m of an oval wall that was preserved to a height of 3.5 m and that enclosed the site in the south. Such oval walls are known to protect temple complexes at Tell Ubaid and at Khafadje (the Oval Temple). However at Tell Hazna I this wall covered the remains of another wall belonging to the earlier period of constructional activities on the site.

The lower terrace complex comprises the cult tower No. 37 and adjoining temple structures. The tower is preserved to a height of 8 m and raised on a 1 m high socle, 1 m beneath which is a bed of deliberately laid soil. Below this bed a special place was cleaned, that was covered with pottery fragments and pebbles. The deposit consisted of a 'constructional sacrifice' of at least two ungulates. Obviously, this sacrifice marked the beginning of the construction of the tower. The socle was formed from exceptionally large mud-bricks (0.50 × 0.50 × 0.1 m) without plaster: the foundation of this structure was situated under the level of the surface. The tower's upper surface level measured 5.5 × 6.2 m. Its walls were built of standard mud-bricks (30 × 20 × 7 cm) and covered with plaster, bearing traces of green paint.

A rectangular deep chamber (1.7 × 2.3 m) was cleared inside the tower No. 37. It consisted of three vertical cells that were separated by brick partitions. The tower's north and south walls have 1 m high doorways with stone pavements beside them and outside the structure.

The upper part of the tower's south wall had three narrow rectangular 'windows'. A hiding place was discovered in the eastern window that contained 17 flint blades for insertion into three sickles and a rectangular stone seal with images of a lion and hooved animal, lying on its back. We believe that this essentially ritual niche signified the completion of the tower's construction, while its beginning had been commemorated by the previously mentioned animal sacrifice.

A massive 5.5 m high wall adjoined the eastern part of tower No. 37. The upper part of this wall had four pilasters and apertures between them. Turning to the north, this wall ran close to the next monumental building — construction No. 110. This tower-type construction was preserved to a height of 7.5 m and was set on a 1 m thick brick platform that had been built almost at the same level as the foundation for tower No. 37.

Though these chambers have not been totally excavated, on the basis of their stratigraphy and some other markers, they appear to be correlated with those of tower No. 37. At the same time, building No. 110 shows features typical for a granary. The process of filling such towers with grain from the stairs is depicted on cylindrical seals from Mesopotamia sites.

One more similar structure No. 149 adjoined tower No. 110. This trapezoidal structure contained four chambers. A necklace of 109 paste glass, crystal, carnelian, jet, turquoise, bone, and shell beads and silver(?) pendants were found between the bricks of one of the partition walls.

These structures are related to form a specific system of monumental buildings in the temple complex's southern sector. This system stretches to the northeast, following the overall arch plan of the complex. In this respect Tell Hazna I is similar to the Ninkhursag temple at Tell Ubaid and the Oval Temple at Khafadje.

Another complex of structures adjoining tower No. 37 from the north, west and east is greatly interesting. This complex includes a courtyard, connecting through doorways with chambers with consoles. A brick pedestal (1.25 × 0.6 × 0.8 m) unearthed in one of them — in structure No. 136 (2.5 × 2.3 m) — appeared to be a sacrificial table. Those units were parts of a sanctuary, analogous to sanctuaries of the Khafadje Oval Temple. Such a combination of courtyards and temple structures is well known and comprises one of the specific features of ancient Mesopotamia cult architecture. We conventionally call the complex on the second terrace 'the Lower Temple'.

The ruins of massive structures on the next or third platform are grouped together under the name ‘the Upper Temple’. These include a wall with buttresses, preserved to a height of 5.5 m and a tower-type construction 6 m high. A brick construction with an interior drain lined with bricks was unearthed in the lower part of the latter tower.

The site should contain one more platform-terrace, the highest on the site. The evidence in favor of this idea is provided by the large structures uncovered on Tell Hazna I’s summit.

The architecture of the Tell Hazna I Early Dynastic layers is notable for its great complexity. The monumental structures are located on various levels. Thus, ‘the Upper Temple’ is raised 5 m above ‘the Lower Temple,’ while the structures of the tell’s top were 5 m above the walls of ‘the Upper Temple.’

The tradition to erect temples on large artificial platform-terraces is deeply rooted in Mesopotamia. Such constructions were built as far back as the Late Ubaid period (Sievertsen, 1998. II. Abb. 13,44; etc.). In Uruk times they were rather numerous both in Uruk (Tunca, 1984. P. 103) and in Eridu (Safar, Mustafa, Lloyd, 1981. P. 51–82. Fig. 3). Certain resemblances between the Tell Hazna I architecture and the architecture of several sites in central and southern Mesopotamia have already been mentioned. All these parallels provide evidence of continuous active relations between different regions within Mesopotamia, connections that determined a high level of its cultural unity during the IIIrd millennium BC.

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## PART II

# The Ceramics of Tell Hazna I

Massive quantities of ceramics provide the basic dating material for the Tell Hazna I investigations. The ceramics were collected in the field in 5 m/side squares (25 sq m), and, as usual during the excavations, the sherds were collected separately every 20–30 cm arbitrary levels or ‘spits’ of vertical excavation. During the excavations of Tell Hazna I, approximately 83000 ceramics fragments were recovered and saved, including 9000 being diagnostic (in terms of their form and ornamentation). The contexts of all collected examples were graphically fixed.

Vessels morphology was the main object of the research. In order to create a system of objective, verifiable mass morphological classification, a quantitative appraisal of formally described attributes for the examination of intuitively divided morphological groups was devised.

Based on the formalized description of the ceramics’ morphology, a list of 42 attributes was set up. This register has both verbal and graphical representations of the states of attributes (Fig. 2–17). Based on this list of attributes, the shapes of vessels were described. These descriptive results comprised a database, containing information on 4700 diagnostic fragments.

The attribute analysis allows us to get quantitative values of the states of different morphological groups (Tab. 1–10). Based on the correlated analysis of rows of attributes, the quantitative limits between related morphological groups were determined. Besides the verification of the segregation of morphological groups, the quantitative analysis allows us to define more precisely the classification scheme through the transmission of several marginal shapes from one morphological group to another.

As a result of this classification based on the ceramics’ formal description 21 morphological groups called Stable Variety of Shape (SVS) were identified.

As a basis for the relative dating of materials from the Tell Hazna I cultural deposits, the percentage distribution of the ceramics’ morphological groups (SVS of upper taxonomic level) by stratigraphic level was used (Fig. 35a, b; Tab. 26–31). Additionally, a separate research was carried out on the distribution of Ubaid decorated ceramics, the specialized ceramics of Ninevite V style, Cyma Recta and Metallic ware (Fig. 36–37; Tab. 32–37).

As a result, a periodization of the Tell Hazna I cultural deposits was proposed that consisted of six periods. The upper four (I–IV) periods are connected with the existence of the temple complex, and the lowest two (V–VI) belong to periods predating its construction. The quantitative data for different periods are not identical (ranging from c. 2000 sherds in the top layers to c. 100 sherds in the bottom layers).

It is obvious from the examination of the ceramics that the two earliest periods existed over a much longer time span than that of the later temple complex. However, the relatively small excavated area and, accordingly, the insufficient quantity of material from the lower layers do not allow us to offer a more detailed periodization of the lowest part of the Tell Hazna I cultural deposits.

The earliest layers of the settlement demonstrate that up to 33% of the ceramics contain Ubaid style decorations. In the upper layers, a sharp reduction in the quantity of this type of ceramics is observed. At the same time, in the lowermost layers the significant number (about 20%) of so-called coba-bowl vessels, which are mainly related to the ceramic tradition of the Uruk Period, is noteworthy. This speaks in favor of dating the earliest layers of Tell Hazna I to the Early Uruk Period. However we do not exclude the possibility that the increase of material from the bottom layers of the complex will provide evidence for a somewhat earlier date for the initial settlement at Tell Hazna I.

The large changes in social life, which took place at the time of the construction of the temple oval (‘temenos’) in the beginning of the IIIrd mil. BC., also are reflected in the ceramics. Simultaneously with the creation of the temple complex Ninevite V style ceramics first appear in the cultural deposits of Tell Hazna I. Ninevite V style ceramics continued to exist until the end of life on the settlement. In total, 70 vessels with incised ornaments and 46 local imitations with painted decorations were established. Within the framework of this type of ceramics, certain lines of development can be observed. Painted imitations and engraved ceramics of the Ninevite V style probably appeared simultaneously. At the beginning, the painted ceramics quantitatively prevailed. The engraved ceramics predominated only at the latest stages. Among the engraved Ninevite V ceramics, the vessels, decorated with incised ornamentations are more numerous. Excised ornamentation occurred only at the very latest stage of the settlement’s existence.

The percentage distribution of the ceramics through six divided periods allows us to synchronize Tell Hazna I materi-

als with comparable data from other investigated sites of the Djezira, such as Tell Brak, Tell Leilan, Tepe Gawra, Chagar Bazar, Tell Raqa'i, Tell Atij, Hammam et-Turkman, and others (Fig. 38), and to date the existence of the Tell Hazna I settlement from the Early Uruk (or Ubaid – Uruk transitional Period) to the end of the ED I Period.

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### PART III

## Tell Hazna I: burial complexes

This chapter deals with the burials excavated at Tell Hazna I inclusive through field season 2000. They are 31 in number, including that of a dog (No. 24). Having different states of preservation, the burials, with few exceptions, were dug into the cultural layers.

Some burials (Nos. 3, 6, 8, 10, 11, 13–16, 18, 19, 21) were placed in deserted structures. Only burials Nos. 15 and 17 were made during the time of the functioning of the center. Burial No. 30 was discovered beneath the Ubaid cultural layer that can be dated to the 1st half of the IV millennium BC. Out of thirty burials, twenty-one belong to infants, mostly under the age of one. A similar distribution was uncovered in level XI at Tepe Gawra where sixty-one of the seventy-five excavated burials were those of infants. With the exception of complexes Nos. 15, 17 and 30, as well as those Nos. 25, 26 of the Islamic period, all others are dated within the 2nd and 3rd quarters of the III millennium BC. Not one of them contains ceramics of the Khabur style, the Mittani Period or, all the more, of the I millennium BC. Consequently, Tell Hazna I had started to serve as a necropolis, probably, right after or, at least, shortly after, it had been deserted. It seems absolutely clear that for a long time Tell Hazna I was considered a sacred place by people living in this Khabur region.

There are 3 recognized types among the excavated burials: 1. ditch (No. 1); 2. cist (Nos. 2, 4, 7, 14, 15, 19, 22, and 23); and 3. jar (Nos. 2, 10, 11, 17, 18, and 30). Some burials were covered with bricks, mats or gravel.

Almost all the burials were individual. Only one (No. 28) contained the remains of an infant and an adult. Skeletons were discovered lying in flexed positions on their right or, more rarely, left sides in 14 graves. 3 burials contained skeletons extended straight on their backs. Most bodies were oriented to the west.

18 graves, including 5 infants (Nos. 10, 15, 20, 29, and 31), contained burial goods. In particular, 2 painted vessels of Nineveh V type, 2 bronze pins, and over 60 various beads were found in burial 31. Clay vessels were also discovered in 14 burials, usually, 2 forms in each grave. 3 burials contained Nineveh V type vessels. Metal artifacts, mainly bronze pins, were discovered in 7 burials, and beads also were found in 7 burials. Most of them were made of quartz, crystal and paste.

Comparative study shows that in northern Mesopotamia for a rather long period, including the entire III millennium BC, burials were interred in urns, pits, and brick constructions. The finds from the Tell Hazna I burial complexes are well confined to the 2nd third of the III millennium BC, and can be dated to the XXVI–XXIV centuries BC.

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## SUPPLMENTS

### **Pottery Kilns at Tell Hazna I**

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Pottery kilns of the first half of the 3rd millennium BC. were discovered at Tell Hazna I in north-eastern Syria. The kilns were the fire-constructions with updraft motion of hot gases. They consisted of a deep fuel-firing chamber, a permanent horizontal heat-conducting-and-separating chamber, and a pottery-firing chamber. According to Alexander A. Bobrinsky these kilns belong to a rather early period of the development of pottery kilns.

The earlier pottery kiln functioned for three years and five firing cycles were made there; the later one was used during about six years and there were 12 firing cycles of clay vessels.

A comparative investigation of pottery kilns from Hassuna, Halaf, Ubaid, and Uruk cultures, and from Early Dynastic times allowed us to determine that there were at least two main cultural traditions of pottery kiln constructions that belonged originally to various groups of ancient populations in northern Mesopotamia during the VIIth – IIIrd millennia BC.

- Figure 1 (p. 417): General view of the excavated pottery kiln at Tell Hazna I.  
Figure 2 (p. 417): Modern pottery kiln in Qomishly-town in north-eastern Syria (1990).  
Fig. 3 (p. 418): General view (1) and plan of heat-conducting-and-separating unit (2) of pottery kiln.  
Fig. 4 (p. 419): Longitudinal section of the remains of the pottery kilns A and B.  
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Fig. 6 (p. 421): General reconstruction of the pottery kiln and the layers in it.  
Fig. 7 (p. 422): Place of the excavated kiln A in general evolution of pottery firing system.  
Fig. 8 (p. 423): Kilns similar to kiln A excavated at Tell Hazna I from other ancient near-eastern centers.  
Table 1 (p. 424): Data on the construction elements of near-eastern pottery kilns.

## Palaeoethnobotanical research at Tell Hazna I: new materials on agriculture in Northern Syria

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This article presents the palaeoethnobotanical materials from 36 samples that were collected and floated by archaeologists during the field seasons 1989 and 1997–2000 at Tell Hazna I. Major cereal crop-plant species of Bronze Ages farmers were *Hordeum distichum* and *Hordeum vulgare*, *vulgare* (two- and six-row hulled barley) — 73,8%; *Triticum dicoccum* (emmer wheat) — 11,3%; *Triticum durum/aestivum* (free-threshing wheat) — 5,7%. Leguminous crop plants — only 3% — include mainly *Lathyrus sativus* (grass pea) and *Lens culinaris* (lentil).

The residue of the threshing process (spikelet forks, glume bases, rachis segments etc.) were abundantly present among the charred remains. Ear fragments of barley dominate in this respect also, but not so much as grains (53,5%).

The samples from Tell Hazna I yielded great numbers of weed seeds. For this reason, the problem of using dung as a fuel at this site must be discussed.

The quantity distribution analyses of crop plants by the stratigraphic layers show the increase of barely grains in layers 2–3. Such an increase could be connected with the prosperity of the temple at Tell Hazna I: as it is well known, one of the functions of the temple in the Near East was the accumulation and distribution of grain.

- Table 1 (p. 435): List of the samples from Tell Hazna I.  
Table 2 (p. 436–437): General composition of the palaeobotanical samples from Tell Hazna I.  
Table 3 (p. 438): Species' composition of the palaeobotanical samples from Tell Hazna I.  
Table 4 (p. 439): Stratigraphic distribution of crop remains (%).  
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Fig. 2 (p. 440): Stratigraphic distribution of crop remains.

# The Results of Palynological Research at Tell Hazna I

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Palynological analyses provide the possibility of detecting consistent and gradual environmental changes over a long period of time. The collected data allowed us to determine palynological periods for the tell, the time of their formation, and changes of landscape zones. On the basis of the recorded data, 21 phases of vegetation development were defined for this territory. These phases correspond to 21 palynological zones. All the data are represented in the correlation table of sections studied at the Tell Hazna site.

- Fig. 1 (p. 454): Sampling locations. Section of eastern wall at the squares XV/18, XVII/18.  
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Fig. 2 (p. 456): Percentage pollen diagram. Section at the square XI/20, 1998.  
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Fig. 8 (p. 462): Percentage pollen diagram. Section at the square XV/14, 1997.

## Archaeozoological materials from Tell Hazna I

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The archaeozoological collection from Tell Hazna I contains 2273 animal bone fragments. The majority of the bones are kitchen remains with typical traces of butchering — the cuts and dogs' bites. Some quantity of animal bones comes from the human burials. The ratio of domestic to wild animals remains has shown the predominance of domesticate ungulate bones. They are pig, sheep and goat, cattle and ass. Some dog bones were founded in cultural layers too. Not a single bone of horse was found in materials from Tell Hazna. Bones of wild animals include: gazelle, onager, wild sheep, and hare. Three camel bones were found, though it could not be established whether they were domestic or wild. Somewhat surprising was the high percentage of pig bones — 35,5% of the domestic ungulates. The sheep/goat bones amount to 34%, and cattle bones — 30,5%. In this respect, the collection from Tell Hazna looks quite different from osteological materials from other sites in north-eastern Syria. Probably the specific character of Tell Hazna as a temple complex conditioned the character of the animals that were exploited there.

- Table 1 (p. 470): Basic structure of the osteological collection from Tell Hazna I.  
Table 2 (p. 470): Species composition of mammal bones from Tell Hazna I.  
Table 3 (p. 471): The ratio of different categories of artificial traces on animal bones from Tell Hazna I.  
Table 4 (p. 471): The distribution and the ratio of domestic ungulate bones from different parts of Tell Hazna I.  
Table 5 (p. 472): The ratio of different animals groups on some archaeological sites in north-eastern Syria in the IIIrd millennium BC.  
Table 6 (p. 472): The common measurements of domestic ungulate bones at Tell Hazna I.  
Table 7 (p. 473): The age structure of domestic ungulates at Tell Hazna I.